

# **APPENDIX “F”**

## **Chapter 62-610 Florida Administrative Code**

## CHAPTER 62-610 REUSE OF RECLAIMED WATER AND LAND APPLICATION

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## PART I GENERAL

### **62-610.100 Scope, Intent, Purpose, and Applicability.**

(1) Sections 403.064(1) and 373.250(1), F.S., establish the encouragement and promotion of water conservation and reuse of reclaimed water as state objectives and state that water conservation and reuse are in the public interest.

(2) Section 403.021(2), F.S., as amended, establishes 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. Sections 403.085 and 403.086, F.S., set forth requirements for the treatment and reuse or disposal of domestic wastewater. Section 403.051(2)(a), F.S., 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 requirements of Sections 403.051, 403.085, 403.086, 403.087, 403.088, F.S., concerning domestic wastewater facilities.

(3) It is the policy of the Department to encourage an applicant, before submittal of a permit application, to evaluate alternative wastewater management techniques and to discuss alternatives with the Department.

(a) The Department encourages inclusion of public health, economic, scientific, energy, engineering and environmental considerations in such evaluations. Each prospective domestic wastewater facility shall be assessed on an individual basis.

(b) The Department encourages environmentally acceptable alternatives which provide the most economic and energy efficient methods of complying with the requirements of this rule, and promote the beneficial reuse of reclaimed waters and treated residuals.

(4) The Commission, recognizing the complexity of water quality management and the necessity to temper regulatory actions with the realities of technological progress and social and economic well-being, nevertheless, intends to prohibit any discharge that constitutes a hazard to human health.

(5) These rules shall be construed to assure that all waters of the state shall be free from components of wastewater discharges which, alone or in combination with other substances, are acutely toxic; are present in concentrations which are carcinogenic, mutagenic, or teratogenic to humans, animals, or aquatic species; or otherwise pose a serious threat to the public health, safety, and welfare.

(6) This rule contains the specific reuse and land application requirements of the Florida Department of Environmental Protection and of Local Pollution Control Programs approved and established pursuant to Section 403.182, F.S., 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 rule does not eliminate the need to comply with those requirements.

(7) The purpose of Chapter 62-610, F.A.C., is to provide design and operation and maintenance criteria for land application systems that may discharge reclaimed waters or domestic wastewater effluent to Class G-II ground waters and to a limited extent to Class G-I and F-I ground waters (as defined by Chapter 62-520, F.A.C.). This chapter also provides design and operation and maintenance criteria for surface water discharge projects involving reuse for ground water recharge, indirect potable reuse, or other beneficial purposes described in this chapter. The requirements in this rule shall apply to systems involving potential discharges to Class G-I and F-I ground waters (as defined by Chapter 62-520, F.A.C.) to the extent that these rule provisions do not conflict with requirements for G-I and F-I ground waters. Supported by moderating provisions, it is intended that Chapter 62-610, 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. This rule contains operation and maintenance requirements so as much information as possible on reuse and land application can be presented in a single rule.

(8) Chapter 62-610, F.A.C., shall be used in conjunction with Chapter 62-600, F.A.C. Systems shall be designed in accordance with sound engineering practice. Minimum design waste treatment and disinfection standards are specified in Rules 62-600.420 and 62-600.440, F.A.C. Additional waste treatment standards, where appropriate, are addressed in this rule.

(9) Applicability.

(a) Requirements in this chapter shall apply only to domestic wastewater treatment facilities and reuse and land application systems receiving reclaimed water or effluent from domestic wastewater treatment facilities.

(b) Unless specifically provided otherwise in this chapter, requirements in this chapter shall apply to all new reuse and land application systems for which construction permit applications or initial permits which authorize construction are approved by the Department after April 5, 1989. This chapter also shall apply to all existing facilities when such facilities are to be modified or expanded, but this chapter shall apply only to the expansion or modification thereof, or if treatment processes are altered such that the quality of reclaimed water or effluent or reliability of such processes is adversely affected. Re-rating of an existing reuse or land application system or site such that the permitted capacity of the system or site is increased shall be considered an expansion, even if there is no increase in physical size of the system or site.

#### **62-610.450 Description of System.**

(1) This type of reuse system involves the irrigation of areas that are intended to be accessible to the public, such as residential lawns, golf courses, cemeteries, parks, landscape areas, and highway medians. Public access areas may include private property that is not open to the public at large, but is intended for frequent use by many persons. Reclaimed water may also be made available for fire protection, aesthetic purposes (such as decorative ponds or fountains), irrigation of edible crops, dust control on construction sites, or other reuse activities. These reuse systems feature reclaimed water that has received high-level disinfection.

(2) Public access also may be provided to sites irrigated using subsurface application systems as described and regulated by Part II of Chapter 62-610, F.A.C. Subsurface application projects regulated by Part II are not subject to the requirements of Part III of Chapter 62-610, F.A.C.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Formerly 17-610.450, Amended 1-9-96.*

#### **62-610.451 Minimum System Size.**

(1) No treatment facility with a design average daily flow of less than 0.1 mgd shall have the produced reclaimed water made available for reuse by slow-rate land application in public access areas.

(2) No treatment facility with a design average daily flow of less than 0.1 mgd shall have the produced reclaimed water made available for reuse by slow-rate land application on residential properties or on edible crops.

(3) A minimum system size is not required if reclaimed water will be used only for toilet flushing or fire protection.

(4) The permitted capacity of the overall domestic wastewater treatment facility shall be used in determining compliance with the minimum system size requirements, even if only a small percentage of the wastewater treated is used for beneficial purposes.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 4-2-90, Formerly 17-610.451, Amended 1-9-96.*

#### **62-610.460 Waste Treatment and Disinfection.**

(1) Preapplication waste treatment shall result in a reclaimed water that meets, at a minimum, secondary treatment and high-level disinfection. The reclaimed water shall not contain more than 5.0 milligrams per liter of suspended solids before the application of the disinfectant.

(2) An operating protocol as described in Rules 62-610.320 and 62-610.463, F.A.C., shall be developed and implemented.

(3) Filtration shall be provided for TSS control. Chemical feed facilities for coagulant, coagulant aids, or polyelectrolytes shall be provided. Such chemical feed facilities may be idle if the TSS limitation is being achieved without chemical addition. Filtration is an important component of a wastewater treatment facility that provides reclaimed water for the types of activities allowed by Part III of Chapter 62-610, F.A.C. By removing TSS before disinfection, filtration serves to increase the ability of the disinfection process to inactivate virus and other pathogens. Filtration also serves as the primary barrier for removal of protozoan pathogens (Cryptosporidium, Giardia, and others). Addition of chemical coagulants generally increases the effectiveness of pathogen removal.

