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**Southwest Florida Water Management District**

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## CHAPTER 62-600 DOMESTIC WASTEWATER FACILITIES

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### PART I GENERAL

#### **62-600.100 Scope, Intent, Purpose, and Applicability.**

(1) Section 403.021(2), Florida Statutes, as amended, the Florida Air and Water Pollution Control Act, established that no wastes are to be discharged to any waters of the state without first being given the degree of treatment necessary to protect the beneficial uses of such water. Toward this end, Sections 403.085 and 403.086, Florida Statutes, set forth requirements for the treatment and reuse or disposal of domestic wastewater. Section 403.051(2)(a), Florida Statutes, requires that any Department planning, design, construction, modification, or operating standards, criteria, and requirements for wastewater facilities be developed as a rule. This chapter is promulgated to implement the provisions and requirements of Sections 120.53(1), 120.55, 403.021, 403.051, 403.061, 403.062, 403.064, 403.085, 403.086, 403.087, 403.088, 403.0881, 403.101, 403.131, 403.161, 403.182, 403.859, and 403.918, Florida Statutes, concerning domestic wastewater facilities.

(2) The requirements of this chapter represent the specific requirements of the Florida Department of Environmental Protection and of Local Pollution Control Programs approved and established pursuant to Section 403.182, Florida Statutes, where such authority has been delegated to those programs. It may be necessary for domestic wastewater facilities to conform with requirements of other agencies, established via interagency agreements (e.g., for mosquito control); the absence of reference to such arrangements in this chapter does not negate the need for compliance with those requirements.

(3) The purpose of Chapter 62-600, F.A.C., is to provide minimum standards for the design of domestic wastewater facilities and to establish minimum treatment and disinfection requirements for the operation of domestic wastewater facilities. All systems shall be designed in accordance with sound engineering practice. Supported by moderating provisions, it is intended that Chapter 62-600, F.A.C., establish a framework whereby design flexibility and sound engineering practice can be used in developing systems with which to manage domestic wastewater in an environmentally sound manner.

(4) As appropriate, Chapter 62-600, F.A.C., shall be used in conjunction with other Department rules relating to the design and operation and maintenance of domestic wastewater facilities.

(5) Standards and requirements in this chapter shall apply only to domestic wastewater treatment, reuse, and disposal facilities (including residuals management facilities).

(a) Standards and requirements shall apply to all new facilities and modifications or expansions of existing facilities that submit complete permit applications to the Department after July 1, 1991.

(b) Standards and requirements shall apply to all existing facilities that submit complete applications for permit renewal after July 1, 1991.

(6) Domestic wastewater facilities that submit complete permit applications on or before July 1, 1991, may:

(a) Continue to comply with the rule requirements that were in effect at the time the permit was issued and with the conditions of the existing construction or operation permit until the expiration of such permit, or

(b) Opt to comply with the requirements of this revised chapter.

(7) The standards and requirements of Part II of Chapter 62-600, F.A.C., and Rules 62-600.500 and 62-600.530, F.A.C., shall be applicable to septic tank drainfield systems and other on-site waste treatment systems with subsurface disposal regulated by this chapter. The reliability requirements of paragraph 62-600.400(1)(b), F.A.C., shall not apply to such septic tank drainfield systems and other on-site waste treatment systems.

(8) The discharge limitation of subsection 62-600.510(4), F.A.C., shall not be applicable to facilities permitted on or before January 1, 1982, that discharge into Class II waters or Class III waters which are subsequently reclassified as Class II waters.

(9) This chapter provides for exemptions, allowances for existing facilities and variations from standards and requirements. Unless specifically provided otherwise, no wastewater permit shall be issued or renewed unless the permit applicant demonstrates that the subject facility is in compliance with the applicable provisions of this chapter.

*Specific Authority 403.051, 403.061, 403.062, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 11-27-89, Amended 1-30-91, Formerly 17-600.100, Amended 12-24-96.*

#### **62-600.120 Exemptions.**

The following sources are exempted from the requirements of this chapter. Those sources in subsections (3)-(5) are only exempted from those requirements specifically stated therein upon order of the Secretary:

(1) Septic tank drainfield systems and other on-site sewage treatment and disposal systems with subsurface disposal if:

(a) The system serves the complete wastewater needs of an establishment with a design capacity of 10,000 gallons per day or less of domestic wastewater, or

(b) The system serves the complete wastewater needs of a commercial establishment with a design capacity of 5,000 gallons per day or less of commercial wastewater.

(2) Any single individual service connection from a single building to a pretreatment system, or any single individual gravity service connection, with no pretreatment, to a collection system sized and intended to serve a single building.

(3) Exemptions to Provide for the Experimental Use of Wetlands for Low-Energy Water and Wastewater Recycling.

(a) To encourage experiments which are designed to lead to the development of new information regarding low-energy approaches to the advanced treatment of domestic wastes and to encourage the conservation of wetlands and fresh waters, the Secretary shall, upon petition of an affected person, and after public notice in the Florida Administrative Weekly and in a newspaper of general circulation in the area of the waters affected, and after opportunity for public hearing pursuant to Chapter 120, Florida Statutes, issue an Order, for a period not to exceed five (5) years, specifically exempting certain sources of pollution which discharge into restricted areas of wetlands, as approved by the Secretary, from the water quality criteria contained in Chapter 62-302, F.A.C., provided that:

1. The discharger affirmatively demonstrates that the wetlands ecosystem may reasonably be expected to assimilate the waste discharge without significant adverse impact on the biological community within the receiving waters; and

2. Granting the exemption is in the public interest and will not adversely affect public health or the cost of public health or other related programs; and

3. The public is restricted from access to the waters under consideration; and

4. The waters are not used for recreation; and

5. The applicant affirmatively demonstrates that presently specified criteria are unnecessary for the protection of potable water supplies or human health; and

6. The exemption will not interfere with the designated use of contiguous waters; and

7. Scientifically valid experimental controls are provided by the applicant and approved by the Department to monitor the long-term ecological effects and waste recycling efficiency.

(b) The Petitioner shall affirmatively demonstrate those standards which the Petitioner believes more appropriate apply to the waters for which the exemption is sought.

(c) The Secretary shall specify, by Order, only those criteria which the Secretary determines to have been demonstrated by the preponderance of competent substantial evidence to be more appropriate.

(d) The Department shall modify the Petitioner's permit consistent with the Secretary's Order.

(4) Exemption Providing Alternative Criteria for Existing Permitted Discharges Comprising the Principal Flow.

(a) The Secretary shall, upon the petition of one or more existing wastewater discharge sources for which a Department permit has been issued before August 30, 1988, after public notice in the Florida Administrative Weekly and in a newspaper of general circulation in the area of the waters affected, and after opportunity for public hearing pursuant to Chapter 120, Florida Statutes, issue an Order for the duration of the petitioner's permit exempting waters of the state which are not used for potable water supplies, or recreation, and contain no significant population of fish and wildlife, from one or more Class III or Class IV criteria specified in the petition and substituting appropriate alternative criteria where the discharge of the Petitioner(s) comprised a majority of the flow, excluding runoff from storm drains and other wastewater discharges, during a substantial portion of the year preceding August 30, 1988. Provided, however, that such Order shall be issued only after an affirmative demonstration by the Petitioner(s) of the following:

1. The waters for which exemption is sought are:

a. Wholly artificial and not a modified or channelized natural stream; or

b. Intermittent watercourses which, in the absence of runoff from storm drains and wastewater discharges, acts as tributaries only following the occurrence of rainfall and which normally do not contain contiguous areas of standing water; or

c. Are channelized or modified natural watercourses which were historically intermittent as described in b. above;

2. The waters are not used for potable waters supplies, or recreation, and do not contain a significant population of fish or wildlife. "Significant population of fish or wildlife" shall mean the presence of commercially or recreationally important species or significant quantities of organisms which provide food for such species;

3. Reasonable assurance has been provided that the alternative criteria will adequately protect the designated uses of adjacent downstream waters;

4. The alternative criteria are not less stringent than the minimum standards prescribed for all waters at all times in Rule 62-302.500, F.A.C.;

5. The alternative criteria are in the public interest and there is no reasonable relationship between the economic, social, and environmental costs of compliance with existing criteria and the economic, social and environmental benefits of compliance;

6. Compliance with the alternative criteria will adequately protect present and future potable water supplies and human health;

7. Compliance with the alternative criteria will adequately protect the population of animals, plants, or aquatic life then utilizing the waters;

8. The waters are not lakes or ponds; and

9. Achievement of Class III standards would provide no reasonable expectation of future recreational use of the waters.

(b) The Secretary shall specify by Order the alternative criteria, if any, which the Secretary determines to have been demonstrated by the preponderance of the competent substantial evidence to be more appropriate than the Class III or Class IV criteria specified in the petition.

(c) The Department shall modify the Petitioner's permit consistent with the Secretary's Order.

(5) Exemption for Existing Effluent Ditches.

(a) The Secretary or a Deputy Assistant Secretary shall, upon the petition of a wastewater discharger for whom a Department permit has been issued before August 30, 1988, and after public notice and opportunity for public hearing, issue an order for the duration of the petitioner's permit exempting waters of the state in an effluent ditch from all water quality criteria except those specified in Rule 62-302.500, F.A.C. In order to qualify for this exemption, the petitioner shall affirmatively demonstrate that:

1. The ditch is a wholly artificial man-made conveyance that was constructed as a part of the wastewater treatment process;

2. The ditch contains flowing water only when there is a discharge or immediately after rainfall;

3. The petitioner has legal control of the ditch and abutting land sufficient to restrict public access;

4. Migration of indigenous aquatic organisms into the ditch will be prevented; and

5. The ditch is not used for recreation and contains no significant population of fish or wildlife. "Significant population of fish or wildlife" shall mean the presence of commercially or recreationally important species or significant quantities of organisms which provide food for such species.

(b) The Department shall modify the Petitioner's permit, consistent with the Secretary's or Deputy Assistant Secretary's Order.

(6) Additional relief from the criteria established by this chapter may be provided through an exemption, pursuant to Rule 62-4.243, F.A.C., or a variance, pursuant to Rule 62-103.100, F.A.C.

### **62-600.200 Definitions.**

Terms used in this chapter shall have the meaning specified below.

(1) "Affected discharger" is an existing permitted wastewater discharger, or a proposed wastewater discharger which has either a pending permit application, is included in a 201 Facilities Plan, has a conceptually approved Development of Regional Impact, or otherwise can demonstrate a substantial likelihood of discharging the pollutant within five years.

(2) "Allowable loading" or "available assimilative capacity" is that portion of the loading capacity of a water body that is available for allocating to a point source discharger(s) through regulation by the Department. It is the difference between the loading capacity and the total loading of pollutants from other sources, such as background, stormwater, and exempt sources.

(3) "Annual average daily flow (AADF)" means the total volume of wastewater flowing into a wastewater facility during any consecutive 365 days, divided by 365 and expressed in units of mgd.

(4) "Aquifer" means a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield useful quantities of ground water to wells, springs or surface water.

(5) "Aquitard" means a geological formation or stratum, or artificial barrier, of relatively low permeability which will not transmit water fast enough to furnish an appreciable supply; confining zone.

(6) "Approved methods" means sampling and laboratory testing methods approved by the Department, as specified by Chapter 62-601, F.A.C.

(7) "Arithmetic mean" means the value computed by dividing the sum of a set of terms by the number of terms.

(8) "Assimilative capacity" means the capacity of a body of water or soil-plant system to receive wastewater effluents, reclaimed water, or residuals without violating the provisions of Chapters 62-3, 62-4, 62-7, 62-302, 62-610, 62-611, and 62-640, F.A.C., and this chapter.

(9) "Average daily flow (ADF)" means the total volume of wastewater flowing into a wastewater facility during some defined period of time, divided by the number of days in that period of time, expressed in units of mgd.

(10) "Biochemical oxygen demand (BOD5)" means the quantity of oxygen utilized in the biochemical oxidation of organic matter present in water or wastewater, reported as a five-day value established as determined using approved methods.

(11) "Carbonaceous biochemical oxygen demand (CBOD5)" means the quantity of oxygen utilized in the carbonaceous biochemical oxidation of organic matter present in water or wastewater, reported as a five-day value determined using approved methods.

(12) "Chloride" means the negatively charged chloride ion (Cl-) in water or wastewater, as determined using approved methods.

(13) "Coastal waters" means all estuarine, gulf, or ocean waters which are not classified as open ocean waters.

(14) "Collection/transmission systems" means sewers, pipelines, conduits, pumping stations, force mains, and all other facilities used for collection and transmission of wastewater from individual service connection laterals to facilities intended for the purpose of providing treatment prior to release to the environment.

(15) "Commission" means the Environmental Regulation Commission.

(16) "Composite sample" means a combination of individual samples of wastewater, effluent, or reclaimed water taken at selected intervals, generally hourly or less for some specified time period, to minimize the effect of the variability of the individual sample.

(17) "Conductivity" means the standardized numerical expression of the ability of water or wastewater to carry an electric current, as determined using approved methods.

(18) "Department" means the State of Florida Department of Environmental Protection.

(19) "Design capacity" means the average daily flow projected for the design year which serves as the basis for the sizing and design of the wastewater facilities. The design capacity is established by the permit applicant. The time frame associated with the design capacity (e.g., annual average daily flow, maximum monthly average daily flow, three-month average daily flow) shall be specified by the permit applicant.

(20) "Developed areas" means areas in or adjacent to residential, commercial, or residentially or commercially-zoned areas.

(21) "Disinfection" means the selective destruction of pathogens in wastewater effluents, reclaimed water, and domestic wastewater residuals.

(22) "Disposal system" means injection wells, effluent outfalls, subsurface drain systems, and other facilities utilized for the release of effluents into the environment.

(23) "District" means a water management district created pursuant to Chapter 373, Florida Statutes.

(24) "District office" means the regional district offices of the Department.

