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**IDAPA 16
TITLE 01
Chapter 08**

16.01.08 - IDAHO RULES FOR PUBLIC DRINKING WATER SYSTEMS

000. LEGAL AUTHORITY.

The Idaho Legislature has given the Idaho Department Board of Health and Welfare the authority to promulgate rules governing quality and safety of drinking water, pursuant to Title 37, Chapter 21 and Title 39, Chapter 1, Idaho Code. (7-1-97)

001. TITLE AND SCOPE.

01. Title. These rules shall be cited in full as Idaho Department of Health and Welfare Rules, IDAPA 16.01.08, "Idaho Rules for Public Drinking Water Systems". (10-1-93)

02. Scope. The purpose of these rules is to control and regulate the design, construction, operation, maintenance, and quality control of public drinking water systems to provide a degree of assurance that such systems are protected from contamination and maintained free from contaminants which may injure the health of the consumer. (10-1-93)

002. INCORPORATION BY REFERENCE.

Any reference in these rules to requirements, procedures, or specific forms contained in any section or subsection of the Code of Federal Regulations (CFR), Title 40, Parts 141 and 143, revised as of July 1, 1999, 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. Any reference in these rules to procedures, methods, standards, or construction criteria contained in a published technical manual shall constitute the full adoption by reference of the part of the technical manual that pertains to the procedure, method, standard, or construction criterion as it appears in the manual. (4-5-00)

01. Availability Of Specific Referenced Material. Copies of specific documents adopted by reference throughout these rules are available in the following locations: (12-10-92)

a. All federal regulations: Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, Telephone (202)783-3238, or U.S. Government Bookstore, Room 194, Federal Bldg., 915 Second Ave., Seattle, WA 98174, (206) 553-4270; and (7-1-97)

b. All documents herein incorporated by reference: Administrative Procedures Section, Idaho Department of Health and Welfare, 450 W. State Street, P.O. Box 83720, Boise, Idaho 83720-0036, Telephone (208) 334-5552. (7-1-97)

c. Recommended Standards for Water Works: a committee report of the Great Lakes -- Upper Mississippi River Board of Department of Public Health and Environmental Health Managers, published by Health Education Services, P.O. Box 7823, Albany, New York, 1992, Telephone (518) 439-7286. (7-1-97)

d. Manual of Individual Water Supply Systems (EPA-430/9-74-007), 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. (12-10-92)

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, IDAPA 37.03.09, "Well Construction Standards Rules," July 1993, available at the Idaho Department of Water Resources, 1301 North Orchard, P.O. Box 83720, Boise, Idaho 83720-0098, Telephone (208) 327-7900. (7-1-97)

g. USEPA Guidance Manual, Guidance Manual for Compliance with the Filtration and Disinfection

Requirements for Public Water Systems Using Surface Water Sources, March 1991 Edition, available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, Telephone (202) 782-3238. (12-10-92)

h. NSF 53 -- 1992, Drinking Water Treatment Units -- Health Effects, available from the National Sanitation Foundation, 3475 Plymouth Road, P.O. Box 1468, Ann Arbor, Michigan 48106, Telephone (313) 769-8010. (10-1-93)

i. NSF 58 -- 1992, Reverse Osmosis Drinking Water Treatment Systems, available from the National Sanitation Foundation, 3475 Plymouth Road, P.O. Box 1468, Ann Arbor, Michigan 48106, Telephone (313) 769-8010. (10-1-93)

j. American Water Works Association (AWWA) Standards, Edition effective July 23, 1992, available from the AWWA, 6666 West Quincy Avenue, Denver, Colorado 80235, Telephone (800) 926-7337. (7-1-97)

k. ANSI/NSF 60 -- 1988, Drinking Water Treatment Chemicals -- Health Effects, available from the National Sanitation Foundation, 3475 Plymouth Road, P.O. Box 1468, Ann Arbor, Michigan 48106, Telephone (313) 769-8010. (12-10-92)

l. ANSI/NSF 61 -- 1991, Drinking Water System Components -- Health Effects, available from the National Sanitation Foundation, 3475 Plymouth Road, P.O. Box 1468, Ann Arbor, Michigan 48106, Telephone (313) 769-8010. (10-1-93)

02. Federal Regulations. 40 CFR 141.2 is herein incorporated by reference, except for the definition of the term "person". (10-1-93)

003. DEFINITIONS.

01. ABC. The abbreviation for "Association of Boards of Certification for Operating Personnel," an international organization representing water utility and pollution control certification boards. (3-10-00)

02. 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)

03. Administrator. The Administrator of the United States Environmental Protection Agency. (3-10-00)

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

05. Available. Based on system size, complexity, and source water quality, a certified operator must be on site or able to be contacted as needed to initiate the appropriate action in a timely manner. (3-10-00)

06. Average Daily Demand. The volume of water used by a system on an average day based on a one (1) year period. (12-10-92)

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. Board. The Idaho State Board of Health and Welfare. (12-10-92)

09. 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: (6-1-99)T

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. Certification and training of the operator(s) is required, as appropriate, for the system size and complexity. (6-1-99)T

b. Financial capacity means the financial resources of the water system, including an appropriate budget, rate structure, cash reserves sufficient for future needs and emergency situations, and adequate fiscal controls. (6-1-99)T

c. Managerial capacity means that the management structure of the water system embodies the aspects of water treatment operations, including, but not limited to; (6-1-99)T

i. Short and long range planning; (6-1-99)T

ii. Personnel management; (6-1-99)T

iii. Fiduciary responsibility; (6-1-99)T

iv. Emergency response; (6-1-99)T

v. Customer responsiveness; (6-1-99)T

vi. Source water protection; (6-1-99)T

vii. Administrative functions such as billing and consumer awareness; and (6-1-99)T

viii. Ability to meet the intent of the federal Safe Drinking Water Act. (6-1-99)T

10. Certificate. Documentation of competency issued by the Director stating that the person (to be certified) has met requirements for a specific classification of the certification program. (3-10-00)

11. 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. (12-10-92)

12. 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: ()

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. ()

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. ()

13. Compositing Of Samples. The mixing of up to five (5) samples by the laboratory. (3-10-00)

14. 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)

- 15. Connection.** Each structure, facility, or single family residence which is connected to a water system, and which is or could be used for domestic purposes, is considered a single connection. 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. (10-1-93)
- 16. Consumer.** Any person served by a public water system. (12-10-92)
- 17. 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. ()
- 18. Contaminant.** Any physical, chemical, biological, or radiological substance or matter in water. (12-10-92)
- 19. Continuing Education Unit (CEU).** An alternate unit (to semester or quarter systems) of formal credit assignment to post-secondary training activities, which is based upon regionally or nationally established and recognized education criteria. (3-10-00)
- 20. 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)
- 21. Department.** The Idaho Department of Health and Welfare. (12-10-92)
- 22. Director.** The Director of the Department of Health and Welfare or his designee. (12-10-92)
- 23. Disinfection.** Introduction of chlorine or other agent or process approved by the Department, in sufficient concentrations, followed by adequate contact time so as to kill or inactivate pathogenic and indicator organisms. (12-10-92)
- 24. 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. ()
- 25. Distribution System.** Any combination of pipes, tanks, pumps, and other equipment which delivers water from the source(s) and/or treatment facility(ies) to the consumer. (3-10-00)
- 26. 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)
- 27. DWIMS.** Idaho Department of Health and Welfare Drinking Water Information Management System. (10-1-93)
- 28. Enhanced Coagulation.** The addition of sufficient coagulant for improved removal of disinfection byproduct precursors by conventional filtration treatment. ()
- 29. Enhanced Softening.** The improved removal of disinfection byproduct precursors by precipitative softening. ()
- 30. 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)

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

32. 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. ()

33. GAC10. Granular activated carbon filter beds with an empty bed contact time of ten (10) minutes based on average daily flow and a carbon reactivation frequency of every one hundred eighty (180) days. ()

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

35. Ground Water Under The Direct Influence Of Surface Water. 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 (for subpart H systems serving at least ten thousand (10,000) people only) *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 must be determined for individual sources in accordance with criteria established by the State. The State determination of direct influence may be based on site-specific measurements of water quality and/or documentation of well construction characteristics and geology with field evaluation. ()

36. 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. ()

37. 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. (10-1-93)

38. Inorganic. Generally refers to compounds that do not contain carbon and hydrogen. (12-10-92)

39. 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. (3-10-00)

40. Log. Logarithm to the base ten (10). (12-10-92)

41. Maximum Daily Consumption Rate. The average rate of consumption for the twenty-four (24) hour period in which total consumption is the largest on record. (12-10-92)

42. Maximum Hourly Demand. The greatest volume of water used in any hour during a one (1) year period. (12-10-92)

43. 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. ()

44. 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. ()

45. 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)

46. 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. (6-1-99)T

47. 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. (3-10-00)

48. 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. (12-10-92)

49. Nuclear Facility. Factories, processing plants or other installations in which fissionable material is processed, nuclear reactors are operated, or spent (used) fuel material is processed, or stored. (12-10-92)

50. Operator/Owner/Purveyor 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/or is ultimately responsible for the public water system operation. (6-1-99)T

51. Operator Certifying Entity. An organization that contracts with the Department to provide public drinking water operator certification services. (3-10-00)

52. Operating Experience. The number of years spent at a drinking water system in performance of duties. (3-10-00)

53. Operating Shift. That period of time during which water system operator decisions that affect public health are necessary for proper operation of the system. (3-10-00)

54. Operator/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/or is ultimately responsible for the public water system operation. (3-10-00)

55. Operator Reciprocity. Means on a case by case basis the acceptance of certificates issued by other certification programs, which satisfy the state of Idaho requirements for operator certification. (3-10-00)

56. Peak Hourly Flow. The highest hourly flow during any day. (12-10-92)

57. 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)

58. 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)

59. 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)

60. Public Drinking Water System. (3-10-00)

a. In General. A system for the provision to the public of water for human consumption through pipes or other constructed conveyances, if such system has at least fifteen (15) service connections 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 (1) any collection, treatment, storage, and distribution facilities under control of the operator of such system, and used primarily in connection with such system, and (2) any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. A public drinking water system is either a "community water system" or a "noncommunity water system". (3-10-00)

b. Connections. (3-10-00)

i. In General. For purposes of Subsection 003.49.a., a connection to a system that delivers water by a constructed conveyance other than a pipe shall not be considered a connection, if: (3-10-00)

(1) The water is used exclusively for purposes other than residential uses (consisting of drinking, bathing, and cooking, or other similar uses); (3-10-00)

(2) The Director determines that alternative water to achieve the equivalent level of public health protection provided by the applicable national primary drinking water regulation is provided for residential or similar uses for drinking and cooking; or (3-10-00)

(3) The Director determines that the water provided for residential or similar uses for drinking, cooking, and bathing is centrally treated or treated at the point of entry by the provider, a pass-through entity, or the user to achieve the equivalent level of protection provided by the applicable national primary drinking water regulations. (3-10-00)

ii. Irrigation Districts. 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 shall not be considered to be a public drinking water system if the system or the residential or similar users of the system comply with Subsections 003.49.b.i.(2) and 003.49.b.i.(3). (3-10-00)

c. Transition Period. A supplier of water that would be a public drinking water system only as a result of modifications made to Subsection 003.49 by the Safe Drinking Water Act Amendments of 1996 shall not be considered a public drinking water system for purposes of the Safe Drinking Water Act until the date that is two (2) years after the date of enactment of the Safe Drinking Water Act Amendments of 1996. If a supplier of water does not serve fifteen (15) service connections (as defined in Subsections 003.49.a. and 003.49.b.) or twenty-five (25) people at any time after the conclusion of the two (2) year period, the supplier of water shall not be considered a public drinking water system. (3-10-00)

