

**CHAPTER 62-550**  
**DRINKING WATER STANDARDS, MONITORING, AND REPORTING**

62-550.102	Intent and Scope
62-550.200	Definitions for Public Water Systems
62-550.300	Application of Quality Standards to Public Water Systems
62-550.310	Primary Drinking Water Standards: Maximum Contaminant Levels and Maximum Residual Disinfectant Levels
62-550.315	Primary Drinking Water Standards: Treatment Technique Requirements
62-550.320	Secondary Drinking Water Standards: Maximum Contaminant Levels
62-550.325	Secondary Drinking Water Standards: Treatment Technique Requirements for Control of Iron and Manganese
62-550.330	Other Contaminants Without a Standard
62-550.340	Small System Compliance Technologies
62-550.400	General Requirements for Unregulated Contaminants (Repealed)
62-550.500	General Monitoring and Compliance Measurement Requirements for Contaminants and Disinfectant Residuals
62-550.511	Asbestos Monitoring Requirements
62-550.512	Nitrate and Nitrite Monitoring Requirements
62-550.513	Inorganic Contaminants Monitoring Requirements
62-550.514	Disinfectant Residuals and Disinfection Byproducts Monitoring Requirements
62-550.515	Volatile Organic Contaminants Monitoring Requirements
62-550.516	Synthetic Organic Contaminants Monitoring Requirements
62-550.517	Physical Characteristics Monitoring Requirements
62-550.518	Microbiological Monitoring Requirements
62-550.519	Radionuclides Monitoring Requirements
62-550.520	Secondary Contaminants Monitoring Requirements
62-550.521	Unregulated Contaminants Monitoring Requirements
62-550.540	Monitoring of Consecutive Public Water Systems
62-550.550	Certified Laboratories and Analytical Methods for Public Water Systems
62-550.590	Public Water System Monitoring Information and Monitoring Schedule (Repealed)
62-550.720	Recordkeeping
62-550.730	Reporting Requirements for Public Water Systems
62-550.800	Control of Lead and Copper
62-550.817	Additional Requirements for Subpart H Water Systems
62-550.821	Disinfectant Residuals, Disinfection Byproducts (Stage 1), and Disinfection Byproduct Precursors
62-550.822	Initial Distribution System Evaluations and Stage 2 Disinfection Byproducts Requirements
62-550.824	Consumer Confidence Reports
62-550.828	Ground Water Rule
62-550.830	Revised Total Coliform Rule

**62-550.102 Intent and Scope.**

(1) To assure that public water systems supply drinking water which meets minimum requirements, the Federal Government enacted PL 93-523, the "Safe Drinking Water Act." The scheme of that law was to give primary responsibility for public water systems programs to states to implement a public water system program. Also, the legislature of Florida has enacted the "Florida Safe Drinking Water Act," Sections 403.850-.864, F.S. This chapter and Chapters 62-555 and 62-560, F.A.C., are promulgated to implement the requirements of the Florida Safe Drinking Water Act and to acquire and maintain primacy for Florida under the Federal Act. This chapter and Chapters 62-555 and 62-560, F.A.C., adopt national primary and secondary drinking water standards of the Federal Government where possible, and otherwise create additional rules to fulfill state and Federal requirements.

(2) The Safe Drinking Water Act and the Florida Safe Drinking Water Act exclude certain public water systems from coverage. The drinking water rules in Chapters 62-550, 62-555, and 62-560, F.A.C., apply to all public water systems except those which meet all of the following criteria:

- (a) Consist of distribution and storage facilities only and do not have any collection or treatment facilities;
- (b) Obtain all water from, but are not owned or operated by, a public water system to which such rules apply;
- (c) Do not sell water to any person; and
- (d) Are not carriers which convey passengers in interstate commerce.

(3) For the purpose of subsection (2) above, the phrase “sell water to any person” shall mean distribute water to land owned by another person as well as bill separately or specifically for the water. Also, for the purpose of subsection (2) above, the phrase “treatment facilities” shall exclude treatment facilities that are not necessary to achieve, and will not adversely affect, compliance with applicable drinking water standards and requirements.

(4) This chapter sets the drinking water standards, monitoring requirements, and treatment techniques to be met by public water systems and the testing protocol required for certified laboratories.

(5) Chapter 62-555, F.A.C., sets the permitting requirements for public water systems including the location and construction of wells serving the system and the treatment plant. Construction of public water systems require permits and the use of lead free pipes, plumbing fixtures, solder and flux. General permits for public water systems are included. Engineering references are listed.

(6) Chapter 62-560, F.A.C., gives the description of the violations of Chapters 62-550, 62-555 and 62-560, F.A.C., and the resulting penalties. In addition, this chapter describes public notification requirements for public water systems that do not meet applicable maximum contaminant levels, maximum residual disinfectant levels, and treatment technique requirements; do not meet applicable monitoring requirements; or have a variance or exemption. This chapter also describes the availability and processes for receiving variances, exemptions, and waivers. Additionally, Best Available Technology is listed for various contaminants and disinfectant residuals.

*Rulemaking Authority 403.861(9) FS. Law Implemented 403.851, 403.853 FS. History—New 11-9-77, Amended 1-13-81, Formerly 17-22.102, Amended 1-18-89, Formerly 17-550.102, Amended 12-9-96, 11-27-01, 4-3-03, 11-28-04.*

#### **62-550.200 Definitions for Public Water Systems.**

For the purpose of this chapter and Chapters 62-555 and 62-560, F.A.C., the following words, phrases, or terms shall have the following meaning:

(1) “Action Level” is the concentration of lead or copper in water specified in 40 C.F.R. §141.80(c) (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., which determines, in some cases, the treatment requirements contained in 40 C.F.R Part 141, Subpart I (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., that a system is required to complete.

(2) “Adequate Protection by Treatment” means any one or any combination of the controlled processes of coagulation, sedimentation, absorption, adsorption, filtration, or other processes in addition to disinfection which produce a water that consistently meets the requirements of the standards in Rules 62-550.310 through 62-550.410, F.A.C., including processes which are appropriate to the source of supply; systems which are of adequate capacity to meet maximum demands without creating health hazards and which are located, designed, and constructed to eliminate or prevent violations of these rules; and conscientious operation by well-trained and competent personnel who meet the requirements of Chapters 62-602 and 62-699, F.A.C.

(3) “Annular Space” means the space between two casings or the space between the outer casing and the wall of the bore hole.

(4) “Approved County Health Department” means county health departments designated by the Department of Health and approved by the Department as having qualified sanitary engineering staffs to perform the duties described in Section 403.862(1)(c), F.S.

(5) “Bag Filters” are pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed of a non-rigid, fabric filtration media housed in a pressure vessel in which the direction of flow is from the inside of the bag to outside. (40 C.F.R. §141.2 (July 1, 2011)).

(6) “Bank Filtration” is a water treatment process that uses a well to recover surface water that has naturally infiltrated into ground water through a river bed or bank(s). Infiltration is typically enhanced by the hydraulic gradient imposed by a nearby pumping water supply or other well(s). (40 C.F.R. §141.2 (July 1, 2011)).

(7) “Best Available Technology” or “BAT” means the best technology, treatment techniques, or other means promulgated by EPA and adopted by the Department. In promulgating BAT the EPA examines the efficacy under field conditions and not solely under laboratory conditions, and takes costs into consideration when determining what technology or treatment technique is

available.

(8) “Bottled Water” means water that is containerized or packaged and offered for human consumption or other consumer usage.

(9) “Capacity Development” means the process of water systems acquiring and maintaining adequate technical, managerial, and financial capabilities to enable them to consistently provide safe drinking water.

(10) “Cartridge Filters” are pressure-driven separation devices that remove particulate matter larger than 1 micrometer using an engineered porous filtration media. They are typically constructed as rigid or semi-rigid, self-supporting filter elements housed in pressure vessels in which flow is from the outside of the cartridge to the inside. (40 C.F.R. §141.2 (July 1, 2011))

(11) “Casing” means the tubular material used to shut off or exclude a stratum or strata other than the source bed and conduct water from only the source bed to the surface.

(12) “Check Sample” means a sample analysis or analyses used to confirm the results of another sample. Each sample for the analysis shall be taken or measured at the same location in the water system as the original sample.

(13) “Clean Compliance History” is, for the purposes of 40 C.F.R. Part 141, Subpart Y, which is incorporated by reference in Rule 62-550.830, F.A.C., a record of no MCL violations under 40 C.F.R. §141.63, as incorporated in subsection 62-550.310(5), F.A.C.; no monitoring violations under 40 C.F.R. §141.21, as incorporated in Rule 62-550.518, F.A.C., or 40 C.F.R. Part 141, Subpart Y; and no coliform treatment technique trigger exceedances or treatment technique violations under 40 C.F.R. Part 141, Subpart Y. (40 C.F.R. §141.2 revised as of July 1, 2014.) This subsection shall be effective on July 7, 2015.

(14) “Coagulation” means a process using coagulant chemicals and mixing by which colloidal and suspended materials are destabilized and agglomerated into flocs.

(15) “Combined Distribution System” is the interconnected distribution system consisting of the distribution systems of wholesale systems and of the consecutive systems that receive finished water. (40 C.F.R. §141.2 (July 1, 2011))

(16) “Commencement of Operations” means the beginning of the service of furnishing water treated by the water system to the consumers.

(17) “Community Water System” (CWS) means a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

(18) “Compliance Cycle” means the nine-year cycle during which public water systems must monitor. Each compliance cycle consists of three-year compliance periods. The first compliance cycle begins January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011 and ends December 31, 2019.

(19) “Compliance Period” means a three-year period within a compliance cycle. Each compliance cycle has three three-year compliance periods. Within the first compliance cycle, the first compliance period runs from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998; the third from January 1, 1999 to December 31, 2001.

(20) “Comprehensive Performance Evaluation (CPE)” is 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. For purpose of compliance with Subparts P and T of 40 C.F.R. Part 141 (which are incorporated by reference in paragraphs 62-550.817(3)(a) and (b), F.A.C.), the comprehensive performance evaluation 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. (40 C.F.R. §141.2 (July 1, 2011))

(21) “Confirmation Sample” means a sample analysis or analyses taken to verify the results of an original analysis. Each sample for the analysis shall be taken or measured at the same location in the water system as the original sample. The results of the confirmation samples shall be averaged with the original sample to determine compliance.

(22) “Confluent Growth” means a continuous bacterial growth covering the entire filtration area of a membrane filter used for coliform detection, or a portion thereof, in which bacterial colonies are not discrete.

(23) “Consecutive System” is a public water system that receives some or all of its finished water from one or more wholesale systems. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems. (40 C.F.R. §141.2 (July 1, 2011))

(24) “Contaminant” means any physical, chemical, biological, or radiological substance or matter in water.

(25) “Conventional Filtration Treatment” means a series of processes including coagulation, flocculation, sedimentation, and

filtration resulting in substantial particulate removal.

(26) “Corrosion Inhibitor” means a substance capable of reducing the corrosivity of water toward metal plumbing materials, especially lead and copper, by forming a protective film on the interior surface of those materials.

(27) “Cross-Connection” means any physical arrangement whereby a public water supply is connected, directly or indirectly, with any other water supply system, sewer, drain, conduit, pool, storage reservoir, plumbing fixture, or other device which contains or may contain contaminated water, sewage or other waste, or liquid of unknown or unsafe quality which may be capable of imparting contamination to the public water supply as the result of backflow. By-pass arrangements, jumper connections, removable sections, swivel or changeable devices, and other temporary or permanent devices through which or because of which backflow could occur are considered to be cross-connections.

(28) “CT” or “CTcalc” is the product of “residual disinfectant concentration” (C) in mg/L determined before or at the first customer, and the corresponding “disinfectant contact time” (T) in minutes, i.e., “C” x “T”. If a public water system applies disinfectants at more than one point prior to the first customer, it must determine the CT of each disinfectant sequence before or at the first customer to determine the total percent inactivation or “total inactivation ratio.” In determining the total inactivation ratio, the public water system must determine the residual disinfectant concentration of each disinfection sequence and corresponding contact time before any subsequent disinfection application point(s). “CT<sub>99.9</sub>” is the CT value required for 99.9 percent (3-log) inactivation of *Giardia lamblia* cysts. CT<sub>99.9</sub> for a variety of disinfectants and conditions appear in Tables 1.1 – 1.6, 2.1, and 3.1 of 40 C.F.R. §141.74(b)(3) (which is incorporated by reference in subsection 62-550.817(2), F.A.C.). (CTcalc)/(CT<sub>99.9</sub>) is the inactivation ratio. The sum of the inactivation ratios, or total inactivation ratio shown as  $\sum[(CT_{calc})/(CT_{99.9})]$  is calculated by adding together the inactivation ratio for each disinfection sequence. A total inactivation ratio equal to or greater than 1.0 is assumed to provide a 3-log inactivation of *Giardia lamblia* cysts. (40 C.F.R. §141.2 (July 1, 2011))

(29) “Department” means the Department of Environmental Protection (DEP) and the Approved County Health Departments, and, where the context is appropriate, their employees.

(30) “Diatomaceous Earth Filtration” means a process resulting in substantial particulate removal in which a precoat cake of diatomaceous earth filter media is deposited on a support membrane (septum); and, while the water is filtered by passing through the cake on the septum, additional filter media known as body feed is continuously added to the feed water to maintain the permeability of the filter cake.

(31) “Direct Filtration” means a series of processes including coagulation and filtration but excluding sedimentation resulting in substantial particulate removal.

(32) “Disinfectant” means any oxidant, including but not limited to chlorine, chlorine dioxide, chloramines, and ozone added to water in any part of the treatment or distribution process, that is intended to kill or inactivate pathogenic microorganisms.

(33) “Disinfectant Contact Time” (“T” in CT calculations) means the time in minutes that it takes for water to move from the point of disinfectant application or the previous point of disinfectant residual measurement to a point before or at the point where residual disinfectant concentration (“C”) is measured. Disinfectant contact time in pipelines shall be calculated based on “plug flow” by dividing the internal volume of the pipe by the maximum hourly flow rate through that pipe. Disinfectant contact time within mixing basins and storage reservoirs shall be determined by tracer studies or in accordance with Appendix C or O of the guidance manual adopted in subsection 62-555.335(1), F.A.C.

(34) “Disinfection” means a process which inactivates pathogenic organisms in water by chemical oxidants or equivalent agents.

(35) “Disinfection Profile” is a summary of daily *Giardia lamblia* inactivation through the treatment plant. The procedure for developing a disinfection profile is contained in Rule 62-550.817, F.A.C.

(36) “Domestic or other Non-Distribution System Plumbing Problem” means a coliform contamination problem in a public water system with more than one service connection that is limited to the specific service connection from which the coliform-positive sample was taken.

(37) “Dose Equivalent” means the product of the absorbed dose from ionizing radiation and such factors as account for differences in biological effectiveness due to the type of radiation and its distribution in the body, specified by the International Commission on Radiological Units and Measurements (ICRU).

(38) “Dual Sample Set” is a set of two samples collected at the same time and same location, with one sample analyzed for TTHM and the other sample analyzed for HAA5. Dual sample sets are collected for the purpose of conducting an IDSE under Subpart U of 40 C.F.R. Part 141 (which is incorporated by reference in Rule 62-550.822, F.A.C.) and for the purpose of determining

compliance with the TTHM and HAA5 MCLs under Subpart V of 40 C.F.R. Part 141 (which is incorporated by reference in Rule 62-550.822, F.A.C.). (40 C.F.R. §141.2 (July 1, 2011))

(39) “Effective Corrosion Inhibitor Residual,” for the purpose of 40 C.F.R. Part 141, Subpart I (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., means a concentration sufficient to form a passivating film on the interior walls of a pipe.

(40) “Enhanced Coagulation” means the addition of sufficient coagulant for improved removal of disinfection byproduct precursors by conventional filtration treatment.

(41) “Enhanced Softening” means the improved removal of disinfection byproduct precursors by precipitative softening.

(42) “Exemption” means approval from the Department affording a public water system an extended time for compliance with an applicable maximum contaminant level, maximum residual disinfectant level, or treatment technique requirement due to compelling factors (which may include time, legal, or economic factors).

(43) “Filter Profile” means a graphical representation of individual filter performance, based on continuous turbidity measurements or total particle counts versus time for an entire filter run, from startup to backwash inclusively, and includes an assessment of filter performance while another filter is being backwashed.

(44) “Filtration” means a process for removing particulate matter from water by passage through porous media.

(45) “Finished Water” is water that is introduced into the distribution system of a public water system and is intended for distribution and consumption without further treatment, except treatment as necessary to maintain water quality in the distribution system (e.g., booster disinfection or addition of corrosion control chemicals). (40 C.F.R. §141.2 (July 1, 2011))

(46) “First Draw Sample” means a one-liter sample of tap water, collected in accordance with 40 C.F.R. §141.86(b)(2) (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., that has been standing in plumbing pipes at least 6 hours and is collected without flushing the tap.

(47) “Flocculation” means a process to enhance agglomeration or collection of smaller floc particles into larger, more easily settleable particles through gentle stirring by hydraulic or mechanical means.

(48) “Flowing Stream” is a course of running water flowing in a definite channel. (40 C.F.R. §141.2 (July 1, 2011))

(49) “GAC10” means granular activated carbon filter beds with an empty-bed contact time of 10 minutes based on average daily flow and a carbon reactivation frequency of every 180 days, except that the reactivation frequency for GAC10 used as a best available technology for compliance with 40 C.F.R. Part 141, Subpart V (Stage 2) MCLs under 40 C.F.R. §141.64(b)(2) (which is incorporated in sub-subparagraph 62-550.310(3)(b)2.a., F.A.C.), shall be 120 days. (40 C.F.R. §141.2 (July 1, 2011))

(50) “GAC20” means granular activated carbon filter beds with an empty-bed contact time of 20 minutes based on average daily flow and a carbon reactivation frequency of every 240 days. (40 C.F.R. §141.2 (July 1, 2011))

(51) “Gross Alpha Particle Activity” means the total radioactivity due to alpha particle emission as inferred from measurements on a dry sample.

(52) “Gross Beta Particle Activity” means the total radioactivity due to beta particle emission as inferred from measurements of a dry sample.

(53) “Ground Water under the Direct Influence of Surface Water” means any water beneath the surface of the ground with:

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

(b) Significant and relatively rapid shifts in water characteristics such as turbidity, temperature, conductivity, or pH which closely correlate to climatological or surface water conditions. Direct influence shall be determined for individual sources in accordance with criteria established by the Department in subparagraph 62-550.817(2)(a)1., F.A.C.

(54) “Haloacetic Acids (Five)” (HAA5) mean the sum of the concentrations in milligrams per liter of the haloacetic acid compounds (monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid) rounded to two significant figures after addition.

(55) “Halogen” as used in the present context of this rule means one of the chemical elements chlorine or bromine.

(56) “Health Hazards” means any conditions, devices, or practices in a water supply system or its operation which create or may create an imminent and substantial danger to the health and well-being of the water consumer.

(57) “Heterotrophic Plate Count” formerly known as the standard plate count, is a procedure for estimating the number of live heterotrophic bacteria in water. Unless stated otherwise, heterotrophic plate count refers to Method (9215A), the pour plate method,

as set forth in Standard Methods for Examination of Water and Wastewater, American Public Health Association, 17th Edition, 1989, pp. 9-58 to 9-60.

(58) "Human Consumption" means water which is ingested, or absorbed into the body by dermal contact or through inhalation, except water which is used solely for fire or chemical emergencies.

(59) "Initial Compliance Period" means the first full three-year compliance period that begins January 1, 1993.

(60) "Lake/Reservoir" refers to a natural or man made basin or hollow on the Earth's surface in which water collects or is stored that may or may not have a current or single direction of flow. (40 C.F.R. §141.2 (July 1, 2011))

(61) "Large System" for the purpose of 40 C.F.R. Part 141, Subpart I (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., means a water system that serves more than 50,000 people.

(62) "Lead Service Line" means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such a lead line.

(63) "Legionella" means a genus of bacteria some species of which have caused a type of pneumonia called Legionnaires Disease.

(64) "Level 1 Assessment" is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. It is conducted by the system operator or owner. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. (40 C.F.R. §141.2 revised as of July 1, 2014.) This subsection shall be effective on July 7, 2015.

(65) "Level 2 Assessment" is an evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices, and (when possible) the likely reason that the system triggered the assessment. A Level 2 assessment provides a more detailed examination of the system (including the system's monitoring and operational practices) than does a Level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices. It is conducted by an individual approved by the State, which may include the system operator. Minimum elements include review and identification of atypical events that could affect distributed water quality or indicate that distributed water quality was impaired; changes in distribution system maintenance and operation that could affect distributed water quality (including water storage); source and treatment considerations that bear on distributed water quality, where appropriate (e.g., whether a ground water system is disinfected); existing water quality monitoring data; and inadequacies in sample sites, sampling protocol, and sample processing. The system must conduct the assessment consistent with any State directives that tailor specific assessment elements with respect to the size and type of the system and the size, type, and characteristics of the distribution system. The system must comply with any expedited actions or additional actions required by the State in the case of an *E. coli* MCL violation. (40 C.F.R. §141.2 revised as of July 1, 2014.) This subsection shall be effective on July 7, 2015.

(66) "Liner" means the tubular material used to seal off caving materials which may be encountered below the bottom end of the well casing. A liner shall not be allowed to overlap or telescope into any portion of the well casing.

(67) "Locational Running Annual Average" (LRAA) is the average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. (40 C.F.R. §141.2 (July 1, 2011))

(68) "Man-Made Beta Particle and Photon Emitters" means all radionuclides emitting beta particles or photons listed in "Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure," NBS Handbook 69, except the daughter products of thorium-232, uranium-235, and uranium-238.

(69) "Maximum Contaminant Level" (MCL) means the maximum permissible level of a contaminant in water which is delivered to any user of a public water system.

(70) "Maximum Residual Disinfectant Level" (MRDL) means a level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap without an unacceptable possibility of adverse health effects. For chlorine and chloramines, a public water system (PWS) 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 PWS is in

compliance with the MRDL when daily samples are taken at the entrance to the distribution system and no two consecutive daily samples exceed the MRDL. MRDLs are enforceable in the same manner as maximum contaminant levels under the Florida Safe Drinking Water Act. However, there is convincing evidence that addition of a disinfectant is necessary for control of waterborne microbial contaminants. Therefore, notwithstanding the MRDLs listed in subsection 62-550.310(2), F.A.C., 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.

(71) “Maximum Total Trihalomethane Potential” (MTP) means the maximum concentration of total trihalomethanes produced in a given water containing a disinfectant residual after 7 days at a temperature of 25° C or above.

(72) “Medium System” for the purpose of 40 C.F.R. Part 141, Subpart I (July 1, 2011), which incorporated by reference in Rule 62-550.800, F.A.C., means a water system that serves greater than 3,300 and less than or equal to 50,000 people.

(73) “Membrane Filtration” is a pressure or vacuum driven separation process in which particulate matter larger than 1 micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test. This definition includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration, and reverse osmosis. (40 C.F.R. §141.2 (July 1, 2011))

(74) “Near the First Service Connection” means at one of the 20 percent of all service connections in the entire system that are nearest the water supply treatment facility, as measured by water transport time within the distribution system.

(75) “New System” means, for the purposes of capacity development, community water systems or non-transient non-community water systems being newly constructed; systems which do not currently meet the definition of a public water system under Rule 62-550.200, F.A.C., but which expand their infrastructure and thereby grow to become community water systems or non-transient non-community water systems; and transient non-community systems that expand their infrastructure and thereby grow to become community water systems or non-transient non-community water systems. Systems not currently public water systems under Rule 62-550.200, F.A.C., or systems that are transient non-community systems, and that add additional users and thereby become community water systems or non-transient non-community water systems without constructing any additional infrastructure are not “new systems” for purposes of capacity development. This subsection shall be effective on July 7, 2015.

(76) “Non-Community Water System” means a public water system that is not a community water system. A non-community water system is either a “transient non-community water system” (TWS) or a “non-transient non-community water system” (NTNCWS). See the Code of Federal Regulations (C.F.R.), title 40, part 141, section 2. Other public water systems are addressed in Chapter 64E-8, F.A.C.

(77) “Non-Transient Non-Community Water System” means a public water system that is not a community water system and that regularly serves at least 25 of the same persons over 6 months per year.

(78) “Optimal Corrosion Control Treatment” for the purpose of 40 C.F.R. Part 141, Subpart I (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., means the corrosion control treatment that minimizes the lead and copper concentrations at users’ taps while ensuring that the treatment does not cause the system to violate any national primary drinking water regulations.

(79) “Person” means an individual, public or private corporation, company, association, partnership, municipality, agency of the state, district, Federal agency, or any other legal entity, or its legal representative, agent, or assigns.

(80) “Picocurie” (pCi) means that quantity of radioactive material producing 2.22 nuclear transformations per minute.

(81) “Plant Intake” refers to the works or structures at the head of a conduit through which water is diverted from a source (e.g., river or lake) into the treatment plant. (40 C.F.R. §141.2 (July 1, 2011))

(82) “Point of Disinfectant Application” is the point where the disinfectant is applied and water downstream of that point is not subject to recontamination by surface water runoff.

(83) “Point-of-Entry Treatment Device (POE)” is a treatment device applied to the drinking water entering a house or building in order to reduce contaminants in the drinking water distributed throughout the house or building.

(84) “Point-of-Use Treatment Device (POU)” is a treatment device applied to a single tap used in order to reduce contaminants in drinking water at that location.

(85) “Presedimentation” is a preliminary treatment process used to remove gravel, sand and other particulate material from the source water through settling before the water enters the primary clarification and filtration processes in a treatment plant. (40 C.F.R.

§141.2 (July 1, 2011))

(86) “Public Water System” or “PWS” means 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 service connections or regularly serves an average of at least twenty-five individuals daily at least 60 days out of the year. Such term includes: any collection, treatment, storage, and distribution facilities under control of the operator of such system and used primarily in connection with such system; and any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. Such term does not include any “special irrigation district.” A public water system is either a “community water system” or a “non-community water system.” See the Code of Federal Regulations (C.F.R.), title 40, part 141, section 2.

(87) “Reclaimed Water” means water that has received at least secondary treatment and is reused after flowing out of a wastewater treatment facility.

(88) “REM” means the unit of dose equivalent from ionizing radiation to the total body or any internal organ or organ system. A “millirem” (mrem) is 1/1000 of a rem.

(89) “Repeat Compliance Period” means any subsequent compliance period after the initial compliance period.

(90) “Residual Disinfectant Concentration” (“C” in CT calculations) means the concentration of disinfectant measured in milligrams per liter in a representative sample of water.

(91) “Sanitary Defect” is a defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place. (40 C.F.R. §141.2 revised as of July 1, 2014.) This subsection shall be effective on July 7, 2015.

(92) “Sanitary Hazard” means a physical condition which involves or affects any part of a drinking water system or the raw water source, and that creates an imminent or potentially serious risk to the health of any person who consumes water from that system.

(93) “Sanitary Survey” means an on-site review of the water source (identifying sources of contamination using results of source water assessments where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system to evaluate the adequacy of the system to produce and distribute safe drinking water and remain in compliance with the Federal and State Safe Drinking Water Acts and Department Rule Chapters 62-550, 62-555, 62-560 and 62-699, F.A.C.

(94) “Seasonal System” is a non-community water system that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and end of each operating season. (40 C.F.R. §141.2 revised as of July 1, 2014.) This subsection shall be effective on July 7, 2015.

(95) “Sedimentation” means a process for removal of solids before filtration by gravity or separation.

(96) “Service Connection” as used in the definition of “public water system,” does not include a connection to a system that delivers water by a constructed conveyance other than a pipe if:

(a) The water is used exclusively for purposes other than residential uses (consisting of drinking, bathing, and cooking, or other similar uses);

(b) The State 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

(c) The State 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. (40 C.F.R. §141.2 (July 1, 2011))

(97) “Service Line Sample” means a one-liter sample of water collected in accordance with 40 C.F.R. §141.86(b)(3) (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., that has been standing for at least 6 hours in a service line.

(98) “Single Family Structure” for the purpose of 40 C.F.R. subpart I only, means a building constructed as a single-family residence that is currently used as either a residence or a place of business.

(99) “Slow Sand Filtration” means a process involving passage of raw water through a bed of sand at low velocity (generally less than 0.4 meters per hour) resulting in substantial particulate removal by physical and biological mechanisms.

(100) “Small System” for the purpose of 40 C.F.R. Part 141, Subpart I (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., means a water system that serves 3,300 people or less.

(101) “Source Water Sample” for the purpose of 40 C.F.R. Part 141, Subpart I (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., means a sample that is collected at an entry point to the distribution system and is representative of a source of supply after treatment.



(102) “Specific Ultraviolet Absorption” (SUVA) means specific ultraviolet absorption at 254 nanometers (nm), which is an indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample’s ultraviolet absorption at a wavelength of 254 nm (in  $m^{-1}$ ) by its concentration of dissolved organic carbon (in mg/L).