(25) "Domestic wastewater" means wastewater derived principally from dwellings, business buildings, institutions, and the like; sanitary wastewater; sewage. Where wastewater from sources other than typical domestic sources (e.g., industrial sources) is combined and treated with wastes from domestic sources, the determination of whether or not the wastewater treatment plant is designated as "domestic" shall be made by the Department considering any or all of the following: wastewater residuals

classification; whether wastewaters have been pretreated or contain constituents within 50-150%, by concentration, of typical domestic wastewater; and whether the permittee, when not required to provide more stringent or otherwise specific levels of treatment, can provide assurance of facility compliance with domestic wastewater treatment standards contained in this chapter.

(26) "Domestic wastewater residuals" means the solid, semisolid, or liquid residue removed during the treatment of municipal wastewater. Not included is the treated effluent or reclaimed water from a domestic wastewater treatment plant.

(27) "Effluent", unless specifically stated otherwise, means water that is not reused after flowing out of any wastewater treatment facility or other works used for the purpose of treating, stabilizing, or holding wastes.

(28) "Effluent limitation" means any restriction established by the Department on quantities, rates, or concentrations of chemical, physical, biological, or other constituents which are discharged from sources into waters of the State.

(29) "Establishment" means a housing, commercial, or institutional development, including, but not limited to, a place of business, assembly, or residence, whether multiple or single family. An establishment will include all buildings, structures, mobile homes, and appurtenant lands.

(30) "Estuary" means a semi-enclosed naturally existing coastal body of water which has a free connection with the open sea and within which the chloride concentration at the surface is equal to or greater than 1,500 milligrams per liter.

(31) "Fecal coliforms" means members of the coliform group capable of producing gas from lactose at 44.5° C, as determined using approved methods.

(32) "Functionally complete" means that the wastewater facilities or one or more of its components have been constructed and are capable of functioning as intended and as described in the preliminary design report, construction application, or plans and specifications. Additional construction may be needed to fully meet the requirements of the construction contract documents.

(33) "Geometric mean" means that nth root of the product of n numbers.

(34) "Grab sample" means a single sample of wastewater, effluent, or reclaimed water.

(35) "Ground water" means water beneath the surface of the ground, whether or not flowing through known and definite channels.

(36) "Holding pond" means a storage tank or artificial impoundment or pond constructed above, on, below, or partly below the ground surface that is designed and maintained to store a specific volume of fluid and minimize fluid losses other than those primarily occurring by evaporation; generally, holding ponds are not intended to provide a mechanism for pollutant reduction. When used in conjunction with rapid-rate land application systems or other systems described in Chapter 62-610, F.A.C., holding ponds can also provide a mechanism to accomplish nitrogen reduction.

(37) "Hydrogeology" means the branch of hydrology that deals with ground water, its occurrence and movements, its replenishment and depletion, the properties of rocks that control ground water movement and storage, and the methods of investigation and use of ground water.

(38) "Individual wastewater" means wastewater not otherwise defined as domestic wastewater, including the runoff and leachate from areas that receive pollutants associated with industrial or commercial storage, handling or processing.

(39) "Land application" means the reuse of reclaimed water or the utilization or disposal of effluents or wastewater residuals on, above, or into the surface of the ground through spray irrigation, land spreading, or other methods.

(40) "Loading capacity" is the greatest amount of a pollutant loading (in terms of mass per time or mass per volume) that a water body can receive without violating water quality standards. Such loading shall be established at a level necessary to implement the applicable water quality standards with a margin of safety which takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality.

(41) "Local program" means any county, municipality, or combination thereof that has established and administers a pollution control program approved by the Department in compliance with Section 403.182, Florida Statutes, as amended.

(42) "Maximum daily flow" means the largest volume of wastewater flowing into a wastewater facility during any consecutive 24-hour period, expressed in units of mgd; maximum 24-hour flow.

(43) "Maximum monthly average daily flow (MMADF)" means the largest volume of wastewater flowing into a wastewater facility during any calendar month, divided by the number of days in that month and expressed in units of mgd.

(44) "Membrane filter (MF) method" means a method for the direct enumeration of specific microorganisms resulting from the passage of an appropriate volume of water or wastewater through a membrane filter that retains the microorganisms present in the sample, using approved methods.

(45) "Milligrams per liter (mg/L)" means the quantity of material present in water or wastewater expressed on the basis of the weight (milligrams) per unit volume of solution (liter).

(46) "Milliliter (mL)" means the metric unit of capacity equal to one thousandth of the volume of a liter.

(47) "Minimum 24-hour flow" means the smallest volume of wastewater flowing into a wastewater facility during any consecutive 24-hour period, expressed in units of mgd.

(48) "Modification" means any alteration, expansion, upgrade, extension, replacement of, or addition to an existing wastewater facility or activity. "Modification" does not include, and no permit revision is required for structural changes to an existing wastewater facility or activity, site or plant, that do not change the quality, nature, or quantity of the discharge of wastes or that do not cause water pollution.

(49) "Monitoring well" means a strategically located well from which ground water levels are measured and samples are withdrawn for water quality analysis.

(50) "Monthly average daily flow" means the total volume of wastewater flowing into a wastewater facility during a calendar month, divided by the number of days in that month and expressed in mgd.

(51) "Most probable number (MPN) method" means a method for the detection and estimation of specific microorganisms in water or wastewater samples by the multiple fermentation tube technique, as determined using approved methods.

(52) "NGVD" means National Geodetic Vertical Datum.

(53) "Nitrate (NO<sub>3</sub>)" means the nitrogen content present in water or wastewater attributable to the nitrate (NO<sub>3</sub>) ion and expressed as elemental nitrogen, N, as determined using approved methods.

(54) "Nitrite (NO<sub>2</sub>)" means the nitrogen content present in water or wastewater attributable to the nitrite (NO<sub>2</sub>) ion and expressed as elemental nitrogen, N, as determined using approved methods.

(55) "Ocean outfall" means the outlet or structure through which effluent is finally discharged to the marine environment which includes the territorial sea, contiguous zone and the ocean.

(56) "Open ocean waters" means all surface waters extending seaward from the most seaward natural 90-foot (15-fathom) isobath. Contour lines may be determined from National Oceanic and Atmospheric Administration Charts.

(57) "Operator" means any person who is principally engaged in and is in charge on-site of the actual treatment plant operation and includes the person who is in charge of treatment plant operation for a shift or period of operation during any part of the day, as certified in accordance with Chapter 62-602, F.A.C.

(58) "Outfall" means the outlet or structure through which effluent is finally discharged to a receiving water.

(59) "Pathogens" means disease-producing organisms.

(60) "Peak hourly flow (PHF)" means the average flow rate during the one-hour period of the day when wastewater flows are at a maximum, expressed in units of mgd.

(61) "Percolation" means the generally vertical movement of water through soil or other unconsolidated medium to the water table and to lower aquifers where occurring.

(62) "Permitted capacity" means the treatment capacity for which a plant is approved by Department permit expressed in units of mgd. The permit shall specify the time frame associated with the permitted capacity (e.g., annual average daily flow, maximum monthly average daily flow, three-month average daily flow).

(63) "Permittee" means the owner, operator or other entity to which a permit for a wastewater facility or activity is issued by the Department. The term "permittee" shall be functionally synonymous with the terms "owner", "contractor", and "licensee" but shall not include licensed individuals, such as State certified operators, unless they are the persons to whom a facility permit is issued by the Department. The term shall extend to a permit "applicant" for purposes of this chapter.

(64) "pH" means the negative common logarithm of the hydrogen-ion activity in moles per liter, as determined using approved methods.

(65) "Pollution" means the presence in the outdoor atmosphere or waters of the state of any substances, contaminants, noise, or man-made or man-induced alteration of the chemical, physical, biological, or radiological integrity of air or water in quantities or levels which are or may be potentially harmful or injurious to human health or welfare, animal or plant life, or property, including outdoor recreation.

(66) "Preapplication waste treatment" means that level of treatment provided prior to application of reclaimed water or effluent to a land application system.

(67) "Reclaimed water" means water that has received at least secondary treatment and is reused after flowing out of a wastewater treatment facility.

(68) "Reuse" means the deliberate application of reclaimed water, in compliance with Department and District rules, for a beneficial purpose.

(a) Where appropriate, said uses may encompass:

1. Landscape irrigation (such as irrigation of golf courses, cemeteries, highway medians, parks, playgrounds, school yards, retail nurseries and residential properties);

2. Agricultural irrigation (such as irrigation of food, fiber, fodder and seed crops, wholesale nurseries, sod farms, and pastures);

3. Aesthetic uses (such as decorative ponds and fountains);

4. Ground water recharge (such as slow-rate, rapid-rate, and absorption field land application systems) but not including disposal methods described in paragraph (b), below;

5. Industrial uses (such as cooling water, process water, and wash waters);

6. Environmental enhancement of surface waters resulting from discharge of reclaimed water having received at least advanced wastewater treatment or from discharge of reclaimed water for wetlands restoration;

7. Fire protection; or

8. Other useful purpose.

(b) Overland flow land application systems, rapid-rate land application systems providing continuous loading to a single percolation cell, other land application systems involving less than secondary treatment prior to application, septic tanks, and ground water disposal systems using Class I wells injecting effluent or wastes into Class G-IV waters shall be excluded from the definition of reuse.

(69) "Secondary treatment" means wastewater treatment to a level that will achieve the effluent limitations specified in subsection 62-600.420(1), F.A.C.



(70) "Secretary" means the Secretary of the Department of Environmental Protection.

(71) "Septic tank" means a watertight receptacle constructed to promote separation of solid and liquid components of wastewater to provide limited digestion of organic matter, to store solids, and to allow clarified liquid to discharge for further treatment and disposal in a soil absorption system.

(72) "Service connection lateral" means the sewer which connects the point(s) at which wastewater leaves an establishment which is its source and the point at which it enters a collection or pretreatment system.

(73) "Subsurface drain" means an underground conduit system (which may include one or more vertical water wells) made of various construction materials (e.g., tile) installed to collect unconfined ground waters and applied reclaimed waters or effluents, and provide conveyance to the treatment plant or discharge point; underdrain.

(74) "Surface water" means water upon the surface of the earth, whether contained in bounds created naturally or artificially or diffused. Water from natural springs shall be classified as surface water when it exits from the spring onto the earth's surface.

(75) "Technology-based effluent limitation (TBEL)" means a minimum waste treatment requirement, established by the Department, based on treatment technology. The minimum treatment requirements may be set at levels more stringent than that which is necessary to meet water quality standards of the receiving water body as set out specifically in other sections of this chapter.

(76) "Three-month average daily flow" means the total volume of wastewater flowing into a wastewater facility during a period of three consecutive months, divided by the number of days in this three-month period and expressed in units of mgd. The three-month average daily flow also can be calculated by adding the three monthly average daily flows observed during this three-month period and dividing by three.

(77) "Total ammonia" means the sum of nitrogen content present as un-ionized ammonia (NH<sub>3</sub>) and the nitrogen content present as ammonium (NH<sub>4</sub><sup>+</sup>) and expressed as elemental nitrogen, N, as determined using approved methods.

(78) "Total chlorine residual" means the chlorine remaining in water or wastewater at the end of a specific contact period as combined and free chlorine, measured analytically by approved methods as combined chlorine residual.

(79) "Total dissolved solids (TDS)" means the amount of dissolved constituents present in water or wastewater, usually expressed in milligrams per liter and analyzed as filtrable residue, as determined using approved methods.

(80) "Total Kjeldahl nitrogen (TKN)" means the sum of free ammonia and organic nitrogen compounds in water or wastewater and expressed as elemental nitrogen, N, as determined using approved methods.

(81) "Total nitrogen (TN)" means the total content of the nitrogen species of organic nitrogen, ammonia, nitrate and nitrite present in water or wastewater and expressed as elemental nitrogen, N, as determined using approved methods.

(82) "Total organic carbon (TOC)" means the carbon content in water or wastewater that is present in the form of organic material, as determined using approved methods.

(83) "Total phosphorus (TP)" means the total phosphate content of water or wastewater including all of the orthophosphates and condensed phosphates, both soluble and insoluble, and organic and inorganic species and expressed as elemental phosphorus, P, as determined using approved methods.

(84) "Total suspended solids (TSS)" means solids that either float on the surface of, or are suspended in, water or wastewater; the quantity of material removed from a sample in a laboratory test referred to as nonfiltrable residue, as determined using approved methods.

(85) "Treatment" means any method, technique, or process which changes the physical, chemical, or biological character or composition of wastewater and thereby reduces its potential for polluting waters of the state.

(86) "Treatment plant" means any plant or other works used for the purpose of treating, stabilizing, or holding wastes.

(87) "Type I facility" means a wastewater facility having a permitted capacity of 500,000 gallons per day or greater.

(88) "Type II facility" means a wastewater facility having a permitted capacity of 100,000 up to but not including 500,000 gallons per day.

(89) "Type III facility" means a wastewater facility having a permitted capacity of over 2,000 up to but not including 100,000 gallons per day.

(90) "Unconfined aquifer" means an aquifer that has a water table.

(91) "Underground injection" means effluent disposal or reuse by well injection into underground geologic formations.

(92) "Vector" means a carrier organism that is capable of transmitting a pathogen from one organism to another.

(93) "Virus" means an ultra-microscopic, obligate, intracellular, parasitic pathogen consisting of a single type nucleic acid (either RNA or DNA) and a protein coat.

(94) "Wastes" means sewage, industrial wastes, and all other liquid, gaseous, solid, radioactive, or other substances which may pollute or tend to pollute any waters of the State.

(95) "Wastewater" means the combination of liquid and water-carried pollutants from residences, commercial buildings, industrial plants, and institutions together with any ground water, surface runoff or leachate that may be present.

(96) "Wastewater facility" or "facility" means any facility which discharges wastes into waters of the State or which can reasonably be expected to be a source of water pollution and includes any or all of the following: the collection and transmission system, the wastewater treatment works, the reuse or disposal system, and the residuals management facility.

