SUBCHAPTER A: GENERAL PROVISIONS
§§210.1 - 210.9
Effective February 12, 1997

§210.1. Applicability.

This chapter applies to the reclaimed water producer, provider, and user. If the entity which is the producer of the reclaimed water is the same as the user, then the use of reclaimed water is permissible only if the use occurs after the wastewater has been treated in accordance with the producer's wastewater permit and the permit provides for an alternative means of disposal during times when there is no demand for the use of the reclaimed water. This chapter does not apply to treatment or disposal of wastewater permitted by the commission in accordance with the requirements of Chapter 305 of this title (relating to Consolidated Permits), or to the user of such treated wastewater identified in the producer's wastewater discharge permit authorizing disposal by irrigation. This chapter does not apply to those systems authorized under Chapter 285 of this title (relating to On-Site Wastewater Treatment) which utilizes surface irrigation as an approved disposal method.

Adopted January 8, 1997 Effective February 12, 1997

§210.2. Purpose and Scope.

(a) The purpose of this chapter is to establish general requirements, quality criteria, design, and operational requirements for the beneficial use of reclaimed water which may be substituted for potable water and/or raw water. As defined and specified in this chapter, the requirements must be met by producers, providers, and/or users of reclaimed water. Specific use categories are defined with corresponding reclaimed water quality requirements. These criteria are intended to allow the safe utilization of reclaimed water for conservation of surface and ground water; to ensure the protection of public health; to protect ground and surface waters; and to help ensure an adequate supply of water resources for present and future needs.

(b) The commission has defined other types of reclaimed water activity in separate regulations, including §309.20 of this title (relating to Land Disposal of Sewage Effluent) and §297.1 of this title (relating to Definitions). These regulations do not modify those definitions. The term reclaimed water is limited in scope for the purpose of this rule as defined in §210.3 of this title (relating to Definitions).

(c) Approval by the executive director of a reclaimed water use project under this chapter does not affect any existing water rights. If applicable, a reclaimed

water use authorization in no way affects the need of a producer, provider and/or user to obtain a separate water right authorization from the commission.

(d) Reclaimed water projects approved under this chapter do not require a new or amended waste discharge permit from the commission except as provided in §210.5 of this title (relating to Permits Required). Persons who desire to develop projects not specifically authorized by this chapter may seek authorization pursuant to provisions of Subchapter D or apply for a new or amended waste discharge permit under Chapter 305 of this title (relating to Consolidated Permits).

Adopted January 8, 1997 Effective February 12, 1997

§210.3. Definitions.

The following words and terms when used in this chapter shall have the following meanings unless the context clearly indicates otherwise.

(1) Beneficial use--An economic use of wastewater in accordance with the purposes, applicable requirements, and quality criteria of this chapter, and which takes the place of potable and/or raw water that could otherwise be needed from another source. The use of reclaimed water in a quantity either less than or the economically optimal amount may be considered a beneficial use as long as it does not constitute a nuisance.

(2) BOD_5--Five-day biochemical oxygen demand.

(3) $CBOD_5$--Five-day carbonaceous biochemical oxygen demand.

(4) CFU--Colony forming units.

(5) Domestic wastewater--Waste and wastewater from humans or household operations that are discharged to a wastewater collection system or otherwise enters a treatment works. Also, this includes waterborne human waste and waste from domestic activities such as washing, bathing, and food preparation, including greywater and blackwater, that is disposed in an on-site wastewater system as defined in Chapter 285 of this title (relating to On-Site Wastewater Treatment).

(6) DRASTIC--A classification system for comparing land units on the basis of their vulnerability to ground-water pollution, a detailed description of which is found in Appendix 1 of this chapter.

Figure: 30 TAC §210.3(6)

APPENDIX 1

DRASTIC - An Approach to Ground-Water Pollution Potential Mapping

DRASTIC was developed as a tool for comparing land units on the basis of their vulnerability to ground-water pollution. Artificial classification of natural systems, including aquifers, has been used for years. A system for ranking ground-water pollution potential which took into consideration a relatively large number of parameters had not been developed, however. Through a consensus process, a group sponsored by the National Water Well Association and the Robert S. Kerr Environmental Research Laboratory developed the methodology described in limited detail here.

DRASTIC is a systematic approach for assessing the ground-water pollution potential of hydrogeologic settings. The DRASTIC system is a methodology which involves delineation of hydrogeologic settings and data analysis to develop a single index number which represents the sensitivity of that setting to ground-water pollution potential. The system to some degree depends on subjective, but skilled judgement by the user (Texas Water Commission, 1989).

Hydrogeologic settings are delineated based on seven parameters which are used to develop an index number for each setting. The parameters have been organized to create the acronym DRASTIC.

DRASTIC stands for:

D - Depth to water
R - Annual recharge
A - Aquifer media
S - Soil media
T - Topography
I - Vadose zone impact
C - Hydraulic conductivity

After index numbers are developed, maps can be constructed to present a graphic display of the pollution potential. Two maps can be generated using the DRASTIC methodology, a map depicting general vulnerability to ground-water pollution and another specifically aimed at pollution from certain agricultural practices.

A generic contaminant is used for this methodology. The contaminant is introduced at the land surface as a solid or liquid and travels to the aquifer with recharge waters derived from precipitation. Mobility of the contaminant is assumed to be equal to that of groundwater and attenuation processes are assumed to go on in the soil, Vadose zone and aquifer.

Parameters used in the DRASTIC system are divided into ranges with corresponding ratings. Rating values depend on the impact of the factor on contamination potential. The general and agricultural DRASTIC evaluations use the same ranges and rating values, but the weighting of parameters changes. Weighting represents an attempt to define the relative importance of each factor in its ability to affect pollution transport to and within the aquifer and it creates the differences between the general and agricultural indices (Texas Water Commission, 1989).

Two pollution potential numbers, one for generalized pollution sources and one for pollution due to agricultural activities, are derived for each hydrogeologic setting. The formula for the index number is:

$$I = (Dr \times Dw) + (Rr \times Rw) + (Ar \times Aw) + (Sr \times Sw) + (Tr \times Tw) + (Ir \times Iw) + (Cr \times Cw)$$

I = DRASTIC index number
D, R, A, S, T, I, C - parameters
r - rating
w - weight

Maps are labeled with designations for the hydrogeologic settings and pollution potential numbers and the indices are then divided into ranges for color coding of the final maps.

More detailed information may be found in *DRASTIC: A standardized system for evaluating ground water pollution potential using hydrogeologic settings*: U.S. Environmental Protection Agency, EPA/600/2-87/035, authored by L. Allen, T. Bennett, J. H. Lehr, R. J. Petty and G. Hackett.

(7) Edwards Aquifer--That portion of an arcuate belt of porous, water bearing, predominantly carbonate rocks known as the Edwards and Associated Limestones in the Balcones Fault Zone trending from west to east to northeast in Kinney, Uvalde, Medina, Bexar, Comal, Hays, Travis, and Williamson counties; and composed of the Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, Edwards Formation, and Georgetown Formation. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally. (See Chapter 213 of this title (relating to Edwards Aquifer).)

(8) Edwards Aquifer Recharge zone--Generally, that area where the stratigraphic units constituting the Edwards Aquifer crop out, and including the outcrops of other geologic formations in proximity to the Edwards Aquifer, where caves, sinkholes, faults, fractures, or other permeable features would create a

potential for recharge of surface waters into the Edwards Aquifer. The recharge zone is identified as that area designated as such on official maps located in the offices of the commission and the Edwards Underground Water District. (See Chapter 213 of this title (related to Edwards Aquifer).)

(9) Food crop--Any crops intended for direct human consumption.

(10) Initial holding pond--An impoundment which first receives reclaimed water from a producer at the quality levels established by this chapter, not including subsequent holding ponds.

(11) Geometric mean--The n^{th} root of the product of all measurements made in a particular period of time, for example in a month's time, where *n* equals the number of measurements made. In the alternative, the geometric mean can also be computed as the antilogarithm of the sum of the logarithm of each measurement made. Where any measurement using either computation method equals zero, it must be substituted with the value of one.