(4) A pretreatment program shall be prepared and implemented in accordance with Rule 62-610.330, F.A.C.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 4-2-90, Formerly 17-610.460, Amended 1-9-96, 8-8-99.*

#### **62-610.462 Reliability and Operator Staffing.**

(1) The following reliability requirements shall apply. Facility reliability shall have a minimum Class I reliability as described in paragraph 62-610.300(1)(c), F.A.C. The Department shall approve alternative levels of treatment facility reliability if the permittee provides reasonable assurances in the engineering report that the facility will provide a level of reliability equivalent to Class I reliability. Class I reliability shall not be required if a permitted alternate treatment or discharge system exists which has sufficient capacity to handle any reclaimed water flows which do not meet the performance criteria established in the operating protocol.

(a) Multiple aeration basins shall not be required for an oxidation ditch facility to comply with Class I reliability requirements, if the following conditions are met:

1. The construction permit application was approved by the Department before April 5, 1989;
2. The treatment facility is not being expanded; and
3. All other Class I reliability criteria are met.

(2) Except as provided in subsection 62-610.462(3), F.A.C., the wastewater treatment facility shall be staffed by a Class C or higher operator 24 hours per day, 7 days per week. The lead/chief operator shall be at minimum Class B, or higher if required by Chapter 62-699, F.A.C.

(3) The minimum staffing requirement at the wastewater treatment facility shall be reduced to staffing by a Class C or higher operator 6 hours per day, 7 days per week, unless Chapter 62-699, F.A.C., requires additional operator presence or a higher level of operator. The lead/chief operator shall be at minimum Class C, or higher if required by Chapter 62-699, F.A.C. This minimum staffing requirement shall be allowed only in conjunction with at least one of the following.

- (a) Diversion of acceptable quality reclaimed water to the reuse system only during periods of operator presence.
- (b) Other provisions for increased facility reliability.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 4-2-90, Formerly 17-610.462, Amended 1-9-96, 8-8-99.*

#### **62-610.463 Monitoring and Operating Protocol.**

(1) Reclaimed water limitations shall be met after disinfection and before discharge to holding ponds or reuse systems. The total suspended solids limitation shall be achieved before disinfection, regardless of the actual reclaimed water compliance monitoring location.

(2) The treatment facility shall include continuous on-line monitoring for turbidity before application of the disinfectant. Continuous on-line monitoring of total chlorine residual or for residual concentrations of other disinfectants, if used, shall be provided at the compliance monitoring point. Instruments for continuous on-line monitoring of turbidity and disinfectant residuals shall be equipped with an automated data logging or recording device. Continuous on-line monitoring instruments shall be calibrated according to the requirements of Chapters 62-160 and 62-601, F.A.C. Continuous on-line monitoring instruments shall be maintained according to the manufacturer's operation and maintenance instructions. In accordance with Rule 62-610.320, F.A.C., the permittee shall develop, and the Department shall approve, an operating protocol designed to ensure that the high-level disinfection criteria will be met before the reclaimed water is released to the system storage or to the reclaimed water reuse system. The operating protocol shall be reviewed and updated as required in Rule 62-610.320, F.A.C. Reclaimed water produced at the treatment facility that fails to meet the criteria established in the operating protocol shall not be discharged into system storage or to the reuse system. Such substandard reclaimed water (reject water) shall be either stored for subsequent additional treatment or shall be discharged to another permitted reuse system requiring lower levels of preapplication treatment or to a permitted effluent disposal system.

(3) Ground water monitoring.

(a) Monitoring of ground water requirements shall be as contained in Chapters 62-601 and 62-522, F.A.C.

(b) A ground water monitoring well shall be located adjacent to unlined storage ponds or lakes, unless the applicant provides an affirmative demonstration in the engineering report, based on local hydrogeological conditions or historic flow data for the pond, that reclaimed water stored in the pond will not percolate to ground water.

(4) Monitoring for *Giardia* and *Cryptosporidium*.

(a) For treatment plants having capacities of 1.0 mgd or larger, the permittee shall sample the reclaimed water for *Cryptosporidium* and *Giardia* as follows:

1. Sampling shall be conducted at one time during each two-year period. Intervals between sampling shall not be greater than two years.

2. Samples shall be taken at a point immediately following the disinfection process.

(b) For treatment plants having capacities less than 1.0 mgd, the permittee shall sample the reclaimed water for *Cryptosporidium* and *Giardia* as follows:

1. Sampling shall be conducted at one time during each five-year period. Intervals between sampling shall not be greater than five years.

2. Samples shall be taken at a point immediately following the disinfection process.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 4-2-90, Formerly 17-610.463, Amended 1-9-96, 8-8-99.*

#### **62-610.464 Storage Requirements.**

(1) System storage shall not be required where another permitted reuse system or effluent disposal system is incorporated into the system design to ensure continuous facility operation in accordance with the requirements of Chapter 62-600, F.A.C. If system storage is not required, provision of flow equalization or storage should be evaluated in the engineering report to ensure that reclaimed water flows will match the demand pattern during a diurnal cycle.

(2) Unless exempted by subsection 62-610.464(1), F.A.C., system storage ponds shall have capacities determined as follows.

(a) Requirements for system storage pond capacity shall be as contained in Rule 62-610.414, F.A.C., for restricted access slow-rate land application systems. System storage or a limited wet weather discharge authorization shall be required for wet weather conditions. At a minimum, system storage capacity shall be the volume equal to three times that portion of the average daily flow of the total reuse capacity for which no alternative reuse or disposal system is permitted.

(3) In addition, a separate, off-line system for storage of reject water shall be provided, unless another permitted reuse system or effluent disposal system is capable of discharging the reject water in accordance with requirements of Chapter 62-600, F.A.C. Reject water storage shall have sufficient capacity to ensure the retention of reclaimed water of unacceptable quality. At a minimum, this capacity shall be the volume equal to one day flow at the average daily design flow of the treatment plant or the average daily permitted flow of the reuse system, whichever is less. Provisions for recirculating this reject water to other parts of the treatment plant for further treatment shall be incorporated into the design.

(4) Requirements for system storage and reject water holding ponds shall be as contained in Rule 62-610.414, F.A.C., except for the following:

(a) System storage ponds do not have to be lined.

(b) Reject storage ponds shall be lined or sealed to prevent measurable seepage.

(c) Existing or proposed lakes or ponds (such as golf course ponds) are appropriate for storage of reclaimed water and stormwater management if all Department rules are met and the use of lakes or ponds for reclaimed water storage will not impair the ability of the lakes or ponds to function as a stormwater management system. Rule 62-610.830, F.A.C., contains permitting requirements for these types of storage lakes or ponds. Lakes or ponds (such as golf course ponds) used to store reclaimed water are not required to meet the storage pond design, construction, and operation requirements in subsections 62-610.414(7) and (8), F.A.C.

(5) The permittee shall maintain an inventory of storage systems. The inventory shall be submitted to the Department at least 30 days before reclaimed water will be introduced into any new storage systems. The inventory shall be submitted annually to the Department with the annual reuse report required by subsection 62-610.870(3), F.A.C. The inventory shall include the following:

(a) Name or identifier for the storage system.