(103) “Standard Bacteria Sample” means the aliquot of raw or finished drinking water that is examined for the presence of coliform bacteria, and shall consist of: a. For the bacteriological fermentation tube test, five (5) standard portions of either: 1. Ten milliliters (10 ml); 2. or one hundred milliliters (100 ml); b. For the membrane filter technique, not less than one hundred milliliters (100 ml).

(104) “Subpart H System” means a public water system that is using surface water or ground water under the direct influence of surface water as a source and that is subject to the requirements of 40 CFR 141, subpart H, and Rule 62-550.817, F.A.C.

(105) “Supplier of Water” means any person who owns or operates a public water system.

(106) “Surface Water” means all water which is open to the atmosphere and subject to surface runoff. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth’s surface.

(107) “System with a Single Service Connection” means a system which supplies drinking water to consumers via a single service line.

(108) “Tier 1 Public Notice” means a public notice issued in response to the events described in subparagraph 62-560.410(1)(a)1., F.A.C.

(109) “Tier 2 Public Notice” means a public notice issued in response to the events described in subparagraph 62-560.410(1)(a)2., F.A.C.

(110) “Tier 3 Public Notice” means a public notice issued in response to the events described in subsection 62-560.410(3), F.A.C.

(111) “Too Numerous to Count” means that the total number of bacterial colonies exceeds 200 on a 47-millimeter diameter membrane filter used for coliform detection.

(112) “Total Organic Carbon” (TOC) means 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 significant figures.

(113) “Total Trihalomethanes” (TTHM) means the sum of the concentration in milligrams per liter of the trihalomethane compounds: trichloromethane (chloroform), dibromochloromethane, bromodichloromethane, tribromomethane (bromoform), rounded to two significant figures after addition.

(114) “Transient Non-Community Water System” or “TWS” means a non-community water system that does not regularly serve at least 25 of the same persons over six months per year. See the Code of Federal Regulations (C.F.R.), title 40, part 141, section 2.

(115) “Treatment Technique” means the technology, when installed in a public water system, which leads to the reduction of contaminant levels.

(116) “Trihalomethane” (THM) means one of the family of organic compounds named as derivatives of methane, wherein three of the four hydrogen atoms in methane are each substituted by a halogen atom in the molecular structure.

(117) “Two-Stage Lime Softening” is a process in which chemical addition and hardness precipitation occur in each of two distinct unit clarification processes in series prior to filtration. (40 C.F.R. §141.2 (July 1, 2011))

(118) “Uncovered Finished Water Storage Facility” is a tank, reservoir, or other facility used to store water that will undergo no further treatment to reduce microbial pathogens except residual disinfection and is directly open to the atmosphere. (40 C.F.R. §141.2 (July 1, 2011))

(119) “Variance” means approval from the Department affording a public water system an extended time for compliance with an applicable maximum contaminant level or maximum residual disinfectant level, or allowing a public water system to not comply with an applicable treatment technique requirement, due to the quality of the raw water.

(120) “Virus” means a virus of fecal origin which is infectious to humans by waterborne transmission.

(121) “Waiver” means approval from the Department for elimination of enhanced coagulation requirements or enhanced softening requirements, elimination of disinfection requirements or certified operator requirements for transient non-community water systems using only ground water not under the direct influence of surface water, or reduction of the monitoring requirements for organic contaminants listed in paragraphs 62-550.310(4)(a) and (b), F.A.C.

(122) “Waterborne Disease Outbreak” means the occurrence of acute infectious illness, epidemiologically associated with the ingestion of water from a public water system which is deficient in treatment, as determined by the Department.

(123) “Well” means any excavation that is drilled, cored, bored, washed, driven, dug, jetted, or otherwise constructed when the intended use of such excavation is to conduct ground water from a source bed to the surface, by pumping or natural flow, when ground water from such excavation is used or is to be used for a public water supply system.

(124) “Wholesale System” is a public water system that treats source water as necessary to produce finished water and then delivers some or all of that finished water to another public water system. Delivery may be through a direct connection or through the distribution system of one or more consecutive systems. (40 C.F.R. §141.2 (July 1, 2011))

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.853, 403.854, 403.8615, 403.862 FS. History—New 11-9-77, Amended 1-13-81, 11-19-87, Formerly 17-22.103, Amended 1-18-89, 5-7-90, 1-3-91, 1-1-93, Formerly 17-550.200, Amended 9-7-94, 12-9-96, 9-22-99, 8-1-00, 11-27-01, 4-3-03, 11-25-03, 10-14-04, 11-28-04, 1-17-05, 12-30-11, 7-7-15.*

**62-550.300 Application of Quality Standards to Public Water Systems.**

The ultimate concern of the public water system supervision program is the quality of water for human consumption when the water reaches the consumers. The following rules establish maximum contaminant levels (MCLs) and maximum residual disinfectant levels (MRDLs) for water within public water systems. Additionally, these rules establish treatment technique requirements in lieu of, or in addition to, MCLs for certain contaminants. Public water systems shall comply with the MCLs, MRDLs, and treatment technique requirements established herein unless granted a variance or exemption pursuant to Rule 62-560.510 or 62-560.520, F.A.C., or unless identified as excluded from the MCLs, MRDLs, or treatment technique requirements by this chapter. Public water systems shall take necessary corrective action approved by the Department to meet all applicable MCLs, MRDLs, and treatment technique requirements.

*Rulemaking Authority 403.861(9) FS. Law Implemented 403.852(12), (13), 403.853(1) FS. History—New 11-9-77, Amended 3-30-82, 11-19-87, Formerly 17-22.200, Amended 1-18-89, 1-3-91, Formerly 17-550.300, Amended 11-27-01.*

**62-550.310 Primary Drinking Water Standards: Maximum Contaminant Levels and Maximum Residual Disinfectant Levels.**

(These standards may also apply as ground water quality standards as referenced in Chapter 62-520, F.A.C.)

(1) Inorganics – Except for nitrate and nitrite, which apply to all public water systems, this subsection applies to community water systems and non-transient non-community water systems only.

(a) The maximum contaminant levels for the inorganic contaminants are listed in Table 1, which is incorporated herein and appears at the end of this chapter.

(b) The maximum contaminant level for nitrate (as N) applicable to transient non-community water systems is 10 milligrams per liter. The Department or Approved County Health Department shall allow a contaminant level for nitrate (as N) of up to 20 milligrams per liter upon a showing by the supplier of water that the following conditions are met:

1. The water distributed by the water system is not available to children under 6 months of age or to lactating mothers, and
2. There is continuous public notification of what the nitrate level (as N) is and what the potential health effects of such exposure are.
3. The Department shall require monitoring every 3 months as long as the maximum contaminant level is exceeded. Should adverse health effects occur, the Department shall require immediate compliance with the maximum contaminant level for nitrate (as N).

(c) The revised maximum contaminant level of 0.010 mg/L for arsenic becomes effective January 1, 2005. All community and non-transient non-community water systems shall demonstrate compliance with the revised maximum contaminant level by December 31, 2007.

(2) Disinfectant Residuals.

(a) Maximum residual disinfectant levels (MRDLs) are as follows:

DISINFECTANT RESIDUAL	MRDL
Chlorine	4.0 mg/L (as Cl <sub>2</sub> )

Chloramines	4.0 mg/L (as Cl <sub>2</sub> ).
Chlorine Dioxide	0.8 mg/L (as ClO <sub>2</sub> ).

(40 C.F.R. § 141.65(a) (July 1, 2011))

(b) Compliance dates – community water systems and non-transient non-community water systems. (40 C.F.R. §141.65(b) (July 1, 2011))

1. Subpart H systems serving 10,000 or more persons must comply with paragraph (a) above beginning January 1, 2002. Subpart H systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with paragraph (a) above beginning January 1, 2004. (40 C.F.R. §141.65(b)(1) (July 1, 2011))

2. If you are a consecutive system that does not add a disinfectant but delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light, you must comply with analytical and monitoring requirements for chlorine and chloramines in 40 C.F.R. §141.131(c) and §141.132(c)(1) (which are incorporated by reference in subsection 62-550.550(1), F.A.C., and Rule 62-550.821, F.A.C.) and the compliance requirements in 40 C.F.R. §141.133(c)(1) (which is incorporated by reference in Rule 62-550.821, F.A.C.) beginning April 1, 2009, and report monitoring results under 40 C.F.R. §141.134(c) (which is incorporated by reference in Rule 62-550.821, F.A.C.). (40 C.F.R. §141.624 (July 1, 2011))

(c) Compliance dates – transient non-community water systems. Subpart H systems serving 10,000 or more persons and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2002. Subpart H systems serving fewer than 10,000 persons and using chlorine dioxide as a disinfectant or oxidant and systems using only ground water not under the direct influence of surface water and using chlorine dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL beginning January 1, 2004. (40 C.F.R. §141.65(b)(2) (July 1, 2011))

(3) Disinfection Byproducts.

(a) Bromate and chlorite. (40 C.F.R. §141.64(a) (July 1, 2011))

1. The maximum contaminant levels (MCLs) for bromate and chlorite are as follows:

DISINFECTION BYPRODUCT	MCL
Bromate	0.010 mg/L
Chlorite	1.0 mg/L

(40 C.F.R. §141.64(a) (July 1, 2011))

2. Compliance dates for community water systems and non-transient non-community water systems. Subpart H systems serving 10,000 or more persons must comply with subparagraph 1. above beginning January 1, 2002. Subpart H systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with subparagraph 1. above beginning January 1, 2004. (40 C.F.R. §141.64(a)(1) (July 1, 2011))

(b) Total trihalomethanes (TTHM) and haloacetic acids (five) (HAA5). (40 C.F.R. §141.64(b) (July 1, 2011))

1. Subpart L (Stage 1) – running annual average compliance. (40 C.F.R. §141.64(b)(1) (July 1, 2011))

a. Compliance dates for community water systems and non-transient non-community water systems. Subpart H systems serving 10,000 or more persons must comply with this sub-subparagraph beginning January 1, 2002. Subpart H systems serving fewer than 10,000 persons and systems using only ground water not under the direct influence of surface water must comply with this sub-subparagraph beginning January 1, 2004. All systems must comply with these maximum contaminant levels (MCLs) as a running annual average until the date specified for 40 C.F.R. Part 141, Subpart V (Stage 2), compliance in 40 C.F.R. §141.620(c) (which is incorporated by reference in Rule 62-550.822, F.A.C.).

DISINFECTION BYPRODUCT	MCL
TTHM	0.080 mg/L
HAA5	0.060 mg/L

(40 C.F.R. §141.64(b)(1)(i) (July 1, 2011))

b. The regulations in 40 C.F.R. Part 141, Subpart L (as incorporated in Rule 62-550.821, F.A.C.) establish criteria under which community water systems and non-transient non-community water systems that add a chemical disinfectant to the water in any part of the drinking water treatment process must modify their practices to meet MCLs in 40 C.F.R. §141.64 (which is incorporated in subsection 62-550.310(3), F.A.C.). (40 C.F.R. §141.130(a)(1) (July 1, 2011))

2. Subpart V (Stage 2) – locational running annual average (LRAA) compliance. (40 C.F.R. §141.64(b)(2) (July 1, 2011))

a. Compliance dates for community water systems and non-community water systems. The subpart V maximum contaminant levels (MCLs) for TTHM and HAA5 must be complied with as an LRAA at each monitoring location beginning the date specified for 40 C.F.R. part 141, subpart V, compliance in 40 C.F.R. §141.620(c) (which is incorporated by reference in Rule 62-550.822, F.A.C.).

DISINFECTION BYPRODUCT	MCL
TTHM	0.080 mg/L
HAA5	0.060 mg/L

(40 C.F.R. §141.64(b)(2)(i) (July 1, 2011))

b. The regulations in 40 C.F.R. Part 141, Subpart V (which is incorporated by reference in Rule 62-550.822, F.A.C.), establish monitoring and other requirements for achieving compliance with maximum contaminant levels based on LRAAs for TTHM and HAA5. You are subject to these requirements if your system is a community water system or a non-transient non-community water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light. (40 C.F.R. §141.620(a) and (b) (July 1, 2011)).

(4) Organics – This subsection applies only to community water systems and non-transient non-community water systems.

(a) The maximum contaminant levels for the volatile organic contaminants (VOCs) are listed in Table 4, which is incorporated herein and appears at the end of this chapter. The regulatory detection limit (RDL) for all VOCs is 0.0005 mg/L.

(b) The maximum contaminant levels and the regulatory detection limits (RDLs) for the synthetic organic contaminants (SOCs) are listed in Table 5, which is incorporated herein and appears at the end of this chapter.

(5) Microbiological – This subsection applies to all public water systems. Until March 31, 2016, monitoring requirements to demonstrate compliance with this subsection are defined in Rule 62-550.518, F.A.C. Beginning April 1, 2016, monitoring requirements to demonstrate compliance with this subsection are defined in Rule 62-550.830, F.A.C. This subsection shall be effective on July 7, 2015.

(a) Until March 31, 2016, the total coliform MCL is based on the presence or absence of total coliforms in a sample, rather than coliform density. (40 C.F.R. §141.63(b) revised as of July 1, 2014.) For the purpose of the public notice requirements in Rule 62-560.410, F.A.C., a violation of the standards in this paragraph poses a non-acute risk to health. This paragraph shall be effective on July 7, 2015.

1. For a system which collects at least 40 samples per month, if no more than 5.0 percent of the samples collected during a month are total coliform-positive, the system is in compliance with the maximum contaminant level for total coliforms.

2. For a system which collects fewer than 40 samples per month, if no more than one sample collected during a month is total coliform-positive, the system is in compliance with the maximum contaminant level for total coliforms.

(b) Until March 31, 2016, any fecal coliform-positive repeat sample or *E. coli*-positive repeat sample, or any total coliform-positive repeat sample following a fecal coliform-positive or *E. coli*-positive routine sample is a violation of the MCL for total coliforms. For the purposes of the public notification requirements in Rule 62-560.410, F.A.C., this is a violation that poses an acute risk to health. (40 C.F.R. §141.63(b) revised as of July 1, 2014.) This paragraph shall be effective on July 7, 2015.

(c) Until March 31, 2016, a public water system shall determine compliance with the MCL for total coliforms in paragraphs (a) and (b) of this subsection for each month in which it is required to monitor for total coliforms. (40 C.F.R. §141.63(d) revised as of July 1, 2014.) This paragraph shall be effective on July 7, 2015.

(d) Beginning April 1, 2016, a system is in compliance with the MCL for *E. coli* for samples taken under the provisions of 40 C.F.R. Part 141, Subpart Y, which is incorporated by reference in Rule 62.550.830, F.A.C., unless any of the conditions identified in the following subparagraphs 1. through 4. occur. For purposes of the public notification requirements in 40 C.F.R. Part 141, Subpart Q, which is incorporated by reference in Rule 62-560.410, F.A.C., violation of the MCL may pose an acute risk to health. (40 C.F.R. §141.63(c) revised as of July 1, 2014.) This paragraph shall be effective on July 7, 2015.

1. The system has an *E. coli*-positive repeat sample following a total coliform-positive routine sample. (40 C.F.R. §141.63(c)(1) revised as of July 1, 2014.) This subparagraph shall be effective on July 7, 2015.

2. The system has a total coliform-positive repeat sample following an *E. coli*-positive routine sample. (40 C.F.R. §141.63(c)(2) revised as of July 1, 2014.) This subparagraph shall be effective on July 7, 2015.

3. The system fails to take all required repeat samples following an *E. coli*-positive routine sample. (40 C.F.R. §141.63(c)(3) revised as of July 1, 2014.) This subparagraph shall be effective on July 7, 2015.

4. The system fails to test for *E. coli* when any repeat sample tests positive for total coliform. (40 C.F.R. §141.63(c)(4) revised as of July 1, 2014.) This subparagraph shall be effective on July 7, 2015.

(e) Beginning April 1, 2016, a public water system must determine compliance with the MCL for *E. coli* in paragraph 62-550.310(5)(d), F.A.C., for each month in which it is required to monitor for total coliforms. (40 C.F.R. §141.63(d) revised as of July 1, 2014.) This paragraph shall be effective on July 7, 2015.

(6) Radionuclides – This subsection applies to community and nontransient noncommunity water systems. The following are the maximum contaminant levels (MCLs) and regulatory detection limits (RDLs) for radionuclides:

(a) Naturally occurring radionuclides:

**MAXIMUM CONTAMINANT LEVELS  
FOR RADIONUCLIDES**

CONTAMINANT	MAXIMUM CONTAMINANT LEVEL
Combined radium226 and radium228	5 pCi/L
Gross alpha particle activity including radium226 but excluding radon and uranium	15 pCi/L
Uranium	30 ug/L

pCi/L = picoCuries per liter

ug/L = micrograms per liter

(b) Man-made radionuclides:

1. The average annual concentration of beta particle and photon radioactivity from man-made radionuclides in drinking water shall not produce an annual dose equivalent to the body or any internal organ greater than 4 millirem/year.

2. Except for those radionuclides listed below, the concentration of man-made radionuclides causing 4 mrem total body or organ dose equivalents shall be calculated on the basis of a 2 liter per day drinking water intake using the 168-hour data list in “Maximum Permissible Body Burdens and Maximum Permissible Concentration of Radionuclides in Air or Water for Occupational Exposure,” NBS Handbook 69 as amended August 1963, U. S. Department of Commerce at <http://www.flrules.org/Gateway/reference.asp?No=Ref-04137>, which is incorporated herein by reference.

Average Annual Concentration Assumed to Produce  
an Exposure of 4 millirem/year:

RADIONUCLIDE	CRITICAL ORGAN	pCi/L
Tritium	total body	20,000
Strontium90	bone marrow	8

pCi/L = picoCuries per liter

3. If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed 4 millirem/year.

(c) For the purposes of monitoring for gross alpha particle activity, radium-226, radium-228, uranium, and beta particle and photon radioactivity in drinking water, the following regulatory detection limits shall be used:

CONTAMINANT	REGULATORY DETECTION LIMIT
Gross alpha particle activity	3 pCi/L
Radium-226	1 pCi/L
Radium-228	1 pCi/L
Uranium	1 ug/L
Tritium	1,000 pCi/L
Strontium-89	10 pCi/L
Strontium-90	2 pCi/L
Iodine-131	1 pCi/L
Cesium-134	10 pCi/L
Gross beta	4 pCi/L
Other radionuclides	1/10 of the applicable limit

pCi/L = picoCuries per liter

ug/L = micrograms per liter

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.852(12), 403.853(1) FS. History—New 11-19-87, Formerly 17-22.210, Amended 1-18-89, 5-7-90, 1-3-91, 1-1-93, 1-26-93, 7-4-93, Formerly 17-550.310, Amended 9-7-94, 8-1-00, 11-27-01, 4-14-03, 4-25-03, 11-28-04, 12-30-11, 6-24-14, 7-7-15.*

#### **62-550.315 Primary Drinking Water Standards: Treatment Technique Requirements.**

(1) Control of Acrylamide and Epichlorohydrin – This subsection applies to all public water systems using acrylamide or epichlorohydrin.

(a) Each system using acrylamide or epichlorohydrin shall certify annually in writing to the Department that the combination of dose and monomer level does not exceed the following levels:

1. Acrylamide = 0.05 percent dosed at one part per million (or equivalent).
2. Epichlorohydrin = 0.01 percent dosed at 20 parts per million (or equivalent).

(b) Certifications required by paragraph (a) above may rely on appropriate manufacturer or third party certifications.

(2) Filtration and Disinfection (Surface Water Treatment) – This subsection applies only to subpart H systems. Filtration and disinfection treatment technique requirements are specified in Rule 62-550.817, F.A.C.

(3) Control of Lead and Copper – This subsection applies only to community water systems and non-transient non-community water systems. The treatment technique requirements for control of lead and copper are specified in 40 CFR 141, subpart I, as adopted under Rule 62-550.800, F.A.C.

(4) Control of Disinfection Byproduct Precursors (Enhanced Coagulation or enhanced Softening) – This subsection applies only to community or non-transient non-community water systems that are subpart H systems using conventional filtration treatment. The treatment technique requirements for control of disinfection byproduct precursors are specified in 40 CFR 141, subpart L, as adopted and modified under Rule 62-550.821, F.A.C.

*Rulemaking Authority 403.861(9) FS. Law Implemented 403.852(12), 403.853(1), 403.861(17) FS. History—New 11-27-01, Amended 4-3-03.*

#### **62-550.320 Secondary Drinking Water Standards: Maximum Contaminant Levels.**

This section applies only to community water systems. (These standards may also apply as ground water quality standards as referenced in Chapter 62-520, F.A.C.)

(1) The secondary maximum contaminant levels are listed in Table 6, which is incorporated herein and appears at the end of this chapter.

(2) Failure to meet the fluoride secondary standard requires public notification pursuant to Rule 62-560.430, F.A.C.

*Rulemaking Authority 403.861(9) FS. Law Implemented 403.852(13), 403.853(1) FS. History—New 11-19-87, Formerly 17-22.220, Amended 1-18-89, 1-1-93, 7-4-93, Formerly 17-550.320, Amended 9-7-94, 11-27-01.*

#### **62-550.325 Secondary Drinking Water Standards: Treatment Technique Requirements for Control of Iron and Manganese.**

This section applies only to community water systems (CWSs).

(1) CWSs may, in lieu of meeting the maximum contaminant level for iron or manganese, sequester iron or manganese using polyphosphates when the maximum concentration of iron plus manganese does not exceed 1.0 milligram per liter. Each CWS using polyphosphate to sequester iron or manganese shall certify annually in writing to the Department that the amount of phosphate added does not exceed 10 milligrams per liter as PO<sub>4</sub>.

(2) CWSs using ground water may, in lieu of meeting the maximum contaminant level for iron or manganese, sequester iron or manganese using sodium silicates when the maximum concentration of iron plus manganese does not exceed 2 milligrams per liter. Each CWS using sodium silicate to sequester iron or manganese shall certify annually in writing to the Department that the amount of silicate added does not exceed 20 milligrams per liter as SiO<sub>2</sub> and that the total amount of added plus naturally occurring silicate does not exceed 60 milligrams per liter as SiO<sub>2</sub>.

*Rulemaking Authority 403.861(9) FS. Law Implemented 403.853(1), (3), 403.861(16), (17) FS. History—New 1-1-93, Amended 7-4-93, Formerly*

### **62-550.330 Other Contaminants Without a Standard.**

No contaminant which creates or has the potential to create an imminent and substantial danger to the public shall be introduced into a public water system.

*Rulemaking Authority 403.861(9) FS. Law Implemented 403.852(12), (13), 403.853(1) FS. History—New 11-19-87, Formerly 17-22.230, 17-550.330.*

### **62-550.340 Small System Compliance Technologies.**

(1) The United States Environmental Protection Agency (US EPA) has published a list of “Small System Compliance Technologies.” These technologies are suggested by US EPA as being affordable methods that systems serving from 25 to 10,000 persons should consider when searching for ways to deal with certain contaminants.

(a) A list of small systems compliance technologies for radionuclides and limitations on their use are contained in the July 1, 2011, edition of 40 C.F.R. §141.66(h) (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00896>), which is adopted and incorporated herein by reference.

(b) A list of small system compliance technologies for arsenic and limitations on their use are contained in the July 1, 2011 edition of 40 C.F.R. §141.62(d) (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00897>), which is adopted and incorporated herein by reference.

(c) A list of small system compliance technologies for total coliforms and *E. coli* is identified in 40 C.F.R. §§141.63(e) and (f) revised as of July 1, 2014 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05579>), which are adopted and incorporated herein by reference. This paragraph shall be effective on July 7, 2015.

(2) Community, non-transient non-community and transient non-community water systems may use point-of-entry (POE) or point-of-use (POU) devices to comply with a maximum contaminant level (MCL).

(a) The use of POE and POU devices shall be limited to systems serving 3,300 or fewer people.

(b) POE and POU units shall be owned, controlled, and maintained by the water system. A contractor may be hired by the water system to ensure proper operation and maintenance of the devices and compliance with maximum contaminant levels. The following are additional requirements:

1. POE and POU units shall conform to applicable NSF International (NSF) standards for drinking water treatment units (i.e., NSF Standard 42-2002, 50-2002, 53-2003, 55-2002, 58-2002, or 62-1999).

2. POE and POU units shall have warning devices attached to provide automatic notification of operational problems.

(c) A water system desiring to use POE or POU devices to comply with a maximum contaminant level must submit its request in writing to the Department. The Department shall approve or disapprove the request, or request additional information, within 30 days of receiving the complete submittal. The request for approval shall include, as a minimum, the following:

1. The results of pilot testing. The system shall conduct pilot testing of POE and POU devices in order to select the proper technology and sizes.

2. An economic analysis. The analysis shall compare the costs of centralized treatment to that of the selected technology. The Department shall not approve the use of POE or POU devices in the event centralized treatment is more cost effective.

3. An installation plan. This plan shall detail what and where devices are to be installed. When POU devices are used, the system shall install one at each point where people normally would be expected to consume water (drinking fountains, ice makers, wet bars, kitchen sinks, etc.). The plan shall also detail customer education and training.

4. A maintenance plan. This plan shall provide schedules for inspection, maintenance, and replacement of the devices. If a contractor is used to maintain the devices, the plan shall provide details of the contractual agreement.

5. A monitoring plan. This plan shall provide details for monitoring the effluent of the devices. Monitoring shall be frequent enough to ensure that no break through of the contaminant occurs. All monitoring results shall be reported to the Department as required by Rule 62-550.730, F.A.C.

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.852(12), 403.853(1) FS. History—New 4-14-03, Amended 11-28-04, 12-30-11, 7-7-15.*

## **62-550.400 General Requirements for Unregulated Contaminants.**

*Rulemaking Authority 403.861(9), (16), (17) FS. Law Implemented 403.853(1), (3), (7) FS. History--New 1-18-89, Amended 5-7-90, 1-1-93, Formerly 17-550.400, Amended 8-1-00, Repealed 2-16-12.*

## **62-550.500 General Monitoring and Compliance Measurement Requirements for Contaminants and Disinfectant Residuals.**

These general requirements shall apply unless other monitoring or compliance measurement requirements are specified in Rules 62-550.511 through 62-550.540, F.A.C., Rule 62-550.821, F.A.C., Rule 62-550.822, F.A.C. or Rule 62-555.830, F.A.C. This introductory text shall be effective on July 7, 2015.

(1) **The Monitoring Framework.** Monitoring by public water systems shall be accomplished within a standardized monitoring framework developed to address the issues of complexity, coordination between various rules, and coordination of monitoring schedules. A compliance cycle is a nine-year period during which all public water systems must monitor. Compliance cycles begin January 1, 2002 and January 1, 2011, and every nine years thereafter. Each compliance cycle is broken down into three three-year compliance periods. For example, the three compliance periods that make up the 2002 through 2010 compliance cycle begin January 1, 2002, January 1, 2005, and January 1, 2008.

(2) **Monitoring Frequencies.** Monitoring frequencies for each group of contaminants or disinfectant residuals are specified in Rules 62-550.511 through 62-550.520, F.A.C., plus Rule 62-550.821, F.A.C., and are summarized in Table 7.

(3) **Monitoring Schedule.** Each public water system shall monitor at the time designated by this subsection during each compliance cycle and compliance period. Table 8 summarizes when public water systems shall perform initial or routine monitoring.

(a) Systems that monitor for a contaminant quarterly may do so any time during the quarter, except that samples taken in consecutive quarters shall be taken at least 30 days apart.

(b) Systems that monitor for a contaminant annually may do so any time during the year, except that samples taken in consecutive years shall be taken at least 90 days apart.

(c) Systems that monitor for a contaminant every three years shall adhere to the following schedule:

1. Community water systems which serve more than 3,300 persons shall monitor during the first year of each compliance period.

2. Community water systems which serve 3,300 or fewer persons shall monitor during the second year of each compliance period.

3. Non-transient non-community water systems shall monitor during the third year of each compliance period.

(d) Systems that monitor for a contaminant every six years shall monitor as directed by the Department.

(e) Systems that monitor for a contaminant every nine years shall monitor during the first three-year compliance period of each nine-year compliance cycle following the same schedule as in paragraph (c) above.

(f) In the event the population of a small community system increases to more than 3,300 persons, the system shall continue to monitor on the schedule originally prescribed in paragraphs (c) and (d) above for the remainder of the nine-year compliance cycle. At the beginning of the next nine-year compliance cycle, the system shall begin monitoring in the prescribed year according to its then current size or classification.

(g) Upon request, small community systems and non-transient non-community systems shall be approved to monitor earlier during compliance periods or cycles than required by paragraphs (c) through (e) above.

(4) **Increased Monitoring.** When specified by the State Health Officer, the Department shall require more frequent monitoring than specified in this section and shall require confirmation samples results as needed to protect public health.

(5) **Monitoring Locations.**

(a) Ground water systems and subpart H systems shall take a minimum of one sample at every entry point to the distribution system that is representative of each source after treatment (hereafter called a sampling point). The system shall take each sample at the same sampling point unless conditions make another sampling point more representative of each source or treatment plant.