(12) l--Liter.

(13) Landscape impoundment--Body of reclaimed water which is used for aesthetic enjoyment or which otherwise serves a function not intended to include contact recreation.

(14) Leak detection system--A system or device designed, constructed, maintained, and operated with a pond that is capable of immediately detecting a release of leachate or reclaimed water that migrates through a liner. The system may typically include a leachate collection system along with either leak detection sensors or view ports.

(15) Municipal wastewater--Waste or wastewater discharged into a publicly owned or a privately owned sewerage treatment works primarily consisting of domestic waste.

(16) mg/l--Milligram per liter.

(17) NTU--Nephelometric turbidity units.

(18) Nuisance--Any distribution, storage, or use of reclaimed water, in such concentration and of such duration that is or may tend to be injurious to or which adversely affects human health or welfare, animal life, vegetation, or property, or which interferes with the normal use and enjoyment of animal life, vegetation, or property.

(19) On-channel pond--An impoundment wholly or partially within a definite channel of a stream in which water flows within a defined bed and banks, originating from a definite source or sources. The water may flow continuously or intermittently, and if intermittently, with some degree of regularity, dependent on the characteristics of the source or sources.

(20) Permit or permitted--A written document issued by the commission or executive director in accordance with Chapter 305 of this title (relating to Consolidated Permits) which, by its conditions, may authorize the permittee to construct, install, modify, or operate, in accordance with stated limitations, a specified facility for waste discharge, including a wastewater discharge permit.

(21) Pond system--Wastewater facility in which primary treatment followed by stabilization ponds are used for secondary treatment and in which the ponds have been designed and constructed in accordance with applicable design criteria. (See Chapter 317 of this title (relating to the Design Criteria for Sewerage Systems).)

(22) Producer--A person or entity that produces reclaimed water by treating domestic wastewater or municipal wastewater, in accordance with a permit or other authorization of the Agency, to meet the quality criteria established in this chapter.

(23) Provider--A person or entity that distributes reclaimed water to a user(s) of reclaimed water. For purposes of this chapter, the reclaimed water provider may also be a reclaimed water producer.

(24) Reclaimed water--Domestic or municipal wastewater which has been treated to a quality suitable for a beneficial use, pursuant to the provisions of this chapter and other applicable rules and permits.

(25) Restricted landscaped area--Land which has vegetative cover to which public access is controlled in some manner. Access may be controlled by either legal means (e.g. state or city ordinance) or controlled by some type of physical barrier (e.g., fence or wall). Example of such areas are: golf courses; cemeteries; roadway rights-of-way; median dividers.

(26) Restricted recreational impoundment--Body of reclaimed water in which recreation is limited to fishing, boating and other non-contract recreational activities.

(27) Single grab sample--An individual sample collected in less than 15 minutes.

(28) Spray irrigation--Application of finely divided water droplets using artificial means.

(29) Subsequent holding pond--A pond or impoundment which receives reclaimed water from an initial holding pond where the quality of the water changes after management in the initial holding pond, due to factors which may include:

(A) the addition of water occurs such as contributions from surface water or ground water sources, but not including contributions of reclaimed water, domestic wastewater, or municipal wastewater;

(B) some type of utilization of the reclaimed water for a beneficial use occurs; or

(C) commingling of reclaimed water with surface water runoff where it occurs between storage in an initial holding pond and the subsequent holding pond.

(30) Surface irrigation--Application of water by means other than spraying so that contact between the edible portion of any food crop and the irrigation water is prevented.

(31) Type I reclaimed water use--Use of reclaimed water where contact between humans and the reclaimed water is likely.

(32) Type II reclaimed water use--Use of reclaimed water where contact between humans and the reclaimed water is unlikely.

(33) Unrestricted landscaped area--Land which has had its plant cover modified and access to which is uncontrolled. Examples of such areas are: parks; school yards; greenbelts; residences.

(34) User--Person or entity utilizing reclaimed water for a beneficial use, in accordance with the requirements of this chapter. A reclaimed water user may also be a producer or a provider.

Adopted January 8, 1997 Effective February 12, 1997

§210.4. Notification.

(a) Before providing reclaimed water to another for a use allowable under this chapter, the reclaimed water provider shall notify the executive director and obtain written approval to provide the reclaimed water. The notification shall include:

(1) a description of the intended use of the reclaimed water, including quantity, quality, origin, and location and purpose of intended use;

(2) a clear indication of the means for compliance with this chapter, including documentation that a user will be apprised of their responsibilities under this chapter as a part of the water supply contract or other binding agreement;

(3) evidence in a water supply contract or other binding agreement of the provider's authority to terminate reclaimed water use that is noncompliant with this chapter; and

(4) an operation and maintenance plan that is required under ordinance or is to be a part of the water supply contract or other binding agreement, where applicable, and which shall contain, as a minimum, the following:

(A) a labeling and separation plan for the prevention of cross connections between reclaimed water distribution lines and potable water lines;

(B) the measures that will prevent unauthorized access to reclaimed water facilities (eg., secured valves);

(C) procedures for monitoring reclaimed water transfers and use;

(D) steps the user must utilize to minimize the risk of inadvertent human exposure;

(E) schedules for routine maintenance;

(F) a plan for carrying out provider employee training and safety relating to reclaimed water treatment, distribution, and management; and

(G) contingency plan for remedy of system failures, unauthorized discharges, or upsets.

(b) If the provider is not the producer, a description of the origin of the reclaimed water, its quality based upon the parameters contained in the underlying waste discharge permit(s), and a signed agreement from the producer authorizing the transfer of the reclaimed water to the provider. If applicable, a reclaimed water provider or user may need to obtain a separate water right authorization from the commission.

(c) A producer who chooses to use reclaimed water for a beneficial use only within the boundaries of a wastewater treatment facility permitted by the commission, may do so without notification otherwise required by this section. In

such instances, the producer is still required to comply with all applicable requirements of this chapter pertaining to the reclaimed water use.

(d) If effluent is to be used for irrigation within the Edwards Aquifer recharge zone, plans and specifications for the disposal system must be submitted to the executive director for review and approval prior to construction of the facility in accordance with Chapter 213 of this title (relating to Edwards Aquifer).

(e) Major changes from a prior notification for use of reclaimed water must be approved by the executive director. A major change includes:

(1) a change in the boundary of the approved service area not including the conversion of individual lots within a subdivision to reclaimed water use;

(2) the addition of a new producer;

(3) major changes in the intended use, such as conversion from irrigation of a golf course to residential irrigation; or

(4) changes from either Type I or Type II uses to the other.

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§210.5. Authorization for the Use of Reclaimed Water.

(a) Prior to discharging any reclaimed water to the waters in the state, the provider or user shall obtain a permit from the commission in accordance with the requirements of Chapter 305 of this title (relating to Consolidated Permits) except as provided for by §210.22(g) of this title (relating to General Requirements).

(b) The executive director may require a reclaimed water user to apply for and obtain a permit to utilize reclaimed water if the reclaimed water use poses potential or actual adverse impacts upon human health, soil and ground water resources, or aquatic life.

(c) For purposes of this chapter, no permit issued pursuant to Chapter 305 of this title (relating to Consolidated Permits) will be required for additional treatment required to meet the quality standards of §210.33 of this title (relating to Quality Standards for Using Reclaimed Water), unless such additional treatment results in a discharge of wastewater into waters in the state.

(d) A reclaimed water provider or user who accepts effluent meeting the Type II quality criteria and that must also meet the Type I quality criteria for a proposed use must provide additional treatment for the proposed new use. The additional

manner of treatment must be authorized by the executive director. The provider or user must notify and be granted an authorization from the executive director prior to engaging in such activity. Examples of such additional treatment may include processes for disinfection or filtration of the reclaimed water. Such authorization may be granted by the executive director after review of the proposed plans and specifications submitted to the executive director for the additional treatment. This request for authorization may be submitted to the executive director along with the notification required by §210.4 of this title (relating to Notification).