(b) Location of the storage system (latitude/longitude).

(c) Function of the storage system (system storage or reject storage).

(d) Type of facility (covered tank, uncovered tank, lined pond, unlined pond).

(e) Indication of whether or not the storage facility is a water of the state or discharges to a water of the state.

(f) Distances to the nearest public water supply wells and to the nearest potable water supply wells which are not public water supply wells.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 4-2-90, Formerly 17-610.464, Amended 1-9-96, 8-8-99.*

#### **62-610.466 Aquifer Storage and Recovery (ASR).**

(1) Aquifer storage and recovery of reclaimed water involves the following:

(a) Injection of reclaimed water into a subsurface formation for storage; and

(b) Recovery of the stored reclaimed water for beneficial purposes at a later date.

(2) Aquifer storage and recovery can be an effective and environmentally sound approach to provision of storage for reclaimed water for reuse systems regulated under Part III of Chapter 62-610, F.A.C. Aquifer storage and recovery by itself does not constitute “reuse.” It is only when reclaimed water, which has been stored in an aquifer, is recovered and used for beneficial purposes that the reclaimed water is considered to be “reused.” Aquifer storage and recovery systems are considered components of the overall reuse system.

(3) Aquifer storage and recovery systems shall meet the technical and permitting requirements of the Department’s underground injection control program which are contained in Chapter 62-528, F.A.C., and shall obtain an underground injection control construction and operation permit, as appropriate, in addition to any permits required under Chapters 62-610 and 62-620, F.A.C.

(4) In the engineering report submitted with the initial application to implement an aquifer storage and recovery system, the applicant shall provide an evaluation of the anticipated changes in the characteristics of the reclaimed water during the injection, storage, and recovery phases. In the engineering report, the applicant shall evaluate the need for additional treatment or disinfection upon recovery before introduction of the recovered water into system storage or the reuse system. The engineering report shall include an initial characterization of the ground water at the point of injection. The ground water characterization shall include analyses for all parameters for which ground water quality standards have been established in Chapter 62-520, F.A.C., and for fecal coliforms. The characterization of TDS at the point of injection is discussed in subparagraph 62-610.310(3)(c)9. and subsection 62-610.800(11), F.A.C.

(5) The water recovered from the aquifer storage and recovery system shall meet the performance standards for fecal coliforms as specified for high-level disinfection before use in a reuse system regulated under Part III of this chapter.

(6) Applications for permit renewals shall include an evaluation of the performance of the aquifer storage and recovery system. This shall include evaluations of monitoring data (including trends observed), any problems encountered, and any anticipated problems based on review of the monitoring trends. Existing and anticipated problems shall be addressed as described in subsection 62-610.466(17), F.A.C.

(7) Use of Class G-IV ground water.

(a) Wells may be used to inject reclaimed water into Class G-IV ground water for aquifer storage and recovery if all of the following conditions in either 1 or 2 are met:

1. Wells may be used to inject reclaimed water into Class G-IV ground water for aquifer storage and recovery if all of the following conditions are met:

a. The reclaimed water meets all the preapplication treatment and disinfection criteria established in Part III of Chapter 62-610, F.A.C., before injection.

b. Technical and permitting requirements in Chapter 62-528, F.A.C., are met.

2. Wells may be used to inject effluent into Class G-IV ground water for aquifer storage and recovery if all of the following conditions are met:

- a. The preapplication treatment criteria established in subsections 62-600.540(1) and (4), F.A.C., shall be met before injection.
- b. Technical and permitting requirements in Chapter 62-528, F.A.C., are met.
- c. The treatment and disinfection requirements in Part III of Chapter 62-610, F.A.C., shall be met upon recovery of the water.

Treatment and disinfection upon recovery shall include filtration and chemical feed facilities, as described in Rule 62-610.460, F.A.C., high-level disinfection, Class I reliability, operator attendance and staffing, operating protocol, reject storage, and monitoring requirements.

(8) Use of Class G-I or F-I ground water.

(a) Wells may be used to inject reclaimed water into Class G-I or F-I ground water for aquifer storage and recovery if all of the following requirements are met:

1. The reclaimed water meets the full treatment and disinfection criteria established in Rule 62-610.563, F.A.C., for ground water recharge projects.

2. Technical and permitting requirements in Chapter 62-528, F.A.C., are met.

(b) Except as provided in subsection 62-610.466(17), F.A.C., additional treatment or disinfection shall not be required upon recovery of the reclaimed water.

(9) Use of Class G-II ground water containing 3000 mg/L or less of total dissolved solids.

(a) Wells may be used to inject reclaimed water into Class G-II ground water containing 3000 mg/L or less of total dissolved solids for aquifer storage and recovery if all of the following conditions are met:

1. The reclaimed water meets the full treatment and disinfection criteria established in Rule 62-610.563, F.A.C., for ground water recharge projects.

2. Technical and permitting requirements in Chapter 62-528, F.A.C., are met.

(b) If the applicant provides an affirmative demonstration that the receiving ground water contains between 1000 and 3000 mg/L (inclusive) of total dissolved solids, is not currently used as a source of public water supply, and that the receiving ground water is not reasonably expected to be used for public water supply in the future, the preapplication treatment and disinfection requirements shall be as follows:

1. The principal treatment and disinfection requirements in Rule 62-610.563, F.A.C., shall apply, with the following modifications:

a. The parameters listed as primary drinking water standards shall be applied as maximum single sample permit limitations. The fecal coliform limitations associated with high-level disinfection shall not apply. The primary drinking water standards for asbestos and sodium shall not apply as reclaimed water limitations.

b. The secondary drinking water standards shall not be applied as reclaimed water limitations. As described in paragraph 62-610.466(14)(f), F.A.C., the ground water standard for sodium and the ground water standards corresponding to the secondary drinking water standards shall be met at the edge of the extended zone of discharge.

c. The total nitrogen limit in paragraph 62-610.563(2)(c), F.A.C., shall not apply.

d. The extended zone of discharge shall not extend into zones having TDS concentrations less than 1000 mg/L (based on the initial TDS characterization in the engineering report).

(c) The provisions of paragraph 62-610.466(9)(b), F.A.C., shall only apply to receiving ground waters that are not used for public water supply within the following geographic limits (whichever provides for the largest horizontal distance):

1. Located within 1000 feet radially (measured horizontally) from injection and recovery wells, or

2. Located within the radial extent (measured horizontally) of the extended zone of discharge plus an additional 500 feet radially (horizontally).

(d) Except as provided in subparagraph 62-610.466(12)(b)1. and subsection 62-610.466(17), F.A.C., additional treatment or disinfection shall not be required upon recovery of the reclaimed water.

(10) Use of Class G-II ground water containing greater than 3000 mg/L of total dissolved solids.

