

**CHAPTER 62-611
WETLANDS APPLICATION**

TABLE OF CONTENTS

		PAGE
62-611.100	Scope/Intent/Purpose. (Repealed)	2
62-611.110	Applicability.	2
62-611.200	Definitions.	2
62-611.300	General Qualitative Design Criteria.	7
62-611.350	General Quantitative Design Criteria.	7
62-611.400	Specific Quantitative Design Criteria.	7
62-611.420	Discharge Limits to Treatment and Receiving Wetlands.	8
62-611.450	Discharge Limits from Treatment and Receiving Wetlands.	8
62-611.500	Standards within Treatment and Receiving Wetlands.	9
62-611.600	Permitting Requirements.	12
62-611.650	Man-made Wetlands.	13
62-611.700	Monitoring Requirements.	14
62-611.900	Forms. (Repealed)	18

62-611.100 Scope/Intent/Purpose. (Repealed)

Specific Authority 403.061, 403.918, FS.

Law Implemented 403.021, 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, 403.918, FS.

History -- New 11-27-89, Formerly 17-611.100, Repealed 12-26-96.

62-611.110 Applicability.

- (1) Requirements in this rule shall apply only to domestic wastewater facilities.
 - (2) The use of wetlands as treatment wetlands shall not be permitted where the:
 - (a) Wetlands are within Outstanding Florida Waters as listed in Section 62-302.700, F.A.C.;
 - (b) Wetlands are within Class I or Class II waters (Section 62-302.400, F.A.C.);
 - (c) Wetlands are within areas designated as areas of critical state concern as of October 1, 1985;
 - (d) Wetland is a herbaceous wetland, unless the herbaceous ground cover of the entire wetland is composed of greater than 50% *Typha* spp. (cattail). This prohibition shall not apply in hydrologically altered wetlands.
 - (3) The use of wetlands as receiving wetlands shall not be permitted where the:
 - (a) Wetlands are within Class I or II waters;
 - (b) Wetland is a herbaceous wetland, unless the herbaceous groundcover of the entire wetland is composed of greater than 50% *Typha* spp. (cattail). This prohibition shall not apply in hydrologically altered wetlands.
- Specific Authority 373.414(4), 403.061, FS.
Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.
History -- New 11-27-89, Formerly 17-611.110.

62-611.200 Definitions.

Terms used in this chapter shall have the meaning specified below. The meaning of any term not defined below, shall be taken from definitions in Rule 62-600, F.A.C., or in other rules of the Department.

- (1) "Approved methods" means sampling and laboratory testing methods approved by the Department, as specified by Section 62-4.246, F.A.C.
- (2) "Biochemical oxygen demand (BOD)" 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.
- (3) "Chloride" means the negatively charged chloride ion (Cl⁻) in water or wastewater, as determined using approved methods.
- (4) "Conductivity" means the standardized numerical expression of the ability of water or wastewater to carry an electric current, as determined using approved methods.
- (5) "Department" means the Department of Environmental Protection.

(6) "Disinfection" means the selective destruction of pathogens in wastewater effluents and sludges.

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

(8) "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: sludge classification (currently in "reserved" status); 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.

(9) "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 the environment of the state.

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

(11) "Forage fish" means all species of fish not otherwise defined as rough fish or as sport and commercial fish.

(12) "Herbaceous wetland" means an area within the landward extent of waters of the state where herbaceous ground cover constitutes greater than 30% of the uppermost stratum.

(13) "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 Rule 62-610, F.A.C., holding ponds can also provide a mechanism to accomplish nitrogen reduction.

(14) "Hydrologically altered herbaceous wetland" means a herbaceous wetland in which the hydrologic regime has been altered prior to October 1, 1985, by drainage works which have directly resulted in substantial and continuing encroachment by perennial upland species.

(15) "Hydrologically altered woody wetland" means a woody wetland in which the hydrologic regime has been altered prior to October 1, 1985, by drainage works which have directly resulted in substantial and continuing reduction in water levels.

(16) "Importance value" means the sum of the relative density, relative dominance, and relative frequency, converted to a basis of 100 percent.

(17) "Man-made wetland" means a wetland which was created solely as a result of human activity, such as scraping or contouring of uplands or the land application of reclaimed water, that then comes within the landward extent of waters. A man-made

treatment wetland does not include a wetland that was created as mitigation pursuant to a Department dredge and fill permit or consent order.

(18) "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).

(19) "Modification" means any alteration, expansion, upgrade, extension, addition, or replacement of an existing wastewater facility for which a construction permit is required from the Department after the effective date of this chapter; modify.