(b) For purposes of Part V of this chapter, subpart H systems also include systems using a combination of surface water (or ground water under the direct influence of surface water) and ground water not under the direct influence of surface water.

(c) If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of typical operating conditions (e.g., when water is representative



of the sources being used).

(6) Confirmation Samples. The system shall take confirmation samples whenever a sample exceeds the maximum contaminant level for nitrate or nitrite and whenever an unregulated contaminant is detected. However, a system may take confirmation samples for other inorganic contaminants, organic contaminants, radionuclides, or secondary contaminants. For regulated contaminants, the results of confirmation samples shall be averaged with the first sampling results and the average used for the compliance determination as specified by subsection (7) below. Confirmation samples shall be collected at the same sampling point as soon as possible, but not later than two weeks, after the initial sample was taken. The Department shall delete results of obvious sampling errors from this calculation.

(7) Measurement of Compliance. Compliance with Rule 62-550.310, F.A.C., shall be determined based on the analytical results obtained at each sampling point. If one sampling point is in violation of an MCL, the system is in violation of the MCL.

(a) For systems that are taking more than one sample per year, compliance is determined by a running annual average of all samples taken at each sampling point. If the running annual average of any sampling point is greater than the maximum contaminant level, then the system is out of compliance. If the initial sample or a subsequent sample would cause the running annual average to be exceeded, then the system is immediately out of compliance. Any sample results which are below the regulatory detection limit shall be calculated as zero for purposes of determining the running annual average. If a system fails to collect the required number of samples, compliance with the MCL will be based on the total number of samples collected. Systems shall include all samples, taken within a quarter and analyzed under the provisions of this section (even if that number is greater than the minimum required), to obtain an average for the quarter to determine compliance with these rules.

(b) A system monitoring annually or less frequently for the inorganic contaminants, other than nitrate or nitrite, listed in subsection 62-550.310(1), F.A.C., the volatile organic contaminants listed in paragraph 62-550.310(4)(a), F.A.C., the synthetic organic contaminants listed in paragraph 62-550.310(4)(b), F.A.C., or the radiological contaminants listed in subsection 62-550.310(6), F.A.C., whose sample result exceeds the maximum contaminant level will not be considered in violation of the maximum contaminant level until it has completed one year of quarterly sampling. If the running annual average of any sampling point is greater than the maximum contaminant level, then the system is out of compliance. If the initial sample or a subsequent sample would cause the running annual average to exceed the maximum contaminant level, then the system is immediately out of compliance. For the purpose of calculating the running annual average, the initial exceedance is considered to be the first quarterly sample. Any sample result that is below the regulatory detection limit shall be calculated as zero for purposes of determining the running annual average. If a system fails to collect the required number of samples, compliance with the MCL will be based on the total number of samples collected. Rule 62-550.512, F.A.C., governs nitrate and nitrite, which are considered acute contaminants.

(c) The Department shall delete results of obvious sampling or analytic errors.

(8) Systems Not in Compliance with a Maximum Contaminant Level (MCL) or Maximum Residual Disinfectant Level (MRDL). A system that is not in compliance with an MCL or MRDL shall notify the Department within 48 hours of receiving the results (except for violations of the microbiological, nitrate, or nitrite MCL and acute violations of the MRDL for chlorine dioxide), and notify the public in accordance with Rule 62-560.410, F.A.C.

(9) Waivers from Monitoring. Systems may request to receive a waiver from the requirement to monitor for organic contaminants pursuant to Rule 62-560.545, F.A.C.

(10) Reporting the results of analyses. All public water systems shall forward the results of analyses to the Department pursuant to Rule 62-550.730, F.A.C.

(11) New Systems or Sources. All new systems or systems that use a new source of water shall demonstrate compliance with all maximum contaminant levels. The system shall comply with the initial sampling frequencies as specified in this chapter. Routine and increased monitoring frequencies shall be conducted in accordance with the requirements in this chapter.

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.853(1), (3), 403.859(1), 403.861(16), (17) FS. History—New 11-19-87, Formerly 17-22.300, Amended 1-18-89, 5-7-90, 1-1-93, 1-26-93, 7-4-93, Formerly 17-550.500, Amended 9-7-94, 8-1-00, 11-27-01, 4-14-03, 11-28-04, 12-30-11, 7-7-15.*

#### **62-550.511 Asbestos Monitoring Requirements.**

All community and non-transient non-community systems that are susceptible to asbestos contamination (e.g., source water contaminated by asbestos or use of asbestos-cement pipe within the distribution system) shall monitor to determine compliance with

the maximum contaminant level for asbestos specified in paragraph 62-550.310(1)(a), F.A.C., according to the following:

(1) Each community and non-transient non-community water system that is susceptible to asbestos contamination (e.g., source water contaminated by asbestos or use of asbestos-cement pipe within the distribution system) shall monitor for asbestos during the year prescribed by paragraph 62-550.500(3)(e), F.A.C. Source waters in Florida are not considered to be susceptible to asbestos contamination. The water system shall monitor source waters when notified in writing by the Department that the system is susceptible to asbestos contamination.

(a) A system susceptible to asbestos contamination due solely to corrosion of asbestos-cement pipe shall take one sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

(b) A system susceptible to asbestos contamination due solely to source water shall monitor in accordance with the provision of paragraph 62-550.500(5)(a), F.A.C.

(c) A system susceptible to contamination due both to its source water supply and corrosion of asbestos-cement pipe shall take one sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

(2) Reports of the result of asbestos sampling shall describe the location where the sample was taken and the reason why that location was chosen.

(3) During the year the system is scheduled to monitor, the system shall send the Department an asbestos sampling plan, using Form 62-555.900(10) detailing the location and the conditions under which the sample is to be taken.

(4) A system without asbestos-containing components shall certify to the Department in writing, using Form 62-555.900(10), that it is asbestos free. Certification shall satisfy the requirements of subsections (1), (2) and (3) above, and shall be submitted each nine-year compliance cycle during the specified year the system is required to monitor.

(5) The Department shall reduce the monitoring frequency to annually, for systems that exceeded the maximum contaminant level for asbestos and are required to monitor quarterly as prescribed by subsection 62-550.500(8), F.A.C., if the running annual average is below the maximum contaminant level. The Department shall reduce the monitoring frequency as provided in paragraph 62-550.500(3)(d), F.A.C., when the average of three consecutive years of monitoring results is less than 50% of the maximum contaminant level and no sample exceeds the maximum contaminant level.

(6) If the initial monitoring for asbestos was completed between January 1, 1990 and December 31, 1992, and the results did not exceed the maximum contaminant level specified in paragraph 62-550.310(1)(a), F.A.C., the system may submit those results to the Department in lieu of monitoring during the first compliance cycle.

(7) Compositing of samples is allowed as provided in subsection 62-550.550(4), F.A.C.

*Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Amended 7-4-93, Formerly 17-550.511, Amended 9-7-94, 2-7-95, 12-9-96, 4-14-03, 11-28-04.*

#### **62-550.512 Nitrate and Nitrite Monitoring Requirements.**

All public water systems shall monitor to determine compliance with the maximum contaminant levels for nitrate and nitrite specified in paragraph 62-550.310(1)(a), F.A.C.

(1) Community or non-transient non-community water systems that are ground water systems shall monitor annually. Community or non-transient non-community water systems that are subpart H systems shall monitor quarterly.

(a) The repeat monitoring frequency for ground water systems shall be quarterly for at least one year following any one sample in which the concentration is greater than or equal to 50 percent of the maximum contaminant level. A ground water system may reduce the sampling frequency to annually after the running annual average is less than 50 percent of the maximum contaminant level.

(b) A subpart H system may reduce the sampling frequency to annually if each analytical result from the four most recent consecutive quarters is less than 50 percent of the maximum contaminant level. A subpart H system shall return to quarterly monitoring if any one sample is greater than or equal to 50 percent of the maximum contaminant level.

(c) After the initial round of quarterly sampling is completed, each system that monitors annually shall take subsequent samples during the quarter that previously resulted in the highest analytical result.

(2) Each transient non-community water system shall monitor annually. The monitoring frequency for any transient non-community water system shall be quarterly for at least one year following any one sample in which the concentration of nitrite is greater than or equal to 50 percent of the maximum contaminant level specified in Table 1, which is incorporated herein and appears

at the end of this chapter. The system may return to annual monitoring when the running annual average is less than the maximum contaminant level.

(3) A system that exceeds the maximum contaminant level for nitrate or nitrite as specified in paragraph 62-550.310(1)(a), F.A.C., shall comply with the following:

(a) Compliance with the maximum contaminant levels for nitrate and nitrite is determined based on one sample if the levels of these contaminants are below the maximum contaminant levels. If the levels of nitrate or nitrite exceed the maximum contaminant levels in the initial sample, a confirmation sample is required to be taken within 24 hours of notification of the analytical results of the first sample. Systems unable to comply with the requirement to take a confirmation sample within 24 hours shall immediately notify the public and the Department in accordance with subsection 62-560.410(1), F.A.C. Systems exercising this option shall take and analyze a confirmation sample within two weeks of notification of the analytical results of the first sample. Compliance shall be determined based on the average of the initial and confirmation samples.

(b) If the average of the initial and confirmation samples, or the initial sample if no confirmation is taken, exceeds the maximum contaminant level, the system shall immediately notify the public pursuant to subsection 62-560.410(1), F.A.C.

(c) Systems shall notify the Department within 24 hours of determining that the maximum contaminant level has been exceeded.

(4) Compositing of samples is allowed as provided in subsection 62-550.550(4), F.A.C.

*Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Amended 7-4-93, Formerly 17-550.512, Amended 9-7-94, 2-7-95, 8-1-00, 11-27-01, 4-14-03, 1-17-05.*

#### **62-550.513 Inorganic Contaminants Monitoring Requirements.**

Community and non-transient non-community water systems shall monitor to determine compliance with the maximum contaminant levels of all the contaminants listed in paragraph 62-550.310(1)(a), F.A.C., (except asbestos, nitrate, and nitrite) as follows:

(1) Ground water systems shall take one sample at each sampling point during each compliance period. Subpart H systems shall take one sample annually.

(2) Systems that exceed the maximum contaminant level shall monitor quarterly. The system may decrease the quarterly monitoring requirement of this rule to the frequencies specified in subsection (1) above when the system has results from four consecutive quarters that are below the MCL, unless the system enters into another schedule as part of a formal compliance agreement with the Department.

(3) Conditions which require more frequent monitoring for lead than specified in subsections (1) and (2) above are found in Rule 62-550.800, F.A.C.

(4) Compositing of samples is allowed with certain restrictions pursuant to subsection 62-550.550(4), F.A.C.

*Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Formerly 17-550.513, Amended 2-7-95, 11-27-01, 4-14-03.*

#### **62-550.514 Disinfectant Residuals and Disinfection Byproducts Monitoring Requirements.**

(1) Disinfectant Residuals.

(a) Community or non-transient non-community water systems adding a chemical disinfectant to the water in any part of the drinking water treatment process shall monitor in accordance with 40 CFR 141, subpart L, as adopted and modified under Rule 62-550.821, F.A.C., to determine compliance with the maximum residual disinfectant levels specified in subsection 62-550.310(2), F.A.C.

(b) If you are a consecutive system that does not add a disinfectant but delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light, you must comply with monitoring requirements for chlorine and chloramines in 40 C.F.R. §141.132(c)(1) (which is incorporated by reference in Rule 62-550.821, F.A.C.) beginning April 1, 2009. (40 C.F.R. §141.624 (July 1, 2011))

(c) Transient non-community water systems (TWSs) using chlorine dioxide as a disinfectant or oxidant shall monitor in accordance with 40 CFR 141, subpart L, as adopted and modified under Rule 62-550.821, F.A.C., to determine compliance with the chlorine dioxide maximum residual disinfectant level specified in subsection 62-550.310(2), F.A.C.

(2) Disinfection Byproducts.

(a) Community or non-transient non-community water systems adding a chemical disinfectant to the water in any part of the

drinking water treatment process shall monitor in accordance with 40 CFR 141, subpart L, as adopted and modified under Rule 62-550.821, F.A.C., to determine compliance with the Stage 1 disinfection byproduct maximum contaminant levels specified in subsection 62-550.310(3), F.A.C.

(b) The regulations in 40 C.F.R. Part 141, Subpart V (which is incorporated by reference in Rule 62-550.822, F.A.C.) establish monitoring requirements for achieving compliance with maximum contaminant levels based on locational running annual averages for total trihalomethanes and haloacetic acids (five). You are subject to these requirements if your system is a community water system or a non-transient non-community water system that uses a primary or residual disinfectant other than ultraviolet light or delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light. (40 C.F.R. §141.620(a) and (b) (July 1, 2011))

*Rulemaking Authority 403.8055, 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Amended 7-4-93, Formerly 17-550.514, Amended 2-7-95, 11-27-01, 11-28-04, 12-30-11.*

### **62-550.515 Volatile Organic Contaminants Monitoring Requirements.**

Monitoring for the volatile organic contaminants listed in paragraph 62-550.310(4)(a), F.A.C., shall be conducted to determine compliance with the maximum contaminant levels.

#### (1) Monitoring Frequency.

(a) Initial base point monitoring. Each community or non-transient non-community water system shall take four consecutive quarterly samples for each contaminant listed in paragraph 62-550.310(4)(a), F.A.C., during the first compliance period.

(b) If the public water system does not detect any of the contaminants listed in paragraph 62-550.310(4)(a), F.A.C., it shall sample annually beginning with the next compliance period.

(c) If the initial monitoring for contaminants listed in paragraph 62-550.310(4)(a), F.A.C., as required in subsection (1) of this section, was completed between January 1, 1988, and December 31, 1992, and the system did not detect any contaminant listed in paragraph 62-550.310(4)(a), F.A.C., then each ground water system and subpart H system may take one sample annually beginning January 1, 1993.

(d) After a minimum of three years of annual sampling, ground water systems with no previous detection of any contaminant listed in paragraph 62-550.310(4)(a), F.A.C., may take one sample during each compliance period.

(e) Subpart H systems and ground water systems may apply to the Department for a monitoring waiver as specified in Rule 62-560.545, F.A.C.

(2) Sampling location. During the first quarter of the initial base point monitoring, ground water systems shall take a minimum of one sample that is specifically representative of each well. It may be collected as a raw or treated sample. Subsequent samples shall be taken as required by subsection 62-550.500(5), F.A.C.

(3) Monitoring Frequency After a Contaminant Is Detected. If a contaminant listed in paragraph 62-550.310(4)(a), F.A.C., is detected at a level exceeding 0.0005 milligrams per liter in any sample:

(a) The system shall notify the Department within seven days of receiving the laboratory results and shall monitor quarterly for that contaminant at each sampling point that resulted in a detection.

(b) The Department shall decrease the quarterly monitoring requirement of this section to annually if the system has results from four consecutive quarters that are below the MCL, unless the system enters into another schedule as part of a formal compliance agreement with the Department. After three years of annual sampling with no detection of the contaminant, a ground water system may decrease the annual monitoring requirement to one sample each compliance period.

(c) Systems that monitor annually shall monitor during the quarter that previously yielded the highest analytical result for that particular contaminant.

(4) Compositing of samples is allowed as provided in subsection 62-550.550(4), F.A.C.

*Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Amended 1-26-93, 7-4-93, Formerly 17-550.515, Amended 9-7-94, 2-7-95, 11-27-01, 4-14-03.*

### **62-550.516 Synthetic Organic Contaminants Monitoring Requirements.**

Monitoring for the synthetic organic contaminants listed in paragraph 62-550.310(4)(b), F.A.C., shall be conducted as follows:

- (1) Monitoring Frequency.
  - (a) Each community or non-transient non-community water system shall take four consecutive quarterly samples for each contaminant listed in paragraph 62-550.310(4)(b), F.A.C., during each compliance period.
  - (b) Systems which serve more than 3,300 persons that do not detect a contaminant in the initial compliance period may reduce the sampling frequency to two quarterly samples, taken at least 60 days apart, in one year during each repeat compliance period.
  - (c) Systems which serve less than or equal to 3,300 persons that do not detect a contaminant in the initial compliance period may reduce the sampling frequency to one sample during each repeat compliance period.
  - (d) Systems may apply to the Department for a monitoring waiver as specified in Rule 62-560.545, F.A.C.
- (2) Sampling location. During the first quarter of the initial base point monitoring, ground water systems shall take a minimum of one sample that is representative of each well. The sample may be collected as a raw or treated sample. Subsequent samples shall be taken as directed by subsection 62-550.500(5), F.A.C.
- (3) Systems monitoring annually or less frequently whose sample result exceeds the regulatory detection level shall begin quarterly sampling. Detection as used in this rule shall be defined as a sample result greater than the concentration for each contaminant as listed in the column headed "Regulatory Detection Limit" in Table 5, which appears at the end of this chapter.
- (4) Monitoring Requirements After a Contaminant Is Detected. If an organic contaminant listed in paragraph 62-550.310(4)(b), F.A.C., is detected in any sample:
  - (a) The system shall notify the Department within seven days after receiving the laboratory results and shall monitor quarterly at each sampling point where a contaminant was detected.
  - (b) The Department shall decrease the quarterly monitoring requirement of this section to annually if the system has results from four consecutive quarters that are below the MCL, unless the system enters into another schedule as part of a formal compliance agreement with the Department. After three years of annual sampling with no detection of any contaminant listed in paragraph 62-550.310(4)(b), F.A.C., systems may sample according to the schedule detailed in paragraphs (1)(b) and (c) above.
  - (c) Systems that monitor annually shall monitor during the quarter that previously yielded the highest analytical result.
  - (d) If monitoring detects heptachlor or heptachlor epoxide, then subsequent monitoring shall analyze for both.
- (5) Compositing of samples is allowed as provided in subsection 62-550.550(4), F.A.C.

*Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Amended 1-26-93, Formerly 17-550.516, Amended 9-7-94, 2-7-95, 11-27-01, 4-14-03, 11-28-04.*

### **62-550.517 Physical Characteristics Monitoring Requirements.**

- (1) All community, non-transient non-community, and transient non-community public water systems that use any surface water sources, or ground water sources under the direct influence of surface water, shall monitor for turbidity pursuant to Rule 62-550.560, F.A.C.
- (2) All public water systems using ground water not under the direct influence of surface water are required by subsections 62-550.518(2), (3) and (10), F.A.C., to periodically sample the raw ground water for microbiological contamination. In the event a raw water sample is positive for total coliform bacteria, the system shall begin monitoring the raw water source for turbidity, pH, temperature, nitrates, and conductivity when notified in writing by the Department to do so and shall perform a microscopic particulate analysis and particle counter analysis when notified in writing by the Department to do so. These data will be used by the Department to determine whether the system's water source is under the direct influence of surface water. If the Department renders a written decision that the source is not under the direct influence of surface water, or if no subsequent raw water samples are positive for bacteria during the following one-year period, monitoring of the raw water for turbidity, pH, temperature, and conductivity will no longer be required. If the Department determines that a system is under the direct influence of surface water, the system shall comply with Rule 62-550.817, F.A.C. In the event the system notifies the Department in writing that it disagrees with the Department's determination, the system shall have six months in which to commission and complete an independent analysis of the system. Upon receipt of such an independent analysis, the Department will reconsider its determination and notify the system of its decision and include the notice of rights to an administrative hearing as provided in Rule 62-110.106, F.A.C.

Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Amended 7-4-93, Formerly 17-550.517, Amended 9-7-94, 8-1-00, 11-27-01, 4-3-03.

**62-550.518 Microbiological Monitoring Requirements.**

The provisions of subsections 62-550.518(1) through (6), F.A.C., pertaining to distribution system sampling or samples and the provisions of subsection 62-550.518(12), F.A.C., are applicable until March 31, 2016. The provisions of subsections 62-550.518(7) through (11), F.A.C., pertaining to distribution system sampling or samples are applicable until all required repeat monitoring under subsections 62-550.518(7) and (8), F.A.C., and fecal coliform or *E. coli* testing under subsection 62-550.518(10), F.A.C., that was initiated by a total coliform-positive sample taken before April 1, 2016, is completed, as well as analytical method, reporting, recordkeeping public notification, and consumer confidence report requirements associated with that monitoring and testing. Beginning April 1, 2016, the provisions of 40 C.F.R. Part 141, Subpart Y, which is incorporated by reference in Rule 62-550.830, F.A.C., are applicable, with systems required to begin regular monitoring at the same frequency as the system-specific frequency required on March 31, 2016. (40 C.F.R. §141.21(h) revised as of July 1, 2014.) This introductory text shall be effective on July 7, 2015.

(1) All public water systems shall analyze for coliform bacteria to determine compliance with subsection 62-550.310(5), F.A.C. Public water systems shall collect total coliform samples at sites that are representative of water throughout the distribution system and in accordance with a written sampling plan that addresses location, timing, frequency and rotation period. These plans shall be available for review and possible revision on the occasion of a sanitary survey conducted by the Department. Descriptions of sampling locations shall be specific, i.e., numbered street addresses or lot numbers. Pressure tank or plant tap samples are not acceptable for determining compliance.

(2) Total coliform samples shall be taken at regular intervals and in numbers proportionate to the population served by the system. Community water systems, non-transient non-community water systems, transient non-community water systems that are subpart H systems and transient non-community water systems that serve more than 1,000 persons per day during any one month shall take monthly distribution system samples. In addition, systems that are using ground water not under the direct influence of surface water shall take a minimum of one monthly raw water sample that is representative of each ground water source (i.e., well) not under the direct influence of surface water. For purposes of this subsection, consecutive systems that receive any finished water originating from a subpart H system are considered subpart H systems. In no event shall the number of distribution system samples be less than as set forth below:

Population Served	Minimum number of routine samples		
			per month
25	to	2,500	2
2,501	to	3,300	3
3,301	to	4,100	4
4,101	to	4,900	5
4,901	to	5,800	6
5,801	to	6,700	7
6,701	to	7,600	8
7,601	to	8,500	9
8,501	to	12,900	10
12,901	to	17,200	15
17,201	to	21,500	20
21,501	to	25,000	25
25,001	to	33,000	30
33,001	to	41,000	40
41,001	to	50,000	50
50,001	to	59,000	60
59,001	to	70,000	70
70,001	to	83,000	80

83,001	to	96,000	90
96,001	to	130,000	100
130,001	to	220,000	120
220,001	to	320,000	150
320,001	to	450,000	180
450,001	to	600,000	210
600,001	to	780,000	240
780,001	to	970,000	270
970,001	to	1,230,000	300
1,230,001	to	1,520,000	330
1,520,001	to	1,850,000	360
1,850,001	to	2,270,000	390
2,270,001	to	3,020,000	420
3,020,001	to	3,960,000	450
3,960,001	or	more	480

(3) Transient non-community water systems using only ground water not under the direct influence of surface water and serving 1,000 or fewer persons shall monitor at the rate of two distribution system samples in each calendar quarter during which the system provides water to the public. In addition, such systems shall take a minimum of one quarterly raw water sample that is representative of each ground water source (i.e., well).

(4) Public water systems shall collect distribution system samples at regular intervals throughout the month, except that a system that uses only ground water not under the direct influence of surface water and that serves 4,900 persons or fewer may collect all required samples on a single day if the samples are taken from different sites.

(5) Subpart H systems in an interim period per subparagraph 62-550.817(2)(a)2., F.A.C., until filtration is installed in compliance with 40 CFR 141, Subpart H, adopted by Rule 62-550.817, F.A.C., shall collect at least one total coliform sample near the first service connection each day the turbidity level of the source water exceeds one NTU, measured as specified in 40 CFR 141.74(b)(2), adopted by Rule 62-550.817, F.A.C. This sample shall be analyzed for the presence of total coliforms. When any turbidity measurement in any day exceeds one NTU, the system shall collect this coliform sample within 24 hours unless the Department determines that the system, for logistical reasons outside the system's control, cannot have the sample analyzed within 30 hours of collection. In this case, the Department shall specify how much time the system has to collect the sample. Sample results from this coliform monitoring shall be included in determining compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C.

(6) Special purpose samples, such as those taken to determine whether disinfection practices are sufficient following pipe placement, replacement, or repair, shall not be used to determine compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C. Repeat distribution system samples taken pursuant to subsection (7) of this section are not considered special purpose samples and shall be used to determine compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C.

(7) Additional or Repeat Monitoring.

(a) If a raw water sample is total-coliform-positive, the public water system shall disinfect and bacteriologically survey the relevant well(s) in accordance with subsection 62-555.315(6), F.A.C., when notified in writing by the Department to do so and shall conduct physical characteristics monitoring in accordance with subsection 62-550.517(2), F.A.C., when notified in writing by the Department to do so.

(b) If a routine distribution system sample is total-coliform-positive, the public water system shall collect a set of repeat distribution system samples within 24 hours of being notified of the positive result. The system shall collect all repeat samples on the same day. A system that collects monthly routine samples shall collect no fewer than three repeat samples for each total-coliform-positive sample found. A transient non-community water system that collects quarterly routine samples shall collect no fewer than four repeat samples for each total-coliform-positive sample found. The Department shall extend the 24-hour limit on a case-by-case basis if the system has a logistical problem that is beyond its control in collecting the repeat samples within 24 hours. If an extension is granted, the Department shall specify how much time the system has to collect the repeat samples. If a routine distribution system

sample is total-coliform-positive and the public water system is collecting fewer than five routine distribution system samples per month, the system also shall comply with the sampling requirements in subsection 62-550.518(8), F.A.C.

(c) The system shall collect at least one repeat distribution system sample from the sampling tap where the original total-coliform-positive sample was taken, at least one repeat distribution system sample at a tap within five service connections upstream of the original sampling site, and at least one repeat distribution system sample at a tap within five service connections downstream of the original sampling site. If a total-coliform-positive sample is at the beginning or end of the distribution system, or one service connection away from the beginning or end of the distribution system, the system need not collect a repeat sample upstream or downstream of the original sampling site, whichever is applicable, but still must collect the total number of repeat samples specified in paragraph (b) above.

(d) If any repeat distribution system sample in the set is total-coliform-positive the public water system shall collect an additional set of repeat distribution system samples in the manner specified in paragraphs (7)(b) and (c) of this section. The public water system shall collect the additional samples within 24 hours of being notified of the positive result unless the Department extends the limit as provided in paragraph (7)(b) of this section. The system shall repeat this process until either total coliforms are not detected in one complete set of repeat samples or the system determines that the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C., has been exceeded and notifies the Department in accordance with subsections (10) and (11) below.

(e) Results of all routine and repeat distribution system samples not invalidated by the Department shall be included in determining compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C.

(8) If a system collecting fewer than five routine distribution system samples per month has one or more total-coliform-positive samples and the Department does not invalidate the sample(s) under paragraph 62-550.518(9)(a), F.A.C., it shall collect at least five routine distribution system samples during the next month the system provides water to the public.

(9) Invalidation of Total Coliform Samples. A total-coliform-positive sample invalidated under this subsection does not count toward meeting the minimum monitoring requirements of this section. Department invalidation of a total coliform-positive sample invalidates subsequent fecal-coliform-positive or *E.-coli*-positive results on the same sample.

(a) The Department shall invalidate a total-coliform-positive sample only if any of the following conditions are met:

1. The laboratory establishes that improper sample analysis caused the total-coliform-positive result.
2. The Department, on the basis of the results of the repeat distribution system samples collected as required by subsection (7) of this section, determines that the total-coliform-positive sample resulted from a non-distribution system plumbing problem. The Department shall not invalidate a sample on the basis of repeat samples unless all repeat samples collected at the same tap as the original total-coliform-positive sample are also total-coliform-positive and all repeat samples collected within five service connections of the original tap are total-coliform-negative. The Department shall not invalidate a total-coliform-positive sample on the basis of repeat samples if all the repeat samples are total-coliform-negative or if the public water system has only one service connection.

3. The Department has received in writing substantial grounds to conclude that a total-coliform-positive result is due to a circumstance or condition that does not reflect raw water quality or water quality in the distribution system. In this case, the system shall still collect all repeat distribution system samples required under subsection (7) of this section and use them to determine compliance with the maximum contaminant level for total coliforms in subsection 62-550.310(5), F.A.C. The written documentation shall describe the specific cause of the total-coliform-positive sample and what action the system has taken, or will take, to correct this problem. The Department shall not invalidate a total-coliform-positive sample solely on the grounds that all repeat samples are total-coliform-negative.

(b) Unless total coliforms are detected, a laboratory shall invalidate a total coliform sample if the sample produces a turbid culture in the absence of gas production using an analytical method where gas formation is examined (e.g., the Multiple-Tube Fermentation Technique); produces a turbid culture in the absence of an acid reaction in the Presence-Absence (P-A) Coliform Test; or, exhibits confluent growth or produces colonies too numerous to count with an analytical method using a membrane filter (e.g., Membrane Filter Technique). If a laboratory invalidates a sample because of such interference, the system shall report to the Department in accordance with subsection 62-550.730(1), F.A.C., and collect another sample from the same location as the original sample within 24 hours of being notified of the interference problem. The system shall continue to resample every 24 hours and have the samples analyzed until it obtains a valid result. The Department shall expand the 24-hour requirement on a case-by-case basis if the system has a logistical problem that is beyond its control in collecting the repeat samples within 24 hours. If an extension is



granted, the Department shall specify how much time the system has to collect the repeat samples.

