CHAPTER 62-555
PERMITTING, CONSTRUCTION, OPERATION, AND MAINTENANCE OF PUBLIC WATER SYSTEMS

62-555.310 Source and Siting Requirements for Public Water Systems.

(1) Suppliers of water shall obtain raw water from the best available source that is economically sensible and technically possible and shall make an effort to protect the source from contamination.

(2) To the extent practicable, suppliers of water and persons constructing public water systems shall avoid locating any part of a new public water system, and any expansion of an existing public water system, at any site that:

(a) Is subject to significant risk from contamination that could adversely affect the quality of drinking water or is subject to significant risk from floods, fires, or other disasters that could cause a breakdown of the public water system or any portion thereof; or

(b) Except for surface water impoundments, reservoirs, or intake structures (including pumping facilities) and except for underground piping and appurtenances, is within the floodplain of a 100-year flood or is lower than any recorded high tide.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.852(12), 403.853(1) FS. History–New 11-19-87, Formerly 17-22.610, Amended 1-18-89, Formerly 17-555.310, Amended 8-28-03.

62-555.312 Location of Public Water System Wells.

For the purpose of this section, the phrase “new wells” shall mean wells being newly connected, or reconnected, to a public water system (PWS).

(1) All wells that were connected to a PWS on or after November 9, 1977, but before December 13, 1983, and wells that are, or will be, supplying a PWS serving premises with an estimated collective sewage flow of 2,000 gallons or less per day and that were, or will be, connected to the PWS on or after December 13, 1983, shall be no closer than 100 feet from any “on-site sewage treatment

and disposal system" (OSTDS) as defined in Section 381.0065(2), F.S., and Rule 64E-6.002, F.A.C., regardless of the location of the OSTDS. Wells that are, or will be, supplying a PWS serving premises with an estimated collective sewage flow greater than 2,000 gallons per day and that were, or will be, connected to the PWS on or after December 13, 1983, shall be no closer than 200 feet from any OSTDS, regardless of the location of the OSTDS.

(2) New wells shall not be placed within the setback distances discussed in subsection 62-532.400(7), F.A.C., and listed in Part A of Table I in Chapter 62-532, F.A.C.

(3) New wells shall be located no closer than 100 feet from other sanitary hazards that pose a potentially high risk to ground water quality and public health and shall be located no closer than 50 feet from other sanitary hazards that pose a moderate risk to ground water quality and public health. The following are examples of other sanitary hazards that pose a potentially high risk: active or abandoned mines; airplane or train fueling or maintenance areas at airports and railroad yards; animal feeding operations other than those regulated under Rule 62-670.500, F.A.C.; concentrated aquatic animal production facilities; domestic wastewater collection/transmission systems; drainage or injection wells, oil or gas production wells, and improperly constructed or abandoned wells (i.e., wells not constructed or abandoned in accordance with Chapter 62-532, F.A.C.); fertilizer, herbicide, or pesticide storage areas at agricultural sites, golf courses, nurseries, and parks; graveyards; impoundments and tanks that process, store, or treat domestic wastewater, domestic wastewater residuals, or industrial fluids or waste and that are not regulated under Rule 62-670.500, F.A.C.; industrial waste land application areas other than those regulated under Rule 62-670.500, F.A.C.; junkyards and salvage or scrap yards; pastures with more than five grazing animals per acre; pipelines conveying petroleum products, chemicals, or industrial fluids or wastes; and underground storage tanks that are not regulated under Chapter 62-761, F.A.C., but are used for bulk storage of a liquid pollutant or hazardous substance (as defined in Chapter 62-761, F.A.C.) other than sodium hypochlorite solution. The following are examples of other sanitary hazards that pose a moderate risk: aboveground storage tanks that are not regulated under Chapter 62-761, F.A.C., but are used for bulk storage of a liquid pollutant or hazardous substance (as defined in Chapter 62-761, F.A.C.) other than sodium hypochlorite solution; fertilizer, herbicide, or pesticide application areas that are not under the ownership or control of the supplier of water at agricultural sites, golf courses, nurseries, and parks; railroad tracks; stormwater detention or retention basins; and surface water.

(4) For wells connected to a community water system on or after August 28, 2003, except those connected under a construction permit for which the Department received a complete application before August 28, 2003, continuing protection of the well from the sanitary hazards described in subsection (3) above shall be provided during the entire useful life of the well through one of the following means:

(a) Ownership by the water supplier of all land within 100 feet of the well;

(b) Control by the water supplier of all land within 100 feet of the well via easements, lease agreements, or deed restrictions that appropriately limit use of the land;

(c) Wellhead protection, zoning, or other land use regulations that appropriately limit use of all land within 100 feet of the well; or

(d) Other appropriate means.

(5) New wells shall be located on their sites in such a manner that the wells are in an area free from, or least subject to, inundation with surface drainage and flood water; and to the extent practicable, new wells shall be located on their sites in such a manner that the wells are "upstream" from on-site or off-site sanitary hazards when considering the direction of ground water movement.

(6) The Department or the appropriate water management district or delegated permitting authority shall approve a decrease in the standard well setback distances described in subsections (1) through (4) above if justified by any of the following: the presence, thickness, and extent of natural barriers such as impermeable geological strata; the design and construction of the well, including the depth of the well; the drinking water treatment provided; or the use of alternative means to reduce public health risks, such as the use of encasement or restrained joints to eliminate or minimize leakage from a pipeline that is a sanitary hazard or the use of additional drinking water monitoring. However, water management districts and delegated permitting authorities shall obtain the Department's concurrence before decreasing well setback distances because of either the type of drinking water treatment provided or the use of alternative means to reduce public health risks.

Rulemaking Authority 373.309(1), 373.337, 403.861(9) FS. Law Implemented 373.309(1), 403.852(12) FS. History–Formerly 17-22.615(2), Amended 1-18-89, 5-7-90, Formerly 17-555.312, Amended 8-28-03.

62-555.314 Location of Public Water System Mains.

For the purpose of this section, the phrase "water mains" shall mean mains, including treatment plant process piping, conveying either raw, partially treated, or finished drinking water; fire hydrant leads; and service lines that are under the control of a public water system and that have an inside diameter of three inches or greater.

(1) Horizontal Separation Between Underground Water Mains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, Reclaimed Water Pipelines, and On-Site Sewage Treatment and Disposal Systems.

(a) New or relocated, underground water mains shall be laid to provide a horizontal distance of at least three feet between the outside of the water main and the outside of any existing or proposed storm sewer, stormwater force main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C.

(b) New or relocated, underground water mains shall be laid to provide a horizontal distance of at least three feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed vacuum-type sanitary sewer.

(c) New or relocated, underground water mains shall be laid to provide a horizontal distance of at least six feet, and preferably ten feet, between the outside of the water main and the outside of any existing or proposed gravity- or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C. The minimum horizontal separation distance between water mains and gravity-type sanitary sewers shall be reduced to three feet where the bottom of the water main is laid at least six inches above the top of the sewer.

(d) New or relocated, underground water mains shall be laid to provide a horizontal distance of at least ten feet between the outside of the water main and all parts of any existing or proposed "on-site sewage treatment and disposal system" as defined in Section 381.0065(2), F.S., and Rule 64E-6.002, F.A.C.

(2) Vertical Separation Between Underground Water Mains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, and Reclaimed Water Pipelines.

(a) New or relocated, underground water mains crossing any existing or proposed gravity- or vacuum-type sanitary sewer or storm sewer shall be laid so the outside of the water main is at least six inches, and preferably 12 inches, above or at least 12 inches below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.

(b) New or relocated, underground water mains crossing any existing or proposed pressure-type sanitary sewer, wastewater or stormwater force main, or pipeline conveying reclaimed water shall be laid so the outside of the water main is at least 12 inches above or below the outside of the other pipeline. However, it is preferable to lay the water main above the other pipeline.

(c) At the utility crossings described in paragraphs (a) and (b) above, one full length of water main pipe shall be centered above or below the other pipeline so the water main joints will be as far as possible from the other pipeline. Alternatively, at such crossings, the pipes shall be arranged so that all water main joints are at least three feet from all joints in vacuum-type sanitary sewers, storm sewers, stormwater force mains, or pipelines conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C., and at least six feet from all joints in gravity- or pressure-type sanitary sewers, wastewater force mains, or pipelines conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.

(3) Separation Between Water Mains and Sanitary or Storm Sewer Manholes.

(a) No water main shall pass through, or come into contact with, any part of a sanitary sewer manhole.

(b) Effective August 28, 2003, water mains shall not be constructed or altered to pass through, or come into contact with, any part of a storm sewer manhole or inlet structure. Where it is not technically feasible or economically sensible to comply with this requirement (i.e., where there is a conflict in the routing of a water main and a storm sewer and where alternative routing of the water main or the storm sewer is not technically feasible or is not economically sensible), the Department shall allow exceptions to this requirement (i.e., the Department shall allow construction of conflict manholes), but suppliers of water or persons proposing to construct conflict manholes must first obtain a specific permit from the Department in accordance with Part V of this chapter and must provide in the preliminary design report or drawings, specifications, and design data accompanying their permit application the following information:

1. Technical or economic justification for each conflict manhole.

2. A statement identifying the party responsible for maintaining each conflict manhole.

3. Assurance of compliance with the design and construction requirements in sub-subparagraphs a. through d. below.

a. Each water main passing through a conflict manhole shall have a flexible, watertight joint on each side of the manhole to accommodate differential settling between the main and the manhole.

b. Within each conflict manhole, the water main passing through the manhole shall be installed in a watertight casing pipe

having high impact strength (i.e., having an impact strength at least equal to that of 0.25-inch-thick ductile iron pipe).

c. Each conflict manhole shall have an access opening, and shall be sized, to allow for easy cleaning of the manhole.

d. Gratings shall be installed at all storm sewer inlets upstream of each conflict manhole to prevent large objects from entering the manhole.

(4) Separation Between Fire Hydrant Drains and Sanitary or Storm Sewers, Wastewater or Stormwater Force Mains, Reclaimed Water Pipelines, and On-Site Sewage Treatment and Disposal Systems. New or relocated fire hydrants with underground drains shall be located so that the drains are at least three feet from any existing or proposed storm sewer, stormwater force main, or pipeline conveying reclaimed water regulated under Part III of Chapter 62-610, F.A.C.; at least three feet, and preferably ten feet, from any existing or proposed vacuum-type sanitary sewer; at least six feet, and preferably ten feet, from any existing or proposed gravity- or pressure-type sanitary sewer, wastewater force main, or pipeline conveying reclaimed water not regulated under Part III of Chapter 62-610, F.A.C.; and at least ten feet from any existing or proposed "on-site sewage treatment and disposal system" as defined in Section 381.0065(2), F.S., and Rule 64E-6.002, F.A.C.

(5) Exceptions. Where it is not technically feasible or economically sensible to comply with the requirements in subsection (1) or (2) above, the Department shall allow exceptions to these requirements if suppliers of water or construction permit applicants provide technical or economic justification for each exception and provide alternative construction features that afford a similar level of reliability and public health protection. Acceptable alternative construction features include the following:

(a) Where an underground water main is being laid less than the required minimum horizontal distance from another pipeline and where an underground water main is crossing another pipeline and joints in the water main are being located less than the required minimum distance from joints in the other pipeline:

1. Use of pressure-rated pipe conforming to the American Water Works Association standards incorporated into Rule 62-555.330, F.A.C., for the other pipeline if it is a gravity- or vacuum-type pipeline;

2. Use of welded, fused, or otherwise restrained joints for either the water main or the other pipeline; or

3. Use of watertight casing pipe or concrete encasement at least four inches thick for either the water main or the other pipeline.

(b) Where an underground water main is being laid less than three feet horizontally from another pipeline and where an underground water main is crossing another pipeline and is being laid less than the required minimum vertical distance from the other pipeline:

1. Use of pipe, or casing pipe, having high impact strength (i.e., having an impact strength at least equal to that of 0.25-inch-thick ductile iron pipe) or concrete encasement at least four inches thick for the water main; and

2. Use of pipe, or casing pipe, having high impact strength (i.e., having an impact strength at least equal to that of 0.25-inch-thick ductile iron pipe) or concrete encasement at least four inches thick for the other pipeline if it is new and is conveying wastewater or reclaimed water.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.853(3), 403.861(12) FS. History–New 1-1-93, Formerly 17-555.314, Amended 8-28-03.

62-555.315 Public Water System Wells - Security; Number; Capacity; Under the Direct Influence of Surface Water; Control of Copper Pipe Corrosion and Black Water; and Disinfection and Bacteriological Surveys and Evaluations.

In addition to the rules set forth in Chapters 62-524 and 62-532, F.A.C., the requirements of this section apply to public water system wells.

(1) Well Security. Wellheads shall be enclosed by fences with lockable access gates, housed in lockable buildings or enclosures, or otherwise protected against tampering, vandalism, and sabotage.

(2) Number of Wells. A minimum of two wells shall be connected to each community water system that is using only ground water and that is serving, or is designed to serve, 350 or more persons or 150 or more service connections.

(3) Well Capacity. The total well capacity connected to a water system using only ground water shall equal at least the system's design maximum-day water demand (including design fire-flow demand if fire protection is being provided). In addition, if the water system is a community system serving, or designed to serve, 350 or more persons or 150 or more service connections, the total well capacity with the largest producing well out of operation shall equal at least the design average daily water demand, and preferably the design maximum-day water demand, for the system. If a community water system interconnects with another community water system to meet the requirements in subsection (2) above regarding number of wells, the total well capacity for the combined systems shall equal at least the total design maximum-day water demand for the combined systems and, with the largest

producing well out of operation for the combined systems, shall equal at least the design average daily water demand, and preferably the design maximum-day water demand, for the combined systems.

(4) Wells Under the Direct Influence of Surface Water. Ground water from some wells, especially shallow wells and radial horizontal collector wells, and ground water from springs or infiltration galleries may be under the direct influence of surface water. The Department shall determine whether ground water is under the direct influence of surface water by using the procedures described in subsection 62-550.517(2), F.A.C., and subparagraph 62-550.817(2)(a)1., F.A.C. Suppliers of water using ground water that is determined by the Department to be under the direct influence of surface water shall comply with applicable requirements under Rule 62-550.817, F.A.C.

(5) Control of Copper Pipe Corrosion and Black Water. Applicants for a construction permit to connect a new or altered well to a community water system, except those applicants who have submitted a complete application to the Department before August 28, 2003, shall include in the preliminary design report or design data accompanying their permit application the results of measurements for alkalinity, dissolved iron, dissolved oxygen, pH, total sulfide, and turbidity in a minimum of one sample of raw water from the new or altered well. These measurements may be performed by any authorized representative of the supplier of water or applicant; but field measurements for dissolved oxygen, pH, and 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 62-550.550(1), F.A.C., or in *Standard Methods for the Examination of Water and Wastewater* as adopted in Rule 62-555.335, F.A.C. If the result for total sulfide equals or exceeds 0.3 mg/L, the applicant shall do the following:

(a) Provide aeration or other appropriate treatment of the water from the new or altered well to remove total sulfide as necessary. Recommended types of aeration treatment for different water quality ranges are listed in the table below, which is incorporated herein as guidance and not as a requirement. Direct chlorination shall not be used to remove (i.e., oxidize) 0.3 mg/L or more of total sulfide unless the elemental sulfur formed during chlorination is removed.

POTENTIAL FOR IMPACTS WITHOUT TOTAL SULFIDE REMOVAL	WATER QUALITY RANGES	POTENTIAL WATER TREATMENT
Low	Total Sulfide < 0.3 mg/L Dissolved Iron < 0.1 mg/L1	Direct Chlorination2
Moderate	0.3 mg/L Total Sulfide 0.6 mg/L @ pH 7.2 **or** 0.3 mg/L Total Sulfide 0.6 mg/L @ pH > 7.2	Conventional Aeration3 (maximum removal efficiency 40-50%) **or** Conventional Aeration with pH Adjustment4,5 (maximum removal efficiency 40-50%)
Significant	0.6 mg/L < Total Sulfide 3.0 mg/L @ pH 7.2 **or** 0.6 mg/L < Total Sulfide 3.0 mg/L @ pH > 7.2	Forced Draft Aeration3 (maximum removal efficiency 90%) **or** Forced Draft Aeration with pH Adjustment4,5 (maximum removal efficiency 90%)
Very Significant	Total Sulfide > 3.0 mg/L	Packed Tower Aeration with pH Adjustment4,5 (maximum removal efficiency > 90%)

1. High iron content raises concern if chlorination alone is used and significant dissolved oxygen exists in the source water. Filtration may be required to remove particulate iron prior to water distribution.

2. Direct chlorination of sulfide in water in the pH range normally found in potable sources produces elemental sulfur and increased turbidity. Finished-water turbidity should not be more than two nephelometric turbidity units greater than raw-water turbidity.

3. Increased dissolved oxygen entrained during aeration may increase corrosivity.

4. Reduction of alkalinity during pH adjustment and high dissolved oxygen entrained during aeration may increase corrosivity. Corrosion control treatment such as pH adjustment, alkalinity recovery, or use of inhibitors may be required.

5. High alkalinity will make pH adjustment more costly, and use of other treatment may be in order. Treatment that preserves the

natural alkalinity of the source water may enhance the stability of finished water.

(b) Provide in the preliminary design report or design data accompanying the applicant's permit application a water quality and treatment evaluation affirmatively demonstrating that the secondary maximum contaminant levels for color and odor will not be exceeded in the water supplier's drinking water distribution system or in water customers' potable water systems.

(6) Disinfection of Wells and Bacteriological Surveys and Evaluations of Wells. Wells shall be disinfected to inactivate any microbiological contaminant that may have been introduced into the wells during construction, repair, or maintenance and to allow the true microbiological character of well water to be determined through a bacteriological survey.

(a) Before new or altered wells, wells out of operation for more than six months, wells in which new pumping equipment has been installed, and wells taken out of operation for maintenance that might have contaminated the well are placed into, or returned to, operation, they shall be disinfected in accordance with Sections 1. through 4. and Section 5.2 of American Water Works Association (AWWA) Standard C654 as incorporated into Rule 62-555.330, F.A.C. In Section 5.2 of the aforementioned AWWA standard, references to Section 5.1 shall be interpreted to mean paragraph 62-555.315(6)(b) or (c), F.A.C., as appropriate. This paragraph does not apply to, and disinfection is not required for, wells that officially have been determined to be under the direct influence of surface water per subsection 62-550.517(2), F.A.C., and subparagraph 62-550.817(2)(a)1., F.A.C., and that are pumping to treatment plants with filtration and disinfection facilities meeting all applicable requirements in Rule 62-550.817, F.A.C.

(b) Following disinfection of a new or altered well or a well that has been out of operation for more than six months, a bacteriological survey of the well shall be conducted as set forth in subparagraphs 1. through 3. below unless the well is already considered microbially contaminated or susceptible to microbial contamination per subparagraph 2. below or paragraph (f) below. The total residual chlorine measurements required under subparagraph 1. may be performed by any authorized representative of the supplier of water or person constructing or altering the well 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. The total coliform or *E. coli* analyses required under subparagraph 1. shall be performed by a laboratory of the Department of Health (DOH) or a laboratory certified by the DOH to perform bacteriological analyses of drinking water and shall be performed using an appropriate method referenced in subsection 62-550.550(1), F.A.C.

1. A total of at least 20 samples – each taken on a separate but consecutive workday and taken at least six hours apart from the other samples – shall be collected after first pumping the well to waste to remove all residual chlorine and then pumping the well to waste at a rate approximately equal to that of the permanent well pump for at least 15 minutes before each sample is collected, and the samples shall be analyzed for the presence of total residual chlorine, total coliform, and *E. coli*. Upon a showing by the supplier of water, or a determination by the Department, that historical records or other circumstances warrant it, the Department shall allow the required number of samples or the sample collection interval to be modified. Under no circumstances shall the Department allow fewer than ten samples to be collected, and under no circumstances shall the Department allow more than two samples to be collected per day. If the Department allows collection of two samples per day, the samples shall be collected at least six hours apart, and the well shall be pumped to waste for at least 15 minutes before each sample is collected.

2. If any sample shows the presence of free or combined chlorine, the sample shall be considered invalid. If any sample shows the presence of *E. coli*, the well shall be considered microbially contaminated unless the Department invalidates the sample or the supplier of water determines and eliminates the source of the *E. coli*, in which case the well shall be redisinfected in accordance with paragraph (a) above and resampled in accordance with subparagraph 1. above. If more than ten percent of the total number of samples collected show the presence of total coliform or if either of the last two samples collected shows the presence of total coliform, the well shall be redisinfected as necessary in accordance with paragraph (a) above and resampled in accordance with subparagraph 1. above or shall be considered susceptible to microbial contamination. If a well is considered microbially contaminated or susceptible to microbial contamination, the supplier of water shall provide treatment that reliably achieves at least four-log inactivation or removal of viruses in accordance with paragraph 62-555.320(12)(b), F.A.C. Additionally, the supplier of water 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.

3. Bacteriological test results shall be considered unacceptable if the tests were completed more than 60 days before the Department received the results.

(c) Following disinfection of a well in which new pumping equipment has been installed or a well taken out of operation for maintenance that might have contaminated the well, a bacteriological evaluation of the well shall be conducted as set forth in subparagraphs 1. through 3. below unless the well is already considered microbially contaminated or susceptible to microbial

contamination per subparagraph 62-555.315(6)(b)2., F.A.C., or paragraph (f) below. The total residual chlorine measurements required under subparagraph 1. may be performed by any authorized representative of the supplier of water 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. The total coliform analyses required under subparagraph 1. shall be performed by a laboratory of the Department of Health (DOH) or a laboratory certified by the DOH to perform bacteriological analyses of drinking water and shall be performed using an appropriate method referenced in subsection 62-550.550(1), F.A.C.

1. After pumping the well to waste for at least 15 minutes with zero chlorine residual, a total of at least two samples – each taken on a separate day and taken at least six hours apart from the other sample(s) – shall be collected, and the samples shall be analyzed for the presence of total residual chlorine and total coliform.

2. If any sample shows the presence of free or combined chlorine, the sample shall be considered invalid. If any sample shows the presence of total coliform, the well shall be redisinfected as necessary in accordance with paragraph (a) above and resampled in accordance with subparagraph 1. above until two consecutive samples show the absence of total coliform.

3. Bacteriological test results shall be considered unacceptable if the tests were completed more than 60 days before the Department received the results.

(d) Except as allowed under paragraph (e) below and except as allowed under any special construction permit condition established in accordance with paragraph 62-555.533(2)(f), F.A.C., no disinfected well shall be placed into, or returned to, operation until a bacteriological survey or evaluation has been completed if required by paragraph (b) or (c) above, results of the survey or evaluation have been submitted to the appropriate Department of Environmental Protection (DEP) District Office or Approved County Health Department (ACHD) if a survey or evaluation is required, and said DEP District Office or ACHD has approved the well for operation.

(e) When installing new well pumping equipment for which a public water system construction permit is not required per subsection 62-555.520(1), F.A.C., or when taking a well out of operation for maintenance that might contaminate the well, the well may be returned to operation without the Department's approval after completion of disinfection and after satisfactory completion of a bacteriological evaluation if such an evaluation is required under paragraph (c) above. If a bacteriological evaluation is required, the results of the evaluation shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department along with the next monthly operation report(s) required under paragraph 62-555.350(12)(b), F.A.C., or if no monthly operation report is required under paragraph 62-555.350(12)(b), F.A.C., within ten days after the end of the month during which the evaluation was completed.