(20) "Nitrate (NO₃)" means the nitrogen content present in water or wastewater attributable to the nitrate (NO₃) ion and expressed as elemental nitrogen, N, as determined using approved methods.

(21) "Nitrite (NO₂)" means the nitrogen content present in water or wastewater attributable to the nitrite (NO₂) ion and expressed as elemental nitrogen, N, as determined using approved methods.

(22) "Permittee" means the person or entity to which a permit for a wastewater facility is issued by the Department. The term "permittee" shall be functionally synonymous with the terms "owner" and "licensee", but shall not include licensed individuals (e.g., operators) unless they are the person(s) to whom a facility permit is issued by the Department. The term shall extend to a permit "applicant" for purposes of this chapter. To the extent that this chapter imposes duties with respect to the construction, operation, maintenance, or monitoring of a facility and for reporting to or securing permits from the Department, ultimate responsibility lies with the owner of the facility. Nevertheless, Chapter 403, F.S., creates joint and several liability for those responsible for violations.

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

(24) "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.

(25) "Receiving wetland" means a wetland within the landward extent of waters of the state used to receive reclaimed water that contain not more, on an annual average basis, than the following concentrations:

1.	Carbonaceous Biochemical Oxygen Demand (CBOD ₅)	5 mg/l
2.	Total Suspended Solids	5 mg/l
3.	Total Nitrogen (as N)	3 mg/l
4.	Total Phosphorus (as P)	1 mg/l

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

(27) "Relative density" means the density for a species divided by the total density for all species, converted to a basis of 100 percent.

(28) "Relative dominance" means the dominance for a species divided by the total dominance for all species, converted to a basis of 100 percent. Dominance shall be determined using basal area or areal coverage measurements.

(29) "Relative frequency" means the frequency value for a species divided by the total of frequency values for all species converted to a basis of 100 percent.

(30) "Rough fish" means all members of the families Castastomidae (the suckers), Cichlidae (the Tilapia and relatives), and Lepisosteidae (the gar); and all members of the species Amia calva (bowfin), Ctenopharyngodon idella (grass carp), Cyprinus carpio (common carp), and Dorosoma cepedianum (gizzard shad).

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

(32) "Sport and commercial fish" means all members of the genera Acipenser (the sturgeon), Esox (the pickerel), Ictalurus (the catfish), Micropterus (the bass), and Morone (the white and striped bass and their hybrids); as well as the species Alosa sapidissima (American shad), Anguilla rostrata (American eel), Centrarchus macropterus (flier), Lepomis auritus (redbreast sunfish), Lepomis gulosus (warmouth), Lepomis macrochirus (bluegill sunfish), Lepomis microlophus (redeer sunfish), Lepomis punctatus (spotted sunfish), and Pomoxis nigromaculatus (black crappie).

(33) "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.

(34) "Total ammonia" means the sum of nitrogen content present as un-ionized ammonia (NH₃) and the nitrogen content present as ammonium (NH₄⁺).

(35) "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.

(36) "Total coliforms" means the group of bacteria, consisting predominantly of Enterobacter, Escherichia and Klebsiella, which are biochemically characterized as aerobic or facultative anaerobic, gram-negative, non-sporeforming rod shaped bacteria that ferment lactose with gas formation within 48 hours at 35°C, as determined using approved methods.

(37) "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.

(38) "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.

(39) "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.

(40) "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 method.

(41) "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.

(42) "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.

(43) "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.

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

(45) "Treatment wetland" means a wetland within the landward extent of waters of the state used to treat reclaimed water that has received secondary treatment with nitrification.

(46) "Turbidity" means a condition in water or wastewater caused by the presence of suspended matter, resulting in the scattering and absorption of light rays, as determined using approved methods.

(47) "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.

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

(49) "Wastewater facilities" means any or all of the following: the collection/transmission system, the treatment plant, and the disposal system.

(50) "Waters" shall be defined in Section 403.031(3), Florida Statutes.

(51) "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.

(52) "Water quality standards" means 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 Rules 62-4 and 62-302 of the Florida Administrative Code.

(53) "Woody wetland" means an area within the landward extent of waters where woody vegetation constitutes equal to or greater than 70% of the uppermost stratum.

Specific Authority 373.414(4), 403.061, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.200.

62-611.300 General Qualitative Design Criteria.

The discharge of reclaimed water to treatment or receiving wetlands shall:

- (1) Minimize channelized flow and maximize sheet flow in the wetland;
- (2) Minimize the loss of dissolution of sediments due to erosion or leaching; and
- (3) Not cause adverse effects on endangered or threatened species.