(10) Fecal Coliforms/*Escherichia coli* (*E. coli*) Testing. If any raw water sample is total-coliform-positive, the system shall analyze that total-coliform-positive culture to determine if *E. coli* is present. If any routine or repeat distribution system sample is total-coliform-positive, the system shall analyze that total-coliform-positive culture to determine if fecal coliforms are present or shall analyze that total-coliform-positive culture to determine if *E. coli* is present. If fecal coliform or *E. coli* is present in any repeat distribution system sample, the system shall notify the Department in accordance with paragraph (11)(a) below. If fecal coliform or *E. coli* is present in any routine distribution system sample or if *E. coli* is present in any raw water sample that is representative of a well previously considered to be meeting the bacteriological requirements in paragraph 62-555.315(6), F.A.C., the system shall notify the appropriate Department of Environmental Protection (DEP) District Office or appropriate Approved County Health Department (ACHD) by the end of the day that the system learns of the test result unless the system learns of the result after the appropriate DEP District Office or appropriate ACHD is closed, in which case the system shall notify the appropriate DEP District Office or appropriate ACHD before the end of the next business day.

(11) Response to Violation.

(a) A public water system that has an acute violation of the total coliform maximum contaminant level (MCL) as specified in paragraph 62-550.310(5)(b), F.A.C., shall report the violation to the Department as soon as practicable but no later than 24 hours after the system learns of the violation and shall notify the public in accordance with Rule 62-560.410, F.A.C. A public water system that has a non-acute violation of the total coliform MCL as specified in paragraph 62-550.310(5)(a), F.A.C., shall report the violation to the Department no later than the end of the next business day after it learns of the violation, and shall notify the public in accordance with Rule 62-560.410, F.A.C.

(b) A public water system that has failed to comply with a coliform monitoring requirement shall report the monitoring violation to the Department within 48 hours after the system discovers the violation, and shall notify the public in accordance with Rule 62-560.410, F.A.C.

(12) The requirements contained in 40 C.F.R. §141.21(d) revised as of July 1, 2014 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05580>), are adopted and incorporated herein by reference. This subsection shall be effective on July 7, 2015.

*Rulemaking Authority 403.8055, 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Amended 7-4-93, Formerly 17-550.518, Amended 9-7-94, 2-7-95, 8-1-00, 11-27-01, 4-3-03, 11-28-04, 7-7-15.*

#### **62-550.519 Radionuclides Monitoring Requirements.**

This section contains monitoring frequency and compliance requirements for radionuclides for community and nontransient noncommunity water systems.

(1) Monitoring and Compliance Requirements for Gross Alpha Particle Activity, Radium-226, Radium-228, and Uranium.

(a) Community water systems (CWSs) and nontransient noncommunity water systems (NTNCs) shall conduct monitoring to determine compliance with paragraph 62-550.310(6)(a), F.A.C.

1. All existing CWSs and NTNCs shall sample at every entry point to the distribution system under normal operating conditions.

2. All new CWSs and new NTNCs or existing CWSs or NTNCs that use a new source of water shall begin to conduct initial monitoring for the new source within the first quarter after initiating use of the source.

3. The conversion factor for converting uranium results expressed in pCi/L to ug/L is 1.50 ug/pCi. When converting uranium results expressed in ug/L to pCi/L, use 0.67 pCi/ug.

4. Compliance and reduced monitoring frequencies shall be calculated based on the analytical results. The analytical result is the number that the laboratory reports, not including (i.e., not adding or subtracting) the standard deviation.

(b) Initial monitoring: Systems shall conduct initial monitoring for gross alpha particle activity, radium-226, radium-228, and uranium as follows:

1. Systems shall collect four consecutive quarterly samples at all sampling points. All CWSs will have completed their initial monitoring by January 1, 2007. CWSs constructed after that time and all new NTNCs will conduct one year of initial monitoring within the first year of operation. Existing CWSs and NTNCs can use historical data to satisfy the initial monitoring requirement as specified in paragraph 62-550.519(1)(c), F.A.C., below.

2. For gross alpha particle activity, uranium, radium-226, and radium-228 monitoring, the Department shall waive the final two quarters of initial monitoring for a sampling point if the results of the samples from the previous two quarters are below the regulatory detection limit.

3. If the average of the initial monitoring results for any sampling point is above the MCL, the system is out of compliance. The system must continue to collect and analyze quarterly samples at that sampling point until the system has results from four consecutive quarters that are at or below the MCL, unless the system enters into another schedule as part of a formal compliance agreement with the Department.

4. CWSs serving more than 3,300 people that were required to sample prior to January 1, 2012 and had no detections shall sample again during 2014. CWSs serving 3,300 or fewer people that were required to sample prior to January 1, 2013 and had no detections shall sample again during 2015. All existing NTNCs shall begin routine monitoring under paragraph 62-550.519(1)(d), F.A.C., starting January 1, 2016, unless the system has historical data that allows them to go either to reduced monitoring or waives the monitoring requirement entirely.

(c) Use of Historical Data. Under the following conditions, CWS's data gathered between June 1, 2000 and December 8, 2003 and NTNC's data gathered between January 1, 1996 and December 31, 2015, may be used to satisfy the requirement to monitor during the initial monitoring period described in paragraph 62-550.519(1)(b), F.A.C., above.

1. The water system shall have at least one sample result from every point of entry for gross alpha and radium-228;
  2. The gross alpha result shall not exceed 15 pCi/L;
  3. The system must either sample for radium-226 or may substitute the gross alpha value if it is less than 5 pCi/L. If the gross alpha particle activity result is less than the regulatory detection level of 3 pCi/L, half the detection level (1.5 pCi/L), shall be used if substituting for radium-226; and
  4. The combined value for radium-226 and radium-228 shall not exceed 5 pCi/L.
5. Systems that use historical data gathered between June 1, 2000, and December 8, 2003, in lieu of testing during the initial monitoring period do not need to monitor again until 2008 for systems serving 3,300 or more people, and 2009 for systems serving fewer than 3,300 people.

(d) Routine monitoring began January 1, 2008 for community water systems serving 3,300 or more people. Community water systems serving fewer than 3,300 people began monitoring January 1, 2009. NTNCs will begin routine monitoring January 1, 2016. Routine monitoring will take place every three years and must meet the following conditions:

1. The water system shall have at least one sample result from every point of entry for gross alpha and radium-228.
2. The system may either sample for uranium or may substitute the gross alpha value if it is less than 15 pCi/L. If the gross alpha value exceeds 15 pCi/L, the system must sample for uranium. The uranium result shall be subtracted from the gross alpha result in order to determine compliance with the gross alpha MCL. In the event the gross alpha result minus the uranium result exceeds 15 pCi/L, the system shall begin quarterly monitoring for gross alpha.
3. In the event the uranium value exceeds 30 ug/L (20 pCi/L), the system shall begin quarterly monitoring for uranium.
4. The system must either sample for radium-226 or may substitute the gross alpha value if it is less than 5 pCi/L. If the gross alpha value result is less than the regulatory detection level of 3 pCi/L, half the detection level (1.5 pCi/L) shall be used if substituting for radium-226.
5. In the event the combined value for radium-226 and radium-228 exceeds 5 pCi/L, the system shall begin quarterly monitoring for both radium-226 and radium-228.

(e) Reduced monitoring. The Department shall allow community and NTNC water systems to reduce the future frequency of monitoring at each sampling point from once every three years or once every six years to once every six or nine years or waive monitoring for NTNCs altogether, based on the following criteria:

1. If the monitoring result for a contaminant (i.e., gross alpha particle activity, uranium, radium-226, or radium-228) is below the regulatory detection limit specified in paragraph 62-550.310(6)(c), F.A.C., above, the CWS shall collect and analyze for that contaminant at that sampling point every nine years, and a NTNC is waived from any future monitoring for that contaminant.
2. For gross alpha particle activity and uranium, if the monitoring results for each contaminant is at or above the regulatory detection limit but at or below half the MCL, the CWS shall collect and analyze for that contaminant using at least one sample at that sampling point every six years and the NTNC shall collect and analyze for that contaminant using at least one sample at that sampling point every nine years. For radium-226 and radium-228, the analytical results shall be combined. If the combined

monitoring result for radium-226 and radium-228 is at or above 1 pCi/L, but at or below half the MCL (2.5 pCi/L), the CWS shall collect and analyze for that contaminant using at least one sample at that sampling point every six years and the NTNC shall collect and analyze for that contaminant using at least one sample at that sampling point every nine years.

3. For gross alpha particle activity and uranium, if the monitoring results for each contaminant is above half the MCL but at or below the MCL, the CWS shall remain on routine monitoring and shall collect and analyze at least one sample at that sampling point every three years and every six years for a NTNC system. If the combined monitoring result for radium-226 and radium-228 is above half the MCL but at or below the MCL, the CWS shall remain on routine monitoring and shall collect and analyze at least one sample at that sampling point every three years, and every six years for the NTNC system.

4. Systems with multiple entry points to the distribution system could have different monitoring schedules for radionuclides at each entry point. In the event such a situation occurs, the system shall be responsible for keeping track of its monitoring schedule.

(f) Systems shall use the samples collected during the initial, routine or reduced monitoring period to determine the monitoring frequency for subsequent monitoring periods (e.g., if a system's sampling point is on a nine year monitoring period, and the sample result is above half the MCL, then the next monitoring period for that sampling point is three years).

(g) If a system has a monitoring result that exceeds the MCL, the system shall collect and analyze quarterly samples at that sampling point until the system has results from four consecutive quarters that are below the MCL, unless the system enters into another schedule as part of a formal compliance agreement with the Department. When the combined MCL for radium-226 and radium-228 exceeds the MCL of 5 pCi/L, the system shall begin quarterly monitoring for both radium-226 and radium-228. Substitution of a gross alpha particle activity result for radium-226 shall not be allowed when the combined result exceeds the MCL.

(h) Compositing. To fulfill quarterly monitoring requirements for gross alpha particle activity, radium-226, radium-228, or uranium, a system may composite up to four consecutive quarterly samples from a single entry point if analysis is done within a year of the first sample. The Department shall treat analytical results from the composited sample as the average analytical result to determine compliance with the MCLs and the future monitoring frequency. If the analytical result from the composited sample is greater than half the MCL, the Department shall direct the system to take one year of additional quarterly samples before allowing the system to sample under a reduced monitoring schedule.

(i) A gross alpha particle activity measurement may be substituted for the required radium-226 measurement provided that the measured gross alpha particle activity does not exceed 5 pCi/L. A gross alpha particle activity measurement may be substituted for the required uranium measurement provided that the measured gross alpha particle activity does not exceed 15 pCi/L. When a system uses a gross alpha particle activity measurement in lieu of a radium-226 and/or a uranium measurement, the gross alpha particle activity analytical result shall be used to determine the future monitoring frequency for radium-226 and/or uranium.

(j) If any sample result is less than the regulatory detection limit, zero shall be used. If the gross alpha particle activity result is less than the regulatory detection limit and is used in lieu of actual measurements for either radium-226 or uranium, then half the regulatory detection limit (1.5 pCi/L) shall be used.

(k) Use of Historical Data. Under the following conditions, data gathered between June 1, 2000 and December 8, 2003 for CWSs and between January 1, 1996 and December 31, 2015 for NTNCs, may be used to satisfy the requirement to monitor during the initial monitoring period described in paragraph 62-550.519(1)(b), F.A.C., above or may be used to allow a NTNC to go to reduced monitoring or waive the monitoring requirement altogether.

1. The water system shall have at least one sample result from every point of entry for gross alpha and radium-228;
2. The gross alpha result shall not exceed 15 pCi/L;
3. The system must either sample for radium-226 or may substitute the gross alpha value if it is less than 5 pCi/L. If the gross alpha particle activity result is less than the regulatory detection level of 3 pCi/L, half the detection level, that is 1.5 pCi/L, shall be used if substituting for radium-226; and
4. The combined value for radium-226 and radium-228 shall not exceed 5 pCi/L.

(2) Monitoring and Compliance Requirements for Beta Particle and Photon Radioactivity. These requirements only apply to community water systems. To determine compliance with the maximum contaminant levels in paragraph 62-550.310(6)(b), F.A.C., for beta particle and photon radioactivity, a CWS shall monitor at a frequency as follows:

(a) Community public water systems (both surface water and ground water) notified in writing by the Department as being vulnerable to such contamination shall sample for beta particle and photon radioactivity. Systems must collect quarterly samples for beta emitters and annual samples for tritium and strontium-90 at each entry point to the distribution system (hereafter called a

sampling point), beginning within one quarter after being notified by the Department. Systems already designated by the Department must continue to sample until the Department reviews and either reaffirms or removes the designation.

1. If the gross beta particle activity minus the naturally occurring potassium-40 beta particle activity at a sampling point has a running annual average (computed quarterly) less than or equal to 50 pCi/L (screening level), the Department shall reduce the frequency of monitoring at that sampling point to once every 3 years. Systems shall collect all samples required in paragraph (2)(a) above during the reduced monitoring period.

2. For systems in the vicinity of a nuclear facility, the Department may allow the community water system to use environmental surveillance data collected by the nuclear facility in lieu of monitoring at the system's entry point(s), when the Department determines that such data is applicable to a particular water system. In the event that there is a release from a nuclear facility, systems that are using surveillance data shall begin monitoring at the community water system's entry point(s) in accordance with paragraph (2)(a) above.

(b) Community water systems (both surface and ground water) designated by the Department as using waters contaminated by effluents from nuclear facilities shall sample for beta particle and photon radioactivity. Systems shall collect quarterly samples for beta emitters and iodine-131 and annual samples for tritium and strontium-90 at each entry point to the distribution system (hereafter called a sampling point), beginning within one quarter after being notified by the Department. Systems already designated by the Department as systems using waters contaminated by effluents from nuclear facilities shall continue to sample until the Department reviews and either reaffirms or removes the designation.

1. Quarterly monitoring for gross beta particle activity shall be based on the analysis of monthly samples or the analysis of a composite of three monthly samples. The former is recommended.

2. For iodine-131, a composite of five consecutive daily samples shall be analyzed once each quarter. As ordered by the Department, more frequent monitoring shall be conducted when iodine-131 is identified in the finished water.

3. Annual monitoring for strontium-90 and tritium shall be conducted by means of the analysis of a composite of four consecutive quarterly samples or analysis of four quarterly samples. The latter procedure is recommended.

4. If the gross beta particle activity beta minus the naturally occurring potassium-40 beta particle activity at a sampling point has a running annual average (computed quarterly) less than or equal to 15 pCi/L (screening level), the Department shall reduce the frequency of monitoring at that sampling point to every 3 years. Systems shall collect all samples required in paragraph (2)(b) above during the reduced monitoring period.

5. For systems in the vicinity of a nuclear facility, the Department may allow the CWS to use environmental surveillance data collected by the nuclear facility in lieu of monitoring at the system's entry point(s), when the Department determines that such data is applicable to a particular water system. In the event that there is a release from a nuclear facility, systems that are using surveillance data shall begin monitoring at the entry point(s) in accordance with paragraph (2)(b) above.

(c) Community water systems designated by the Department to monitor for beta particle and photon radioactivity can not apply to the Department for a waiver from the monitoring frequencies specified in paragraph (2)(a) or (2)(b) above.

(d) Community water systems may analyze for naturally occurring potassium-40 beta particle activity from the same or equivalent sample used for the gross beta particle activity analysis. Systems are allowed to subtract the potassium-40 beta particle activity value from the total gross beta particle activity value to determine if the screening level is exceeded. The potassium-40 beta particle activity shall be calculated by multiplying elemental potassium concentrations (in mg/L) by a factor of 0.82.

(e) If the gross beta particle activity minus the naturally occurring potassium-40 beta particle activity exceeds the appropriate screening level, an analysis of the sample shall be performed to identify the major radioactive constituents present in the sample and the appropriate doses shall be calculated and summed to determine compliance with subparagraphs 62-550.310(6)(b)1. and 2., F.A.C. Doses shall also be calculated and combined for measured levels of tritium and strontium to determine compliance.

(f) Systems shall monitor monthly at the sampling point(s) that exceed the maximum contaminant level in paragraph 62-550.310(6)(b), F.A.C., beginning the month after the exceedance occurs. Systems shall continue monthly monitoring until the system has established, by a running average of 3 monthly samples, that the MCL is being met. Systems that establish that the MCL is being met shall return to quarterly monitoring until they meet the requirements set forth in paragraph (2)(a)1. or (2)(b)4., above.

*Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 1-1-93, Amended 7-4-93, Formerly 17-550.519, Amended 2-7-95, 11-27-01, 4-14-03, 11-28-04, 6-24-14.*

#### **62-550.520 Secondary Contaminants Monitoring Requirements.**

(1) Analysis to determine compliance with Rule 62-550.320, F.A.C., shall be conducted by all community water systems and shall be repeated once each compliance period. Lime softening facilities may operate above 8.5 but less than or equal to 9.0 pH units without Department approval, and may operate above 9.0, but less than or equal to 10.0 pH units upon approval by the Department of a written demonstration by the water system that operating at the higher pH will not cause the treatment plant to suffer operational failures, that minimum disinfectant levels can be maintained throughout the distribution system, and that the system can remain in compliance with the lead and copper and microbiological provisions of Chapters 62-550 and 62-555, F.A.C. Surface water systems or ground water systems that are required to demonstrate the effectiveness of their primary disinfection treatment process to meet *Giardia lamblia* or virus inactivation requirements shall operate within a pH range as specified for their disinfectant in the tables in Appendix E of the Guidance Manual adopted in subsection 62-555.335(1), F.A.C.

(2) If the results of an analysis indicate that the level of fluoride exceeds the secondary maximum contaminant level, the supplier of water shall notify the public pursuant to Rule 62-560.430, F.A.C., and take corrective action as approved by the Department pursuant to Rule 62-560.700, F.A.C.

(3) With the exception of pH, the system is in violation if the level of a secondary contaminant at any sampling point is greater than the secondary maximum contaminant level.

*Rulemaking Authority 403.861(9) FS. Law Implemented 403.853(1), (3), 403.861(16), (17) FS. History—New 11-19-87, Formerly 17-22.320, Amended 1-18-89, 5-7-90, 1-1-93, 7-4-93, Formerly 17-550.520, Amended 11-28-04.*

#### **62-550.521 Unregulated Contaminants Monitoring Requirements.**

If a sample analysis shows the presence of an unregulated contaminant, the supplier of water shall take a confirmation sample in accordance with subsection 62-550.500(6), F.A.C., and notify the Department within seven days after the result of the confirmation sample is received. If the presence of the contaminant is determined by the State Health Officer and the Department to constitute an unreasonable risk to health, corrective action, including additional monitoring, shall be taken by the supplier of water as approved by the Department, pursuant to Rule 62-560.700, F.A.C., based on the potential health risks of the contaminant level, the estimated time needed to take corrective action, and any other data known to the Department.

*Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), 403.861(16), (17) FS. History—New 1-1-93, Amended 7-4-93, Formerly 17-550.521, Amended 9-7-94, 2-7-95, 8-1-00.*

#### **62-550.540 Monitoring of Consecutive Public Water Systems.**

(1) Consecutive systems shall conduct asbestos monitoring in their distribution systems in accordance with Rule 62-550.511, F.A.C.; shall conduct microbiological monitoring in their distribution systems in accordance with Rules 62-550.518 and 62-550.830, F.A.C.; shall comply with the lead and copper control requirements in Rule 62-550.800, F.A.C.; and shall conduct residual disinfectant monitoring at a remote point in their distribution systems in accordance with subsection 62-555.350(6), F.A.C., to verify that the minimum residual disinfectant concentration required by subsection 62-555.350(6), F.A.C., is being maintained throughout their distribution systems. In accordance with subparagraph 62-550.817(1)(b)2., F.A.C., consecutive systems that receive any finished water originating from a subpart H system shall comply with the distribution system residual disinfectant monitoring requirements in 40 CFR 141.74(c)(3) as adopted in subsection 62-550.817(2), F.A.C. Consecutive systems that add a chemical disinfectant to the water shall conduct residual disinfectant monitoring in accordance with subsection 62-550.514(1) and Rule 62-550.821, F.A.C., and shall conduct disinfection byproduct monitoring in accordance with subsection 62-550.514(2) and Rule 62-550.821, F.A.C. This subsection shall be effective on July 7, 2015.

(2) If you are a consecutive system that does not add a disinfectant but delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light, you must comply with monitoring requirements for chlorine and chloramines in 40 C.F.R. §141.132(c)(1) (which is incorporated by reference in Rule 62-550.821, F.A.C.) beginning April 1, 2009. (40 C.F.R. §141.624 (July 1, 2011))

(3) The regulations in 40 C.F.R. Part 141, Subpart V (which is incorporated by reference in Rule 62-550.822, F.A.C.), establish monitoring requirements for achieving compliance with maximum contaminant levels based on locational running annual averages for total trihalomethanes and haloacetic acids (five). You are subject to these requirements if your system is a community water system or a non-transient non-community water system that uses a primary or residual disinfectant other than ultraviolet light or

delivers water that has been treated with a primary or residual disinfectant other than ultraviolet light. (40 C.F.R. §141.620(a) and (b) (July 1, 2011))

(4) Consecutive systems that treat or retreat a wholesale system's finished water in a manner that could cause violation of any applicable primary or secondary standard in Part III of this chapter shall conduct additional monitoring or comply with additional requirements (i.e., monitoring or requirements in addition to the monitoring and requirements specified in subsection (1) above) when notified in writing by the Department to do so. Such additional monitoring or requirements shall be for the standard(s) in question and shall be consistent with the monitoring or requirements specified in this chapter for the standard(s) in question.

(5) Consecutive systems that have their own source(s) of raw water or that receive raw water from one or more other water systems shall monitor such water in accordance with Rules 62-550.500, 62-550.512, 62-550.513, 62-550.515, 62-550.516, 62-550.517, 62-550.519, 62-550.520, and 62-550.521, F.A.C.; the source water asbestos monitoring requirements under Rule 62-550.511, F.A.C.; and the raw water microbiological monitoring requirements under Rule 62-550.518, F.A.C.; and shall comply with any primary or secondary treatment technique requirements applicable to such water.

(6) Upon written approval by the Department, consecutive systems that receive all of their finished water from a single wholesale system may consolidate their monitoring requirements with those of the wholesale system or those of another interconnected consecutive system that receives all of its finished water from the same wholesale system. To obtain the Department's approval, consolidating systems shall submit to the appropriate Department of Environmental Protection District Office or appropriate Approved County Health Department the following:

- (a) Documentation that interconnection of the systems justifies treating them as a single system for monitoring purposes;
- (b) Written asbestos, residual disinfectant and disinfection byproducts, microbiological, or lead and copper sampling/monitoring plans, as applicable, for the consolidated system; and

(c) A written agreement between the systems establishing the following:

1. The one system that shall be solely accountable to the Department for compliance with applicable monitoring requirements and associated maximum contaminant levels, maximum or minimum residual disinfectant levels, treatment technique requirements, reporting requirements, public notification requirements, and recordkeeping requirements for the consolidated system; and

2. Each system's responsibilities to the other for providing treatment, taking corrective action, monitoring, reporting, notifying the public, and keeping records.

(7) Consecutive systems that receive any finished water originating from a subpart H system shall comply with the disinfectant residual monitoring requirements of subparagraph 62-550.817(1)(b)2., F.A.C.

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 11-19-87, Formerly 17-22.340, Amended 1-18-89, 1-1-93, Formerly 17-550.540, Amended 11-27-01, 10-14-04, 11-28-04, 12-30-11, 7-7-15.*

#### **62-550.550 Certified Laboratories and Analytical Methods for Public Water Systems.**

(1) For the purpose of determining compliance with standards and monitoring requirements other than those mentioned in subsection (2) below, samples shall be considered acceptable only if they have been analyzed by a laboratory certified in drinking water by the Department of Health to perform such drinking water analyses with the exception that measurements for alkalinity, bromide, calcium, chlorite at entrances to distribution systems, orthophosphate, silica, specific ultraviolet absorbance, or total organic carbon may be performed by operators licensed under Chapter 62-602, F.A.C., or by persons under the direct supervision of a licensed operator, and measurements for conductivity, disinfectant residual, pH, temperature, or turbidity may be performed by operators licensed under Chapter 62-602, F.A.C., by persons under the direct supervision of a licensed operator, or by any authorized representative of the Department. Approved analytical methods shall be used and are contained in the July 1, 2014, edition of 40 C.F.R. §§141.21, 141.23, 141.24, 141.25, 141.27, 141.74, 141.89, 141.131, 141.402, 141.704, 141.852, and 143.4 and Appendix A to 40 C.F.R. Part 141, Subpart C (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05592>), all of which are incorporated herein by reference. Use of an alternative analytical technique requires written permission from the Department and the U.S. Environmental Protection Agency. The use of DPD colorimetric test kits to measure residual chlorine, chloramine, or chlorine dioxide concentration is approved. This subsection shall be effective on July 7, 2015.

(2) Measurements for residual disinfectant to demonstrate that TTHM and HAA5 samples were taken under normal operating conditions (see subsection 62-550.821(4), F.A.C.) and measurements for disinfectant residual to determine compliance with the operational requirements in subsection 62-555.350(6), F.A.C., may be performed by any authorized representative of the supplier of

water or the Department; but measurements for residual chlorine shall be performed following the appropriate procedures in the Department of Environmental Protection Standard Operating Procedures for Field Activities, DEP-SOP-001/01, as incorporated into Rule 62-160.800, F.A.C., and all other measurements shall be performed using an appropriate method referenced in subsection (1) above. Measurements for alkalinity, dissolved iron, dissolved oxygen, pH, total sulfide, or turbidity to evaluate treatment for control of copper pipe corrosion and black water (see subsection 62-555.315(5), F.A.C.) may be performed by any authorized representative of the construction permit applicant or supplier of water; but measurements for pH and field measurements for dissolved oxygen or turbidity shall be performed following the appropriate procedures in the Department of Environmental Protection Standard Operating Procedures for Field Activities, DEP-SOP-001/01, as incorporated into Rule 62-160.800, F.A.C., and all other measurements shall be performed using an appropriate method referenced in subsection (1) above or in *Standard Methods for the Examination of Water and Wastewater* as adopted in Rule 62-555.335, F.A.C. Measurements for residual chlorine when taking bacteriological survey or evaluation samples (see paragraphs 62-555.315(6)(b) and (c), F.A.C., and subsection 62-555.340(2), F.A.C.) may be performed by any authorized representative of the permittee, supplier of water, or Department, but shall be performed following the appropriate procedures in the Department of Environmental Protection Standard Operating Procedures for Field Activities, DEP-SOP-001/01, as incorporated into Rule 62-160.800, F.A.C. Daily measurements for fluoride concentration at water treatment plants fluoridating water (see paragraph 62-555.325(3)(a), F.A.C.) may be performed by any authorized representative of the supplier of water but shall be performed using an appropriate method referenced in subsection (1) above. Measurements for disinfectant residual, pH, or temperature to determine compliance with the operational requirements under subsection 62-555.350(5), F.A.C., may be performed by any authorized representative of the supplier of water or Department; but measurements for residual chlorine, temperature, or pH shall be performed following the appropriate procedures in the Department of Environmental Protection Standard Operating Procedures for Field Activities, DEP-SOP-001/01, as incorporated into Rule 62-160.800, F.A.C., and all other measurements shall be performed using an appropriate method referenced in subsection (1) above or in *Standard Methods for the Examination of Water and Wastewater* as adopted in Rule 62-555.335, F.A.C.

(3) The Department may take samples and use the results to determine compliance with the applicable requirements of this chapter or Chapter 62-555, F.A.C.

(4) Compositing of Samples.

(a) A public water system may reduce the total number of samples that must be analyzed pursuant to Rules 62-550.511, 62-550.512, 62-550.513, 62-550.515, 62-550.516, and 62-550.519, F.A.C., by the use of compositing. No more than two samples shall be combined into one composite sample when analyzing for antimony or thallium, which are listed in Table 1, or for any of the volatile organic contaminants listed in Table 4, or for ethylene dibromide (EDB), which is listed in Table 5. No more than three samples shall be combined into one composite sample when analyzing for toxaphene, which is listed in Table 5. No more than four samples shall be combined into one composite sample when analyzing for cyanide, which is listed in Table 1. No more than five samples shall be combined into one composite sample when analyzing for the other contaminants in the other groups.

(b) Compositing shall be done only by certified laboratories using the approved methods referenced in subsection (1) above. All samples, except those taken for radionuclides, shall be analyzed within 14 days of collection.

(c) If the population served by the system is greater than 3,300 persons, then compositing is only permitted at sampling points within a single system. For systems serving 3,300 or fewer persons, compositing among different systems is permitted provided the 5 sample limit is maintained.

(d) Resampling After a Detection of a Contaminant in a Composite Sample.

1. A follow-up sample shall be taken within 14 days from each source and sampling point included in the composite. Each of the samples shall be analyzed individually for the detected contaminant.