(97) "Waters" shall be as defined in Section 403.031(12), Florida Statutes.

(98) “Water hammer” means a dynamic pressure caused by the sudden transformation of kinetic energy to pressure energy when a liquid flowing full in a pipeline is abruptly stopped.

(99) “Water quality-based effluent limitation (WQBEL)” means an effluent limitation, which may be more stringent than a technology-based effluent limitation, that has been determined necessary by the Department to ensure that water quality standards in a receiving body of water will not be violated.

(100) “Water quality standards” means standards adopted by the Environmental Regulation Commission pursuant to Chapter 403, Florida Statutes, including standards comprised of designated most beneficial uses (classification of waters), the numerical and narrative criteria applied to the specific water use or classification, the Florida anti-degradation policy, and the moderating provisions contained in Chapters 62-3, 62-4, and 62-302, F.A.C.

(101) “Water table” means the upper surface of the zone of saturation where ground water pressures are equal to atmospheric pressure, except where that surface is formed by an impermeable stratum.

(102) “Zone of mixing” means a volume of surface water containing the point or area of discharge and within which an opportunity for the mixture of wastes with receiving surface waters has been afforded; mixing zone.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.200, Amended 12-24-96.*

### **62-600.300 General Technical Guidance and Related Rules.**

(1) The technical standards and criteria contained in the following standard manuals and technical publications listed in subsection (4) below and those referenced throughout this chapter are hereby incorporated by reference and shall be applied, if applicable, in determining whether permits allowing construction or modification of domestic wastewater facilities shall be issued or denied. Chapter 62-610, F.A.C., shall be applied to reuse of reclaimed water systems and to land application projects.

(2) Deviations from the standards and criteria contained in the publications listed in subsection (4) below shall be approved by the Department provided that:

(a) The preliminary design report provides reasonable assurance that the proposed design will provide collection, transmission, treatment, and reuse or disposal meeting the requirements of this chapter; and either:

(b) Conforming with these standards cannot be done except at unreasonably higher costs; or

(c) It is not technically feasible to conform to these standards because of site conditions or incompatibility with a proposed facility design employing new and innovative techniques which assure compliance with the remainder of this chapter.

(3) The Department shall require deviation from the standards and criteria contained in the publications listed in subsection (4) below upon a finding that conformance to them will not assure compliance with the remainder of this chapter or other rules of the Department.

(4) Standard Manuals and Publications.

(a) Water Pollution Control Federation, 1977. Manual of Practice No. 8. Wastewater Treatment Plant Design. W.P.C.F., 601 Wythe Street, Alexandria, Virginia 22314-1994.

(b) Great Lakes/Upper Mississippi River Board of State Sanitary Engineers, 1978 edition. Recommended Standards for Sewage Works. Health Education Service, Inc., P. O. Box 7126, Albany, New York 12224.

(c) U.S. Environmental Protection Agency, 1987. Phosphorus Removal-Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(d) U.S. Environmental Protection Agency, 1973. Carbon Absorption-Process Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(e) U.S. Environmental Protection Agency, 1975. Suspended Solids Removal-Process Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(f) U.S. Environmental Protection Agency, 1974. Upgrading Existing Wastewater Treatment Plants – Process Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(g) U.S. Environmental Protection Agency, 1985. Odor and Corrosion Control in Sanitary Sewerage Systems and Treatment Plants – Process Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(h) U.S. Environmental Protection Agency, 1975. Nitrogen Control – Process Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(i) U.S. Environmental Protection Agency, 1981. Land Treatment of Municipal Wastewater – Process Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(j) U.S. Environmental Protection Agency, 1977. Wastewater Treatment Facilities for Sewered Small Communities – Process Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(k) U.S. Environmental Protection Agency, 1979. Sludge Treatment and Disposal – Process Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(l) U.S. Environmental Protection Agency, 1974. Design Criteria for Mechanical, Electric, and Fluid System and Component Reliability – MCD-05. Environmental Quality Instructional Resources Center, The Ohio State University, 1200 Chambers Road, Room 310, Columbus, Ohio 43212.

(m) U.S. Environmental Protection Agency, 1974. Protection of Shellfish Waters – MCD-06. Environmental Quality Instructional Resources Center, The Ohio State University, 1200 Chambers Road, Room 310, Columbus, Ohio 43212.

(n) U.S. Environmental Protection Agency, 1977. Procedures Manual for Groundwater Monitoring at Solid Waste Disposal Facilities. National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161.

(o) U.S. Environmental Protection Agency, 1980. Design Manual-Onsite Wastewater Treatment and Disposal Systems. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(p) U.S. Department of Agriculture, Soil Conservation Service, 1973. Drainage of Agricultural Land. Water Information Center, Inc., 125 East Bethpage Road, Plainview, New York 11803.

(q) Florida Department of Transportation, 1985. Florida Land Use, Cover and Forms Classification System. Procedure No. 550-010-001-A. Florida Department of Transportation, Maps and Publications Sales, Mail Station 12, 605 Suwannee Street, Tallahassee, Florida 32399-0450.

(r) U.S. Environmental Protection Agency, 1976. Direct Environmental Factors at Municipal Wastewater Works – MCD-20. Environmental Quality Instructional Resources Center, The Ohio State University, 1200 Chambers Road, Room 310, Columbus, Ohio 43212.

(s) U.S. Environmental Protection Agency, 1984. Land Treatment of Municipal Wastewater – Supplement on Rapid Infiltration and Overland Flow – Process Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(t) U.S. Environmental Protection Agency, 1986. Municipal Wastewater Disinfection – Design Manual. EPA Center for Environmental Research Information, 26 West Martin Luther King Drive, Cincinnati, Ohio 45268.

(5) Members of the public may request and obtain copies of the publications listed in subsection (4) above by contacting the appropriate publisher at the address indicated. Copies of the above publications are on file with the Florida Secretary of State and the Joint Administrative Procedures Committee. Copies are also on file and available for review in the Department's Tallahassee offices (including the Information Center) and in the Department's district and branch offices where they may be reviewed during normal business hours.

(6) Related rules. The following Department rules may be applicable to domestic wastewater facility projects. This listing is provided solely for the purpose of noting other Department rules which the applicant may need to consult and comply with during the planning, design, construction, and operation of domestic wastewater facility projects. This listing is not intended to be a comprehensive listing of every rule which may be applicable.

(a) Collection system, transmission system, and low pressure sewer system requirements are contained in Chapter 62-604, F.A.C.

(b) Industrial pretreatment requirements are contained in Chapter 62-625, F.A.C.

(c) Requirements for disposal or land application of domestic wastewater residuals are contained in Chapters 62-2, 62-640, and 62-701, F.A.C.

(d) Underground injection control requirements are contained in Chapter 62-528, F.A.C.

(e) Reuse and land application system requirements are contained in Chapter 62-610, F.A.C.

(f) Surface water discharge requirements are contained in Chapter 62-650, F.A.C.

(g) Wetland discharge requirements are contained in Chapter 62-611, F.A.C.

(h) Antidegradation policy requirements are contained in Rules 62-4.242 and 62-302.300, F.A.C.

(i) Surface water quality standards are contained in Chapter 62-302, F.A.C.

(j) Ground water quality standards are contained in Chapter 62-520, F.A.C.

(k) Drinking water standards are contained in Chapter 62-550, F.A.C.

(l) Wellhead protection requirements are contained in Chapter 62-521, F.A.C.

(m) Monitoring requirements are contained in Chapter 62-601, F.A.C. Requirements for ground water monitoring plans are contained in Chapter 62-522, F.A.C.

(n) Operator staffing requirements are contained in Chapter 62-699, F.A.C.

(o) Permitting requirements and associated forms are contained in Chapter 62-620, F.A.C.

(p) Fees related to permitting are listed in Chapter 62-4, F.A.C.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088, 403.913 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088, 403.913, 403.918 FS. History—New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.300, Amended 12-24-96.*

## **PART II TREATMENT FACILITIES**

### **62-600.400 Design Requirements.**

(1) Facilities.

(a) New wastewater treatment plants and modifications of existing plants shall be designed in accordance with sound engineering practice. General technical guidance is provided by references listed under Rule 62-600.300, F.A.C.

(b) For new facilities and modifications of existing facilities, it shall be the design objective to select treatment processes and equipment that will efficiently and reliably meet required effluent limitations. Unless otherwise stated, new, expanded, or modified wastewater treatment and domestic wastewater residuals treatment, handling, and dewatering facilities shall be designed to provide Class III reliability as described in paragraph 62-600.300(4)(1), F.A.C. The minimum Class III reliability requirement shall apply to new, expanded, and modified facilities for which the Department received complete construction permit applications after July 1, 1991, but Class III reliability requirements shall only apply to the new, expanded, or modified portions of the facilities. Facility reliability shall be addressed in the preliminary design report as required by subsection 62-600.710(2) and Rule 62-600.715, F.A.C. The Department shall approve other methods of providing Class I, II, or III reliability if the permittee provides reasonable assurances in the preliminary design report that the level of reliability provided is equivalent to the class of reliability required (i.e., Class I, II, or III, whichever applies).

(c) Innovative or alternative treatment processes for Type I and Type II facilities shall be reviewed on their merit. When sufficient supporting information has been presented to the Department, installation may be allowed on an experimental basis for the period of time necessary to evaluate the new technology. Except as provided in Section 403.088(3)(a), Florida Statutes, an operation permit shall not be issued unless the permittee has provided supporting information which demonstrates to the Department that the technology is capable of consistently and reliably producing effluent or reclaimed water meeting the standards of Chapters 62-3 and 62-302, F.A.C., and this chapter.

(d) For Type III conventional wastewater treatment plants utilized for domestic wastewater treatment in smaller communities, residential areas, institutions, commercial establishments, recreational areas, or similar areas:

1. Generally, it shall be a design objective to select proven treatment processes and equipment that will efficiently and reliably meet required effluent limitations, while minimizing the amount and complexity of routine operation and maintenance requirements for the system.

2. The design shall be conservative and shall sufficiently provide for alternative process adjustments necessary for adequately treating widely varying (shock) hydraulic, organic, or toxic loadings often experienced with these types of plants.

(2) Plant Sites.

(a) New treatment plants and modifications to existing plants shall be designed and located on the site so as to minimize adverse effects resulting from odors, noise, aerosol drift and lighting. The permittee shall give reasonable assurance that the treatment plant or modifications to an existing plant shall not cause odor, noise, aerosol drift or lighting in such amounts or at such levels that they adversely affect neighboring residents, in commercial or residential areas, so as to be potentially harmful or injurious to human health or welfare or unreasonably interfere with the enjoyment of life or property, including outdoor recreation. Reasonable assurance may be based on such means as aeration, landscaping, treatment of vented gases, setback distances, chemical additions, prechlorination, ozonation, innovative structural design or other similar techniques and methods. All such design measures shall be included in the preliminary design report.

(b) All treatment plant sites shall be enclosed with a fence or otherwise designed with appropriate features that discourage the entry of animals and unauthorized persons.

(c) The potential for damage or interruption of operation because of flooding shall be considered by the permittee when siting new treatment plants and expansions of existing plants at inland or coastal locations. The treatment plant structures essential for the purpose of treating, stabilizing, conveying, or holding incompletely treated waste and electrical and mechanical equipment shall be protected from physical damage by the 100-year flood. The treatment plant shall be designed to remain fully operational and accessible during the 25-year flood; lesser flood levels may be designed for, if justified in the preliminary design report based on local conditions, water surface elevations, forces arising from water movement, wave heights, flood protection measures provided, and provisions for wastewater storage such that applicable water quality standards will be met; but in no case shall less than a 10-year flood be used. Design for flood protection shall include considerations for wave action as appropriate. These flood protection considerations shall be addressed in the preliminary design report and shall be based upon available information; where site-specific information is unavailable, sound engineering practices shall be used in siting and design of treatment plant facilities.

(3) Permitted Capacity.

(a) The permittee shall establish the design capacity of a wastewater facility in the permit application and shall specify the time frame (e.g., annual average daily flow, maximum monthly average daily flow, three-month average daily flow). The time frame selected shall reflect seasonal variations in flows, if any.

(b) The Department shall include the permitted capacity in the facility permit and shall specify the time frame (e.g., annual average daily flow, maximum monthly average daily flow, three-month average daily flow). The permitted capacity shall not exceed the design capacity. The Department shall establish a permitted capacity less than the design capacity if:

1. The total available reuse and disposal permitted capacity is less than the design capacity; or

2. The preliminary design report does not provide reasonable assurances that the proposed wastewater facility technology will function as intended at the design capacity requested by the permittee.

(c) When the permit includes the treatment facilities and reuse or disposal systems, different permitted capacities may be established for the treatment, reuse, and disposal systems.

(4) Sampling Points.

(a) Provisions shall be made in the design for easy access points for the purpose of obtaining representative influent and effluent samples. These access points shall be dry points which can be reached safely.

(b) Provisions for flow measurements shall be in accordance with Chapter 62-601, F.A.C.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.086, 403.087, 403.088 FS. History—New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.400, Amended 12-24-96.*

**62-600.405 Planning for Wastewater Facilities Expansion.**

(1) The permittee shall provide for the timely planning, design, and construction of wastewater facilities necessary to provide proper treatment and reuse or disposal of domestic wastewater and management of domestic wastewater residuals.

(2) The permittee shall routinely compare flows being treated at the wastewater facilities with the permitted capacities of the treatment, residuals, reuse, and disposal facilities.

(3) When the three-month average daily flow for the most recent three consecutive months exceeds 50 percent of the permitted capacity of the treatment plant or reuse and disposal systems, the permittee shall submit to the Department a capacity analysis report.

(4) The initial capacity analysis report shall be submitted according to the following:

(a) For new or expanded wastewater facilities for which the Department received a complete construction permit application after July 1, 1991, the initial capacity analysis report shall be submitted within 180 days after the last day of the last month in the three-month period referenced in subsection 62-600.405(3), F.A.C.