(f) 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 *E. coli*, the relevant well(s) shall be considered microbially contaminated unless the Department invalidates the sample or the supplier of water determines and eliminates the source of the *E. coli*, after which the supplier of water shall disinfect and bacteriologically survey the well(s) in accordance with paragraphs (a) and (b) above. If a raw water sample is positive for total coliform bacteria and if the relevant well(s) are not already considered microbially contaminated or susceptible to microbial contamination, the supplier of water shall disinfect and bacteriologically survey the well(s) in accordance with paragraphs (a) and (b) above when notified in writing by the Department to do so.

Rulemaking Authority 373.309, 373.337, 403.861(9) FS. Law Implemented 373.309, 403.861(12), (17) FS. History–New 11-19-87, Formerly 17-22.615, Amended 1-18-89, 5-7-90, 1-1-93, Formerly 17-555.315, Amended 8-28-03.

62-555.320 Design and Construction of Public Water Systems.

Public water systems shall be designed and constructed to provide sufficient drinking water of a quality that will meet all applicable standards in Chapters 62-550, F.A.C., and requirements in this chapter. This section addresses the design and construction of all public water system components other than wells (but including well pumping equipment and appurtenances). Public water system wells are addressed in Chapters 62-524 and 62-532, F.A.C., and Rule 62-555.315, F.A.C.

(1) Sound Engineering Practice. New or altered public water system components shall be designed in accordance with sound engineering practice. Engineering references are listed in Rule 62-555.330, F.A.C.

(2) Innovative or Alternative Processes and Equipment. The Department encourages the development of new treatment processes and equipment. However, construction permits for innovative or alternative treatment processes or equipment (i.e.,

treatment processes or equipment not covered in the engineering references listed in Rule 62-555.330, F.A.C.) shall not be issued unless construction permit applicants include in the preliminary design report or design data accompanying their permit application supporting information demonstrating to the Department that the process or equipment is capable of consistently and reliably producing drinking water meeting applicable standards in Chapter 62-550, F.A.C., and requirements in this chapter. Supporting information shall include the following:

(a) The manufacturer's technical information;

(b) Data and reports from full-scale or pilot-plant installations that are operated under conditions comparable to those for which the process or equipment is being proposed and that are operated for a sufficient time to verify satisfactory performance of the process or equipment; and

(c) Operation and maintenance requirements and availability of technical support.

(3) Direct or Indirect Drinking Water Additives.

(a) Drinking water additives and treatment chemicals, including chemicals used to regenerate ion-exchange resins or generate disinfectants on site at treatment plants, shall conform to one of the following:

1. NSF International Standard 60 as adopted in Rule 62-555.335, F.A.C.;

2. The standards in *Water Chemicals Codex* as adopted in Rule 62-555.335, F.A.C.; or

3. The standards in *Food Chemicals Codex* as adopted in Rule 62-555.335, F.A.C.

(b) Newly installed or constructed public water system (PWS) components that come into contact with drinking water or drinking water treatment chemicals shall conform to the applicable standards, regulations, or requirements referenced in subparagraphs 1. through 3. below. Fire hydrants are not covered by this paragraph; and mechanical devices that were previously installed in a PWS and then are removed, repaired or refurbished, and reinstalled in the same PWS are not covered by this paragraph. In addition, this paragraph does not apply to PWS components that either come into contact with drinking water prior to its treatment by reverse osmosis or come into contact with drinking water treatment chemicals and that are installed or constructed under a construction permit for which the Department received a complete application before August 28, 2003.

1. Except for ion-exchange resins, precast or cast-in-place concrete structures, and cement mortar, which are addressed in subparagraphs 2. and 3. below, newly installed or constructed PWS components that come into contact with drinking water or drinking water treatment chemicals shall conform to one of the following:

a. NSF International Standard 61 as adopted in Rule 62-555.335, F.A.C.;

b. NSF International Standard 42, 44, 53, 55, 58, or 62 as adopted in Rule 62-555.335, F.A.C.;

c. Section 6 of NSF International Standard 14 as adopted in Rule 62-555.335, F.A.C.; or

d. The Food and Drug Administration's regulations for indirect food additives as contained in the April 1, 2002, revision of 21 CFR Parts 174 through 189, which are incorporated herein by reference.

2. Newly installed ion-exchange resins that come into contact with drinking water shall be part of an ion-exchange water softener that conforms to NSF International Standard 44 as adopted in Rule 62-555.335, F.A.C., or shall conform to one of the following:

a. NSF International Standard 61 as adopted in Rule 62-555.335, F.A.C.; or

b. The Food and Drug Administration's regulations for secondary direct food additives from ion-exchange resins as contained in the April 1, 2002, revision of 21 CFR 173.25, which is incorporated herein by reference.

3. Any newly installed or constructed precast or cast-in-place concrete structure or newly installed cement mortar that is not coated by a barrier material meeting the requirements of subparagraph 1 above and that comes into contact with drinking water or drinking water treatment chemicals shall meet the following requirements:

a. All cement, admixtures, form release agents, curing compounds, and sealers used in or on the concrete or mortar shall conform to NSF International Standard 61 as adopted in Rule 62-555.335, F.A.C.

b. Aggregate used in the concrete or mortar shall be clean (i.e., free of excess clay, silt, mica, organic matter, chemical salts, and coated grains) and shall be essentially free of those metals and radionuclides regulated under applicable primary drinking water standards.

c. Water used in the concrete or mortar shall meet applicable primary drinking water standards for inorganics, organics, and radionuclides.

(c) To determine or document whether drinking water additives or treatment chemicals or public water system components conform to the standards, regulations, or requirements listed in paragraph (a) or (b) above, suppliers of water or construction permit

applicants may conduct their own evaluations or may rely upon third-party or manufacturer certifications.

(d) The Department shall allow exceptions to the requirements in paragraph (b) above if suppliers of water or construction permit applicants provide the following:

1. Documentation that components conforming to the applicable standards, regulations, or requirements in paragraph (b) are not readily available; and

2. Assurance that the components being provided will not impart into drinking water or drinking water treatment chemicals any contaminant in an amount that could cause adverse human health effects.

(4) Flood Protection. Community water systems (CWSs) shall be designed and constructed so that structures, and electrical or mechanical equipment, used to treat, pump, or store drinking water, apply drinking water treatment chemicals, or handle drinking water treatment residuals are protected from physical damage by the 100-year flood and, in coastal areas subject to flooding by wave action, from physical damage by the 100-year wave action. Additionally, CWSs shall be designed and constructed so that the aforementioned structures and equipment remain fully operational and accessible during the 25-year flood and, in coastal areas subject to flooding by wave action, the 25-year wave action; a lesser flood or wave action may be used if suppliers of water or construction permit applicants provide justification for using a lesser flood or wave action, but in no case shall less than the ten-year flood or wave action be used.

(5) Security. Drinking water treatment or pumping facilities shall be enclosed by fences with lockable access gates, housed in lockable buildings or enclosures, or otherwise protected to prevent tampering, vandalism, and sabotage. Finished-drinking-water storage facilities shall be enclosed by fences with lockable access gates, shall have lockable access openings and lockable cages or enclosures obstructing access to ladders, or shall be otherwise protected to prevent tampering, vandalism, and sabotage.

(6) Capacity of Drinking Water Source and Treatment Facilities. The total capacity of all water source and treatment facilities connected to a water system shall at least equal the water system's design maximum-day water demand (including design fire-flow demand if fire protection is being provided). Applicants for a permit to construct or alter a drinking water treatment plant's source water or treatment facilities shall establish in the preliminary design report or drawings, specifications, and design data accompanying their permit application the design maximum-day capacity of the plant's source water facilities and the plant's treatment facilities and, if the plant is being designed to meet peak water demand or to supplement finished-drinking-water storage facilities in meeting peak water demand, the design peak capacity of the plant's source water facilities and the plant's treatment facilities. In turn, the Department shall specify in its construction permit for the plant's new or altered source water or treatment facilities the permitted maximum-day operating capacity of the plant and, if the plant is being designed to meet peak water demand or to supplement finished-water storage facilities in meeting peak water demand, the permitted peak operating capacity of the plant. The Department shall not specify a permitted plant operating capacity greater than the design capacity of the plant's treatment facilities as established by the applicant. However, the Department shall specify a permitted plant operating capacity less than the design capacity of the plant's treatment facilities if the actual design capacity of the plant's source water facilities, regardless of any water use permit limitations set by the water management district, is less than the design capacity of the plant's treatment facilities; in such a case:

(a) The construction permit for the plant's new or altered source water or treatment facilities shall indicate the design capacity of the plant's treatment facilities, shall state that permitted plant operating capacity is being limited because of the actual design capacity of the plant's source water facilities, and shall specify a permitted plant operating capacity equal to the actual design capacity of the plant's source water facilities.

(b) Each subsequent construction permit for new or altered source water facilities for the plant shall update the permitted plant operating capacity as appropriate.

(7) Raw Surface Water Pumping Stations. At each raw surface water pumping station that is constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, and that is connected to a community water system (CWS) serving, or designed to serve, 350 or more persons or 150 or more service connections, the supplier of water shall provide an installed or uninstalled standby pump of sufficient capacity to replace the largest pump. However, for CWSs that have multiple pumping stations subject to this requirement, the supplier of water may provide one uninstalled standby pump for each size of raw surface water pump installed in the water system instead of providing a standby pump on site at each raw surface water pumping station; and for CWSs that have only one pumping station subject to this requirement and that are designed to serve 10,000 or fewer persons, as many as three water systems located in the same county, or within 50 miles of one another, may enter into a mutual aid agreement to share one appropriately sized, uninstalled standby pump instead of providing a standby pump

on site at each water system's raw surface water pumping station.

(8) Well Pump Housing, Well Pump Discharge Piping, and Well Pump Appurtenances.

(a) Housing of Well Pumps.

1. Well pumps shall be housed in a weatherproof building, room, or pit unless the pumps are submersible or completely weatherproof, in which case the pumps need only be protected against tampering, vandalism, and sabotage in accordance with subsection (5) above.

2. Well pumphouses (i.e., buildings or rooms) for which the Department receives a complete construction permit application on or after August 28, 2003, shall have a concrete floor that is elevated above the adjacent finished ground surface and that is sloped to drain away from wells and well pumps. In addition, such well pumphouses shall have an access opening or removable roof or walls as necessary to provide full access for servicing wells and well pumps.

3. Well pump pits are allowed only where the finished ground surface is above the 100-year flood elevation and, in coastal areas subject to flooding by wave action, the 100-year wave-action elevation. All pump pit access openings shall have watertight covers or shall be flanged upward and provided with overlapping covers, and all pump pits shall be drained by gravity or by dual sump pumps with an alarm system that is activated in the event either sump pump fails. Sump pump alarm systems shall include an audio-visual alarm near the pump pit, and if the pump pit is not at a site staffed 24 hours per day and seven days per week, the alarm also shall be telemetered to a place staffed 24 hours per day and seven days per week, or shall trigger an automatic telephone dialing or paging device, to enable notification of an authorized representative of the supplier of water. Pump pits for which the Department receives a complete construction permit application on or after August 28, 2003, shall have an opening as necessary to provide full access for servicing wells and well pumps and shall have a concrete floor sloped to drain away from wells and well pumps.

(b) Well Pump Discharge Piping.

1. New or altered discharge piping shall be designed and constructed in accordance with Section 3.2.7.3 in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C., except that a check valve is not required in the discharge piping from a jet pump and except that the required smooth-nosed sampling tap shall be located as specified in subparagraph 2. below.

2. The discharge piping from each well pump shall include a smooth-nosed tap for sampling raw well water. All such sampling taps shall be located upstream of the check valve in the discharge piping if possible and upstream of all treatment facilities and chemical application points; shall be located at least 12 inches above the finished floor, pad, or ground surface below the tap; and shall be conveniently accessible and downward-opening. Raw well water sampling taps installed on or after August 28, 2003, except those installed under a construction permit for which the Department received a complete application before August 28, 2003, shall have no interior or exterior threads.

(c) Well Vents. Well pumps installed on or after August 28, 2003, except those installed under a construction permit for which the Department received a complete application before August 28, 2003, shall pump from a well that is vented to the atmosphere unless the well pump is a packer-type jet pump, the well casing also serves as well pump suction piping, the well is a flowing artesian well, there is no appreciable drawdown in the well, or the supplier of water provides justification for not venting the well to the atmosphere. All well vents shall terminate at least 12 inches above the 100-year flood elevation and, in coastal areas subject to flooding by wave action, at least 12 inches above the 100-year wave-action elevation. New or altered well vents shall be designed and constructed in accordance with Section 3.2.7.5 in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C.

(9) Odor Control at Drinking Water Treatment Plants. Drinking water treatment plants shall comply with the objectionable odor prohibition under subsection 62-296.320(2), F.A.C. ("Objectionable odor" is defined in Rule 62-210.200, F.A.C.) Applicants for a permit to construct or alter drinking water treatment facilities, except those applicants who have submitted a complete application to the Department before August 28, 2003, shall provide in the preliminary design report or drawings, specifications, and design data accompanying their permit application assurance of compliance with subsection 62-296.320(2), F.A.C. Assurance of compliance may be based upon water quality data; use of appropriate water treatment processes and chemicals; proper treatment of vented gases; use of mitigative measures such as buffer zones owned or under the control of the supplier of water; etc.

(10) Color Coding of Piping at Drinking Water Treatment Plants. All new or altered, aboveground piping at drinking water treatment plants shall be color coded and labeled as recommended in Section 2.14 of *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C. In addition, all underground water main pipe that is installed at drinking water treatment plants on or after August 28, 2003, and that is conveying finished drinking water shall be color coded as required under

subparagraph 62-555.320(21)(b)3., F.A.C. This subsection does not apply to drinking water treatment plant piping installed or altered under a construction permit for which the Department received a complete application before August 28, 2003.

(11) Alarms for Nitrate/Nitrite Removal Equipment. An alarm system shall be provided for any drinking water treatment plant equipment that is installed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, and that is necessary to achieve compliance with the primary drinking water standard for nitrate or nitrite. The alarm system shall be activated in the event of equipment failure and shall include an audio-visual alarm at the plant. If the plant is not staffed during all hours the plant is in operation, the alarm also shall be telemetered to a place staffed during all hours the plant is in operation, or shall trigger an automatic telephone dialing or paging device, to enable notification of an appropriately licensed water treatment plant operator.

(12) Disinfection of Drinking Water. All suppliers of water shall provide continuous disinfection of the drinking water they distribute. The necessary equipment and tanks shall be designed to comply with the applicable requirements in paragraphs (a) through (d) below and subsections 62-555.350(5) and (6), F.A.C. Applicants for a permit to construct or alter disinfection facilities at a drinking water treatment plant where the requirements in paragraph (a) or (b) below apply shall establish in the preliminary design report or drawings, specifications, and design data accompanying their permit application the following: the design level of *Cryptosporidium, Giardia lamblia,* or virus inactivation to be achieved by disinfection; if chemical disinfection is being used to achieve *Giardia lamblia* or virus inactivation, the design minimum residual disinfectant concentration (C) before or at the first customer and the corresponding design minimum disinfectant contact time (T); and if ultraviolet disinfection is being used to achieve *Cryptosporidium, Giardia lamblia,* or virus inactivation, the design minimum ultraviolet dose.

(a) Suppliers of water using surface water or ground water under the direct influence of surface water shall comply with applicable requirements under Rule 62-550.817, F.A.C.

(b) Suppliers of water using ground water that is not under the direct influence of surface water but that is from a well considered microbially contaminated or susceptible to microbial contamination per paragraph 62-555.315(6)(b) or (f), F.A.C., shall provide treatment that reliably achieves at least four-log (99.99 percent) inactivation or removal of viruses before or at the first customer at all flow rates. Additionally, by no later than December 31, 2005, suppliers of water using ground water that is not under the direct influence of surface water but that is exposed during treatment to the open atmosphere and possible microbial contamination shall provide treatment that reliably achieves at least four-log inactivation or removal of viruses before or at the first customer at all flow rates. For the purpose of this paragraph, 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 microbial contamination. Direct filtration and diatomaceous-earth filtration are considered to be achieving one-log (90 percent) removal of viruses when properly operated, and conventional filtration treatment and slow sand filtration are considered to be achieving two-log (99 percent) removal of viruses when properly operated. Chemical disinfection using free chlorine, chlorine dioxide, or ozone and chemical disinfection using chloramines with chlorine added prior to ammonia are considered to be achieving two-log, three-log (99.9 percent), or four-log inactivation of viruses when meeting the applicable CT value listed in Appendix E of the *Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources* as adopted in Rule 62-555.335, F.A.C.

(c) Disinfectant contact time shall be calculated or determined as described in the definition of “disinfectant contact time” under Rule 62-550.200, F.A.C.

(d) All suppliers of water shall maintain a minimum free chlorine residual of 0.2 milligram per liter, or a minimum combined chlorine residual of 0.6 milligram per liter or an equivalent chlorine dioxide residual, throughout their drinking water distribution system at all times.

(13) Chlorination Facilities for Disinfection of Drinking Water.

(a) Gas Chlorination Facilities.

1. New chlorinators shall be the vacuum-operated, solution-feed type.

2. Chlorinator capacity shall be such that any applicable minimum CT value and the minimum residual disinfectant level specified in paragraph 62-555.320(12)(d), F.A.C., and subsection 62-555.350(6), F.A.C., can be maintained when maximum chlorine demand coincides with maximum flow rate at the point of chlorine application.

3. At each drinking water treatment plant that is using gas chlorination facilities to achieve *Giardia lamblia* or virus inactivation in accordance with paragraph 62-555.320(12)(a) or (b), F.A.C.; at each treatment plant that is using gas chlorination facilities for disinfection and that is connected to a community water system (CWS) having an actual or design average daily chlorine

consumption equaling or exceeding ten pounds per day; and at each treatment plant that has gas chlorine disinfection facilities constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, and that is connected to a CWS serving, or designed to serve, 350 or more persons or 150 or more service connections, the supplier of water shall provide installed or uninstalled standby gas chlorination equipment (i.e., a standby chlorinator, including a standby vacuum regulator and a standby eductor, which is also referred to as an injector or ejector; a standby booster pump where booster pumps are used; and a standby evaporator where evaporators are used) of sufficient capacity to replace the largest equipment. However, for water systems that have multiple interconnected plants subject to this requirement, the supplier of water may provide one uninstalled standby for each type and size of gas chlorination equipment installed in the water system instead of providing standby gas chlorination equipment on site at each plant; and for water systems that have only one plant subject to this requirement and that are designed to serve 10,000 or fewer persons, as many as three water systems located in the same county, or within 50 miles of one another, may enter into a mutual aid agreement to share appropriately sized, uninstalled standby gas chlorination equipment instead of providing standby gas chlorination equipment on site at each water system's plant.

4. At each drinking water treatment plant that is using gas chlorination facilities to achieve *Giardia lamblia* or virus inactivation in accordance with paragraph 62-555.320(12)(a) or (b), F.A.C.; at each treatment plant that is using gas chlorination facilities for disinfection and that is connected to a community water system (CWS) having an actual or design average daily chlorine consumption equaling or exceeding ten pounds per day; and at each treatment plant that has gas chlorine disinfection facilities constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, and that is connected to a CWS serving, or designed to serve, 350 or more persons or 150 or more service connections, the supplier of water shall provide devices for automatic switch-over of chlorine cylinders or containers.

5. Chlorine shall be fed into drinking water proportional to flow. Where the flow rate is reasonably constant, this may be accomplished by electrically interconnecting gas chlorination equipment with well or service pumps or by otherwise designing gas chlorination equipment to operate only when well or service pumps operate. Automatic flow proportioning control of chlorinators shall be provided where the flow rate fluctuates significantly. Furthermore, automatic residual control of chlorinators shall be provided where the chlorine demand fluctuates significantly, and automatic compound-loop control of chlorinators shall be provided where both the flow rate and the chlorine demand fluctuate significantly.

6. Scales shall be provided to accurately weigh chlorine cylinders or containers in use.

7. Chlorine shall be rapidly and thoroughly mixed with all drinking water being treated.

8. Chlorine storage and feed facilities shall be located in a room or area separate from other operating areas. If chlorine storage or feed facilities are enclosed in a room, the room shall be located at ground level and shall be provided with floor-level ventilation. New or altered chlorine rooms shall be designed and constructed in accordance with Section 5.4.1 in R*ecommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C. If chlorine storage or feed facilities are not enclosed in a room, they shall be shielded from direct sunlight and rain and shall be located at ground level in an area that either has adequate natural ventilation or is equipped with a mechanical ventilation system. For the purpose of this subparagraph, an area is considered to have adequate natural ventilation if walls are not completely obstructing more than one side of the perimeter of the area. New or altered mechanical ventilation systems for chlorine storage or feed areas shall meet applicable requirements in Section 5.4.1.c of *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C.

9. At each drinking water treatment plant that is using gas chlorination facilities to achieve *Giardia lamblia* or virus inactivation in accordance with paragraph 62-555.320(12)(a) or (b), F.A.C., and at each treatment plant that is using gas chlorination facilities for disinfection and that is connected to a community water system serving, or designed to serve, 350 or more persons or 150 or more service connections, the supplier of water shall provide an audio-visual alarm system that is activated by high- and low-vacuum switches, a continuous chlorine residual analyzer, or a continuous oxidation-reduction potential meter to indicate loss of chlorination capability or chlorine residual. If the plant is not staffed during all hours the plant is in operation, the alarm also shall be telemetered to a place staffed during all hours the plant is in operation, or shall trigger an automatic telephone dialing or paging device, to enable notification of an appropriately licensed water treatment plant operator.

10. Suppliers of water shall provide the following safety or protective equipment at drinking water treatment plants with gas chlorination facilities.

a. At each treatment plant with gas chlorination facilities, the supplier of water shall provide in a convenient location, but not inside any room where chlorine is stored or handled, a self-contained breathing apparatus (SCBA) meeting the requirements of the National Institute for Occupational Safety and Health. However, for water systems that have multiple interconnected plants

withdrawing chlorine from only 150-pound or smaller cylinders, the supplier of water may provide an SCBA in each vehicle used by plant operators instead of providing an SCBA at each plant withdrawing chlorine from only 150-pound or smaller cylinders.

b. At each treatment plant with gas chlorination facilities, the supplier of water shall provide appropriate protective equipment in accordance with Table 15.5 in *Water Treatment Plant Design* as incorporated into Rule 62-555.330, F.A.C., except that the supplier of water shall provide a self-contained breathing apparatus in accordance with sub-subparagraph a. above instead of providing a gas mask in accordance with this sub-subparagraph and Table 15.5.

c. At each treatment plant withdrawing chlorine from ton containers or tank cars or trucks, the supplier of water shall provide continuous chlorine leak detection equipment that is connected to an alarm system. The alarm system shall include an audio-visual alarm at the plant, and if the plant is not staffed 24 hours per day and seven days per week, the alarm also shall be telemetered to a place staffed 24 hours per day and seven days per week, or shall trigger an automatic telephone dialing or paging device, to enable notification of an authorized representative of the supplier of water.

d. At each treatment plant withdrawing chlorine from ton containers or tank cars or trucks, the supplier of water shall provide an emergency chlorine leak repair kit meeting the requirements of the Chlorine Institute.