(e) If a provider or user elects to treat reclaimed water supplied by the provider or producer, respectively, to a quality better than the minimum standards of this chapter for the same use, such treatment does not require a permit or other additional authorization by the executive director.

(f) Any sewage sludge generated as a result of reclaimed water treatment undertaken pursuant to this section shall be managed in accordance with the requirements of Chapter 312 of this title (relating to Sludge Use, Disposal and Transportation).

Adopted January 8, 1997 Effective February 12, 1997

§210.6. Responsibilities.

The producer of reclaimed water will not be liable for misapplication of reclaimed water by users, except as provided in this section. Both the reclaimed water provider and user have, but are not limited to, the following responsibilities:

(1) The reclaimed water producer shall:

(A) transfer reclaimed water of at least the minimum quality required by this chapter at the point of delivery to the user for the specified use;

(B) sample and analyze the reclaimed water and report such analyses in accordance with §210.34 and §210.36(b) of this title (relating to Sampling and Analysis and Record keeping and Reporting, respectively); and

(C) notify the executive director in writing within five (5) days of obtaining knowledge of reclaimed water use not authorized by the executive director's reclaimed water use approval.

(2) The reclaimed water provider shall:

(A) assure construction of reclaimed water distribution lines or systems in accordance with this chapter and in accordance with §210.25 of this title (relating to Special Design Criteria for Reclaimed Water Systems);

(B) transfer reclaimed water of at least the minimum quality required by this chapter at the point of delivery to the user for the specified use;

(C) notify the executive director in writing within five (5) days of obtaining knowledge of reclaimed water use not authorized by the executive director's reclaimed water use approval; and

(D) not be found in violation of this chapter for the misuse of the reclaimed water by the user if transfer of such water is shut off promptly upon knowledge of misuse regardless of contract provisions.

(3) The reclaimed water user shall:

(A) use the reclaimed water in accordance with this chapter; and

(B) maintain and provide records as required by §210.36(a) of this title (relating to Recordkeeping and Reporting).

Adopted January 8, 1997 Effective February 12, 1997

§210.7. Transfer and Conveyance of Reclaimed Water.

Reclaimed water transferred from a provider to a user shall be done on a demand only basis in order that the water is not provided during times it cannot be beneficially used in accordance with this chapter. The reclaimed water user may refuse delivery of such water at any time. However, this section is not intended to change any obligation the user may have by contract or ordinance. All reclaimed water transferred to a user must be of at least the treatment quality for the use specified in §210.32 of this title (relating to Specific Uses of Reclaimed Water).

Adopted January 8, 1997 Effective February 12, 1997

§210.8. Restrictions.

This chapter does not convey or alter any property right and does not grant any exclusive privilege.

Adopted January 8, 1997 Effective February 12, 1997

§210.9. Enforcement.

If a person or entity fails to comply with the terms of this chapter, the executive director may require the entity to apply for and obtain a permit or permit amendment. The commission may also issue an enforcement order requiring

remedial measures and the assessment of administrative penalties pursuant to §26.019 and §26.136 of the Texas Water Code. The commission may also seek civil penalties and injunctive relief in a court of competent jurisdiction as provided by §26.123 of the Texas Water Code.

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SUBCHAPTER B: GENERAL REQUIREMENTS FOR THE PRODUCTION, CONVEYANCE, AND USE OF RECLAIMED WATER
§§210.21 - 210.25
Effective February 12, 1997

§210.21. Applicability.

This subchapter establishes general requirements applicable to producers, providers, and users of reclaimed water. This subchapter also establishes requirements and specifications for transfer, storage, and irrigation using reclaimed water and design criteria of reclaimed water systems. Additionally, this subchapter establishes requirements and specifications necessary to minimize discharges of waste into or adjacent to waters in the state.

Adopted January 8, 1997 Effective February 12, 1997

§210.22. General Requirements.

(a) Reuse of untreated wastewater is prohibited.

(b) Food crops that may be consumed raw by humans shall not be spray irrigated. Food crops including orchard crops that will be substantially processed prior to human consumption may be spray irrigated. Other types of irrigation that avoid contact of reclaimed water with edible portions of food crops are acceptable.

(c) There shall be no nuisance conditions resulting from the distribution, the use, and/or storage of reclaimed water.

(d) Reclaimed water shall not be utilized in a way that degrades ground water quality to a degree adversely affecting its actual or potential uses.

(e) Reclaimed water managed in ponds for storage must be prevented from discharge into waters in the state, except for discharges directly resulting from rainfall events or in accordance with a permit issued by the commission. All other discharges are unauthorized. If any unauthorized overflow of a holding pond occurs causing discharge into or adjacent to waters in the state, the user or provider, as appropriate, shall report the noncompliance. A written submission of such information shall also be provided to the TNRCC regional office and to the Austin Office, Water Enforcement Section (MC-149), within five (5) working days of becoming aware of the overflow. The written submission shall contain a description of the noncompliance and its cause; the potential danger to human health or safety, or the environment; the period of noncompliance, including exact dates and times; if the noncompliance has not been corrected, the anticipated time it is expected to

continue; and, steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance, and to mitigate its adverse effects.

Adopted January 8, 1997 Effective February 12, 1997

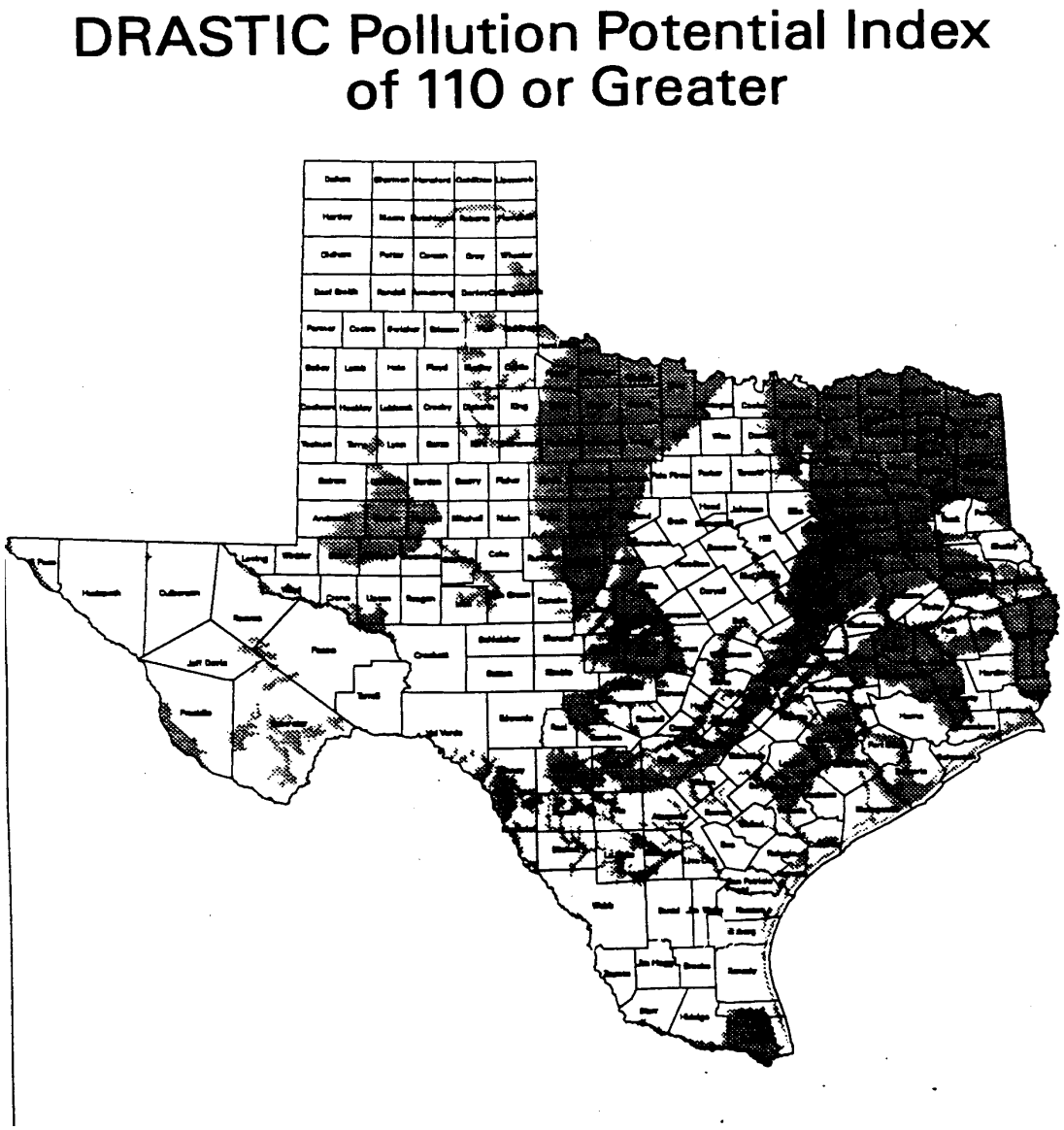
§210.23. Storage Requirements for Reclaimed Water.