Specific Authority 373.414(4), 403.061, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.300.

62-611.350 General Quantitative Design Criteria.

(1) Hydraulic loading rates shall be designed to minimize alteration of the natural hydroperiod and for wetlands used for treatment to maximize their assimilative capacity.

The annual average hydraulic loading shall not exceed two inches per week, except in hydrologically altered wetlands where the annual average hydraulic loading shall be appropriately designed for the site and approved by the Department to assure compliance with Rule 62-611.500 and 62-611.450, F.A.C., and shall not exceed six inches per week.

(2) Upon renewal of the operation permit, the permittee may request a modification of design criteria based on a demonstration that predicted future trends in the effects of reclaimed water on the wetland and downstream waters, as will occur from the proposed modification, will meet standards pursuant to this rule. This demonstration shall be made based on five years of operational monitoring data as specified in Table 1, 2 and 3 of Rule 62-611.700, F.A.C.

(3) Reclaimed water shall be stored in a holding pond constructed according to requirements provided in the manual on the Land Application of Domestic Wastewater Effluent in Florida referenced in Rule 62-610.300, F.A.C. The holding pond shall have sufficient storage capacity to assure retention of reclaimed water that has not been treated to an acceptable quality for discharge to a treatment or receiving wetland. At a minimum, this capacity shall be the volume equivalent to one day's flow at the permitted capacity of the treatment plant. Provisions for recirculating and treating reclaimed water that has not been treated to an acceptable quality for discharge to a treatment or receiving wetland shall be incorporated into the design of the facility.

Specific Authority 373.414(4), 403.061, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.350.

62-611.400 Specific Quantitative Design Criteria.

(1) The minimum detention time of the reclaimed water within a treatment wetland shall be no less than fourteen days unless the applicant can affirmatively demonstrate that a shorter detention time will provide the required level of water quality in the discharge from the treatment wetland. This minimum detention time shall be calculated on an annual basis by dividing the estimated volume of the treatment wetland by the sum of

the design flow rates of reclaimed water and natural inflow to the treatment wetland. The estimated volume of the treatment wetland shall be determined for the area and depth of the treatment wetland based on the landward extent of waters as specified in Sections 373.4211, FS and 62-301.400, F.A.C.

(2) To maximize a treatment wetland's assimilative capacity for reclaimed water on a long-term basis, the loading rate of total nitrogen (as N) shall not exceed 25 g/m²/yr except for hydrologically altered wetlands where it shall not exceed 75 g/m²/yr, and the loading rate of total phosphorus (as P) shall not exceed 3.0 g/m²/yr except for hydrologically altered wetlands where it shall not exceed 9.0 g/m²/yr. The nutrient loading rates in hydrologically altered wetlands shall be appropriately designed for the site and approved by the Department to assure compliance with Rule 62-611.500 and 62-611.450, F.A.C.

Specific Authority 373.414(4), 403.087, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.400.

62-611.420 Discharge Limits to Treatment and Receiving Wetlands.

(1) Reclaimed water discharged to a treatment wetland must receive secondary treatment with nitrification.

(2) Reclaimed water discharged to a receiving wetland shall contain not more, on an annual average basis, than the following concentrations:

- | | |
|--|--------|
| (a) Carbonaceous Biochemical Oxygen Demand CBOD ₅ | 5 mg/l |
| (b) Total Suspended Solids | 5 mg/l |
| (c) Total Nitrogen (as N) | 3 mg/l |
| (d) Total Phosphorus (as P) | 1 mg/l |

(3) Reclaimed water discharged to a treatment or a receiving wetland must not exceed 2.0 milligrams per liter total ammonia (as N) as a monthly average.

Specific Authority 373.414(4), 403.061, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.420.

62-611.450 Discharge Limits from Treatment and Receiving Wetlands.

(1) The discharge from a treatment or receiving wetland shall not have an average annual total nitrogen concentration greater than 3 mg/l (as N) of which no more than 0.02 mg/l (as N) may be as un-ionized ammonia, or an average annual total phosphorus concentration greater than 0.2 mg/l (as P), unless Water Quality Based Effluent Limitations (WQBEL) pursuant to Rule 62-600.450, F.A.C., have been established. In those waters where phosphorus has been shown not to be a limiting nutrient or a contaminant, the Department shall waive or alter the compliance levels for phosphorus until there is a demonstration that phosphorus is a limiting nutrient or contaminant. In those waters where phosphorus has been shown to be a limiting nutrient or a contaminant, the

Department shall require plans for future additional phosphorus removal capability to be included in the approved design of the treatment facility. In order to determine if phosphorus is a limiting nutrient or contaminant in a water body, the Department shall consider the following water quality data from the receiving water body:

- (a) Monthly analysis for total kjeldahl nitrogen, ammonia nitrogen, nitrite plus nitrate nitrogen, ortho phosphorus, total phosphorus, temperature, conductivity, and pH; and
- (b) Quarterly algal assays; and
- (c) Other data specific to the receiving water body.