(b) Hypochlorination Facilities.

1. New hypochlorinators shall be positive displacement metering pumps or accurate vacuum-operated dosers.

2. Hypochlorinator capacity shall be such that any applicable minimum CT value and the minimum residual disinfectant level specified in paragraph 62-555.320(12)(d), F.A.C., and subsection 62-555.350(6), F.A.C., can be maintained when maximum chlorine demand coincides with maximum flow rate at the point of hypochlorite application.

3. At each drinking water treatment plant that is using hypochlorination facilities to achieve Giardia lamblia or virus inactivation in accordance with paragraph 62-555.320(12)(a) or (b), F.A.C.; at each treatment plant that is using hypochlorination facilities for disinfection and that is connected to a community water system (CWS) having an actual or design average daily chlorine consumption equaling or exceeding ten pounds per day; and at each treatment plant that has hypochlorite disinfection facilities constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, and that is connected to a CWS serving, or designed to serve, 350 or more persons or 150 or more service connections, the supplier of water shall provide installed or uninstalled standby hypochlorination equipment (i.e., a standby electrolytic generator and brine pump where sodium hypochlorite is generated on site; a standby metering pump where metering pumps are used; a standby doser, including a standby vacuum regulator and a standby eductor, which is also referred to as an injector or ejector, where vacuum-operated dosers are used; and a standby booster pump where booster pumps are used) of sufficient capacity to replace the largest equipment. However, for water systems that have multiple interconnected plants subject to this requirement, the supplier of water may provide one uninstalled standby for each type and size of hypochlorination equipment installed in the water system instead of providing standby hypochlorination equipment on site at each plant; and for water systems that have only one plant subject to this requirement and that are designed to serve 10,000 or fewer persons, as many as three water systems located in the same county, or within 50 miles of one another, may enter into a mutual aid agreement to share appropriately sized, uninstalled standby hypochlorination equipment instead of providing standby hypochlorination equipment on site at each water system’s plant.

4. Hypochlorite shall be fed into drinking water proportional to flow. Where the flow rate is reasonably constant, this may be accomplished by electrically interconnecting hypochlorination equipment with well or service pumps or by otherwise designing hypochlorination equipment to operate only when well or service pumps operate. Automatic flow proportioning control of hypochlorinators shall be provided where the flow rate fluctuates significantly. Furthermore, automatic residual control of hypochlorinators shall be provided where the chlorine demand fluctuates significantly, and automatic compound-loop control of hypochlorinators shall be provided where both the flow and the chlorine demand fluctuate significantly.

5. Hypochlorite metering pumps shall have antisiphon protection. For new or altered hypochlorination facilities, the antisiphon protection for metering pumps shall be in accordance with Section 5.1.5 in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C.

6. For sodium hypochlorite facilities that are constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, and that include a metering pump:

a. The pump shall be located as close as possible to, and lower than, the hypochlorite source with the pump suction line sloping upward from the pump to the hypochlorite source; or

b. The hypochlorite facilities shall be otherwise designed to prevent gas binding of the pump.

7. For hypochlorination facilities constructed or altered under a construction permit for which the Department receives a

complete application on or after August 28, 2003:

a. Hypochlorinator suction lines shall be located with the intake above the bottom of the hypochlorite container or shall be equipped with a strainer; or

b. The hypochlorination facilities shall be otherwise designed to avoid feeding sediment into the drinking water.

8. Sodium hypochlorite shall not be stored or handled together with any acid or any ammonia or organic compound, and calcium hypochlorite shall not be stored or handled together with any acid or any combustible, organic, or oxidizable material. The storage of sodium hypochlorite shall be carefully managed to limit degradation of the hypochlorite and to limit formation of chlorate; alternative approaches for managing sodium hypochlorite storage are discussed on page 243 in *Water Treatment Plant Design* as incorporated into Rule 62-555.330, F.A.C. Tanks for bulk storage of sodium hypochlorite shall have a liquid-level indicator, a vent, and an overflow discharging to a basin capable of containing accidental spills or overflows without uncontrolled discharge. Where bulk storage of sodium hypochlorite is provided, a day tank also shall be provided unless there is an alternative means for accurately measuring the daily amount of hypochlorite fed and there are alternative safeguards (e.g., continuous chlorine residual monitoring; audio-visual alarms activated by high chlorine residual levels; and staffing at the water treatment plant, or at a monitoring and control center for the plant, during all hours the plant is in operation) that maintain a similar level of protection against overfeeding of hypochlorite. Sodium hypochlorite bulk storage tanks that are installed on or after August 28, 2003, and that cannot be completely drained to a day tank shall be equipped with a valved drain to allow for complete drainage and periodic cleaning of the bulk storage tank; however, this requirement does not apply to bulk storage tanks installed under a construction permit for which the Department received a complete application before August 28, 2003.

9. Hypochlorite solution or day tanks shall have a lid or cover, shall have a valved drain, and shall be scale-mounted or have a means for measuring the liquid level in the tank. For new or altered hypochlorination facilities, solution or day tanks shall be designed and constructed in accordance with Sections 5.1.10 and 5.1.11 in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C.

10. Hypochlorite shall be rapidly and thoroughly mixed with all drinking water being treated.

11. Housing for new or altered hypochlorite storage or feed facilities shall be designed and constructed in accordance with Section 5.1.14 in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C. Waste hydrogen from on-site sodium hypochlorite generation systems constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, shall be vented directly to the outside atmosphere using a dilution air blower as necessary to ensure the concentration of hydrogen always will be below the explosion level.

12. At each drinking water treatment plant that is using hypochlorination facilities to achieve *Giardia lamblia* or virus inactivation in accordance with paragraph 62-555.320(12)(a) or (b), F.A.C., and at each treatment plant that has hypochlorite disinfection facilities constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, and that is connected to a CWS serving, or designed to serve, 350 or more persons or 150 or more service connections, the supplier of water shall provide an audio-visual alarm system that is activated by high- and low-pressure switches, a low-flow switch or flow meter, high- and low-vacuum switches, a continuous chlorine residual analyzer, or a continuous oxidation-reduction potential meter to indicate loss of hypochlorination capability or chlorine residual. If the plant is not staffed during all hours the plant is in operation, the alarm also shall be telemetered to a place staffed during all hours the plant is in operation, or shall trigger an automatic telephone dialing or paging device, to enable notification of an appropriately licensed water treatment plant operator.

13. At each drinking water treatment plant with hypochlorination facilities, the supplier of water shall provide appropriate safety or protective equipment in accordance with Table 15.5 in *Water Treatment Plant Design* as incorporated into Rule 62-555.330, F.A.C.

(14) Standby Power.

(a) By no later than December 31, 2005, each community water system (CWS) serving, or designed to serve, 350 or more persons or 150 or more service connections shall provide standby power for operation of that portion of the system's water source, treatment, and pumping facilities necessary to deliver drinking water meeting all applicable primary or secondary standards at a rate at least equal to the average daily water demand for the system. If a CWS interconnects with another CWS to meet this requirement, the portion of the combined systems' components provided with standby power shall be sufficient to deliver water at a rate at least equal to the average daily water demand for the combined systems.

(b) Where standby power is required under paragraph (a) above, it shall be provided through:

1. Connection to at least two independent power feeds from separate substations; or

2. One or more auxiliary power sources (i.e., generators or engines).

(c) Where standby power is required under paragraph (a) above and is provided through connection to independent power feeds from separate substations, the power feeds shall not be located in the same conduit or supported from the same utility pole and, if overhead power feeds are used, shall not cross or be located in an area where a single plausible occurrence (e.g., a fallen tree) could disrupt both power feeds.

(d) Where standby power is required under paragraph (a) above and is provided through an auxiliary power source, an in-place auxiliary power source is preferred. A portable auxiliary power source may be provided only if all of the following conditions are met:

1. A system to automatically start up the auxiliary power source and transfer electrical loads is not required under paragraph (e) below.

2. The supplier of water demonstrates that the water system has first priority for use of the portable auxiliary power source.

3. The supplier of water demonstrates that the portable auxiliary power source will at all times be in reasonably close proximity to (i.e., within 25 miles of) the water system components for which standby power is required.

(e) Where standby power is required under paragraph (a) above and the time delay required to manually transfer electrical loads from one power source to another could result in failure to maintain the minimum water distribution system pressure required under subsection 62-555.350(7), F.A.C., the supplier of water shall provide a system to automatically start up the auxiliary power source if an auxiliary power source is provided and to automatically transfer electrical loads.

(f) At each site where standby power is required under paragraph (a) above, the supplier of water shall provide by December 31, 2005, an audio-visual alarm system that is activated in the event any power source fails. If the site is not staffed during all hours the standby-powered water system components are in operation, the alarm also shall be telemetered to a place staffed during all hours the standby-powered water system components are in operation, or shall trigger an automatic telephone dialing or paging device, to enable notification of an authorized representative of the supplier of water.

(15) High-Service or Booster Pumps. For purposes of this subsection, well pump installations shall be considered high-service pumping stations if the well pumps serve as high-service pumps.

(a) Unless elevated finished-drinking-water storage is provided, the total capacity of all high-service pumping stations connected to a water system, or the capacity of a booster pumping station, shall be sufficient to:

1. Meet at least the water system's, or the booster station service area's, peak-hour water demand (and if fire protection is being provided, meet at least the water system's, or the booster station service area's, design fire-flow rate plus a background water demand equivalent to the maximum-day demand other than fire-flow demand); and

2. Maintain a minimum gauge pressure of 20 pounds per square inch throughout the water system's, or the booster station service area's, distribution system up to each customer's point of connection to the distribution system.

(b) Where elevated finished-drinking-water storage is provided, the total capacity of all high-service pumping stations connected to a water system, or the capacity of a booster pumping station, shall be sufficient to at least meet the water system's, or the booster station service area's, maximum-day water demand (including design fire-flow demand if fire protection is being provided) and to maintain distribution system pressure as specified in subparagraph 62-555.320(15)(a)2., F.A.C. In addition, the total capacity of the high-service pumping stations, or the capacity of the booster pumping station, combined with the useful elevated finished-water storage capacity shall be sufficient to meet the water system's, or the booster station service area's, peak-hour water demand for at least four consecutive hours (and if fire protection is being provided, shall be sufficient to meet the water system's, or the booster station service area's, design fire-flow rate plus a background water demand equivalent to the maximum-day demand other than fire-flow demand for the design fire-flow duration).

(c) At each high-service or booster pumping station that is constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, and that is connected to a community water system (CWS) serving, or designed to serve, 350 or more persons or 150 or more service connections, the supplier of water shall provide an installed or uninstalled standby pump of sufficient capacity to replace the largest pump. However, for CWSs that have multiple interconnected pumping stations subject to this requirement, the supplier of water may provide one uninstalled standby pump for each size of high-service or booster pump installed in the water system instead of providing a standby pump on site at each high-service or booster pumping station; and for water systems that have only one pumping station subject to this requirement and that are designed to serve 10,000 or fewer persons, as many as three water systems located in the same county, or within 50 miles of one

another, may enter into a mutual aid agreement to share one appropriately sized, uninstalled standby pump instead of providing a standby pump on site at each water system's high-service or booster pumping station.

(16) Finished-Drinking-Water Meters. All water treatment plants that are connected to a community water system and water treatment plants that are connected to a non-community water system and that are constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, shall be equipped with a totalizing flow meter to measure the net quantity of finished drinking water, excluding any filter backwash water, produced at the plant each day. All other drinking water treatment plants shall be equipped with at least elapsed time meters that can be used in conjunction with calibrated pumps to measure the net quantity of finished drinking water produced at the plant each day.

(17) Finished-Drinking-Water Sampling Taps. A conveniently accessible sampling tap shall be provided at each entry point to a drinking water distribution system (i.e., at each point where drinking water source and treatment facilities discharge to a drinking water distribution system) so that samples of finished drinking water may be taken in accordance with subsection 62-550.500(5), F.A.C. Each such sampling tap shall be located downstream from all water treatment processes at a point where all treatment chemicals have been thoroughly mixed with the water and shall be located upstream from all water customers. If a water system draws water from more than one source and combines the sources before distribution, a single finished-water sampling tap may be provided downstream from where all of the sources are combined at a point where all of the sources have been thoroughly mixed together.

(18) Pump Suction Piping. All pump suction piping that is conveying raw, partially treated, or finished drinking water shall be protected against infiltration. Pump suction piping that is conveying raw, partially treated, or finished drinking water and that is constructed or altered under a construction permit for which the Department receives a complete application on or after August 28, 2003, must be located aboveground or, if located underground, must be constantly under positive gauge pressure.

(19) Finished-Drinking-Water Storage Capacity. This subsection addresses finished-water storage capacity necessary for operational equalization to meet peak water demand. (If fire protection is being provided, additional finished-water storage capacity shall be provided as necessary to meet the design fire-flow rate for the design fire-flow duration.) The finished-water storage capacity necessary to meet the peak water demand for a consecutive system may be provided by the consecutive system or by a wholesale system delivering water to the consecutive system.

(a) Except as noted in paragraph (b) below, the total useful finished-water storage capacity (excluding any storage capacity for fire protection) connected to a water system shall at least equal 25 percent of the system's maximum-day water demand, excluding any design fire-flow demand.

(b) A total useful finished-water storage capacity less than that specified in paragraph (a) above is acceptable if the supplier of water or construction permit applicant makes one of the following demonstrations:

1. A demonstration consistent with Section 10.6.3 in *Water Distribution Systems Handbook* as incorporated into Rule 62-555.330, F.A.C., showing that the water system's total useful finished-water storage capacity (excluding any storage capacity for fire protection) is sufficient for operational equalization.

2. A demonstration showing that, in conjunction with the capacity of the water system's source, treatment, and finished-water pumping facilities, the water system's total useful finished-water storage capacity (excluding any storage capacity for fire protection) is sufficient to meet the water system's peak-hour water demand for at least four consecutive hours. For small water systems with hydropneumatic tanks that are installed under a construction permit for which the Department receives a complete application on or after August 28, 2003, the supplier of water or construction permit applicant also shall demonstrate that, in conjunction with the capacity of the water system's source, treatment, and finished-water pumping facilities, the water system's total useful finished-water storage capacity (i.e., the water system's total effective hydropneumatic tank volume) is sufficient to meet the water system's peak instantaneous water demand for at least 20 consecutive minutes.

(20) Hydropneumatic Tanks. New hydropneumatic tanks, including bladder- or diaphragm-type tanks, shall be designed and constructed in accordance with Section 7.2 in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C., except that:

(a) The tanks need not be housed.

(b) Tanks installed on or after August 28, 2003, except those installed under a construction permit for which the Department received a complete application before August 28, 2003, shall have an automatic air or pressure relief valve.

(c) Bladder- or diaphragm-type tanks need not have an access manhole, water sight glass, or means for adding air other than a recharging valve.

(21) Drinking Water Piping and Appurtenances.

(a) All new or altered mains, including treatment plant process piping, and appurtenances conveying raw or partially treated drinking water shall be designed and constructed in accordance with Sections 8.0, 8.4, 8.5, and 8.7 in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C., except that:

1. Asbestos-cement water mains shall be pressure and leakage tested in accordance with American Water Works Association (AWWA) Standard C603 as incorporated into Rule 62-555.330, F.A.C., and polyvinyl chloride water mains shall be pressure and leakage tested in accordance with AWWA Standard C605 as incorporated into Rule 62-555.330, F.A.C., while all other types of water mains shall be pressure and leakage tested in accordance with AWWA Standard C600 as incorporated into Rule 62-555.330, F.A.C.

2. Water mains and appurtenances that normally convey surface water, or ground water under the direct influence of surface water, and that are located upstream of all filtration and disinfection treatment facilities need not be disinfected.

3. All water mains and appurtenances other than those described in subparagraph 2. above shall be disinfected and bacteriologically evaluated in accordance with Rule 62-555.340, F.A.C.

(b) All new or altered piping, including treatment plant process piping, and appurtenances conveying finished drinking water shall be designed and constructed in accordance with Sections 8.0 through 8.5 and 8.7 through 8.11 in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C., except that:

1. Asbestos-cement water mains shall be pressure and leakage tested in accordance with American Water Works Association (AWWA) Standard C603 as incorporated into Rule 62-555.330, F.A.C., and polyvinyl chloride water mains shall be pressure and leakage tested in accordance with AWWA Standard C605 as incorporated into Rule 62-555.330, F.A.C., while all other types of water mains shall be pressure and leakage tested in accordance with AWWA Standard C600 as incorporated into Rule 62-555.330, F.A.C.

2. All water mains and appurtenances shall be disinfected and bacteriologically evaluated in accordance with Rule 62-555.340, F.A.C.

3. All water main pipe, including fittings, installed on or after August 28, 2003, except pipe installed under a construction permit for which the Department received a complete application before August 28, 2003, shall be color coded or marked using blue as a predominant color to differentiate drinking water from reclaimed or other water. Underground plastic pipe shall be solid-wall blue pipe, shall have a co-extruded blue external skin, or shall be white or black pipe with blue stripes incorporated into, or applied to, the pipe wall; and underground metal or concrete pipe shall have blue stripes applied to the pipe wall. Pipe striped during manufacturing of the pipe shall have continuous stripes that run parallel to the axis of the pipe, that are located at no greater than 90-degree intervals around the pipe, and that will remain intact during and after installation of the pipe. If tape or paint is used to stripe pipe during installation of the pipe, the tape or paint shall be applied in a continuous line that runs parallel to the axis of the pipe and that is located along the top of the pipe; for pipes with an internal diameter of 24 inches or greater, tape or paint shall be applied in continuous lines along each side of the pipe as well as along the top of the pipe. Aboveground pipe at drinking water treatment plants shall be color coded and labeled in accordance with subsection 62-555.320(10), F.A.C., and all other aboveground pipe shall be painted blue or shall be color coded or marked like underground pipe.

(c) The Department shall allow the use of pipe and appurtenances that do not conform to applicable American Water Works Association (AWWA) standards as incorporated into Rule 62-555.330, F.A.C., only if suppliers of water or construction permit applicants provide documentation showing that the alternate pipe and appurtenances provide strength, durability, reliability, and public health protection at least equal to that provided by pipe and appurtenances that conform to applicable AWWA standards.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.861(7) FS. History–New 11-19-87, Formerly 17-22.620, Amended 1-18-89, 5-7-90, 1-1-93, 3-8-94, Formerly 17-555.320, Amended 8-28-03.

62-555.322 Prohibition on Use of Lead Pipe, Solder, and Flux.

(1) As of January 18, 1989, any pipe, pipe fitting, solder, and flux that is used in the construction, alteration, or repair of any public water system shall be lead free as defined in subsection (2) below, and as of August 28, 2003, any plumbing fitting or fixture that is intended to dispense water for human consumption and that is used in the construction, alteration, or repair of any public water system shall be lead free as defined in subsection (2) below. This subsection shall not apply to leaded joints necessary for the repair of cast iron pipes.

(2) The phrase “lead free” shall mean:

(a) When used with respect to solder and flux, solder and flux containing not more than 0.2 percent lead;

(b) When used with respect to pipe and pipe fittings, pipe and pipe fittings containing not more than 8.0 percent lead; and

(c) When used with respect to plumbing fittings and fixtures intended to dispense water for human consumption, plumbing fittings and fixtures in compliance with Section 9 of NSF International Standard 61 as adopted in Rule 62-555.335, F.A.C.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.853(1) FS. History–New 1-18-89, Formerly 17-555.322, Amended 8-28-03.

62-555.325 Fluoridation.

(1) Fluoride levels in drinking water shall not exceed the primary maximum contaminant level under Rule 62-550.310, F.A.C., or the secondary maximum contaminant level under Rule 62-550.320, F.A.C. The recommended optimal fluoride concentration for fluoridated community water systems is 0.8 milligram per liter. The recommended fluoride control range for fluoridated community water systems is 0.7 to 1.3 milligrams per liter.

(2) Equipment and Installation.

(a) Fluoride chemicals shall be fed into drinking water proportional to flow. Where the flow rate is reasonably constant, this may be accomplished by electrically interconnecting fluoride metering pumps with well or service pumps or by otherwise designing fluoride metering pumps to operate only when well or service pumps operate. Automatic flow proportioning control of fluoride metering pumps shall be provided where the flow rate varies significantly (i.e., where the flow rate varies by more than 20 percent).

(b) Fluoride metering pumps shall have antisiphon protection.

(c) Tanks and containers holding fluorosilicic acid shall be vented only to the outside atmosphere.

(d) Scales, loss-of-weight recorders, liquid-level indicators, or flow meters, as appropriate, shall be provided to accurately measure quantities of fluoride chemicals used.

(e) At each drinking water treatment plant with fluoridation facilities, the supplier of water shall provide appropriate safety or protective equipment in accordance with Table 15.5 in *Water Treatment Plant Design* as incorporated into Rule 62-555.330, F.A.C.

(f) Suppliers of water who fluoridate their water shall provide analytical equipment that uses the colorimetric or ion electrode method to measure the fluoride concentration in the treated water.

(g) New or altered fluoridation facilities shall be designed and constructed in accordance with Section 4.7 and Part 5 in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C., and in accordance with *Water Fluoridation: A Manual for Engineers and Technicians* as incorporated into Rule 62-555.330, F.A.C.

(3) Quality Assurance and Reporting.

(a) For each drinking water treatment plant fluoridating water, the supplier of water shall measure and record daily the quantity of fluoride chemical used, calculate and record daily the fluoride dose, and measure and record daily the fluoride concentration in the finished drinking water at the entry to the drinking water distribution system. The daily measurements of fluoride concentration in finished water may be performed by any authorized representative of the supplier of water but shall be performed using an appropriate method referenced in subsection 62-550.550(1), F.A.C. If the daily measurements of fluoride concentration in finished water are not performed by a laboratory certified by the Department of Health to perform fluoride analyses of drinking water, the supplier of water shall collect check samples and have them analyzed in accordance with paragraph (b) below.

(b) For each public water system (PWS) fluoridating water and not using a certified laboratory to perform all daily measurements of fluoride concentration in the finished drinking water from each of the PWS's treatment plants, the supplier of water shall collect two check samples per month from the PWS's distribution system. Each check sample shall be "split" into two samples, one which shall be analyzed by an authorized representative of the supplier of water and one which shall be analyzed by a laboratory of the Department of Health or a laboratory certified by the Department of Health to perform fluoride analyses of drinking water.

(c) For each drinking water treatment plant fluoridating water, the supplier of water shall report the information required under paragraph (a) above and, if applicable, the results of the analyses required under paragraph (b) above to the Department of Health's Bureau of Dental Health within ten days after each month of operation using Form 62-555.900(5), Monthly Operation Report for PWSs Fluoridating Water, hereby adopted and incorporated by reference, effective August 28, 2003. 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.

(4) The Department of Health's Bureau of Dental Health is authorized to conduct inspections of fluoridation facilities at public water systems.

Rulemaking Authority 403.853(3), 403.861(6), (9), 403.862(1) FS. Law Implemented 403.852(12), (13), 403.853(3), (5) FS. History–New 11-19-87, Formerly 17-22.625, Amended 1-18-89, 1-3-91, Formerly 17-555.325, Amended 8-28-03.

62-555.330 Engineering References for Public Water Systems.