(a) Wells may be used to inject reclaimed water into Class G-II ground water containing greater than 3000 mg/L of total dissolved solids for aquifer storage and recovery if all of the following conditions are met:

1. The principal treatment and disinfection requirements in Rule 62-610.563, F.A.C., shall apply, with the following modifications:

a. The parameters listed as primary drinking water standards shall be applied as maximum single sample permit limitations. The fecal coliform limitations associated with high-level disinfection shall not apply. The primary drinking water standards for asbestos and sodium shall not apply as reclaimed water limitations.

b. The secondary standards shall not be applied as reclaimed water limitations. As described in paragraph 62-610.466(14)(f), F.A.C., the ground water standard for sodium and the ground water standards corresponding to the secondary drinking water standards shall be met at the edge of the extended zone of discharge.

c. The total nitrogen limit in paragraph 62-610.563(2)(c), F.A.C., shall not apply.

d. The extended zone of discharge shall not extend into zones having TDS concentrations less than 3000 mg/L (based on the initial TDS characterization in the engineering report).

2. Technical and permitting requirements in Chapter 62-528, F.A.C., are met.



(b) Except as provided in subparagraph 62-610.466(12)(b)1. and subsection 62-610.466(17), F.A.C., additional treatment or disinfection shall not be required upon recovery of the reclaimed water.

(11) If an aquifer exemption pursuant to subsection 62-528.300(3), F.A.C., or a parameter exemption pursuant to Rule 62-520.500, F.A.C., has been obtained, the Department shall modify the discharge limitations in the permit to reflect the terms of the exemption.

(12) Monitoring.

(a) Reclaimed water shall be monitored before injection in accordance with the requirements of Chapter 62-601, F.A.C.

(b) Water recovered from the aquifer storage and recovery system.

1. Except as provided in subparagraphs 62-610.466(12)(b)2. and 3., F.A.C., the reclaimed water recovered from the aquifer storage and recovery system shall be monitored for TSS, and fecal coliforms at the same frequency specified in Chapter 62-601, F.A.C., for the treatment facility providing reclaimed water to the reuse system. CBOD5 shall be monitored monthly. If the reclaimed water withdrawn from an aquifer storage and recovery system fails to meet the CBOD5, TSS, or fecal coliform limits established for a reuse project regulated under Part III of Chapter 62-610, F.A.C., the Department shall require that additional treatment or disinfection facilities be provided to ensure compliance with these limits. If the CBOD5 limits are not met, the Department shall increase the sampling frequency for CBOD5 to the level required in Chapter 62-601, F.A.C.

2. If the reclaimed water injected into the aquifer storage and recovery system meets the full treatment and disinfection requirements in Rule 62-610.563, F.A.C., fecal coliforms shall be monitored monthly in the water recovered from the aquifer storage and recovery system.

3. If additional treatment or disinfection is provided after recovery of the water from the aquifer storage and recovery system, the monitoring requirements in Rule 62-610.463, F.A.C., shall apply and an operating protocol shall be implemented pursuant to Rule 62-610.463, F.A.C.

(c) Aquifer storage and recovery system.

1. A ground water monitoring plan pursuant to Rule 62-522.600, F.A.C., shall be implemented before placing the aquifer storage and recovery system into operation. The monitoring plan shall be designed to verify compliance with the ground water standards and to monitor the performance of the aquifer storage and recovery system. As part of this monitoring plan, the permittee shall monitor a measure of inorganics concentration (such as chloride or TDS) and specific conductance for the water being injected, ground water, and the recovered water.

2. Ground water shall be monitored quarterly for all parameters for which ground water standards exist. After the first year of operation, the frequency of this monitoring and the list of parameters may be adjusted by the Department based on previous monitoring. Reductions in monitoring shall only be considered after the injected bubble of reclaimed water reaches a monitoring well. The complete list of all parameters for which ground water standards exist shall be sampled at least once during each five years.

(d) Additional water quality and ground water monitoring may be required under the underground injection control permit.

(13) Injection wells and recovery wells used for aquifer storage and recovery shall be located at least 500 feet from any potable water supply well. For potable water supply wells which are not public water supply wells, the Department shall approve a smaller setback distance, if the applicant provides an affirmative demonstration in the engineering report that confinement exists between the aquifer used for aquifer storage and recovery and the potable water supply well such that the aquifer storage and recovery system will not adversely affect the quantity or quality of water withdrawn from the potable water supply well.

(14) Extended zone of discharge.

(a) Projects described in paragraph 62-610.466(9)(b) and subsection (10), F.A.C., shall have an extended zone of discharge included in the permit. The extended zone of discharge shall apply to parameters listed as secondary drinking water standards and for sodium. Zones of discharge will not be provided for parameters listed as primary drinking water standards (except for sodium).

(b) Except as provided in paragraph 62-610.466(14)(a), F.A.C., zones of discharge will not be allowed for projects featuring injection into other Class G-II ground waters or into Class G-I, F-I, or G-IV ground waters.

(c) The extended zone of discharge will extend radially to the permittee's property line. This may be greater than the 100 feet normally allowed for a zone of discharge in Rule 62-522.410, F.A.C. The applicant may request an extended zone of discharge that extends beyond the property boundary, if the conditions and procedures in paragraphs 62-522.500(3)(d) and (e), F.A.C., are met. The applicant may request an extended zone of discharge beyond the property line at the time of initial permit application or with subsequent permit renewals or permit modifications.

(d) An extended zone of discharge shall not extend closer than 500 feet to potable water supply wells. For potable water supply wells which are not public water supply wells, the Department shall approve a smaller setback distance, if the applicant provides an affirmative demonstration in the engineering report that confinement exists between the aquifer used for aquifer storage and recovery and the potable water supply well such that the aquifer storage and recovery system will not adversely affect the quantity or quality of water withdrawn from the potable water supply well.

(e) The extended zone of discharge shall extend vertically from the base to the top of a specifically designated aquifer, aquifers, or portion of an aquifer. The vertical and lateral limits of the extended zone of discharge shall be designated. Injection and recovery wells used in the aquifer storage and recovery system shall be included within the extended zone of discharge. As noted in

sub-subparagraphs 62-610.466(9)(b)1.d. and 62-610.466(10)(a)1.d., F.A.C., the extended zone of discharge shall not extend into zones having TDS concentrations less than the specified threshold (based on the initial TDS characterization in the engineering report).

(f) For aquifer storage and recovery systems involving the levels of preapplication treatment provided in paragraph 62-610.466(9)(b) or subsection (10), F.A.C., all ground water quality criteria shall be met at the edge of the extended zone of discharge. If the natural background ground water quality does not meet the ground water quality criteria, the aquifer storage and recovery system shall meet the natural background quality at the edge of the extended zone of discharge.

(15) The aquifer storage and recovery system (including both injection and recovery) shall be described in the domestic wastewater permit.

(16) Applicants proposing aquifer storage and recovery systems using Class F-I, G-I, or G-II ground water shall comply with the public and utility notification requirements contained in Rule 62-610.574, F.A.C.