This data shall be no more than 5 years old.

(2) Pursuant to subsection 62-4.070(1) and 62-302.300(5), F.A.C., the applicant shall provide the Department with reasonable assurance that the discharge from a treatment or receiving wetland shall not cause or contribute to:

- (a) Violations of water quality criteria contained in Chapter 62-302, F.A.C., in contiguous waters;
- (b) Violations of water quality criteria contained in Chapter 62-302, F.A.C., in downstream waters, including a lake, estuary, lagoon, Outstanding Florida Water, or designated area of critical state concern;
- (c) Violations of the nitrogen and phosphorus limits specified in Rule 62-611.450, F.A.C. These limits shall be used as guidance when determining whether reasonable assurance has been provided that Department standards will be met.

However, the Department may set more stringent limits if necessary to assure compliance with these standards.

(3) If the maximum allowable concentration(s) of total nitrogen, un-ionized ammonia, or total phosphorus are exceeded in the discharge from the treatment or receiving wetland, the Department shall require the permittee to reduce the areal loading of total nitrogen, total ammonia, or total phosphorus to the treatment or receiving wetland, in accordance with an alternative approved by the Department. An alternative or alternatives for the reduction of the areal loadings of total nitrogen, total ammonia and total phosphorus to the treatment or receiving wetland shall be proposed in the application to construct a domestic wastewater treatment and disposal system and approved by the Department prior to the issuance of the permit.

Specific Authority 373.414(4), 403.061, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.450.

62-611.500 Standards within Treatment and Receiving Wetlands.

(1) The following water quality standards of Chapter 62-302, F.A.C., shall not apply in the treatment or receiving wetland: Sections 62-302.500(2)(f), 62-302.530(7), 62-302.530(11), 62-302.530(31), the total coliform bacteria standard in subsection 62-302.530(48)(a), 62-302.530(62), 62-302.530(68), 62-302.530(70).

However, Outstanding Florida Water ambient water quality may not be lowered, as required in Section 62-4.242(2), F.A.C.

(2) Levels of dissolved oxygen including daily and seasonal fluctuations shall be maintained to prevent violations of the biological quality standards contained in Rule 62-611.500, F.A.C.

(3) Wetland Biological Quality:

(a) The flora and fauna of the wetland shall not be changed to the extent that the ability of the wetland to function in the propagation and maintenance of healthy, well-balanced populations of fish and wildlife is impaired.

(b) Benthic Macroinvertebrates

1. The Shannon-Weaver diversity of benthic macroinvertebrates shall not be reduced to less than 50% of background levels as measured using organisms retained by a U.S. Standard No. 30 sieve and collected and composited from either Hester-Dendy type artificial substrate samplers of 0.10 to 0.15 square meters each, incubated for a period of four weeks; or measured using organisms retained by a U.S. Standard No. 30 sieve and collected and composited from natural substrate samplers, such as benthic grabs or coring devices. If grabs or cores are to be taken, ponar-type samplers with minimum sampling areas of 225 square centimeters or coring devices with minimum sampling areas of 45 square centimeters shall be used.

Any of these types of samplers can be used at each sampling station, but once a type of sampler is used at a station it must always be used at that station. The minimum number of samples necessary at a given station shall be that number needed to be 90% certain of being within 15% of the mean diversity of the population.

2. Once a determination of the needed number of samples is made for a station, that number of samples shall continue to be used at the station.

3. The Shannon-Weaver diversity index shall be as defined in Chapter 62-302.200, F.A.C.

(c) Fish

In a wetland with fish populations, an analysis of covariance shall be conducted annually, by species, using water depth as a covariant and biomass as a dependent variable. Where significant (0.15) changes from baseline data in biomass occur the permittee shall determine the cause of this change. Where significant changes occur that cannot be statistically attributed to factors other than the discharge, it shall constitute a violation of this section if the biomass of sport and commercial or of forage fish decreases by at least 10%. Where significant changes occur that cannot be statistically attributed to factors other than the discharge, it shall also constitute a violation of this section if the biomass of rough fish increases by at least 25% unless the ratio of sport and commercial fish to rough fish is maintained. All data shall be collected at times when standing water is present in the wetland. If sampling at any station yields no fish for four consecutive quarters when water is present, the fish sampling at that station can be eliminated. Standardized samples shall be collected using an electroshocking device along a series of evenly spaced transects in the wetland, or using a Wegener Ring, with a minimum sampling area of 0.8 m², thrown at 30 meter intervals along a series of evenly

spaced transects in the wetland; or any other similar method approved by the Florida Game and Fresh Water Fish Commission and the Department. Any fish kills observed during any monitoring shall be reported to the Department immediately.