In addition to the requirements of this chapter, the requirements and standards contained in the following technical publications are hereby incorporated by reference and shall be applied in determining whether permits to construct or alter public water system components, excluding wells (but including well pumping equipment and appurtenances), shall be issued or denied. Each of these publications is available from the publisher or source listed for the publication, and each of these publications is available for review at the Department of Environmental Protection, Source and Drinking Water Program, MS 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, at the Department of Environmental Protection district offices, and at the Approved County Health Departments. The specific requirements contained in this chapter supersede the requirements and standards contained in these publications. Where there are conflicts between these publications, suppliers of water and construction permit applicants shall comply with any one of the publications. Where there are multiple options or alternatives in these publications, suppliers of water and construction permit applicants shall comply with any one of the options or alternatives. The Department shall allow exceptions to the requirements and standards in these publications if suppliers of water or construction permit applicants provide justification for each exception and provide alternative design and construction features that achieve the same purpose and that afford a similar level of strength, durability, reliability, and public health protection.

(1) *Water Quality and Treatment: A Handbook of Community Water Supplies*, Fifth Edition, 1999, American Water Works Association. Published by McGraw-Hill, Post Office Box 182604, Columbus, OH 43218-2605.

(2) *Water Treatment Plant Design*, Third Edition, 1997, American Society of Civil Engineers and American Water Works Association. Published by McGraw-Hill, Post Office Box 182604, Columbus, OH 43218-2605.

(3) *Recommended Standards for Water Works*, 1997 Edition, Great Lakes – Upper Mississippi River Board of State Public Health and Environmental Managers. Published by Health Research, Inc., Health Education Services Division, P. O. Box 7126, Albany, NY 12224.

(4) Standards of the American Water Works Association (AWWA) in effect on January 1, 2003. Published by the AWWA, 6666 W. Quincy Avenue, Denver, CO 80235.

(5) *Water Fluoridation: A Manual for Engineers and Technicians*, September 1986, Thomas G. Reeves, P.E. Published by the U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, Dental Disease Prevention Activity, Atlanta, GA 30333.

(6) *Recommended Practice for Backflow Prevention and Cross-Connection Control: AWWA Manual M14*, Third Edition, 2004, American Water Works Association (AWWA). Published by the AWWA, 6666 W. Quincy Avenue, Denver, CO 80235, www.awwa.org.

(7) *Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse*, December 2000, National Water Research Institute (NWRI) and American Water Works Association Research Foundation. Published by the NWRI, P. O. Box 20865, Fountain Valley, CA 92728-0865.

(8) *Water Distribution Systems Handbook*, 1999, Larry W. Mays, Editor in Chief. Published by McGraw-Hill, Post Office Box 182604, Columbus, OH 43218-2605.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.861(7) FS. History–New 11-19-87, Formerly 17-22.630, Amended 1-18-89, 1-3-91, 1-1-93, Formerly 17-555.330, Amended 9-22-99, 8-28-03, 5-5-14.

62-555.335 Guidance Documents for Public Water Systems.

The following publications are adopted as financial, managerial, and technical guidance to assist suppliers of water in achieving compliance with Chapters 62-550, 62-555, and 62-560, F.A.C. Each of these publications is available from the publisher or source listed for the publication. Specific portions of these publications may be referenced as enforceable requirements in Chapters 62-550, 62-555, and 62-560, F.A.C. But otherwise, these publications are to be used only as guidance, and the specific requirements contained in Chapters 62-550, 62-555, and 62-560, F.A.C., shall supersede the guidance in these publications.

(1) *Guidance Manual for Compliance with the Filtration and Disinfection Requirements for Public Water Systems Using Surface Water Sources*, March 1991 Edition, U.S. Environmental Protection Agency (USEPA). Available from the following sources:

(a) USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0003.

(b) Educational Resources Information Center, Clearinghouse for Sciences, Mathematics, and Environmental Education, 1929 Kenny Road, Columbus, OH 43210-1080.

(c) U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(2) *Lead and Copper Rule Guidance Manual, Volume I: Monitoring*, September 1991, U.S. Environmental Protection Agency. Available from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(3) *Lead and Copper Rule Guidance Manual, Volume II: Corrosion Control Treatment*, September 1992, U.S. Environmental Protection Agency. Available from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(4) *Lead and Copper Monitoring and Reporting Guidance for Public Water Systems*, February 2002, U.S. Environmental Protection Agency (USEPA). Available from the following sources:

(a) USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0003.

(b) U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(5) *Alternative Disinfectants and Oxidants Guidance Manual*, April 1999, U.S. Environmental Protection Agency (USEPA). Available from the following sources:

(a) USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0003.

(b) Educational Resources Information Center, Clearinghouse for Sciences, Mathematics, and Environmental Education, 1929 Kenny Road, Columbus, OH 43210-1080.

(c) U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(6) *Guidance Manual for Compliance with the Interim Enhanced Surface Water Treatment Rule: Turbidity Provisions*, April 1999, U.S. Environmental Protection Agency (USEPA). Available from the following sources:

(a) USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0003.

(b) Educational Resources Information Center, Clearinghouse for Sciences, Mathematics, and Environmental Education, 1929 Kenny Road, Columbus, OH 43210-1080.

(c) U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(7) *Enhanced Coagulation and Enhanced Precipitative Softening Guidance Manual*, May 1999, U.S. Environmental Protection Agency (USEPA). Available from the following sources:

(a) USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0003.

(b) Educational Resources Information Center, Clearinghouse for Sciences, Mathematics, and Environmental Education, 1929 Kenny Road, Columbus, OH 43210-1080.

(c) U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(8) *Disinfection Profiling and Benchmarking Guidance Manual*, August 1999, U.S. Environmental Protection Agency (USEPA). Available from the following sources:

(a) USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0003.

(b) Educational Resources Information Center, Clearinghouse for Sciences, Mathematics, and Environmental Education, 1929 Kenny Road, Columbus, OH 43210-1080.

(c) U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(9) *Microbial and Disinfection Byproduct Rules Simultaneous Compliance Manual*, August 1999, U.S. Environmental Protection Agency (USEPA). Available from the following sources:

(a) USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0003.

(b) Educational Resources Information Center, Clearinghouse for Sciences, Mathematics, and Environmental Education, 1929

Kenny Road, Columbus, OH 43210-1080.

(c) U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(10) NSF International (NSF) Standard 14-2003, Plastics Piping System Components and Related Materials; NSF Standard 42-2002, Drinking Water Treatment Units – Aesthetic Effects; NSF Standard 44-2002, Residential Cation Exchange Water Softeners; NSF Standard 53-2002, Drinking Water Treatment Units – Health Effects; NSF Standard 55-2002, Ultraviolet Microbiological Water Treatment Systems; NSF Standard 58-2002, Reverse Osmosis Drinking Water Treatment Systems; NSF Standard 60-2002, Drinking Water Treatment Chemicals – Health Effects; NSF Standard 61-2002, Drinking Water System Components – Health Effects; and NSF Standard 62-1999, Drinking Water Distillation Systems. Available from Techstreet, 1327 Jones Drive, Ann Arbor, MI 48105.

(11) *Water Chemicals Codex*, 1982, National Research Council. Published by the National Academies Press, 500 Fifth Street, NW, Lockbox 285, Washington, DC 20055.

(12) *Food Chemicals Codex*; Fourth Edition, 1996; First Supplement to the Fourth Edition, 1997; Second Supplement to the Fourth Edition, 2000; and Third Supplement to the Fourth Edition, 2001; Institute of Medicine. Published by the National Academies Press, 500 Fifth Street, NW, Lockbox 285, Washington, DC 20055.

(13) *Standard Methods for the Examination of Water and Wastewater*, 20th Edition, 1998, American Public Health Association (APHA), American Water Works Association, and Water Environment Federation. Published by the APHA, 800 I Street, NW, Washington, DC 20001.

(14) *Emergency Planning for Water Utilities*, AWWA Manual M19, Fourth Edition, 2001, American Water Works Association (AWWA). Published by the AWWA, 6666 W. Quincy Avenue, Denver, CO 80235.

(15) *Manual of Small Public Water Supply Systems*, May 1991, U.S. Environmental Protection Agency. Available from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(16) *Design and Construction of Small Water Systems*, An AWWA Small Systems Resource Book, Second Edition, 1999, American Water Works Association (AWWA). Published by the AWWA, 6666 W. Quincy Avenue, Denver, CO 80235.

(17) *Design of Small Water Systems*; Engineer Manual 1110-2-503; February 27, 1999; U.S. Army Corps of Engineers. Available from the U.S. Department of Commerce, National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

(18) "Guidelines for the Issuance of Precautionary Boil Water Notices;" August 26, 1999; Florida Department of Health (FDOH). Available from the FDOH, Bureau of Water Programs, 4052 Bald Cypress Way, Bin A08, Tallahassee, Florida 32399-1709.

(19) *Sources of Technical and Financial Assistance for Small Drinking Water Systems*, July 2002, U.S. Environmental Protection Agency (USEPA). Available from the USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0003.

(20) *System Partnership Solutions to Improve Public Health Protection*, September 2002, U.S. Environmental Protection Agency (USEPA). Available from the USEPA, Office of Ground Water and Drinking Water (4601), Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0003.

(21) *New Water System Capacity Development Planning Manual*, April 2003, Florida Department of Environmental Protection (FDEP). Available from the FDEP, Drinking Water Section, 2600 Blair Stone Road, M.S. 3520, Tallahassee, Florida 32399-2400.

(22) *Uniform System of Accounts for Class A Water Utilities*, 1996; *Uniform System of Accounts for Class B Water Utilities*, 1996; *Uniform System of Accounts for Class C Water Utilities*, 1996; National Association of Regulatory and Utility Commissioners (NARUC). Published by the NARUC, 1101 Vermont Avenue, NW, Suite 200, Washington, DC 20005.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.861(7), 403.8615 FS. History–New 1-3-91, Amended 1-1-93, Formerly 17-555.335, Amended 9-22-99, 8-28-03.

62-555.340 Disinfection and Bacteriological Evaluation of Public Water System Components.

This section addresses disinfection and bacteriological evaluation of the following public water system (PWS) components: treatment or storage facilities and water mains. These PWS components shall be disinfected to inactivate any microbiological contaminant that might have been introduced into the facilities or mains during construction, alteration, repair, or maintenance. For the purpose of this section, the phrase "water mains" shall mean mains, including treatment plant process piping, conveying either raw, partially treated, or finished drinking water; fire hydrant leads; and service lines that are under the control of a PWS and that

have an inside diameter of three inches or greater. Disinfection of public water system wells and bacteriological surveys and evaluations of such wells are addressed in subsection 62-555.315(6), F.A.C.

(1) Before new or altered treatment or storage facilities, new or altered water mains, and treatment or storage facilities and water mains taken out of operation for repair or maintenance that might lead to contamination of water are placed into, or returned to, operation, they shall be properly disinfected in accordance with the applicable American Water Works Association (AWWA) standard (i.e., AWWA Standard C651, C652, or C653) as incorporated into Rule 62-555.330, F.A.C., except that bacteriological evaluations to verify proper disinfection shall be conducted in accordance with subsection (2) below. This subsection does not apply to, and disinfection and bacteriological evaluations are not required for, the following treatment or storage facilities and water mains:

(a) Treatment or storage facilities and water mains that normally are treating, storing, or conveying surface water, or ground water under the direct influence of surface water, and that are located upstream of all filtration and disinfection treatment facilities;

(b) Disinfectant storage, feed, or application facilities;

(c) Treatment facilities handling residuals that are not recycled to the drinking water treatment train; and

(d) Water mains that are repaired with clamping devices while remaining full of pressurized water.

(2) Bacteriological evaluations to verify proper disinfection of treatment or storage facilities and water mains shall be conducted as set forth in paragraphs (a) through (c) below. The total residual chlorine measurements required under paragraph (a) may be performed by any authorized representative of the supplier of water or person constructing or altering the treatment or storage facilities or water mains 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. The total coliform analyses required under paragraph (a) shall be performed by a laboratory of the Department of Health (DOH) or a laboratory certified by the DOH to perform bacteriological analyses of drinking water and shall be performed using an appropriate method referenced in subsection 62-550.550(1), F.A.C.

(a) After reducing the total chlorine residual in the facilities or mains to no more than four milligrams per liter, a total of at least two samples – each taken on a separate day and taken at least six hours apart from the other sample(s) – shall be collected at each of the locations indicated in the applicable AWWA standard referenced in subsection (1) above, and the samples shall be analyzed for total residual chlorine and for the presence of total coliform.

(b) If any sample contains more than four milligrams per liter of total chlorine, the sample shall be considered invalid. If any sample shows the presence of total coliform, the facilities or mains shall be redisinfected as necessary in accordance with subsection (1) above and resampled in accordance with paragraph (a) above until two consecutive samples at each sampling location show the absence of total coliform.

(c) Bacteriological test results shall be considered unacceptable if the tests were completed more than 60 days before the Department received the results.

(3) Except as allowed under subsections (4) and (5) below and except as allowed under special construction permit conditions established in accordance with paragraph 62-555.533(2)(f), F.A.C., no disinfected treatment or storage facilities or water mains shall be placed into, or returned to, operation until a bacteriological evaluation has been satisfactorily completed in accordance with subsection (2) above, results of the evaluation have been submitted to the appropriate Department of Environmental Protection (DEP) District Office or Approved County Health Department (ACHD), and said DEP District Office or ACHD has approved the facilities or mains for operation.

(4) When constructing or altering treatment or storage facilities, or water mains, for which a public water system construction permit is not required per subsection 62-555.520(1), F.A.C., and when taking treatment or storage facilities or water mains out of operation for repair or maintenance that might lead to contamination of water, the facilities or mains may be placed into, or returned to, operation without the Department's approval after disinfection and satisfactory completion of a bacteriological evaluation in accordance with subsection (2) above. The results of the bacteriological evaluation shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department along with the next monthly operation report(s) required under paragraph 62-555.350(12)(b), F.A.C., or if no monthly operation report is required under paragraph 62-555.350(12)(b), F.A.C., within ten days after the end of the month during which the bacteriological evaluation was completed.

(5) When taking water mains out of operation for repair or rehabilitation that might lead to contamination of water, the mains may be returned to operation without the Department's approval after disinfection and before completion of a bacteriological evaluation in order to minimize the time customers are without water. An advisory or a precautionary "boil water" notice shall be issued if deemed necessary by the supplier of water or if recommended in the Department of Health's "Guidelines for the Issuance

of Precautionary Boil Water Notices" as adopted in Rule 62-555.335, F.A.C. A bacteriological evaluation still must be satisfactorily completed in accordance with subsection (2) above after the mains are returned to operation. If any bacteriological sample shows the presence of total coliform, the supplier of water shall telephone, and speak directly to a person at, the appropriate Department of Environmental Protection (DEP) District Office or Approved County Health Department (ACHD) as soon as possible, but never later than noon of the next business day. Otherwise, the results of the bacteriological evaluation shall be submitted to the appropriate DEP District Office or ACHD along with the next monthly operation report(s) required under paragraph 62-555.350(12)(b), F.A.C., or if no monthly operation report is required under paragraph 62-555.350(12)(b), F.A.C., within ten days after the end of the month during which the bacteriological evaluation was completed.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.852(12), (13), 403.853(1), (3) FS. History–New 11-19-87, Formerly 17-22.640, Amended 1-18-89, Formerly 17-555.340, Amended 8-28-03.

62-555.345 Certification of Construction Completion and Clearance for Public Water System Components.

Except as allowed under subsection 62-555.340(5), F.A.C., or by special permit condition established in accordance with paragraph 62-555.533(2)(f), F.A.C., no public water system (PWS) components constructed or altered under a permit granted by the Department shall be placed into permanent operation without prior Department approval, or clearance, as described below.

(1) Upon completing, or substantially completing, the construction of new or altered PWS components, and before placing the components into operation for any purpose other than disinfection, testing for leaks, or testing equipment operation, the permittee shall submit to the appropriate Department of Environmental Protection (DEP) District Office or Approved County Health Department one copy of a completed certification of construction completion using Form 62-555.900(9), Certification of Construction Completion and Request for Clearance to Place Permitted PWS Components into Operation, hereby adopted and incorporated by reference, effective August 28, 2003. 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 certification shall be accompanied by one copy of the following information:

(a) The portion of record drawings showing deviations from the DEP construction permit, including the approved preliminary design report or drawings and specifications, if there are any deviations from said permit. (Note that it is necessary to submit a copy of only the portion of record drawings showing deviations and not a complete set of record drawings.)

(b) Bacteriological test results, including a sketch or description of all bacteriological sampling locations, demonstrating compliance with subsection 62-555.315(6), F.A.C., or Rule 62-555.340, F.A.C., if any of the new or altered PWS components must be disinfected and bacteriologically surveyed or evaluated per said subsection or said rule.

(c) Analytical test results demonstrating compliance with Part III of Chapter 62-550, F.A.C., or subsection 62-524.650(2), F.A.C., if any of the new or altered PWS components are necessary to achieve, or affect, compliance with said part or said subsection.

(d) A completed Form 62-555.900(20), New Water System Capacity Development Financial and Managerial Operations Plan, as incorporated into Rule 62-555.357, F.A.C., if the new or altered PWS components were constructed under a permit issued by the Department before the effective date of Rule 62-555.525, F.A.C., (9-22-99) and create a "new system" as described under subsection 62-555.525(1), F.A.C.

(e) Any other information required by conditions in the DEP construction permit.

(2) Within 14 days after receiving a certification of construction completion for PWS components constructed or altered under a general permit, the Department shall review the certification. If the Department finds anything that will prevent the new or altered components from functioning in compliance with Chapters 62-550 and 62-555, F.A.C., or if the Department finds that the new or altered components will cause, or contribute to, a PWS's noncompliance with Chapter 62-550 or 62-555, F.A.C., the Department shall issue to the permittee, within the aforementioned 14-day review period, a written request for corrective action and for resubmittal of the certification after the corrective action is completed.

(3) Within 30 days after receiving a certification of construction completion for PWS components constructed or altered under a specific permit, the Department shall review the certification and, if the new or altered components create a "new system" as described under subsection 62-555.525(1), F.A.C., shall inspect the "new system." If the Department finds anything that will prevent the new or altered components from functioning in compliance with Chapters 62-550 and 62-555, F.A.C., if the Department finds anything that will prevent a "new system" from functioning in compliance with Chapters 62-550, 62-555, 62-560, and 62-699, F.A.C., or if the Department finds that the new or altered components will cause, or contribute to, an existing PWS's noncompliance

with Chapter 62-550 or 62-555, F.A.C., the Department shall issue to the permittee, within the aforementioned 30-day review/inspection period, a written request for corrective action and for resubmittal of the certification after the corrective action is completed.

(4) Within 14 days after receiving a satisfactory certification of construction completion for PWS components constructed or altered under a general permit and within 30 days after receiving a satisfactory certification of construction completion for PWS components constructed or altered under a specific permit, the Department shall issue written approval, or clearance, to place the new or altered components into permanent operation. The Department shall issue the clearance to the permittee and shall provide a copy of the clearance to the PWS supplying water to the new or altered components if said PWS is not the permittee.

(5) Suppliers of water shall ensure that permittees have obtained written clearance from the Department before suppliers of water turn on water service to permittees.

Rulemaking Authority 403.853(3), 403.861(9) FS. Law Implemented 403.0877, 403.853(1), (3), 403.861(10), 403.8615 FS. History–New 11-19-87, Formerly 17-22.645, Amended 1-18-89, 5-7-90, 1-3-91, 1-1-93, Formerly 17-555.345, Amended 9-22-99, 8-28-03.

62-555.348 Planning for Expansion of Public Water System Source, Treatment, or Storage Facilities.

This section applies to all community water systems serving, or designed to serve, 350 or more persons or 150 or more service connections.

(1) Suppliers of water shall provide for the timely planning, design, permitting, and construction of necessary public water system source, treatment, or storage facilities.

(2) Suppliers of water shall routinely compare the total net quantity of finished drinking water produced each day by their treatment plant(s) with the total permitted maximum-day operating capacity of their plant(s). The permitted maximum-day operating capacity of each plant shall be as specified in the latest Department of Environmental Protection (DEP) construction permit concerning source water or treatment facilities for the plant. In cases where no permitted maximum-day operating capacity has been specified in the latest DEP construction permit concerning source water or treatment facilities for a plant, the Department shall establish the permitted maximum-day operating capacity of the plant based upon information that is included in or with pertinent permit applications or that is provided by the supplier of water and based upon design requirements in Part III of this chapter, including design requirements in the engineering references listed in Rule 62-555.330, F.A.C.

(3) When the total maximum-day quantity of finished water produced by all treatment plants connected to a water system, including water produced to meet any fire-flow demand but excluding water produced to meet any demand that the supplier of water documents to be highly unusual and nonrecurring, exceeds 75 percent of the total permitted maximum-day operating capacity of the plants, the supplier of water shall submit source/treatment/storage capacity analysis reports to the Department according to the schedule described in paragraphs (a) and (b) below; however, in no case shall it be necessary to submit more than one report annually. The reports shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department.

(a) The initial report shall be submitted within six months after the month in which the total maximum-day quantity of finished water produced by the treatment plant(s) first exceeds 75 percent of the total permitted maximum-day operating capacity of the plant(s) or by August 28, 2004, whichever occurs later.

(b) Updated reports shall be submitted as follows:

1. If the initial report or the latest updated report indicates that maximum-day water demand (including fire-flow demand if fire protection is being provided) at build-out will not exceed the total permitted maximum-day operating capacity of the treatment plant(s) and that finished-water storage need (including fire storage if fire protection is being provided) at build-out will not exceed the existing total useful finished-water storage capacity, no additional report is required.

2. If the initial report or the latest updated report indicates that maximum-day water demand (including fire-flow demand if fire protection is being provided) will not exceed the total permitted maximum-day operating capacity of the treatment plant(s) for at least ten years and that finished-water storage need (including fire storage if fire protection is being provided) will not exceed the existing total useful finished-water storage capacity for at least ten years, the next updated report shall be submitted within five years after submittal of the previous report.

3. If the initial report or the latest updated report indicates that maximum-day water demand (including fire-flow demand if fire protection is being provided) will exceed the total permitted maximum-day operating capacity of the treatment plant(s) in less than ten years but greater than or equal to five years or that finished-water storage need (including fire storage if fire protection is being

provided) will exceed the existing total useful finished-water storage capacity in less than ten years but greater than or equal to five years, the next updated report shall be submitted within two years after submittal of the previous report.

4. If the initial report or the latest updated report indicates that maximum-day water demand (including fire-flow demand if fire protection is being provided) will exceed the total permitted maximum-day operating capacity of the treatment plant(s) in less than five years or that finished-water storage need (including fire storage if fire protection is being provided) will exceed the existing total useful finished-water storage capacity in less than five years, the next updated report shall be submitted within one year after submittal of the previous report.

(4) Each initial or updated source/treatment/storage capacity analysis report shall evaluate the capacity of all source, treatment, or storage facilities connected to a water system and shall contain the following information:

(a) The capacity of each water treatment plant's source water facilities and treatment facilities; the permitted maximum-day operating capacity and, if applicable, permitted peak operating capacity of each plant; and the useful capacity of each finished-water storage facility;

(b) The maximum-day and annual average daily quantities of finished water produced by each plant during each of the past ten years or during each of the years the plant has been in operation, whichever is less;

(c) Projected total water demands – total annual average daily demand and total maximum-day demand (including fire-flow demand if fire protection is being provided) – for at least the next ten years and projected total finished-water storage need (including fire storage if fire protection is being provided) for at least the next ten years;

(d) An estimate of the time required for maximum-day water demand (including fire-flow demand if fire protection is being provided) to exceed the total permitted maximum-day operating capacity of the plant(s) and an estimate of the time required for finished-water storage need (including fire storage if fire protection is being provided) to exceed the existing total useful finished-water storage capacity;

(e) Recommendations for new or expanded source, treatment, or storage facilities; and

(f) A recommended schedule showing dates for design, permitting, and construction of recommended new or expanded source, treatment, or storage facilities.