2. If duplicates of the original sample for volatile or synthetic organic contaminants are available, the system may use these duplicates instead of resampling. If a duplicate is used, it shall be analyzed for the detected contaminant within 14 days of collection.

(e) Compositing of no more than two samples from new wells for the purpose of obtaining clearance is allowed.

*Rulemaking Authority 403.8055, 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), 403.861(16), (17) FS. History—New 11-19-87, Formerly 17-22.350, Amended 1-18-89, 5-7-90, 1-3-91, 1-1-93, 1-26-93, Formerly 17-550.550, Amended 9-7-94, 2-7-95, 8-1-00, 11-27-01, 4-14-03, 11-28-04, 9-18-07, 12-30-11, 7-7-15.*

### **62-550.590 Public Water System Monitoring Information and Monitoring Schedule.**

*Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), 403.861(16), (17) FS. History—New 1-18-89, Amended 1-3-91, 1-1-93, Formerly 17-550.590, Amended 9-7-94, 8-1-00, 11-27-01, Repealed 2-16-12.*

### **62-550.720 Recordkeeping.**

Suppliers of water shall retain on their premises, or at a convenient location near their premises, the following records:

(1) Records of microbiological analyses and turbidity analyses made pursuant to the chapter shall be kept for not less than 5 years (40 C.F.R. §141.33(a) (July 1, 2011)). Records of other physical, chemical, or radiological analyses made under any portion of this chapter other than Rule 62-550.800, F.A.C., (including records of chemical analyses to determine compliance with maximum residual disinfectant levels) shall be kept for not less than 10 years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, provided that the information required in Rule 62-550.730, F.A.C., is included.

(2) Records of action taken by the system to correct a violation of primary drinking water regulations shall be kept for a period not less than 3 years after the last action taken with respect to the particular violation involved.

(3) Copies of any written reports, summaries, or communications relating to cross-connection control program or sanitary surveys of the system conducted by the system itself, by a private consultant, or by any local, State or Federal agency, shall be kept for a period not less than 10 years after completion of the sanitary survey.

(4) Records concerning a variance or exemption granted to the system shall be kept for a period ending not less than 5 years following the expiration of the variance and exemption.

(5) Monthly operation reports shall be kept for a period of not less than 10 years.

(6) Any system subject to the requirements of Rule 62-550.800, F.A.C., shall retain, for no fewer than 12 years, original records of all sampling data and analyses, reports, surveys, letters, evaluations, schedules, Department determinations, and any other information required by Rule 62-550.800, F.A.C.

(7) Copies of monitoring plans developed pursuant to this chapter shall be kept for the same period of time as the records of analyses taken under the plan are required to be kept under subsection (1) of this section, except as specified elsewhere in this chapter. (40 C.F.R. §141.33(f) (July 1, 2011))

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.861(16) FS. History—New 11-19-87, Formerly 17-22.820, Amended 1-18-89, 1-1-93, 7-4-93, Formerly 17-550.720, Amended 11-27-01, 11-28-04, 12-30-11.*

### **62-550.730 Reporting Requirements for Public Water Systems.**

Suppliers of water and DOH-certified laboratories shall report as follows:

(1) Suppliers of Water.

(a) Except where a shorter reporting period is specified in this chapter, the suppliers of water shall report to the appropriate District office of the Department or Approved County Health Department the results of the test measurement or analysis required by this chapter within the first ten days following the end of the required monitoring period as designated by the Department, or the first ten days following the month in which the sample results were received, whichever time is shortest.

(b) The supplier of water shall use the format described in subparagraphs 1. through 9. below for reporting all water analysis results for inorganics, disinfectant residuals at microbiological or disinfection byproduct sampling points, disinfection byproducts, volatile or synthetic organics, microbiological contaminants, radionuclides, or secondary contaminants. Example laboratory reporting formats can be obtained by writing to the Department of Environmental Protection, Drinking Water Section, MS 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, or by visiting the Department's Internet site at <http://www.dep.state.fl.us/water/drinkingwater/forms.htm>. The supplier of water shall completely fill out analysis reports in non-erasable ink, on a typewriter, or using a computer generated report and shall include, at a minimum, the following information:

1. Facility name and PWS I.D. number – The complete, unabbreviated facility name is required. The correct, seven digit PWS I.D. number assigned by DEP shall also be clearly written.

2. Address and county – The water system's legal address (plant location) shall be completely filled out along with the name of the county where the water system is located.

3. Collector's name and title – The collector's name and job title shall be included, along with a business phone number.



4. Date and time of collection – A complete date (month, day, and year) and sampling time (including a.m. or p.m.) shall be included in order to calculate sample holding time. The results from samples exceeding the appropriate holding time for the contaminant before analysis (for example, thirty hours for bacteriological samples) shall be rejected by the Department as not reliable.

5. Type of water system. The sample form shall clearly show if the water system is a community, transient non-community, or non-transient non-community water system.

6. Raw or treated – The sample form shall indicate if the samples were collected from raw or treated water. If samples from both water types are included on the form, they shall be clearly labeled from which type of water each sample was taken.

7. Sample type – The sample form shall clearly show if the sample was taken for compliance, recheck, main clearance, well survey, inter-agency agreement, or other purposes. If “other” is marked, the purpose for taking the sample shall be stated (e.g., complaint, quality control, special, etc.).

8. Sample location – Samples shall be taken at valid sampling locations as described in subsection 62-550.500(5), F.A.C. Legal addresses, or the best descriptions possible, shall be given for each sampling point.

9. Field analyses for disinfectant residual – The analyzer’s name, as well as the analysis result, shall be included for each disinfectant residual analysis at a microbiological or disinfection byproduct sampling point. Additionally, the analyzer’s qualifications and the analytical method shall be included for each analysis used to determine compliance with disinfectant residual standards (i.e., for each disinfectant residual analysis at a point where a routine or repeat sample is taken to determine whether a community or non-transient non-community water system is in compliance with microbiological standards).

(c) Analysis results not reported in the format specified in paragraph 62-550.730(1)(b), F.A.C., or reported on formats that are not completely, clearly, and correctly filled out by the supplier of water and the laboratory shall be invalid. The Department District Office or Approved County Health Department shall reject invalid analytical results and return the reports to the supplier of water within 7 days. The supplier of water shall then resubmit the analysis report with the corrected information within 5 days.

(d) The supplier of water shall submit monthly operation reports as specified in subsections 62-555.900(2) through (4), F.A.C., to the appropriate Department of Environmental Protection District Office or appropriate Approved County Health Department within 10 days after the month of operation.

(e) The supplier of water shall report to the appropriate Department of Environmental Protection District Office or appropriate Approved County Health Department within 48 hours (unless otherwise specified by the chapter) the failure to comply with any drinking water rule contained in Parts III, V, or VIII of this chapter, or Part IV of Chapter 62-560, F.A.C. When compliance is achieved, the measures taken shall be reported to that office.

(f) The supplier of water is not required to report analytical results to the Department in cases where a Department of Health laboratory performs the analysis and reports the results to the Department.

(g) Copies of any written reports, summaries, or communications relating to sanitary surveys of the system conducted by the system itself, by a private consultant, or by any local or Federal agency, shall be submitted to the appropriate Department District Office or the appropriate Approved County Health Department within 15 days of receipt by the supplier of water of the information.

(h) The supplier of water, within ten days of completion of each public notification requirement pursuant to Part IV of Chapter 62-560, F.A.C., shall submit to the Department a completed DEP Form 62-555.900(22), Certification of Delivery of Public Notice, and include with the form a representative copy of each type of notice distributed, published, posted, and made available to the persons served by the system and the media.

(i) Upon request, the supplier of water shall submit to the Department within the time stated in the request, copies of any records required to be maintained under Rule 62-550.720, F.A.C., or copies of any document which the Department is entitled to inspect.

(2) Certified Laboratories.

(a) A certified laboratory shall report analysis results for inorganics, disinfectant residuals at microbiological or disinfection byproduct sampling points, disinfection byproducts, volatile or synthetic organics, microbiological contaminants, radionuclides, or secondary contaminants to the appropriate Department of Environmental Protection District Office or appropriate Approved County Health Department in a format that includes all of the information described in subparagraphs 1. through 7. below. If lab analysis results are not submitted using the specified format, the results will be rejected. The information submitted by the certified laboratory shall include, at a minimum, the following information:

1. Laboratory name – The complete, unabbreviated laboratory name is required. If the analytical work was subcontracted out to

another certified laboratory, the subcontracting laboratory name shall also be included.

2. Laboratory certification number – The correct, five digit lab certification number, assigned by DOH, shall be clearly identified for the services provided. Any subcontracting laboratory certification numbers shall also be identified for the services provided. The proper certification number for the services provided shall be included, such as when a laboratory that performs radiological analyses has a different certification number from a laboratory that performs other analyses, and both laboratories have the same owner and address.

3. Date and time of the beginning of the analysis – A complete date (month, day, and year) and time of the beginning of the analysis (including a.m. or p.m.) shall be included in order to calculate sample holding time. Results from samples exceeding the appropriate holding time for the contaminant before analysis (for example, thirty hours for bacteriological samples) shall not be accepted as reliable and shall be rejected by the Department.

4. Name, title, and business phone number of the laboratory contact person.

5. Detection limits and analytical methods – The analytical method for each bacteriological analysis, the analytical method for each disinfectant residual analysis used to determine compliance with disinfectant residual standards (i.e., for each disinfectant residual analysis at a point where a routine or repeat sample is taken to determine whether a community or non-transient non-community water system is in compliance with microbiological standards), and the actual detection limit and analytical method for each chemical or radiological analysis shall be included.

6. Analysis results – For bacteriological analyses, only the presence or absence of the contaminant need be reported. For chemical or radiological analyses, any value above the detection limit shall be reported as a real number; only reporting that a value is below the maximum contaminant level is insufficient.

7. Analysis error – The analysis error for each radiological analysis shall be included to determine compliance with the standards in this chapter.

(b) All certified laboratories shall report the chemical analysis results by using the name of the contaminant as given in Part III of this chapter. Different isomers of a contaminant shall be reported separately. If a laboratory reports a result for a contaminant not listed in Part III of this chapter, the name of the contaminant and its isomers shall be given using I.U.P.A.C. (International Union of Pure and Applied Chemistry) nomenclature.

(c) Analytical results not reported in the format specified in paragraph 62-550.730(2)(a), F.A.C., or reported on formats that are not completely, clearly, and correctly filled out by the certified laboratory as described in paragraphs (a) and (b), are invalid. The Department or Approved County Health Department shall reject all invalid analytical results and return the reports to the supplier of water within 7 days of receipt. The supplier of water shall then resubmit the analysis reports with the corrected information within 5 days.

(d) The Department shall not be responsible for any costs incurred when requiring a supplier of water to resample for invalid analytical results.

(3) Additional Reporting Formats for Disinfectant Residuals, Disinfection Byproducts, and Disinfection Byproduct Precursors and Enhanced Coagulation or Enhanced Softening. See subsection 62-550.821(12) and Rule 62-550.822, F.A.C.

(4) Reporting Formats for the Control of Lead and Copper. Analytical results for samples taken pursuant to this chapter shall be reported in a format that includes all of the required information described below. If laboratory analysis reports are submitted without all of the required information as set forth below, the submittal will be rejected.

(a) Lead and Copper Tap Samples. The information submitted by the certified laboratory for the analysis of lead and copper tap samples shall include, at a minimum:

1. System name.

2. Public water system identification number.

3. Laboratory name. The complete unabbreviated laboratory name is required. If the analytical work was subcontracted out to another certified laboratory, the subcontracting laboratory name shall also be included.

4. Laboratory certification number. The correct five digit laboratory certification number as assigned by the Department of Health shall be clearly identified for the services provided. Any subcontracting laboratory's certification number shall also be submitted for the services provided.

5. Contact person. Name and title of the laboratory contact person.

6. Telephone number.

7. Date samples were submitted to the laboratory.
  8. Analysis date.
  9. Analytical method used.
  10. Method detection limit.
  11. Specify whether the sample is part of the minimum number of samples selected under 40 C.F.R. §141.86(c) (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., or is an ADDITIONAL sample taken under 40 C.F.R. §141.86(e) (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C.
  12. Specify the rank of the sample result for lead or copper and list results in ascending order in accordance with 40 C.F.R. §141.80(c)(3)(i) (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C.
  13. Specify the location code of the sample. This number is the same as that reported on Form 62-555.900(12). It is a three digit identification number followed by the tier number of the site.
  14. The laboratory sample identification number.
  15. The date the site was sampled.
  16. The concentration of lead or copper in milligrams per liter.
  17. The 90th percentile value of lead or copper.
  18. The laboratory's authorized representative shall certify that the samples were submitted by the listed public water system; each sample container contained one liter of solution ( $\pm$  100 mL); each sample was taken and analyzed by the methods in subsection 62-550.550(1), F.A.C.; the sample date for each sample was reported; and all data submitted are correct.
- (b) Lead and Copper Source Water Samples. Certified laboratories shall report in the format specified in paragraph 62-550.730(2)(a), F.A.C., when reporting the results for lead or copper source water samples or lead service line samples.
- (c) Reporting Formats for Water Quality Parameters. The results submitted by systems for the analysis of water quality parameters required under 40 C.F.R. §141.87 (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C., shall be reported in the following format:
1. Format Header.
    - a. System name.
    - b. System type.
    - c. Public water system identification number.
    - d. Name of system contact person.
    - e. Contact telephone number.
    - f. Population interval letter value.
    - g. Monitoring period dates.
    - h. Water quality parameter sampling round value which will be either the first or second sampling round of the reported sampling period.
      - i. The number of sampling sites required under 40 C.F.R. §141.87(a)(2) (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C.
      - j. The number of sites reported.
  2. Format Table.
    - a. Each sampling site location identification number corresponding to the identification number reported in Part VI of DEP Form 62-555.900(12).
    - b. The sampling date for each reported sample.
    - c. The measured value of the water quality parameters and dosage rates required to be analyzed under 40 C.F.R. §141.87 (July 1, 2011), which is incorporated by reference in Rule 62-550.800, F.A.C.

*Rulemaking Authority 403.8055, 403.853(3), 403.861(9) FS. Law Implemented 403.852(12), (13), 403.853(3), 403.861(16), (17) FS. History—New 11-19-87, Formerly 17-22.830, Amended 1-18-89, 1-3-91, 1-1-93, Formerly 17-550.730, Amended 9-7-94, 2-7-95, 12-9-96, 8-1-00, 11-27-01, 4-3-03, 11-28-04, 1-17-05, 12-30-11.*

### **62-550.800 Control of Lead and Copper.**

The requirements contained in the July 1, 2011, edition of 40 C.F.R. Part 141, Subpart I (Sections 80 through 91) (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00899>), are adopted and incorporated herein by reference and are enforceable under this rule. The following are clarifications to the requirements in 40 C.F.R. Part 141, Subpart I (Sections 80 through 91).

- (1) The term "State" shall mean "Department."
- (2) The Department shall not allow the option in 40 CFR 141.85(b)(3)(iv) that allows an extension of the activities beyond the 60 day requirement stated in 40 CFR 141.85(b)(2).
- (3) The Department shall not allow the option in 40 CFR 141.85(b)(5) that allows an extension of the activities beyond the 60 day requirement stated in 40 CFR 141.85(b)(4).
- (4) To fulfill the noticing requirements in 40 CFR 141.90(f)(2)-(3), the Department hereby adopts and incorporates Form 62-555.900(16), PWS Certification of Notification of Lead and Copper Tap Sample Results, (10-1-10), and Form 62-555.900(17), Lead Public Education Program Report for PWSs, (10-1-10). These forms are available as described in Rule 62-555.900, F.A.C.

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.853 FS. History—New 12-9-96, Amended 8-1-00, 11-27-01, 10-1-10, 12-30-11.*

### **62-550.817 Additional Requirements for Subpart H Surface Water Systems.**

The requirements for subpart H systems in this section apply to all subpart H systems except where noted in this section and are in addition to the requirements applicable to all public water systems found elsewhere in Chapters 62-550, 62-555, and 62-560, F.A.C. Subparagraph 62-550.817(1)(b)2. and paragraphs 62-550.817(11)(e) and 62-550.817(13)(b), F.A.C., apply only to consecutive systems that receive any finished water originating from a subpart H system. In addition to the requirements of this section, the standards and criteria contained in the regulations adopted in subsections 62-550.817(1), (2), (3), and (4), F.A.C., are adopted by reference and enforceable under these rules. A subpart H system is considered to be in compliance with the requirements of this section if it meets all the requirements set forth in this section. A subpart H system is considered to be out of compliance with the requirements of this section if it does not meet all the requirements set forth in this section.

- (1) Scope of Requirements.
  - (a) These rules are intended to implement the National Primary Drinking Water Regulations related to the disinfection and filtration of surface water and ground water under the direct influence of surface water, and the recycle of fluids referenced in 40 C.F.R. §141.76(a) (July 1, 2011), which is incorporated by reference in subparagraph 62-550.817(1)(a)2., F.A.C., by subpart H systems that employ conventional filtration or direct filtration treatment.
    1. They adopt filtration and disinfection as best available treatment techniques for the removal or inactivation of pathogens in lieu of establishing a maximum contaminant level for the following contaminants: *Cryptosporidium*, *Giardia lamblia*, viruses, heterotrophic plate count (HPC) bacteria, *Legionella*, and turbidity. Subpart H systems shall provide treatment of those part(s) of their source water that are surface water or ground water under the direct influence of surface water. Such treatment shall comply with the treatment technique requirements found in paragraph 62-550.817(2)(b), F.A.C., in lieu of maximum contaminant levels for *Cryptosporidium*, *Giardia lamblia*, viruses, HPC bacteria, *Legionella*, and turbidity.
    2. Recycle provisions. In addition to the requirements of this chapter, the standards and criteria contained in the July 1, 2014, edition of 40 C.F.R. §141.76 (<http://www.flrules.org/Gateway/Reference.asp?No=Ref-05603>) are adopted by reference and enforceable under this rule. This subsection shall be effective on July 7, 2015.
  - (b) For purposes of the requirements of this section:
    1. The number of persons served by a wholesale system includes the number of persons served by the consecutive systems that receive finished water from the wholesale system; and
    2. Consecutive systems that receive any finished water originating from a subpart H system are considered subpart H systems for the purpose of demonstrating compliance with the distribution system disinfection residual maintenance requirements of 40 CFR 141.72(b)(3)(i), adopted in subsection 62-550.817(2), F.A.C., the monitoring requirements of paragraph 62-550.817(10)(e), F.A.C., and the reporting requirements of paragraph 62-550.817(12)(b), F.A.C.
    3. When using Form 62-555.900(2) (the Monthly Operation Report or MOR form) to calculate CT and other values, input data and output data must be within the ranges provided in the MOR form in order to be valid.

4. To determine compliance with the following standards for removal or inactivation, actual log-inactivation due to disinfectants shall be rounded to the same number of significant figures as the standards: 2.0 log *Cryptosporidium*, 3.0 log *Giardia lamblia*, and 4.0 log viruses.

(2) Filtration and Disinfection. In addition to the requirements of this chapter, the standards and criteria contained in the July 1, 2014, edition of 40 C.F.R. §§141.13, 141.22, 141.70(a), 141.70(b)(2), 141.70(c), 141.70(d), 141.70(e), 141.71(b)(6), 141.72, 141.72(a), 141.72(b)(1), 141.72(b)(2), 141.72(b)(3)(i), 141.73, 141.74, and 141.75 (<http://www.flrules.org/Gateway/Reference.asp?No=Ref-05603>) are adopted by reference and enforceable under this rule. However, 40 C.F.R. §141.72(b)(3)(ii) is not adopted. This subsection shall be effective on July 7, 2015.

(a) The following are clarifications and additions to the regulations adopted in subsection 62-550.817(2), F.A.C.

1. The method used to determine which ground water systems are under the direct influence of surface water (UDI) is described in chapter 2 of the *Guidance Manual for Compliance With the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources*, adopted in subsection 62-555.335(1), F.A.C., and implemented in subsection 62-550.517(2), F.A.C.

2. No later than 18 months after the Department has determined that a ground water system is under the influence of surface water as described in subsection 62-550.517(2), F.A.C., the system shall comply with the filtration requirements of 40 CFR 141.73. No later than 6 months after the Department determination pursuant to subparagraph 1. above, the system shall comply with the interim disinfection treatment technique described in a., b., and c. below. “Interim” refers to the period between Department determination that the system is UDI and the start of compliance with the filtration requirements of 40 CFR 141.73.

- a. Interim disinfection treatment requirements shall be in accordance with 40 CFR 141.72(a).
- b. Interim monitoring requirements shall be in accordance with 40 CFR 141.74(b).
- c. Interim reporting requirements shall be in accordance with 40 CFR 141.75(a).

3. Starting no later than the end of the interim period and continuing as long as the systems remain subpart H systems, subpart H systems shall provide treatment consisting of both disinfection and filtration treatment which complies with the requirements of 40 CFR 141.72(b) and 141.73, respectively.

(b) Treatment Techniques.

1. The treatment technique requirements consist of installing and properly operating filtration and disinfection water treatment processes that reliably achieve:

- a. At least 99.9 percent (3-log) removal or inactivation of *Giardia lamblia* between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream, before or at taps providing water for human consumption; and
- b. At least 99.99 percent (4-log) removal or inactivation of viruses between a point where the raw water is not subject to recontamination by surface water runoff or, after December 31, 2005, exposed during treatment to the open atmosphere and a point downstream, before or at taps providing water for human consumption. For the purposes of subsection 62-550.817(2), F.A.C., aerators and other facilities that are protected against contamination from birds, insects, wind borne debris, rainfall, and drainage are not considered to be exposing water to the open atmosphere and possible viral contamination.

2. Log-removal credit through filtration. The Department shall determine if a system is well-operated based on monthly operation report records, sanitary survey and compliance inspection results, CPE results, and any other relevant information. Well-operated filtration treatment plants are given the following log-removal credit:

Filtration Type	Log-Removal Credit for the Removal of	
	<i>Giardia lamblia</i>	Viruses
Conventional	2.5	2.0
Direct	2.0	1.0
Slow Sand	2.0	2.0
Diatomaceous Earth	2.0	1.0

3. Systems with significant deficiencies related to the treatment process as noted in one or more of the reports listed in subparagraph 62-550.817(2)(b)2., F.A.C., shall not receive the log-removal credits shown in subparagraph 62-550.817(2)(b)2., F.A.C., without Department approval. The Department will notify such systems in writing of any Department-assigned log-removal credits which are lower than the credits shown in subparagraph 62-550.817(2)(b)2., F.A.C. The Department will assign reductions in log-removal credits according to the criteria in the “Compliance Manual for Subpart H systems”, June 2004 edition, incorporated

herein by reference.

4. Minimum disinfection log-inactivation effectiveness requirements pursuant to 40 CFR 141.72(b)(1). The determination of log-removal/inactivation effectiveness achieved, specific to the system operating conditions, shall be made using the methods in subsections (6) and (7) below.

a. Systems providing conventional filtration treatment in compliance with Rule 62-550.817, F.A.C., shall provide sufficient disinfection to achieve a minimum of 0.5-log *Giardia lamblia* cyst and 2-log virus inactivation to supplement filtration.

b. Systems providing slow sand filtration treatment in compliance with Rule 62-550.817, F.A.C., shall provide sufficient disinfection to achieve a minimum of 1-log *Giardia lamblia* cyst and 2-log virus inactivation to supplement filtration.

c. Systems providing direct and diatomaceous earth filtration treatment in compliance with Rule 62-550.817, F.A.C., shall provide sufficient disinfection to achieve a minimum of 1-log *Giardia lamblia* cyst and 3-log virus inactivation to supplement filtration.

d. Systems providing reverse osmosis, ultrafiltration, or nanofiltration shall provide sufficient disinfection to achieve a minimum of 0.5-log *Giardia lamblia* cyst and 2-log virus inactivation to supplement membrane filtration treatment.

e. Systems shall be deemed to meet the requirements of subparagraph 62-550.817(2)(b)4., F.A.C., by

(I) Determining CT<sub>calc</sub>,

(II) Estimating log-inactivation for the CT<sub>calc</sub> for *Giardia lamblia* and viruses, and

(III) Showing that 95% of the daily measurements taken each month meet or exceed the minimum log-inactivation disinfection requirements set forth in sub-subparagraphs 4.a. through d. above. Estimates of log-inactivation levels shall be rounded to two significant figures.

f. A violation of the requirement set forth in III above is a treatment technique violation.

g. If, in any daily measurement, log-inactivation levels are insufficient to meet the requirements of sub-subparagraphs 4.a. through d. above, the operator shall take immediate steps to increase disinfection levels.

(3) Enhanced filtration and disinfection requirements.

(a) For subpart H systems serving 10,000 or more people.

1. In addition to the requirements of this chapter, the requirements contained in the July 1, 2011 edition of the Code of Federal Regulations, Title 40, Part 141, Subpart P, Sections 170 and 172 through 175 (<http://www.flrules.org/Gateway/Reference.asp?No=Ref-00904>) are adopted by reference and enforceable under this rule. 40 C.F.R. §141.171 is not adopted under this rule.

2. Treatment technique requirements further consist of installing and properly operating water treatment processes which reliably achieve at least a 99 percent (2-log) removal or inactivation of *Cryptosporidium* between a point where the raw water is not subject to recontamination by surface water and a point downstream, before or at taps providing water for human consumption.

(b) For subpart H systems serving fewer than 10,000 people. In addition to the requirements of this chapter, the requirements contained in the July 1, 2011, edition of the Code of Federal Regulations, Title 40, Part 141, Subpart T, Sections 141.500 through 141.501, 141.503, 141.510 through 141.511, 141.530, 141.532 through 141.536, 141.540 through 141.544, 141.550 through 141.553, 141.560 through 141.564, and 141.570 through 141.571, (<http://www.flrules.org/Gateway/Reference.asp?No=Ref-00905>) are adopted by reference and enforceable under this rule. 40 C.F.R. §§141.502, 141.520 through 141.522 and 141.531, and 40 C.F.R. §142.16(j)(2)(i) are not adopted under this rule.

(4) Enhanced Treatment for *Cryptosporidium* (Long Term 2 Enhanced Surface Water Treatment Rule). In addition to the requirements of this chapter, the requirements contained in the July 1, 2011, edition of the Code of Federal Regulations, Title 40, Part 141, Subpart W, Sections 141.700 through 141.723 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00906>) are adopted by reference and enforceable under this rule, except the following regulations are not adopted under this rule: 40 C.F.R. §§ 141.700(b)(3), 141.701(a)(2), 141.701(a)(5), 141.701(a)(6), 141.701(d)(2), 141.703(b)(2), 141.712, 141.713(b), 141.713(e), 141.715(a)(2), 141.720(d)(2)(iii), and 141.721(d).

(5) Sanitary Surveys and Other Inspections.

(a) Sanitary survey corrective action pursuant to 40 CFR 142.16(b)(1)(ii) and (iii). A subpart H public water system must take the necessary steps to address deficiencies identified in sanitary survey reports required under 40 CFR 142.16(b)(3), if such deficiencies are within the control of the system.

(b) Systems shall respond in writing no later than within 45 days after the receipt of a written report of:

1. A sanitary survey outlining significant deficiencies required under paragraph (a) above. Systems shall indicate how and on what schedule the system will address significant deficiencies noted in the survey, and

2. A sanitary survey, CPE evaluation, or an inspection referenced in paragraph (c) below indicating how and on what schedule the system will undertake the filter backwash recycle modifications noted.

(c) A subpart H public water system shall take the necessary steps to correct any failure to follow the filter backwash recycling treatment technique requirements of 40 CFR 141.76(c) identified in subparagraph (b)2., above.

(6) Composite Correction Program. A composite correction program (CCP) consists of a comprehensive performance evaluation (CPE) and a comprehensive technical assistance (CTA) program. CCPs and CPEs are described in *Optimizing Water Treatment Plant Performance Using the Composite Correction Program*, 1998 Edition, Environmental Protection Agency, Technical Support Center, Standards and Risk Management Division, Office of Ground Water and Drinking Water, Office of Water, Cincinnati, Ohio, hereby adopted and incorporated by reference.

(a) Pursuant to 40 CFR 142.16(g), subpart H systems that are out of compliance with the treatment technique requirements of this section shall conduct a CPE within ninety days after the receipt of written notification by the Department that such a program is necessary.

(b) Who Conducts the CPE. The CPE shall be conducted by the Department or a third party familiar with the operation of the plant such as a certified operator or a professional engineer. The person or entity conducting the CPE is called the CPE Team. The CPE Team must be approved by the Department. The Department will approve CPE Teams that have:

1. All members with experience participating in the conduct of at least three CPEs, and
2. No conflict of interest.

(c) System Response to Identified Improvements. A subpart H system must respond in writing to the recommendations of the CPE report no later than 45 days after receipt of the report, indicating how and on what schedule the system will address improvements identified in the CPE.

(d) Comprehensive Technical Assistance (CTA) Program.