(d) Vegetation

1. The importance value of each plant species occupying the canopy and subcanopy strata, as defined in Section 62-301.400(1), F.A.C., shall be determined at each station and averaged over the entire wetland. The importance value of any of the most common species in the canopy and subcanopy at any station shall not be reduced by more than 50% excluding the following species: (1) Casuarina spp. (Australian pine), (2) Melaleuca quinquenervia (pork tree), (3) Sapium sebiferum (popcorn tree), and (4) Schinus terebinthifolius (Brazilian pepper). In addition, the average importance value for all stations of any of the most common plant species occupying the canopy or subcanopy stratum, excluding those species listed in this paragraph, shall not be reduced by more than 25%. The most common plant species shall be defined as those species present during the baseline monitoring program within the canopy and subcanopy that have a relative importance value of at least 15%.

2. The minimum number of quadrats shall be that number needed to provide 90% certainty of being within 15% of the mean number of species of the population. Once the minimum number of quadrats is determined, the quadrats shall be permanently located for continued use at the station. The minimum quadrat size shall be 100 m² for canopy vegetation and 50 m² for subcanopy vegetation.

3. Reductions in the importance value or average importance value of a plant species resulting from management operations authorized by the Department or events such as fire or a hurricane shall not constitute a violation.

(4) Substances in concentrations which are chronically toxic to humans, animals, or plants, or provide adverse physiological or behavioral response in humans or animals, shall not be present.

(5) The standards set forth in the following rule shall not apply in a hydrologically altered wetland: Rule 62-611.500(2) and (3)(b) through (d), F.A.C. A hydrologically altered wetland shall be monitored as specified in Rule 62-611.700, F.A.C., in accordance with methodologies approved by the Department. The applicant must demonstrate that the discharge of reclaimed water to the hydrologically altered wetland will maintain or increase the dominance of plant species listed in Rule 62-301.400, F.A.C., and the wetland biological quality. Whether the discharge will maintain or increase the wetland biological quality will be evaluated in accordance with monitoring requirements set forth in Rule 62-611.500(3), F.A.C.

Specific Authority 373.414(4), 403.061, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.500.

62-611.600 Permitting Requirements.

(1) Any person who intends to discharge reclaimed water to wetlands shall file an application to construct a domestic wastewater treatment and disposal system(s), or file a petition for an exemption pursuant to Rule 62-600.120, F.A.C., with a permit application. Such an application shall be filed using form 62-620.910(16), F.A.C. The applicant must receive such a permit before construction of the wastewater facilities, or for existing wastewater facilities before construction of the modifications for discharge to wetlands. Management practices proposed by the applicant for the treatment or receiving wetland shall be included in the permit application and must be approved by the Department before implementation. In addition to meeting the requirements of this section, the applicant shall comply with all other applicable rules of the Department.

(2) Any person who has a Department permit to discharge to wetlands pursuant to Rule 62-600.120, F.A.C., shall not be regulated pursuant to Rule 62-611, F.A.C., unless the wastewater treatment plant is modified or expanded, or the point of discharge is relocated. After the initial period of operation under a permit and exemption issued pursuant to Rule 62-600.120, F.A.C, the permittee may obtain an operation permit upon demonstration that all permit and exemption conditions and the provisions of Rule 62-600.120, F.A.C., are being met and the discharge does not cause or contribute to violations of water quality standards contained in Chapter 62-302, F.A.C., in contiguous and downstream waters.

(3) All other dischargers of reclaimed water to wetlands within the Department's jurisdiction, permitted prior to May 1, 1986, if complying with the conditions of the permit, shall comply with the provisions of this section or comply with all applicable water quality standards, by May 1, 1991. The Department may consider modifications from baseline and operational monitoring requirements for these dischargers.

(4) The applicant shall obtain sufficient legal interest in the treatment or receiving wetland to provide reasonable assurance that the treatment or receiving capability will not be adversely affected. Documentation of this legal interest shall be submitted to the Department with the application to construct a domestic wastewater treatment and disposal system.