(5) Each initial or updated source/treatment/storage capacity analysis report shall be prepared under the responsible charge of one or more professional engineers licensed in Florida and shall be signed, sealed, and dated by the professional engineer(s) in responsible charge.

(6) If an initial or updated source/treatment/storage capacity analysis report indicates that maximum-day water demand (including fire-flow demand if fire protection is being provided) will exceed the total permitted maximum-day operating capacity of the water treatment plant(s) in less than five years or that finished-water storage need (including fire storage if fire protection is being provided) will exceed the existing total useful finished-water storage capacity in less than five years, documentation of timely design, permitting, and construction of recommended new or expanded source, treatment, or storage facilities shall be submitted with the report. The documentation shall consist of a written statement that is signed by an authorized representative of the supplier of water and that certifies the supplier is meeting, and intends to meet, the report's recommended schedule for design, permitting, and construction of recommended new or expanded source, treatment, or storage facilities.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.861(17) FS. History–New 8-28-03.

62-555.350 Operation and Maintenance of Public Water Systems.

(1) Suppliers of water shall operate and maintain their public water systems so as to comply with applicable standards in Chapter 62-550, F.A.C., and requirements in this chapter.

(2) Suppliers of water shall keep all necessary public water system components in operation and shall maintain such components in good operating condition so the components function as intended. Preventive maintenance on electrical or mechanical equipment – including exercising of auxiliary power sources, checking the calibration of finished-drinking-water meters at treatment plants, testing of air or pressure relief valves for hydropneumatic tanks, and exercising of isolation valves – shall be performed in accordance with the equipment manufacturer's recommendations or in accordance with a written preventive maintenance program established by the supplier of water; however, in no case shall auxiliary power sources be run under load less frequently than monthly. Accumulated sludge and biogrowths shall be cleaned routinely (i.e., at least annually) from all treatment facilities that are in contact with raw, partially treated, or finished drinking water and that are not specifically designed to collect sludge or support a biogrowth; and blistering, chipped, or cracked coatings and linings on treatment or storage facilities in contact

with raw, partially treated, or finished drinking water shall be rehabilitated or repaired. Finished-drinking-water storage tanks, including conventional hydropneumatic tanks with an access manhole but excluding bladder- or diaphragm-type hydropneumatic tanks without an access manhole, shall be checked at least annually to ensure that hatches are closed and screens are in place; shall be cleaned at least once every five years to remove biogrowths, calcium or iron/manganese deposits, and sludge from inside the tanks; and shall be inspected for structural and coating integrity at least once every five years by personnel under the responsible charge of a professional engineer licensed in Florida. Dead-end water mains conveying finished drinking water shall be flushed quarterly or in accordance with a written flushing program established by the supplier of water; additionally, dead-end or other water mains conveying finished water shall be flushed as necessary whenever legitimate water quality complaints are received.

(3) Suppliers of water shall ensure that drinking water treatment chemicals conform to the standards referenced in paragraph 62-555.320(3)(a), F.A.C., and shall have their lead/chief water treatment plant operators certify in writing on the monthly operation reports required under subsection (12) below that drinking water treatment chemicals conform to the standards referenced in paragraph 62-555.320(3)(a), F.A.C. Lead/chief water treatment plant operators may base their certifications upon evaluations conducted by the supplier of water or upon third-party or manufacturer certifications.

(4) No supplier of water shall operate any drinking water treatment plant at a capacity greater than the plant's permitted operating capacity except with the Department's prior approval, which shall be given when such operation will not cause a violation of a maximum contaminant level, a treatment technique requirement, or other operating requirements and is for no more than three months, or under circumstances that the supplier of water documents as highly unusual and nonrecurring. The permitted operating capacity of each plant shall be as specified in the latest Department of Environmental Protection (DEP) construction permit concerning source water or treatment facilities for the plant. In cases where no permitted operating capacity has been specified in the latest DEP construction permit concerning source water or treatment facilities for a plant, the Department shall establish the permitted maximum-day operating capacity of the plant and, if the plant is designed to meet peak water demand or to supplement finished-water storage facilities in meeting peak water demand, the permitted peak operating capacity of the plant based upon information that is included in or with pertinent permit applications or that is provided by the supplier of water and based upon design requirements in Part III of this chapter, including design requirements in the engineering references listed in Rule 62-555.330, F.A.C. Each day that a supplier of water is required under Chapter 62-699, F.A.C., to have a licensed operator staff or visit a plant, the supplier of water shall measure and record in the logs and reports required under subsection (12) below the net quantity of finished drinking water, excluding any filter backwash water, produced by the plant.

(5) Suppliers of water who are using ground water not under the direct influence of surface water and who are required to provide treatment to reliably achieve at least four-log inactivation or removal of viruses in accordance with paragraph 62-555.320(12)(b), F.A.C., shall monitor, record, and maintain the effectiveness and reliability of disinfection treatment as described in paragraphs (a) through (c) below. The residual disinfectant, temperature, or pH measurements required under paragraph (a) or (b) may be performed by any authorized representative of the supplier of water; but field measurements of residual chlorine, temperature, and 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 62-550.550(1), F.A.C., or in *Standard Methods for the Examination of Water and Wastewater* as adopted in Rule 62-555.335, F.A.C.

(a) For each day a supplier of water serving 3,300 or more persons serves water to the public from a drinking water treatment plant that includes chemical disinfection for virus inactivation, the supplier of water shall continuously monitor the residual disinfectant concentration (C) before or at the first customer and shall record in the logs and reports required under subsection (12) below the lowest C measured before or at the first customer during peak flow, the corresponding disinfectant contact time (T) at the C monitoring point during peak flow, and the resulting lowest CT provided before or at the first customer during peak flow. In addition, at least once for each day the supplier of water serves water to the public from the plant, the supplier of water shall measure and record the temperature of the water at the point where C is monitored; shall measure and record the pH of the water at the point where C is monitored if free chlorine is being used for virus inactivation; and with this temperature and pH information, shall determine and record the minimum CT required to comply with paragraph 62-555.320(12)(b), F.A.C. If there is a failure of equipment used to continuously monitor C, the supplier of water may temporarily monitor C by taking grab samples every four hours but may do so for no more than one week following the equipment failure. If at any time the "CT provided" falls below the minimum CT required, the supplier of water shall increase the disinfectant dose until the "CT provided" is at least equal to the minimum CT required and shall notify the Department in accordance with subsection (10) below.

(b) For each day a supplier of water serving less than 3,300 persons serves water to the public from a drinking water treatment plant that includes chemical disinfection for virus inactivation, the supplier of water shall monitor the residual disinfectant concentration (C) before or at the first customer by taking at least one grab sample during peak flow and shall record in the logs and reports required under subsection (12) below the lowest C measured before or at the first customer during peak flow, the corresponding disinfectant contact time (T) at the C monitoring point during peak flow, and the resulting CT provided before or at the first customer during peak flow. In addition, at least once for each day the supplier of water serves water to the public from the plant, the supplier of water shall measure and record the temperature of the water at the point where C is monitored; shall measure and record the pH of the water at the point where C is monitored if free chlorine is being used for virus inactivation; and with this temperature and pH information, shall determine and record the minimum CT required to comply with paragraph 62-555.320(12)(b), F.A.C. If any measurement of the "CT provided" falls below the minimum CT required, the supplier of water shall increase the disinfectant dose and take follow-up grab samples at least every four hours until the "CT provided" is at least equal to the minimum CT required and shall notify the Department in accordance with subsection (10) below.

(c) For each day a supplier of water serves water to the public from a drinking water treatment plant that includes ultraviolet (UV) disinfection for virus inactivation, the supplier of water shall continuously monitor the operating UV dose and shall record in the logs and reports required under subsection (12) below the lowest operating UV dose measured. If at any time the operating UV dose falls below the minimum UV dose required to comply with paragraph 62-555.320(12)(b), F.A.C., the supplier of water shall clean the UV lamp sleeves or replace the UV lamps to restore the operating UV dose to a level at least equal to the required minimum UV dose and shall notify the Department in accordance with subsection (10) below.

(6) Suppliers of water shall maintain a minimum free chlorine residual of 0.2 milligram per liter, or a minimum combined chlorine residual of 0.6 milligram per liter or an equivalent chlorine dioxide residual, throughout their drinking water distribution system at all times. If at any time the residual disinfectant concentration in any portion of a distribution system falls below the required minimum level, the supplier of water shall increase the disinfectant dose as necessary and flush said portion of the distribution system until the residual disinfectant concentration is restored to the required minimum level. Suppliers of water shall monitor and record the residual disinfectant concentration in their distribution system as described in paragraphs (a) and (b) below. The residual disinfectant measurements required under paragraph (a) or (b) may be performed by any authorized representative of the supplier of water; but field measurements of chlorine residual 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.

(a) Each supplier of water serving 3,300 or more persons shall take at least one grab sample each day the supplier serves water to the public or at least five days per week, whichever is less, at a point in the water supplier's distribution system reflecting maximum residence time after disinfectant addition, shall measure the residual disinfectant concentration, and shall record the residual disinfectant concentration in the logs and reports required under subsection (12) below.

(b) Each supplier of water serving less than 3,300 persons shall take at least one grab sample each day the supplier serves water to the public or at least two days per week, whichever is less, at a point in the water supplier's distribution system reflecting maximum residence time after disinfectant addition, shall measure the residual disinfectant concentration, and shall record the residual disinfectant concentration in the logs and reports required under subsection (12) below.

(7) Except when a water main breaks or treatment or pumping equipment fails and except under circumstances that the supplier of water documents to be highly unusual and nonrecurring, suppliers of water shall maintain a minimum gauge pressure of 20 pounds per square inch throughout their drinking water distribution system up to each customer's point of connection to the water supplier's distribution system.

(8) Suppliers of water shall employ licensed operation personnel in accordance with Chapters 62-602 and 62-699, F.A.C., for all public water systems except transient non-community water systems using only ground water and serving only businesses other than public food service establishments as defined in, and regulated under, Chapter 381, 500, or 509, F.S.

(9) No supplier of water shall alter or replace underground portions of, or abandon, any public water system well without first obtaining a permit from the appropriate water management district or delegated permitting authority if such a permit is required under Chapter 62-532, F.A.C. In addition, no supplier of water shall introduce a new source of water into any public water system; alter, or discontinue use of, any public water system components other than wells (but including well pumping equipment and appurtenances); or alter the type of chemicals being used to treat drinking water without first obtaining a construction permit or

written approval from the Department if such a permit or such approval is required under subsection 62-555.520(1), F.A.C., or first submitting written notification to the Department if such notification is required under subsection 62-555.520(1), F.A.C.

(10) Suppliers of water shall notify the State Warning Point (SWP), the appropriate Department of Environmental Protection (DEP) District Office or Approved County Health Department (ACHD), and water customers in accordance with the following procedures in the event of the following circumstances.

(a) Suppliers of water shall telephone the SWP at 1(800)320-0519 immediately (i.e., within two hours) after discovery of any actual or suspected sabotage or security breach, or any suspicious incident, involving a public water system.

(b) Suppliers of water shall telephone, and speak directly to a person at, the appropriate DEP District Office or ACHD as soon as possible, but never later than noon of the next business day, in the event of any of the following emergency or abnormal operating conditions:

1. The occurrence of any abnormal color, odor, or taste in a public water system's raw or finished water;

2. The failure of a public water system to comply with applicable disinfection requirements; or

3. The breakdown of any water treatment or pumping facilities, or the break of any water main, in a public water system if the breakdown or break is expected to adversely affect finished-water quality, interrupt water service to 150 or more service connections or 350 or more people, interrupt water service to any one service connection for more than eight hours, or necessitate the issuance of a precautionary "boil water" notice in accordance with the Department of Health's "Guidelines for the Issuance of Precautionary Boil Water Notices" as adopted in Rule 62-555.335, F.A.C.

(c) Suppliers of water shall notify the appropriate DEP District Office or ACHD and affected water customers by no later than the previous business day before initiating any planned permanent or temporary conversion from free chlorine to chloramines or vice versa for disinfection. Notices to the appropriate DEP District Office or ACHD shall be delivered by telephoning, and speaking directly to a person at, the DEP District Office or ACHD, and notices to affected water customers shall be delivered in writing or via telephone, newspaper, radio, or television. A single notice may be provided to cover both a planned temporary conversion from chloramines to free chlorine and the planned subsequent conversion back to chloramines. Notification is not required before unplanned temporary conversions from chloramines to free chlorine to protect public health during emergency operating conditions caused by circumstances such as source water contamination, water main breaks, or backflow incidents.

(d) Suppliers of water shall notify affected water customers in writing or via telephone, newspaper, radio, or television by no later than the previous business day before taking public water system (PWS) components out of operation for planned maintenance or repair work if the work is expected to adversely affect finished-water quality or interrupt water service to any service connection. Additionally, suppliers of water shall telephone, and speak directly to a person at, the appropriate DEP District Office or ACHD by no later than the previous business day before taking PWS components out of operation for planned maintenance or repair work if the work is expected to adversely affect finished-water quality, interrupt water service to 150 or more service connections or 350 or more people, interrupt water service to any one service connection for more than eight hours, or necessitate the issuance of a precautionary "boil water" notice in accordance with the Department of Health's "Guidelines for the Issuance of Precautionary Boil Water Notices" as adopted in Rule 62-555.335, F.A.C.

(e) Suppliers of water shall describe in the monthly operation reports required under subsection (12) below all emergency or abnormal operating conditions and all maintenance or repair work that involves taking out of operation public water system components other than water service lines.

(11) Suppliers of water shall issue precautionary "boil water" notices as required or recommended in the Department of Health's "Guidelines for the Issuance of Precautionary Boil Water Notices" as adopted in Rule 62-555.335, F.A.C.

(12) Suppliers of water shall keep and submit operation and maintenance logs, reports, and records as described below.

(a) All suppliers of water shall keep operation and maintenance logs at their drinking water treatment plants. For plants that are part of a transient non-community water system using only ground water and serving only businesses other than public food service establishments, the operation and maintenance logs shall contain a minimum of three months of data at all times and shall contain the date and type of all maintenance performed and the date and results of all sampling and analyses performed unless the sampling or analyses are documented on a laboratory sheet. For all other plants, the operation and maintenance logs shall contain the information listed in, and shall be maintained as described in, subsection 62-602.650(4), F.A.C.

(b) For all public water systems except transient non-community water systems using only ground water and serving only businesses other than public food service establishments, suppliers of water shall submit monthly operation reports to the appropriate Department of Environmental Protection District Office or Approved County Health Department within ten days after

each month of operation per paragraph 62-550.730(1)(d), F.A.C., and shall do so using the following forms as applicable: Form 62-555.900(2), Monthly Operation Report for Subpart H Systems as incorporated into paragraph 62-550.817(11)(a), F.A.C.; Form 62-555.900(3), Monthly Operation Report for PWSs Treating Raw Ground Water or Purchased Finished Water, hereby adopted and incorporated by reference, effective August 28, 2003; Form 62-555.900(4), Monthly Operation Report for Consecutive Systems that Do Not Treat Water, hereby adopted and incorporated by reference, effective August 28, 2003; Form 62-555.900(6), Monthly Operation Report for Consecutive Systems that Receive Purchased Finished Water from a Subpart H System as incorporated into paragraph 62-550.817(11)(b), F.A.C.; Form 62-555.900(11), Monthly Operation Report for Summation of Finished-Water Production by CWSs that Have Multiple Treatment Plants, hereby adopted and incorporated by reference, effective August 28, 2003. Copies of these forms are available from the Department of Environmental Protection Drinking Water Section, M.S. 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Suppliers of water shall keep copies of monthly operation reports, together with any additional operation records required by the monthly operation reports, for at least ten years in accordance with subsection 62-550.720(5), F.A.C.

(c) All suppliers of water shall keep records documenting that their finished-drinking-water storage tanks, including conventional hydropneumatic tanks with an access manhole but excluding bladder- or diaphragm-type hydropneumatic tanks without an access manhole, have been cleaned and inspected during the past five years in accordance with subsection 62-555.350(2), F.A.C. In addition, all suppliers of water shall keep records documenting that their isolation valves are being exercised, and their water mains conveying finished drinking water are being flushed, in accordance with subsection 62-555.350(2), F.A.C.

(13) Suppliers of water shall provide an operation and maintenance manual for each of their drinking water treatment plants by no later than December 31, 2005, and shall update the manual thereafter as necessary to reflect plant alterations and additions. The manual shall contain operation and control procedures, and preventive maintenance and repair procedures, for all plant equipment and shall be made available for reference at the plant or at a convenient location near the plant. Bound and indexed equipment manufacturer manuals shall be considered sufficient to meet the requirements of this subsection.

(14) By December 31, 2005, suppliers of water who own or operate a community water system serving, or designed to serve, 350 or more persons or 150 or more service connections shall have, and thereafter maintain, an up-to-date map of their drinking water distribution system. Such a map shall show the location and size of water mains if known; the location of valves and fire hydrants; and the location of any pressure zone boundaries, pumping facilities, storage tanks, and interconnections with other public water systems.

(15) Suppliers of water who own or operate a community water system serving, or designed to serve, 350 or more persons or 150 or more service connections shall develop a written emergency preparedness/response plan in accordance with *Emergency Planning for Water Utilities*, AWWA Manual M19, as adopted in Rule 62-555.335, F.A.C., by no later than December 31, 2004, and shall update and implement the plan as necessary thereafter. Said suppliers of water shall coordinate with their Local Emergency Planning Committee and their Florida Department of Law Enforcement Regional Security Task Force when developing their emergency plan and shall include in their plan all of the information in paragraphs (a) through (e) below.

(a) A communication chart as described in Chapter 5 of AWWA Manual M19.

(b) Written agreements with other agencies, utilities, or response organizations.

(c) A disaster-specific preparedness/response plan as described in Chapter 5 of AWWA Manual M19 for each of the following disasters: vandalism or sabotage; a drought; a hurricane; a structure fire; and if applicable, a flood, a forest or brush fire, and a hazardous material release. Each disaster-specific preparedness/response plan shall incorporate the results of a vulnerability assessment; shall include actions and procedures, and identify equipment, that can obviate or lessen the impact of such a disaster; and shall include plans and procedures that can be implemented, and identify equipment that can be utilized, in the event of such a disaster.

(d) Details about how the water system meets the standby power requirements under subsection 62-555.320(14), F.A.C., and, if applicable, recommendations regarding the amount of fuel to maintain on site, and the amount of fuel to hold in reserve under contracts with fuel suppliers, for operation of auxiliary power sources.

(e) If applicable, recommendations regarding the amount of drinking water treatment chemicals, including chemicals used for regeneration of ion-exchange resins or for onsite generation of disinfectants, to maintain in inventory at treatment plants.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.852(12), 403.853(6), 403.861(17) FS. History–New 11-19-87, Formerly 17-22.650, Amended 1-18-89, 1-1-93, Formerly 17-555.350, Amended 8-28-03.

62-555.357 New Water System Capacity Development Financial and Managerial Operations Plans.

A New Water System Capacity Development Financial and Managerial Operations Plan consists of a completed Form 62-555.900(20), hereby adopted and incorporated by reference, effective August 28, 2003, including all supporting attachments. 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) For each water system that is considered a "new system" per subsection 62-555.525(1), F.A.C., but for which a construction permit is not required, the supplier of water shall submit a New Water System Capacity Development Financial and Managerial Operations Plan to the Department within 90 days after commencing operations as a community or non-transient non-community water system. The plan shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department.

(2) For each water system that is considered a "new system" per subsection 62-555.525(1), F.A.C., the supplier of water shall submit an updated New Water System Capacity Development Financial and Managerial Operations Plan to the Department within 90 days after the third anniversary of the system commencing operations as a community or non-transient non-community water system. The updated plan shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department.

(3) For each water system that is considered a "new system" per subsection 62-555.525(1), F.A.C., and that changes ownership on or after August 28, 2003, the supplier of water acquiring ownership of the system shall submit an updated New Water System Capacity Development Financial and Managerial Operations Plan to the Department within 90 days after acquiring ownership of the system. The updated plan shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department.

(4) Within 30 days after the Department receives a New Water System Capacity Development Financial and Managerial Operations Plan required under subsection (1), (2), or (3) above, the Department shall review the plan. If the Department finds anything that will prevent the "new system" from functioning in compliance with Chapters 62- 550, 62-555, 62-560, and 62-699, F.A.C., the Department shall issue to the supplier of water, within the aforementioned 30-day review period, a written request for changes to the plan and for resubmittal of the plan after the changes are made. Within 30 days after receiving a satisfactory plan (i.e., a plan that is complete and that indicates the "new system" has the capacity to function in compliance with Chapters 62-550, 62-555, 62-560, and 62-699, F.A.C.), the Department shall issue to the supplier of water written approval of the plan.

Rulemaking Authority 403.861(9), 403.8615(1) FS. Law Implemented 403.8615 FS. History–New 9-22-99, Amended 8-28-03.

62-555.360 Cross-Connection Control for Public Water Systems.

(1) Cross-connections, as defined in Rule 62-550.200, F.A.C., are prohibited unless appropriate backflow protection is provided to prevent backflow through the cross-connection into the public water system. This does not prohibit a public water system from being interconnected to another public water system of the same type without backflow protection (i.e., a community water system [CWS] may be interconnected to another CWS without backflow protection, a non-transient non-community water system [NTNCWS] may be interconnected to another NTNCWS without backflow protection, and a transient non-community water system [TWS] may be interconnected to another TWS without backflow protection).

(a) Appropriate backflow protection for various applications is described in *Recommended Practice for Backflow Prevention and Cross-Connection Control: AWWA Manual M14*, Third Edition, as clarified and modified in paragraphs (b) and (c) below and in Table 62-555.360-2, which appears at the end of this section. The third edition of *AWWA Manual M14* is incorporated herein by reference; is available from the American Water Works Association, 6666 West Quincy Avenue, Denver, CO 80235, www.awwa.org; and is available for review at the Department of Environmental Protection, Source and Drinking Water Program, MS 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, at the Department of Environmental Protection district offices, and at the Approved County Health Departments.

(b) Except for the temporary cross-connections described in paragraph (c) below, cross-connections between a public water system and a wastewater system or reclaimed water system are prohibited (i.e., an air gap shall be maintained between any public water system and any wastewater system or reclaimed water system). The Department shall allow an exception to this requirement if the supplier of water provides justification for the exception and provides alternative backflow protection that achieves a level of reliability and public health protection similar to that achieved by an air gap (e.g., two biannually-tested reduced-pressure principle assemblies installed in series); however, in no case shall the Department allow a single, annually-tested mechanical backflow

preventer to be used as the only protection against backflow of wastewater or reclaimed water into a public water system.