61. Public Water System/Water System/System. Means "public drinking water system". (3-10-00)

62. Reciprocity. A system by which certificates issued by any other certification program are recognized as valid and equal to Idaho's Certification Program provision. (3-10-00)

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

64. Responsible Charge (RC). Responsible Charge means, active, daily on-site and/or on-call responsibility for the performance of operations or active, on-going, on-site and on-call direction of employees and assistants. (3-10-00)

- 65. Sampling Point.** The location in a public water system from which a sample is drawn. (12-10-92)
- 66. Sanitary Defects.** Any faulty structural condition which may allow the water supply to become contaminated. (12-10-92)
- 67. 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: ()
- a. Source; ()
 - b. Treatment; ()
 - c. Distribution system; ()
 - d. Finished water storage; ()
 - e. Pumps, pump facilities, and controls; ()
 - f. Monitoring and reporting and data verification; ()
 - g. System management and operation; and ()
 - h. Operator compliance with state requirements. ()
- 68. Significant Deficiency.** Any defect in a system's design, operation, maintenance, or administration, as well as any failure or malfunction of any system component, that the State determines to cause, or have potential to cause, risk to health or safety, or that could affect the reliable delivery of safe drinking water. ()
- 69. 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)
- 70. Surface Water System.** A public water system which is supplied by one (1) or more surface water sources or groundwater sources under the direct influence of surface water. (12-10-92)
- 71. Specific Ultraviolet Absorption (SUVA).** SUVA means Specific Ultraviolet Absorption at two hundred fifty-four (254) nanometers (nm), an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wave length of two hundred fifty-four (254) nm (UV254) (in m=1) by its concentration of dissolved organic carbon (DOC) (in mg/l). ()
- 72. System Operator.** The person who is employed, retained, or appointed to conduct the tasks associated with day to day operation and maintenance of a public drinking water system, including, but not limited to, repair and maintenance of equipment, adjustment of flow rates and storage quantities, reading of meters, and collection of regulatory monitoring samples. (6-1-99)T
- 73. 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. ()
- 74. Transient Noncommunity 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. (10-1-93)
- 75. 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. (3-10-00)

76. 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)

77. Uncovered Finished Water Storage Facility. A tank, reservoir, or other facility that is used to store water that will undergo no further treatment except residual disinfection and is open to the atmosphere. ()

78. 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)

79. 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)

80. 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). (3-10-00)

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

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

83. Waiver. (12-10-92)

a. For the purposes of these rules, except Sections 550 through 552, "waiver" means the Department approval of a temporary reduction in sampling requirements for a particular contaminant. (10-1-93)

b. For purposes of Sections 550 through 552, "waiver" means a dismissal of any requirement of compliance. (12-10-92)

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

84. Water System Operator. The person who is employed, retained, or appointed to conduct the tasks associated with day to day operation and maintenance of a public drinking water system in order to safeguard the public health and environment. (3-10-00)

004. COVERAGE.
40 CFR 141.3 is herein incorporated by reference. (10-1-93)

005. GENERAL PROVISIONS FOR WAIVERS, VARIANCES, AND EXEMPTIONS.
40 CFR 141.4, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

01. Waivers. (12-10-92)

a. The Department may waive any requirement of Sections 550 through 552, if it can be shown to the satisfaction of the Department that the requirement is not necessary for the protection of public health, protection from contamination, and satisfactory operation and maintenance of a public water system. (12-10-92)

- b. The Department may at its discretion waive the requirements outlined in Section 010. (10-1-93)
- 02. Conditions.** A waiver, exemption or variance may be granted upon any conditions that the Department, in its discretion, determines are appropriate. Failure by the public water system to comply with any condition voids the waiver, variance or exemption. (12-10-92)
- 03. Public Hearing.** The Department shall provide public notice and an opportunity for public hearing in the area served by the public water system before any exemption or variance under Section 005 is granted by the Department. (12-10-92)
- 04. Exceptions.** Any person aggrieved by the Department's decision on a request for a waiver, variance or exemption may file a petition for a contested case with the Board. Such petitions shall be filed with the Board, as prescribed in Idaho Department of Health and Welfare Rules, IDAPA 16.05.03, "Rules Governing Contested Cases and Declaratory Rulings". (10-1-93)
- 05. Surface Water Variances.** Variances from the requirements of Sections 300 through 303 are not allowed. (4-5-00)
- 06. Surface Water Exemptions.** Exemptions from 40 CFR 141.72(a)(3) and 40 CFR 141.72(b)(2), incorporated by reference herein, are not allowed. (10-1-93)
- 006. SITING REQUIREMENTS.**
40 CFR 141.5 is herein incorporated by reference. (10-1-93)
- 007. DISAPPROVAL DESIGNATION.**
A disapproved designation may be assigned to a public water system when: (12-10-92)
- 01. Defects.** There are design and/or construction defects; or (12-10-92)
- 02. Operating Procedures.** Operating procedures constitute a health hazard; or (12-10-92)
- 03. Quality.** Physical, chemical, microbiological or radiological quality does not meet the requirements of these rules; or (10-1-93)
- 04. Monitoring.** The required monitoring as specified in these rules has not been conducted; or (10-1-93)
- 05. Unapproved Source.** An unapproved source of drinking water is used or the system is interconnected with a disapproved water system. (12-10-92)
- 06. Non-Payment Of Annual Fee Assessment.** The annual drinking water system fee assessment is not paid as set forth in Section 010. (7-1-97)
- 008. HEALTH HAZARDS.**
- 01. Prohibited.** (10-1-93)
- a. No public water system, or portion of a public water system, shall constitute a health hazard as determined by the Department during a sanitary survey. (10-1-93)
- b. No public water system, or portion of a public water system, shall create a condition which prevents, or may prevent, the detection of a health hazard, as determined by the Department during a sanitary survey. (10-1-93)
- 02. Schedule.** Health hazards and conditions which prevent, or may prevent, the detection a health hazard must be mitigated as required by the Department and terminated within a time schedule established by the Department. (10-1-93)

03. Standards. Design and construction revisions necessary to correct a health hazard or conditions which prevent, or may prevent, the detection of a health hazard, must be reviewed and approved by the Department, and comply with Sections 550 and 551, unless otherwise specified by the Department. (10-1-93)

009. MONITORING.

The Department may, in its discretion, alter the monitoring or sampling requirements for any contaminant otherwise specified in these rules if the Department determines that such alteration is necessary to adequately assess the level of such contamination. (10-1-93)

010. FEE SCHEDULE FOR PUBLIC DRINKING WATER SYSTEMS.

All regulated public drinking water systems shall pay an annual drinking water system fee. The fee shall be assessed to regulated public drinking water systems as provided in this section. (10-1-93)

01. Effective Date. Annual fees shall be paid for each fee year beginning October 1, 1993, and continuing for each succeeding year. (10-1-93)

02. Fee Schedule. (10-1-93)

a. Community and Nontransient noncommunity public drinking water systems shall pay an annual fee according to the following fee schedule:

Number of Connections	Fee
1 to 20	\$100.00
21 to 184	\$5.00 per connection, not to exceed a total of \$735 per system
185 to 3,663	\$4.00 per connection, not to exceed a total of \$10,988 per system
3,664 or more	\$3.00 per connection

(7-1-97)

b. The annual fee for transient public drinking water systems is twenty-five dollars (\$25). (10-1-93)

c. New public drinking water systems formed after October 1 will not pay a fee until the following October. (10-1-93)

03. Fee Assessment. (10-1-93)

a. An annual fee assessment will be generated for each community and nontransient noncommunity public drinking water system listed in the Department's Drinking Water Information Management System (DWIMS). (10-1-93)

b. Community and nontransient noncommunity public drinking water systems will be notified each year of the official number of connections listed in DWIMS. Systems will have at least one (1) month to notify the Department if the number of connections listed in DWIMS is not in agreement with the system's records. (10-1-93)

c. The official number of connections listed in DWIMS following each yearly update, as required in Subsection 010.03.b., will be used to calculate the annual fee for community and nontransient noncommunity public drinking water systems for the next fee year of October 1 through September 30. (10-1-93)

04. Billing. An annual fee shall be assessed and a statement will be mailed to all community, nontransient noncommunity, and transient public drinking water systems listed in DWIMS by the Department on or before September 1 of each year. (10-1-93)

05. Payment. (10-1-93)

a. Payment of the annual fee shall be due on October 1, unless it is a Saturday, a Sunday, or a legal holiday, in which event the payment shall be due on the successive business day. Fees paid by check or money order shall be made payable to the Idaho Department of Health and Welfare and sent to Support Services, Division of Environmental Quality, Idaho Department of Health and Welfare, 1410 North Hilton Street, Boise, ID 83706-1290.

(10-1-93)

b. If a public water system consists of two hundred fifty (250) connections or more, the system may request to divide its annual fee payment into equal monthly or quarterly installments by submitting a request to the Department on the proper request form provided with the initial billing statement.

(10-1-93)

c. The Department will notify applicable systems, in writing, of approval or denial of a requested monthly or quarterly installment plan within ten (10) business days of the Department receiving such a request.

(10-1-93)

d. If a public water system has been approved to pay monthly installments then each installment shall be due by the first day of each month, unless it is a Saturday, a Sunday, or a legal holiday, in which event the installment shall be due on the successive business day.

(10-1-93)

e. If a public water system has been approved to pay quarterly installments then each installment shall be due by the first day of the month of each quarter (October 1, January 1, April 1, and July 1), unless it is a Saturday, a Sunday, or a legal holiday, in which event the installment shall be due on the first successive business day.

(10-1-93)

06. Delinquent Unpaid Fees. (10-1-93)

a. A public water system will be delinquent in payment if its annual fee assessment has not been received by the Department by November 1; or if having first opted to pay monthly or quarterly installments, its monthly or quarterly installment has not been received by the Department by the last day of the month in which the monthly or quarterly payment is due.

(10-1-93)

07. Suspension Of Services And Disapproval Designation. (7-1-97)

a. For any system delinquent in payment of fee assessed under Subsections 010.02 and 010.06, in excess of ninety (90) days, technical services provided by the Department may be suspended except for the following:

(7-1-97)

i. Issuance of monitoring waivers; (7-1-97)

ii. Review and processing of engineering reports; and (7-1-97)

iii. Review of plans and specifications for design and construction as set forth in Sections 550 and 551. (7-1-97)

b. For any system delinquent in payment of fee assessed under Subsections 010.02 and 010.06, in excess of one hundred and eighty (180) days, the Department may suspend all technical services provided by the Department including any of the following:

(7-1-97)

i. Review and processing of engineering reports; (7-1-97)

ii. Review of plans and specifications for design and construction as set forth in Sections 550 and 551; (7-1-97)

iii. Renewal of monitoring waivers; or (7-1-97)

iv. Granting of new monitoring waivers. (7-1-97)

c. For any system delinquent in payment of fee assessed under Subsections 010.02 and 010.06, in excess of one hundred and eighty (180) days, the Department may disapprove the public water system pursuant to Subsection 007.06. (7-1-97)

08. Reinstatement Of Suspended Services And Approval Status. The suspension of technical services and/or the disapproval of a public water system pursuant to Subsection 010.07 may be reinstated upon payment of delinquent annual fee assessments. (7-1-97)

09. Enforcement Action. Nothing in Section 010 waives the Department's right to undertake an enforcement action at any time, including seeking penalties, as provided in Section 39-108, Idaho Code. (7-1-97)

10. Responsibility To Comply. Subsection 010.07 shall in no way relieve any system from its obligation to comply with all applicable state and federal drinking water statutes, rules, regulations, or orders. (7-1-97)

011. -- 049. (RESERVED).