(17) The permittee shall assess the performance of the aquifer storage and recovery system on a monthly basis.

(a) During operation of the reuse system, if it is shown that water recovered from the aquifer storage and recovery system does not meet the fecal coliform performance criteria associated with high-level disinfection or if the water recovered adversely affects vegetation or crops grown in the reuse system or adversely affects the infiltration/percolation capability of soils within the reuse system, the permittee shall do the following:

1. Evaluate the nature and severity of the problems.

2. Propose remedial or preventative measures and provide reasonable assurances that the remedial or preventative measures will avoid future occurrences of the adverse effects. Remedial or preventative measures may include additional monitoring of or additional treatment of the water recovered from the aquifer storage and recovery system, or other measures.

3. Propose a time schedule for implementation of the proposed remedial or preventative measures.

4. Submit a written report to the Department within 120 days of identification of a potential problem. The report shall address the requirements of subparagraphs 62-610.466(17)(a)1. through 3., F.A.C.

(b) The Department shall incorporate remedial or preventative measures and a schedule for implementation in the domestic wastewater permit.

(c) Nothing in subsection 62-610.466(17), F.A.C., shall preclude the Department from taking enforcement action to compel compliance with the requirements of Rule 62-610.466, F.A.C., the requirements of Part III of Chapter 62-610, F.A.C., or the ground water standards contained in Chapter 62-520, F.A.C.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 8-8-99.*

#### **62-610.468 Access Control and Advisory Signs.**

(1) No provisions for access control are needed.

(2) The public shall be notified of the use of reclaimed water. This shall be accomplished by the posting of advisory signs designating the nature of the reuse project area where reuse is practiced, notes on scorecards, or by other methods. Examples of some of the notification methods which may be used by permittees include posting of advisory signs at entrances to residential neighborhoods where reclaimed water is used for landscape irrigation and posting of advisory signs at the entrance to a golf course and at the first and tenth tees.

(3) Use of purple as a prominent color on advisory signs and written notices related to a reuse project is recommended, but shall not be required.

(4) Advisory signs shall include the following text in English and Spanish: “Do not drink” together with the equivalent standard international symbol.

(5) Advisory signs shall be posted adjacent to lakes or ponds used to store reclaimed water that are not located at the domestic wastewater treatment facilities. Advisory signs shall be posted at decorative water features that use reclaimed water. Advisory signs at storage ponds or decorative water features shall include the following text in English and Spanish: “Do not drink” and “Do not swim” together with the equivalent standard international symbols.

(6) The permittee shall ensure that users of reclaimed water are informed about the origin, nature, and characteristics of reclaimed water; the manner in which reclaimed water can be safely used; and limitations on the use of reclaimed water. Notification is required at the time of initial connection to the reclaimed water distribution system and annually after the reuse system is placed into operation. The details of the public notification program shall be included in the engineering report and with each permit application. A description of ongoing public notification activities shall be included in the annual reuse report required by subsection 62-610.870(3), F.A.C. The public notification program shall include details on written public notification activities, activities related to the news media, use of advisory signs, and other public notification activities.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Formerly 17-610.468, Amended 1-9-96, 8-8-99.*

**62-610.469 Application/Distribution Systems and Cross-Connection Control.**

(1) New slow-rate land application systems, expansions of existing distribution systems, and replacement of existing systems shall be designed to provide, at a minimum, hydraulic capacity of 1.5 times maximum daily flow (at which adequate treatment can be provided) of the treatment facility. The actual hydraulic criterion selected shall be justified in the engineering report on the reclaimed water.

(2) Application of reclaimed water on public access facilities shall be controlled by agreement with the wastewater management entity or by local ordinance.

(3) Except as specifically allowed in this paragraph, above ground hose bibbs (spigots or other hand operated connections) shall not be present. Hose bibbs shall be located in locked vaults, service boxes, or compartments which shall be clearly labeled as being of nonpotable quality (bearing the words in English and Spanish: "Do not drink" together with the equivalent standard international symbol). Hose bibbs which can only be operated by a special tool may be placed in nonlockable vaults, service boxes, or compartments clearly labeled as nonpotable water (bearing the words in English and Spanish: "Do not drink" together with the equivalent standard international symbol). Vaults, service boxes, and compartments meeting the requirements of this rule may be located above or below grade. For restricted access sites, the Department shall approve the use of hose bibbs that are not in vaults, service boxes, or compartments, if the applicant provides an affirmative demonstration in the engineering report that alternate means of securing the hose bibb will preclude unauthorized use of the hose bibb. If the Department approves alternate measures for securing hose bibbs for restricted access sites, the alternate control measures and the hose bibb shall be color coded and clearly labeled as being of nonpotable quality (bearing the words in English and Spanish: "Do not drink" together with the equivalent standard international symbol).

(4) Reclaimed water shall not be used to fill swimming pools, hot tubs, or wading pools.

(5) Reclaimed water may be used to irrigate landscaped areas with a tank truck only if the following requirements are met:

(a) All applicable requirements in Part III of Chapter 62-610, F.A.C., are met;

(b) The truck used to transport and distribute reclaimed water is not used to transport potable water that is used for drinking water; and

(c) The truck used to transport and distribute reclaimed water is not used to transport waters or other fluids that do not meet, at a minimum, the requirements of Part III of Chapter 62-610, F.A.C., unless the tank has been evacuated and properly cleaned prior to the addition of the reclaimed water.

(6) Conversion of existing facilities.

(a) Existing water lines, sewers, and wastewater transmission lines may be converted for use as reclaimed water transmission lines.

(b) Applicants wanting to convert these types of facilities to reclaimed water transmission lines shall provide an affirmative demonstration in the engineering report of the following:

1. The location and identification of the facilities to be converted.

2. The location of all connections to the facilities to be converted.

3. Identification of measures to be taken to ensure that existing connections will be eliminated.

4. Identification of procedures to be used to ensure that all connections and cross-connections have been eliminated. This may include physical inspections, dye testing, or other testing procedures.

5. Description of marking, signing, labeling, or color coding to be used to identify the converted facility as a reclaimed water transmission facility.

6. Description of cleaning and disinfection procedures to be followed before the converted facilities will be placed into operation for reclaimed water service.

7. Assessment of the physical condition and integrity of facilities to be converted.

8. Reasonable assurance that cross-connections will not result, public health will be protected, and the integrity of water, wastewater, and reclaimed water systems will be maintained when the conversion is made.

(7) Cross-connection control.

(a) No cross-connections to potable water systems shall be allowed. The permittee shall submit documentation of Department acceptance for a cross-connection control and inspection program, pursuant to Rule 62-555.360, F.A.C., for all public water supply systems located within the area to be served by reclaimed water.

(b) Reclaimed water shall not enter a dwelling unit or a building containing a dwelling unit except as allowed by Rules 62-610.476 and 62-610.479, F.A.C.