1. Pursuant to 40 CFR 142.16(g)(1) and (j)(1), the Department will, as a part of its conduct or review of a CPE, determine if a system is required to participate in a Comprehensive Technical Assistance (CTA) Program. This written determination shall be based on:

a. Results of a CPE which indicate the potential for improved performance, and

b. A finding by the Department that the system is able to receive and implement technical assistance provided through the CTA program.

2. During the CTA phase of the CPE, the system must identify and systematically address factors limiting performance. The CTA is a combination of utilizing CPE results as a basis for follow-up, implementing process control priority-setting techniques, and maintaining long-term involvement to systematically train staff and administrators.

(e) Corrective Action. A subpart H system must take the necessary steps to implement the recommendations of the CPE, required under paragraphs (a), (b), and (d) above, if such recommendations are within the control of the system.

(7) Determination of log-removal/inactivation effectiveness achieved for *Giardia lamblia* through filtration and disinfection. Pursuant to the requirements of 40 CFR 141.74(b)(3), the procedures incorporated in Form 62-555.900(2) shall be used to calculate the log-inactivation effectiveness achieved through the use of the following disinfectants: free chlorine, chlorine dioxide, ozone, and chloramines.

(8) Determination of log-removal/inactivation effectiveness achieved for viruses through filtration and disinfection. Pursuant to the requirements of 40 CFR 141.172(b)(5), the procedures incorporated in DEP Form 62-555.900(2), which are based on the methods found in the guidance manual adopted as subsection 62-555.335(1), F.A.C., shall be used to calculate the log-inactivation effectiveness achieved for viruses when free chlorine, chlorine dioxide, chloramines or ozone, are used as a primary disinfectant. The log-inactivation effectiveness of UV light shall be evaluated using the methods outlined in paragraph (e) below.

(a) Free Chlorine. The procedures incorporated in DEP Form 62-555.900(2), which are based on Table E-7 of the guidance manual adopted as subsection 62-555.335(1), F.A.C., shall be used for the calculation of  $CT_{99,99}$  to effect the required log-inactivation of viruses when chlorine is used as a disinfectant. At operating levels above a pH of 9.0, Table E-7 no longer applies. Systems operating above 9.0 shall submit a proposed alternative method in writing to the Department. Department approval must be obtained in order to operate under the proposed conditions. The Department shall approve methods based on the results of laboratory

studies or calculations.

(b) Chlorine Dioxide. The procedures incorporated in DEP Form 62-555.900(2), which are based on Table E-9 from the guidance manual adopted as subsection 62-555.335(1), F.A.C., shall be used for the calculation of  $CT_{99,99}$  to effect the required log inactivation of viruses when chlorine dioxide is used as a disinfectant.

(c) Chloramines.

1. The procedures incorporated in DEP Form 62-555.900(2), which are based on Table E-13 of the guidance manual adopted as subsection 62-555.335(1), F.A.C., shall be used for the calculation of  $CT_{99,99}$  values which are used for the calculation of the required log inactivation of viruses when chloramines are used as a disinfectant and free chlorine is added prior to ammonia.

2. Systems that add ammonia prior to chlorine, or ammonia and chlorine concurrently, shall determine viral inactivation using the protocol given in Appendix G-2 of the guidance manual adopted as subsection 62-555.335(1), F.A.C.

(d) Ozone.

1. The procedures incorporated in DEP Form 62-555.900(2), which are based on Table E-11 in the guidance manual adopted as subsection 62-555.335(1), F.A.C., and on Table 3-11 in the guidance manual adopted as subsection 62-555.335(8), F.A.C., shall be used to estimate  $CT_{99,99}$  viral log-inactivation values when ozone is used as a disinfectant.

2. The procedures incorporated in DEP Form 62-555.900(2), which are based on Appendix O of the guidance manual adopted as subsection 62-555.335(1), F.A.C., shall be used to calculate the time of travel,  $T_{10}$ , during tracer studies at the four process flows as outlined in subparagraph 62-550.817(8)(a)3., F.A.C.

(e) UV Light. Table E-14 in the guidance manual adopted as subsection 62-555.335(1), F.A.C., shall be used to estimate  $CT_{99,99}$  and viral log-inactivation values. Systems proposing to use UV light to meet the disinfection requirements of this rule shall also make a written, affirmative demonstration incorporating the results of pilot plant studies that show how  $CT_{99,99}$  requirements are met.

(9) Demonstrating and evaluating disinfection effectiveness through completion of Form 62-555.900(2).

(a) Subpart H systems shall demonstrate the effectiveness of their disinfection treatment by:

1. Determining the disinfectant CT value at their plant under operating conditions specified in paragraph 62-550.817(10)(c), F.A.C., and

a. The disinfectant contact time, T, shall be measured as a time of travel through the disinfection process.

b. Systems may calculate T,  $CT_{calc}$ , and log-inactivation effectiveness by completing Form 62-555.900(2) using baffling factors for each treatment segment. The baffling factors shall be selected from Table C-5 of Appendix C of the guidance manual adopted in subsection 62-555.335(1), F.A.C., and shall correspond to the actual baffling conditions at the system. The Department shall review the baffling factors selected by the system when Form 62-555.900(2), is submitted. The Department shall notify the system in writing if, in its review, it determines that the baffling factors are not representative of actual conditions at the system.

c. The disinfectant concentration shall be measured at the downstream point of each treatment segment.

d. Systems may also estimate contact time by conducting a tracer study to measure time of travel,  $T_{10}$ , using the methods in Appendix C of the guidance manual adopted as subsection 62-555.335(1), F.A.C. When conducting a tracer study, the time of travel shall be measured at a minimum of four process flow rates:

(I) Maximum rate, which must be at least 91% of the peak hourly flow,

(II) The maximum day flow,

(III) The average plant flow rate, and

(IV) The minimum plant flow rate.

e.  $T_{10}$  may be estimated in a tracer study using other or fewer flow rates if the use of such flow rates is justified by the system in an affirmative written showing submitted to the Department.

f. After December 31, 2005, systems may calculate contact time for virus inactivation only through treatment segments that are not exposed to the open atmosphere during treatment. For the purpose of this paragraph, facilities that are protected from contamination from birds, insects, wind-borne debris, rainfall, and drainage are not considered to be exposing water to the open atmosphere and possible microbial contamination.

2. Estimating log-inactivation effectiveness. Systems shall use the procedures in Form 62-555.900(2) and in Appendix C of the guidance manual adopted as subsection 62-555.335(1), F.A.C., to calculate the log-inactivation effectiveness of their treatment processes to demonstrate the effectiveness of their disinfection treatment to meet the requirements of subparagraph 62-



550.817(2)(b)3., F.A.C.

(b) Systems that propose to treat surface water shall submit CT calculations with the design report required by paragraph 62-555.520(4)(a), F.A.C., when applying for a construction permit.

(c) Systems that use tracer studies to determine the time of travel or baffling coefficients shall summarize the results of their evaluations by submitting a written Disinfectant Contact Time Compliance Report to the Department.

1. This tracer study report shall consist of a completed Florida Department of Environmental Protection Disinfectant Contact Time Compliance Report worksheet, December 2002 edition, or all the information referenced in that worksheet. The worksheet is hereby adopted and incorporated by reference and is available from the Department of Environmental Protection, Drinking Water Section, M.S. 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

2. Until a Disinfectant Contact Time Compliance Report prepared under subsection (1) above is approved by the Department, the system shall use baffling coefficients approved by the Department under sub-subparagraph 62-550.817(8)(a)1.b., F.A.C., when completing Form 62-555.900(2).

(d) The Department shall evaluate the effectiveness of a system's disinfection and thereby determine if the system is in compliance with this section by:

1. Evaluating completed Form 62-555.900(2), Monthly Operation Report for Subpart H Systems,
2. Evaluating Disinfectant Contact Time Compliance Reports or written baffling factor justification, and
3. Evaluating the results of sanitary surveys and compliance inspections.

(e) Changes to disinfection treatment.

1. No disinfection process shall be altered or discontinued unless the subpart H system secures written permission from the Department in advance.

2. The Department will approve such requests when the system demonstrates in writing, including an updated Disinfection Contact Time Compliance Report or a completed written baffling factor justification, that the proposed changes will not adversely modify the disinfection benchmark currently provided.

(f) Benchmarking and Profiling. All subpart H systems treating surface water shall collect data to establish a disinfection benchmark and profile and shall maintain such data and calculated monthly profile values on Form 62-555.900(2), Monthly Operation Report for Subpart H Systems. The disinfection profile and benchmark shall be based on profile values calculated from data collected over the initial twelve consecutive months after monitoring begins. Pursuant to 40 CFR 141.172(a)(3), the Department shall approve another set of data to establish a profile and benchmark based on a written showing by the system that the replacement data are more representative of expected conditions at the plant.

(10) Approving Alternative Filtration Technologies Pursuant to 40 C.F.R. §§142.16(g)(2)(iv) and 142.16(j)(2)(iv) (July 1, 2011).

(a) Subpart H systems proposing to use other filtration technologies shall perform pilot plant studies to demonstrate the effectiveness of the proposed treatment process to treat water similar to the water source being used.

1. Treatment effectiveness shall be demonstrated through the use of turbidity measurements, particle count studies, or sampling results showing virus, *Giardia lamblia*, and *Cryptosporidium* removal efficiencies that demonstrate that the proposed filtration technology, in combination with disinfection treatment, reliably and consistently achieves the log-removal/inactivation requirements of this section.

2. Based on the results of the pilot plant studies in subparagraph 1. above, the Department shall set turbidity performance requirements that the system shall meet at least 95% of the time, and a Maximum Allowable Limit.

3. The system shall conduct monitoring pursuant to 40 CFR 141.172(b) and submit the results to the Department. The Department shall establish a disinfection profile based on those results.

4. The system shall comply with the monitoring and reporting requirements of subsections (10) and (11) below.

(b) Systems determined per subparagraph 62-550.817(2)(b)2., F.A.C., to be well-operated and using membrane filtration treatment technologies including either reverse osmosis, nanofiltration, or ultrafiltration are given a 2.0 log-removal credit for *Cryptosporidium*, a 2.0 log-removal credit for viruses, and a 2.5 log-removal credit for *Giardia lamblia* if grab samples taken every four hours or continuous monitoring show turbidity levels equal to or less than 0.3 NTU 95% of the time and if all samples are equal to or less than 1 NTU.

(c) Systems using alternative treatment technologies approved under this subsection shall be subject to a reduction in a log-

removal credit given by the Department pursuant to subparagraph 62-550.817(2)(b)2., F.A.C.

(11) Monitoring Requirements. All subpart H systems shall monitor to determine compliance with both the filtration and disinfection treatment techniques, in lieu of maximum contaminant levels, as specified in 40 CFR 141.74, adopted in subsection 62-550.817(2), F.A.C., and 40 CFR 141.174, adopted in subsection 62-550.817(3), F.A.C. Consecutive subpart H systems that do not provide filtration need monitor only to show compliance with paragraph (e) below.

(a) A public water system may substitute continuous turbidity monitoring in lieu of grab sample monitoring specified in 40 CFR 141.74 (b)(2), and 141.74(c)(1), if it validates the continuous measurement for accuracy on a regular basis using a protocol that includes:

1. Initial Department approval of the monitoring equipment before its installation. The Department will approve the use of turbidimeters that conform to the requirements of the *Guidance Manual for Compliance with the Interim Enhanced Surface Water Treatment Rule: Turbidity Provisions*, Chapter 3, US EPA, April 1999, hereby adopted and incorporated by reference,

2. Calibration of the equipment using primary standards at a frequency recommended by the manufacturer or quarterly, whichever is more frequent,

3. Reporting of the calibration results reported on part five of Form 62-555.900(2), Monthly Operation Report for Subpart H Systems,

4. Retention of maintenance and calibration records, on the premises of the public water system or at a convenient location near the premises, for a period of not less than three years or until the Department completes a Sanitary Survey, and

5. Approved monitoring locations for combined turbidity pursuant to Paragraph 5.2 of Chapter 5 of the guidance manual adopted as subsection 62-555.335(1), F.A.C.

a. Combined filter effluent prior to entry into a clearwell,

b. Clearwell effluent,

c. Plant effluent or immediately prior to entry into the distribution system, or

d. Flow weighted average of effluent measurements from each filter, or

e. Another location approved in writing by the Department, based on an affirmative written showing by the system that the proposed alternative location provides filtered water turbidity readings that are representative of the water served to system customers.

(b) Continuous and bench top monitoring equipment for disinfectant residual, pH and temperature shall be calibrated not less than quarterly and the results reported on part five of Form 62-555.900(2), Monthly Operation Report for Subpart H Systems.

(c) In addition to the monitoring requirements of 40 CFR 141.74, subpart H systems that treat surface water shall daily monitor the following parameters at the downstream end of each treatment segment during peak hourly flow.

1. The temperature of the disinfected water in degrees Celsius,

2. If the system uses chlorine, chlorine dioxide, or chloramines, the pH of the disinfected water,

3. The disinfectant concentration, "C", in mg/L, prior to each additional point of disinfection and before or at the first customer, and

4. The used storage volume in a segment, in cubic feet.

(d) If at any time the residual disinfectant concentration at the point of entry to the distribution system falls below 0.2 milligrams per liter free chlorine or its equivalent in a system using grab sampling in lieu of continuous monitoring, the system shall immediately begin taking grab samples every four hours until the residual disinfectant concentration is equal to or greater than 0.2 milligrams per liter free chlorine or its equivalent.

(e) Consecutive subpart H systems that do not provide filtration shall monitor disinfectant residual levels in compliance with 40 CFR 141.74(c)(3)(i), adopted in subsection 62-550.817(2), F.A.C.

(12) Process Monitoring Requirements. Subpart H systems that provide conventional filtration shall monitor:

(a) Raw water turbidity daily, prior to any treatment, and

(b) Settled water turbidity every two hours at the outlet of each operating sedimentation basin.

(13) Reporting Requirements.

(a) Subpart H systems shall complete and submit to the appropriate Department District Office or appropriate Approved County Health Department Form 62-555.900(2), Monthly Operation Report for Subpart H Systems, within ten days after the end of each

month. For instructions on how to complete the form and other information on subpart H system operation, refer to the DEP document "Compliance Manual for Subpart H Systems," June 2004 edition.

(b) Consecutive systems that receive purchased finished water originating from a subpart H system shall report the disinfectant residual data specified on page one of Monthly Operation Report for Consecutive Systems that Receive Purchased Finished Water from a Subpart H System (formerly adopted and incorporated as subsection 62-555.900(6), F.A.C.), hereby adopted and incorporated by reference into this rule. Systems shall submit this completed form to the appropriate Department District Office or appropriate Approved County Health Department within ten days after the end of each month.

(c) In addition to the reporting requirements of 40 CFR 141.75 and 40 CFR 141.175, subpart H systems that treat surface water shall report using DEP Form 62-555.900(2).

1. The measurements required by paragraph 62-550.817(10)(c), F.A.C., and
2. The daily total inactivation for viruses and *Giardia lamblia* estimated from these measurements and the monthly disinfection profile values.

(d) Subpart H systems shall also report:

1. The disinfectant residual monitoring data required under 40 CFR 141.75 included in part three of Form 62-555.900(2), Monthly Operation Report for Subpart H Systems.

2. The process monitoring for raw water and settled water turbidity required under paragraphs 62-550.817(11)(a) and (b), F.A.C. Report each daily raw water turbidity and the maximum settled water turbidity during each 4-hour period on Form 62-555.900(2).

3. For systems serving 10,000 or more persons, the filter profile required under 40 CFR 141.175(b)(1) through (3) unless the reason for a turbidity exceedance is one of the following:

- a. Treatment process outages,
- b. Maintenance activities at processes within the treatment train,
- c. Coagulation feed pump or equipment failure, or
- d. The filters were run at higher loading rates than approved by the Department.

(e) Subpart H systems that employ conventional filtration or direct filtration treatment and that recycle spent filter backwash water, thickener supernatant, or liquids from dewatering processes shall report to the Department:

1. The filter backwash recycle information required under 40 CFR 141.76(b) using a completed Florida Department of Environmental Protection Filter Backwash Recycling Notification Worksheet, December 2003 edition, or all the information referenced on this worksheet. The worksheet is hereby adopted and incorporated by reference and is available from the Department of Environmental Protection, Drinking Water Section, M.S. 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. This worksheet, or all the information referenced on this worksheet, shall be submitted to the Department by December 8, 2003, and revised and resubmitted whenever recycle flow handling changes are completed.

2. The recycle flow information specified in 40 CFR 141.76(d)(1) through (6) using a completed Florida Department of Environmental Protection Filter Backwash Recycling Recordkeeping Worksheet, December 2003 edition, or all the information referenced on this worksheet. The worksheet is hereby adopted and incorporated by reference and is available from the Department of Environmental Protection, Drinking Water Section, M.S. 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. This worksheet, or all the information referenced on this worksheet, shall be submitted to the Department initially by June 8, 2004, and updated annually thereafter by January 10.

(14) Public notification requirements for the Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR), and the Long Term 2 Enhanced Surface Water Treatment Rule (LT2ESWTR). In addition to the requirements in Part IV of Chapter 62-560, F.A.C., the following public notification requirements are adopted by reference and enforceable under this rule:

(a) In the July 1, 2011, edition of 40 C.F.R. §141.202 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00915>), the Tier 1 public notice requirements pertaining to violation of the SWTR, IESWTR, or LT1ESWTR treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit, where the primacy agency determines after consultation that a Tier 1 notice is required or where consultation does not take place within 24 hours after the system learns of the violation.

(b) In the July 1, 2011, edition of 40 C.F.R. §141.203(b)(3) (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00917>), the

consultation requirements pertaining to violation of the SWTR, IESWTR, or LT1ESWTR treatment technique requirement resulting from a single exceedance of the maximum allowable turbidity limit.

(c) The July 1, 2011, edition of 40 C.F.R. §141.211 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00918>).

(15) Recordkeeping requirements. In addition to the requirements of 40 CFR 141.175 and .571, systems must maintain System Control and Data Acquisition (SCADA) data in electronic form so that it is available to a Department inspector for 3 years. Individual filter turbidity vs. time must be readily available to the Department in ascii format extending back at least 36 months. Turbidity must represent at least peak turbidity during a 15-minute interval as per 40 CFR 141.173.

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.852(12), 403.853(1), (3) FS. History—New 4-3-03, Amended 5-28-03, 11-25-03, 10-14-04, 1-17-05, 12-30-11, 7-7-15.*

### **62-550.821 Disinfectant Residuals, Disinfection Byproducts (Stage 1), and Disinfection Byproduct Precursors.**

The requirements contained in the July 1, 2014, edition of 40 C.F.R. Part 141, Subpart L (Sections 141.130 through 141.135) (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05604>), are adopted and incorporated herein by reference and are enforceable under this rule. The following are clarifications and additions to the requirements in 40 C.F.R. Part 141, Subpart L. This introductory text shall be effective on July 7, 2015.

(1) In 40 CFR 141, subpart L, the term “State” shall mean “Department.” Also, references to section 141.2 shall be interpreted to mean Rule 62-550.200, F.A.C.; references to section 141.21 shall be interpreted to mean Rule 62-550.518, F.A.C.; references to section 141.23(k)(1) or 141.89(a) shall be interpreted to mean subsection 62-550.550(1), F.A.C.; references to section 141.31 shall be interpreted to mean subsection 62-550.730(1), F.A.C.; references to section 141.32 or 141.202 shall be interpreted to mean Rule 62-560.410, F.A.C.; references to section 141.32(e)(78) shall be interpreted to mean subsection 62-560.410(6), F.A.C.; references to section 141.64 or 141.64(a) shall be interpreted to mean paragraph 62-550.310(3)(b), F.A.C.; references to section 141.65 shall be interpreted to mean subsection 62-550.310(2), F.A.C.; references to section 141.74(b)(6)(i) shall be interpreted to mean subsection 62-550.560(2), F.A.C.; references to section 141.74(c)(3)(i) shall be interpreted to mean paragraph 62-550.560(3)(d), F.A.C.; references to subpart Q shall be interpreted to mean Part IV of Chapter 62-560, F.A.C.; and references to section 142.16(h)(5) shall be interpreted to mean subsection 62-550.821(9), F.A.C.

(2) For purposes of the compliance dates in 40 CFR 141.130(b) and the disinfection byproduct and residual disinfectant monitoring requirements in 40 CFR 141.132(b), (c), and (f):

(a) The number of persons served by a wholesale system includes the number of persons served by the consecutive systems that receive finished water from the wholesale system; and

(b) Consecutive systems that receive any finished water originating from a subpart H system are considered subpart H systems.

(3) 40 CFR 141.130(c) shall be interpreted to mean that suppliers of water who own or operate a CWS or NTNCWS, including either a consecutive CWS or a consecutive NTNCWS, must employ operators licensed under Chapter 62-602, F.A.C., to operate the system and staff the system’s water treatment plant(s), if any, in accordance with Chapter 62-699, F.A.C.

(4) Under 40 CFR 141.132(a), systems shall demonstrate that TTHM and HAA5 samples were taken under normal operating conditions by measuring, and reporting with the results of samples for TTHM and HAA5, the residual disinfectant level at the same points where, and same times when, TTHM and HAA5 samples are taken. These measurements may be performed by any authorized representative of the supplier of water or Department; but measurements for residual chlorine shall be performed following the appropriate procedures in the Department of Environmental Protection Standard Operating Procedures for Field Activities, DEP-SOP-001/01, as incorporated into Rule 62-160.800, F.A.C., and all other measurements shall be performed using an appropriate method referenced in subsection 62-550.550(1), F.A.C. These measurements shall not be used for determining compliance with the MRDL.

(5) For purposes of the TTHM and HAA5 monitoring requirements in 40 CFR 141.132(b)(1), each entry point from a wholesale system to a consecutive system is considered a plant for the consecutive system.

(a) Consecutive systems may request that the Department allow for multiple entry points from a single wholesale system to a single consecutive system to be considered as one plant.

(b) The Department shall approve requests made in accordance with paragraph (a) above if the consecutive system submits documentation showing that factors such as relative locations of entry points, detention times, sources, and the presence of treatment (such as corrosion control or booster disinfection) will not have a significant differential effect on TTHM and HAA5 formation

associated with individual entry points.

(6) 40 CFR 141.132(b)(1)(v) shall be interpreted to mean that, in addition to allowing systems on increased monitoring to return to routine monitoring under 40 CFR 141.132(b)(1)(iv), the Department shall allow systems on increased monitoring to return to routine monitoring if their TTHM quarterly averages and HAA5 quarterly averages are less than or equal to the MCL for four consecutive quarters.

(7) Under 40 CFR 141.131(c)(2), the use of DPD colorimetric test kits to measure residual chlorine, chloramines, or chlorine dioxide is approved per subsection 62-550.550(1), F.A.C.

(8) Under 40 CFR 141.131(b)(3), (c)(3), and (d), operators licensed under Chapter 62-602, F.A.C., and persons under the direct supervision of a licensed operator, as well as laboratories certified by the Department of Health, are approved to measure alkalinity, bromide, chlorite (only at entrances to distribution systems), pH, residual disinfectant concentration, specific ultraviolet absorbance, and total organic carbon. Refer to subsection 62-550.550(1), F.A.C.

(9) Under 40 CFR 141.132(a)(2), the Department shall approve reduced TTHM and HAA5 monitoring by allowing systems to consider multiple plants treating water from multiple wells completed in the same aquifer as one treatment plant if:

(a) The plants are applying the same disinfectant(s); and

(b) The system submits a hydrogeological evaluation that is prepared under the supervision of a professional geologist or engineer registered in Florida and that indicates the wells are completed in, and drawing water from, the same aquifer and indicates the characteristics (including the total organic carbon level and, if ozone is being used to treat the water, bromide level) of the water from each well are enough alike to conclude disinfection byproduct formation will be similar.

(10) Under 40 CFR 141.132(f), all subpart H systems shall submit a copy of their monitoring plan to the appropriate Department of Environmental Protection District Office or appropriate Approved County Health Department no later than the date of the first report required under 40 CFR 141.134. All other systems shall make their monitoring plan available for review during sanitary surveys conducted by the Department and shall submit their monitoring plan if requested by the Department.

(11) The monitoring plans required under 40 CFR 141.132(f) shall be prepared in a format containing all the following information:

(a) A cover page identifying the system and providing relevant general information, including:

1. The system name and PWS identification number;

2. A contact person and phone number;

3. The system type (community, non-transient non-community, or transient non-community system);

4. The number and type of water sources and water treatment plants; and

5. The population served by the system when including the population served by any consecutive systems that receive water from the system.

(b) For subpart H systems using conventional filtration treatment, a summary of the system's enhanced coagulation or softening performance requirements. If applicable, a copy of the most recent Department approval of Step 2 TOC removal requirements shall be attached to the monitoring plan.

(c) A summary of the residual disinfectant, disinfection byproduct, and disinfection byproduct precursor monitoring that is required of the system. If applicable, a copy of the following Department approvals shall be attached to the monitoring plan:

1. Department approval allowing the system to consider multiple plants treating water from multiple wells completed in the same aquifer as one treatment plant;

2. If the system is a consecutive system, Department approval allowing the system to consider multiple entry points from a single wholesale system as one plant.

(d) For subpart H systems using conventional filtration treatment, a schematic drawing of each of the system's plants that use conventional treatment to treat surface water or ground water under the direct influence of surface water. Each schematic drawing shall show:

1. The water source(s);

2. Each unit process of each treatment train and each chemical application point; and

3. Sampling locations identified and numbered (e.g., T-1, T-2, etc.).

(e) A schematic drawing of the system's distribution system. The schematic drawing shall show:

1. Entry points to the distribution system (i.e., water treatment plants and, if the system is a consecutive system, entry points

from wholesale systems);

2. Finished water storage facilities and booster chlorination facilities; and
3. Sampling locations identified and numbered (e.g., D-1, D-2, etc.).

(f) A summary of typical distribution system operating characteristics explaining, on a seasonal basis if necessary, how water sources are used and water treatment plants are operated to meet demands on the system and where average and maximum water residence times are expected to occur in the distribution system.

(g) Schedules for collecting all required samples. The schedules shall identify sampling times, sampling locations, sample handling and preservation requirements, and whether samples will be analyzed on site by either a licensed operator or a person under the direct supervision of a licensed operator or will be analyzed at a certified laboratory. Also, the schedules shall address both routine and reduced monitoring frequencies.

(h) The method for calculating compliance with applicable maximum residual disinfectant levels, maximum contaminant levels, and treatment technique requirements.

(12) This subsection replaces 40 CFR 141.134 and discusses reporting requirements for disinfectant residuals, disinfection byproducts, and disinfection byproduct precursors.

(a) Systems and laboratories shall report results of required measurements for chlorine or chloramines, and results of required disinfection byproduct analyses conducted by certified laboratories, in accordance with subsections 62-550.730(1) and (2), F.A.C. In addition, systems described in paragraphs (b) through (d) below shall report the summary information described in paragraphs (b) through (d). (For other systems, the Department will perform calculations and determine whether MRDLs or MCLs were exceeded.) Systems required to report under paragraphs (b) through (d) below shall report to the appropriate Department of Environmental Protection District Office or Approved County Health Department within ten days after the end of each quarter in which samples were collected.

(b) Systems serving more than 4,900 persons, and systems using chlorine dioxide, shall report a summary of results of measurements for disinfectant residuals in a format including all of the following information:

1. The system name and PWS identification number.
2. A contact person and phone number.
3. The information listed in 40 CFR 141.134(c) except that:

a. Systems monitoring for chlorine or chloramines also shall include the location, date, and result of each sample taken during the last quarter.

b. In addition to including the date, result, and location of each sample taken during the last quarter, systems monitoring for chlorine dioxide shall include the name of the person who collected each sample, the date of analysis of each sample, the name and certification number of the laboratory that analyzed each sample or the name and license number of the operator responsible for analysis of each sample, and the analytical method used for each sample and shall identify each sample as to whether it is an entry point sample or a distribution system sample.

(c) Subpart H systems serving 500 or more persons, systems using only ground water not under the direct influence of surface water and serving 10,000 or more persons, and systems using chlorine dioxide shall report a summary of results of analyses for disinfection byproducts in a format including all of the following information:

1. The system name and PWS identification number.
2. A contact person and phone number.
3. The information listed in 40 CFR 141.134(b) except that:

a. In addition to including the location, date, and result of each sample taken during the last monitoring period, systems monitoring for TTHM and HAA5, chlorite, or bromate shall include the name of the person who collected each sample, the date of analysis of each sample, the name and certification number of the laboratory that analyzed each sample, and the analytical method used for each sample.

b. In addition to including the location, date, and result of each sample taken during the last monitoring period, systems monitoring for TTHM and HAA5, chlorite, or bromate shall include the name of the person who collected each sample, the date of analysis of each sample, the name and certification number of the laboratory that analyzed each sample, and the analytical method used for each sample.

c. Systems monitoring for TTHM and HAA5 also shall identify each sample as to whether it was taken at a location

representing maximum residence time in the distribution system or at a location representing average residence time in the distribution system and shall report the residual chlorine or chloramine level measured at the same point where, and same time when, each sample was taken.

d. Systems monitoring for chlorite also shall identify each sample as to whether it is an entry point sample or a distribution system sample.