(c) Temporary cross-connections may be made between a public water system and a wastewater system or reclaimed water system for either of the following purposes:

1. To supply water for flushing or testing a new wastewater force main or new reclaimed water main, in which case a double check valve assembly or reduced-pressure principle assembly shall be provided at the cross-connection.

2. To supply water for temporarily operating a new reclaimed water main that has not yet been connected to a reclaimed water supply, in which case a reduced-pressure principle assembly shall be provided at the cross-connection.

(2) Each community water system (CWS) shall establish and implement a cross-connection control program utilizing backflow protection at or for service connections from the CWS in order to protect the CWS from contamination caused by cross-connections on customers' premises. This program shall include a written plan that is developed using recommended practices of the American Water Works Association set forth in *Recommended Practice for Backflow Prevention and Cross-Connection Control: AWWA Manual M14*, Third Edition, as clarified and modified in paragraph (a) below. The third edition of *AWWA Manual M14* is incorporated herein by reference and is available as indicated in paragraph 62-555.360(1)(a), F.A.C.

(a) The minimum components that each CWS shall include in its written cross-connection control plan are listed and described in Table 62-555.360-1, which appears at the end of this section. The categories of customers for which each CWS shall ensure backflow protection is provided at or for the service connection from the CWS to the customer are listed in Table 62-555.360-2, which appears at the end of this section.

(b) Each CWS serving more than 10,000 persons shall prepare and submit cross-connection control program annual reports. The first annual report shall cover calendar year 2016, and subsequent annual reports shall cover each calendar year thereafter. These reports shall be prepared using Form 62-555.900(13), Cross-Connection Control Program Annual Report, effective 5-5-14, which is incorporated herein by reference and which is available as described in Rule 62-555.900, F.A.C., and at http://www.flrules.org/Gateway/reference.asp?No=Ref-04104. These reports shall be submitted to the appropriate Department of Environmental Protection district office or Approved County Health Department within three months after the end of the calendar year covered by the report.

(3) Upon discovery of a prohibited or inappropriately protected cross-connection, public water systems either shall ensure that the cross-connection is eliminated, shall ensure that appropriate backflow protection is installed to prevent backflow into the public water system, or shall discontinue water service. If the discovered cross-connection is on the premises of a customer of a community water system (CWS) and if the customer's premises is in a category described in Table 62-555.360-2, which appears at the end of this section, the CWS shall ensure that appropriate backflow protection is provided at or for the water service connection to the customer regardless of whether the cross-connection is eliminated or whether internal backflow protection is installed at the cross-connection to the customer's plumbing system.

Table 62-555.360-1: Minimum Components that Each Community Water System (CWS) Shall Include in Its Written Cross-Connection Control (CCC) Plan (Effective 5-5-14)

Component Number and Description
I. Legal authority for the CWS's CCC program – i.e., an ordinance, a bylaw or resolution, or water service rules and regulations. The legal authority shall include or reference Components 2 and 3 below.
II. The CWS's policy establishing where backflow protection at or for service connections from the CWS is mandatory. A. This policy shall identify categories of customers for which the CWS is requiring backflow protection at or for the service connection to the customer and shall specify the minimum backflow protection that the CWS is requiring for each such category of customers. B. This policy shall be no less stringent than Table 62-555.360-2, which appears at the end of Rule 62-555.360, F.A.C.

Component Number and Description
III. The CWS's policy regarding ownership, installation, inspection/testing, and maintenance of backflow protection that the CWS is requiring at or for service connections from the CWS. A. This policy shall specify whether the CWS or customer is responsible for installation, inspection/testing, and maintenance of backflow protection being required at or for service connections. B. This policy shall specify design and performance standards, and shall specify installation criteria, for new backflow protection being required at or for service connections. Installation criteria shall be consistent with installation criteria in *AWWA Manual M14* as incorporated into subsection 62-555.360(2), F.A.C., and shall assure the backflow protection is installed as close as practical to the CWS's meter or customer's property line but, in all cases, before the first distribution line off of the customer's water service line. C. This policy shall specify the frequency for inspecting air gaps (AGs) being required at or for service connections and shall specify qualifications for persons inspecting such AGs. All AGs being required at or for service connections pursuant to Table 62-555.360-2, which appears at the end of Rule 62-555.360, F.A.C., shall be inspected at least annually. D. This policy shall specify the frequency for testing backflow preventer assemblies[1] being required at or for service connections, shall specify qualifications for persons testing such assemblies, and shall specify test procedures for such assemblies. Assemblies being required at or for non-residential service connections[2] pursuant to Table 62-555.360-2, which appears at the end of Rule 62-555.360, F.A.C., shall be tested after installation or repair and at least annually thereafter and shall be repaired if they fail to meet performance standards. Assemblies being required at or for residential service connections[2] pursuant to Table 62-555.360-2 shall be tested after installation or repair and at least biennially thereafter and shall be repaired if they fail to meet performance standards. E. This policy shall specify the frequency for refurbishing or replacing dual check devices (DuCs) being required at or for service connections. DuCs being required at or for service connections pursuant to Table 62-555.360-2, which appears at the end of Rule 62-555.360, F.A.C., shall be refurbished or replaced at least once every 5 to 10 years or at a lesser frequency determined by the CWS if the CWS documents that the lesser frequency is appropriate based on data from spot-testing DuCs in its system or based on data from backflow sensing meters in its system.
IV. The CWS's procedures for evaluating customers' premises to establish the category of customer and the backflow protection being required at or for the service connection(s) from the CWS to the customer.[3] A. The CWS shall evaluate the customer's premises at a newly constructed service connection before the CWS begins supplying water to the service connection. B. The CWS shall evaluate the customer's premises at an existing – i.e., previously constructed – service connection whenever the customer connects to a reclaimed water distribution system, whenever an auxiliary water system is discovered on the customer's premises, whenever a prohibited or inappropriately protected cross-connection is discovered on the customer's premises, and whenever the customer's premises is altered under a building permit in a manner that could change the backflow protection required at or for a service connection to the customer.
V. The CWS's procedures for maintaining CCC program records.[4] A. The CWS shall maintain a current inventory of backflow protection being required at or for service connections from the CWS. B. The CWS shall maintain records of the installation, inspection/testing, and repair of backflow protection being required at or for service connections from the CWS.

[1] Backflow preventer assemblies include the following: double check valve assemblies (DCs) and double check detector assemblies (DCDAs); pressure vacuum breaker assemblies (PVBs); and reduced-pressure principle assemblies (RPs) and reduced-pressure principle detector assemblies (RPDAs).

[2] For the purpose of this table, "residential service connection" means any service connection, including any dedicated irrigation or fire service connection, that is two inches or less in diameter and that supplies water to a building, or premises, containing only dwelling units; and "non-residential service connection" means any other service connection.

[3] CWSs may evaluate customers' premises using questionnaires, reviews of construction plans or pertinent records, on-site inspections, or any combination thereof.

[4] CWSs may maintain all records in either electronic or paper format.

Table 62-555.360-2: Categories of Customers for Which Each Community Water System (CWS) Shall Ensure Minimum Backflow Protection Is Provided at or for the Service Connection from the CWS to the Customer (Effective 5-5-14)

Category of Customer	Minimum Backflow Protection[1] to Be Provided at or for the Service Connection from the CWS to the Customer
Beverage processing plant, including any brewery	DC if the plant presents a low hazard[2]; or RP if the plant presents a high hazard[2]
Cannery, packing house, rendering plant, or any facility where fruit, vegetable, or animal matter is processed, excluding any premises where there is only restaurant or food service facility	RP
Car wash	RP
Chemical plant or facility using water in the manufacturing, processing, compounding, or treatment of chemicals, including any facility where a chemical that does not meet the requirements in paragraph 62-555.320(3)(a), F.A.C., is used as an additive to the water	RP
Dairy, creamery, ice cream plant, cold-storage plant, or ice manufacturing plant	RP[3]
Dye plant	RP
Film laboratory or processing facility or film manufacturing plant, excluding any small, noncommercial darkroom facility	RP
Hospital; medical research center; sanitarium; autopsy facility; medical, dental, or veterinary clinic where surgery is performed; or plasma center	RP
Laboratory, excluding any laboratory at an elementary, middle, or high school	RP
Laundry (commercial), excluding any self-service laundry or Laundromat	RP
Marine repair facility, marine cargo handling facility, or boat moorage	RP
Metal manufacturing, cleaning, processing, or fabricating facility using water in any of its operations or processes, including any aircraft or automotive manufacturing plant	DC if the facility presents a low hazard[2]; or RP if the facility presents a high hazard[2]
Mortuary	RP
Premises where oil or gas is produced, developed, processed, blended, stored, refined, or transmitted in a pipeline or where oil or gas tanks are repaired or tested, excluding any premises where there is only a fuel dispensing facility	RP
Premises where there is an auxiliary or reclaimed water system[4,5]	A. At or for a residential service connection[6]: DuC[7] B. At or for a non-residential service connection[6]: DC if the auxiliary or reclaimed water is a low hazard[8,9]; or RP if the auxiliary or reclaimed water is a high hazard[8,9]
Premises where there is a cooling tower	RP
Premises where there is an irrigation system that is using potable water and that… I. Is connected directly to the CWS's distribution system via a dedicated irrigation service connection II. Is connected internally to the customer's plumbing system	I. At or for a residential or non-residential dedicated irrigation service connection[6]: PVB if backpressure cannot develop in the downstream piping[10]; or RP if backpressure could develop in the downstream piping[10] II. None[11]

Category of Customer	Minimum Backflow Protection[1] to Be Provided at or for the Service Connection from the CWS to the Customer
Premises where there is a wet-pipe sprinkler, or wet standpipe, fire protection system that is using potable water and that…	
I. Is connected directly to the CWS's distribution system via a dedicated fire service connection[12]	I.A. At or for a residential dedicated fire service connection[6]: DuC if the fire protection system contains no chemical additives and is not connected to an auxiliary water system[4]; or RP or RPDA if the fire protection system contains chemical additives or is connected to an auxiliary water system[4,13] I.B. At or for a non-residential dedicated fire service connection[6]: DC or DCDA if the fire protection system contains no chemical additives and is not connected to an auxiliary water system[4]; or RP or RPDA if the fire protection system contains chemical additives or is connected to an auxiliary water system[4,13]
II. Is connected internally to the customer's plumbing system	II. None[11]
Radioactive material processing or handling facility or nuclear reactor	RP
Paper products plant using a wet process	RP
Plating facility, including any aircraft or automotive manufacturing plant	RP
Restricted-access facility	RP
Steam boiler plant	RP
Tall building – i.e., a building with five or more floors at or above ground level	DC if the customer has no potable water distribution lines connected to the suction side of a booster pump; or RP if the customer has one or more potable water distribution lines connected to the suction side of a booster pump
Wastewater treatment plant or wastewater pumping station	RP
Customer supplied with potable water via a temporary or permanent service connection from a CWS fire hydrant	Varies[14]

[1] Means of backflow protection, listed in an increasing level of protection, include the following: a dual check device (DuC); a double check valve assembly (DC) or double check detector assembly (DCDA); a pressure vacuum breaker assembly (PVB); a reduced-pressure principle assembly (RP) or reduced-pressure principle detector assembly (RPDA); and an air gap. A PVB may not be used if backpressure could develop in the downstream piping.

[2] The CWS shall determine the degree of hazard. "Low hazard" or "non-health hazard" and "high hazard" or "health hazard" are defined in *AWWA Manual M14* as incorporated in paragraph 62-555.360(1)(a), F.A.C., and subsection 62-555.360(2), F.A.C.

[3] A DC may be provided if it was installed before 5-5-14; and if such a DC is replaced on or after 5-5-14, it may be replaced with another DC.

[4] For the purpose of this table, "auxiliary water system" means a pressurized system of piping and appurtenances using auxiliary water, which is water other than the potable water being supplied by the CWS and which includes water from any natural source such as a well, pond, lake, spring, stream, river, etc., includes reclaimed water, and includes other used water or industrial fluids described in *AWWA Manual M14* as incorporated in paragraph 62-555.360(1)(a), F.A.C., and subsection 62-555.360(2), F.A.C.; however, "auxiliary water system" specifically excludes any water recirculation or treatment system for a swimming pool, hot tub,

or spa. (Note that reclaimed water is a specific type of auxiliary water and a reclaimed water system is a specific type of auxiliary water system.)

[5] The Department shall allow an exception to the requirement for backflow protection at or for a residential or non-residential service connection from a CWS to premises where there is an auxiliary or reclaimed water system if all of the following conditions are met:

- The CWS is distributing water only to land owned by the owner of the CWS.
- The owner of the CWS is also the owner of the entire auxiliary or reclaimed water system up to the points of auxiliary or reclaimed water use.
- The CWS conducts at least biennial inspections of the CWS and the entire auxiliary or reclaimed water system to detect and eliminate any cross-connections between the two systems.

[6] For the purpose of this table, "residential service connection" means any service connection, including any dedicated irrigation or fire service connection, that is two inches or less in diameter and that supplies water to a building, or premises, containing only dwelling units; and "non-residential service connection" means any other service connection.

[7] A DuC may be provided only if there is no known cross-connection between the plumbing system and the auxiliary or reclaimed water system on the customer's premises. Upon discovery of any cross-connection between the plumbing system and any reclaimed water system on the customer's premises, the CWS shall ensure that the cross-connection is eliminated. Upon discovery of any cross-connection between the plumbing system and any auxiliary water system other than a reclaimed water system on the customer's premises, the CWS shall ensure that the cross-connection is eliminated or shall ensure that the backflow protection provided at or for the service connection is equal to that required at or for a non-residential service connection.

[8] Reclaimed water regulated under Part III of Chapter 62-610, F.A.C., is a low hazard unless it is stored with surface water in a pond that is part of a stormwater management system, in which case it is a high hazard; well water is a low hazard unless determined otherwise by the CWS; industrial fluids and used water other than reclaimed water are high hazards unless determined otherwise by the CWS; reclaimed water not regulated under Part III of Chapter 62-610, F.A.C., and surface water are high hazards.

[9] Upon discovery of any cross-connection between the plumbing system and any reclaimed water system on the customer's premises, the CWS shall ensure that the cross-connection is eliminated.

[10] A DC may be provided if both of the following conditions are met:

- The dedicated irrigation service connection initially was constructed before 5-5-14.
- No chemicals are fed into the irrigation system.

[11] The CWS may rely on the internal backflow protection required under the *Florida Building Code* or the predecessor State plumbing code. The CWS may, but is not required to, ensure that such internal backflow protection is inspected/tested and maintained the same as backflow protection provided at or for service connections from the CWS.

[12] The Department shall allow an exception to the requirement for backflow protection at or for a residential or non-residential dedicated fire service connection from a CWS to a wet-pipe sprinkler, or wet standpipe, fire protection system if both of the following conditions are met:

- The fire protection system was installed and last altered before 5-5-14.
- The fire protection system contains no chemical additives and is not connected to an auxiliary water system as defined in Footnote 4.

[13] Upon discovery of any cross-connection between the fire protection system and any reclaimed water system on the customer's premises, the CWS shall ensure that the cross-connection is eliminated.

[14] The CWS shall ensure that backflow protection commensurate with the degree of hazard is provided at or for the service connection from its fire hydrant.

Rulemaking Authority 403.086(8), 403.853(3), 403.861(9) FS. Law Implemented 403.086(8), 403.852(12), 403.853(1), 403.855(3), 403.861(17) FS. History–New 11-19-87, Formerly 17-22.660, Amended 1-18-89, 1-3-91, 1-1-93, Formerly 17-555.360, Amended 8-28-03, 5-5-14.

62-555.365 Changes in Ownership of Public Water Systems.

At least 30 days before the proposed sale, or legal transfer of ownership, of a public water system, the current owner of the system and the proposed owner of the system shall jointly notify the Department in writing of the proposed change in ownership of the system. The notification shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department and shall include the following information: the public water system name and identification number; the name of the current owner of the system; the name of the proposed owner of the system and the name, title, mailing address,

telephone number, fax number, and e-mail address of a designated responsible official of the proposed owner; and the proposed date for the change in ownership of the system.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.861(14) FS. History–New 8-28-03.

62-555.401 General Permit for Construction of Lead or Copper Corrosion Control, or Iron or Manganese Sequestration, Treatment Facilities for Small or Medium Public Water Systems.

(1) A general permit is hereby granted to any small or medium system, as defined in Rule 62-550.200, F.A.C., for the construction of lead or copper corrosion control treatment facilities, provided that the facilities are designed in accordance with Part III of this chapter and provided that:

(a) Per subsections 62-4.530(1) and 62-555.520(2), F.A.C., the system notifies the Department at least 30 days before beginning construction using Form 62-555.900(18), Notice of Intent to Use the General Permit for Construction of Lead or Copper Corrosion Control, or Iron or Manganese Sequestration, Treatment Facilities for Small or Medium PWSs, as incorporated into subsection 62-555.520(2), F.A.C. The completed notice form shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department and shall be accompanied by the permit processing fee described in subsection 62-555.520(6), F.A.C., and listed in paragraph 62-4.050(4)(p), F.A.C.

(b) The selected lead or copper corrosion control treatment is consistent with the guidance and recommendations in the *Lead and Copper Guidance Manual, Volume II: Corrosion Control Treatment* as adopted in Rule 62-555.335, F.A.C.

(2) A general permit is hereby granted to any small or medium system, as defined in Rule 62-550.200, F.A.C., for the construction of iron or manganese sequestration treatment facilities, provided that the facilities are designed in accordance with Part III of this chapter and provided that, per subsections 62-4.530(1) and 62-555.520(2), F.A.C., the system notifies the Department at least 30 days before beginning construction using Form 62-555.900(18), Notice of Intent to Use the General Permit for Construction of Lead or Copper Corrosion Control, or Iron or Manganese Sequestration, Treatment Facilities for Small or Medium PWSs, as incorporated into subsection 62-555.520(2), F.A.C. The completed notice form shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department and shall be accompanied by the permit processing fee described in subsection 62-555.520(6), F.A.C., and listed in paragraph 62-4.050(4)(p), F.A.C.

(3) This general permit is subject to the general conditions in Rule 62-4.540, F.A.C., and the following specific conditions:

(a) If the treatment facilities being constructed under this general permit were designed under the responsible charge of a professional engineer, the permittee shall retain a Florida-licensed professional engineer in accordance with subsection 62-555.530(3), F.A.C., to take responsible charge of inspecting construction of the facilities for the purpose of determining in general if the construction proceeds in compliance with this general permit, including the approved preliminary design report for the facilities.

(b) In accordance with subsection 62-555.530(4), F.A.C., the permittee shall have complete record drawings produced for the treatment facilities being constructed under this general permit.

(c) To fulfill the requirements under subsection 62-555.350(13), F.A.C., the permittee shall provide an operation and maintenance manual for the treatment facilities constructed under this general permit.

(d) Per Rule 62-555.345, F.A.C., the permittee shall submit a certification of construction completion to the Department and obtain approval, or clearance, from the Department before placing any treatment facilities constructed under this general permit into operation for any purpose other than disinfection, testing for leaks, or testing equipment operation. This specific condition does not prohibit the permittee from cutting into existing water mains and returning the water mains to operation in accordance with subsection 62-555.340(5), F.A.C., without the Department’s approval.

Rulemaking Authority 403.814(1), 403.861(9) FS. Law Implemented 403.0877, 403.814(1), (4), 403.861(7), (10) FS. History–New 12-10-96, Amended 8-28-03.

62-555.405 General Permit for Construction of Water Main Extensions for Public Water Systems.

(1) A general permit is hereby granted to any person for the construction of an extension to public water system mains conveying finished drinking water, provided that the extension is designed in accordance with Part III of this chapter and provided that:

(a) Per subsections 62-4.530(1) and 62-555.520(2), F.A.C., the person notifies the Department at least 30 days before beginning construction using Form 62-555.900(7), Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs, as incorporated into subsection 62-555.520(2), F.A.C. The completed notice form shall be submitted to the appropriate

Department of Environmental Protection District Office or Approved County Health Department and shall be accompanied by the permit processing fee described in subsection 62-555.520(6), F.A.C., and listed in paragraph 62-4.050(4)(p), F.A.C.

(b) The public water system to which the water main extension will be connected has the capacity necessary to meet the design water demands of all customers to be served by the water main extension, and said public water system is in compliance with applicable planning requirements under Rule 62-555.348, F.A.C.; applicable cross-connection control requirements under Rule 62-555.360, F.A.C.; and all other applicable rules in Chapters 62-550, 62-555, and 62-699, F.A.C.

(c) Construction of the water main extension will not include construction of any drinking water treatment, pumping, or storage facilities or any conflict manholes.

(d) The water main extension will not be installed in areas contaminated by low-molecular-weight petroleum products or organic solvents.

(e) The water main extension will not interconnect previously separate public water systems or create a "new system" as described under subsection 62-555.525(1), F.A.C.

(f) No portion of the water main extension will remain dry following completion of construction.

(2) This general permit is subject to the general conditions in Rule 62-4.540, F.A.C., and the following specific conditions:

(a) If the water main extension being constructed under this general permit was designed under the responsible charge of a professional engineer, the permittee shall retain a Florida-licensed professional engineer in accordance with subsection 62-555.530(3), F.A.C., to take responsible charge of inspecting construction of the water main extension for the purpose of determining in general if the construction proceeds in compliance with this general permit, including the approved preliminary design report for the water main extension.

(b) In accordance with subsection 62-555.530(4), F.A.C., the permittee shall have complete record drawings produced for the water main extension being constructed under this general permit.

(c) Per Rule 62-555.345, F.A.C., the permittee shall submit a certification of construction completion to the Department and obtain approval, or clearance, from the Department before placing any water main extension constructed under this general permit into operation for any purpose other than disinfection or testing for leaks. This specific condition does not prohibit the permittee from cutting into existing water mains and returning the water mains to operation in accordance with subsection 62-555.340(5), F.A.C., without the Department's approval.

Rulemaking Authority 403.814(1), 403.861(9) FS. Law Implemented 403.0877, 403.814(1), (4), 403.861(7), (9), (10) FS. History–New 7-8-82, Formerly 17-4.63, 17-4.630, 17-22.801, Amended 1-18-89, 1-1-93, Formerly 17-555.540, Amended 12-19-94, 12-10-96, 8-28-03.

62-555.500 General.

This part addresses construction permitting requirements for all public water system components other than wells (but including well pumping equipment and appurtenances) Permitting requirements for construction or repair of public water system wells are addressed in Chapters 62-524 and 62-532, F.A.C.

Rulemaking Authority 403.861(2), (6), (9) FS. Law Implemented 403.861(2), (6), (7), (10) FS. History–New 11-19-87, Formerly 17-22.710, Amended 1-18-89, Formerly 17-555.500, Amended 8-28-03.

62-555.520 Applying for Public Water System Construction Permits.

(1) Except as noted in paragraphs (a) through (d) below, a construction permit is required for construction or alteration of any public water system component.

(a) No construction permit is required for use of point-of-entry (POE) or point-of-use (POU) treatment devices in lieu of centralized treatment to comply with a maximum contaminant level as allowed under subsection 62-550.340(2), F.A.C. However, suppliers of water shall submit a written request to, and obtain written approval from, the Department in accordance with subsection 62-550.340(2), F.A.C., before installing such POE or POU treatment devices. Additionally, suppliers of water are responsible for ensuring that such POE or POU treatment devices comply with the requirements in subsection 62-550.340(2), F.A.C.