050. MAXIMUM CONTAMINANT LEVELS AND MAXIMUM RESIDUAL DISINFECTANT LEVELS.

- 01. Inorganic Contaminants.** (10-1-93)
- a. 40 CFR 141.11 is herein incorporated by reference. (10-1-93)
- b. 40 CFR 141.62 is herein incorporated by reference. (10-1-93)
- c. The maximum contaminant level for cyanide is two-tenths milligram per liter (0.2 mg/l). (12-10-92)
- 02. Organic Contaminants.** (10-1-93)
- a. 40 CFR 141.12, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)
- b. 40 CFR 141.61 is herein incorporated by reference. except that the best available technology (BAT) treatment listed in 40 CFR 141.61(b) shall be changed to reflect that packed tower aeration will not be listed for toxaphene but will be listed for toluene. (10-1-93)
- 03. Turbidity.** 40 CFR 141.13 is herein incorporated by reference. (10-1-93)
- 04. Radium-226, Radium-228, and Gross Alpha Particle Radioactivity.** 40 CFR 141.15 is herein incorporated by reference. (10-1-93)
- 05. Beta Particle And Photon Radioactivity From Man-Made Radionuclides.** 40 CFR 141.16 is herein incorporated by reference. (10-1-93)
- 06. Microbiological Contaminants.** 40 CFR 141.63 is herein incorporated by reference. (10-1-93)
- 07. Maximum Contaminant Levels For Disinfection Byproducts.** 40 CFR 141.64, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)
- 08. Maximum Residual Disinfectant Levels.** 40 CFR 141.65, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)
- 09. Effective Dates.** Effective date information provided in specified Sections of 40 CFR that are incorporated by reference are applicable. (12-10-92)

051. -- 099. (RESERVED).

100. MONITORING AND ANALYTICAL REQUIREMENTS.

- 01. Microbiological Contaminant Sampling And Analytical Requirements.** (10-1-93)
- a. 40 CFR 141.21 is herein incorporated by reference. (10-1-93)
- 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; (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 it's 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 groundwater 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. 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; (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 groundwater 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; (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 effect microbial quality; and (12-10-92)
- v. The system uses only a groundwater 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 141.32 for acute MCL violations including notice for consumers to boil their water; (12-10-92)
 - 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. (10-1-93)
- 03. Inorganic Chemical Sampling And Analytical Requirements.** 40 CFR 141.23 is herein incorporated by reference. (10-1-93)
- 04. Organic Chemicals Other Than Total Trihalometranes, Sampling And Analytical Requirements.** 40 CFR 141.24 is herein incorporated by reference. (10-1-93)
- 05. Analytical Methods for Radioactivity.** 40 CFR 141.25 is herein incorporated by reference. (10-1-93)
- 06. Monitoring Frequency For Radioactivity In Community Water Systems.** 40CFR 141.26 is herein incorporated by reference. (10-1-93)
- 07. Waivers And Vulnerability Assessments.** (10-1-93)
 - a. Waivers from sampling requirements in Subsections 100.03, 100.04, 200.01, 551.01.h. and 551.01.i. may be available to all systems for all contaminants except nitrate, nitrite, arsenic and trihalomethanes, and are based upon a vulnerability assessment, use assessment and/or the analytical results of previous sampling. (10-1-93)
 - 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: (10-1-93)

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. All analyses conducted pursuant to this chapter, except those listed below, shall be performed in laboratories certified or granted reciprocity by the Department. The following analyses shall be conducted by the public water system in accordance with the procedures approved in Idaho Department of Health and Welfare Rules, IDAPA 16.02.13, Subsection 008.02, "Rules Governing Certification of Idaho Water Quality Laboratories". (10-1-93)

- a. pH; (12-10-92)
- b. Turbidity (Nephelometric method only); (12-10-92)
- c. Daily analysis for fluoride; (12-10-92)
- d. Temperature; and (12-10-92)

e. Disinfectant residuals, except ozone, which shall be analyzed using the Indigo Method or an acceptable automated method pursuant to Subsection 300.05.c. (12-10-92)

11. Consecutive Water System. 40 CFR 141.29 is herein incorporated by reference. (10-1-93)

12. Total Trihalomethane Sampling, Analytical And Other Requirements. 40 CFR 141.30, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

101. -- 149. (RESERVED).

150. REPORTING, PUBLIC NOTIFICATION, RECORDKEEPING.

01. Reporting Requirements. 40 CFR 141.31 is herein incorporated by reference. (10-1-93)

02. Public Notification. 40 CFR 141.32, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

03. Record Maintenance. 40 CFR 141.33 is herein incorporated by reference. (10-1-93)

04. Lead Public Notice Requirements. 40 CFR 141.34 is herein incorporated by reference. (10-1-93)

05. Unregulated Contaminant Reporting And Public Notification. 40 CFR 141.35 is herein incorporated by reference. (10-1-93)

06. Reporting And Record Keeping For The Interim Enhanced Surface Water Treatment Rule. 40 CFR 141.175, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

07. Reporting And Record Keeping Requirements For The Disinfectants And Disinfectant Byproducts Rule. 40 CFR 141.134, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

151. CONSUMER CONFIDENCE REPORTS. 40 CFR Part 141, Subpart O, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

152. -- 199. (RESERVED).

200. SPECIAL REGULATIONS.

01. Inorganic And Organic Chemical Special Monitoring. 40 CFR 141.40 is herein incorporated by reference. (10-1-93)

02. Sodium Special Monitoring. 40 CFR 141.41 is herein incorporated by reference. (10-1-93)

03. Special Monitoring For Corrosively Characteristics. 40 CFR 141.42 is herein incorporated by reference. (10-1-93)

04. Lead Prohibition. 40 CFR 141.43 is herein incorporated by reference. (10-1-93)

201. -- 249. (RESERVED).

250. MAXIMUM CONTAMINANT LEVEL GOALS.

01. Organic Contaminants. 40 CFR 141.50 is herein incorporated by reference. (10-1-93)

02. Inorganic Contaminants. 40 CFR 141.51 is herein incorporated by reference. (10-1-93)

03. Microbiological Contaminants. 40 CFR 141.52, revised as of July 1, 1999, is herein incorporated

by reference. (4-5-00)

04. Maximum Contaminant Level Goals For Disinfection Byproducts. 40 CFR 141.53, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

05. Maximum Residual Disinfectant Level Goals For Disinfectants. 40 CFR 141.54, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

251. -- 299. (RESERVED).

300. FILTRATION AND DISINFECTION.

01. General Requirements. 40 CFR 141.70, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

a. Each community and nontransient noncommunity system using a surface water source or ground water source directly influenced by surface water shall be operated by personnel as specified in 40 CFR 141.70(c) and Sections 553 through 562 of these Rules. (4-5-00)

b. Each transient water system using a surface water source or ground water source directly influenced by surface water shall be operated by personnel as specified in 40 CFR 141.70(c). Such personnel must: (4-5-00)

i. Be certified as Drinking Water System Operators pursuant to the requirements of Sections 553 through 562; or (4-5-00)

ii. Be certified as qualified to operate the water system by the Department. The Department may certify an individual as qualified to operate the water system if: (12-10-92)

(1) The individual operated the system on or before December 31, 1992; and (12-10-92)

(2) The Department determines that the system has not been modified after December 31, 1992; or (4-5-00)

(3) The Department determines that the compliance history of the system is acceptable; and (12-10-92)

(4) The individual passes any field evaluation of operating and record keeping procedures required by the Department; and (4-5-00)

(5) Upon thirty (30) days notice, personnel operating the system shall attend periodic training sessions as required by the Department. (12-10-92)

02. Criteria For Avoiding Filtration. 40 CFR 141.71, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

03. 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 groundwater 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 actual contact time of at least thirty (30) minutes at maximum hourly demand before delivery to the first customer. (12-10-92)

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 provides filtration treatment must provide disinfection treatment such that filtration plus disinfection provide ninety-nine and nine tenths percent (99.9%) inactivation and/or removal of *Giardia lamblia* cysts and ninety-nine and ninety-nine one hundredths percent (99.99%) inactivation and/or removal of viruses as specified in 40 CFR 141.72 and Section 300. (12-10-92)

i. Each system which provides filtration treatment shall submit engineering evaluations and/or other documentation as required by the Department to demonstrate ongoing compliance with Subsection 300.03.c. (7-1-97)

ii. 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 and/or inactivation credit allowed for filtration is as follows:

Maximum Log Removal		
Filtration Type	Giardia	Viruses
Conventional	2.5	2.0
Direct	2.0	1.0
Slow sand	2.0	2.0
Diatomaceous earth	2.0	1.0
Alternate technology	2.0	0

(12-10-92)

- iii. Filtration removal credit shall be granted for filtration treatment provided the system is; (12-10-92)
- (1) Operated in accordance with the Operations Plan specified in Subsection 552.06.a.; and (12-10-92)
 - (2) The system is in compliance with the turbidity performance criteria specified under 40 CFR 141.73; and (12-10-92)
 - (3) 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 (12-10-92)
 - (4) Slow sand filters are operated at a rate not to exceed one-tenth (0.1) gallons per minute per square foot; and (12-10-92)
 - (5) Diatomaceous earth filters are operated at a rate not to exceed one and one-half (1.5) gallons per minute per square foot. (12-10-92)

04. Filtration. 40 CFR 141.73, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

05. Analytical and Monitoring Requirements. 40 CFR 141.74, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

a. Each public water system which provides filtration treatment shall monitor as follows: (12-10-92)

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 disinfectant contact time, "T", must be determined each day during peak hourly flow. 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 hourly flow rate through that pipe. Disinfectant contact time, "T", for all other system components used for *Giardia lamblia* and virus inactivation shall be determined by tracer studies or equivalent methods. (12-10-92)

(4) The residual disinfectant concentrations at each residual disinfectant sampling point at or before the first customer, must be determined each day during peak hourly flow, or at other times approved by the Department. (12-10-92)

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 300.03 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. (10-1-93)

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 (CT_{calc}/CT_{99.9}) is determined at/or before the first customer during peak hourly flow; or (12-10-92)

(b) Sequential inactivation ratios are calculated between the point of disinfectant application and a point at or before the first customer during peak hourly flow. The following method must be used to calculate the total inactivation ratio: (12-10-92)

(i) Step 1: Determine (CT_{calc}/CT_{99.9}) for each sequence. (12-10-92)

(ii) Step 2: Add the (CT_{calc}/CT_{99.9}) 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 hourly flow. The sum of the (CT_{calc}/CT_{99.9}) values from all sequences is the total inactivation ratio. (CT_{calc}/CT_{99.9}) must be determined by the methods described in 40 CFR 141.74(b)(4)(i)(B). (12-10-92)

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 as provided for in 40 CFR 141.74(a)(5) and Subsection 300.05. Automated methods for ozone measurement will be allowed by the Department provided they are listed as "Recommended" in the USEPA Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems using Surface Water Sources, Appendix D, as set forth in Subsection 002.01.g., and provided they are calibrated on a schedule approved by the Department using the Indigo Method. (12-10-92)

c. As provided for in 40 CFR 141.74(b), the Department may specify interim monitoring requirements for 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 Departments; (12-10-92)

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
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) The total coliform MCL is not exceeded; and (12-10-92)

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

d. The Department may allow systems with surface water sources or groundwater 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 manufacturers 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)

e. The Department may allow systems using both a surface water source(s), or groundwater source(s) under the direct influence of surface water, and one (1) or more groundwater 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 in advance of the monitoring requirement. (10-1-93)

f. 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 Record Keeping. 40 CFR 141.75 is herein incorporated by reference. (10-1-93)