(c) Maximum obtainable separation of reclaimed water lines and domestic water lines shall be practiced. A minimum horizontal separation of three feet (outside to outside) shall be maintained between reclaimed water lines and either potable water mains or sewage collection lines. The Department shall approve smaller horizontal separation distances if one of the following conditions is met:

1. The top of the reclaimed water line is installed at least 18 inches below the bottom of the potable water line.

2. The reclaimed water line is encased in concrete.

3. The applicant provides an affirmative demonstration in the engineering report that another alternative will result in an equivalent level of protection.

(d) The provisions of Chapter 62-604, F.A.C., are applicable to in-ground crossings. No vertical or horizontal separation distances are required for above-ground crossings.

(e) Separation distance requirements in paragraphs 62-610.469(7)(c) and (d), F.A.C., apply to transmission and distribution systems located in rights-of-ways. Similar separation distances are recommended, but are not required on properties where reclaimed water is being used.

(f) All reclaimed water valves and outlets shall be appropriately tagged or labeled (bearing the words in English and Spanish: "Do not drink" together with the equivalent standard international symbol) to warn the public and employees that the water is not intended for drinking. All piping, pipelines, valves, and outlets shall be color coded, or otherwise marked, to differentiate reclaimed water from domestic or other water. Effective January 1, 1996, underground piping which is not manufactured of metal or concrete, shall be color coded for reclaimed water distribution systems using Pantone Purple 522C using light stable colorants. Underground metal and concrete pipe shall be color coded or marked using purple as a predominant color. If tape is used to mark the pipe, the tape shall be permanently affixed to the top and each side of the pipe (three locations parallel to the axis of the pipe). For pipes less than 24 inches in diameter, a single tape may be used along the top of the pipe. Visible, above-ground portions of the reclaimed water distribution system shall be clearly color coded or marked. New systems and expansions of existing systems for which permit applications are submitted to the Department on or after January 1, 1996, shall comply with this color coding standard. It is recommended, but shall not be required, that distribution and application facilities located on private properties, including residential properties, be color coded using Pantone Purple 522C.

(g) The return of reclaimed water to the reclaimed water distribution system after the reclaimed water has been delivered to a user is prohibited.

(h) The permittee is responsible for conducting inspections within the reclaimed water service area to verify proper connections, monitor proper use of reclaimed water, and minimize the potential for cross-connections. Inspections are required when customers first connect to the reclaimed water distribution system. Periodic inspections are required as specified in the cross-connection control and inspection program.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 4-2-90, Formerly 17-610.469, Amended 1-9-96, 8-8-99.*

#### **62-610.471 Setback Distances.**

(1) There shall be a setback distance of 75 feet from the edge of the wetted area of the public access land application area to potable water supply wells that are existing or have been approved by the Department or by the Department of Health (but not yet constructed). To comply with this requirement a utility providing reclaimed water for residential irrigation may adopt and enforce an ordinance prohibiting private drinking water supply wells in residential areas. This setback distance requirement does not apply to closed loop heating or air conditioning return wells.

(2) No setback distance is required to any nonpotable water supply well.

(3) A 75-foot setback distance shall be provided from a reclaimed water transmission facility to a public water supply well. No setback distance is required to other potable water supply wells or to nonpotable water supply wells.

(4) Setback distances for potable water supply wells shall be applied only for new or expanded reuse facilities. Setback distances shall not be applied when considering renewal of a permit.

(5) Setback distances are not required for surface waters or developed areas.

(6) Within 100 feet from outdoor public eating, drinking and bathing facilities, low trajectory nozzles, or other means to minimize aerosol formation shall be used.

(7) No setback distances are required for private swimming pools, hot tubs, spas, saunas, picnic tables, or barbecue pits or grills.

(8) A setback distance of 100 feet shall be maintained from indoor aesthetic features (such as decorative pools or fountains) using reclaimed water to adjacent indoor public eating and drinking facilities where the aesthetic features and eating and drinking facilities are within the same room or building space.

(9) A setback distance of 200 feet shall be provided from unlined storage ponds to potable water supply wells. This setback distance shall be reduced, but in no case to less than 75 feet, if the applicant provides an affirmative demonstration in the engineering report that reclaimed water will not migrate to the potable water supply well as a result of conditions such as the following:

(a) Confining units exist which preclude migration of the reclaimed water to the potable water supply well, or

(b) Ground water flow will be away from the potable water supply well, or

(c) Other hydrogeologic conditions preclude migration of the reclaimed water to the potable water supply well.

(10) Unless specifically stated otherwise, all setback distances shall be measured horizontally.

(11) For aquifer storage and recovery projects regulated under Rule 62-610.466, F.A.C., setback distance requirements for injection and recovery wells and for extended zones of discharge are contained in subsections 62-610.466(13) and (14), F.A.C.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 4-2-90, Formerly 17-610.471, Amended 1-9-96, 8-8-99.*

### **62-610.472 Supplemental Water Supplies.**

(1) Rule 62-610.472, F.A.C., applies to projects for which complete permit applications involving the use of supplemental water supplies were received by the Department on or after August 8, 1999. Rule 62-610.472, F.A.C., shall also apply to any existing reuse system which proposes to add a new supplemental water supply or to expand the facilities, structures, or pumps used for an existing supplemental water supply; however, these rule requirements shall only apply to the expanded or modified portion of the project. Incorporation of a supplemental water supply into the reuse system shall require a permit modification.

(2) Other water supplies may be used by the permittee to supplement the supply of reclaimed water. Surface waters, ground waters, treated stormwater, and drinking water may be used to supplement the reclaimed water supply.

(3) Surface water and stormwater supplies.

(a) Surface water supplies may be used to supplement the reclaimed water supply, if all of the following conditions are met:

1. Disinfection is provided and the fecal coliform and TSS limits established for high-level disinfection in subsection 62-600.440(5), F.A.C., are met for the treated surface water or stormwater supply before mixing with the reclaimed water. Operating protocols and reject storage facilities are not required for the supplemental water supply.

2. The applicant shall provide an affirmative demonstration that the quality of the resulting mixture of reclaimed water and treated surface water or stormwater will be acceptable for the permitted uses of the reclaimed water within the reclaimed water distribution system. The following factors shall be evaluated in assessing the acceptability of the mixture of reclaimed water and supplemental water:

a. The mixture shall not harm vegetation or crops grown in the reuse system.

b. The mixture shall enable compliance with ground water standards at the edge of the zone of discharge.

c. Public health shall be protected.

3. A one-way flow device shall be provided on each surface water or stormwater supply line to prevent backflow of reclaimed water into the surface water or into the stormwater treatment facilities. This does not have to be an approved device as listed in Rule 62-555.360, F.A.C. A check valve, flap valve, or other device may be used.

4. Continuous monitoring for disinfectant residual shall be performed on the disinfected surface water or stormwater supply at a point before mixing with the reclaimed water. Fecal coliforms and TSS shall be monitored at this point in accordance with the schedule established in Chapter 62-601, F.A.C., for high-level disinfection facilities, based on the permitted capacity of the largest domestic wastewater treatment facility providing reclaimed water to the reuse system.