(a) Except for authorized on-channel ponds, storage facilities for retaining reclaimed water prior to use shall not be located within the floodway.

(b) Except as provided by subsection (e) of this section, all initial holding ponds must be lined in accordance with either subsection (c) or (d) of this section, as appropriate.

(c) All initial and subsequent holding ponds containing Type I and Type II effluent, located within the recharge zone of the Edwards Aquifer, as defined in Chapter 213 of this title (relating to Edwards Aquifer), and all initial holding ponds containing Type II effluent, located in a vulnerable area as defined by a rating of 110 or greater on the statewide "*Ground-Water Pollution Potential - General, Municipal, and Industrial Sources*" (DRASTIC) map (as shown in Figure 1 of this chapter), shall conform to the following requirements:

FIGURE 1: 30 TAC §210.23(c)



(1) The ponds, whether constructed of earthen or other impervious material, shall be designed and constructed so as to prevent groundwater contamination;

(2) Soils used for pond lining shall be free from foreign material such as paper, brush, trees, and large rocks;

(3) All soil liners must be of compacted material, at least 24 inches thick, compacted in lifts no greater than 6 inches thick and compacted to 95% of Standard Proctor Density. In-situ clay soils meeting the soils liner requirements shall be excavated and re-compacted a minimum of 6 inches below planned grade to assure a uniformly compacted finished surface.

(4) Soil liners must meet the following particle size gradation and Atterberg limits:

(A) 30% or more passing a number 200 mesh sieve; and

(B) a liquid limit of 30% or greater; and a plasticity index of 15 or greater and have a permeability less than or equal to 1×10^{-7} cm/sec;

(5) Synthetic membrane linings shall have a minimum thickness of 40 mils with a leak detection system. In situ liners at least 24 inches thick meeting a permeability less than or equal to 1×10^{-7} cm/sec are acceptable alternatives;

(6) Certification shall be furnished by a Texas Registered Professional Engineer that the pond lining meets the appropriate criteria prior to utilization of the facilities; and

(7) Soil embankment walls shall have a top width of at least five feet. The interior and exterior slopes of soil embankment walls shall be no steeper than one foot vertical to three feet horizontal unless alternate methods of slope stabilization are utilized. All soil embankment walls shall be protected by a vegetative cover or other stabilizing material to prevent erosion. Erosion stops and water seals shall be installed on all piping penetrating the embankments.

(d) All initial holding ponds designed to contain Type I effluent, located outside of the recharge zone of the Edwards Aquifer, and Type II effluent, located in areas in the state not identified in subsection (c) of this section shall conform to the following requirements:

(1) The ponds, whether constructed of earthen or other impervious materials, shall be designed and constructed so as to prevent groundwater contamination;

(2) Soils used for pond lining shall be free from foreign material such as paper, brush, trees, and large rocks;

(3) All soil liners must be of compacted material having a permeability less than or equal to 1 x 10^{-4} cm/sec, at least 24 inches thick, compacted in lifts no greater than 6 inches each;

(4) Synthetic membrane linings shall have a minimum thickness of 40 mils. In situ liners at least 24 inches thick meeting a permeability less than or equal to 1 X 10^{-4} cm/sec are acceptable alternatives;

(5) Certification shall be furnished by a Texas Registered Professional Engineer that the pond lining meets the appropriate criteria prior to utilization of the facilities; and

(6) Soil embankment walls shall have a top width of at least five feet. The interior and exterior slopes of soil embankment walls shall be no steeper than one foot vertical to three feet horizontal unless alternate methods of slope stabilization are utilized. All soil embankment walls shall be protected by a vegetative cover or other stabilizing material to prevent erosion. Erosion stops and water seals shall be installed on all piping penetrating the embankments.

(7) An alternative method of pond lining which provides equivalent or better water quality protection than provided under this section may be utilized with the prior approval of the executive director.

(8) A specific exemption may be obtained from the executive director if, after the review of data submitted by the reclaimed water provider or user, as appropriate, the executive director determines containment of the reclaimed water is not necessary, considering:

(A) soil and geologic data, and ground water data, including its quality, uses, quantity and yield; and

(B) adequate demonstration that impairment of ground water for its actual or potential use will be prevented.

(e) Reclaimed water may be stored in leak-proof, fabricated tanks.

(f) Subsequent holding ponds utilized for the receipt and storage of reclaimed water of a quality that could cause or causes a violation of a surface water quality standard or impairment of ground water for its actual or intended use will also be subject to the storage requirements of this section.

§210.24. Irrigation Using Reclaimed Water.

(a) The reclaimed water user shall provide reasonable control of the application rates for reclaimed water applied to irrigation areas. These controls shall encourage the efficient use of reclaimed water and avoid excessive application of reclaimed water that results in surface runoff or excessive percolation below the root zone.

(b) The reclaimed water provider or user, as applicable shall determine and document typical irrigation demands for the proposed use based on type of vegetation and land area to be irrigated. As one alternative, a typical method for determining irrigation needs is shown in Table 1 of this section. However, other alternative methods may be used.

Figure: 30 TAC §210.24(b)

TABLE 1
WATER BALANCE EXAMPLE
(All Units are Inches of Water per Acre of Irrigated Area)

	a	b	Ri	c	d			e	f	g
Month	Average Precipi-tation	Average Runoff	Average Infil-trated Rainfall	Evapo-Transp-iration	Required Leaching	Total Water Needs (5)+ (6)	Effluent Needed in Root Zone (7)-(4)	Evapo-ration from Reservoir Surface	Effluent to be Applied to Land (8)/K	Consumption from Reservoir (9)+(10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Jan.	2.11	0.40	1.71	0.80	0.00	0.80	0.00	0.02	0.00	0.02
Feb.	2.43	0.57	1.86	1.20	0.00	1.20	0.00	0.01	0.00	0.01
Mar.	2.02	0.36	1.66	2.80	0.20	3.00	1.34	0.09	1.58	1.67
Apr.	3.19	1.03	2.16	3.40	0.22	3.62	1.46	0.05	1.72	1.77
May	4.19	1.74	2.45	6.10	0.64	6.74	4.29	0.10	5.05	5.15
June	3.30	1.10	2.20	6.50	0.76	7.26	5.06	0.20	5.95	6.15
July	2.20	0.45	1.75	6.70	0.87	7.57	5.82	0.34	6.85	7.19
Aug.	2.12	0.41	1.71	4.60	0.51	5.11	3.40	0.34	4.00	4.34
Sept.	3.58	1.30	2.28	5.10	0.50	5.60	3.32	0.19	3.91	4.10
Oct.	3.09	0.96	2.13	4.10	0.35	4.45	2.32	0.14	2.73	2.87
Nov.	2.23	0.46	1.77	2.10	0.06	2.16	0.39	0.07	0.46	0.53
Dec.	2.34	0.52	1.82	1.00	0.00	1.00	0.00	0.03	0.00	0.03
	32.80	9.30	23.50	44.40	4.11	48.51	27.40	1.58	32.25	33.83