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: (12-10-92)

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 and/or removal achieved each day by filtration and disinfection. (12-10-92)

301. ENHANCED FILTRATION AND DISINFECTION.

This Section incorporates, 40 CFR Part 141, Subpart P, of the National Primary Drinking Water Regulations, known as the Interim Enhanced Surface Water Treatment Rule. (4-5-00)

01. General Requirements. 40 CFR 141.170, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

02. Criteria For Avoiding Filtration. 40 CFR 141.171, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

03. Disinfection Profiling And Benchmarking. 40 CFR 141.172, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

04. Filtration. 40 CFR 141.173, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

05. Filtration Sampling Requirements. 40 CFR 141.174, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

06. Reporting And Record Keeping. 40 CFR 141.175, revised as of July, 1, 1999, is herein incorporated by reference. (4-5-00)

302. SANITARY SURVEYS.

The Department shall conduct a sanitary survey of all public water systems which use surface water or ground water under the direct influence of surface water. (4-5-00)

01. Frequency. For noncommunity 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 that a community water system that has been determined to have outstanding performance, according to criteria established by the Department, may have a sanitary survey conducted every five (5) years. (4-5-00)

02. Report. A report describing the results of the sanitary survey will be provided to the water system. (4-5-00)

03. Response Required. A water system must respond in writing not later than forty-five (45) days after receipt of the sanitary survey report describing how and on what schedule the system will address significant deficiencies identified in the survey. (4-5-00)

04. 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. (4-5-00)

303. COMPOSITE CORRECTION PROGRAM (CCP).

The Department may require a public water system to conduct a composite correction program, as defined in Section 003 of these rules, for the purpose of identifying and correcting deficiencies in water treatment and distribution. Failure to implement the performance improvement factors identified through the CCP constitutes a violation of these rules. (4-5-00)

304. -- 319. (RESERVED).

320. DISINFECTANT RESIDUALS, DISINFECTION BYPRODUCTS, AND DISINFECTION BYPRODUCT PRECURSORS.

This Section incorporates 40 CFR Part 141, Subpart L, of the National Primary Drinking Water Regulations, known as the Disinfectants and Disinfection Byproducts Rule. (4-5-00)

01. General Requirements. 40 CFR 141.130, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

02. Analytical Requirements. 40 CFR 141.131, revised as of July 1, 1999, is herein incorporated by reference. DPD colorimetric test kits may be used to measure residual disinfectant concentrations for chlorine, chloramines, and chlorine dioxide. (4-5-00)

03. Monitoring Requirements. 40 CFR 141.132, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

04. Compliance Requirements. 40 CFR 141.133, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

05. Treatment Techniques For Control Of Disinfection Byproduct (DBP) Precursors. 40 CFR 141.135, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

321. -- 349. (RESERVED).

350. CONTROL OF LEAD AND COPPER.

- 01. General Requirements.** 40 CFR 141.80 is herein incorporated by reference. (10-1-93)
- 02. Applicability Of Corrosion Control Treatment Steps To Small, Medium-Size, And Large Water Systems.** 40 CFR 141.81 is herein incorporated by reference. (10-1-93)
- 03. Description of Corrosion Control Treatment Requirements.** (12-1-92)
- a. 40 CFR 141.82 is herein incorporated by reference. (10-1-93)
- b. The Department may modify its determination of the optimal corrosion control treatment or optimal water quality control parameters where it concludes that such changes are necessary to optimize corrosion control treatment as specified in 40 CFR 141.82(h) and as referred to in Subsection 350.03. The Department may also modify its determination of the optimal corrosion control treatment or water quality control parameters where it finds such changes will provide equivalent or improved treatment in a manner which is simpler or less costly to operate. (12-10-92)
- 04. Source Water Treatment Requirements.** 40 CFR 141.83 is herein incorporated by reference. The Department may modify its determination of optimal source treatment or maximum permissible lead and/or copper concentrations where it concludes that such changes are necessary as specified in 40 CFR 141.83(b)(6). (10-1-93)
- 05. Lead Service Line Replacement Requirements.** 40 CFR 141.84 is herein incorporated by reference. (10-1-93)
- 06. Public Education And Supplemental Monitoring Requirements.** 40 CFR 141.85 is herein incorporated by reference. (10-1-93)
- 07. Monitoring Requirements For Lead And Copper In Tap Water.** 40 CFR 141.86 is herein incorporated by reference. (10-1-93)
- a. Systems with insufficient tier one (1), two (2), or three (3) sampling sites shall complete their sampling pools from "tier four (4) sampling sites" consisting of buildings or multiple family residences that contain copper pipes with lead solder installed before 1983, or if these are not available, any other sampling sites acceptable to the Department. Any community water system which includes tier four (4) sites in its sampling pool shall submit a letter to the Department indicating why it was unable to locate sufficient tier one (1), two (2), or three (3) sites. (10-1-93)
- b. Nontransient noncommunity water systems with insufficient tier one (1) and pre-1983 lead solder containing copper pipe sampling sites shall complete its sampling pool with other sampling sites acceptable to the Department. A nontransient noncommunity water system which includes sampling sites other than tier one (1) in its sampling pool, shall submit a letter to the Department indicating why it was unable to locate sufficient tier one (1) sites. (12-10-92)
- 08. Monitoring Requirements For Water Quality Parameters.** 40 CFR 141.87 is herein incorporated by reference. (10-1-93)
- 09. Monitoring Requirements For Lead And Copper In Source Water.** 40 CFR 141.88 is herein incorporated by reference. (10-1-93)
- 10. Analytical Methods.** 40 CFR 141.89 is herein incorporated by reference. (10-1-93)
- 11. Reporting Requirements.** 40 CFR 141.90 is herein incorporated by reference. (10-1-93)
- 12. Recordkeeping Requirements.** 40 CFR 141.91 is herein incorporated by reference. (10-1-93)

351. -- 399. (RESERVED).

400. SECONDARY MCLS.

- 01. Purpose.** 40 CFR 143.1 is herein incorporated by reference. (10-1-93)
- 02. Definitions.** 40 CFR 143.2 is herein incorporated by reference. (10-1-93)
- 03. Secondary Maximum Contaminant Levels.** 40 CFR 143.3 is herein incorporated by reference. (10-1-93)
- 04. Monitoring.** 40 CFR 143.4 is herein incorporated by reference. (10-1-93)
- 05. Compliance And Public Notification.** 40 CFR 143.5 is herein incorporated by reference. (10-1-93)

401. -- 449. (RESERVED).

450. USE OF NON-CENTRALIZED TREATMENT DEVICES.

- 01. Point Of Entry Devices.** 40 CFR 141.100, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)
- 02. Use Of Bottled Water.** 40 CFR 141.101, revised as of July 1, 1999, is herein incorporated by reference. (4-5-00)

451. -- 499. (RESERVED).

500. TREATMENT TECHNIQUES.

- 01. General Requirements.** 40 CFR 141.110 is herein incorporated by reference. (10-1-93)
- 02. Acrylamide, Epichlorohydrin.** 40 CFR 141.111 is herein incorporated by reference. (12-10-92)

501. -- 548. (RESERVED).

549. DEMONSTRATION OF TECHNICAL, FINANCIAL, AND MANAGERIAL CAPACITY OF PUBLIC DRINKING WATER SYSTEMS.

No person shall proceed, or cause to proceed, with construction of a new community or nontransient, noncommunity drinking water system until it has been demonstrated to the Department that the water system will have adequate technical, financial, and managerial capacity, as defined in Section 003 of these rules. Demonstration of capacity shall be submitted to the Department prior to or concurrent with the submittal of plans and specifications, as required in Section 39-118, Idaho Code, and Subsection 551.04 of these rules. The Department shall issue its approval of the new system capacity demonstration in writing. (4-5-00)

01. Technical Capacity. In order to meet this requirement, the public water system shall submit documentation to demonstrate the following: (4-5-00)

- a. The system meets the relevant design, construction, and operating requirements of Sections 550, 551, and 552 of these rules; (4-5-00)
- b. The system has an adequate and consistent source of water; (4-5-00)
- c. A plan is in place to protect the water source and deal with emergencies; (4-5-00)
- d. A plan exists for replacement or improvement of infrastructure as necessary; and (4-5-00)

e. There are trained personnel with an understanding of the technical and operational characteristics of the system. (4-5-00)

02. Financial Capacity. A demonstration of financial capacity must include but is not limited to the following information: (4-5-00)

a. Documentation that organizational and financial arrangements are adequate to construct and operate the public water system in accordance with these rules (see Sections 550, 551, and 552). This information can be provided by submitting estimated construction, operation, and maintenance costs, letters of credit, or other access to financial capital through public or private sources and, if available, a certified financial statement; (4-5-00)

b. Demonstration of revenue sufficiency, that includes but is not limited to billing and collection procedures, a proposed rate structure which is affordable and ensures availability of operating funds, revenues for depreciation and reserves, and the ability to accrue a capital replacement fund. A preliminary operating budget shall be provided; and (4-5-00)

c. Adequate fiscal controls must be demonstrated. (4-5-00)

03. Managerial Capacity. In order to demonstrate adequate managerial capacity, the owner and/or operator of a new drinking water system shall submit at least the following information to the Department: (4-5-00)

a. Clear documentation of legal ownership and any plans that may exist for transfer of that ownership on completion of construction or after a period of operation; (4-5-00)

b. The name, address, and telephone number of the person who will be accountable for ensuring that the water system is in compliance with these rules; (4-5-00)

c. The name, address, and telephone number of the system operator; (4-5-00)

d. A description of the manner in which the water system will be managed. By-laws, restrictive covenants, articles of incorporation, or procedures and policy manuals which describe the management organization structure are a means of providing this information; (4-5-00)

e. A description of staffing should be provided, including training, experience, certification or licensing, and continuing education completed by the water system staff; (4-5-00)

f. An explanation of how the water system will establish and maintain effective communications and relationships between the water system management, its customers, professional service providers, and any applicable regulatory agencies; and (4-5-00)

g. Evidence of planning for future growth, equipment repair and maintenance, and long term replacement of system components. (4-5-00)

04. Submittal Form. The Department shall provide a standard form to be used in preparing a new system capacity demonstration. (4-5-00)

05. Expanding Systems. A public water system which comes into existence as a result of growth in population or number of service connections within a previously unregulated system will be considered a new system under these rules and is subject to all design, construction and operating requirements herein. (4-5-00)

06. Consolidation. In demonstrating new system capacity, the owner of the proposed new system must investigate the feasibility of obtaining water service from an established public water system. If such service is available, but the owner elects to proceed with an independent system, the owner must explain why this choice is in the public interest in terms of environmental protection, affordability to water users, and protection of public health. (4-5-00)

07. Exclusion. New public water systems which are public utilities as defined in Sections 61-104

(Corporation), 61-124 (Water System), 61-125 (Water Corporation), and 61-129 (Public Utility), Idaho Code, must meet the regulatory requirements of the Idaho Public Utilities Commission (IPUC) in Chapter 1, Title 61, Idaho Code, Public Utilities Law, and IDAPA 31.01.01, "Rules of Procedure of the Idaho Public Utilities Commission". Such water systems will not be required to meet any requirements of this Section which are in conflict with the provisions and requirements of the IPUC. (4-5-00)

550. DESIGN STANDARDS FOR PUBLIC DRINKING WATER SYSTEMS.

01. System Design. Unless otherwise specified by the Department, the design of new, or modifications to existing, public drinking water systems shall be in conformance with "Recommended Standards for Water Works, A Report of the Committee of the Great Lakes-Upper Mississippi River Board of Department Sanitary Engineers", as set forth in Subsection 002.01.c. and with recommended changes and additions to this document as found in the "USEPA Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources", as set forth in Subsection 002.01.g. (7-1-97)