(b) No construction permit is required for the types work or alterations listed in subparagraphs 1. through 5. below. However, suppliers of water shall obtain written approval from the Department before beginning such work or alterations. Each request for approval shall be submitted in writing to the appropriate Department of Environmental Protection District Office or Approved County Health Department and shall include the following: a description of the scope, purpose, and location of the work or alterations; and assurance that the work or alterations will comply with applicable requirements in Part III of this chapter, including

applicable requirements in the engineering references listed in Rule 62-555.330, F.A.C. Additionally, each request for approval to discontinue use of existing drinking water treatment facilities, each request for approval to change drinking water treatment chemicals, and each request for approval to add tracer chemicals shall include assurance of continuing compliance with applicable primary or secondary drinking water standards; and each request for approval to conduct demonstration testing of existing drinking water treatment facilities that will discharge directly to downstream treatment, storage, or distribution facilities and each request for approval to construct or install a temporary pilot plant that will discharge to a public water system shall include the following: technical and reliability information, third-party technology verifications or historical study data, and jar test results to provide assurance of continuing compliance with applicable primary or secondary drinking water standards during times of demonstration testing or pilot plant operation; a plan to monitor at least daily for applicable process control parameters and acute contaminants and at least weekly for applicable chronic contaminants during times of demonstration testing or pilot plant operation; a plan for start-up, normal operation, and emergency shutdown of the demonstration testing or pilot plant and for emergency flushing of storage and distribution facilities; and a plan to properly train operators and to staff the affected drinking water treatment plant with a licensed operator during all times of demonstration testing or pilot plant operation. Within 30 days after the Department receives a request for approval, the Department shall issue written approval of the work or alterations described in the request, shall issue written comments asking for resubmittal of the request with all information and assurances required under this paragraph, or shall issue a written determination that a construction permit is required because the work/alterations described in the request is/are not of a type listed under this paragraph. The Department shall approve work or alterations described in a request for approval if the work/alterations is/are of a type listed under this paragraph and if the request includes all information and assurances required under this paragraph.

1. Discontinuing use of any existing drinking water treatment, pumping, or storage facilities.

2. Changing any type of drinking water treatment chemicals other than temporarily converting from chloramines to free chlorine (to protect public health during emergency operating conditions or to eliminate excess ammonia, oxidize nitrite and nitrifying bacteria, and control biofilm in a water distribution system), provided the change in chemicals will be made without construction or alteration of any chemical application facilities or other drinking water treatment facilities.

3. Temporarily adding any chemical to raw, partially treated, or finished drinking water for the purpose of conducting a tracer study.

4. Demonstration testing of any existing drinking water treatment facilities if the water from the facilities being tested will be discharged directly to downstream treatment, storage, or distribution facilities (instead of being discharged to waste or to upstream treatment facilities for full treatment at no greater than the maximum permitted rate).

5. Construction or installation of any pilot plant that will discharge water to a public water system (instead of discharging water to waste), provided the plant will discharge to the water system for no more than three months.

(c) No construction permit is required for the types of work or alterations listed in subparagraphs 1 through 5 below. However, suppliers of water shall submit written notification to the Department before beginning such work or alterations. Each notification shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department and shall include the following: a description of the scope, purpose, and location of the work or alterations; and assurance that the work or alterations will comply with applicable requirements in Part III of this chapter, including applicable requirements in the engineering references listed in Rule 62-555.330, F.A.C. Suppliers of water may begin such work or alterations 14 days after providing notification to the Department unless they are advised by the Department that the notification is incomplete or that a construction permit is required because the work/alterations is/are not of a type listed under this paragraph.

1. Replacement of any existing drinking water pumping, storage, or treatment facilities, including chemical application facilities and residuals handling facilities, with new facilities of the same design and capacity, and at the same general location, as the existing facilities.

2. Replacement of any existing water main with a new main at the same location as the existing main, provided the new main will be either the same size as the existing main, no more than two sizes larger than the existing main, or no larger than the minimum size required or recommended in *Recommended Standards for Water Works* as incorporated into Rule 62-555.330, F.A.C.

3. Relocation of any existing water main to accommodate other utilities, provided the length of main being moved at each location will be no more than 100 linear feet.

4. Alteration, excluding maintenance or repair, of any structures that are not used to treat, store, or handle drinking water, drinking water treatment chemicals, or drinking water treatment residuals but that are used to house drinking water pumping or

treatment facilities, including chemical application facilities and residuals handling facilities.

5. Installation or alteration, excluding maintenance or repair, of any alarm equipment required under Part III of this chapter.

(d) No construction permit is required for the types of work or alterations listed in subparagraphs 1. through 13. below. However, suppliers of water are responsible for ensuring that such work/alterations complies/comply with applicable requirements in Part III of this chapter, including applicable requirements in the engineering references listed in Rule 62-555.330, F.A.C. Additionally, suppliers of water are responsible for notifying others about emergency or abnormal operating conditions, planned conversions from free chlorine to chloramines or vice versa, and planned maintenance or repair work as required under subsection 62-555.350(10), F.A.C.

1. Discontinuing use of any existing water main.

2. Temporarily converting from chloramines to free chlorine to protect public health during emergency operating conditions or to eliminate excess ammonia, oxidize nitrite and nitrifying bacteria, and control biofilm in a water distribution system.

3. Demonstration testing of any existing drinking water treatment facilities if the water from the facilities being tested will be discharged to waste or to upstream treatment facilities for full treatment at no greater than the maximum permitted rate (instead of being discharged directly to downstream treatment, storage, or distribution facilities).

4. Construction or installation of any pilot plant that will discharge water to waste (instead of discharging water to a public water system).

5. Any maintenance or repair work.

6. Construction or alteration of any roads, landscaping, or fencing.

7. Construction or alteration of any structures that are not used to treat, store, or handle drinking water, drinking water treatment chemicals, or drinking water treatment residuals and that are not used to house drinking water pumping or treatment facilities, including chemical application facilities and residuals handling facilities.

8. Installation or alteration of any well vent.

9. Any electrical work that does not affect compliance with Part III of this chapter, including installation or alteration of auxiliary power sources for water systems not subject to the standby power requirements in Part III of this chapter.

10. Any instrumentation work that does not affect compliance with Part III of this chapter, including installation or alteration of chlorination or hypochlorination alarm equipment where such equipment is not required under Part III of this chapter and including installation or alteration of power failure alarm equipment for water systems not subject to the standby power requirements in Part III of this chapter.

11. Installation or alteration of any valve, flow meter, or backflow preventer.

12. Installation or alteration of any fire hydrant or hydrant lead.

13. Installation or alteration of any water service line to a single building, including any water service line dedicated exclusively to a fire protection or irrigation system serving a single building or its premises.

(2) Before commencing work or alterations for which a construction permit is required per subsection (1) above, the supplier of water or person who will perform such work or alterations shall submit a construction permit application to the Department using Form 62-555.900(1), Application for a Specific Permit to Construct PWS Components, effective August 28, 2003; or for a water main extension to be constructed under the general permit provision of Rule 62-555.405, F.A.C., shall notify the Department using Form 62-555.900(7), Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs, effective August 28, 2003; or for lead or copper corrosion control, or iron or manganese sequestration, treatment facilities to be constructed under the general permit provision of Rule 62-555.401, F.A.C., shall notify the Department using Form 62-555.900(18), Notice of Intent to Use the General Permit for Construction of Lead or Copper Corrosion Control, or Iron or Manganese Sequestration, Treatment Facilities for Small or Medium PWSs, effective August 28, 2003. The above Forms 62-555.900(1), 62-555.900(7), and 62-555.900(18) are hereby adopted and incorporated by reference into this subsection. Copies of these forms are available from the Department of Environmental Protection, Drinking Water Section, M.S. 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. One copy of the appropriate application or notice form shall be executed in full and submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department. A separate application or notice shall be submitted for each non-contiguous project; non-contiguous projects are projects that are neither interconnected nor located nearby one another (i.e., on the same site, on adjacent streets, or in the same neighborhood). Suppliers of water or persons applying for a permit to construct public water system components that will create a “new system” as described in subsection 62-555.525(1), F.A.C., shall also complete and submit, with their permit application, Form 62-555.900(20), New Water System Capacity

Development Financial and Managerial Operations Plan, as incorporated into Rule 62-555.357, F.A.C. No supplier of water or person shall begin work for which a construction permit is required until obtaining a specific permit from the Department or until the Department determines that the work qualifies for use of a general permit.

(3) Per Section 471.003, F.S., projects involving construction or alteration of public water system components shall be designed under the responsible charge of one or more professional engineers licensed in Florida except as noted in paragraphs (a) and (b) below. The professional engineer(s) in responsible charge of designing a project shall certify on the construction permit application or notice that the design of the project provides assurance of compliance with Chapter 62-550, F.A.C., if applicable, and complies with this chapter.

(a) Any person acting as a public officer employed by any state, county, municipal, or other governmental unit of Florida may design any project that has a total estimated cost of $10,000 or less.

(b) Any plumbing contractor licensed in Florida may design any project that he or she will install if the project has a value of $50,000 or less and involves a plumbing system, which includes any public water system serving a single property, with fewer than 250 fixture units.

(4) Each “Application for a Specific Permit to Construct PWS Components” shall be accompanied by one copy of either a preliminary design report as described in paragraph (a) below or drawings, specifications, and design data as described in paragraph (b) below. (When completed, Part II of the “Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs” or Part II of the “Notice of Intent to Use the General Permit for Construction of Lead or Copper Corrosion Control, or Iron or Manganese Sequestration, Treatment Facilities for Small or Medium PWSs” serves as a preliminary design report, and thus, it is unnecessary to submit a separate preliminary design report or drawings, specifications, and design data with a notice of intent to use a general permit.) Additional information may be required by the Department to clarify any construction permit application or notice; to clarify any preliminary design report or drawings, specifications, and design data; or to demonstrate that new or altered public water system components will comply with requirements in this chapter and provide drinking water meeting all applicable standards in Chapter 62-550, F.A.C

(a) Preliminary Design Reports. Preliminary design reports prepared under the responsible charge of one or more Florida-licensed professional engineers in accordance with subsection (3) above shall be signed, sealed, and dated by the professional engineer(s) in responsible charge. Preliminary design reports shall contain the following information where pertinent:

1. A brief description of the project and its purpose and an estimate of the cost to construct the project.

2. If the project will connect to, or become part of, an existing public water system, a description of the existing water system and discussion of the impact that the project will have on the existing water system. The description of the existing water system shall include the information in sub-subparagraphs a. through c. below if the project involves new or altered drinking water source facilities, drinking water treatment facilities, or finished-drinking-water pumping or storage facilities.

a. The name/location of existing water sources and the number and capacity of existing wells and raw surface water pumps.

b. The name/location of existing water treatment plants, the existing design capacity of each plant’s source water facilities and each plant’s treatment facilities and the permitted operating capacity of each plant, the existing type of treatment provided at each plant, and the number and capacity of existing finished-water pumps.

c. The name/location, type, and useful capacity of existing finished-water storage tanks.

3. The water service area, water use, and water service pressure information in sub-subparagraphs a. through d. below for the water system’s service area or for the project’s service area if the project involves only new or altered water mains or new or altered, finished-drinking-water booster pumping facilities.

a. A description of the nature and extent of both the present and the design water service area, including both the present and the design number of water service connections; an appraisal of both present and design commercial, institutional, and industrial water needs and fire fighting requirements; and discussion of both existing and proposed interconnections with other public water systems, including regulated consecutive systems.

b. Discussion of historical water use trends in the present water service area.

c. Both the present and the design water demands-average daily demand; maximum-day demand (including fire-flow demand, i.e., fire-flow rate times fire-flow duration, if fire protection is being provided); peak-hour demand (and if fire protection is being provided, fire-flow rate plus a background water demand equivalent to maximum-day demand other than fire-flow demand); and for small water systems that use hydropneumatic tanks or that are not designed to provide fire protection, peak instantaneous demand.

d. Both the present and the design water service pressure range.

4. If the project involves new or altered drinking water source facilities, the information in sub-subparagraphs a. through d. below.

a. The name/location of new water sources and documentation that new water sources are the best available sources as required under subsection 62-555.310(1), F.A.C.

b. Documentation that new wells meet applicable construction requirements in Chapter 62-532, F.A.C.

c. Discussion of sanitary hazards located within 500 feet of new wells or located less than 500 feet upstream of new surface water intakes; and for each well being connected to a community water system, documentation of continuing protection of the well from sanitary hazards as required under subsection 62-555.312(4), F.A.C.

d. A description of new or altered surface water intake structures, impoundments, and reservoirs.

5. If the project involves new or altered source water or treatment facilities for a drinking water treatment plant, the information in sub-subparagraphs a. through d. below.

a. The design capacity of the plant's source water facilities and the plant's treatment facilities. Refer to subsection 62-555.320(6), F.A.C.

b. Water quality data assessing applicable microbiological, physical, chemical, and radiological characteristics of raw water from all new, altered, or existing water sources for the plant. For new or altered wells, the water quality data shall include the sulfide-related measurements required under subsection 62-555.315(5), F.A.C., if applicable, and the results of the bacteriological survey required under paragraph 62-555.315(6)(b), F.A.C.

c. Discussion of applicable primary or secondary drinking water standards, including treatment technique requirements, in Part III of Chapter 62-550, F.A.C.; applicable sulfide treatment requirements in subsection 62-555.315(5), F.A.C.; and applicable disinfection requirements in subsection 62-555.320(12), F.A.C.

d. An evaluation of the adequacy of new, altered, or existing treatment facilities to meet applicable standards and requirements given the quality of raw water from all new, altered, or existing water sources for the plant. If the sulfide treatment requirements in subsection 62-555.315(5), F.A.C., are applicable, the water quality and treatment evaluation shall include the affirmative demonstration required under paragraph 62-555.315(5)(b), F.A.C.

6. If the project involves new or altered drinking water treatment facilities, the information in sub-subparagraphs a. through l. below.

a. The design daily operating period for the treatment facilities.

b. A flow diagram showing all new, altered, or existing water treatment operations and processes (including residuals handling operations), chemical application points, water pumping facilities, bypass arrangements, and recycle flows.

c. A hydraulic profile establishing operating water elevations through new, altered, or existing water treatment facilities at design flow rates.

d. For new or altered disinfection facilities, the design level of *Cryptosporidium*, *Giardia lamblia*, or virus inactivation to be achieved, if applicable, and the design minimum CT or ultraviolet dose if chemical or ultraviolet disinfection will be used to achieve *Cryptosporidium*, *Giardia lamblia*, or virus inactivation. Refer to subsection 62-555.320(12), F.A.C.

e. The design dose of water treatment chemicals.

f. An evaluation of the types, quantities, and characteristics of residuals generated by existing, altered, or new water treatment facilities.

g. Sizes, capacities, retention times, loading rates, schematic diagrams, and other design parameters and details sufficient to demonstrate that new or altered water treatment facilities (including chemical application facilities and residuals handling facilities) and water pumping facilities will comply with applicable requirements in Part III of this chapter, including applicable requirements in the engineering references listed in Rule 62-555.330, F.A.C. The schematic diagrams of water treatment facilities, including chemical application facilities, shall show proper air gaps between drains or overflows from such facilities and sanitary or storm sewers.

h. For innovative or alternative processes and equipment, the supporting information required under subsection 62-555.320(2), F.A.C.

i. Assurance of compliance with the odor control requirements referenced under subsection 62-555.320(9), F.A.C.

j. For new or altered storage tank systems subject to regulation under Chapter 62-761, F.A.C., assurance that the storage tank systems will meet applicable performance standards in Chapter 62-761, F.A.C.

k. Discussion of housing and safety or protective equipment for new or altered chemical application facilities.

l. For new or altered fluoridation facilities, discussion of how the analytical equipment required under paragraph 62-555.325(2)(f), F.A.C., will be provided.

7. If the project involves new or altered, raw-water or finished-drinking-water pumping facilities, including well pumping facilities, the number and capacity of pumps and the basis therefor, schematic diagrams, and other design parameters and details sufficient to demonstrate compliance with applicable requirements in Part III of this chapter, including applicable requirements in the engineering references listed in Rule 62-555.330, F.A.C.

8. If the project involves new or altered, finished-drinking-water storage facilities, the name/location and type of storage tanks, the useful capacity of storage tanks and the basis therefor, schematic diagrams, and other design parameters and details sufficient to demonstrate compliance with applicable requirements in Part III of this chapter, including applicable requirements in the engineering references listed in Rule 62-555.330, F.A.C.

9. If the project involves new or altered water mains, including treatment plant process piping, conveying either raw, partially treated, or finished drinking water, the information in sub-subparagraphs a. through g. below.

a. Hydraulic analyses or other justification for the size of new or altered water mains.

b. Discussion of color coding or marking of new or relocated water main pipe that will convey finished water. Refer to subparagraph 62-555.320(21)(b)3., F.A.C.

c. Discussion of installation procedures for new or altered water mains, including bedding and cover for underground mains; thrust restraint at new or altered tees, bends, plugs, and hydrants; pressure and leakage testing of new or altered mains; support, anchorage, and protection for new or altered mains crossing above surface water; and special construction of flexible, restrained, or welded watertight joints for new or altered mains crossing under surface water.

d. Discussion of separation distances between new or relocated, underground water mains, including hydrant drains, and existing or proposed sanitary or storm sewers, wastewater force mains, reclaimed water pipelines, and on-site sewage treatment and disposal systems. The Department shall allow exceptions to the separation distances required under subsections 62-555.314(1) and (2), F.A.C., only if justification and alternative construction features are provided in accordance with subsection 62-555.314(5), F.A.C.

e. Justification for each conflict manhole, identification of the party responsible for maintaining each conflict manhole, and assurance of compliance with design and construction requirements relative to conflict manholes. Refer to paragraph 62-555.314(3)(b), F.A.C.

f. Discussion of how proper backflow protection will be provided at those new or altered service connections where backflow protection is required or recommended under Rule 62-555.360, F.A.C., or in *Recommended Practice for Backflow Prevention and Cross-Connection Control*, AWWA Manual M14, as incorporated into Rule 62-555.330, F.A.C.

g. Schematic diagrams and other design parameters and details sufficient to demonstrate that new or altered hydrants and hydrant leads; air relief valves; valve, meter, or blow-off chambers; and backflow preventer installations will comply with applicable requirements in Part III of this chapter, including applicable requirements in the engineering references listed in Rule 62-555.330, F.A.C.

10. The project site information in sub-subparagraphs a. through f. below.

a. A site plan showing the approximate location of new or altered public water system wells; new or altered structures used to treat, store, or handle drinking water, drinking water treatment chemicals, or drinking water treatment residuals; structures housing new or altered drinking water pumping or treatment facilities, including chemical application facilities and residuals handling facilities; and new or altered water mains, including treatment plant process piping, conveying either raw, partially treated, or finished drinking water. The site plan shall indicate sizes of new or altered water mains and approximate locations of meters, valves, hydrants, blow-offs, and backflow preventers; approximate locations of new or altered interconnections between public water systems; approximate dimensions and elevations of structures; and both the 100-year and the 10- to 25-year flood elevation and wave-action elevation.

b. If applicable, discussion of how the permit applicant is avoiding locating a new public water system, or an expansion of an existing public water system, at any site subject to significant risk from contamination or significant risk from floods, fires, or other disasters. Refer to subsection 62-555.310(2), F.A.C.

c. Discussion of how community water system structures, and electrical or mechanical equipment, used to treat, pump, or store drinking water, apply drinking water treatment chemicals, or handle drinking water treatment residuals will be protected from physical damage by the 100-year flood and the 100-year wave action and will remain fully operational and accessible during the 25-

year flood and the 25-year wave action. The Department shall allow use of less than the 25-year flood or wave action, but not less than the 10-year flood or wave action, only if justification is provided in accordance with subsection 62-555.320(4), F.A.C.

d. Discussion of approximate ground water elevations in relation to subsurface structures.

e. A description of security features for new or altered drinking water wells and new or altered drinking water treatment, pumping, or storage facilities.

f. A description of areas where new or altered water mains, including treatment plant process piping, conveying either raw, partially treated, or finished drinking water will be installed above or under surface water, in aggressive soil, or in areas contaminated by low-molecular-weight petroleum products or organic solvents.

11. A description of materials that will be used for new or altered public water system components and documentation that the materials and components will comply with the following standards, regulations, or requirements:

a. The American Water Works Association standards as incorporated into Rule 62-555.330, F.A.C., if applicable. The Department shall allow use of pipe and appurtenances that do not conform to these standards only if documentation is provided in accordance with paragraph 62-555.320(21)(c), F.A.C.

b. NSF International Standard 61 as adopted in Rule 62-555.335, F.A.C., or other standards, regulations, or requirements referenced under paragraph 62-555.320(3)(b), F.A.C., if applicable. The Department shall allow exceptions to conformance with these standards, regulations, or requirements only if documentation and assurance are provided in accordance with paragraph 62-555.320(3)(d), F.A.C.

c. The lead use prohibition in Rule 62-555.322, F.A.C., if applicable.

12. Discussion of color coding of new or altered, aboveground piping at drinking water treatment plants.

13. A description of electrical systems and provisions for standby power at new or altered drinking water treatment or pumping facilities. Refer to subsection 62-555.320(14), F.A.C.

14. A description of operation and control strategies and instrumentation and control systems, including monitoring or alarm systems, at new or altered drinking water treatment, pumping, or storage facilities. Refer to subparagraph 62-555.320(8)(a)3., F.A.C.; subsection 62-555.320(11), F.A.C.; subparagraph 62-555.320(13)(a)9., F.A.C.; sub-subparagraph 62-555.320(13)(a)10.c., F.A.C.; subparagraph 62-555.320(13)(b)12., F.A.C.; and paragraph 62-555.320(14)(f), F.A.C., for required alarm systems.

15. A description of provisions for metering and sampling finished drinking water at new or altered drinking water treatment plants. Refer to subsections 62-555.320(16) and (17), F.A.C.

16. A schematic diagram of the entire finished-water supply (i.e., plumbing) system at new or altered drinking water treatment plants and pumping stations. The diagram shall show proper air gaps or mechanical backflow preventers where appropriate.

17. Discussion of procedures for disinfecting, and conducting bacteriological surveys or evaluations of, new or altered public water system (PWS) wells; new or altered drinking water treatment or storage facilities; and new or altered water mains conveying either raw, partially treated, or finished drinking water, including treatment plant process piping, fire hydrant leads, and service lines that are under the control of the PWS and that have an inside diameter of three inches or greater. Refer to subsection 62-555.315(6), F.A.C., and Rule 62-555.340, F.A.C.

18. Discussion of procedures for keeping existing public water system components in operation, or for minimizing interruptions in the operation of the existing components, during construction of the project.

19. A description of drinking water additives and treatment chemicals that will be used or obtained under the construction project and documentation that the additives and chemicals will conform to NSF International Standard 60 as adopted in Rule 62-555.335, F.A.C., or other standards referenced under paragraph 62-555.320(3)(a), F.A.C.