Table 1 Footnotes

a. Up-to date rainfall and evaporation data sets are available from the Texas Natural Resources Information System.

b. Runoff should be determined by an acceptable method such as the Soil Conservation Service method found in SCS Technical Releases No. 55. For calculation purposes only, a CN value of 74 was assumed for good pasture with Class "C" soils.

c. Suggested source of values is the "Bulletin 6019, Consumptive Use of Water by Major Crops in Texas", Texas Board of Water Engineers.

d. In low rainfall areas, this is the required leaching to avoid salinity build-up in the soil where:

$$L = \frac{Ce}{Cl - Ce}(E - Ri)$$

Ce = Electrical conductivity of effluent

E = Evapotranspiration

Ri = Infiltrated rainfall

C1 = Maximum Allowable Conductivity of Soil Solution (Table 3)

For calculation purposes only, Ce is measured to be 1.5 millimhos/cm @ 25^{o} and C1 is 10.0 (Bermuda Grass)

e. Net evaporation from reservoir surface. For the purpose of calculation, an assumption must be made as to the ratio of irrigated land area to reservoir surface area. For this example problem, the necessary reservoir area was assumed to be 17% of the irrigated area. If, after all calculations are made, the reservoir dimensions do not seem reasonable, then a new assumption must be made and the calculations repeated. Values in column (9) are adjusted to be inches per irrigated acre.

f. K is the irrigation efficiency which for this example is taken to be 0.85.

g. The total of this column together with the expected annual volume of effluent will determine the acreage of irrigated land required.

(c) The reclaimed water provider shall be responsible for conducting periodic audits of appropriate controls implemented by reclaimed water users. Other typical irrigation operational considerations that must be addressed include the following:

(1) Irrigation of Food Crops.

(A) 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 crops is allowed.

(B) Irrigation of citrus fruit is allowed. Direct contact of the reclaimed water with citrus is allowed.

(C) Irrigation of edible crops that will not be peeled, skinned, cooked, or thermally processed before consumption is allowed if an indirect application method is used which will preclude the direct contact with the reclaimed water. For instance, a ridge and furrow, drip irrigation, or a subsurface distribution system may be used to irrigate such above ground crops. However, these methods would not be suitable for crops such as carrots or radishes.

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

(2) Irrigation of pastures used by animals milked for human consumption shall be conducted in a manner to avoid contact of reclaimed water with such animals.

(3) Irrigation of landscaped areas:

(A) Application of reclaimed water on public access facilities shall be controlled by agreement with the reclaimed water provider or by local ordinance.

(B) Reclaimed water may not be used to fill swimming pools, hot tubs, wading pools, or other structures designed for contact recreation.

(d) General irrigation requirements.

(1) A provider or user designing or operating an irrigation system using reclaimed water is responsible for ensuring that reclaimed water overflow, crop stress, and undesirable soil contamination by a salt does not occur. To prevent such occurrences, the provider or user is required to consider, evaluate, and respond appropriately to the following factors as the need arises:

(A) Precipitation inputs to the water balance should utilize the average monthly precipitation based on past rainfall records.

(B) The consumptive use requirements (evapotranspiration losses) of the crop system should be developed on a monthly basis. The method of determining the consumptive use requirement shall be documented by the provider or user as a part of the water balance study and the records of the study maintained for possible commission review.

(C) A leaching requirement, calculated as shown in Table 1 of this section, shall be included in the water balance study when the total dissolved solids concentration of the reclaimed water presents the potential for developing excessive soil salinity buildup due to the long term operation of the irrigation system.

(2) The irrigation site must be maintained with a vegetative cover or be under cultivation during times when reclaimed water is being applied.

(3) The irrigation practices shall be designed so as to prevent incidental ponding or standing water except where local farming conditions and the accepted irrigation delivery systems and cropping patterns are such that, as an unavoidable consequence of such conditions, systems, and patterns, there will be standing water.

(4) Irrigation application rates and application times shall be developed so as to minimize "wet grass" conditions in unrestricted landscaped areas during the periods the area could be in use.

(5) Irrigation systems shall be designed so that the irrigation spray does not reach any privately-owned premises outside the designated irrigation area or reach public drinking fountains.

(6) There shall be no application of effluent when the ground is water saturated or frozen.

(7) Distribution systems must be designed to prevent operation by unauthorized personnel.

(8) Irrigation operations shall be managed in a manner to minimize the inadvertent contact of reclaimed water with humans.

(9) Operational or tailwater controls shall be provided to preclude discharge of reclaimed water from irrigation sites.

Adopted January 8, 1997 Effective February 12, 1997

§210.25. Special Design Criteria for Reclaimed Water Systems.

(a) All hose bibs and faucets shall be painted purple and designed to prevent connection to a standard water hose. Hose bibs shall be located in locked, below grade vaults which shall be clearly labeled as being of non-potable quality. As an alternative to the use of locked, below grade vaults with standard hose bibs services, hose bibs may be placed in a non-lockable service box which can only be operated by a special tool so long as the hose bib is clearly labeled as non-potable water, in accordance with subsection (b) of this section.

(b) One of the following requirements must be met by the user or provider, for any area where reclaimed water is stored or where there exist hose bibs or faucets:

(1) Signs having a minimum size of eight inches by eight inches, as shown in Figure 1, shall be posted at all storage areas and on all hose bibs and faucets reading, in both English and Spanish, "Reclaimed Water, Do Not Drink" or similar warning.

FIGURE 1: 30 TAC §210.25(b)(1)

DO NOT DRINK THE WATER

NO TOMAR EL AGUA

(2) The area shall be secured to prevent access by the public.

(c) Reclaimed water piping shall be separated from potable water piping by a horizontal distance of at least nine feet. Where the nine foot separation distance cannot be achieved, the reclaimed water piping must meet the line separation requirements of Chapter 290 of this title (relating to Water Hygiene).

(d) Where a reclaimed water line parallels a sewer line, the reclaimed water line shall be constructed in accordance with subsection (e) or (f) of this section. The horizontal separation distance shall be three feet (outside to outside) with the reclaimed water line at the level of or above the sewer line. Reclaimed water lines which parallel sewer lines may be placed in the same benched trench. Where a reclaimed water line crosses a sewer line, the requirements of §290.44(e)(5)(B) of this title (relating to Location of Water Lines) shall be followed, with "reclaimed water line" substituted in §290.44(e) of this title (relating to Location of Water Lines) for "water line."

(e) Reclaimed water lines which transport reclaimed water under pressure shall be sized according to acceptable engineering practices for the needs of the reclaimed water users. The designer shall consider methods to prevent or maintain lines to mitigate the effect of the deposition of solids in such lines. Pipe specified for reclaimed water force mains shall be of a type having an expected life at least as long as that of the lift station and shall be suitable for the reclaimed water being pumped and operating pressure to which it will be subjected. All pipe shall be identified in the technical specifications with appropriate American Society for Testing and Materials, American National Standard Institute, or American Water Works Association (AWWA) standard numbers for both quality control (dimensions, tolerance, and installation such as bedding or backfill). All pipes and fittings shall have a minimum working pressure rating of 150 pounds per square inch. Final plans and specifications shall describe required pressure testing for all installed reclaimed water force mains. Minimum test pressure shall be 1.5 times the maximum design pressure. Allowable leakage rates shall be determined as described in §317.2(d)(4) of this title (relating to Pressure Sewer Systems).

(f) Gravity flow reclaimed water lines shall meet the requirements of §317.2 (a) of this title (relating to General Requirements) and §317.2(c) of this title (relating to High Velocity Protection). The designer shall consider methods to prevent high velocity scour or maintain line fluid velocity to mitigate the effects of the deposition of solids in the gravity conveyance.

(g) All exposed piping and piping within a building shall be either purple pipe or painted purple. All buried piping installed after the effective date of these rules shall be one of the following: manufactured in purple, painted purple, taped with purple metallic tape, or bagged in purple. All exposed piping should be stenciled in white with a warning reading "NON-POTABLE WATER." All exposed or buried reclaimed water piping constructed at a wastewater treatment facility is exempt from the color coding requirements of this section.