02. Materials. Materials which are used to construct public drinking water systems and which have water contact surfaces must comply with applicable AWWA standards or ANSI/NSF standard 61 or NSF standard 53 or 58, unless otherwise approved by the Department on a site specific basis. (10-1-93)

03. Wells. Any supplier of water for a public water system served by one (1) or more wells shall ensure that the following requirements are met: (12-10-92)

a. Each well shall be located a minimum of fifty (50) feet from any potential source of contamination and no closer to specified sources of contamination than set forth in Subsection 900.01; (12-10-92)

b. Each well shall comply with the minimum Well Construction Standards and with the permitting requirements of the Idaho Water Resources Board, as set forth in Subsection 002.01.f.; (7-1-97)

c. Upon completion of a groundwater source, the following information and data must be submitted by the water system to the Department: (12-10-92)

i. A copy of all well logs; (12-10-92)

ii. For all wells, test pumping data including sand production, static water level, yield, drawdown and duration of test pumping; (12-10-92)

iii. As constructed plans showing at least the following: (12-10-92)

(1) Surface seal; (12-10-92)

(2) Casing; (12-10-92)

(3) Casing perforations, screens, gravel packs; and (12-10-92)

(4) Pump location; and (12-10-92)

iv. Other information as may be specified by the Department. (12-10-92)

d. Test pumping. Upon completion of a groundwater source, test pumping shall be conducted in accordance with the following procedures to meet the specified requirements: (12-10-92)

i. A small capacity well yielding less than fifty (50) gallons per minute shall be test pumped for a minimum of four (4) hours at a rate equal to the permanent pump rate or until the drawdown stabilizes; (12-10-92)

ii. A large capacity well, one that yields more than fifty (50) gallons per minute, shall be test pumped at a rate of one hundred twenty five percent (125%) of the desired yield of the well. The test period shall be a minimum of six (6) hours, and longer if necessary to stabilize the drawdown. If the well fails the test, the design must

- be re-evaluated and resubmitted to the Department; and (12-10-92)
- iii. Fifteen (15) minutes after the start of the test pumping, the sand content of a new well shall not be more than five (5) parts per million. Sand production shall be measured by a centrifugal sand sampler or equivalent. If sand production exceeds five (5) ppm, the well shall be screened and gravel packed. (12-10-92)
 - e. A sample tap shall be provided on the discharge piping from every well; (12-10-92)
 - f. The discharge line shall be equipped with the necessary valves and appurtenances to allow a well to be pumped to waste via an approved air gap; (12-10-92)
 - g. A pressure gauge shall be provided at all installations; (12-10-92)
 - h. A flow meter shall be installed on the discharge line of each well; (12-10-92)
 - i. All wells except flowing artesian wells shall be vented, with the open end of the vent screened and terminated downward at least eighteen (18) inches above the floor of the pump house. (12-10-92)
 - j. The following requirements apply to well casings and seals: (12-10-92)
 - i. Casings shall extend a minimum of twelve (12) inches above the finished ground surface and six (6) inches above the well house floor. (12-10-92)
 - ii. Wells shall be cased and sealed in such a manner that surface water cannot enter the well. (12-10-92)
 - iii. A watertight seal shall be provided at the top of the well casing, and shall not allow water to enter the well. (12-10-92)
 - iv. Wells completed in unconsolidated water bearing formations shall be constructed to prevent caving of the walls of the well and sand pumping. Screens and/or gravel packs shall be provided where fine grained materials such as sands are being developed as the source of water. (12-10-92)
 - k. The following requirements apply to well houses: (12-10-92)
 - i. Well houses shall be protected from flooding and be adequately drained. (12-10-92)
 - ii. Well houses shall be provided with a locking door or access to prohibit unauthorized entrance. (12-10-92)
 - iii. Well houses shall be kept clean and in good repair and shall not be used to store toxic or hazardous materials. (12-10-92)
 - iv. Floor drains shall not be connected to sewers, storm drains, chlorination room drains, or any other source of contamination. (12-10-92)
 - v. Sumps for well house floor drains shall not be closer than thirty (30) feet from the well. (12-10-92)
 - vi. Pitless adapters or pitless units: (12-10-92)
 - (1) Shall be of the type marked approved by the National Sanitation Foundation or Pitless Adapter Division of the Water Systems Council. (12-10-92)
 - (2) Shall be designed, constructed and installed to be watertight including the cap, cover, casing extension and other attachments. (12-10-92)
 - (3) Shall be field tested for leaks before being put into service. The procedure outlined in "Manual of

Individual Water Supply Systems", as set forth in Subsection 002.01.d., or other procedure approved by the Department shall be followed. (12-10-92)

l. Wells shall not be located in pits. Exceptions to Subsection 550.03.l. will be granted by the Department if the well was constructed prior to November 5, 1964, and the installation is constructed or reconstructed in accordance with the requirements of the Department to provide watertight construction of pit walls and floors, floor drains and acceptable pit covers. (12-10-92)

m. A well lot shall be provided for wells constructed after November 1, 1977. The well lot shall be owned in fee simple by the supplier of water or controlled by lease with a term of not less than the useful life of the well and be large enough to provide a minimum distance of fifty (50) feet between the well and the nearest property line. (12-10-92)

n. Prior to drilling, the well site must be approved in writing by the Department. (12-10-92)

o. New community water systems constructed after July 1, 1985, shall have a minimum of two (2) sources if they serve more than twenty-five (25) homes. (12-10-92)

p. No pesticides, herbicides, or fertilizers shall be applied to a well lot without prior approval from the Department. (12-10-92)

q. No pesticides, herbicides, fertilizers, petroleum products, or other toxic or hazardous materials shall be stored on a well lot. (12-10-92)

04. Springs. Any supplier of water for a public water system served by one (1) or more springs shall ensure that the following requirements are met: (12-10-92)

a. Springs shall be housed in a permanent structure and protected from contamination including the entry of surface water, animals, and dust; (12-10-92)

b. A sample tap shall be provided; (12-10-92)

c. A flow meter or other flow measuring device shall be provided; and (12-10-92)

d. The entire area within one hundred (100) feet of the spring shall be owned by the supplier of water or controlled by a long term lease, fenced to prevent trespass of livestock and void of buildings, dwellings and sources of contamination. Surface water and drainage ditches shall be diverted from this area. (12-10-92)

05. Surface Sources And Groundwater Sources Under The Direct Influence Of Surface Water. (10-1-93)

a. Design Criteria. (12-1-92)

i. The system shall ensure that filtration and disinfection facilities for surface water or groundwater directly influenced by surface water sources are designed, constructed and operated in accordance with all applicable engineering practices designated by the Department. (12-10-92)

ii. Filtration facilities (excluding disinfection) shall be designed, constructed and operated to achieve at least two (2) log removal of *Giardia lamblia* cysts and one (1) log removal of viruses, except as allowed under Subsection 550.05.b.iii.; and (10-1-93)

iii. Disinfection facilities shall be designed, constructed and operated so as to achieve at least one half (0.50) log inactivation of *Giardia lamblia* cysts; and (10-1-93)

(1) Two (2) log inactivation of viruses if using conventional and slow sand filtration technology; or (12-10-92)

- (2) Three (3) log inactivation of viruses if using direct and diatomaceous earth filtration technology; or (12-10-92)
- (3) Four (4) log inactivation of viruses if using alternate filtration technology. (12-10-92)
- (4) Four (4) log inactivation of viruses if filtration treatment is not used. (10-1-93)
- iv. Higher levels of disinfection than specified under Subsection 550.05.a.iii. may be required by the Department in order to provide adequate protection against giardia and viruses. (10-1-93)
- v. For plants constructed after December 31, 1992, each filter unit must be capable of filter to waste. (12-10-92)
- vi. For plants constructed prior to December 31, 1992, each filter unit must be capable of filter to waste unless the system demonstrates through continuous turbidity monitoring or other means acceptable to the Department that water quality is not adversely affected following filter backwashing, cleaning or media replacement. (12-10-92)
- vii. For conventional, direct and diatomaceous earth filtration technology, equipment must be provided to continuously measure the turbidity of each filter bed. (12-10-92)
- viii. Equipment must be provided and operated for continuous measurement of disinfectant residual prior to entry to the distribution system, unless the system serves fewer than three thousand three hundred (3,300) people. (12-10-92)
- ix. Diatomaceous earth filtration facilities shall include an alternate power source with automatic startup and alarm, or be designed in a manner to ensure continuous operation. (12-10-92)
- b. Filtration technology. (12-10-92)
- i. The purveyor shall select a filtration technology acceptable to the Department. (12-10-92)
- ii. Conventional, direct, slow sand and diatomaceous earth filtration technologies are generally acceptable to the Department on a case-by-case basis. (12-10-92)
- iii. Alternate filtration technologies may be acceptable if the purveyor demonstrates all of the following to the satisfaction of the Department: (12-10-92)
- (1) That the filtration technology: (12-10-92)
- (a) Is certified and listed by the National Sanitation Foundation (NSF) under Standard 53, Drinking Water Treatment Units - Health Effects, as achieving the NSF criteria for cyst reduction; or (12-10-92)
- (b) Removes or inactivates at least ninety-nine (99%) percent (two (2) logs) of Giardia lamblia cysts or Giardia lamblia cyst surrogate particles in a challenge study acceptable to the Department. (12-10-92)
- (2) Using field studies or other means acceptable to the Department, that the filtration technology: (12-10-92)
- (a) In combination with disinfection treatment, consistently achieves ninety-nine and nine tenths percent (99.9%) (three (3) logs) removal or inactivation of Giardia lamblia cysts and ninety-nine and ninety-nine hundredths percent (99.99%) (four (4) logs) removal or inactivation of viruses; and (12-10-92)
- (b) Meets the turbidity performance requirements of 40 CFR 141.73 (b). (12-10-92)
- c. Pilot Studies. The system shall conduct pilot studies in accordance with the following requirements for all proposed filtration facilities and structural modifications to existing filtration facilities, unless the Department modifies the requirements in writing: (12-10-92)

- i. The system shall obtain the Department's approval of the pilot study plan before the pilot filter is constructed and before the pilot study is undertaken. (12-10-92)
- ii. The design and operation of the pilot study shall be overseen by a licensed professional engineer. (12-10-92)
- iii. The system's pilot study plan shall identify at a minimum: (12-10-92)
 - (1) The objectives of the pilot study; (12-10-92)
 - (2) Pilot filter design; (12-10-92)
 - (3) Water quality and operational parameters to monitor; (12-10-92)
 - (4) Amount of data to collect; and (12-10-92)
 - (5) Qualifications of the pilot plant operator. (10-1-93)
- iv. The system shall ensure that the pilot study is: (12-10-92)
 - (1) Conducted to simulate conditions of the proposed full-scale design; (12-10-92)
 - (2) Conducted for at least twelve (12) consecutive months; (12-10-92)
 - (3) Conducted to evaluate the reliability of the treatment system to achieve applicable water quality treatment criteria specified for filtration systems in 40 CFR 141.72 and 40 CFR 141.73; and (12-10-92)
 - (4) Designed and operated in accordance with good engineering practices documented in references acceptable to the Department. (12-10-92)
- d. New systems constructed after July 1, 1985, are required to install backup disinfection facilities. (12-10-92)

06. Distribution System. Any supplier of water for a public water system shall ensure that the distribution system complies with all of the following requirements: (12-10-92)