5. The supplemental water supply pipes and appurtenances shall be color coded and marked to differentiate them from the reclaimed water and potable water facilities.

(b) Subparagraphs 62-610.472(3)(a)1. through 5., F.A.C., shall apply to situations involving the introduction of stormwater or surface water directly into a reclaimed water distribution system. Cases involving storage of reclaimed water in lakes and ponds which are part of a stormwater management system are described in, and regulated by, Rules 62-610.464 and 62-610.830, F.A.C., and are not subject to Rule 62-610.472, F.A.C., shall not apply to system storage and reclaimed water distribution facilities that are on the property of and are operated by the user of reclaimed water (such as a golf course or farm).

(c) Stormwater may be introduced into the sanitary sewerage system to augment the supply of reclaimed water, if all of the following conditions are met:

1. The resulting mixture of stormwater and domestic wastewater receives the full level of treatment and disinfection required by Part III of Chapter 62-610, F.A.C.

2. The applicant provides an affirmative demonstration that the sewerage system and treatment facilities have sufficient capacities to accommodate the added volumes of stormwater.

3. Introduction of stormwater into the sewerage system shall be limited to dry-weather, low-flow conditions in the sanitary sewerage system.

(d) Monitoring for *Giardia* and *Cryptosporidium*.

1. For treatment plants having capacities of 1.0 mgd or larger, the permittee shall sample the reclaimed water for *Cryptosporidium* and *Giardia* as follows:

a. Sampling shall be conducted at one time during each two-year period. Intervals between sampling shall not be greater than two years.

b. Samples shall be taken at a point after treatment of the supplemental water supply (before blending with reclaimed water).

2. For treatment plants having capacities less than 1.0 mgd, the permittee shall sample the reclaimed water for *Cryptosporidium* and *Giardia* as follows:

a. Sampling shall be conducted at one time during each five-year period. Intervals between sampling shall not be greater than five years.

b. Samples shall be taken at a point after treatment of the supplemental water supply (before blending with reclaimed water).

(4) Ground water supplies.

(a) Ground water supplies may be used to supplement the reclaimed water supply, if all of the following conditions are met:

1. The applicant shall provide an affirmative demonstration that the quality of the resulting mixture of reclaimed water and ground water will be acceptable for the permitted uses of the reclaimed water within the reclaimed water distribution system. This shall include an evaluation of the factors contained in subparagraph 62-610.472(3)(a)2., F.A.C. This shall include an analysis of the ground water source for all of the parameters included in the ground water quality standards listed in Chapter 62-520, F.A.C.

2. An approved backflow prevention device, as described in Rule 62-555.360, F.A.C., shall be provided on the pipe from each well connected into the reclaimed water system.

3. Monitoring of the ground water supply shall be conducted quarterly for fecal coliforms, unless additional monitoring is required by paragraph 62-610.472(4)(b), F.A.C. At the end of the first year of operation, monitoring of the ground water supply shall be reduced if the applicant provides an affirmative demonstration that the ground water supply meets the high-level disinfection criteria for fecal coliforms and that public health will be protected.

4. The supplemental water supply pipes and appurtenances shall be color coded and marked to differentiate them from the reclaimed water and potable water facilities.

(b) If the initial analysis of the ground water supply reveals that the ground water supply does not meet ground water quality standards in Chapter 62-520, F.A.C., the parameters for which the ground water standards are not met shall be added to the quarterly monitoring of the ground water supply.

(c) For purposes of subsection 62-610.472(4), F.A.C., water withdrawn at a springhead shall be considered as "ground water."

(5) Drinking water supplies. Drinking water from a public water supply system may be used to supplement the reclaimed water supply, if all of the following conditions are met:

(a) An air gap separation, as described in Rule 62-555.360, F.A.C., shall be provided on each connection from the public water supply system into the reclaimed water system.

(b) The reuse permit shall not include requirements for monitoring of the drinking water supply.

(c) The supplemental water supply pipes and appurtenances shall be color coded and marked to differentiate them from the reclaimed water facilities.

(d) The number of connections from the public water supply system into the reclaimed water system shall be minimized.

(6) A consumptive use permit for the use of surface water or ground water to supplement the reclaimed water supply may be required by the appropriate water management district. A consumptive use permit from the water management district shall not be required at the time of application for a permit from the Department. The permittee shall be responsible for securing any needed consumptive use permits from the water management district before using ground water or surface water to supplement the reclaimed water supply.

(7) Facilities used to connect supplemental water supplies into the reclaimed water distribution system shall be located and documented in the record drawings for the reuse system.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 8-8-99.*

### **62-610.473 Hydraulic Loading Rates.**

Loading rates generally shall be as specified in Rule 62-610.423, F.A.C.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Formerly 17-610.473.*

### **62-610.475 Edible Crops.**

(1) Irrigation of edible crops that will be peeled, skinned cooked or thermally processed before consumption is allowed. Direct contact of the reclaimed water with such edible crops is allowed.

(2) Irrigation of tobacco or citrus is allowed. Direct contact of the reclaimed water with tobacco or citrus is allowed, including citrus used for fresh table fruit, processing into concentrate, or other purposes.

(3) Irrigation of edible crops that will not be peeled, skinned, cooked, or thermally processed before consumption is allowed if an indirect application method that will preclude direct contact with the reclaimed water (such as ridge and furrow irrigation, drip irrigation, or a subsurface distribution system) is used.

(4) Irrigation of edible crops that will not be peeled, skinned, cooked or thermally processed before consumption using an application method that allows for direct contact of the reclaimed water on the crop is prohibited.

(5) The permittee shall maintain an inventory of commercial agricultural operations using reclaimed water to irrigate edible crops. The inventory of edible crop irrigation shall be submitted to the Department at least 30 days before any agricultural operation which will use reclaimed water for irrigation of edible crops will be added to the reused system. The inventory of edible crop irrigation shall be submitted annually to the Department with the annual report of reclaimed water utilization required by subsection 62-610.870(3), F.A.C. The inventory of edible crop irrigation shall include the following:

(a) Name of the agricultural operation.

(b) Name and telephone number of the owner or operator of the agricultural operation.

(c) Address of the agricultural operation.

(d) Edible crops irrigated with reclaimed water.

(e) Type of application (irrigation) method used.

(f) Approximate area under irrigation on which edible crops are grown.

(6) If requested, the Department shall authorize special demonstration projects to collect and present data related to the direct application of reclaimed water on crops which are not peeled, skinned, cooked, or thermally processed before consumption. Crops produced during such demonstration projects may be used as animal feeds or may be thermally processed or cooked for human consumption. If the applicant, based on the data collected, demonstrates to the Department that public health will be protected if their reclaimed water is directly applied to crops which are not peeled, skinned, cooked, or thermally processed, the Department shall waive the prohibition described in subsection 62-610.475(4), F.A.C., for that project. When considering such demonstration projects, the Department shall seek the advice of the Department of Health.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 9-13-89, Formerly 17-610.475, Amended 1-9-96, 8-8-99.*

#### **62-610.476 Toilet Flushing and Fire Protection.**

(1) Toilet flushing.