(h) When applicable, in accordance with §317.1(a)(3) - (4) of this title, (relating to General Provisions), the design of distribution systems which will convey reclaimed water to a user shall be submitted to the executive director and must receive an approval. The design of the distribution systems must meet the requirements of Chapter 317 of this title (relating to Design Criteria for Sewerage Systems). Where a municipality is the plan review authority for certain sewer systems which transport primarily domestic waste, in accordance with §317.1(a)(5) of this title, in lieu of the commission, design submittal will not be subject to submittal to the commission and instead must be approved by the municipality. Materials shall be submitted for approval by the executive director in accordance with the Texas Engineering Practice Act (Article 3271a, Vernon's Annotated Texas Statutes).

(i) All ground level and elevated storage tanks shall be designed, installed, and constructed in accordance with current AWWA standards with reference to materials to be used and construction practices to be followed, except for health-based standards strictly related to potable water storage and contact practices, where appropriately less restrictive standards may be applied.

Adopted January 22, 1997 Effective February 12, 1997

SUBCHAPTER C: QUALITY CRITERIA AND SPECIFIC USES FOR RECLAIMED WATER
§§210.31 - 210.36
Effective November 26, 2009

§210.31. Applicability.

This subchapter applies to the reclaimed water producer, the reclaimed water provider and the reclaimed water user. This subchapter sets the specific uses, the quality standards, as well as the monitoring, record keeping, and reporting standards for reclaimed water.

Adopted January 8, 1997 Effective February 12, 1997

§210.32. Specific Uses of Reclaimed Water.

Numerical parameter limits pertaining to specific reclaimed water use categories are contained in §210.33 of this title (relating to Quality Standards for Using Reclaimed Water). These limits apply to reclaimed water before discharge to initial holding ponds or a reclaimed water distribution system. It shall be the responsibility of the reclaimed water producer to establish that the reclaimed water meets the quality limits at the sample point for the intended use in accordance with the monitoring requirements identified in §210.34 of this title (relating to Sampling and Analysis).

(1) Type I Reclaimed Water Use. This type of use includes irrigation or other uses in areas where the public may be present during the time when irrigation takes place or other uses where the public may come in contact with the reclaimed water. The following types of uses would be considered Type I uses:

(A) Residential irrigation, including landscape irrigation at individual homes.

(B) Urban uses, including irrigation of public parks, golf courses with unrestricted public access, school yards, or athletic fields.

(C) Use of reclaimed water for fire protection, either in internal sprinkler systems or external fire hydrants.

(D) Irrigation of food crops where the applied reclaimed water may have direct contact with the edible part of the crop, unless the food crop undergoes a pasteurization process.

(E) Irrigation of pastures for milking animals.

(F) Maintenance of impoundments or natural water bodies where recreational activities, such as wading or fishing, are anticipated even though the water body was not specifically designed for such a use.

(G) Toilet or urinal flush water.

(H) Other similar activities where the potential for unintentional human exposure may occur.

(2) Type II Reclaimed Water Use. This type of use includes irrigation or other uses in areas where the public is not present during the time when irrigation activities occur or other uses where the public would not come in contact with the reclaimed water. The following are examples of uses that would be considered Type II uses.

(A) Irrigation of sod farms, silviculture, limited access highway rights of way, and other areas where human access is restricted or unlikely to occur. The restriction of access to areas under irrigation with reclaimed water could include the following:

(i) The irrigation site is considered to be remote.

(ii) The irrigation site is bordered by walls or fences and access to the site is controlled by the owner/operator of the irrigation site.

(iii) The irrigation site is not used by the public during the times when irrigation operations are in progress. Such sites may include golf courses, cemeteries, and landscaped areas surrounding commercial or industrial complexes. The "syringing" or "wetting" of greens and tees on golf courses shall be allowable under Type II so long as the "syringing" is done with hand-held hoses as opposed to automatic irrigation equipment. The public need not be excluded from areas where irrigation is not taking place. For example, irrigation of golf course fairways at night would not prohibit the use of club house or other facilities located a sufficient distance from the irrigation.

(iv) The irrigation site is restricted from public access by local ordinance or law with specific standards to achieve such a purpose.

(B) Irrigation of food crops where the reclaimed water is not likely to have direct contact with the edible part of the crop, or where the food crop undergoes pasteurization prior to distribution for consumption.

(C) Irrigation of animal feed crops other than pasture for milking animals.

(D) Maintenance of impoundments or natural water bodies where direct human contact is not likely.

(E) Soil compaction or dust control in construction areas where application procedures minimize aerosol drift to public areas.

(F) Cooling tower makeup water. Use for cooling towers which produce significant aerosols adjacent to public access areas may have special requirements.

(G) Irrigation or other non-potable uses of reclaimed water at a wastewater treatment facility.

(3) Any Type I reclaimed water may also be utilized for any of the Type II uses identified in paragraph (2) of this section.

Adopted January 8, 1997 Effective February 12, 1997

§210.33. Quality Standards for Using Reclaimed Water.

The following conditions apply to the types of uses of reclaimed water. At a minimum, the reclaimed water producer shall only transfer reclaimed water of the following quality as described for each type of specific use:

(1) for Type I reclaimed water uses, reclaimed water on a 30-day average shall have a quality of:

Figure: 30 TAC §210.33(1)

BOD_5 or $CBOD_5$	5 mg/l
Turbidity	3 NTU
Fecal coliform or *E. coli*	20 CFU/100 ml*
Fecal coliform or *E. coli*	75 CFU/100 ml**
Enterococci	4 CFU/100 ml*
Enterococci	9 CFR/100 ml**

* 30-day geometric mean

** maximum single grab sample

(2) for Type II reclaimed water use, reclaimed water on a 30-day average shall have a quality of:

(A) for a system other than pond system:

Figure: 30 TAC §210.33(2)(A)

BOD_5	20 mg/l
or $CBOD_5$	15 mg/l
Fecal coliform or *E. coli*	200 CFU/100 ml*
Fecal coliform or *E. coli*	800 CFU/100 ml**
Enterococci	35 CFU/100 ml*
Enterococci	89 CFU/100 ml**

* 30-day geometric mean

** maximum single grab sample

(B) for a pond system:

Figure: 30 TAC §210.33(2)(B)

BOD_5	30 mg/l
Fecal coliform or *E. coli*	200 CFU/100 ml*
Fecal coliform or *E. coli* (not to exceed)	800 CFU/100 ml**
Enterococci	35 CFU/100 ml*
Enterococci	89 CFU/100 ml**

* 30-day geometric mean

** maximum single grab sample

§210.34. Sampling and Analysis.

The reclaimed water producer shall sample the reclaimed water prior to distribution to a user to assure that the water quality is in accord with the intended contracted use. Analytical methods shall be in accord with those specified in Chapter 319 of this title (relating to Monitoring and Reporting). The minimum sampling and analysis frequency for reclaimed water for the applicable parameters identified in §210.33 of this title (relating to Quality Standards for the Use of Reclaimed Water) is as follows:

(1) Type I Reclaimed Water Uses twice per week.

(2) Type II Reclaimed Water Uses once per week.

Adopted January 8, 1997 Effective February 12, 1997

§210.35. Guidelines for Certain Distribution Systems.

The commission recommends that a provider or user maintain a plan to carry out periodic fecal coliform sampling within certain reclaimed water distribution piping systems. Such a plan does not need the approval or review of the commission. This periodic sampling should occur in instances where residential irrigation, including landscape irrigation at individual homes occurs, or where specific urban uses such as irrigation of public parks, school yards, or athletic fields occurs. The plan should specify activities by the provider or user to respond to human health threats if undesirable fecal coliform test results or trends are detected.

Adopted January 8, 1997 Effective February 12, 1997

§210.36. Record Keeping and Reporting.

The reclaimed water provider and user shall maintain records on site for a period of five years.

(1) Records to be maintained by the provider include:

(A) copies of notifications made to the commission concerning reclaimed water projects.