- a. The distribution system shall be protected from contamination and be designed to prevent contamination by steam condensate or cooling water from engine jackets or other heat exchange devices. (12-10-92)
- b. Booster pumps must comply with the following: (12-10-92)
 - i. In-line booster pumps shall maintain an operating pressure no less than twenty (20) psi, and shall be supplied with an automatic cutoff when intake pressure is less than or equal to five (5) psi. (12-10-92)
 - ii. Booster pumps located on suction lines directly connected to any storage reservoirs shall be supplied with an automatic cutoff when pressure is equal to or less than two and one-half (2.5) psi. (12-10-92)
- c. Pipe materials and standards will comply with the following: (12-10-92)
 - i. Pipe, packing and jointing materials shall be manufactured, installed and tested in conformance with the current standards of the American Water Works Association, as set forth in Subsection 002.01.j., or other standards approved in writing by the Department. (7-1-97)
 - ii. Pipe shall be manufactured of materials resistant internally or externally to corrosion, and not imparting tastes, odors, color or any contaminant into the system. (12-10-92)

d. Fire hydrants shall not be connected to water mains smaller than six (6) inches in diameter, and fire hydrants shall not be installed unless fireflow is provided. (12-10-92)

e. Water and sewer (sanitary or storm) mains shall be separated by a horizontal distance no less than ten (10) feet. In any instance where such separation is not achievable, the following standards shall be met: (7-1-97)

i. The water and sewer mains shall be separated by at least six (6) horizontal feet measured between the outside walls of the pipes, and the sewer main shall be constructed to water main standards or shall be encased in no less than four (4) inches of concrete at all such points; and (12-10-92)

ii. The water main shall be a minimum of eighteen (18) inches above the sewer main. (12-10-92)

f. The requirements for vertical separation of water and sewer mains are as follow: (10-1-93)

i. At any point where the sewer and water mains cross, they shall be separated by a vertical distance of no less than eighteen (18) inches. (12-10-92)

ii. At any point where the sewer main crosses above the water main, the sewer main shall be supported to prevent settling. (12-10-92)

iii. At any point where the sewer and water mains cross, the water main shall be centered at the crossing so that the joints will be an equal distance and as far as possible from the sewer main. (12-10-92)

iv. If the water main is below the sewer main, the sewer main shall be constructed of materials conforming to water main standards if the eighteen (18) inch vertical separation cannot be maintained. (12-10-92)

v. In lieu of constructing or reconstructing the sewer main either the sewer main or water main may be encased with four (4) inches of concrete for a distance of ten (10) horizontal feet on both sides of the crossing. (12-10-92)

g. All other pipelines which carry nonpotable water shall meet the minimum separation requirements of Subsection 550.06.e. and 550.06.f. (10-1-93)

h. A minimum horizontal distance of twenty-five (25) feet shall be maintained between a subsurface sewage disposal system and any water distribution pipe. (12-10-92)

i. All dead end water mains shall be equipped with a means of flushing and shall be flushed at least semiannually. (12-10-92)

j. Leaking water mains shall be repaired or replaced upon discovery and disinfected in accordance with American Water Works Association standards as set forth in Subsection 002.01.j. (7-1-97)

07. Cross Connection. All suppliers of water for community water systems shall implement a cross connection control program to prevent the entrance of toxic or hazardous substances to the system. The program will include: (12-10-92)

a. An inspection once a year of all facilities listed in Subsection 900.02 (Table 2) to locate cross connections and determine required suitable protection. (12-10-92)

b. Required installation and operation of adequate backflow prevention devices. A list of minimum recommended devices for various facilities is provided in Subsection 900.02 (Table 2). (12-10-92)

c. Annual inspections by an American Water Works Association-certified tester, or equal, of all installed backflow prevention devices to insure operability. (7-1-97)

d. Discontinuance of service to any facility where suitable backflow protection has not been provided for a cross connection. (12-10-92)

e. If double check valves and/or reduced pressure principle backflow prevention devices are used, they must pass a performance test conducted by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research or meet American Water Works Association C-510 or C-511 standard, or another equal test approved by the Department. (7-1-97)

f. If atmospheric vacuum breakers and pressure vacuum breakers are used, they shall be marked approved by the International Association of Plumbing and Mechanical Officials (IAPMO) or by the American Society of Sanitation Engineers (ASSE). (10-1-93)

g. Resilient seated shutoff valves shall be used after the effective date of these rules when double check valves, reduced pressure backflow prevention devices, and pressure vacuum breakers are installed. (12-10-92)

08. Water Storage. Storage reservoirs shall be constructed and maintained so that the following requirements are met: (12-10-92)

a. All storage reservoirs shall be protected from flooding; (12-10-92)

b. Stored water shall be protected from contamination; (12-10-92)

c. All storage reservoirs shall have watertight roofs or covers and be sloped so that water will drain; (12-10-92)

d. Manholes shall be fitted with an overlapping watertight locked cover and be at least four (4) inches above the surface of the roof; (12-10-92)

e. Overflows and drains shall have free fall discharges which are screened and shall not be connected to a sewer (storm or sanitary); (12-10-92)

f. Any vent shall extend twelve (12) inches above the roof and be constructed and screened to exclude rain, snow, birds, animals, insects, dust and other potential sources of contamination; (12-10-92)

g. The bottom of any reservoir located below the ground surface shall be constructed a minimum of four (4) feet above the high groundwater table; and (12-10-92)

h. There shall be a minimum distance of fifty (50) feet between any storage reservoir and any sanitary sewers, storm sewers, standing water, or any other source of contamination. Hydropneumatic (pressure) tanks are acceptable only for small water systems serving less than fifty (50) homes. (12-10-92)

09. Disinfection. Any supplier of water for a public water system shall ensure that new construction or modifications to an existing system will be flushed and disinfected in accordance with American Water Works Association Standards, as set forth in Subsection 002.01.j., prior to being placed into service. (7-1-97)

10. Violations. Any failure to comply with any provision contained in Section 550 shall be considered a design or construction defect. (12-10-92)

551. CONSTRUCTION REQUIREMENTS FOR PUBLIC WATER SYSTEMS.

01. Engineering Report. For all new water systems or modifications to existing water systems, an engineering report shall be submitted for the Department's review and approval prior to or concurrent with the submittal of plans and specifications as required in Subsection 551.04. This report shall provide the following information: (12-10-92)

a. A general description and location of the project; (12-10-92)

b. The estimated design population of the project; (12-10-92)

- c. Design data for domestic, irrigation, fire fighting, commercial and industrial water uses, including maximum hourly, maximum daily, and average daily demands; (12-10-92)
- d. Storage requirements; (12-10-92)
- e. Pressure ranges for normal and peak flow conditions; (12-10-92)
- f. A hydraulic analysis of the distribution system if requested by the Department; (12-10-92)
- g. Adequacy, quality and availability of sources of water; (12-10-92)
- h. For a community system, results of analysis for total coliform, turbidity inorganic chemical contaminants, organic chemicals other than trihalomethanes, radionuclide contaminants, and total trihalomethanes listed in Subsections 050.02, 100.01, 100.03, 100.04, and 100.12, unless analysis is waived pursuant to Subsection 100.07. (4-5-00)
- i. For a nontransient noncommunity system, results of analysis for total coliform and inorganic and organic chemical contaminants listed in Subsections 100.01, 100.03, and 100.04, unless analysis is waived pursuant to Subsection 100.07. (12-10-92)
- j. For a noncommunity system, results of a total coliform, nitrite, and nitrate analysis listed in Subsections 100.01 and 100.03. (12-10-92)
- k. For any system supplied by surface water or groundwater under the direct influence of surface water, results of turbidity analysis listed in Subsection 100.02. (12-10-92)
- l. For all new groundwater sources, including but not limited to wells, springs, and infiltration galleries, systems shall supply information as required by the Department to determine if these sources are under the direct influence of the surface water. (12-10-92)
- m. Potential sources of contamination to proposed sources of water; (12-10-92)
- n. Mechanisms for protection of the system from flooding; (12-10-92)
- o. In addition to the items listed in Subsections 551.01.a. through 551.01.n., the following information must be provided for proposed surface water sources and groundwater sources under the direct influence of surface water: (12-10-92)
 - i. Hydrological and historical low stream flow data; (12-10-92)
 - ii. A copy of the water right from the Idaho Department of Water Resources; (12-10-92)
 - iii. Anticipated turbidity ranges, high and low; and (12-10-92)
 - iv. Treatment selection process and alternative evaluations. (12-10-92)
- p. In addition to the items listed in Subsections 551.01.a. through 551.01.n., the following information must be provided for a proposed groundwater source: (12-10-92)
 - i. A site plan including potential sources of contamination within five hundred (500) feet of a well or spring; (12-10-92)
 - ii. Dimensions of the well lot; and (12-10-92)
 - iii. Underground geological data and existing well logs. (12-10-92)
- 02. Ownership.** Documentation of the ownership and responsibility for operating the proposed system

shall be made available to the Department prior to or concurrent with the submittal of plans and specifications as required in Subsection 551.04. The documentation must show organization and financial arrangements adequate to assure construction, operation and maintenance of the system according to these rules. Documentation shall also include the name of the water system, the name, address, and phone number of the supplier of water, the system size, and the name, address, and phone number of the system operator. (10-1-93)

03. Connection To An Existing System. If the proposed project is to be connected to an existing public water system, a letter from the purveyor must be submitted to the Department stating that they will be able to provide services to the proposed project. This letter must be submitted prior to or concurrent with the submittal of plans and specifications as required in Subsection 551.04. (12-10-92)

04. Review Of Plans And Specifications. (12-1-92)

a. Prior to construction of new public water supply systems or modifications of existing public water supply systems, plans and specifications must be submitted to the Department for review, and approved. The minimum review requirements are as follow: (10-1-93)

i. Plans and specifications shall be submitted by an Idaho registered professional engineer and bear the imprint of the engineer's seal; (12-10-92)

ii. Plans shall provide topographical data; (12-10-92)

iii. Plans shall show location of sources or potential sources of contamination; (12-10-92)

iv. Plans shall require all new equipment, piping, and appurtenances to meet American Water Works Association standards, as set forth in Subsection 002.01.j. Used materials shall be approved by the Department prior to installation, and shall have been used previously only in the delivery of potable water; and (7-1-97)

v. Plans shall specify that the project is to be disinfected prior to use in accordance with American Water Works Association standards, as set forth in Subsection 002.01.j. (7-1-97)

b. During construction or modification, no deviation can be made from the approved plans without the Department's prior written approval; and (12-10-92)

c. Within thirty (30) days after the completion of construction, as constructed plans and specifications are to be submitted to the Department by an Idaho registered professional engineer. If the construction did not deviate from the approved plans and specifications, a registered professional engineer may certify in writing that the constructed plans and specifications are the same as the originally submitted plans and specifications. (12-10-92)

05. Exclusion. A District Health Department may exclude noncommunity water systems from the Department's plan and specification review if the District has reviewed the project and will inspect it during construction. (12-10-92)

06. Construction. No construction shall commence until all of the necessary approvals have been received from the Department. (12-10-92)

07. Source. Before a public water system uses a new source of water to provide water to consumers, the source shall be approved by the Department. (12-10-92)

552. OPERATING CRITERIA FOR PUBLIC WATER SYSTEMS.

01. Quantity And Pressure Requirements. (12-1-92)

a. Minimum Pressure. (12-1-92)

i. Any public water system shall be capable of providing sufficient water during maximum hourly demand conditions (excluding fire flow) to maintain a minimum pressure of twenty (20) psi within the system