(d) Subpart H systems using conventional filtration treatment shall report a summary of results of measurements for disinfection byproduct precursors and enhanced coagulation or softening in a format including all of the following information:

1. The system name and PWS identification number and the water treatment plant name.
2. A contact person and phone number.
3. The information listed in 40 CFR 141.134(d) except that:

a. In addition to including the location, date, and results of each paired TOC and source-water alkalinity sample taken during the last quarter, systems monitoring for TOC shall include the name of the person who collected each sample, the date of analysis of each sample, the name and certification number of the laboratory that analyzed each sample or the name and license number of the operator responsible for analysis of each sample, and the analytical method used for each sample.

b. Calculations for determining compliance with Step 1 or 2 TOC removal requirements shall be presented in a table similar to Tables 4-3 through 4-6 in the U.S. Environmental Protection Agency's (USEPA's) *Enhanced Coagulation and Enhanced Precipitative Softening Guidance Manual*, which is incorporated herein by reference and is available from the USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue Northwest, Washington, DC 20460-0003.

c. Systems monitoring for SUVA, treated-water alkalinity, or magnesium hardness removal shall include the location, date, and result of each sample that was taken during the last quarter plus the name of the person who collected each sample, the date of analysis of each sample, the name and certification number of the laboratory that analyzed each sample or the name and license number of the operator responsible for analysis of each sample, and the analytical method used for each sample.

(13) Under 40 CFR 141.135(b), systems practicing enhanced softening are not required to apply to the Department for Step 2 TOC removal requirements. Enhanced softening systems that are unable to meet the alternative compliance criteria in section 141.135(a)(2) and (3) and that are unable to meet the Step 1 TOC removal requirements may apply to the Department for a waiver of enhanced softening requirements.

(a) Applicants for a waiver shall submit to the appropriate Department of Environmental Protection District Office or appropriate Approved County Health Department results of bench- or pilot-scale testing conducted in accordance with section 3.3 of the U.S. Environmental Protection Agency's *Enhanced Coagulation and Enhanced Precipitative Softening Guidance Manual*, which is incorporated herein by reference and is available from the source indicated in sub-subparagraph 62-550.821(12)(c)3.b., F.A.C.

(b) The Department shall grant waivers if the test results required by paragraph (a) above show that the applicant is unable to meet the alternative compliance criteria in 40 CFR 141.135(a)(2) and (3) and is unable to meet the Step 1 TOC removal requirements.

(14) This subsection supplements 40 CFR 141.135(b)(3). The Department shall approve Step 2 TOC removal requirements submitted by a system if the system's application includes the information discussed in 40 CFR 141.135(b)(4) and (15) below and if all alternative TOC removal percentages are determined in accordance with 40 CFR 141.135(b)(4) and section 3.2 of the U.S. Environmental Protection Agency's *Enhanced Coagulation and Enhanced Precipitative Softening Guidance Manual*, which is incorporated herein by reference and is available from the source indicated in sub-subparagraph 62-550.821(12)(c)3.b., F.A.C.

(15) This subsection supplements 40 CFR 141.135(b)(4). Applications made to the Department for approval of Step 2 TOC removal requirements shall include a table of Step 2 removal requirements that is similar in format to the table of Step 1 TOC removal requirements in 40 CFR 141.135(b)(2). The Step 2 table shall address the same source-water TOC/alkalinity ranges as addressed in the Step 1 table. Also, in each source-water TOC/alkalinity range, the required Step 2 TOC removal percentage shall remain the same as the Step 1 TOC removal percentage unless the application includes test results as described in 40 CFR 141.135(b)(4) supporting an alternative TOC removal percentage for that specific TOC/alkalinity range.

(16) 40 CFR 141.135(b)(4)(v) is supplemented by the following:

(a) Systems applying for a waiver of enhanced coagulation requirements shall submit to the appropriate Department of Environmental Protection District Office or appropriate Approved County Health Department results of bench- or pilot-scale testing

conducted in accordance with 40 CFR 141.135(b)(4) and Section 3.2 of the U.S. Environmental Protection Agency's *Enhanced Coagulation and Enhanced Precipitative Softening Guidance Manual*, which is incorporated herein by reference and is available from the source indicated in sub-subparagraph 62-550.821(12)(c)3.b., F.A.C.

(b) The Department shall grant waivers of enhanced coagulation requirements if the test results required by paragraph (a) above show that the TOC removal from the applicant system's water is consistently less than 0.3 mg/L of TOC per 10 mg/L of incremental alum dose (as aluminum) at all dosages of alum (or equivalent addition or iron coagulant).

(17) In the event of an acute violation of the maximum residual disinfectant level for chlorine dioxide, the supplier of water shall notify the public and the Department in accordance with Rule 62-560.410, F.A.C., as soon as practicable but no later than 24 hours after learning of the violation.

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.0877, 403.852(12), 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 11-27-01, Amended 11-28-04, 1-17-05, 12-30-11, 7-7-15.*

#### **62-550.822 Initial Distribution System Evaluations and Stage 2 Disinfection Byproducts Requirements.**

The requirements contained in the July 1, 2011, edition of 40 C.F.R. Part 141, Subpart U (Sections 141.600 through 141.605) (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00909>), and 40 C.F.R. Part 141, Subpart V (Sections 141.620 through 141.629) (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00910>) are adopted and incorporated herein by reference and are enforceable under this rule, except 40 C.F.R. §141.623(d) is not adopted or incorporated in this rule.

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.852(12), 403.853(1), (3), (7), 403.861(16), (17) FS. History—New 12-30-11.*

#### **62-550.824 Consumer Confidence Reports.**

These rules are intended to implement the Primary and Secondary Drinking Water Regulations that require community water systems to prepare and provide to their customers annual consumer confidence reports (CCRs) on the quality of the water delivered by the systems. In addition to the requirements of this rule, the requirements contained in the following regulations are adopted and incorporated herein by reference and are enforceable under this rule: the July 1, 2014, edition of 40 C.F.R. Part 141, Subpart O, Sections 151 through 155, except for 40 C.F.R. §141.153(h)(6)(ii), and Appendix A to 40 C.F.R. Part 141, Subpart O (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05590>). 40 C.F.R. §141.153(h)(6)(ii) is not adopted or incorporated in this rule. Additional information may be obtained from the USEPA's guidance manuals *Preparing Your Drinking Water Consumer Confidence Report – Guidance for Water Suppliers*, 2<sup>nd</sup> Revision: EPA 816-R-09-011, April 2010 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00912>), and *Revised State Implementation Guidance for the Consumer Confidence Report (CCR) Rule*, Appendix E, EPA 816-R-09-010, April 2010 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-00913>), which are incorporated herein by reference. This introductory text shall be effective on July 7, 2015.

(1) Additional Report Content Requirements. In addition to the requirements of 40 CFR 141.153, the following requirements shall apply:

(a) Additional Source Water Information. If the Department has determined that a system or well is under the direct influence of surface water, the system shall identify the well and proposed remedial action.

(b) Water Treatment Information. Systems shall include a general description of all major water treatment processes. For example, a statement may be worded in the following way: Our water is obtained from ground water sources and is chlorinated for disinfection purposes, and then fluoridated for dental health purposes.

(c) Additional Primary Contaminant Information.

1. In addition to the contaminants referenced in 40 CFR 141.153(d)(1)(i), the following contaminants shall be subject to the requirements of §141.153(d): nickel, lead (point of entry) and sodium. The applicable results for these three contaminants shall be only the results of monitoring to demonstrate compliance with a maximum contaminant level (MCL) in subsection 62-550.310(1), F.A.C.

2. More Stringent MCLs. For the following contaminants, the Florida MCL is more stringent than the federal MCL referenced in 40 CFR 141, Subpart O, Consumer Confidence Reports: benzene, vinyl chloride, ethylene dibromide, carbon tetrachloride, 1,2-dichloroethane, trichloroethylene, and tetrachloroethylene. For these contaminants, the Florida MCLs listed in Rules 62-550.310 and 62-550.320, F.A.C., shall apply for the purpose of preparing the consumer confidence report.



3. Different Monitoring Location Requirements. Subsection 62-550.500(5), F.A.C., requires monitoring at the entry point to the distribution system rather than at points within the distribution system when monitoring for compliance with the MCLs for the radiological contaminants listed in subsection 62-550.310(6), F.A.C. These results shall be applicable to the consumer confidence report requirements of 40 CFR 141.153(d)(1)(i).

4. Primary Contaminant Source of Contamination Language. In addition to the language found in 40 CFR 141, Appendix A to Subpart O, the following language shall be used in tables of analytical results to report on the source of contamination for lead (point of entry), nickel, and sodium. Systems may substitute other language or add their own language if the language they use as source of contamination language is more specific to conditions affecting their system.

- a. Lead (point of entry): Residue from man-made pollution such as auto emissions and paint. Lead pipe, casing, and solder.
- b. Nickel: Pollution from mining and refining operations. Natural occurrence in soil.
- c. Sodium: Salt water intrusion, leaching from soil.

5. Health Effects Language in addition to that found in 40 CFR 141, Appendix C to Subpart O. The following health effects language shall be used for nickel, sodium, and lead (point of entry) when their MCLs have been exceeded:

a. Nickel: Nickel has been shown to damage the heart and liver in laboratory animals when the animals are exposed to high levels over their lifetimes. The Florida Department of Environmental Protection (DEP) has set the drinking water standard for nickel at 100 parts per billion (ppb) to protect against the risk of these adverse effects.

b. Sodium: The Florida Department of Environmental Protection (DEP) has set the drinking water standard for sodium at 160 parts per million (ppm) to protect individuals that are susceptible to sodium-sensitive hypertension or diseases that cause difficulty in regulating body fluid volume. Sodium is monitored so that individuals who have been placed on sodium (salt) restricted diets may take into account the sodium in their drinking water. Drinking water contributes only a small fraction (less than 10 percent) to the overall sodium intake. Sodium levels in drinking water can be increased by ion-exchange softeners at water treatment facilities or certain point-of-use treatment devices. If you have been placed on a sodium restricted diet, please inform your physician that our water contains <<insert sodium concentration>> ppm of sodium.

c. Lead (point of entry): Infants and children who drink water containing lead in excess of the MCL could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

6. Reporting total coliform results. When reporting the total monthly number of samples include repeat samples.

7. Reporting fecal coliform results. If fecal coliform is detected, the table of analytical results shall include the total number of positive samples for the year.

8. Reporting nitrates and nitrites results. Analytical results for nitrates and nitrites shall be reported individually. The reporting of analytical results of total nitrates and nitrites is not required.

(d) Secondary Contaminant Information.

1. The reporting requirements of 40 CFR 141.153(d) shall be applicable to the secondary contaminants listed in Rule 62-550.320, F.A.C.

2. Reporting of secondary contaminants results.

a. Results subject to CCR reporting for secondary contaminants shall be the most recent year's worth of results obtained during or before the calendar year previous to the year the CCR is due, except that data older than five years need not be included. Results shall be included in the table of secondary contaminants analytical results only if the highest single sample result exceeds the MCL. On the table of secondary contaminants analytical results, the highest result shall be reported as the level detected, and the range of results shall be reported as the range.

b. Results for pH need not be reported.

c. Results for ethylbenzene (odor), toluene (odor), and xylenes (odor), need not be reported, because they are also monitored as primary contaminants.

3. Source of Secondary Contaminants. The following language is provided for use in tables of results to describe the major sources in drinking water for the secondary contaminants listed as follows. Systems may substitute other language or add their own language if the language they use as source of contamination language in the consumer confidence report is more specific to conditions affecting their system.

a. Color and odor: Naturally occurring organics.

- b. Copper: Corrosion byproduct and natural occurrence from soil leaching.
- c. Foaming agents: Pollution from soaps and detergents.
- d. Fluoride: Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
- e. All other secondary contaminants: Natural occurrence from soil leaching.

(e) Unregulated Contaminants. Systems required to monitor for unregulated contaminants by 40 CFR 141.40 shall report analytical results when there are detections of unregulated contaminants. If unregulated contaminants are detected the CCR shall include the following informational statement: <<Insert name of system>> has been monitoring for unregulated contaminants (UCs) as part of a study to help the U.S. Environmental Protection Agency (EPA) determine the occurrence in drinking water of UCs and whether or not these contaminants need to be regulated. At present, no health standards (for example, maximum contaminant levels) have been established for UCs. However, we are required to publish the analytical results of our UC monitoring in our annual water quality report. If you would like more information on the EPA's Unregulated Contaminants Monitoring Rule, please call the Safe Drinking Water Hotline at (800) 426-4791.

(f) Information Collection Rule (ICR) Contaminants. The federal CCR regulations (40 CFR 141.153) state that finished water results for the following are subject to consumer confidence reporting requirements: disinfection by-products or microbial contaminants for which monitoring is required under 40 CFR 141.142 and 141.143 except Cryptosporidium.

1. Systems monitoring for ICR contaminants shall report the following ICR contaminants in their consumer confidence reports, if found in the finished water:

- a. THM4: trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) – report as a group,
- b. HAA5: haloacetic acids (mono-, di-, and trichloroacetic acid, and mono- and di-bromoacetic acid) – report as a group,
- c. HAN: haloacetilnitriles (dichloro-, trichloro-, bromochloro-, and dibromoacetoneitrile) – report as a group,
- d. HK: haloketones (1,1-dichloropropanone and 1,1,1-trichloropropanone) – report as a group,
- e. CP: chloropicrin,
- f. CH: chloral hydrate,
- g. TOX: total organic halides,
- h. disinfectant residual,
- i. total coliforms, fecal coliforms, or Escherichia coli,
- j. Giardia, and
- k. total culturable viruses.

2. The following provisions shall apply:

- a. Treatment plants using chloramines shall report cyanogen chloride;
- b. Treatment plants using hypochlorite solutions shall report chlorate;
- c. Treatment plants using ozone shall report bromate and aldehydes; and
- d. Treatment plants using chlorine dioxide shall report chlorine dioxide residual, chlorite, chlorate, bromate, and aldehydes.

3. As required by the 40 CFR 141.153, results for the above contaminants, if found in the finished water, shall be reported in the table of analytical results in consumer confidence reports in the same manner as the unregulated contaminants (average and range of detection.)

(g) Additional health information required by 40 CFR 141.154. In addition to the requirements of 40 CFR 141.154, systems shall include this additional health information when they:

- 1. Detect arsenic or nitrate at the MCL. Report the informational statements required by 40 CFR 141.154(b) or (c), respectively.
- 2. Detect TTHM at the MCL. Include in the report the informational statements required by 40 CFR 141.154(e).

(h) Educational Statement for Lead. If lead is detected above the action level in more than five percent, and up to and including ten percent of homes sampled, the system shall include in its CCR the language set forth in 40 CFR 141.154(d). Systems that collect fewer than 20 samples during each monitoring period do not have to include the educational statement for lead.

(i) Operation Violations. Systems with any of the problems listed in subparagraphs 1.-3. below shall provide an explanation of the violation in their consumer confidence reports. The explanation shall include a description of the violation and its duration.

- 1. Certified Operator Requirement Violations. Systems that fail to maintain continuous usage of the services of an operator with

the appropriate certification in accordance with Rule 62-699.310, F.A.C.

2. Disinfectant Requirement Violations. Systems that treat their water and that have disinfectant concentrations of less than 0.2 ppm free chlorine or its equivalent at the entry points to their distribution systems in routine monitoring as recorded on their monthly operation reports for the calendar year previous to the year in which the CCR is due.

3. Cross Connection Control Requirement Violations. Systems that fail to adopt and implement a written cross connection control and backflow prevention program as required by Rule 62-555.360, F.A.C.

(j) Table Format. All consumer confidence reports that are required to include a table of analytical results shall display these results in the same format and manner as shown in the FRWA/DEP CCR Template Instructions and Template, February 5, 2003, which is incorporated herein by reference and is available from the Department of Environmental Protection, Drinking Water Section, Mail Station 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

1. If reporting of analytical data is required, the reporting of these data shall appear in one or both of the following tables only: The main table of analytical results and the table of secondary contaminants analytical results.

a. The main table of analytical results shall contain only analytical results of detected regulated contaminants (i.e., contaminants subject to MCL, MRDL, TT, or AL requirements), and detected unregulated contaminants for which the USEPA requires monitoring under 40 CFR 141.40 (Unregulated Contaminant Monitoring) or 141.142 and 141.143 (Information Collection Rule.)

b. The table of secondary contaminants analytical results shall contain only analytical results for secondary contaminants where the highest single sample result exceeds the MCL.

2. Contaminants referenced in sub-subparagraph 1.a. above that were monitored but not detected shall not be included in the main table of analytical results or table of secondary contaminants analytical results. However, they may be reported in text outside the tables.

3. Violations. Violations and action levels exceeded shall be noted in the affirmative with either "Y" or "Yes" per the requirements in sub-subparagraphs a. and b. In addition to following the requirements of 40 CFR 141.153(d)(6), systems shall include:

a. The word "violations" in both the column heading of the main table of analytical results or the table of secondary contaminants analytical results and in the explanation located outside the main table of analytical results and table of secondary contaminants analytical results when reporting maximum contaminant level (MCL), maximum residual disinfectant level (MRDL), and treatment technique (TT) violations, and

b. The phrase "AL exceeded" in both the column heading of the main table of analytical results and in the explanation located outside the main table of analytical results and table of secondary contaminants analytical results when reporting the exceeding of action levels (AL) for lead or copper.

4. Contaminants for which there are secondary drinking water standards (MCLs) that were monitored but not detected shall not be included in the table of secondary contaminants analytical results, but may be reported in text outside the table.

5. The acronym "ND" means not detected and indicates that the substance was not found by laboratory analysis. ND does not mean zero, and zero shall not be used instead of ND where ND is the intended meaning. ND may be used in the main table of analytical results or the table of secondary contaminants analytical results only when:

a. Reporting the lower limit of a range of analytical results, or  
b. Reporting the level detected for systems with multiple hydraulically independent distribution systems and separate columns for each service area.

(k) The CCR shall contain the explanation regarding contaminants which may reasonably be expected to be found in drinking water including bottled water presented in 40 CFR 141.153(h)(1)(i)-(iv) verbatim.

(l) Variances and exemptions. Community water systems operating under the terms of a variance or exemption issued by the state in accordance with Rules 62-560.510 and 62-560.520, F.A.C., or Section 120.542, F.S., for the secondary contaminant MCLs listed in Rule 62-550.320, F.A.C., or for the primary contaminant MCLs for nickel and sodium listed in subsection 62-550.310(1), F.A.C., shall include in their CCRs:

1. An explanation of the reasons for the variance or exemption;
2. The date on which the variance or exemption was issued;
3. A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and

4. A notice of any opportunity for public input in the review or renewal of the variance or exemption.

(2) Use of Language Other Than English. Under 40 CFR 141.153(h)(3), where the proportion of non-English speaking residents served by the system exceeds 20 percent of the total number of consumers served by the system, consumer confidence reports shall contain: information in the appropriate language(s) regarding the nature and importance of the report and a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in understanding the report. A statement to this effect shall be included in the report immediately after the title of the report.

(3) Report Delivery and Recordkeeping. These rules provide additional requirements to those in 40 CFR 141.155.

(a) Existing systems shall deliver their second CCR reports by July 1, 2000, and subsequent reports by July 1 annually thereafter. A new community water system activated after January 1, 1998, shall deliver its first report by July 1 of the year after its first full calendar year in operation and annually thereafter.

(b) A community water system that sells water to another community water system shall deliver the applicable information required in 40 CFR 141.153 to the buyer system by April 1, 2000, and by April 1 annually thereafter, or on a date mutually agreed upon by the seller system and the buyer system, and specifically included in a contract between the parties.

(c) Distribution Via the Internet. In accordance with 40 CFR 141.155(f), each community water system serving 100,000 or more persons shall post its current year's CCR on a publicly accessible Internet site annually beginning July 1 for a period of no less than one year, and shall provide the Department with information on the appropriate Internet link(s) to its CCR using Form 62-555.900(19), F.A.C.

(d) Mailing Requirements. All systems shall mail or otherwise directly deliver one copy of their consumer confidence report to each billing customer. A community water system that sells water to another community water system need not deliver or mail its CCR to the buyer system if it has furnished the required consumer confidence information to the buyer system in accordance with paragraph 62-550.824(3)(b), F.A.C. Systems must make a good faith effort to reach all consumers, using one or more of the methods listed in Form 62-555.900(19), Certification of Delivery of Consumer Confidence Report, hereby adopted and incorporated by reference, effective date 4-10-03. Copies of this form are available from the Department of Environmental Protection, Drinking Water Section, M.S. 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

1. Mailing Waiver. In accordance with 40 CFR 141.155(g), the State of Florida waives the requirement that community water systems serving fewer than 10,000 persons mail or directly deliver to each billing customer their consumer confidence reports provided that the systems have not had any MCL or monitoring and reporting (M/R) violations, nor have been issued formal Notices of Violations (NOVs), Consent Orders, Administrative Orders, or court-ordered civil actions during the year covered by the CCR.

2. The Department will notify systems that are ineligible for a mailing waiver in writing no later than April 1 annually.

a. Community water systems serving fewer than 10,000 persons that have been granted a mailing waiver shall publish their CCRs due July 1 of the current year in local newspapers, and shall do so at least once each year no later than July 1 of that same year.

b. In lieu of the requirement set forth in sub-subparagraph a. above, community water systems serving 500 or fewer persons that have been granted mailing waivers and that elect to post notice(s) that the CCR is not being sent out but is available upon request, may post their notices in publicly accessible areas such as community bulletin boards for a period of no less than 30 days beginning no later than July 1 of that same year annually.

c. Prior to the CCR's publication date(s) in a local newspaper, community water systems granted mailing waivers shall notify customers of the publication date(s), and shall inform customers that a copy of the CCR will not be mailed to them individually.

(e) Reporting.

1. Systems shall demonstrate compliance with the reporting requirements of 40 CFR 141.155(c) by:

a. Sending a copy of their consumer confidence report to the appropriate office of the Department no later than the date the system is required to distribute the report to its customers, and

b. Sending to the appropriate office of the Department a certification that the report has been distributed, that the information is correct, and that the information is consistent with compliance monitoring data. The certification must be sent by August 10 annually. When reporting compliance with these requirements, systems shall use Form 62-555.900(19), Certification of Delivery of Consumer Confidence Report, and may transmit the form via electronic mail. Copies of this form are available from the Department of Environmental Protection, Drinking Water Section, M.S. 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. This form includes documentation of the methods used by systems to distribute their consumer confidence reports.

2. Systems supplying water to other systems shall:
- Send a copy of the information required by 40 CFR 141.153 or the complete consumer confidence report provided to the buyer system to the appropriate office of the Department no later than the date the system is required to furnish the buyer with the information, and
  - Send to the appropriate office of the Department a certification that the information or report has been furnished to the buyer system, that the information is correct, and that the information is consistent with compliance monitoring data. The certification must be sent by April 10 annually or within 10 days after the date that the system is required to furnish its report or information to its buyer. Systems shall use Form 62-555.900(21), Certification of Delivery of Consumer Confidence Information to Supplied System, hereby adopted and incorporated by reference, effective date 4-10-03 when reporting compliance with these reporting requirements and may transmit the form via electronic mail. Copies of this form are available from the Department of Environmental Protection, Drinking Water Section, M.S. 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.
3. Each system shall send an informational copy of its consumer confidence report to its county health department if not sent under sub-subparagraph 62-550.824 (3)(e)1.a., F.A.C.
4. Systems regulated by the Florida Public Service Commission (PSC) shall send an informational copy of their consumer confidence reports to the PSC headquarters office no later than the date they mail the reports to the appropriate office of the Department. The address of the PSC headquarters office is: Division of Water and Wastewater, Florida Public Service Commission, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850.
5. The font size of all printed text in consumer confidence reports shall be 8 point or larger.
6. If the Department finds that a system's consumer confidence report is not in compliance with the requirements of this section, the Department shall notify the system in writing specifying any changes that must be made. The system shall modify and redistribute its consumer confidence report and resubmit the report to the Department and certify its delivery using Form 62-555.900(19) within 90 days of receipt of the Department's notification.

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.853(3), (4), 403.861(9) FS. History—New 9-22-99, Amended 8-1-00, 11-27-01, 4-10-03, 12-30-11, 7-7-15.*

**62-550.828 Ground Water Rule.**

(1) The requirements contained in the July 1, 2014, edition of 40 C.F.R. Part 141, Subpart S (Sections 141.400 through 141.405) (<http://www.flrules.org/Gateway/Reference.asp?No=Ref-05591>), are adopted and incorporated herein by reference and are enforceable under this rule, except the following regulations are not adopted or incorporated in this rule: 40 C.F.R. §§141.400(c)(5), 141.402(e)(2), 141.402(f), and 141.403(a)(7)(iii). This subsection shall be effective on July 7, 2015.

(2) In addition to the public notification requirements in Part IV of Chapter 62-560, F.A.C., the following public notification requirements are adopted and incorporated herein by reference and are enforceable under this rule:

(a) In the July 1, 2011, edition of 40 C.F.R. §141.202 (<http://www.flrules.org/Gateway/Reference.asp?No=Ref-00916>), the Tier 1 public notice requirements pertaining to detection of *E. coli*, enterococci, or coliphage in source water samples required under 40 C.F.R. §§141.402(a) and 141.402(b) (July 1, 2011), which are incorporated by reference in subsection 62-550.828(1), F.A.C.

(b) In the July 1, 2011, edition of 40 C.F.R. §141.203 (<http://www.flrules.org/Gateway/Reference.asp?No=Ref-00919>), the Tier 2 public notice requirements pertaining to failure to take corrective action or failure to maintain at least 4-log treatment of viruses before or at the first customer under 40 C.F.R. §141.403(a) (July 1, 2011), which is incorporated by reference in subsection 62-550.828(1), F.A.C.

TABLE 1  
MAXIMUM CONTAMINANT LEVELS FOR INORGANIC COMPOUNDS

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	MCL (mg/L)
1074	Antimony	0.006
1005	Arsenic	0.05 through 12/31/2004 0.010 on and after 01/01/2005
1094	Asbestos	7 MFL
1010	Barium	2

1075	Beryllium	0.004
1015	Cadmium	0.005
1020	Chromium	0.1
1024	Cyanide (as free Cyanide)	0.2
1025	Fluoride	4.0
1030	Lead	0.015
1035	Mercury	0.002
1036	Nickel	0.1
1040	Nitrate	10 (as N)
1041	Nitrite	1 (as N)
	Total Nitrate and Nitrite	10 (as N)
1045	Selenium	0.05
1052	Sodium	160
1085	Thallium	0.002

Abbreviations Used: MCL = maximum contaminant level;  
MFL = million fibers per liter (longer than 10 micrometers);  
mg/L = milligrams per liter.

TABLE 2  
MAXIMUM RESIDUAL DISINFECTANT LEVELS

FEDERAL CONTAMINANT ID NUMBER	DISINFECTANT RESIDUAL	MRDL (mg/L)
1012	Chlorine	4.0 (as Cl <sub>2</sub> )
1006	Chloramines	4.0 (as Cl <sub>2</sub> )
1008	Chlorine Dioxide	0.8 (as ClO <sub>2</sub> )

Abbreviations Used: mg/L = milligrams per liter;  
MRDL = maximum residual disinfectant level.

TABLE 4  
MAXIMUM CONTAMINANT LEVELS FOR VOLATILE ORGANIC CONTAMINANTS

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT & (CAS NUMBER)	MCL (mg/L)
2977	1,1-Dichloroethylene (75-35-4)	0.007
2981	1,1,1-Trichloroethane (71-55-6)	0.2
2985	1,1,2-Trichloroethane (79-00-5)	0.005
2980	1,2-Dichloroethane (107-06-2)	0.003
2983	1,2-Dichloropropane (78-87-5)	0.005
2378	1,2,4-Trichlorobenzene (120-82-1)	0.07
2990	Benzene (71-43-2)	0.001
2982	Carbon tetrachloride (56-23-5)	0.003
2380	cis-1,2-Dichloroethylene (156-59-2)	0.07
2964	Dichloromethane (75-09-2)	0.005
2992	Ethylbenzene (100-41-4)	0.7
2989	Monochlorobenzene (108-90-7)	0.1
2968	o-Dichlorobenzene (95-50-1)	0.6
2969	para-Dichlorobenzene (106-46-7)	0.075
2996	Styrene (100-42-5)	0.1
2987	Tetrachloroethylene (127-18-4)	0.003
2991	Toluene (108-88-3)	1
2979	trans-1,2-Dichloroethylene (156-60-5)	0.1

2984	Trichloroethylene (79-01-6)	0.003
2976	Vinyl chloride (75-01-4)	0.001
2955	Xylenes (total) (1330-20-7)	10

Abbreviations used: CAS Number = Chemical Abstract System Number;  
MCL = maximum contaminant level;  
mg/L = milligrams per liter.