(B) as applicable, copies of contracts made with each reclaimed water user (this requirement does not include reclaimed water users at residences that have separate distribution lines for potable water).

(C) records of volume of water delivered to each reclaimed water user per delivery (this requirement does not apply to reclaimed water users at residences that have separate distribution lines for potable water).

(D) reclaimed water quality analyses.

(2) The reclaimed water provider or producer shall report to the commission on a monthly basis the following information on forms furnished by the executive director. Such reports are due to the commission by the 20th day of the month following the reporting period.

(A) volume of reclaimed water delivered to a user or provider.

(B) quality of reclaimed water delivered to a user or provider reported as a monthly average for each quality criteria except those listed as "not to exceed" which shall be reported as individual analyses.

Adopted January 22, 1997 Effective February 12, 1997

SUBCHAPTER D: ALTERNATIVE AND PRE-EXISTING RECLAIMED WATER SYSTEMS
§§210.41 - 210.46
Effective February 12, 1997

§210.41. Applicability of Alternate Reclaimed Water Proposals.

In the event a reclaimed water provider or user proposes to design, construct, or operate a reclaimed water system or to utilize reclaimed water in a manner other than authorized in these rules, the provisions of this subchapter shall apply.

Adopted January 8, 1997 Effective February 12, 1997

§210.42. Request to Executive Director.

(a) If a reclaimed water provider or user proposes to design, construct, or operate a reclaimed water system or to utilize reclaimed water in a manner other than authorized in these rules, the provider or user shall file a request with the executive director, in addition to the notification filed pursuant to §210.4 of this title (relating to Notification), identifying the alternative proposal and requesting approval by the executive director.

(b) The request shall be in writing and shall include information necessary or useful in assisting the executive director in acting on the request for approval of the alternate reclaimed water proposal.

Adopted January 8, 1997 Effective February 12, 1997

§210.43. Action on Alternative Reclaimed Water Proposals.

The executive director shall review an alternate reclaimed water proposal filed under §210.42 of this title (relating to Request to Executive Director). Within 60 days, the executive director shall identify in writing to the requestor any additional information necessary for the executive director to act on the request, and provide the requestor sufficient time to provide such information. Following the receipt of such information, the executive director shall act on the request, either granting or denying the proposal, in whole or in part. If no additional information is requested, the executive director shall act on the request within 60 days, either granting or denying the proposal, in whole or in part.

Adopted January 8, 1997 Effective February 12, 1997

§210.44. Pre-existing Reclaimed Water Systems.

A reclaimed water system not already authorized by a commission permit or other written approval, existing on the effective date of these rules, where construction began prior to June 25, 1990, is authorized under this chapter if the provider or user of such a system provides a detailed description of the system to the executive director pursuant to the notification procedures of §210.4 of this title (relating to Notification) and the system is approved by the executive director. Such notification must occur within ninety (90) days of the effective date of these rules. The system is authorized unless the executive director requests additional information pursuant to §210.45 of this title (relating to Actions on Pre-existing Reclaimed Water Systems) or denies such authorization pursuant to the provisions of §210.46 of this title (relating to Denial of Request).

Adopted January 8, 1997 Effective February 12, 1997

§210.45. Action on a Pre-existing Reclaimed Water System.

(a) The executive director may request a reclaimed water user to submit additional information concerning a pre-existing reclaimed water system to be authorized under this subchapter. The additional information may be requested in order to evaluate the potential for significant water quality problems or potential for significant risks to the health or safety of the public, including the need of a project to conform to one or more of the requirements of this chapter. Such request shall be provided in writing to the proposed reclaimed water user within 60 days of the receipt of the notification and shall provide the proposed user not less than 30 days to provide such additional information.

(b) Following the receipt of such information, the executive director shall act on the request, either granting or denying the proposal, in whole or in part. If no additional information is requested, the executive director shall act on the request within 60 days, either granting or denying the proposal, in whole or in part.

Adopted January 8, 1997 Effective February 12, 1997

§210.46. Denial of Request.

The executive director shall not grant an alternate reclaimed water proposal or grant authorization to a pre-existing reclaimed water system which could pose a significant threat to water quality or which represents a significant risk to human health or safety.

Adopted January 22, 1997 Effective February 12, 1997

SUBCHAPTER E: SPECIAL REQUIREMENTS FOR USE OF INDUSTRIAL RECLAIMED WATER
§§210.51 - 210.60
Effective December 11, 2002

§210.51. Applicability, Purpose, and Scope.

(a) A person proposing to use industrial wastewater as industrial reclaimed water may obtain authorization under this subchapter if all of the requirements of the subchapter are met. The purpose of this subchapter is to establish the applicable requirements for industrial reclaimed water use which may be used instead of potable water or raw water. As defined and specified in this subchapter, the requirements must be met by the producers, providers, and users of industrial reclaimed water. These requirements are intended to allow the safe utilization of reclaimed water for conservation of surface water and groundwater, to ensure the protection of public health, to protect surface water and groundwater from contamination, and to help ensure an adequate supply of water resources for present and future needs.

(b) This subchapter establishes the following requirements for producers, providers, and users of industrial reclaimed water:

(1) general requirements applicable to producers, providers, and users;

(2) requirements and specifications for transfer, storage, irrigation, and other end uses;

(3) requirements and specifications necessary to minimize the impact of discharge of waste into or adjacent to water in the state;

(4) specific uses of industrial reclaimed water;

(5) standards for the quality of industrial reclaimed water;

(6) standards for monitoring and recordkeeping; and

(7) payment of fees.

(c) The requirements of this subchapter to obtain an authorization do not apply to the end use of industrial reclaimed water when the end use is authorized by permit, including, but not limited to, a Texas Pollutant Discharge Elimination System permit or a Texas Land Application permit, or by commission rules other than those in this subchapter. The end uses of industrial wastewater that are subject to the requirements of this subchapter include landscape irrigation, dust suppression, soil

compaction, impoundment maintenance, or industrial wastewater that is otherwise land applied for a beneficial purpose. When a use of industrial reclaimed water is regulated under Chapter 335 of this title (relating to Industrial Solid Waste and Municipal Hazardous Waste), that use shall comply with the requirements of Chapter 335 of this title in addition to the requirements of this subchapter.

(d) Internal recycling systems, closed loop systems, and systems that use industrial wastewater as makeup water within a facility are not subject to the requirements of this subchapter.

(e) The use of industrial wastewater as industrial reclaimed water as authorized by this subchapter does not require an amendment of any issued industrial wastewater discharge permit to recognize the activity authorized under this subchapter. Effluent limitations in the industrial wastewater discharge permit remain in effect for and during industrial reclaimed water use activities.

(f) Industrial reclaimed water projects approved under this subchapter do not require a new or amended permit from the commission except as provided by §210.5 of this title (relating to Authorization for the Use of Reclaimed Water). To develop projects not specifically authorized by this subchapter, a person may seek authorization for a new or amended waste discharge permit under Chapter 305 of this title (relating to Consolidated Permits).

(g) Nothing in this subchapter shall alter any requirement to obtain a water right authorization.

Adopted November 20, 2002 Effective December 11, 2002

§210.52. Definitions.

The following words and terms, when used in this subchapter, have the following meanings unless the context clearly indicates otherwise.

(1) Blowdown--The discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts that could damage or impair machinery, equipment, or systems.

(2) CFR--Code of Federal Regulations.

(3) Commingled wastewater--Industrial wastewater that contains any amount of domestic wastewater.

(4) Containing--When the pollutant(s) of concern are measured at levels that exceed the minimum analytical level.

(5) Discharge--The release or disposal of waste into or adjacent to any water in the state that in itself or in conjunction with any other discharge or activity causes, continues to cause, or will cause pollution of any of the water in the state.

(6) Dioxins and furans--Tetra, penta, hexa, hepta, and octa-chlorinated dibenzo dioxins and furans.

(7) End use--Landscape irrigation, soil compaction, dust suppression, impoundment maintenance, or industrial wastewater that is otherwise land applied in accordance with all applicable regulations.

(8) Industrial reclaimed water--Any industrial wastewater which has been treated, if necessary, to a quality suitable for land application for beneficial use.