(b) For wastewater facilities for which the Department received a complete construction permit application on or before July 1, 1991, the initial capacity analysis report shall be submitted when the next application for a permit to construct or operate wastewater facilities is submitted to the Department unless:

1. The three-month average daily flow for any three consecutive months during the period July 1, 1990 to June 30, 1991 exceeds 90 percent of the permitted capacity. In such cases, the initial capacity analysis report shall be submitted to the Department no later than January 1, 1992.

2. The three-month average daily flow for any three consecutive months during the period July 1, 1990 to June 30, 1991 exceeds 75 percent of the permitted capacity. In such cases, the initial capacity analysis report shall be submitted to the Department no later than July 1, 1992.

(c) In no case shall the initial capacity analysis report be required to be submitted before July 1, 1991 or before the three-month average daily flow exceeds 50 percent of the permitted capacity of the treatment plant or reuse or disposal systems, as described in subsection 62-600.405(3), F.A.C.

(5) The permittee shall submit updated capacity analysis reports to the Department according to the following:

(a) If the initial capacity analysis report or an update of the capacity analysis report documents that the permitted capacity will not be equaled or exceeded for at least 10 years, an updated capacity analysis report shall be submitted to the Department at five-year intervals or at each time the permittee applies for an operation permit or renewal of an operation permit, whichever occurs first.

(b) If the initial capacity analysis report or an update of the capacity analysis report documents that the permitted capacity will be equaled or exceeded within the next 10 years, an updated capacity analysis shall be submitted to the Department annually.

(6) The capacity analysis report or an update of the capacity analysis report shall evaluate the capacity of the plant and contain data showing the permitted capacity; monthly average daily flows, three-month average daily flows, and annual average daily flows for the past 10 years or for the length of time the facility has been in operation, whichever is less; seasonal variations in flow; flow projections based on local population growth rates and water usage rates for at least the next 10 years; an estimate of the time required for the three-month average daily flow to reach the permitted capacity; recommendations for expansions; and a detailed schedule showing dates for planning, design, permit application submittal, start of construction, and placing new or expanded facilities into operation. The report shall update the flow-related and loading information contained in the preliminary design report submitted as part of the most recent permit application for the wastewater facilities pursuant to Rules 62-600.710 and 62-600.715, F.A.C.

(7) The capacity analysis report shall be signed by the permittee and shall be signed and sealed by a professional engineer registered in Florida.

(8) Documentation of timely planning, design, and construction of needed expansions shall be submitted according to the following schedule:

(a) If the initial capacity analysis report or an update of the capacity analysis report documents that the permitted capacity will be equaled or exceeded within the next five years, the report shall include a statement, signed and sealed by a professional engineer registered in Florida, that planning and preliminary design of the necessary expansion have been initiated.

(b) If the initial capacity analysis report or an update of the capacity analysis report documents that the permitted capacity will be equaled or exceeded within the next four years, the report shall include a statement, signed and sealed by an engineer registered in Florida, that plans and specifications for the necessary expansion are being prepared.

(c) If the initial capacity analysis report or an update of the capacity analysis report documents that the permitted capacity will be equaled or exceeded within the next three years, the permittee shall submit a complete construction permit application to the Department within 30 days of submittal of the initial capacity analysis report or the update of the capacity analysis report.

(d) If the initial capacity analysis report or an update of the capacity analysis report documents that the permitted capacity will be equaled or exceeded within the next six months, the permittee shall submit to the Department an application for an operation permit for the expanded facility. The operation permit application shall be submitted no later than the submittal of the initial capacity analysis report or the update of the capacity analysis report.

(9) If requested by the permittee, and if justified in the initial capacity analysis report or an update to the capacity analysis report based on design and construction schedules, population growth rates, flow projections, and the timing of new connections to the sewerage system such that adequate capacity will be available at the wastewater facility, the Secretary or Secretary's designee shall adjust the schedule specified in subsection 62-600.405(8), F.A.C.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.086, 403.087, 403.088, 403.0881 FS. History—New 1-30-91, Formerly 17-600.405.*

#### **62-600.410 Operation and Maintenance Requirements.**

(1) All domestic wastewater treatment plants shall be operated and maintained in accordance with the applicable provisions of this chapter and so as to attain, at a minimum, the reclaimed water or effluent quality required by the operational criteria specified in this chapter, and to meet the appropriate domestic wastewater residuals management criteria specified in Chapters 62-2, 62-7, 62-640 and 62-701, F.A.C.

(2) All reuse and land application systems shall be operated and maintained in accordance with the applicable provisions of this chapter and the provisions of Chapter 62-610, F.A.C.

(3) All underground injection effluent disposal systems shall be operated and maintained in accordance with the applicable provisions of this chapter and the provisions of Chapter 62-28, F.A.C.

(4) Wetlands application systems shall be operated and maintained in accordance with the applicable provisions of this chapter and the provisions of Chapter 62-611, F.A.C.

(5) The operation of all treatment plants shall be under the supervision of an operator certified in accordance with Chapter 61E12-41, F.A.C. All facility operations shall provide for the minimum care and maintenance of the facility in accordance with Chapters 61E12-41 and 62-699, F.A.C.

(6) All facilities and equipment necessary for the treatment, reuse, and disposal of domestic wastewater and domestic wastewater residuals shall be maintained, at a minimum, so as to function as intended.

(7) All treatment plant permittees shall be responsible for making all facilities safe in terms of public health and safety at all times, including periods of inactivation or abandonment. The permittee shall give the Department written notice at least 60 days before inactivation or abandonment of a treatment plant and shall specify what steps will be taken to safeguard public health and safety.

(8) In the event that the treatment facilities or equipment no longer function as intended, are no longer safe in terms of public health and safety, or odor, noise, aerosol drift, or lighting adversely affect neighboring developed areas at the levels prohibited by paragraph 62-600.400(2)(a), F.A.C., corrective action (which may include additional maintenance or modifications of the treatment plant) shall be taken by the permittee. Other corrective action may be required to ensure compliance with rules of the Department.

(9) All treatment plant permittees shall provide the operating data, records, and analytical results as required to document the operational results of the treatment plant, reuse system, and disposal system. These records shall be transmitted to the appropriate district office of the Department, in accordance with Chapters 62-601 and 62-620, F.A.C.

(10) Copies of the Department permit; record drawings pursuant to Rule 62-600.717 and paragraph 62-600.730(4)(b), F.A.C.; the approved operation and maintenance manual pursuant to Rule 62-600.720 and paragraph 62-600.730(4)(c), F.A.C.; schedules; logs; and all recorded operating data shall be kept available at all facilities or other acceptable sites approved by the Department for use by plant operators and inspection by the Department.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 403.101 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 11-27-89, Amended 1-30-91, Formerly 17-600.410, Amended 12-24-96.*

#### **62-600.420 Minimum Treatment Standards - Technology Based Effluent Limitations (TBELs).**

(1) Secondary Treatment.

(a) Surface water disposal (excluding ocean outfalls).

All domestic wastewater facilities are required, at a minimum, to provide secondary treatment of wastewater. New facilities and modifications of existing facilities shall be designed to achieve an effluent after disinfection containing not more than 20 mg/L CBOD<sub>5</sub> and 20 mg/L TSS, or 90% removal of each of these pollutants from the wastewater influent, whichever is more stringent. All facilities shall be operated to achieve, at a minimum, the specified effluent limitations (20 mg/L). All facilities shall be subject to provisions of Rule 62-600.110, F.A.C., regarding the applicability of the above requirements, and Rules 62-600.440, 62-600.445 and 62-600.740, F.A.C., regarding compliance with these requirements. Appropriate disinfection and pH control of effluents shall also be required.

(b) Surface water disposal via ocean outfall.

1. All domestic wastewater treatment plants discharging to Class III coastal waters shall meet, at a minimum, the appropriate secondary treatment criteria contained in paragraph 62-600.420(1)(a), F.A.C. Appropriate disinfection and pH control of the effluents shall also be required. Discharges to coastal waters are subject to the applicable limitations of Rule 62-600.520, F.A.C.

2. All domestic wastewater treatment plants discharging to open ocean waters are required, at a minimum, to provide secondary treatment as defined herein. New treatment plants and modifications of existing plants shall be designed to achieve an effluent prior to discharge containing not more than 30 mg/L CBOD<sup>5</sup> and 30 mg/L TSS, or 85% removal of these pollutants from the wastewater influent, whichever is more stringent. All facilities, whether new or existing, shall be operated to achieve, at a minimum, the specified effluent limitations (30 mg/L) and shall be subject to the provisions of Rules 62-600.440, 62-600.445 and 62-600.740, F.A.C., regarding compliance with these requirements. Appropriate disinfection and pH control of the effluents shall also be required. Deviations from the minimum treatment requirements for all facilities, whether new or existing, discharging to open ocean waters shall only be approved pursuant to subsection 62-600.520(5), F.A.C.

(c) Reuse, land application or ground water discharge (excluding underground injection).

1. The secondary treatment criteria specified in paragraph 62-600.420(1)(a), F.A.C., at a minimum, generally are applicable as preapplication waste treatment requirements for all facilities, whether new or existing. The design for more stringent levels of treatment may be required by the Department as a result of the method of reclaimed water reuse or effluent application/distribution; the extent of intended public access; the characteristics of the potential receiving surface waters (i.e., where overland flow runoff or application site underdrainage is involved); or ground water protection pursuant to reuse and effluent disposal provisions of Rule 62-600.530, F.A.C.

2. Under the restricted conditions stipulated in applicable portions of Chapter 62-610, F.A.C., for overland flow and certain underdrained slow-rate land application systems, preapplication concentrations of CBOD<sup>5</sup> and TSS in the effluent prior to discharge onto application sites are not required to be in conformance with the secondary treatment standard specified above. However, the secondary treatment standard, at a minimum, shall be met prior to final effluent release to surface waters via facilities designed for operational control of effluent.

(d) Ground water discharge via underground injection.

1. The secondary treatment criteria specified in paragraph 62-600.420(1)(a), F.A.C., at a minimum, shall apply to all facilities utilizing Class I wells injecting domestic effluent into Class G-IV waters. Deviations from the minimum treatment requirements for such facilities may only be approved pursuant to subsection 62-600.540(5), F.A.C.

2. The design of new facilities and modifications of existing facilities to achieve pollutant reduction to levels beyond that specified by secondary treatment shall be required for reclaimed water or effluents discharged from Class V wells into Class G-II waters. These levels shall be as specified in subsection 62-600.540(2), F.A.C.

(2) Additional Levels of Treatment.

(a) The design of new facilities and modification of existing facilities to achieve pollutant reduction to levels beyond that specified by secondary treatment shall be required before discharge to Class I waters. Class I reliability, as described in paragraph 62-600.300(4)(l), F.A.C., shall be provided. The Department shall approve other methods of providing facility reliability (as provided by paragraph 62-600.400(1)(b), F.A.C.) if the permittee provides reasonable assurances in the preliminary design report that the level of reliability provided is equivalent to the class of reliability required. Treatment shall be provided such that reclaimed water or effluent limitations are met after disinfection (however, reasonable assurances shall be provided that the TSS limitation required to achieve high-level disinfection as specified in paragraph 62-600.440(5)(e), F.A.C., shall be achieved before disinfection regardless of the actual reclaimed water or effluent compliance monitoring location) and:

1. Reclaimed water or effluent discharge meets water quality standards pursuant to Rule 62-600.430, F.A.C. (no mixing zone shall be allowed);

2. Reclaimed water or effluent discharge shall receive high-level disinfection;

3. Reclaimed water or effluent discharge shall not exceed 10 milligrams per liter TN; and

4. Reclaimed water or effluent contains maximum pollutant levels less than those specified for community water systems in Chapter 62-550, F.A.C. These criteria shall be modified, by the Department, up to the level of the ambient receiving surface water characteristics (but in no case to exceed the levels set for Class I waters) where such characteristics exceed the levels stipulated in Chapter 62-550, F.A.C., or to reflect the characteristics of water reaching the sewer system which violate community drinking water standards prior to further contamination (if any) resulting from the introduction of domestic or industrial wastes. Enforcement of community drinking water standards shall be pursuant to Chapter 62-550, F.A.C.

(b) The design of facilities to achieve pollutant reduction to levels beyond that specified by secondary treatment shall be required for reclaimed water or effluents discharged from land application sites (including site underdrainage systems) to surface waters if necessary to maintain water quality standards for the receiving waters. These levels may be established via WQBELs (i.e., subsection 62-600.430(1) and Chapter 62-650, F.A.C.).

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.420.*

#### **62-600.430 Additional Treatment - Water Quality-Based Effluent Limitations (WQBELs).**

(1) Surface water discharge.



(a) In addition to the minimum treatment standards (TBELs) specified in Rule 62-600.420, F.A.C., the design of facilities may be required to provide for additional treatment to satisfy water quality standards for receiving surface waters.

(b) The WQBELs shall be determined by the Department in accordance with Chapter 62-650, F.A.C., and shall be based upon the characteristics of the discharge, the receiving water characteristics, and the criteria and standards of Chapters 62-3, 62-4, and 62-302, F.A.C., and this chapter. Requests for zones of mixing and any previous approved zones of mixing will be taken into consideration when determining WQBELs. No zone of mixing, as contained in Rule 62-4.244, F.A.C., shall be provided for any parameters for which the permittee fails or declines to provide the necessary characteristics of the discharge. WQBELs shall be met after disinfection.

(c) The WQBELs shall be determined by application of accepted scientific methods. It is recognized that models and other scientific methods of predicting the concentrations of pollutants result in estimated values of concentrations. Such estimates shall be acceptable for the purpose of determining reclaimed water or effluent limitations provided that the most reliable and complete data reasonably available to the Department have been applied. Accepted scientific methods shall be based upon, but not limited to, a consideration of the following:

1. An analysis of the condition of the receiving body of water, including reasonably expected ambient water quality, present and future flow conditions, and present and future characteristics of the discharge, under which the cumulative impact of discharge is reasonably expected to be a maximum; and

2. The nature, volume, and frequency of the proposed discharge of waste, including any possible synergistic effects with other pollutants or substances which may be present in the receiving body of water.