(b) Drawings, Specifications, and Design Data. Drawings, specifications, and design data prepared under the responsible charge of one or more Florida-licensed professional engineers in accordance with subsection (3) above shall be signed, sealed, and dated by the professional engineer(s) in responsible charge. Drawings and specifications shall be sufficiently complete and detailed to allow the Department to determine whether the design of a project provides assurance of compliance with Chapter 62-550, F.A.C., if applicable, and complies with this chapter. Drawings shall be at least 18 inches by 24 inches and not larger than 36 inches by 42 inches, but photographically reproduced drawings with a reduced size as small as 11 inches by 17 inches are acceptable if the original drawings are drawn to a scale that will permit all necessary information to be plainly seen on the reduced-size reproductions. Design data shall include pertinent information described in subparagraphs 62-555.520(4)(a)1. through 19., F.A.C., if such information is not provided on the drawings or in the specifications.

(5) Each application for a specific permit to construct a new public water system subject to the jurisdiction of the Florida Public

Service Commission (FPSC) shall be accompanied by one copy of the FPSC certificate authorizing the permit applicant to provide water service.

(6) Each construction permit application or notice shall be accompanied by the proper processing fee made payable to the Department of Environmental Protection or the appropriate Approved County Health Department. Processing fees for specific permits are listed in paragraph 62-4.050(4)(n), F.A.C. In cases where these fees vary depending upon drinking water treatment plant capacity, the capacity to be used in determining the proper fee is the design maximum-day capacity of the entire new or altered plant after construction. Processing fees for general permits are listed in paragraph 62-4.050(4)(p), F.A.C.

(7) If required by the Department, permit applicants shall publish a notice of permit application and furnish proof of publication in accordance with subsections 62-110.106(5), (6) and (9), F.A.C.

Rulemaking Authority 403.087(2), 403.814(1), 403.861(2), (6), (9) FS. Law Implemented 367.031, 403.087(6)(a), 403.0877, 403.815, 403.861(2), (6), (7), 403.8615, 471.003 FS. History–New 11-19-87, Formerly 17-22.720, Amended 1-18-89, Formerly 17-555.520, Amended 12-10-96, 9-22-99, 8-28-03.

62-555.525 Capacity Development Provisions of Public Water System Permitting.

(1) This section applies to the following types of systems only. These are defined as “new systems” for the purposes of capacity development and referred to as “new systems” in this section.

(a) Entirely new community or non-transient non-community water systems constructed, or commencing operations, on or after October 1, 1999.

(b) Water systems that previously did not meet the definition of a community water system (CWS) or the definition of a non-transient non-community water system (NTNCWS) but that grow to become a CWS or NTNCWS through an infrastructure expansion constructed, or placed into operation, on or after October 1, 1999. Water systems that previously did not meet the definition of a CWS or the definition of an NTNCWS but that grow to become a CWS or NTNCWS by adding users without expanding their infrastructure are not considered “new systems” for the purposes of capacity development.

(2) Construction permit applications for infrastructure creating a “new system” as described in subsection (1) above shall include a demonstration that the “new system” will have financial, managerial, and technical capacity to function in compliance with Chapters 62-550, 62-555, 62-560, and 62-699, F.A.C. Construction permit applicants who fail to demonstrate that a “new system” will have financial, managerial, and technical capacity to function in compliance with Chapters 62-550, 62-555, 62-560, and 62-699, F.A.C., shall not receive a construction permit.

(3) Demonstrations of financial, managerial, and technical capacity for “new systems” shall contain the following:

(a) Documentation that the owner of the “new system” holds, or will hold, an operator license sufficient to fulfill the staffing requirements in Chapter 62-699, F.A.C., or that the “new system” employs, or will employ, licensed operators to fulfill the staffing requirements in Chapter 62-699, F.A.C.

(b) A demonstration that the “new system” has, or will have, the capability to conduct the monitoring and reporting required under Chapter 62-550, F.A.C., and the capability to maintain the records required under Chapter 62-550, F.A.C.

(c) A demonstration that the “new system” has, or will have, the capability to meet the operation and maintenance requirements in this chapter.

(d) A demonstration of financial and managerial capacity as described in subparagraph 1. or 2. below.

1. “New systems” that will not be regulated by the Florida Public Service Commission shall demonstrate financial and managerial capacity using Form 62-555.900(20), New Water System Capacity Development Financial and Managerial Operations Plan, as incorporated into Rule 62-555.357, F.A.C. The completed Form 62-555.900(20) shall be sent to the appropriate Department of Environmental Protection District Office or Approved County Health Department.

2. “New systems” that will be regulated by the Florida Public Service Commission shall demonstrate financial and managerial capacity using Form 62-555.900(20), New Water System Capacity Development Financial and Managerial Operations Plan, as incorporated into Rule 62-555.357, F.A.C., except that such systems need not complete Parts II and III of the form (financial capacity). “New systems” in counties under the jurisdiction of the Florida Public Service Commission but not subject to its regulations are not exempt from completing Parts II and III of the form. The completed Form 62-555.900(20) shall be sent to the appropriate Department of Environmental Protection District Office or Approved County Health Department.

Rulemaking Authority 403.861(9), 403.8615 FS. Law Implemented 403.8615 FS. History–New 9-22-99, Amended 8-28-03.

62-555.528 Applying for Reratings of Public Water System Treatment Plants.

This section addresses procedures for obtaining a rerating (i.e., increase) of the permitted operating capacity of a drinking water treatment plant when no construction is necessary for the rerating.

(1) A construction permit is required to document any rerating of the permitted operating capacity of any water treatment plant.

(2) Suppliers of water seeking to have the permitted operating capacity of a water treatment plant rerated shall submit to the appropriate Department of Environmental Protection District Office or Approved County Health Department a construction permit application using Form 62-555.900(1), Application for a Specific Permit to Construct PWS Components, as incorporated into subsection 62-555.520(2), F.A.C.

(3) Each construction permit application shall be accompanied by one copy of a rerating report as described in this subsection. Additional information may be required by the Department to clarify any construction permit application; to clarify any rerating report; or to demonstrate that any rerated water treatment plant will provide drinking water meeting all applicable standards in Chapter 62-550, F.A.C. The rerating report shall be prepared under the responsible charge of one or more professional engineers licensed in Florida and shall be signed, sealed, and dated by the professional engineer(s) in responsible charge, and the rerating report shall contain the following information:

(a) A brief description of the water treatment plant for which a rerating of the permitted operating capacity is being sought. The description of the plant shall include the information in subparagraphs 1. and 2. below.

1. The name/location of water sources for the plant and the number and capacity of wells and raw surface water pumps supplying water to the plant.

2. The name/location of the plant, the existing permitted operating capacity of the plant, the type of treatment provided at the plant, and the number and capacity of finished-water pumps.

(b) The proposed new design capacity of the water treatment plant’s source water facilities and the plant's treatment facilities. Refer to subsection 62-555.320(6), F.A.C.

(c) The daily operating period for the water treatment plant’s source water and treatment facilities.

(d) Water quality data assessing applicable microbiological, physical, chemical, and radiological characteristics of raw water from all water sources for the plant.

(e) Discussion of applicable primary or secondary drinking water standards, including treatment technique requirements, in Part III of Chapter 62-550, F.A.C.; applicable sulfide treatment requirements in subsection 62-555.315(5), F.A.C.; and applicable disinfection requirements in subsection 62-555.320(12), F.A.C.

(f) A flow diagram showing all water treatment operations and processes (including residuals handling operations), chemical application points, water pumping facilities, bypass arrangements, and recycle flows at the water treatment plant.

(g) An evaluation of the hydraulic capacity of the water treatment plant, including all water pumping facilities, showing that the plant will be hydraulically capable of operating at the proposed new design capacity. The evaluation shall include a hydraulic profile establishing operating water elevations through the plant.

(h) An evaluation of the quantities and characteristics of residuals generated when the water treatment facilities are operating at the proposed new design capacity.

(i) An evaluation of all water treatment facilities (including chemical application facilities and residuals handling facilities), water pumping facilities, and ancillary equipment at the drinking water treatment plant showing one of the following:

1. The facilities and equipment will meet pertinent design requirements in Part III of this chapter, including pertinent design requirements in the engineering references listed in Rule 62-555.330, F.A.C., when operating at the proposed new design capacity and, given the quality of raw water from all water sources for the plant, the facilities and equipment will meet applicable primary or secondary drinking water standards, sulfide treatment requirements, and disinfection requirements when operating at the proposed new design capacity; or

2. Based upon data from at least one full-scale or pilot-plant installation treating water of comparable quality during comparable seasonal fluctuations or based upon data from demonstration testing of the facilities and equipment, the facilities and equipment will meet applicable primary or secondary drinking water standards, sulfide treatment requirements, and disinfection requirements under all anticipated water quality conditions when operating at the proposed new design capacity.

(j) Assurance of compliance with the odor control requirements referenced under subsection 62-555.320(9), F.A.C., when the water treatment plant is operating at the proposed new design capacity.

(4) Each construction permit application shall be accompanied by the proper processing fee made payable to the Department of

Environmental Protection or the appropriate Approved County Health Department. The proper processing fee for any rerating of the permitted operating capacity of a drinking water treatment plant shall be determined using the fee schedule in subparagraph 62-4.050(4)(n)1., 2., or 3., F.A.C., as applicable, and using the proposed new design maximum-day capacity of the plant.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.0877, 403.815, 403.861(2), (6), (7) FS. History–New 8-28-03.

62-555.530 Processing Applications or Notices for, and Issuing or Denying, Public Water System Construction Permits.

(1) Specific Construction Permits.

(a) The Department shall process each application for a specific permit in accordance with Rule 62-4.055, F.A.C.

(b) The Department shall review each specific permit application, including the preliminary design report or drawings, specifications, and design data accompanying the application, for the following:

1. Assurance of compliance with applicable primary or secondary drinking water standards, including treatment technique requirements, in Part III of Chapter 62-550, F.A.C. The construction permit applicant shall have the raw water from each new or altered drinking water source sampled and analyzed for applicable contaminants in accordance with Rule 62-550.550, F.A.C.

2. Assurance of compliance with subsection 62-524.650(2), F.A.C., if applicable. The construction permit applicant shall have the raw water from each new or altered drinking water source in a delineated area sampled and analyzed in accordance with Rule 62-524.600, F.A.C.

3. Compliance with applicable design and construction requirements in Part III of this chapter. The construction permit applicant shall have the raw water from new or altered public water system wells sampled and analyzed in accordance with subsection 62-555.315(5), F.A.C., if applicable, and paragraph 62-555.315(6)(b), F.A.C.

4. Compliance with applicable permitting requirements, including capacity development requirements, in Part V of this chapter.

(c) If the Department determines that a construction permit applicant has complied, or provided assurance of compliance, with applicable rules, the Department shall give the applicant a notice of permit issuance or a notice of intent to issue a permit in accordance with subsection 62-110.106(7), F.A.C. If the Department determines that a construction permit applicant has not complied, or provided assurance of compliance, with applicable rules, the Department shall give the applicant a notice of permit denial in accordance with subsection 62-110.106(7), F.A.C. All notices of permit denial shall contain the reasons for the denial.

(d) Under the circumstances described in paragraph 62-110.106(7)(a), F.A.C., the Department shall require the construction permit applicant to publish a notice of the Department's proposed action on an application for a specific permit and furnish proof of publication in accordance with subsections 62-110.106(5) and (9), F.A.C.

(2) General Construction Permits.

(a) The Department shall review each general permit notice for the following:

1. Assurance of compliance with applicable primary or secondary drinking water standards, including treatment technique requirements, in Part III of Chapter 62-550, F.A.C.

2. Compliance with applicable design and construction requirements in Part III of this chapter.

3. Compliance with applicable permitting requirements in Parts IV and V of this chapter.

(b) If the Department determines that a project qualifies for use of the noticed general permit, the Department need not take any action on the notice, and the permittee may use the general permit 30 days after giving notice to the Department. If the Department determines that a project does not qualify for use of the noticed general permit, the Department shall deny use of the general permit by notifying the proposed permittee in accordance with subsection 62-110.106(7), F.A.C. All notices denying use of a general permit shall contain the reasons for the denial.

(3) Whenever a project is designed under the responsible charge of one or more professional engineers licensed in Florida and is permitted by the Department under this chapter, construction of the project shall be inspected, for the purpose of determining in general if the construction proceeds in compliance with the Department permit and approved preliminary design report or drawings and specifications, under the responsible charge of a professional engineer licensed in Florida. The professional engineer in responsible charge of inspecting construction of a project shall certify on the certification of construction completion required under Rule 62-555.345, F.A.C., that construction of the project has been completed in accordance with the Department permit, including the approved preliminary design report or drawings and specifications, or in substantial conformance with Chapter 62-550, F.A.C., if applicable, and this chapter.

(4) Whenever a project is permitted by the Department under this chapter, complete record drawings shall be prepared for the project.

Rulemaking Authority 403.861(9) FS. Law Implemented 373.309, 403.0877, 403.815, 403.861(7), (10) FS. History–New 11-19-87, Formerly 17-22.725, Amended 1-18-89, 1-1-93, Formerly 17-555.530, Amended 8-28-03.

62-555.533 Conditions for Specific Construction Permits for Public Water Systems.

(1) Each specific construction permit issued by the Department shall include the general conditions listed in Rule 62-4.160, F.A.C.

(2) Each specific construction permit issued by the Department shall contain the following specific conditions as applicable:

(a) Each permit shall specify the effective date of the permit and the expiration date of the permit. No permit shall be issued for a term of more than five years.

(b) Each permit for a project involving new or altered source water or treatment facilities for a drinking water treatment plant shall specify the permitted maximum-day operating capacity of the plant and, if applicable, the permitted peak operating capacity of the plant in accordance with subsection 62-555.320(6), F.A.C.

(c) Each permit for a project designed under the responsible charge of one or more professional engineers licensed in Florida shall contain a specific condition requiring the permittee to retain a Florida-licensed professional engineer in accordance with subsection 62-555.530(3), F.A.C., to take responsible charge of inspecting construction of the project for the purpose of determining in general if the construction proceeds are in compliance with the permit, including the approved preliminary design report or drawings and specifications, for the project.

(d) Each permit shall contain a specific condition requiring the permittee to have complete record drawings produced for the project in accordance with subsection 62-555.530(4), F.A.C.

(e) Each permit for a project involving new or altered drinking water treatment facilities shall contain a specific condition requiring the permittee to provide an operation and maintenance manual for the new or altered treatment facilities to fulfill the requirements under subsection 62-555.350(13), F.A.C.

(f) Each permit shall contain a specific condition requiring the permittee to submit a certification of construction completion to the Department and obtain approval, or clearance, from the Department per Rule 62-555.345, F.A.C., before placing any public water system components constructed or altered under the permit into operation for any purpose other than disinfection, testing for leaks, or testing equipment operation. This specific condition shall not prohibit the permittee from cutting into existing water mains and returning the water mains to operation in accordance with subsection 62-555.340(5), F.A.C., without the Department's approval. Additionally, the Department shall allow exceptions to this specific condition if construction permit applicants provide in the preliminary design report or drawings, specifications, and design data accompanying their permit application justification for each exception and assurance of public health protection.

(g) Each permit shall contain other specific conditions, including schedules for completing construction, to ensure that Department rules are met.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.087(4), 403.0877, 403.861(7), (10) FS. History–New 8-28-03.

62-555.536 Modification, Transfer, or Revocation of Public Water System Construction Permits.

(1) Except as noted in paragraphs (a) and (b) below, a construction permit modification is required for changes to a permitted project, including any project noticed for use of a general construction permit.

(a) No construction permit modification is required for the types of project changes listed in subparagraphs 1. through 5. below. However, permittees shall submit written notification to the Department before making such changes. Each notification shall be submitted to the appropriate Department of Environmental Protection District Office or Approved County Health Department and shall include the following: a description of the scope, purpose, and location of the change; and assurance that the change will comply with applicable requirements in Part III of this chapter, including applicable requirements in the engineering references listed in Rule 62-555.330, F.A.C. Permittees may begin such changes seven days after providing notification to the Department unless they are advised by the Department that the notification is incomplete or that a construction permit modification is required because the changes are not of a type listed under this paragraph.

1. Addition of, or changes to, work or alterations of the type described in paragraph 62-555.520(1)(c), F.A.C.

2. Addition of up to five percent more water main or 100 linear feet more water main, whichever is greater, at new locations within the same rights-of-way, easements, or sites, provided the additional water main will not pass through any conflict manholes, will not be installed in areas contaminated by low-molecular-weight petroleum products or organic solvents, will not connect

previously separate public water systems or create a “new system” as described under subsection 62-555.525(1), F.A.C., and will not remain dry following completion of construction.

3. Addition of, or changes to, alternative construction features in accordance with subsection 62-555.314(5), F.A.C., due to unforeseen situations where it is not practicable to comply with the utility separation requirements in subsections 62-555.314(1) and (2), F.A.C.

4. Relocation of public water system components within the width of the same right-of-way or easement or within the same site. (Permittees may realign water mains to maintain required separation distances between the water mains and other utilities without submitting written notification to the Department.)

5. Changes in materials that will come into contact with drinking water or drinking water treatment chemicals and addition of, or changes in, drinking water additives or treatment chemicals that will be used or obtained under a construction project.

(b) No construction permit modification is required for the types of project changes listed in subparagraphs 1. through 4. below. However, permittees are responsible for ensuring that such changes comply with applicable requirements in Part III of this chapter, including applicable requirements in the engineering references listed in Rule 62-555.330, F.A.C.

1. Addition of, or changes to, work or alterations of the type described in paragraph 62-555.520(1)(d), F.A.C.

2. Realignment of water mains within the width of the same right-of-way or easement, or within the same site, to maintain required separation distances between the water mains and other utilities.

3. Changes in materials that will not come into contact with drinking water or drinking water treatment chemicals.

4. Changes in the construction method for water mains (e.g., changes from open-trench construction to tunneling and vice versa).

(2) Before commencing work on project changes for which a construction permit modification is required per subsection (1) above, the permittee shall submit to the appropriate Department of Environmental Protection District Office or Approved County Health Department a written request for a permit modification. Each such request shall be accompanied by one copy of a revised construction permit application or notice as described in subsection 62-555.520(2), F.A.C., if appropriate, and each request for modification of a specific construction permit shall be accompanied by one copy of either a revised preliminary design report or revised drawings, specifications, and design data as described in subsection 62-555.520(4), F.A.C., if appropriate. Additionally, each such request also shall be accompanied by the proper processing fee made payable to the Department of Environmental Protection or the appropriate Approved County Health Department. Processing fees for construction permit modifications involving substantial project changes (i.e., changes altering capacity, adding new treatment, causing additional or different drinking water standards to apply, or causing significantly greater or different environmental impacts) shall be the same as fees for a new construction permit (refer to subsection 62-555.520(6), F.A.C.). Processing fees for construction permit modifications involving other project changes, both major and minor, are listed in subparagraphs 62-4.050(4)(n)6. and 7., F.A.C., and paragraph 62-4.050(4)(s), F.A.C.

(3) Each request for a construction permit modification involving project changes shall be processed in accordance with Rule 62-555.530, F.A.C.

(4) Each request for extension of a specific construction permit shall be made and processed in accordance with subsection 62-4.080(3), F.A.C. Each such request shall be accompanied by the proper processing fee made payable to the Department of Environmental Protection or the appropriate Approved County Health Department. The processing fee for a construction permit extension is listed in paragraph 62-4.050(4)(s), F.A.C. No specific construction permit shall be extended so as to remain in effect longer than five years.

(5) Each request for transfer of a specific construction permit and each request for transfer of a permittee’s use of a general construction permit shall be made and processed in accordance with Rule 62-4.120, F.A.C., except that the current permittee and the proposed permittee shall jointly submit Form 62-555.900(8), Application for Transfer of a PWS Construction Permit, hereby adopted and incorporated by reference, effective August 28, 2003. 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. Each application for transfer of a construction permit shall be accompanied by the proper processing fee made payable to the Department of Environmental Protection or the appropriate Approved County Health Department. The processing fee for transfer of a construction permit is listed in paragraph 62-4.050(4)(s), F.A.C.

(6) Each suspension or revocation of a specific construction permit and each suspension or revocation of a permittee’s use of a general construction permit shall be rendered in accordance with Rule 62-4.100, F.A.C.

Rulemaking Authority 403.861(9) FS. Law Implemented 403.087(6)(a), 403.815, 403.861(7) FS. History–New 8-28-03

62-555.900 Forms and Instructions.

The forms used by the Department in the Public Water System Supervision Program are listed below by form number and name. Each form has been incorporated into the rule that references it. Copies of these forms may be obtained by writing to the Department of Environmental Protection, Source and Drinking Water Program, M.S. 3520, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. In addition, these forms are available at the Department of Environmental Protection's district offices, at the Approved County Health Departments, and on the Department of Environmental Protection's web site at www.dep.state.fl.us. Persons and public water systems shall report to the Department using the forms listed below or using computer-generated versions of the forms listed below provided such versions are identical to the forms listed below in every respect other than font type and style, font size, and character spacing.

(1) Application for a Specific Permit to Construct PWS Components, effective August 28, 2003.

(2) Monthly Operation Report for Subpart H Systems, effective October 14, 2004.

(3) Monthly Operation Report for PWSs Treating Raw Ground Water or Purchased Finished Water, effective August 28, 2003.

(4) Monthly Operation Report for Consecutive Systems that Do Not Treat Water, effective August 28, 2003.

(5) Monthly Operation Report for PWSs Fluoridating Water, effective August 28, 2003.

(6) Monthly Operation Report for Consecutive Systems that Receive Purchased Finished Water from a Subpart H System, effective April 3, 2003.

(7) Notice of Intent to Use the General Permit for Construction of Water Main Extensions for PWSs, effective August 28, 2003.

(8) Application for Transfer of a PWS Construction Permit, effective August 28, 2003.

(9) Certification of Construction Completion and Request for Clearance to Place Permitted PWS Components into Operation, effective August 28, 2003.

(10) Asbestos-Free Certification or Asbestos Sampling Plan for PWSs, effective August 28, 2003.

(11) Monthly Operation Report for Summation of Finished-Water Production by CWSs that Have Multiple Treatment Plants, effective August 28, 2003.

(12) PWS Sampling Plan for Lead and Copper Tap Samples and Water Quality Parameters, effective August 28, 2003.

(13) Form 62-555.900(13), Cross-Connection Control Program Annual Report, effective 5-5-14, incorporated by reference in paragraph 62-555.360(2)(b), F.A.C.

(14) Deleted.

(15) Deleted.

(16) PWS Certification of Notification of Lead and Copper Tap Sample Results, effective October 1, 2010.

(17) Lead Public Education Program Report for PWSs, effective October 1, 2010.

(18) Notice of Intent to Use the General Permit for Construction of Lead or Copper Corrosion Control, or Iron or Manganese Sequestration, Treatment Facilities for Small or Medium PWSs, effective August 28, 2003.

(19) Form number 62-555.900(19), Certification of Delivery of Consumer Confidence Report, effective April 10, 2003.

(20) New Water System Capacity Development Financial and Managerial Operations Plan, effective August 28, 2003.

(21) Form number 62-555.900(21), Certification of Delivery of Consumer Confidence Information to Supplied Systems, effective April 10, 2003.

(22) Form number 62-555.900(22), Certification of Delivery of Public Notice, effective 1-17-05.

Rulemaking Authority 403.8055, 403.861, 403.861(9) FS. Law Implemented 367.031, 403.0877, 403.861, 403.8615 FS. History–New 1-18-89, Amended 1-3-91, Formerly 17-555.900, Amended 12-10-96, 9-22-99, 4-3-03, 4-10-03, 8-28-03, 10-14-04, 1-17-05, 10-1-10, 5-5-14.