(a) Reclaimed water may be used for toilet flushing in commercial or industrial facilities or buildings. Reclaimed water may be used for toilet flushing in motels, hotels, apartment buildings, and condominiums where the individual guests or residents do not have access to the plumbing system for repairs or modifications. Reclaimed water pipes shall be color coded. Reclaimed water shall not be used for toilet flushing in any residential property or dwelling unit where the residents have access to the plumbing system for repairs or modifications.

(b) If reclaimed water will be used only for toilet flushing, the Department shall approve alternative levels of reliability, operation controls, and operator attendance if the applicant provides an affirmative demonstration in the engineering report that alternative controls will provide controls on reclaimed water production equivalent to the full requirements of Part III of Chapter 62-610, F.A.C., and the engineering report presents reasonable assurances that public health will be protected. The engineering report shall document cross-connection control measures and controls on facility operation sufficient to ensure reliable production of reclaimed water of suitable quality.

(2) Fire protection.

(a) Reclaimed water may be used to provide water for fire protection. Reclaimed water may be supplied to fire hydrants. Hydrants supplied with reclaimed water shall be color coded and shall have no connection to the potable water supply.

(b) Reclaimed water may be used to provide water for fire protection in sprinkler systems located in commercial or industrial facilities or buildings. Reclaimed water may be used to provide water for fire protection in sprinkler systems located in motels, hotels, apartment buildings, and condominiums where the individual guests or residents do not have access to the plumbing system for repairs or modifications. Such sprinkler systems shall be color coded and shall be supplied only by reclaimed water.

(c) Fire protection systems using reclaimed water shall be designed and operated in accordance with local fire protection codes, regulations, or ordinances.

(d) If reclaimed water will be used only for fire protection, the Department shall approve alternative levels of reliability, operation controls, and operator attendance if the applicant provides an affirmative demonstration in the engineering report that alternative controls will provide controls on reclaimed water production equivalent to the full requirements of Part III of Chapter 62-610, F.A.C., and the engineering report presents reasonable assurances that public health will be protected. The engineering report shall document cross-connection control measures and controls on facility operation sufficient to ensure reliable production of reclaimed water of suitable quality.

*Specific Authority 403.051, 403.061, 403.064, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.064, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 4-2-90, Formerly 17-610.476, Amended 1-9-96.*

#### **62-610.478 Construction Dust Control.**

Reclaimed water may be used for dust control at construction sites.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Formerly 17-610.478.*

#### **62-610.479 Aesthetic Purposes.**

(1) Reclaimed water may be used for indoor or outdoor aesthetic purposes. Examples of aesthetic uses of reclaimed water include decorative pools, fountains, ponds, lagoons, and other aesthetic features.

(2) Reclaimed water may be used to supply aesthetic features. If the aesthetic feature is a water of the state, or if the aesthetic feature will discharge to waters of the state, discharge limitations determined in accordance with Chapter 62-650, F.A.C., shall be met.

(3) If the aesthetic feature is not a water of the state, and the aesthetic feature will not discharge to waters of the state, Chapter 62-650, F.A.C., shall not apply. It is recommended, but shall not be required, that the permittee consider the need for additional treatment, chemical control, or nutrient control in order to minimize potential aesthetic and water quality problems in the aesthetic features.

*Specific Authority 403.051, 403.061, 403.064, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Formerly 17-610.479, Amended 1-9-96.*

**62-610.480 Other Reuse Applications.**

(1) The Department shall approve other uses of reclaimed water if the following requirements are met:

(a) All requirements of Part III of Chapter 62-610, F.A.C., are met; and

(b) The engineering report provides reasonable assurance that the intended use will meet applicable rules of the Department and will protect the public health.

(2) Additional uses which are approved include:

(a) Water supply for commercial laundries.

(b) Vehicle washing.

(c) Flushing of sanitary sewers and reclaimed water lines.

(d) Mixing of concrete.

(e) Manufacture of ice for ice rinks.

(f) Cleaning roads, sidewalks, and outdoor work areas.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-2-90, Formerly 17-610.480, Amended 1-9-96.*

**62-610.490 Permitting Concept.**

(1) A single permit for the reuse system will be issued to the wastewater treatment facility. Regulation and management of individual users of reclaimed water will be by the domestic wastewater permittee through binding agreements with individual users of reclaimed water or by local ordinance. Individual permits for use of reclaimed water shall not be issued to individual property owners.

(2) A separate reuse system permit shall be issued only if the reuse system receives reclaimed water from more than one domestic wastewater treatment facility. If requested by an applicant having responsibility for the reuse system and one or more of the domestic wastewater facilities providing reclaimed water to the reuse system, the reuse/land application permit shall be combined with the permit for one of the treatment facilities.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Formerly 17-610.490, Amended 1-9-96.*

**62-610.491 Additional Operation and Maintenance Requirements.**

(1) In addition to the operation and maintenance requirements specified in Rule 62-610.320, F.A.C., and the engineering report requirements specified in Rule 62-610.310, F.A.C., the following requirements apply to reuse systems for irrigation in public access areas.

(a) The permittee shall develop and obtain Department approval of an operating protocol as discussed in Rules 62-610.320 and 62-610.463, F.A.C.

(b) The permittee shall develop and obtain Department acceptance for a cross-connection prevention and inspection program as discussed in Rule 62-610.469, F.A.C.

(c) As part of the permit application, the applicant shall submit documentation of controls on individual users of reclaimed water through detailed agreements (including copy of the agreement) or by local ordinance (include copy of appropriate ordinance).

(d) A pretreatment program shall be developed and implemented pursuant to Rule 62-610.330, F.A.C.

(2) For new reuse systems, items required by paragraphs 62-610.491(1)(a) and (b), F.A.C., shall be approved or accepted and implemented prior to placing the initial part, portion, or phase of the reuse system into operation.

*Specific Authority 403.051, 403.061, 403.087 FS. Law Implemented 403.021, 403.051, 403.061, 403.062, 403.085, 403.086, 403.087, 403.088 FS. History—New 4-4-89, Amended 4-2-90, Formerly 17-610.491, Amended 1-9-96.*

**PART IV RAPID-RATE LAND APPLICATION SYSTEMS (RAPID INFILTRATION BASINS AND ABSORPTION FIELDS)**

**62-610.500 Description of System.**

(1) Rapid infiltration basins (RIBs).

(a) Rapid infiltration basins involve reuse of reclaimed water by spreading in a system of basins, RIBs, percolation ponds (cells) which may be underlain with subsurface drains. The percolation area shall be divided into two or more basins, RIBs, or cells (each of which need not have identical size and shape) to allow for alternate loading and resting.

(2) Absorption fields.