3. Nothing in subparagraph 1. or 2. above, shall preclude the Department from establishing WQBELs that vary on a seasonal or other basis.

(2) Ground water discharge.

(a) In addition to any TBELs specified in Rule 62-600.420, F.A.C., the design of facilities may be required to provide for additional treatment to satisfy water quality standards for receiving ground waters.

(b) Such limitations shall be established based on the provisions of Rules 62-28.700 and 62-650.600, F.A.C.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 11-27-89, Amended 1-30-91, Formerly 17-600.430.*

#### **62-600.440 Disinfection - Design and Operational Criteria.**

(1) All wastewater treatment facilities shall be designed and operated such that disinfection to the extent necessary to protect public health is provided and the microbiological pollutants shall not violate the criteria contained in Chapters 62-3 and 62-302, F.A.C., for any receiving waters.

(2) The Department is aware of the possible harmful effects of chlorine used in conjunction with wastewater treatment and encourages the use of alternative disinfection methods. Residual levels, or similar criteria for establishing disinfection of alternative disinfectants, shall be accepted by the Department if the information provided by the permittee in the preliminary design report demonstrates that appropriate microbiological criteria will be met and provides reasonable assurance that public health is protected. Dechlorination shall be required by the Department to ensure that applicable water quality standards will be met and other appropriate reclaimed water or effluent limitations imposed pursuant to this chapter will be achieved. Maximum permissible residual levels in the reclaimed water or effluent immediately following chlorination and the need for dechlorination shall be established as appropriate based upon information provided by the permittee in the preliminary design report regarding effects on the receiving surface or ground water and effects on reuse and land application systems; such residual levels are subject to Department approval.

(3) Disinfection design standards and operational criteria are specified below for discharges from all facilities. Applicability of the criteria to reuse or effluent disposal alternatives shall be as contained in Rule 62-600.530, F.A.C., and Chapter 62-610, F.A.C., for reuse and land application alternatives; Rule 62-600.540, F.A.C., for ground water disposal by underground injection; Rule 62-600.510, F.A.C., for surface water discharges (excluding ocean outfalls and wetlands); Rule 62-600.520, F.A.C., for ocean outfalls; Rules 62-611.100 and 62-611.600, F.A.C., for wetland discharges; and Rule 62-600.630, F.A.C., for septic tank systems not exempted by Rule 62-600.120, F.A.C.

(4) Basic disinfection.

(a) Facilities to provide basic disinfection shall be designed to result in not more than 200 fecal coliform values per 100 mL of reclaimed water or effluent sample.

(b) Where chlorine is used for disinfection, the design shall include provisions for rapid and uniform mixing, and a total chlorine residual of at least 0.5 milligram per liter shall be maintained after at least 15 minutes contact time at the peak hourly flow. Higher residuals or longer contact times may be needed to meet the operational criteria for basic disinfection. The chlorine residual and contact time selected for design shall be justified in the preliminary design report.

(c) To determine compliance of a domestic wastewater facility with the basic disinfection level, the following operational criteria (using either MF or equivalent MPN methods) are applicable.

1. The arithmetic mean of the monthly fecal coliform values (computed as per 2., below) collected during an annual period, as described in subparagraph 62-600.740(1)(a)1., F.A.C., shall not exceed 200 per 100 mL of reclaimed water or effluent sample.

2. The geometric mean of the fecal coliform values for a minimum of 10 samples of reclaimed water or effluent, each collected on a separate day during a period of 30 consecutive days (monthly), shall not exceed 200 per 100 mL of sample.

3. No more than 10 percent of the samples collected during a period of 30 consecutive days shall exceed 400 fecal coliform values per 100 mL of sample.

4. Any one sample shall not exceed 800 fecal coliform values per 100 mL of sample.

(5) High-level disinfection.

(a) Facilities to provide high-level disinfection shall include additional TSS control (beyond secondary treatment levels) to maximize disinfection effectiveness and shall be designed to result in a reclaimed water or effluent in which fecal coliform values (per 100 mL of sample) are below detectable limits, except as provided in paragraph 62-600.440(5)(g) or 62-600.440(5)(h), F.A.C.

(b) Where chlorine is used for disinfection, the design shall include provisions for rapid and uniform mixing; and a total chlorine residual of at least 1.0 milligram per liter shall be maintained at all times. The minimum acceptable contact time shall be 15 minutes at the peak hourly flow. Higher residuals or longer contact times may be needed to meet the design and operational criteria for high-level disinfection as described in paragraphs 62-600.440(5)(c) and 62-600.440(5)(f), F.A.C. Residuals and contact times to be used for design shall be justified in the preliminary design report.

(c) New or expanded treatment facilities for which the Department received a complete permit application for construction of new or expanded facilities after July 1, 1991, and which are using chlorine for disinfection, shall use the following design criteria for total chlorine residuals and contact times:

1. For a reclaimed water or effluent containing 1,000 fecal coliforms, or less, per 100 mL before disinfection, the product of the total chlorine residual used for design (expressed in mg/L) and the contact time at peak hourly flow (expressed in minutes) shall be at least 25.

2. For a reclaimed water or effluent containing greater than 1,000 and up to and including 10,000 fecal coliforms per 100 mL before disinfection, the product of the total chlorine residual used for design (expressed in mg/L) and the contact time at peak hourly flow (expressed in minutes) shall be at least 40.

3. For a reclaimed water or effluent containing greater than 10,000 fecal coliforms per 100 mL, before disinfection, the product of the total chlorine residual used for design (expressed in mg/L) and the contact time at peak hourly flow (expressed in minutes) shall be at least 120.

(d) Alternate combinations of chlorine residuals and contact times used to meet the operational criteria for high-level disinfection shall be accepted by the Department for design purposes if justified in the preliminary design report.

(e) Facilities shall be designed to reduce TSS to 5.0 milligrams per liter or less before the application of the disinfectant. This requirement does not preclude an additional application of disinfectant prior to filtration for the purpose of improving filter performance.

(f) To determine compliance of a domestic wastewater facility with the high-level disinfection level, the following operational criteria (using MF or equivalent MPN methods) shall be applicable:

1. Fecal coliform samples shall be obtained as specified in Chapter 62-601, F.A.C. Over a 30-day period, 75 percent of the fecal coliform values shall be below the detection limits.

2. Any one sample shall not exceed 25 fecal coliform values per 100 mL of sample.

3. Any one sample shall not exceed 5.0 milligrams per liter of TSS at a point before application of the disinfectant.

(g) The requirements in subsection 62-600.440(6), F.A.C., shall serve as the high level disinfection criteria if all of the following conditions are met:

1. Wetlands are used for the discharge or treatment of reclaimed water or effluent.

2. Public access to the wetlands shall be restricted.

3. The reclaimed water produced is not used in a reuse system permitted under Part III of Chapter 62-610, F.A.C.

(h) The requirements in subsection 62-600.440(6), F.A.C., shall serve as the high-level disinfection criteria if:

1. The discharge is to surface waters,

2. The discharge is serving as a back-up disposal system associated with a reuse system permitted under Part III of Chapter 62-610, F.A.C., and

3. The discharge is not subject to regulation by subsection 62-600.510(2) or 62-600.510(3), F.A.C., as a discharge to Class I waters or tributaries to Class I waters.

(6) Intermediate disinfection.

(a) Facilities to provide intermediate disinfection shall be designed to result in not more than 14 fecal coliform values per 100 mL of reclaimed water or effluent sample.

(b) Where chlorine is used for disinfection, the design shall include provisions for rapid and uniform mixing, and a total chlorine residual of at least 1.0 milligram per liter shall be maintained after at least 15 minutes contact time at the peak hourly flow. Higher residuals or longer contact times may be needed to meet the operational criteria for intermediate disinfection. The chlorine residual and contact time used for design shall be justified in the preliminary design report.

(c) To determine compliance of a domestic wastewater facility with the intermediate disinfection level, the following operational criteria (using either MF or MPN methods) are applicable:

1. The arithmetic mean of the monthly fecal coliform values (computed as per 2., below) collected during an annual period, as described in subparagraph 62-600.740(1)(a)1., F.A.C., shall not exceed 14 per 100 mL of reclaimed water or effluent sample.

2. The median value of the fecal coliform values for a minimum number of 10 samples of reclaimed water or effluent, each collected on a separate day during a period of 30 consecutive days (monthly) shall not exceed 14 per 100 mL of sample.

3. No more than 10 percent of the samples collected during a period of 30 consecutive days shall exceed 43 fecal coliform values per 100 mL of sample.

4. Any one sample shall not exceed 86 fecal coliform values per 100 mL of sample.

(7) Low-level disinfection.

(a) Facilities to provide low-level disinfection, allowable under highly controlled conditions for overland flow systems and certain underdrained slow-rate land application systems as specified in applicable portions of Chapter 62-610, F.A.C., shall be designed to result in an effluent containing not more than 2400 fecal coliform values per 100 mL of sample.

(b) To determine compliance of a domestic wastewater facility with the low-level disinfection criteria, the design criteria in paragraph (a), above, shall apply as operational criteria at all times.

(c) Other operational criteria in this section shall be applicable to effluent involving low-level disinfection preapplication treatment upon release of the effluent from operational control in order to determine compliance with other requirements of this chapter.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.440, Amended 12-24-96.*

#### **62-600.445 pH - Standards and Operational Criteria.**

All facilities shall be designed and operated to maintain the pH in the reclaimed water or effluent, after disinfection, within the range of 6.0 to 8.5, except as provided in Chapter 62-611, F.A.C., and in Rule 62-600.430, subsections 62-600.510(3) and 62-600.540(2), F.A.C.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 1-30-91, Formerly 17-600.445.*

### **PART III TREATMENT REQUIREMENTS**

#### **62-600.500 General.**

Generally, the waste treatment standards contained in this chapter shall be met before discharge into holding ponds (if applicable), reuse systems, disposal systems, or surface waters classified pursuant to Chapter 62-302, F.A.C. Waste treatment, at a minimum, shall consist of secondary treatment and, to the extent necessary, disinfection and pH control. Additional levels of treatment (beyond secondary) may be required pursuant to provisions contained in this chapter or in Chapter 62-610, F.A.C. These treatment requirements shall be enforceable pursuant to the operational compliance criteria in this part, and in Rules 62-600.440, 62-600.445, F.A.C., and 62-600.740, F.A.C. General technical guidance is provided by references listed in Rule 62-600.300, F.A.C. Discharges which would not result in the protection of surface and ground water quality criteria shall not be allowed. Effluent or reclaimed water limitations shall be achieved at the appropriate locations specified pursuant to both this part and Part II of Chapter 62-600, F.A.C.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.500.*

#### **62-600.510 Discharge to Surface Waters (Excluding Ocean Outfalls).**

(1) Outfalls for all facilities shall not discharge reclaimed waters or effluents which do not meet, at a minimum, applicable secondary treatment, basic disinfection and pH levels contained in Part II of Chapter 62-600, F.A.C., prior to discharge to the receiving surface waters.

(2) Outfalls for facilities permitted for construction before January 1, 1982 or modifications of facilities existing prior to January 1, 1982 shall not discharge reclaimed waters or effluents to Class I waters unless the reclaimed water or effluent meets the appropriate additional treatment standards (beyond secondary) and high-level disinfection criteria contained in subsections 62-600.420(2) and 62-600.440(5), F.A.C., respectively, prior to discharge to the receiving surface water. Outfalls for such facilities shall discharge not less than 500 feet from any existing or approved (but not yet constructed) potable water intake. However, all facilities, whether new or existing, shall provide for high-level disinfection as specified in subsection 62-600.440(5), F.A.C., or an alternative to this requirement shown by the applicant to give reasonable assurance of providing equivalent protection from pathogens.

(3) For outfalls potentially discharging to waters contiguous to Class I waters, the necessity for treatment, in addition to that required in subsection (2) above, shall be dependent upon the extent of travel time. Travel time shall be the elapsed time from the point of final reclaimed water or effluent monitoring to reclaimed water or effluent arrival at the boundary of Class I waters or at the 500 foot no discharge zone surrounding potable water intakes (if any), as referenced in subsection (2), above, whichever results in the shorter elapsed time. Travel time determinations shall be based upon the expected flow of the receiving water during the

typically wettest month of the year. Information available from public or private scientific or engineering firms may be utilized; velocity data from other waters may be used provided it is documented in the preliminary design report that the water body from which such data is derived is hydrologically similar to the receiving water at issue.

(a) Effluent or reclaimed water discharged from all facilities to waters tributary or contiguous to Class I waters, regardless of whether travel time is greater than 4 hours, shall be subject to technology-based or water quality-based limitations imposed for the specific receiving waters in accordance with Rule 62-600.420 or 62-600.430, F.A.C.

(b) Whenever travel time of the reclaimed water or effluent is less than or equal to 4 hours, new facilities and modifications of existing facilities discharging to waters tributary or contiguous to Class I waters, shall be required to provide wastewater treatment such that the drinking water criteria set by Chapter 62-550, F.A.C., will not be violated at the edge of the mixing zone (which shall not extend into Class I waters). However, Chapter 62-550, F.A.C., criteria shall be modified up to the level of ambient receiving surface water quality (but in no case violate the water quality criteria for Class III waters) where ambient water quality is lower than the criteria stipulated in Chapter 62-550, F.A.C., or to reflect the quality of drinking water reaching the sewer system which may violate community drinking water standards prior to further contamination (if any) resulting from the introduction of domestic and/or industrial wastes. Enforcement of community drinking water standards shall be pursuant to Chapter 62-550, F.A.C.