(5) The Department shall consider the adverse effects of dredging or filling on the treatment or receiving wetland. Minor dredging and filling which is associated with the construction of the discharge pipe(s) or spreader system or which is necessary for the installation of platforms or gauges for monitoring shall be reviewed as part of the application to construct a domestic wastewater treatment and disposal system. In reviewing any other dredge and fill permit application the Department shall apply the permitting criteria of subsection 373.414(4), F.S., to contiguous and downstream waters and the treatment or receiving wetland. The permitting criteria of subsection 403.918(1), F.S., shall apply to contiguous and downstream waters and the treatment or receiving wetland except that the water quality criteria in Rule 62-611.500(1), F.A.C., shall not apply in the treatment or receiving wetland and the water quality criteria in Rule 62-302.530(48)(b), F.A.C., shall not apply in hydrologically altered treatment wetlands. The Department shall make all reasonable attempts to evaluate the dredge and fill permit

application concurrently with the application to construct a domestic wastewater treatment and disposal system.

(6) The applicant shall provide the Department with reasonable assurances that public access to a treatment or receiving wetland shall be restricted unless high level disinfection is provided. Such reasonable assurances may include, but shall not be limited to posting of signs at regular intervals around the boundary of the treatment wetland and posting and gating all access roads to the treatment wetland, or similar restrictions.

Specific Authority 373.414(4), 403.061, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.600, Amended 12-26-96.

62-611.650 Man-made Wetlands.

(1) The provisions of this section shall not apply to the discharge of reclaimed water to man-made wetlands, provided that the water quality criteria for heavy metals contained in Chapter 62-302, F.A.C., shall apply in man-made wetlands. Except as provided herein such discharge shall not be required to meet the surface water quality criteria contained in Chapter 62-302, F.A.C., except for Section 62-302.500, F.A.C. However, discharges to such wetlands shall be permitted in accordance with all other applicable surface water discharge criteria in Chapter 62-600, F.A.C., and other rules.

(2) If the man-made wetland is contiguous to other waters, the permit applicant shall provide reasonable assurance that Rule 62-611.450, F.A.C., and all other applicable water quality criteria in Chapter 62-302, F.A.C., will be met at the boundary between the man-made wetland and other waters, or the applicant shall obtain a permit for discharge of reclaimed water to wetlands for the discharge from the man-made wetland to other wetlands within the landward extent of waters of the state, in accordance with the criteria contained in this section.

(3) In reviewing a proposal to dredge and fill in a man-made wetland, the department shall apply the permitting criteria of section 373.414(1), F.S., to the downstream water only. In addition, the Department shall consider the adverse effects of the dredging and filling on the assimilation capacity of the man-made wetland. Minor dredging and filling which is associated with the construction of the discharge pipe(s) or spreader system, or which is necessary for the installation of platforms or gauges for monitoring shall be reviewed as part of the application to construct or operate a domestic wastewater treatment and disposal system. Any other dredging and filling shall require a dredge and fill permit which shall, when possible, be evaluated concurrently with the application to construct a domestic wastewater treatment and disposal system.

(4) A man-made wetland created for mitigation as a condition of a Department dredge and fill permit may not be used as a treatment wetland. Such a man-made wetland is not prohibited from use as a receiving wetland, provided all appropriate Department rules are met, and provided that such a use is in conformance with the dredge and fill permit that required the mitigation.

Specific Authority 373.414(4), 403.061, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.650.

62-611.700 Monitoring Requirements.

(1) To ensure compliance with water quality standards and to establish a data base upon which to evaluate the design criteria and the performance of the treatment or receiving wetland, a monitoring program shall be required. Data to be collected shall include but not be limited to parameters, stations, and frequency as listed in Tables 1, 2, and 3. After three years of operation, the permittee may request a modification in the parameters and frequency of the monitoring program based on a demonstration that there is an adequate data base to predict future trends in the effects of the discharge of reclaimed water on the wetland. The proposed monitoring plans, using scientifically accepted methodology and appropriate quality assurance, shall be submitted to the Department. The Department shall approve or deny the plan within 45 days of receipt of all necessary information. Upon Department approval of the plan and format for data reporting, baseline monitoring may begin.