TABLE 5  
MAXIMUM CONTAMINANT LEVELS FOR SYNTHETIC ORGANIC CONTAMINANTS

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT & (CAS NUMBER)	MCL (mg/L)	Regulatory Detection Limit (mg/L)
2063	2,3,7,8-TCDD (Dioxin) (1746-01-6)	3 X 10 <sup>-8</sup>	5 x 10 <sup>-9</sup>
2105	2,4-D (94-75-7)	0.07	0.0001
2110	2,4,5-TP (Silvex) (93-72-1)	0.05	0.0002
2051	Alachlor (15972-60-8)	0.002	0.0002
2050	Atrazine (1912-24-9)	0.003	0.0001
2306	Benzo(a)pyrene (50-32-8)	0.0002	0.00002
2046	Carbofuran (1563-66-2)	0.04	0.0009
2959	Chlordane (57-74-9)	0.002	0.0002
2031	Dalapon (75-99-0)	0.2	0.001
2035	Di(2-ethylhexyl)adipate (103-23-1)	0.4	0.0006
2039	Di(2-ethylhexyl)phthalate (117-81-7)	0.006	0.0006
2931	Dibromochloropropane (DBCP) (96-12-8)	0.0002	0.00002
2041	Dinoseb (88-85-7)	0.007	0.0002
2032	Diquat (85-00-7)	0.02	0.0004
2033	Endothall (145-73-3)	0.1	0.009
2005	Endrin (72-20-8)	0.002	0.00001
2946	Ethylene dibromide (EDB) (106-93-4)	0.00002	0.00001
2034	Glyphosate (1071-83-6)	0.7	0.006
2065	Heptachlor (76-44-8)	0.0004	0.00004
2067	Heptachlor epoxide (1024-57-3)	0.0002	0.00002
2274	Hexachlorobenzene (118-74-1)	0.001	0.0001
2042	Hexachlorocyclopentadiene (77-47-4)	0.05	0.0001
2010	Lindane (58-89-9)	0.0002	0.00002
2015	Methoxychlor (72-43-5)	0.04	0.0001
2036	Oxamyl (vydate) (23135-22-0)	0.2	0.002
2326	Pentachlorophenol (87-86-5)	0.001	0.00004
2040	Picloram (1918-02-1)	0.5	0.0001
2383	Polychlorinated biphenyls (PCBs)	0.0005	0.0001
2037	Simazine (122-34-9)	0.004	0.00007
2020	Toxaphene (8001-35-2)	0.003	0.001

Abbreviations used: CAS Number = Chemical Abstract System Number;  
MCL = maximum contaminant level;  
mg/L = milligrams per liter.

NOTE: The Detection Limits listed in this table become effective January 22, 2004.

TABLE 6

SECONDARY DRINKING WATER STANDARDS

FEDERAL CONTAMINANT ID NUMBER	CONTAMINANT	SMCL (mg/L)*
1002	Aluminum	0.2
1017	Chloride	250
1022	Copper	1
1025	Fluoride	2.0
1028	Iron	0.3
1032	Manganese	0.05
1050	Silver	0.1
1055	Sulfate	250
1095	Zinc	5
1905	Color	15 color units
1920	Odor**	3 (threshold odor number)
1925	pH	6.5 - 8.5
1930	Total Dissolved Solids	500
2905	Foaming Agents	0.5

Abbreviations Used:

SMCL = maximum contaminant level;  
mg/L = milligrams per liter.

\* Except color, odor, and pH.

\*\* For purpose of compliance with ground water quality secondary standards, as referenced in Chapter 62-520, F.A.C., levels of ethylbenzene exceeding 30 micrograms per liter, toluene exceeding 40 micrograms per liter, or xylenes exceeding 20 micrograms per liter shall be considered equivalent to exceeding the drinking water secondary standard for odor.



TABLE 7: MONITORING FREQUENCIES AND LOCATIONS (6/24/2014)

See 40 C.F.R. Part 141, Subpart V, which is incorporated by reference in Rule 62-550.822, F.A.C., for Stage 2 disinfection byproducts monitoring frequencies and locations.

CONTAMINANT OR DISINFECTANT RESIDUAL GROUP	APPLICABILITY	INITIAL OR ROUTINE MONITORING		TRIGGER THAT INCREASES MONITORING	INCREASED MONITORING		TRIGGER THAT REDUCES MONITORING	REDUCED MONITORING		MONITORING LOCATION(S)
		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS	
ASBESTOS RULE 62-550.511	CWSs, NTNCWSs	1 SAMPLE EVERY 9 YEARS		SAMPLE > MCL	1 SAMPLE QUARTERLY		SYSTEM NOT SUSCEPTIBLE	NO SAMPLING REQUIRED		NOTE 1
NITRATE & NITRITE RULES 62-550.500(5) & 62-550.512	CWSs, NTNCWSs	1 SAMPLE ANNUALLY	1 SAMPLE QUARTERLY	GW SYS. WITH SAMPLE ≥ 50% OF MCL	1 SAMPLE QUARTERLY	---	SUBPART H SYS. WITH EACH OF 4 MOST RECENT QUARTERLY SAMPLES < 50% OF MCL	---	1 SAMPLE ANNUALLY DURING QUARTER WITH HIGHEST RESULT	EVERY ENTRY POINT TO DIST. SYS. DURING NORMAL OPERATING CONDITIONS
	TWSs	1 SAMPLE ANNUALLY		NITRATE SAMPLE > MCL OR NITRITE SAMPLE ≥ 50% OF MCL	1 SAMPLE QUARTERLY		---	---		
INORGANICS RULES 62-550.500(5) & 62-550.513	CWSs, NTNCWSs	1 SAMPLE EVERY 3 YEARS	1 SAMPLE ANNUALLY	SAMPLE > MCL	1 SAMPLE QUARTERLY		FOUR CONSECUTIVE QUARTERS < MCL	SEE ROUTINE MONITORING		EVERY ENTRY POINT TO DIST. SYS. DURING NORMAL OPERATING CONDITIONS
CHLORINE & CHLORAMINES RULES 62-550.514(1) & 62-550.821	CWSs/NTNCWSs ADDING CHLORINE OR CHLORAMINES	MULTIPLE SAMPLES MONTHLY; SEE NOTE 2		---	---		---	---		NOTE 2
CHLORINE DIOXIDE RULES 62-550.514(1) & 62-550.821	CWSs/NTNCWSs/TWSs ADDING CHLORINE DIOXIDE	1 SAMPLE DAILY		SAMPLE > MCL	ADDITIONAL 3-SAMPLE SET THE FOLLOWING DAY		---	---		NOTE 3
TOTAL TRIHALOMETHANES & HALOACETIC ACIDS (FIVE) - STAGE 1 MCLs RULES 62-550.514(2) & 62-550.821	CWSs/NTNCWSs ADDING A DISINFECTANT & SERVING ≥ 10,000 PERSONS	1 SAMPLE PER TREATMENT PLANT QUARTERLY	4 SAMPLES PER TREATMENT PLANT QUARTERLY	---	---		GW SYS. WITH ANNUAL AVG. TTHM & HAA5 ≤ 50% OF MCL; SUBPART H SYS. WITH ANNUAL AVG. SOURCE-WATER TOC ≤ 4.0 MG/L & ANNUAL AVG. TTHM & HAA5 ≤ 50% OF MCL	1 SAMPLE PER TREATMENT PLANT ANNUALLY DURING MONTH OF WARMEST WATER TEMP.	1 SAMPLE PER TREATMENT PLANT QUARTERLY	NOTE 4

CONTAMINANT OR DISINFECTANT RESIDUAL GROUP	APPLICABILITY	INITIAL OR ROUTINE MONITORING		TRIGGER THAT INCREASES MONITORING	INCREASED MONITORING		TRIGGER THAT REDUCES MONITORING	REDUCED MONITORING		MONITORING LOCATION(S)
		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS	
	CWSs/NTCWSs ADDING A DISINFECTANT & SERVING 500 to 9,999 PERSONS	1 SAMPLE PER TREATMENT PLANT Annually DURING MONTH OF WARMEST WATER TEMP.	1 SAMPLE PER TREATMENT PLANT Quarterly	GW SYS. WITH AVG. OF ANNUAL SAMPLES > MCL	1 SAMPLE PER TREATMENT PLANT Quarterly	---	GW SYS. WITH ANNUAL AVG. TTHM & HAA5 ≤ 50% OF MCL FOR 2 CONSECUTIVE YEARS OR ≤ 25% OF MCL FOR 1 YEAR; SUBPART H SYS. WITH ANNUAL AVG. SOURCE-WATER TOC ≤ 4.0 MG/L & ANNUAL AVG. TTHM & HAA5 ≤ 50% OF MCL	1 SAMPLE PER TREATMENT PLANT EVERY 3 YEARS DURING MONTH OF WARMEST WATER TEMP.	1 SAMPLE PER TREATMENT PLANT ANNUALLY DURING MONTH OF WARMEST WATER TEMP.	
	CWSs/NTCWSs ADDING A DISINFECTANT & SERVING < 500 PERSONS	1 SAMPLE PER TREATMENT ANNUALLY DURING MONTH OF WARMEST WATER TEMP.		AVG. OF ANNUAL SAMPLES > MCL	1 SAMPLE PER TREATMENT PLANT QUARTERLY		GW SYS. WITH ANNUAL AVG. TTHM & HAA5 ≤ 50% OF MCL FOR 2 CONSECUTIVE YEARS OR ≤ 25% OF MCL FOR 1 YEAR		---	
CHLORITE - STAGE 1 MCL RULES 62-550.514(2) & 62-550.821	CWSs/NTCWSs ADDING CHLORINE DIOXIDE	1 SAMPLE DAILY		SAMPLE > MCL	ADDITIONAL 3-SAMPLE SET THE FOLLOWING DAY	---		---	NOTE 5	
		3-SAMPLE SET MONTHLY		---	---	NO INDIVIDUAL ENTRY-POINT OR DIST. SYS. SAMPLE > MCL FOR 1 YEAR	3-SAMPLE SET QUARTERLY			
BROMATE - STAGE 1 MCL RULES 62-550.514(2) & 62-550.821	CWSs/NTCWSs ADDING OZONE	1 SAMPLE PER TREATMENT PLANT MONTHLY		---	---	ANNUAL AVG. SOURCE-WATER BROMIDE < 0.05 MG/L BASED UPON MONTHLY MEASUREMENTS	1 SAMPLE PER TREATMENT PLANT QUARTERLY	ENTRANCE TO DIST. SYS. UNDER NORMAL OPERATING CONDITIONS		

CONTAMINANT OR DISINFECTANT RESIDUAL GROUP	APPLICABILITY	INITIAL OR ROUTINE MONITORING		TRIGGER THAT INCREASES MONITORING	INCREASED MONITORING		TRIGGER THAT REDUCES MONITORING	REDUCED MONITORING		MONITORING LOCATION(S)
		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS	
VOLATILE ORGANICS RULES 62-550.500(5) & 62-550.515	CWSs, NTNCWSs	4 CONSECUTIVE QUARTERLY SAMPLES EVERY 3 YEARS OR, IF AUTHORIZED, 1 SAMPLE ANNUALLY; SEE NOTE 6		DETECTION OF ANY VOC AT > 0.0005 MG/L	1 SAMPLE QUARTERLY		GW SYS. WITH NO DETECTION OF ANY VOC DURING 3 YEARS OF ANNUAL SAMPLING	1 SAMPLE EVERY 3 YEARS	---	NOTE 7
SYNTHETIC ORGANICS RULES 62-550.500(5) & 62-550.516	CWSs/NTNCWSs SERVING > 3,300 PERSONS	4 CONSECUTIVE QUARTERLY SAMPLES EVERY 3 YEARS		DETECTION OF ANY SOC	1 SAMPLE QUARTERLY		NO DETECTION OF ANY SOC DURING INITIAL COMPLIANCE PERIOD	2 QUARTERLY SAMPLES IN THE SAME YEAR EVERY 3 YEARS		NOTE 7
	CWSs/NTNCWSs SERVING ≤ 3,300 PERSONS							1 SAMPLE EVERY 3 YEARS		
MICROBIOLOGICAL CONTAMINANTS RULE 62-550.518	CWSs, NTNCWSs, TWSs SERVING > 1,000 PERSONS	MULTIPLE SAMPLES MONTHLY; SEE NOTE 8		TOTAL COLIFORM POSITIVE SAMPLE	NOTE 9	---	---	---	---	SITES REFLECTING WATER THROUGHOUT DIST. SYS.
	TWSs SERVING ≤ 1,000 PERSONS	2 SAMPLES QUARTERLY	2 SAMPLES MONTHLY							
SECONDARY CONTAMINANTS RULES 62-550.500(5) & 62-550.520	CWSs	1 SAMPLE EVERY 3 YEARS		---	---	---	---	---	---	EVERY ENTRY POINT TO DIST. SYS. DURING NORMAL OPERATING CONDITIONS
GROSS ALPHA, RADIUM-226, RADIUM-228, & URANIUM RULE 62-550.519(1)	CWSs	INITIAL MONITORING IS 4 CONSECUTIVE QUARTERLY SAMPLES ROUTINE MONITORING IS 1 SAMPLE EVERY 3 YEARS NOTE 10		SAMPLE > MCL OR IF MONITORING ONCE EVERY 6 YEARS, A SAMPLE RESULT > 1/2 MCL	1 SAMPLE QUARTERLY WHEN PREVIOUS SAMPLE RESULT IS > MCL OR IF SAMPLING EVERY 9 YEARS AND THE SAMPLE IS ≤ MCL BUT > 1/2 MCL, SAMPLE		AVERAGE OF INITIAL MONITORING SAMPLES OR LAST REDUCED MONITORING SAMPLE < DETECTION LIMIT	1 SAMPLE EVERY 9 YEARS		EVERY ENTRY POINT TO DIST. SYS. DURING NORMAL OPERATING CONDITIONS

CONTAMINANT OR DISINFECTANT RESIDUAL GROUP	APPLICABILITY	INITIAL OR ROUTINE MONITORING		TRIGGER THAT INCREASES MONITORING	INCREASED MONITORING		TRIGGER THAT REDUCES MONITORING	REDUCED MONITORING		MONITORING LOCATION(S)
		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS	
				OR IF MONITORING ONCE EVERY 9 YEARS, A SAMPLE RESULT $\geq$ DETECTION LIMIT	EVERY 6 YEARS; OR IF SAMPLE IS $\geq$ DETECTION LIMIT BUT $\leq 1/2$ MCL OR IF SAMPLING EVERY 6 YEARS AND THE SAMPLE IS $> 1/2$ MCL BUT $\leq$ MCL, SAMPLE EVERY 3 YEARS		DETECTION LIMIT $\leq$ AVERAGE OF INITIAL MONITORING SAMPLES OR LAST REDUCED MONITORING SAMPLE $\leq 1/2$ MCL	1 SAMPLE EVERY 6 YEARS		
	NTNCs	ROUTINE MONITORING IS 1 SAMPLE EVERY 6 YEARS NOTE 10	SAMPLE $>$ MCL OR IF MONITORING ONCE EVERY 9 YEARS, A SAMPLE RESULT $> 1/2$ MCL	1 SAMPLE QUARTERLY WHEN PREVIOUS SAMPLE RESULT IS $>$ MCL OR IF SAMPLING EVERY 9 YEARS AND THE SAMPLE IS $> 1/2$ MCL BUT $\leq$ MCL, SAMPLE EVERY 6 YEARS		AVERAGE OF QUARTERLY MONITORING SAMPLES OR LAST MONITORING SAMPLE $<$ DETECTION LIMIT		NO FURTHER MONITORING REQUIRED		
						AVERAGE OF INITIAL MONITORING SAMPLES OR LAST REDUCED MONITORING SAMPLE $\leq 1/2$ MCL AND $>$ DETECTION LIMIT		1 SAMPLE EVERY 9 YEARS		
BETA PARTICLE & PHOTON RADIOACTIVITY RULE 62-550.519(2)	CWSs DESIGNATED AS VULNERABLE	1 SAMPLE QUARTERLY FOR GROSS BETA & 1 SAMPLE ANNUALLY FOR TRITIUM & STRONTIUM-90	SAMPLE $>$ MCL	1 SAMPLE MONTHLY FOR GROSS BETA, TRITIUM, & STRONTIUM-90		ANNUAL AVERAGE OF GROSS BETA MINUS POTASSIUM-40 $\leq 50$ pCi/L		1 SAMPLE EVERY 3 YEARS FOR GROSS BETA, TRITIUM, & STRONTIUM-90		EVERY ENTRY POINT TO DIST. SYS. DURING NORMAL OPERATING CONDITIONS

CONTAMINANT OR DISINFECTANT RESIDUAL GROUP	APPLICABILITY	INITIAL OR ROUTINE MONITORING		TRIGGER THAT INCREASES MONITORING	INCREASED MONITORING		TRIGGER THAT REDUCES MONITORING	REDUCED MONITORING		MONITORING LOCATION(S)
		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS		GW SYSTEMS	SUBPART H SYSTEMS	
	CWSs DESIGNATED AS UTILIZING WATERS CONTAMINATED BY EFFLUENTS FROM NUCLEAR FACILITIES	QUARTERLY FOR GROSS BETA & IODINE-131 & ANNUALLY FOR TRITIUM & STRONTIUM-90; SEE NOTE 11	QUARTERLY RESULT FOR GROSS BETA OR IODINE-131 > MCL; ANNUAL RESULT FOR TRITIUM OR STRONTIUM-90 > MCL	MONTHLY FOR GROSS BETA, IODINE-131, TRITIUM, & STRONTIUM-90	ANNUAL AVERAGE OF GROSS BETA MINUS POTASSIUM-40 ≤ 15 pCi/L	EVERY 3 YEARS FOR GROSS BETA, IODINE-131, TRITIUM, & STRONTIUM-90				

TABLE 8: INITIAL OR ROUTINE MONITORING SCHEDULE (6/24/2014)  
 REFERENCE SUBSECTION 62-550.500(3), F.A.C.

Under initial or routine monitoring, public water systems shall take required samples during the time period specified below. See 40 C.F.R. Part 141, Subpart V, which is incorporated by reference in Rule 62-550.822, F.A.C., for the Stage 2 disinfection byproducts routine monitoring schedule.

CONTAMINANT OR DISINFECTANT RESIDUAL GROUP		COMMUNITY WATER SYSTEMS SERVING MORE THAN 3,300 PEOPLE	COMMUNITY WATER SYSTEMS SERVING 3,300 OR FEWER PEOPLE	NON-TRANSIENT NON-COMMUNITY WATER SYSTEMS	TRANSIENT NON-COMMUNITY WATER SYSTEMS
ASBESTOS RULES 62-550.500(3) & 62-550.511		FIRST YEAR OF EACH NINE-YEAR COMPLIANCE CYCLE	SECOND YEAR OF EACH NINE-YEAR COMPLIANCE CYCLE	THIRD YEAR OF EACH NINE-YEAR COMPLIANCE CYCLE	NOT REQUIRED
NITRATES AND NITRITES RULES 62-550.500(3) & 62-550.512	GROUND WATER SYSTEMS	ANNUALLY			
	SUBPART H SYSTEMS	QUARTERLY			ANNUALLY
INORGANICS RULES 62-550.500(3) & 62-550.513	GROUND WATER SYSTEMS	FIRST YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD	SECOND YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD	THIRD YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD	NOT REQUIRED
	SUBPART H SYSTEMS	ANNUALLY			NOT REQUIRED
CHLORINE & CHLORAMINES RULES 62-550.514(1) & 62-550.821		MONTHLY FOR SYSTEMS ADDING CHLORINE OR CHLORAMINES			NOT REQUIRED
CHLORINE DIOXIDE RULES 62-550.514(1) & 62-550.821		DAILY FOR SYSTEMS ADDING CHLORINE DIOXIDE			

CONTAMINANT OR DISINFECTANT RESIDUAL GROUP		COMMUNITY WATER SYSTEMS SERVING MORE THAN 3,300 PEOPLE	COMMUNITY WATER SYSTEMS SERVING 3,300 OR FEWER PEOPLE	NON-TRANSIENT NON-COMMUNITY WATER SYSTEMS	TRANSIENT NON-COMMUNITY WATER SYSTEMS
TOTAL TRIHALOMET HANES & HALOACETIC ACIDS (FIVE) – STAGE 1 MCL RULES 62-550.500(3), 550.514(2), & 62-550.821	GROUND WATER SYSTEMS	QUARTERLY FOR SYSTEMS ADDING A DISINFECTANT & SERVING ≥ 10,000 PEOPLE & ANNUALLY DURING MONTH OF WARMEST WATER TEMPERATURE FOR SYSTEMS ADDING A DISINFECTANT & SERVING < 10,000 PEOPLE	ANNUALLY DURING MONTH OF WARMEST WATER TEMPERATURE FOR SYSTEMS ADDING A DISINFECTANT	QUARTERLY FOR SYSTEMS ADDING A DISINFECTANT & SERVING ≥ 10,000 PEOPLE & ANNUALLY DURING MONTH OF WARMEST WATER TEMPERATURE FOR SYSTEMS ADDING A DISINFECTANT & SERVING < 10,000 PEOPLE	NOT REQUIRED
	SUBPART H SYSTEMS	QUARTERLY FOR SYSTEMS ADDING A DISINFECTANT	QUARTERLY FOR SYSTEMS ADDING A DISINFECTANT & SERVING ≥ 500 PEOPLE & ANNUALLY DURING MONTH OF WARMEST WATER TEMPERATURE FOR SYSTEMS ADDING A DISINFECTANT & SERVING < 500 PEOPLE		NOT REQUIRED
CHLORITE – STAGE 1 MCL RULES 62-550.514(2) & 62-550.821		DAILY AT ENTRANCE TO DISTRIBUTION SYSTEM & MONTHLY IN DISTRIBUTION SYSTEM FOR SYSTEMS ADDING CHLORINE DIOXIDE			NOT REQUIRED
BROMATE – STAGE 1 MCL RULES 62-550.514(2) & 62-550.821		MONTHLY FOR SYSTEMS ADDING OZONE			NOT REQUIRED
VOLATILE ORGANICS RULES 62-550.500(3) & 62-550.515		QUARTERLY OR, IF AUTHORIZED, ANNUALLY DURING THE FIRST YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD	QUARTERLY OR, IF AUTHORIZED, ANNUALLY DURING THE SECOND YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD	QUARTERLY OR, IF AUTHORIZED, ANNUALLY DURING THE THIRD YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD	NOT REQUIRED
SYNTHETIC ORGANICS RULES 62-550.500(3) & 62-550.516		QUARTERLY DURING THE FIRST YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD. UNLESS REDUCED MONITORING IS AUTHORIZED	QUARTERLY DURING THE SECOND YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD. UNLESS REDUCED MONITORING IS AUTHORIZED	QUARTERLY DURING THE THIRD YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD UNLESS REDUCED MONITORING IS AUTHORIZED	NOT REQUIRED

CONTAMINANT OR DISINFECTANT RESIDUAL GROUP		COMMUNITY WATER SYSTEMS SERVING MORE THAN 3,300 PEOPLE	COMMUNITY WATER SYSTEMS SERVING 3,300 OR FEWER PEOPLE	NON-TRANSIENT NON-COMMUNITY WATER SYSTEMS	TRANSIENT NON-COMMUNITY WATER SYSTEMS
MICROBIOLOGICAL CONTAMINANTS RULES 62-550.500(3) & 62-550.518	GROUND WATER SYSTEMS	MONTHLY			MONTHLY FOR SYSTEMS SERVING > 1,000 PEOPLE & QUARTERLY FOR SYSTEMS SERVING ≤ 1,000 PEOPLE
	SUBPART H SYSTEMS	MONTHLY			
GROSS ALPHA, RADIUM-226, RADIUM-228 & URANIUM RULES 62-550.500(3) & 62-550.519	ROUTINE MONITORING OCCURS DURING FIRST YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD UNLESS REDUCED MONITORING IS APPROVED	ROUTINE MONITORING OCCURS DURING SECOND YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD UNLESS REDUCED MONITORING IS APPROVED	ROUTINE MONITORING OCCURS DURING THIRD YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD UNLESS REDUCED MONITORING IS APPROVED	NOT REQUIRED	
BETA PARTICLE & PHOTON RADIOACTIVITY RULES 62-550.500(3) & 62-550.519	QUARTERLY/ANNUALLY FOR SYSTEMS DESIGNATED AS VULNERABLE OR UTILIZING WATERS CONTAMINATED BY EFFLUENTS FROM NUCLEAR FACILITIES	NOT REQUIRED		NOT REQUIRED	
SECONDARY CONTAMINANTS RULES 62-550.500(3) & 62-550.520	FIRST YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD	SECOND YEAR OF EACH THREE-YEAR COMPLIANCE PERIOD	NOT REQUIRED		NOT REQUIRED

NOTE 1: Systems susceptible to asbestos contamination due solely to corrosion of asbestos-cement pipe shall sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur. Systems susceptible to asbestos contamination due solely to source water shall monitor at every entry point to the distribution system during normal operating conditions. Systems susceptible to asbestos contamination due to both source water and corrosion of asbestos-cement pipe shall sample at a tap served by asbestos-cement pipe and under conditions where asbestos contamination is most likely to occur.

NOTE 2: Systems shall measure the residual disinfectant level at the same locations in the distribution system where, and at the same time when, total coliforms are sampled.

NOTE 3: Systems shall take routine daily samples at the entrance to the distribution system. Systems shall take additional three-sample sets in the distribution system at the following locations:

(a) If chloramines are used to maintain a disinfectant residual in the distribution system or if chlorine is used to maintain a disinfectant residual in the distribution system and there are no disinfection points after the entrance to the distribution system (i.e., no booster chlorination), the system shall take three samples as close to the first customer as possible at intervals of at least six hours.

(b) If chlorine is used to maintain a disinfectant residual in the distribution system and there are one or more disinfectant addition points after the entrance to the distribution system (i.e., booster chlorination), the system shall take one sample at each of the following locations: as close to the first customer as possible, in a location representative of average residence time, and as close to the end of the distribution system as possible.



NOTE 4: Systems taking one sample shall take the sample at a location reflecting maximum residence time in the distribution system. Systems taking more than one sample shall take at least 25% of the samples at locations representing maximum residence time of the water in the distribution system and shall take the remaining samples at locations representing at least average residence time in the distribution system and representing the entire distribution system, taking into account number of persons served, different sources of water, and different treatment methods.

NOTE 5: Systems shall take routine daily samples at the entrance to the distribution system. Systems shall take routine monthly or additional three-set samples in the distribution system; each three-set sample shall consist of one sample at each of the following locations: a location as close to the first customer as possible, a location representative of average residence time, and a location reflecting maximum residence time in the distribution system.

NOTE 6: For initial base point monitoring, systems shall take four consecutive quarterly samples during the first three-year compliance period. If a system does not detect any VOC, it shall take one sample annually beginning with the next three-year compliance period.

NOTE 7: During the first quarter of initial base point monitoring, GW systems shall take a minimum of one sample that is representative of each well. Under all other circumstances, systems shall sample at every entry point to the distribution system during normal operating conditions.

NOTE 8: The minimum number of samples shall be as set forth in Rule 62-550.518(2), F.A.C.

NOTE 9: Systems shall conduct repeat monitoring in accordance with Rule 62-550.518(7), F.A.C., and systems that routinely collect fewer than five samples per month shall collect at least five samples during the next month the system provides water to the public.

NOTE 10: The Department shall waive the final two quarters of initial monitoring for a sampling point if the results of the samples from the previous two quarters are below the regulatory detection limit. Additionally, under the conditions described in Rule 62-550.519(1)(c), F.A.C., historical data may be used to satisfy initial monitoring requirements.

NOTE 11: Quarterly monitoring for gross beta shall be based on the analysis of monthly samples or the analysis of a composite of three monthly samples. For iodine-131, a composite of five consecutive daily samples shall be analyzed once each quarter. Annual monitoring for tritium and strontium-90 shall be conducted by means of the analysis of a composite of four consecutive quarterly samples or analysis of four quarterly samples.

*Rulemaking Authority 403.8055, 403.861(9) FS. Law Implemented 403.852(12), 403.853(1), (3), (4), (7), 403.861(16), (17) FS. History–New 12-30-11, Amended 7-7-15.*

**62-550.830 Revised Total Coliform Rule.**

The requirements contained in 40 C.F.R. Part 141, Subpart Y (Sections 141.851 through 141.861), revised as of July 1, 2014 (<http://www.flrules.org/Gateway/reference.asp?No=Ref-05605>),\* are adopted and incorporated herein by reference and are enforceable under this rule, except 40 C.F.R. §§141.855(c) through (f) are not adopted or incorporated in this rule. This introductory text shall be effective on July 7, 2015.

*Rulemaking Authority 403.8055, 403.853(3), 403.861(9) FS. Law Implemented 403.853(1), (3), (7), 403.861(16), (17) FS. History–New 07-07-2015.*

\*The U.S. Environmental Protection Agency has identified an error in 40 C.F.R. §141.857(d), where the correct cross reference should be to paragraph (b) instead of paragraph (a), and an error in 40 C.F.R. §141.858(a)(1), where the correct word after §§141.854 should be “through” instead of “though.”