1. Class I reliability, as described in paragraph 62-600.300(4)(l), F.A.C., shall be provided, at a minimum, for new facilities and modification of existing facilities. Provisions for automatic notification of downstream potable water treatment facilities and effluent recirculation to ensure adequate wastewater treatment shall be included for reliability assurance. The Department shall approve other methods of providing facility reliability (as provided by paragraph 62-600.400(1)(b), F.A.C.) if the permittee provides reasonable assurances in the preliminary design report that the level of reliability provided is equivalent to the class of reliability required.

2. Effluent or reclaimed water storage prior to discharge to receiving waters shall be required. Storage volume requirements shall be equal to the average daily flow (at which adequate treatment can be provided or for which reuse/disposal is permitted, whichever is less) of the facility multiplied by the sum of the number of full (24 hours) days per week when the operator is not on-site. The operator may be on-site more often than required pursuant to Chapter 62-602, F.A.C.; where on-site attendance is provided in lieu of storage capacity, such attendance schedules shall be stipulated by permit.

(4) Outfalls shall not discharge reclaimed water or effluents into Class II waters.

(5) Limitations beyond the minimum secondary treatment, basic disinfection and pH levels that are required, or (as appropriate) additional WQBELs, on new facilities which would discharge to waters tributary to or contiguous to Class II waters shall be required when the travel time of effluent or reclaimed water (the elapsed time from the point of final disinfection monitoring to arrival at Class II waters during maximum expected surface water velocities) is less than or equal to 72 hours. Intermediate disinfection, as described in subsection 62-600.440(6), F.A.C., shall be required for all new and existing facilities. Class I reliability, as described in paragraph 62-600.300(4)(l), F.A.C., shall be provided at a minimum. The Department shall approve other methods of providing facility reliability (as provided by paragraph 62-600.400(1)(b), F.A.C.) if the permittee provides reasonable assurances in the preliminary design report that the level of reliability provided is equivalent to the class of reliability required. Additionally, storage of the disinfected reclaimed water or effluents in a holding pond and recirculating capability (for additional treatment) shall be required as follows:

(a) Where the travel time is less than or equal to 24 hours, storage volume requirements shall be equal to the average daily flow (at which adequate treatment can be provided or for which reuse/disposal is permitted, whichever is less) of the facility multiplied by the sum of the number of full days per week when the operator is not on-site plus an additional 24-hour period. The operator may be on-site more often than required pursuant to Chapter 62-602, F.A.C.; where on-site attendance is provided in lieu of storage capacity, such attendance schedules shall be stipulated by permit.

(b) Where the travel time is greater than 24 hours, but less than or equal to 72 hours, storage volume requirements shall be equal to the average daily flow (at which adequate treatment can be provided or for which reuse/disposal is permitted, whichever is less) of the facility multiplied by the number of full days per week when the operator is not on-site. The operator may be on-site more often than required pursuant to Chapter 62-602, F.A.C.; where on-site attendance is provided in lieu of storage capacity, such attendance schedules shall be stipulated by permit.

(6) Outfalls shall be designed with respect to depth and location so as to minimize oxygen demand and adverse effects on the receiving water.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088, 403.859 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088, 403.859 FS. History—New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.510.*

#### **62-600.520 Discharge to Surface Waters - Ocean Outfalls.**

(1) Outfalls for all facilities shall not discharge reclaimed water or effluent to coastal or open ocean waters which does not meet, at a minimum, applicable secondary treatment and pH criteria contained in Rules 62-600.420 and 62-600.445, F.A.C. Where applicable, discharges to coastal waters shall be subject to the limitations of Rule 62-4.242, F.A.C., regarding Outstanding Florida Waters, and subsections 62-600.510(4) and 62-600.510(5), F.A.C., regarding discharges to Class II waters and waters contiguous to Class II waters, respectively.

(2) Outfalls for all facilities shall not discharge effluent or reclaimed water to Class III coastal waters which has not also received basic disinfection prior to the discharge. Outfalls for all facilities shall not discharge effluent to open ocean waters without also being disinfected to the extent necessary to achieve Class III microbiological standards at the edge of the mixing zone established pursuant to subsection 62-600.520(3), F.A.C. If basic disinfection is not provided, the preliminary design report shall affirmatively demonstrate the level of disinfection that is more appropriate.

(3) Mixing zones for effluent discharges via ocean outfalls may be established as follows:

(a) All coastal water discharge facilities shall be subject to the applicable provisions of Rule 62-4.244, F.A.C.

(b) All open ocean water discharge facilities shall be subject to the applicable provisions of Rule 62-4.244, F.A.C., except that:

1. Appropriate dimensions of the mixing zone, for effluents having received treatment in accordance with subsections 62-600.520(1) and 62-600.520(2), F.A.C., and discharged from new facilities or modifications of existing facilities, shall be established by the permittee pursuant to the provisions of subsection 62-600.520(5), F.A.C.

2. Mixing zone criteria currently applicable to existing facilities shall be modified if necessary to meet Department rules by order of the Secretary, pursuant to subsection 62-600.520(5), F.A.C.

(4) Outfalls for facilities permitted for construction after January 1, 1982 and modifications of facilities existing prior to January 1, 1982 shall be designed in accordance with sound engineering practice. General technical guidance is provided by applicable references listed under Rule 62-600.300, F.A.C.

(a) Outfalls shall be designed with respect to depth and location so as to minimize adverse effects on public health and environmental quality. The design shall address the initial dilution, dispersion, and decay rates of the effluent wastes in surrounding waters in order to accomplish these objectives.

(b) Outfalls shall be designed to ensure structural integrity so as to minimize potential damage from natural occurrences (e.g., wave action) or human activities (e.g., anchorage).

(5) Alternative levels of treatment may be allowed for ocean outfall discharges to open ocean waters from any facility, whether new or existing, as provided below.

(a) The Secretary may issue an order, upon petition of an affected permittee and after public hearing, that specifies alternatives to treatment requirements of subparagraph 62-600.420(1)(b)2. and Rule 62-600.520, F.A.C.; and mixing zone requirements of Rule 62-4.244, F.A.C.; and

(b) Such order shall remain in effect as long as applicable water quality criteria specified in Chapter 62-302, F.A.C., are met and the effluent meets statutory treatment requirements; however,

(c) Such order shall be issued only after affirmative demonstration by the Petitioner of the following:

1. Granting the order is in the public interest; and

2. Compliance with minimum treatment standards and requirements in subparagraph 62-600.420(1)(b)2. and Rule 62-600.520, F.A.C., for these discharges is not required to assure adequate protection of public health and the marine environment; and

3. Granting the order will not interfere with existing uses or the designated uses of the receiving waters or contiguous waters, or otherwise impair the recreational use, bathing waters, or economic values associated with the area potentially affected by the discharge; and

4. There is no reasonable relationship between the economic, social, and environmental costs of compliance with the treatment requirements and the benefits associated therewith; and

5. Oceanographic features influencing the effects of the proposed discharge support the proposed level of treatment and any proposed extent of the mixing zone; and

6. The facility will be constructed (where applicable) and operated so that there is no occurrence of inadequately treated wastewater reaching contiguous coastal waters; and

7. An acceptable monitoring program for the discharge has been proposed and would be implemented by the permittee.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088, 403.859 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088, 403.859 FS. History—New 11-27-89, Amended 1-30-91, Formerly 17-600.520.*

#### **62-600.530 Reuse of Reclaimed Water and Land Application.**

(1) The following requirements are applicable for slow-rate, rapid-rate, overland flow, absorption field and other land application systems potentially discharging to Class G-II ground waters as described in Chapter 62-3, F.A.C. Requirements for systems involving potential discharges to other classes of ground water (as defined by Chapter 62-3, F.A.C.) will be established by the Department on a case-by-case basis with the permittee.

(2) Systems shall be designed to meet applicable requirements contained in Chapter 62-610, F.A.C. Minimum design waste treatment standards specified in subsection 62-600.530(3), F.A.C., are described in Part II of Chapter 62-600, F.A.C., and shall be enforceable pursuant to the operational criteria in Part II of Chapter 62-600 and Rule 62-600.740, F.A.C.

(3) Waste treatment, at a minimum, shall consist of secondary treatment and, to the extent necessary, basic disinfection and pH control. These criteria are applicable as preapplication waste treatment requirements for all facilities, whether new or existing.

(a) Less stringent preapplication treatment levels may be allowed under the restricted conditions stipulated in applicable portions of Chapter 62-610, F.A.C., for overland flow and certain underdrained slow-rate land application systems; however, regardless of the level of preapplication treatment provided, the effluent finally released to receiving surface water, via the operational control facilities, shall meet the appropriate requirements in this part and Part II of Chapter 62-600, F.A.C.

(b) Additional levels of preapplication treatment (beyond the minimum) may be required by the Department as a result of: the method of reclaimed water or effluent application/distribution, the extent of intended public access, the characteristics of the potential receiving surface waters (e.g., where application site underdrainage is designed), or ground water protection pursuant to reuse or effluent disposal provisions of Chapter 62-610, F.A.C.

(4) Protection of ground water quality is of concern. The characteristics of background, or ambient, ground water quality shall be established. Two general situations will be encountered: background quality characteristics may be at or below the criteria numerically quantified in Chapter 62-3, F.A.C. (i.e., background quality is equal to, or better than, standards), in which case the land application shall not result in degradation of background water quality in excess of the water quality criteria, or background water quality characteristics may be in excess of the criteria numerically quantified in Chapter 62-3, F.A.C. (i.e., background quality is worse than standards), in which case the land application shall not result in further degradation of the background water quality. Where a surface water discharge is also involved, the underdrainage or overland flow discharge shall not result in a violation of water quality standards.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088, 403.859 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088, 403.859 FS. History--New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.530.*

#### **62-600.540 Ground Water Disposal by Underground Injection.**

(1) All facilities using Class I wells discharging domestic effluent into Class G-IV waters must meet the secondary treatment and pH limitations specified in subsection 62-600.420(1) and Rule 62-600.445, F.A.C. Disinfection is not required before disposal via any Class I well, whether from any new or existing facility; however, all Class I well permittees must maintain capability to disinfect at a level that is consistent with the alternate discharge mechanism pursuant to paragraph 62-28.230(4)(c), F.A.C. Deviations from minimum waste treatment requirements for such discharges shall only be approved pursuant to subsection 62-600.540(5), F.A.C.

(2) New facilities and modifications of existing facilities using Class V wells discharging domestic effluent or reclaimed water into Class G-II waters (except as provided in subsection 62-600.540(3), F.A.C.) shall be designed and operated to achieve pollutant reduction to levels beyond that specified by secondary treatment. Class I reliability, as described in paragraph 62-600.300(4)(1), F.A.C., shall be provided for the treatment. The Department shall approve other methods of providing facility reliability (as provided by paragraph 62-600.400(1)(b), F.A.C.) if the permittee provides reasonable assurances in the preliminary design report that the level of reliability provided is equivalent to the class of reliability required. Effluent or reclaimed water limitations shall be met at compliance monitoring location(s) established on a case-by-case basis; however, the TSS limitation associated with high-level disinfection requirements specified in paragraph (b) below, shall be met prior to disinfection. The following requirements shall be met:

(a) Effluent or reclaimed water shall contain not more than the concentration set for CBOD5 (and TSS) via secondary treatment criteria in paragraph 62-600.420(1)(a), F.A.C.; and

(b) Effluent or reclaimed water shall meet the high-level disinfection requirements contained in subsection 62-600.440(5), F.A.C., or as an alternative other methods for ensuring protection from pathogens shall be approved by the Department if these methods provide at least equivalent levels of public health protection; and

(c) Adequate justification for the use of any specific disinfection process and the identification of resulting public health effects shall be provided to the Department; and

(d) Effluent or reclaimed water shall, at a minimum, meet the Class G-II ground water quality standards as established in Rule 62-520.420, F.A.C.; and

(e) Additional reduction of pollutants which otherwise would be discharged in quantities which would reasonably be anticipated to pose risk to public health or the environment because of acute or chronic toxicity shall be required; and

(f) Storage capability and recirculation of stored reclaimed water or effluent, or provisions for alternative disposal systems, shall be established.

(3) Facilities permitted for construction after January 1, 1982 and modifications of facilities existing prior to January 1, 1982 using Class V wells discharging domestic effluent or reclaimed water into Class G-II waters of the Biscayne or Floridan Aquifers containing total dissolved solids of 500 milligrams per liter or less shall be designed and operated to achieve pollution reduction as specified below.

(a) The Environmental Regulation Commission shall hold a public hearing following the conclusion of any pilot test or the full-scale operational test of any project approved pursuant to Section 403.859(7), Florida Statutes, and shall modify the requirements of this paragraph, as necessary or appropriate, based on the results of the test data. The reclaimed water or effluent standards described below shall be revised if the test data demonstrate that alternative parameters or levels would more effectively control pollutants hazardous to public health and the environment, such as the priority pollutants identified by the United States Environmental Protection Agency and certain lipid-soluble organics.

(b) Injected wastewater shall meet the following reclaimed water or effluent standards or such other standards as are adopted by rule in accordance with paragraph 62-600.540(3)(a), F.A.C.

1. Total organic carbon (as the arithmetic average of any 21 consecutive samples of injected wastewater) shall not exceed 5 milligrams per liter or the background concentration of total organic carbon, whichever is less; no single sample shall exceed 9 milligrams per liter.

2. Total organic halogen shall not exceed 0.2 milligrams per liter (as Cl<sub>2</sub>) as the arithmetic average of any 21 consecutive samples of injected wastewater; no single sample shall exceed 0.3 milligrams per liter.

(c) A biological testing procedure approved by the Department shall be conducted to determine the mutagenicity of the injected reclaimed water or wastewater.

(d) The treatment process prior to injection shall include activated carbon adsorption unless the applicant provides reasonable assurance to the Department that the use of alternative technologies will not result in a discharge of wastes in contravention of the standards described in this paragraph.

(e) Alternative and standby disposal or storage facilities shall be provided such that any wastewater not meeting the requirements of this section may be stored for further treatment or disposed of by alternative means approved by the Department.