(2) Upon Department approval of the plan and format for data reporting an application to construct a domestic wastewater treatment and disposal system may be filed. Before discharge of reclaimed water to a treatment or receiving wetland begins, the applicant shall complete a baseline monitoring program to determine background conditions. The Department shall utilize baseline monitoring data to evaluate whether the discharge from a treatment or receiving wetland will exceed the limits established pursuant to Rule 62-611.450, F.A.C. The Department may determine that an application to construct a domestic wastewater treatment and disposal system is complete prior to completion of the baseline monitoring program if, pursuant to section 62-4.070(1) and 62-302.300(5), F.A.C., reasonable assurance is provided by the applicant that the discharge from the treatment or receiving wetland will not cause or contribute to violations of water quality criteria contained in Chapter 62-302, F.A.C., in contiguous and downstream waters. If baseline monitoring data indicate the discharge from the treatment or receiving wetland may exceed the limits established in Rule 62-611.450, F.A.C., Water Quality Based Effluent Limitations (WQBEL) must be established pursuant to Rule 62-600.430, F.A.C. Any WQBEL shall be incorporated as a permit condition.

Specific Authority 373.414(4), 403.061, FS.

Law Implemented 373.414(4), 403.051, 403.061, 403.085, 403.086, 403.087, 403.088, FS.

History -- New 11-27-89, Formerly 17-611.700.

TABLE 1
MONITORING PROGRAM FOR AN UNALTERED TREATMENT WETLAND

PARAMETER	Baseline Monitoring ¹ Program			Operational Monitoring ² Program		
	Surface ³	Sediment ³	Biota ⁴	Surface ³	Sediment ³	Biota ⁴
Temperature	M(DD)			M(DD)		
Dissolved Oxygen	M(DD)			M(DD)		
pH	M	O		M	A	
Conductivity	M			M		
Cl ₂ (TRC)						
Color	M			M		
CBOD ₅	M			M		
TSS	M			M		
TP (as P)	M	O		M	A	
OP (as P)	M			M		
TKN (as N)	M	O		M	A	
NH ³ (as N)	M	O		M	A	
NO ₃ - NO ₂ (as N)	M	O		M	A	
SO ₄ (as S)	Q			Q		
S ⁻ (as S)		O			A	
Fecal Coliforms	M			M		
Chl a	Q			Q		
Non-metallic priority pollutants	O			A		
Metals (Hg, Pb, Cd, Cu, Zn, Fe, Ni, Ag)	O	O		SA	SA	
Stage ⁵	C					
Benthic Macroinvertebrates			Q			Q
Woody Vegetation			O			A
Herbaceous Vegetation-line intercept method			Q			Q
Fish			Q			Q
Mosquitoes			B			B
Threatened and Endangered Plant and Animal Species List			O			A
Plant Tissue Analysis ⁶ (Hg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, TKN, TP)			O			F
Plant Tissue Analysis ⁷ (TP, TKN, Fe, Zn)			O			A
M = monthly DD = 48 hour dawn-dusk, max of four hour intervals O = once during baseline monitoring period C = continuous Q = quarterly			A = annually SA = semi-annually B = monthly (April - November) F = one final sample after 5 years			
¹ Length of baseline monitoring program in one year. ² Domestic wastewater treatment plant monitoring shall be conducted pursuant to Chapter 62-601, FAC. ³ A minimum of two stations shall be sampled in the wetland; 1) at the proposed point of discharge to, and 2) at the point of discharge from the wetland. Additional stations may be required to determine compliance with section 62-611, FAC. ⁴ A minimum of three permanent stations shall be established as follows; 1) in the immediate vicinity of the point of discharge to the wetland, 2) in the approximate geographical middle of the wetland, and 3) in the vicinity of the point(s) of discharge from the wetland. Additional stations may be required to determine compliance with section 62-611, FAC. ⁵ Stage used to determine flow and only required at the point(s) of discharge from the wetland. ⁶ Bole of two trees at each permanent station (1 species). ⁷ Leaf, stem, and bole of two trees at each permanent station (2 species).						