- measured at the consumer's water tap. (12-10-92)
- ii. Any public water system constructed after July 1, 1985, shall maintain a minimum design working pressure of thirty-five (35) psi and a normal working pressure of sixty (60) psi, measured at the consumer's water tap. (12-10-92)
 - b. Fire Flows. (12-1-92)
 - i. Any public water system designed to provide fire flows shall be designed to provide such flows in addition to maximum daily demand for all other uses combined. (12-10-92)
 - ii. Fire flows shall be compatible with the water demand of existing and planned fire fighting equipment and fire fighting practices in the area served by the system. (12-10-92)
 - c. 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 cultivable land up to one (1) acre per lot. (12-10-92)
 - ii. The requirement of Subsection 552.01.c.i. shall not apply if: (12-10-92)
 - (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. (12-10-92)
 - iii. If a separate nonpotable irrigation system is provided for the consumers, all mains, hydrants and appurtenances shall be easily identified as nonpotable. All new potable services shall be sampled after installation for coliform bacteria to assure no cross connections with the irrigation system exist. (12-10-92)

02. Additives. No chemical or other substance shall be added to drinking water, nor shall any process be utilized to treat drinking water, unless specifically approved by the Department. All chemicals shall conform to applicable American Water Works Association Standards as set forth in Subsection 002.01.j., and be listed as approved under ANSI/NSF standard 60 or 61, as set forth in Subsections 002.01.k.i. and 002.01.l. (7-1-97)

03. Groundwater. (12-10-92)

- a. Public water systems constructed after July 1, 1985, and supplied by groundwater, shall treat water within the system by disinfection if the groundwater 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 groundwater if the system consistently exceeds the MCL for coliform, 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)

04. Operating Criteria. The operating criteria for systems supplied by surface water or groundwater under the direct influence of surface water shall be as follows: (12-10-92)

a. Each system must develop and follow a water treatment operations plan acceptable to the Department, by July 31, 1993, or within six (6) months of installation of filtration treatment, whichever is later. For a maximum of twelve (12) months, this may be a draft operations plan based on pilot studies or other criteria acceptable to the Department. After twelve (12) months the plan shall be finalized based on full scale operation. (12-10-92)

b. The purveyor shall ensure that treatment facilities are operated in accordance with good engineering practices such as those found in the Recommended Standards for Water Works, A Committee Report of the Great Lakes - Upper Mississippi River Board of Department Public Health and Environmental Managers as set forth in Subsection 002.01.c., or other equal standard designated by the Department. (12-10-92)

c. New treatment facilities shall be operated in accordance with Subsection 552.04.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. (12-10-92)

05. Disinfection. Where chlorine is used as a disinfectant: (12-10-92)

a. Chlorinator capacity shall be such that a free chlorine residual of at least two (2) parts per million can be attained in the water after a contact time of thirty (30) minutes. This condition must be attainable even when the maximum hourly demand coincides with anticipated maximum chlorine demands. (12-10-92)

b. A minimum of at least two-tenths (0.2) ppm free chlorine shall be maintained in the treated water after an actual contact period of at least thirty (30) minutes at maximum hourly demand before delivery to the first consumer. (10-1-93)

c. Automatic proportioning chlorinators are required where the rate of flow is not reasonably constant. (12-10-92)

d. Analysis for free chlorine residual shall be made at least daily and records of these analyses shall be kept by the supplier of water for five (5) years. The frequency of measuring free chlorine residuals shall be sufficient to detect variations in chlorine demand or changes in water flow. (12-10-92)

e. A separate and ventilated room for gas chlorination equipment shall be provided. (12-10-92)

f. The Department may, in its discretion, require a treatment rate higher than that specified in Subsection 552.05.b. (12-10-92)

g. When chlorine gas is used, chlorine leak detection devices and safety equipment shall be provided in accordance with the 1992 Recommended Standards for Water Works, as set forth in Subsection 002.01.c. (12-10-92)

06. Fluoridation. (12-1-92)

a. Commercial sodium fluoride, sodium silico fluoride and hydrofluosilicic acid which conform to the applicable American Water Works Association Standards are acceptable as set forth in Subsection 002.01. j. Use of other chemicals shall be specifically approved by the Department. (4-5-00)

b. The accuracy of chemical feeders used for fluoridation shall be plus or minus five percent (5%) of the intended dose. (12-10-92)

c. Fluoride compounds shall be stored in covered or unopened shipping containers. Storage areas shall be ventilated. (12-10-92)

- d. Provisions shall be made to minimize the quantity of fluoride dust. (12-10-92)
- e. 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)

553. CLASSIFICATION OF WATER SYSTEMS.

01. Classification Requirement. All community and nontransient noncommunity public drinking water systems will be classified based on indicators of potential health risks. (3-10-00)

- a. Classification of systems will be completed for every community and nontransient noncommunity public drinking water system using rating forms developed in accordance with the criteria in Subsection 553.02. (3-10-00)
- b. System classifications will be reviewed at five (5) year intervals and revised to reflect changed conditions. (3-10-00)

02. Classification Criteria. Community and nontransient noncommunity public drinking water and distribution systems shall be classified under a system that uses the following criteria: (3-10-00)

- a. Complexity, size, source water for treatment facilities, (as determined by the guidelines established by the operator certifying entity). (3-10-00)
- b. Complexity and size of distribution systems. (3-10-00)
- c. Other criteria deemed necessary to completely classify systems. (3-10-00)

554. CERTIFICATION OF WATER SYSTEM OPERATORS.

01. System Operator Certification Requirement. Owners of all community and nontransient noncommunity water systems must place the direct supervision of their drinking water system, including each treatment facility and/or distribution system, under the responsible charge of an operator holding a valid certification equal to or greater than the classification of the drinking water system and/or distribution system. (3-10-00)

02. Operator Certification Requirement. Operators in responsible charge or equivalent of community and nontransient noncommunity public drinking water systems in Idaho, and who make process control/system integrity decisions about water quality or quantity that affect public health, shall hold a valid certification equal to or greater than the classification of their water system, including each treatment facility, where present, as determined by the Department. (3-10-00)

- a. A designated certified public drinking water system operator must be available for each operating shift. (3-10-00)
- b. All community and non-transient community public drinking water systems addressed in these rules shall be in compliance with these rules within two (2) years of April 15, 2000. (3-10-00)

03. Qualifications For Certification. To qualify for a certificate an applicant must meet requirements of education, experience and examination as described in Section 556. Applicants may also receive certification through reciprocity upon evaluation of his or her qualifications and comparison of Idaho certification rules to those of another state on a case-by-case basis. (3-10-00)

04. Administration Of The Certification Program. Administration of all aspects of the drinking water system operator certification program in Idaho shall be the responsibility of the Department. All administrative activities except enforcement may be contracted to an operator certifying entity. (3-10-00)

05. Contractor Activities. All administrative activities contracted to an operator certifying entity will

be carried out in accordance with these rules. (3-10-00)

555. GRANDPARENTING.

01. Grandparenting Certificate. A grandparenting certificate may only be issued to an existing operator in responsible charge of an existing public drinking water system. The grandparenting certificate will be site specific and non-transferable and can only be issued to an operator of a system that has demonstrated their competency to the director and which, because of state law changes to meet these guidelines, must have a certified operator for the first time. (3-10-00)

02. Application Limitations. The system must apply for grandparenting within (2) two years of April 15, 2000. (3-10-00)

03. Certification Limitations. Upon receiving a grandparenting certificate the operator shall be required to meet renewal requirements including but not limited to continuing education and renewal fee requirements. (3-10-00)

04. Plant Classification Limitations. If the plant classification of the system changes to a higher classification then the grandparenting certification is no longer valid. (3-10-00)

05. Revocation. A grandparenting certification may be suspended, reduced or revoked by the Director if the system remains in non-compliance for a period of time or in the opinion of the Director the operator is not performing their duties in a satisfactory way. (3-10-00)

06. One System Limitation. An operator who is the operator in responsible charge of more than one (1) system shall not be grandparented. (3-10-00)

556. REQUIREMENTS FOR CERTIFICATION.

01. Employment Requirement. Except for OIT Classification, applicants for certification must be currently employed or working in the drinking water field. (3-10-00)

02. Examination Requirement. Applicants must pass a written examination with a score of seventy percent (70%) or better. The examination will reflect different levels of knowledge, ability and judgement required for the established certification classes. Examinations will be administered in accordance with established examination procedures. (3-10-00)

03. Education And Experience Requirements For Public Drinking Water Operators. (3-10-00)

a. To qualify for an Operator-In -Training Certificate, an operator must have a high school diploma or GED and pass an Operator-In-Training exam. After passing an Operator-In-Training exam, a "one (1) time" non-renewable certificate of "Operator-In-Training" will be issued. This certificate will be valid for three (3) years only. After working one (1) year in the field and with no further testing required, the Operator-In-Training will be issued a Class I Certificate upon proof of twelve (12) months of operating experience in a Class I or higher water system and treatment facility.. (3-10-00)

b. To qualify for a Very Small Public Drinking Water System certificate an operator must have a high school diploma or GED and six (6) months of acceptable experience operating a very small water system or a higher system. (3-10-00)

c. To qualify for a Class I certificate an operator must have a high school diploma or GED and one (1) year of acceptable operating experience of a Class I or higher system and/or treatment facility. (3-10-00)

d. To qualify for a Class II certificate an operator must have a high school diploma or GED and three (3) years of acceptable operating experience of a Class I or higher system and/or treatment facility. (3-10-00)

e. To qualify for a Class III certificate an operator must have a high school diploma or GED and two

(2) years of post high school education in the environmental control field, engineering or related science; and four (4) years of acceptable operating experience of a Class II or higher system and/or treatment facility, including two (2) years of responsible charge. (3-10-00)

f. To qualify for a Class IV certificate an operator must have a high school diploma or GED; and four (4) years of post high school education in the environmental control field, engineering or related science; and four (4) years of acceptable operating experience of a Class III or higher system and/or treatment facility, including two (2) years of responsible charge. (3-10-00)

04. Substituting Education For Experience. Applicants may substitute education for operating and responsible charge experience as specified below: (3-10-00)

a. For Very Small Water System and Class I, no substitution for operating experience shall be permitted. (3-10-00)

b. For Class II, a maximum of one and one-half (1 ½) years of post high school education in the environmental control field, engineering or related science may be substituted for one and one-half (1 ½) years of operating experience. (3-10-00)

c. For Class III and IV, a maximum of two (2) years of post high school education in the environmental control field, engineering or related science may be substituted for two (2) years of operating experience; however the applicant must still have one (1) year of responsible charge experience. (3-10-00)

d. Education applied to operating experience shall not also be applied to education requirement. (3-10-00)

e. One (1) year of education above the high school level may be substituted for one (1) year experience, up to maximum of fifty percent (50%) of required operating or responsible charge experience. (3-10-00)

05. Substituting Experience For Education. Where applicable, operating and responsible charge experience may be substituted for education as specified below: (3-10-00)

a. One (1) year of operating experience may be substituted for two (2) years of grade school with no limitation or one (1) year high school with no limitation. (3-10-00)

b. For Class III and IV, additional responsible charge experience (that exceeding the two (2) year class requirements) may be substituted for post high school education on a two (2) for one (1) basis: two (2) years additional responsible charge = one (1) post high school education. (3-10-00)

c. Related experience may be substituted for experience up to one-half (½) of the operating experience requirement for Class II, III and IV. Experience that may be substituted includes but is not limited to the following: (3-10-00)

i. Experience as an environmental or operations consultant; (3-10-00)

ii. Experience in an environmental or engineering branch of federal, state, county, or local government; (3-10-00)

iii. Experience as a wastewater collection system operator; (3-10-00)

iv. Experience as a wastewater treatment plant operator; (3-10-00)

v. Experience as a water distribution system operator and/or manager; (3-10-00)

vi. Experience as a water treatment plant operator; or (3-10-00)

vii. Experience in waste treatment operation and maintenance. (3-10-00)