(f) Any project approved pursuant to Section 403.859(7), Florida Statutes, shall submit an interim report to the Department one year after the commencement of its full-scale operational test. If a pilot test is conducted prior to the full-scale operational test, an interim report is also required one year after its commencement. The interim report shall describe the technical performance and cost-effectiveness of the test project, as indicated by the test data accumulated during the year. The report shall also discuss the technical and economic feasibility of complying with more and less stringent reclaimed water or effluent standards than those specified in this paragraph. The Department shall promptly review the report and present its analysis to the Environmental Regulation Commission.

(g) No permit shall be issued for the underground injection of reclaimed water or wastewater pursuant to this paragraph until a minimum two-year, full scale operational test of the project has been concluded, the test data have been reviewed by experienced national authorities, and the reports of the review have been considered by the Department.

(h) The requirements of this subsection are additive and supplement all other requirements imposed by Department rules on the construction and operation of wastewater treatment, reuse, and disposal facilities, including compliance with the ground water quality standards referenced in Rule 62-3.404, F.A.C.

(4) Surface equipment for all injection well facilities shall be such that manual backup capability to monitor wellhead pressure and flow is provided for systems utilizing automatic and continuous recording equipment. The design of new facilities and modifications of existing facilities shall incorporate additional surface equipment considerations such that:

(a) Effluent or reclaimed water pumping stations shall be protected from lightning and transient voltage surges. As a minimum, stations shall be equipped with lightning arrestors, surge capacitors or other similar protection devices, and phase protection; and

(b) Effluent or reclaimed water pumping stations shall be provided with divided compartments to allow access for repair and maintenance purposes without interrupting operation; and

(c) Potential surge and water hammer will not jeopardize the safety and integrity of the injection well system; and

(d) Surface equipment for multi-well systems provides operational reliability and flexibility in the event of damage to or failure of the pipeline or a well; and

(e) Access to the well for geophysical logging without major modifications is enabled; and

(f) The wellhead shall be protected in a manner to minimize accidents or vandalism; and

(g) Necessary screening for floatable solids prior to injection to avoid plugging of the formation is provided; and

(h) Equipment with sufficient reliability and redundancy is provided in accordance with appropriate references contained in subsection 62-600.300(4), F.A.C.

(5) Alternative treatment levels may be allowed for Class I well discharges to Class G-IV waters from any facility as provided below.

(a) The Secretary may issue an order, upon petition of an affected permittee and after public hearing, that specifies an alternative to the treatment requirements specified in subparagraph 62-600.420(1)(d)1., F.A.C.; and

(b) Such order shall remain in effect as long as applicable water quality criteria specified in Chapter 62-3, F.A.C., are met and the effluent meets statutory treatment requirements; however,

(c) Such order shall be issued only after affirmative demonstration by the Petitioner of the following:

1. Granting the order is in the public interest;

2. Compliance with minimum treatment requirements in subparagraph 62-600.420(1)(d)1., F.A.C., for these discharges is not required to assure adequate protection of fresh water storage areas or industrial or utilities supplies, or for present and future potable water supplies;

3. Granting the order will not interfere with existing uses or the designated uses of the waters or contiguous waters;

4. The facility complies with all of the requirements for Class I wells in Chapter 62-528, F.A.C.;

5. There is no reasonable relationship between the economic, social, and environmental costs of compliance with the treatment requirements and the benefits associated therewith;

6. The facility will be constructed (where applicable) and operated so that there is no occurrence of inadequately treated wastewater reaching other aquifers or surface waters;



7. An acceptable monitoring program for the discharge has been proposed and will be implemented by the permittee;
8. The receiving aquifer is of sufficient transmissivity to preclude clogging of the formation with the effluent;
9. The injection well system has sufficient built-in redundancy to assure an alternate disposal method (such alternate disposal shall be limited to emergency events); and
10. The surface equipment for multi-well systems is designed to provide continued partial operation in the event of damage to or failure of a pipeline or well.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088, 403.859 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088, 403.859 FS. History—New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.540.*

#### **62-600.550 Wastewater Management Requirements for the Wekiva Study Area.**

(1) As authorized in Section 369.318, F.S., this rule implements the specific recommendations related to the establishment of Protection Zones and wastewater management requirements set forth in sections c.2. and c.4. of the Department report entitled “A Strategy for Water Quality Protection: Wastewater Treatment in the Wekiva Study Area” (“Report”), dated December 2004. The purpose of this rule is to achieve nitrogen reductions protective of surface and ground water quality in the Wekiva Study Area, as defined in Section 369.316, F.S. This rule also provides an opportunity for relief from certain wastewater management requirements if the permittee or permit applicant can affirmatively demonstrate that the discharge of treated wastewater is protective of surface water and ground water quality with respect to nitrate-nitrogen as set forth in section c.1. of the Report. This rule does not relieve the permittee from complying with other applicable Department rules.

(2) Existing domestic wastewater facilities (facilities for which complete permit applications that included requests for construction of new or expanded facilities were received by the Department before the effective date of this rule) discharging within the Wekiva Study Area shall comply with the wastewater management requirements set forth in this rule within five years of the effective date unless otherwise established herein. New and expanded facilities shall comply with the requirements immediately.

(3) For the purpose of determining the applicability of wastewater management requirements for the Wekiva Study Area, Protection Zones shall be as delineated in Figure 15 of the Report of Investigations No. 104, “Wekiva Aquifer Vulnerability Assessment,” Florida Geological Survey, June 2005, adopted and incorporated herein. Copies may be obtained from The Florida Geological Survey, Publications Office, 903 W. Tennessee Street, Tallahassee, Florida 32304-7700. For reuse and land application systems, determinations of which protection zone applies shall be based upon the wetted area. For reuse and land application systems located in two or more protection zones, the protection zone featuring the most stringent control measures shall apply to the entire reuse or land application system.

- (a) The Primary Protection Zone corresponds to the area delineated as “Most Vulnerable;”
- (b) The Secondary Protection Zone corresponds to the area delineated as “Vulnerable;” and
- (c) The Tertiary Protection Zone corresponds to the area delineated as “Less Vulnerable.”

(4) The following wastewater management requirements apply to land application and reuse systems located within the Primary Protection Zone:

(a) New or expanded rapid-rate or restricted access slow-rate land application systems, as defined in Chapter 62-610, F.A.C., shall not be located within the Primary Protection Zone.

(b) Type I and II wastewater treatment facilities that use rapid-rate land application systems shall meet an annual average reclaimed water limitation of 3.0 mg/L Total Nitrogen, as N, unless used as a back-up to a public access reuse system.

(c) A rapid-rate land application system used as back-up to a public access reuse system shall meet the Total Nitrogen reclaimed water limitation contained in paragraph (d) below. In order to qualify as a back-up system, no more than 30% of the total annual wastewater treatment plant flow shall be directed to the back-up rapid-rate system.

(d) Type I and II wastewater treatment facilities that use public access reuse systems or restricted access irrigation systems shall meet an annual average reclaimed water limitation of 10.0 mg/L Total Nitrogen, as N.

(e) Type III wastewater treatment facilities that use land application or reuse systems shall meet an annual average reclaimed water limitation of 10.0 mg/L Total Nitrogen, as N.

(f) Land application of Class A or B wastewater residuals is prohibited. Application of Class AA residuals that are distributed and marketed in accordance with Chapter 62-640, F.A.C., is permissible.

(5) The following wastewater management requirements apply to land application and reuse systems located within the Secondary Protection Zone:

(a) Type I and II wastewater treatment facilities that use rapid-rate land application systems shall meet an annual average reclaimed water limitation of 6.0 mg/L Total Nitrogen, as N, unless used as back-up to a public access reuse system.

(b) A rapid-rate land application system used as back-up to a public access reuse system shall meet the Total Nitrogen reclaimed water limitation contained in paragraph (c) below. In order to qualify as a back-up system, no more than 30% of the total annual wastewater treatment plant flow shall be directed to the back-up rapid-rate system.

(c) Type I and II wastewater treatment facilities that use public access reuse systems or restricted access irrigation systems shall meet an annual average reclaimed water limitation of 10.0 mg/L Total Nitrogen, as N.

(d) Type III wastewater treatment facilities that use land application or reuse systems shall meet an annual average reclaimed water limitation of 10.0 mg/L, Total Nitrogen, as N. Existing facilities shall comply with this limitation within 10 years of the effective date.

(e) Land application of Class A or B wastewater residuals is prohibited. Application of Class AA residuals that are distributed and marketed in accordance with Chapter 62-640, F.A.C., is permissible.

(6) Wastewater treatment facilities that use land application or reuse systems located within the Tertiary Protection Zone shall meet the wastewater treatment requirements contained in Chapters 62-600 and 62-610, F.A.C, and other Department rules.

(7) Relief from the requirements of subsection (4) or (5) above can be obtained from the Department if the permittee or permit applicant makes an affirmative demonstration, based on relevant water quality data, physical circumstances, or other credible information, that the discharge of reclaimed water is protective of surface and ground water quality with respect to the target nitrate-nitrogen level of 0.2 mg/L, as N, for the spring vent as established in section c.1. of the Report. Such an affirmative demonstration shall include either paragraph (a) or (b) below:

(a) For existing facilities, monitoring data from wells included in an approved ground water monitoring plan showing the annual median value (a minimum of four samples) for nitrate nitrogen to be less than or equal to 0.2 mg/L, as N, at each compliance well, or

(b) For existing or new facilities, site specific information based upon one or more of the following factors, as necessary to make an affirmative demonstration:

1. The proximity to a spring, and natural and manmade interconnected surface and subsurface features,
2. Ground water flow gradient,
3. Permitted discharge volume,
4. Dilution,
5. Ground water quality data including the influence of background concentrations where applicable,
6. Site-specific geological conditions,
7. Research/studies including dye tracer tests,
8. Ground water transport modeling,
9. Ground water flow velocity,
10. Other relevant information.

(c) If relief is obtained under paragraph (7)(a) or (b) above, the permit shall include reclaimed water and ground water monitoring requirements and limits for nitrogen. At each permit renewal, the permittee shall provide an affirmative demonstration that the relief previously granted remains protective of surface and ground water quality and may use information already provided to the Department for the initial affirmative demonstration and subsequent ground water quality monitoring.

(8) Discharge of domestic wastewater effluent to surface waters within the Wekiva River Basin is restricted as follows:

(a) A new surface water discharge shall be permitted only as back-up to a public access reuse system and only if it complies with the provisions of Sections 403.086(4) and (5), F.S. In addition, the discharge shall constitute no more than 30% of the total annual wastewater treatment plant flow.

(b) Existing surface water discharges shall be restricted to serving as a back-up to a public access reuse system. In order to qualify as a back-up system, the discharge shall constitute no more than 30% of the total annual wastewater treatment plant flow.

(c) Surface water discharges also shall comply with any applicable Total Maximum Daily Loads adopted by the Department pursuant to Section 403.067, F.S., and shall meet reclaimed water or effluent limits established by procedures contained in Chapter 62-650, F.A.C.

(d) Subsection (8) shall apply only to discharges to surface waters subject to NPDES permitting requirements in Section 403.0885, F.S., and Chapter 62-620, F.A.C.

*Specific Authority 369.318(1), 403.051(2)(a), 403.061(7), 403.087(2) FS. Law Implemented 369.318(1), 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-13-06.*

## **PART IV OTHER WASTEWATER MANAGEMENT FACILITIES (Repealed)**

## **PART V PERMITTING**

### **62-600.700 General.**

(1) Construction, modification, or operation of domestic wastewater treatment and effluent disposal or reuse facilities requires an appropriate permit from the Department in accordance with Chapter 62-620, F.A.C., and with this chapter. The permittee shall comply with applicable design and performance criteria pursuant to this chapter and the permitting requirements of Chapter 62-620, F.A.C.

(2) At the time of application for a wastewater treatment plant permit, the applicant must have applied for a reuse or disposal system permit from the Department for no less than 75 percent of the permitted capacity of the treatment plant up to and including one million gallons per day or no less than 50 percent of the permitted capacity of the treatment plant greater than one million

gallons per day, unless the applicant can demonstrate sufficient disposal and reuse capacity to satisfy the demand during the term of the operation permit. Permit applications for a treatment facility may be made separately or in conjunction with applications for effluent disposal or reclaimed water reuse systems.

*Specific Authority 403.051, 403.061, 403.087, 403.088, 403.0881 FS. Law Implemented 403.021, 403.051, 403.061, 403.087, 403.088, 403.0881 FS. History—New 11-27-89, Amended 1-30-91, Formerly 17-600.700, Amended 12-24-96.*

### **62-600.720 Operation and Maintenance Manual.**

(1) In accordance with Rule 62-620.630, F.A.C., permittees of newly constructed or modified domestic wastewater treatment plants and effluent disposal or reuse facilities shall provide notification to the Department that a draft operation and maintenance manual is available prior to placing the newly constructed or modified portion of the facility into operation. Within six months after placing the new or modified facilities into operation, the permittee shall provide notification that a current operation and maintenance manual is available. Permittees of existing domestic wastewater treatment plants and effluent disposal or reuse facilities shall maintain and make available for inspection copies of current operation and maintenance manuals for the facilities, in accordance with Rule 62-620.350, F.A.C. The manual shall provide for the reliable and efficient operation and maintenance of the facilities as follows:

(a) The detail of the manual shall be consistent with the complexity of the system. The manual shall be developed in accordance with the unique requirements of the individual wastewater facility and shall provide the operator with adequate information and description regarding the design, operation, and maintenance features of the facility involved.

(b) The manual shall include basic hydraulic and engineering design criteria for the facility, as well as information and procedures required for normal control and distribution of wastewater, residuals, and effluent within the facility. In addition, information concerning process control and performance evaluation for the facility, as well as equipment and procedural descriptions (including any notification/reporting requirements of appropriate agencies) for emergency operating conditions and listing of spare parts to have on hand shall be included. Regular maintenance and repair instructions for all equipment; laboratory testing equipment and monitoring procedures; safety and personnel requirements; and a “trouble shooting” problem guide shall be included in the manual.