TABLE 2
MONITORING PROGRAM FOR A HYDROLOGICALLY ALTERED
OR MAN-MADE TREATMENT WETLAND¹

PARAMETER	Baseline Monitoring ¹ Program			Operational Monitoring ² Program		
	Surface ³	Sediment ³	Biota ⁴	Surface ³	Sediment ³	Biota ⁴
Temperature				M(DD)		
Dissolved Oxygen				M(DD)		
pH	O			M		
Conductivity				M		
Cl ₂ (TRC)						
Color				M		
CBOD ₅				M		
TSS				M		
TP (as P)	M	O		M	A	
OP (as P)				M		
TKN (as N)	M			M		
NH ³ (as N)	M			M		
NO ₃ - NO ₂ (as N)	M			M		
SO ₄ (as S)	O			Q		
S ⁻ (as S)					A	
Fecal Coliforms	O			M		
Chl a				Q		
Non-metallic priority pollutants	O			A		
Metals (Hg, Pb, Cd, Cu, Zn, Fe, Ni, Ag)	O	O		SA	SA	
Stage ⁵	C			C		
Benthic Macroinvertebrates			Q			Q
Woody Vegetation			O			A
Herbaceous Vegetation-line intercept method			Q			Q
Fish			Q			Q
Mosquitoes			B			B
Threatened and Endangered Plant and Animal Species List			O			A
Plant Tissue Analysis ⁶ (Hg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, TKN, TP)						
Plant Tissue Analysis ⁷ (TP, TKN, Fe, Zn)						
M = monthly DO = 48 hour dawn-dusk, max of four hour intervals O = once during baseline monitoring period C = continuous			A = annually SA = semi-annually B = monthly (April - November) F = one final sample after 5 years			
¹ No sediment or biota parameters required to be monitored in man-made wetland. ² Length of baseline monitoring program is one year. No baseline monitoring program required for man-made wetlands. ³ Domestic wastewater treatment plant monitoring shall be conducted pursuant to Chapter 62-601, FAC. ⁴ A minimum of two stations shall be sampled in the wetland; 1) at the proposed point of discharge to, and 2) at the point of discharge from the wetland. Additional stations may be required to determine compliance with section 62-611, FAC. Only one station at a point of discharge from a man-made wetland is required. ⁵ A minimum of three permanent stations shall be established as follows; 1) in the immediate vicinity of the point of discharge to the wetland, 2) in the approximate geographical middle of the wetland, and 3) in the vicinity of the point(s) of discharge from the wetland. Additional stations may be required to determine compliance with section 62-611, FAC. ⁶ Stage used to determine flow and only required at the point(s) of discharge from the wetland.						

TABLE 3
MONITORING PROGRAM FOR A RECEIVING WETLAND

PARAMETER	Baseline Monitoring ¹ Program			Operational Monitoring ² Program		
	Surface ³	Sediment ³	Biota ⁴	Surface ³	Sediment ³	Biota ⁴
Temperature	O(DD)			Q(DD)		
Dissolved Oxygen	O(DD)			Q(DD)		
pH	O			Q		
Conductivity	O			Q		
Cl ₂ (TRC)						
Color						
CBOD ₅	O			Q		
TSS	O			Q		
TP (as P)	O			Q		
OP (as P)						
TKN (as N)	O			Q		
NH ³ (as N)	O			Q		
NO ₃ - NO ₂ (as N)	O			Q		
SO ₄ (as S)	O			Q		
S ⁻ (as S)		O			A	
Fecal Coliforms	O			Q		
Chl a	O			Q		
Non-metallic priority pollutants						
Metals (Hg, Pb, Cd, Cu, Zn, Fe, Ni, Ag)						
Stage ⁵	C			C		
Benthic Macroinvertebrates						
Woody Vegetation			O			A
Herbaceous Vegetation-line intercept method			O			Q
Fish			O			Q
Mosquitoes						
Threatened and Endangered Plant and Animal Species List			O			A
Plant Tissue Analysis ⁶ (Hg, Pb, Cd, Cr, Cu, Zn, Fe, Ni, Ag, TKN, TP)						
Plant Tissue Analysis ⁷ (TP, TKN, Fe, Zn)						
M = monthly DO = 48 hour dawn-dusk, max of four hour intervals O = once during baseline monitoring period C = continuous			A = annually SA = semi-annually Q = quarterly			
¹ Domestic wastewater treatment plant monitoring shall be conducted pursuant to Chapter 62-601, FAC. ² A minimum of two stations shall be sampled in the wetland; 1) at the proposed point of discharge to, and 2) at the point of discharge from the wetland. Additional stations may be required to determine compliance with section 62-611, FAC. ³ A minimum of three permanent stations shall be established as follows; 1) in the immediate vicinity of the point of discharge to the wetland, 2) in the approximate geographical middle of the wetland, and 3) in the vicinity of the point(s) of discharge from the wetland. Additional stations may be required to determine compliance with section 62-611, FAC. ⁴ Monthly monitoring required if wetland used for phosphorus treatment. ⁵ Stage used to determine flow and only required at the point(s) of discharge from the wetland.						

62-611.900 Forms. (Repealed)

Specific Authority 403.061, 403.918, FS.

Law Implemented 403.051, 403.061, 403.085, 403.086, 403.087, 403.088,
403.918, FS.

History -- New 11-27-89, Formerly 17-611.900, Repealed 12-26-96.