06. Equivalency Policy. Substitutions for education or experience requirements needed to meet minimum requirements for certification will be evaluated upon the following equivalency policies: (3-10-00)

- i. High School – High School diploma = GED or other equivalent = twelve (12) years. (3-10-00)
- ii. College – Thirty-five (35) credits = one (1) year (limited to curricula in environmental engineering, environmental sciences, water/wastewater technology, and/or related fields). (3-10-00)
- iii. Continuing Education Units (CEU) for specialized operator training courses, seminars, related college courses, and other training activities. Ten (10) classroom hours = one (1) CEU; forty-five (45) CEUs = one (1) year of college. (3-10-00)

557. RECIPROCITY.

The Director may waive examination requirements for applicants holding certificates or licenses issued by other States which have equivalent certification requirements. A certificate of appropriate class will be issued. (3-10-00)

558. CERTIFICATES AND RENEWALS.

01. Certificate Issuance. Upon satisfying the requirements of Section 556, a certificate will be issued to the applicant designating his level of operating competency. (3-10-00)

02. Certificate Renewal. Certificates shall be subject to payment of annual renewal fees and professional growth requirements. (3-10-00)

03. Attaining Higher Certification Level. Certified Water System Operators who desire to become certified in a higher grade must satisfactorily complete the higher-grade requirements before a new certificate will be issued. (3-10-00)

04. Invalidation Of Certificates. Certificates for which annual renewal card applications are not received within sixty (60) days after the expiration date or which do not satisfy the professional growth requirement of Subsection 558.09 will be invalid. (3-10-00)

05. Renewal Of Invalidated Certificates. Water System Operators whose certificates are invalidated may be renewed up to two (2) years provided appropriate proof of competency is presented and reinstatement fees are paid. (3-10-00)

06. Recertification. Water System Operators who have failed to renew or qualify for renewal of certificate(s) beyond two (2) years must recertify and provide appropriate proof of competency. (3-10-00)

07. Certificate Issuance. Appropriate classification will be issued to public drinking water system operators, who on the effective date of a mandatory program hold certificates of competency attained by examination under the voluntary program. (3-10-00)

08. Certificate Signatures. Certificates shall be signed by the Chairman and Secretary of the operator certifying entity. (3-10-00)

09. Professional Growth Requirement. Renewal of a certificate shall be based on demonstrations of continued professional growth in the field. A public drinking water system operator shall submit satisfactory evidence of completion of approved training of a minimum point six (0.6) CEUs as a condition for renewal of the certificate. The Water System Operator shall complete the required point six (0.6) CEUs after March 1 of the year preceding the renewal year. It is the obligation of the Water System Operator to present proof of CEUs along with the renewal fee. A Water System Operator holding more than one (1) certificate issued under these rules need only complete the training required to satisfy renewal requirements for one (1) of these certificates. (3-10-00)

10. Grandparented Certificate Renewal. In the first annual certification renewal cycle, grandparented operators shall complete and show documentation of completion of training that includes all

information covered by the initial certification exam. (3-10-00)

559. CONTRACTING FOR SERVICES.

Water systems that do not have a certified public drinking water system operator may contract with a certified public drinking water system operator or with a public drinking water system having certified operators to provide supervision. The contracted public drinking water system operator or contracted entity shall be certified at the grade equal to or greater than the classification of the plant or system. (3-10-00)

01. Supervision. For supervision required in this rule to be sufficient, the contracted certified water system operator or contracted entity shall: (3-10-00)

- a. Be available on twenty-four (24) hour call and able to respond onsite upon request. (3-10-00)
- b. Report the results of analyses or measurements that indicate maximum contaminant levels have been exceeded or that minimum treatment levels are not maintained and report the results of these analyses to the operator, owner, purveyor or supplier of water. (3-10-00)
- c. Recommend corrective action when the results of analyses or measurements indicate maximum contaminant levels have been exceeded or minimum treatment levels are not maintained. (3-10-00)
- d. Recommend that all elements of routine operation and maintenance of the water system are completed in accordance with accepted public health practice and these rules. (3-10-00)

02. Proof Of Contract. Proof of the contract shall be submitted to the Department. (3-10-00)

560. PENALTIES.

The Director may assess penalties in accordance with the following provisions: (3-10-00)

01. General Authority. Violations of these rules shall be punishable as provided in Title 39, Chapter 1, Idaho Code. (3-10-00)

02. Falsification And Forgery. Every person who knowingly procures or offers any false or forged instrument to be filed, registered or recorded in any public office within this state, which instrument, if genuine, might be filed or registered, or recorded under any law of this state, or of the United States, is guilty of a felony. Section 18-3203, Idaho Code. (3-10-00)

03. Civil Penalties. Pursuant to Section 39-108, Idaho Code, any person who violates these rules shall be subject to a civil penalty. Each and every violation is a separate and distinct offense and for continuing violations, each day's violation is separate and distinct. (3-10-00)

561. SUSPENSION, REDUCTION OR REVOCATION.

01. Suspend, Reduce Or Revoke An Operator's Certificate. The Director may suspend, reduce or revoke the certificate of an Operator following a hearing before the Board when the following conditions are found: (3-10-00)

- a. It is found that the Water System Operator has engaged in misconduct such as fraud, falsification of the application, or falsification of operating records. (3-10-00)
- b. The Water System Operator is found to be grossly negligent in the performance of his duties. (3-10-00)
- c. It is found that the Water System Operator has failed to use reasonable care and judgement in the performance of his duties or the application of his knowledge and ability in the performance of his duties is unsatisfactory. (3-10-00)

02. Appeals. In the event of a decision to suspend, reduce or revoke a certificate under the conditions

set forth in this section, the holder of that certificate may appeal the decision as provided for in Sections 39-107(6) and 39-107(7), Idaho Code. and the rules of the Department of Health and Welfare, IDAPA 16.05.03, "Rules Governing Contested Case Proceedings and Declaratory Rulings". (3-10-00)

562. ADVISORY GROUP.

Stakeholder Involvement. Ongoing stakeholder involvement will be provided through the existing drinking water advisory committee at the Department. (3-10-00)

563. -- 899. (RESERVED).

900. TABLES

01. Table 1 - Minimum Distances From A Public Water System Well.

Minimum Distances from a Public Water System Well	
Sewer line	50 feet
Individual home septic tank	100 feet
Individual home disposal field	100 feet
Individual home seepage pit	100 feet
Privies	100 feet
Livestock	50 feet
Canals, streams, ditches, lakes, ponds and tanks used to store nonpotable substances	50 feet

(12-10-92)

02. Table 2 - Selection Chart For Minimum Backflow Prevention Services..

Selection Chart for Minimum Backflow Prevention Devices					
FACILITY	ATMOSPHERIC TYPE VACUUM BREAKER	PRESSURE TYPE VACUUM BREAKER	DOUBLE CHECK VALVE ASSEMBLY	REDUCED PRESSURE BACKFLOW PREVENTER	AIR GAP
Animal Watering	X	X		X	X
Aspirators, harmful substance	X	X		X	X
Autopsy Equipment	X	X		X	
Autoclaves				X	
Boiler Feeds with harmful chemicals (unharmful)			(X)	X	X
Bed Pan Washers	X	X			
Cuspidors, Open Outlet	X	X			
Cuspidors, Valved Outlet		X			
Dishwashers	X	X			X
Domestic Water Booster Pump on service lines			X	X	

Selection Chart for Minimum Backflow Prevention Devices					
FACILITY	ATMOSPHERIC TYPE VACUUM BREAKER	PRESSURE TYPE VACUUM BREAKER	DOUBLE CHECK VALVE ASSEMBLY	REDUCED PRESSURE BACKFLOW PREVENTER	AIR GAP
Garbage Can Washers		X			X
Heat Exchangers with transfer fluids			X	X	
High Rise Buildings, 3 stories or more, bldgs. on hill			X	X	
Irrigation Systems, such as cemeteries, golf courses, playgrounds, parks, estates, ranches, schools (with chemicals added)	X	X	X	(X)	(X)
Laundries with under rim or bottom-fill inlets, dry cleaning, and dye works	X	X		X	X
Mobile Home and RV Parks with nonapproved waste valves		X	X	X	
Mobile Home and RV Parks with below ground level service line termination				X	
Fixing Tees with steam and water used with harmful substances (unharmful)			(X)	X	
Private Water Sources which are unmonitored				X	
Radiator-Vats				X	X
Slaughter Houses (unable to eliminate or prevent cross connection)				X	
Car Washes using soaps and waxes (recycling water)			X	X	
Chemical Plants				X	X
Dockside Watering Facilities, Marinas	X		X	X	X
Film Laboratories				X	X
Food Processing Plants (unable to eliminate or prevent cross connections)			X	X	X
Fertilizer Plants (unable to eliminate or prevent cross connections)				(X)	X
Hospitals handling harmful substances (unable to eliminate or prevent cross connections)				X	
Lab Sink using toxics (unharmful)	X	X	X	X	
Meat Packing Plants (unable to eliminate or prevent cross connections)				X	
Medical Bldgs, clinics, laboratories, etc. (unable to eliminate or prevent cross connections)				X	
Nonpotable Water				X	X
Oil Refinery and Petroleum Storage Facilities (unable to eliminate or prevent cross connections)				X	
Sanitariums (unable to eliminate or prevent cross connections)	X	X		X	
Sewage Piping or Plants (unable to eliminate or prevent cross connections)				X	

Selection Chart for Minimum Backflow Prevention Devices					
FACILITY	ATMOSPHERIC TYPE VACUUM BREAKER	PRESSURE TYPE VACUUM BREAKER	DOUBLE CHECK VALVE ASSEMBLY	REDUCED PRESSURE BACKFLOW PREVENTER	AIR GAP
Tank Truck Fill Station				X	X
Mortuaries (unable to eliminate or prevent cross connections)				X	
Mortuary body washing hoses (installed at service connection)	X	X		(X)	
Hoses that could be in contact with animal waste	X	X			
Shampoo Sprays	X	X			
Sterilizers				X	
Steam Cookers using harmful substance (unharmful)			X	X	
Swim Pools, Hot Tubs, private or semiprivate	X	X		X	X
Swim Pools direct connection	X	X		X	X
Urinals	X			X	
Water Cooling or Heating Coils		X		X	
Water Closets	X			X	

X - indicates suitable protection to be required by the public water system. For facilities with multiple options, the public water system will determine the lowest degree of protection that is acceptable. (12-10-92)

901. -- 995. (RESERVED).

996. ADMINISTRATIVE PROVISIONS.

Contested case appeals shall be governed by Idaho Department of Health and Welfare Rules, Sections 16.05.03.000 et seq., "Rules Governing Contested Cases and Declaratory Rulings". (10-1-93)

997. CONFIDENTIALITY OF RECORDS.

Information obtained by the Department under these rules is subject to public disclosure pursuant to the provisions of Chapter 3, Title 9, Idaho Code. Information submitted under a trade secret claim may be entitled to confidential treatment by the Department as provided in Section 9-342A, Idaho Code, and the Rules of the Department of Health and Welfare Rules, IDAPA 16.05.01, "Rules Governing the Protection and Disclosure of Records in the Possession of the Division of Environmental Quality". (4-5-00)

998. INCLUSIVE GENDER.

For the purposes of these rules, words used in the masculine gender include the feminine, or vice versa, where appropriate. (10-1-93)

999. SEVERABILITY.

Idaho Department of Health and Welfare Rules, IDAPA 16.01.08, "Idaho Rules For Public Drinking Water Systems," are severable. If any rule, or part thereof, or the application of such rule to any person or circumstance is declared invalid, that invalidity does not affect the validity of any remaining portion of these rules. (10-1-93)

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