(c) Operation and maintenance manual requirements for reuse and land application facilities as set forth in Chapter 62-610, F.A.C.

(d) Operation and maintenance manual requirements for underground injection well facilities are set forth in subsection 62-528.415(3), F.A.C.

(e) A copy of the approved manual shall be provided to the operator by the permittee of the facility. The manual shall be available for reference at the facility or other approved site. The permittee shall maintain at least one copy of the approved manual.

(2) The manual shall be revised to reflect any facility alterations performed or to reflect experience resulting from facility operation.

(3) The technical criteria and guidance contained in the technical references listed in subsection (4) below are hereby incorporated by reference and shall be used, where applicable, in developing operation and maintenance manuals, except as provided in paragraphs (a) and (b) below.

(a) Deviations from the criteria contained in the references listed in subsection (4) below shall be approved by the Department if the operation and maintenance manual provides reasonable assurance that the proposed operation and maintenance criteria will meet the requirements of this rule.

(b) The Department shall require deviation from the criteria contained in the references listed in subsection (4) below upon a finding that conformance to them will not assure compliance with the requirements of this rule or other rules of the Department.

(4) Technical References.

(a) Water Pollution Control Federation, 1976. Manual of Practice No. 11 – Operation of Wastewater Treatment Plants. Water Pollution Control Federation, 601 Wythe Street, Alexandria, Virginia 22314-1994.

(b) California State University, Department of Civil Engineering, Third Edition 1988. Operation of Wastewater Treatment Plants – Volumes 1 and 2. California State University, 6000 J Street, Sacramento, California 95819-6025.

(c) California State University, Department of Civil Engineering, First Edition 1987. Advanced Waste Treatment. California State University, 6000 J Street, Sacramento, California 95819-6025.

(d) New York State Department of Environmental Conservation, 1980. Manual of Instruction for Wastewater Treatment Plant Operators – Volumes I, II. Health Education Service, P. O. Box 7126, Albany, New York 12224.

(e) U.S. Environmental Protection Agency, 1977. Aerobic Biological Wastewater Treatment Facilities – Process Control Manual; EPA-430/9-77-006. Environmental Quality Instructional Resources Center, Ohio State University, 1200 Chambers Road – Room 310, Columbus, Ohio 43212.

(f) U.S. Environmental Protection Agency, 1977. Package Treatment Plants Operations Manual. Environmental Quality Instructional Resources Center, Ohio State University, 1200 Chambers Road – Room 310, Columbus, Ohio 43212.

(5) Members of the public may request and obtain copies of the references listed in subsection (4) above by contacting the appropriate publisher at the address indicated. Copies of the above publications are on file with the Florida Secretary of State; copies are also on file and available for review in the Department's Tallahassee offices (including the Information Center) and in the Department's district offices where they may be reviewed during normal business hours.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 11-27-89, Amended 1-30-91, 6-8-93, Formerly 17-600.720, Amended 12-24-96.*

#### **62-600.735 Operation and Maintenance Performance Report.**

(1) All applications to renew permits for treatment, reuse, or disposal facilities shall include a detailed operation and maintenance performance report. This report will be used, in part, to establish reasonable assurances that these facilities will meet permit limitations during the period for which the permit is requested.

(2) The report shall be jointly prepared by staff responsible for operation of these facilities, by the permittee or the permittee's delegated representative, and by a professional engineer registered in Florida.

(3) The report shall evaluate the capability of treatment, reuse, and disposal facilities to function as intended during the period for which the permit is requested.

(4) The report shall:

(a) Evaluate the physical condition of each treatment unit, the treatment efficiencies of each treatment process, the overall treatment efficiency of the treatment plant, performance trends, and the operation and maintenance program.

(b) Identify physical, capacity, performance, and operation and maintenance problems and deficiencies which need immediate attention and areas which are potential problems. The report shall identify the consequences if these problems and deficiencies are not corrected in a timely fashion.

(c) Provide recommendations and schedules for corrective actions.

(d) Evaluate the following components, systems, and processes, if included in the facilities being considered for permit renewal:

1. Pumping facilities (raw wastewater, intermediate, recirculation, residuals, effluent, or reclaimed water pump stations).
2. Preliminary treatment (screens, grit chambers, comminutors).
3. Primary, intermediate, and final clarifiers (structures, scum and residuals removal equipment, baffles, weirs, sand and grit accumulation).
4. Activated sludge system (blowers, mechanical aerators, aeration system, return sludge system, diffusers, sand and grit accumulation).
5. Trickling filters (wastewater distribution system, media, filter bottom, blowers).
6. Rotating biological contactors (drive mechanisms, media integrity).
7. Filters (media, distribution equipment, filter bottoms, backwash facilities).
8. Coagulation/flocculation (mixers, motors, flocculators, drives).
9. Nutrient removal systems.
10. Disinfection (contact chambers, chlorinators, ozonators, ultraviolet systems).
11. Residuals treatment and handling (thickeners, chemical conditioning, aerobic digesters, anaerobic digesters, residuals collection equipment, heat exchange facilities, gas collection equipment).
12. Residuals dewatering (drying beds, filter presses, vacuum filters).
13. Chemical feed facilities.
14. Blowers and motors associated with treatment processes.
15. Instrumentation and monitoring equipment.
16. Sample collection and laboratory analysis.
17. Effluent or reclaimed water pumping and transmission facilities (pumps, motors, valves).
18. Outfalls.
19. Injection wells.
20. Reuse systems.
21. Wetlands systems.

(5) The collection system shall not be evaluated unless treatment plant problems result from the operation of collection and transmission facilities (such as excessive infiltration/inflow, septic wastewater, introduction of toxic substances, or lack of controls on industrial wastewater discharges to the collection system).

(6) The report shall be signed by the owner and the facility's lead operator and shall be signed and sealed by a professional engineer registered in Florida.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.087, 403.088 FS. History—New 1-30-91, Formerly 17-600.735, Amended 12-24-96.*

#### **62-600.740 Reporting, Compliance, and Enforcement.**

(1) Operational Criteria.

(a) General.

1. The Department may establish facility compliance, or noncompliance, with the waste treatment standards of this rule using the information submitted pursuant to self-monitoring operational reports required by Chapter 62-601, F.A.C. For such evaluations, the appropriate reclaimed water or effluent compliance concentrations contained in paragraph 62-600.740(1)(b), F.A.C., shall be applicable. Whenever the Department uses the results of a year's operational reports, the annual reclaimed water or effluent compliance concentrations given in paragraph 62-600.740(1)(b), F.A.C., shall be used for compliance determinations. The annual concentrations obtained from self-monitoring operational reports shall be the average of data from consecutive reporting periods (whether daily, monthly, quarterly, or any other basis) which collectively comprise one year; additional compliance determinations may be made for each successive sampling period.

a. For pollutants which are required to be sampled on a semimonthly or more frequent basis (per Chapter 62-601, F.A.C.), all reclaimed water or effluent compliance concentrations shall be applicable. The semimonthly evaluation shall be based upon the concentration limitation specified for a weekly determination.

b. For pollutants which are required to be sampled on a monthly, quarterly (or less frequent basis), the monthly concentration limitation shall be used as the compliance standard. The annual (as established in subparagraph 62-600.740(1)(a)1., F.A.C.) and maximum-permissible levels shall also be applicable.

2. The Department may also take enforcement action based on its own sample collection activities using any of the annual, monthly, weekly, or maximum-permissible operating criteria specified in paragraph 62-600.740(1)(b), F.A.C. Use of such data shall not preclude enforcement action pursuant to the provisions of this or any other chapter of the Florida Administrative Code. The use of grab or composite samples for evaluating annual, monthly or weekly compliance shall be generally consistent with grab or composite sampling technique (as opposed to sample scheduling) requirements of Chapter 62-601, F.A.C., for the specific permitted capacity of the treatment plant at issue. Maximum-permissible concentrations shall be established by grab sampling due to the transient nature of maximum concentrations; it is expected that such samples will be collected during periods of minimal treatment plant pollutant removal efficiencies or maximum organic loading in the reclaimed water or effluent. Maximum-permissible concentrations are not intended to be representative of average daily conditions of the treatment plant effluent or reclaimed water; grab samples need not be taken at any set time or flow, but the actual time and flow conditions during which such samples are taken shall be recorded.

3. Nothing in this or any other rules of the Florida Administrative Code shall preclude the use, by the Department, of additional or more representative sampling data in establishing compliance status.

(b) Reclaimed Water or Effluent Compliance Concentrations. The applicability of the reclaimed water or effluent compliance concentrations contained below to all facilities shall depend on the treatment requirements referenced, pursuant to Rule 62-600.110, F.A.C.

1. In order to determine compliance of a domestic wastewater facility with the secondary treatment standards specified in paragraph 62-600.420(1)(a), F.A.C., the following operational criteria shall be applicable.

a. The arithmetic mean of the CBOD5 or TSS values for the reclaimed water or effluent samples collected (whether grab or composite technique is used) during an annual period, as described in this section, shall not exceed 20 mg/L.

b. The arithmetic mean of the CBOD5 or TSS values for a minimum of four reclaimed water or effluent samples each collected (whether grab or composite technique is used) on a separate day during a period of 30 consecutive days (monthly) shall not exceed 30 mg/L.

c. The arithmetic mean of the CBOD5 or TSS values for a minimum of two reclaimed water or effluent samples each collected (whether grab or composite technique is used) on a separate day during a period of 7 consecutive days (weekly) shall not exceed 45 mg/L.

d. Maximum-permissible concentrations of CBOD5 or TSS values in any reclaimed water or effluent grab sample at any time shall not exceed 60 mg/L.

2. In order to determine compliance of a domestic wastewater facility with treatment standards more stringent than secondary as specified for additional levels of treatment (i.e., subsection 62-600.420(2), F.A.C.), WQBELs (i.e., Rule 62-600.430, F.A.C.), discharges to contiguous Class I waters (i.e., subsection 62-600.510(3), F.A.C.), discharges via shallow well injection systems (i.e., subsection 62-600.540(2), F.A.C.), and certain reuse or land application systems (i.e., Chapter 62-610, F.A.C.), the following operational criteria shall be applicable.

a. The arithmetic mean of the pollutant values for reclaimed water or effluent samples collected (whether grab or composite technique is used) during an annual period, as described in paragraph 62-600.740(1)(a), F.A.C., shall not exceed the design concentration established for the reclaimed water or effluent.

b. The arithmetic mean of the pollutant values for a minimum of four reclaimed water or effluent samples each collected (whether grab or composite technique is used) on a separate day during a period of 30 consecutive days (monthly) shall not exceed one and one-quarter times the design concentration for the reclaimed water or effluent.

c. The arithmetic mean of the pollutant values for a minimum of two reclaimed water or effluent samples each collected (whether grab or composite technique is used) on a separate day during a period of 7 consecutive days (weekly) shall not exceed one and one-half times the design concentration specified for the reclaimed water or effluent.

d. Maximum-permissible pollutant concentrations in any reclaimed water or effluent grab sample shall not exceed two times the design concentration specified for the reclaimed water or effluent.

3. In order to determine compliance of a domestic wastewater facility with the alternative preapplication treatment standards specified in applicable portions of Chapter 62-610, F.A.C., the design criteria specified therein shall apply as operational criteria at all times (i.e., the design criteria applies on an annual, monthly, weekly, and maximum-permissible concentration basis). Other operational criteria in this section shall be applicable upon release of the effluent from operational control in order to determine compliance with other requirements of this chapter.

4. In order to determine compliance of a domestic wastewater facility with the secondary treatment standards specified in subparagraph 62-600.420(1)(b)2. regarding outfalls discharging to open ocean waters, all operational criteria contained in subparagraph 62-600.740(1)(b)1., F.A.C., shall be applicable except that the annual average limitation shall be identical to the monthly criterion (30 mg/L).

5. In order to determine compliance of a domestic wastewater facility with disinfection criteria (other than the basic level) specified in subsection 62-600.440(4), F.A.C., for outfalls discharging to open ocean waters, the disinfection level approved by the Department shall apply as operational criteria at all times (i.e., the design criteria applies on an annual, monthly, weekly, and maximum-permissible concentration bases).

6. Effluent or reclaimed water compliance criteria, for domestic wastewater facilities established in accordance with subsections 62-600.520(5) and 62-600.540(5), F.A.C., shall be as approved by the Secretary on a case-by-case basis by Order.

(c) Domestic wastewater residuals compliance criteria shall be in accordance with the applicable portions of Chapters 62-2, 62-7, 62-640, and 62-701, F.A.C.

(2) Violations.

The following acts and the causing thereof are prohibited.

(a) The release or disposal of excreta, sewage, or other wastewaters or domestic wastewater residuals without providing proper treatment approved by the Department or otherwise violating provisions of this rule or other rules of the Florida Administrative Code.

(b) The failure to construct wastewater facilities substantially in accordance with Department approved preliminary design reports or plans and specifications unless project alterations receive the written approval of the Department.

(c) The failure to maintain equipment in a condition which will enable the intended function.

(d) The planned (as opposed to emergency) bypassing of components critical to functioning of the treatment plant as designed, or any other critical part of a wastewater facility, without notification to the Department. (The Department may not require notification where design redundancy and reliability characteristics provide reasonable assurance that disposal of excreta, sewage, other wastewaters, or domestic wastewater residuals, without having received proper treatment approved by the Department, will not occur.)

(e) The submission, by the owner, manager, or operator of a domestic wastewater facility, or agent or employee thereof, of misleading, false, or inaccurate information or operational reports to the Department, either knowingly or through neglect.

(f) No owner or permittee of a wastewater treatment plant shall knowingly allow or encourage any operator in his employ to violate any rule, regulation, or law related to treatment plant operation.

*Specific Authority 403.051, 403.061, 403.086, 403.087, 403.088 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088, 403.121, 403.131, 403.161 FS. History—New 11-27-89, Amended 1-30-91, Formerly 17-600.740, Amended 12-24-96.*