(9) Industrial wastewater--A non-domestic or non-municipal wastewater.

(10) Land application--The discharge of waste adjacent to water in the state.

(11) MGD--Million gallons per day.

(12) Minimum analytical level (MAL)--The lowest concentration at which a particular substance can be quantitatively measured in the matrix of concern (i.e., wastewater) with a defined precision level, using approved analytical methods.

(13) Non-contact cooling water--Water used for cooling which does not come into direct contact with any raw material, intermediate product, waste product, by-product, or finished product.

(14) On-site--The use of industrial reclaimed water within the boundaries of the industrial facility or within the boundaries of property that is contiguous to the facility and owned or operated by the producer.

(15) Once-through cooling water--Water passed through main cooling condensers in one or two passes for the purpose of removing waste heat.

(16) Playa lake--A shallow (generally less than one meter deep), isolated, naturally ephemeral approximately circular lake located in an enclosed basin in the High Plains and West Central Plains areas of the state.

(17) POTW--Publicly-owned treatment works.

(18) Priority pollutants--The pollutants as listed in 40 CFR Part 122, Appendix D, Tables 2 and 3, plus 2,3,7,8-Tetrachlorodibenzo-p-dioxin and asbestos.

(19) Process wastewater--Any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.

(20) Producer--A person who produces industrial reclaimed water as identified in this subchapter.

(21) SU--Standard units.

(22) Tail water--The runoff of irrigation water from the lower end of an irrigated field.

Adopted November 20, 2002 Effective December 11, 2002

§210.53. Wastes Eligible for Coverage.

(a) Level I eligibility. A producer is eligible for Level I authorization if the producer uses any of the following wastes on-site and has a primary disposal method as an alternative to reuse and an end use listed in §210.56(b) of this title (relating to Authorization Requirements):

(1) air conditioner condensate; compressor condensate; steam condensate; or condensate that forms externally on steam lines and is not process wastewater;

(2) washwater from washing whole fruits and vegetables;

(3) non-contact cooling water;

(4) once through cooling water;

(5) water treatment filter backwash;

(6) water from routine external washing of buildings, conducted without the use of detergents or other chemicals;

(7) water from routine washing of pavement conducted without the use of detergents or other chemicals and where spills or leaks of toxic or hazardous waste have not occurred (unless spilled material has been removed);

(8) cooling tower blowdown with a total dissolved solids concentration less than 2,000 milligrams per liter; or

(9) wastewater with measured effluent concentrations at or below threshold levels listed in the figure contained in this paragraph that is not a waste source listed in §210.54(a) of this title (relating to Wastes Not Eligible for Coverage). For all other priority pollutants in 40 CFR Part 122 Appendix D, Tables II and III, the threshold level is set at the minimum analytical level.

Figure: 30 TAC §210.53(a)(9)

Threshold Levels for Industrial Reclaimed Water					
Table 1					
Parameter	Threshold (mg/l)	MAL (mg/l)	Parameter	Threshold (mg/l)	MAL (mg/l)
Conventionals & Nonconventionals			Metals		
Total Organic Carbon	55	-	Copper, total	0.030	0.010
Oil and Grease	10	-	Lead, total	0.015	0.005
Total Dissolved Solids	2000	-	Manganese	0.05	--
Nitrate Nitrogen	10	-	Mercury, total	0.0002	0.0002
Metals			Nickel, total	0.030	0.010
Antimony, total	0.09	0.03	Selenium, total	0.030	0.010
Arsenic, total	0.030	0.010	Silver, total	0.006	0.002
Barium, total	0.030	0.010	Thallium, total	0.030	0.010
Beryllium, total	0.015	0.005	Zinc, total	0.015	0.005
Cadmium, total	0.003	0.001	Cyanide,	0.200	---

(b) Level II eligibility. A producer is eligible to apply for Level II authorization for any of the following:

(1) industrial reclaimed water containing pollutant concentration levels which exceed threshold levels listed in the figure contained in subsection (a)(9) of this section, but which is not a listed waste in §210.54(a) of this title;

(2) industrial reclaimed water that contains any amount of domestic wastewater;

(3) the proposed end use of industrial reclaimed water is not on-site;

(4) the proposed end use is not listed in §210.56(b)(2) of this title; or

(5) the disposal method proposed as an alternative to reuse is not listed in §210.56(b)(1) of this title.

§210.54. Wastes Not Eligible for Coverage.

(a) The following wastes are not eligible for authorization under this subchapter regardless of effluent quality or end use:

(1) wastewater containing radioactive material regulated under Texas Health and Safety Code, Chapter 401;

(2) wastewater containing dioxin and furans;

(3) wastewater containing pesticides;

(4) wastewater classified as or which is characteristically hazardous as defined by 40 Code of Federal Regulations (CFR) Part 261;

(5) process wastewater regulated under 40 CFR Parts 400 - 471 with the following exceptions:

(A) Part 405 - dairy products processing;

(B) Part 406 - grain mills;

(C) Part 407 - canned and preserved fruits and vegetables;

(D) Part 408 - canned and preserved seafood processing;

(E) Part 409 - sugar processing;

(F) Part 411 - cement manufacturing;

(G) Part 417 - soap and detergent manufacturing;

(H) Part 423 - steam electric power generating;

(I) Part 434 - coal mining;

(J) Part 436 - mineral mining and processing;

(K) Part 454 - gum and wood chemicals manufacturing; and

(L) Part 460 - hospital;

(6) septic tank waste, chemical toilet waste, grit trap waste, or grease trap waste;

(7) barge cleaning washwater;

(8) air scrubber wastewater;

(9) any wastewater where a permit by rule authorized under Chapter 321 of this title (relating to Control of Certain Activities by Rule) or commission-issued general permit for land application is available; or

(10) remediated/contaminated groundwater generated from facilities where process wastewater is prohibited for use as listed in paragraph (5) of this subsection.

(b) Producers who could otherwise be eligible to obtain authorization under this chapter, but who do not implement all required applicable conditions of this authorization must apply for and obtain permit coverage.

(c) Discharges into or adjacent to water in the state shall not be authorized under this chapter where prohibited by applicable rules including, but not limited to, Chapter 213 of this title (relating to Edwards Aquifer); Chapter 311 of this title (relating to Watershed Protection); and Chapter 335 of this title (relating to Industrial Solid Waste and Municipal Hazardous Waste).

(d) Any user proposing to irrigate or store wastewater within the boundaries of a playa lake may not obtain authorization under this subchapter and must obtain a Texas Pollutant Discharge Elimination System discharge permit for authorization to discharge into a playa lake.

Adopted November 20, 2002 Effective December 11, 2002

§210.55. Application Requirements for Authorization.

(a) Level I authorization. Producers eligible for Level I authorization under this subchapter are authorized to use industrial reclaimed water without any notification or approval by the executive director. Effluent sampling is not required for wastes listed in §210.53(a)(1) - (8) of this title (relating to Wastes Eligible for Coverage) with the exception of cooling tower blowdown which must meet the 2,000 milligrams per liter threshold level for total dissolved solids.

(b) Level II authorization. Producers requesting Level II authorization for industrial reclaimed water activities under this subchapter must submit a complete application to the executive director on a form approved by the executive director to request authorization. The use of industrial reclaimed water shall not begin until written authorization is received from the executive director. The application shall include, at a minimum, the following information:

(1) the legal names and addresses of the user, provider, and producer;

(2) contact representative for the applicant and telephone number;

(3) specific description of the producer's and user's facility location including physical address;

(4) specific description of the proposed industrial reclaimed water use site (if different than the producer's site);

(5) the proposed end use for the industrial reclaimed water;

(6) description of the waste source of the industrial reclaimed water;

(7) the primary disposal method which would be used as an alternative to re-use;

(8) the volume of industrial reclaimed water proposed for end use and the frequency of application;

(9) effluent testing results;

(10) the location of the producer's and user's site in relation to the Edwards Aquifer, if applicable, and;

(11) liner certification, if applicable.

(c) If the end use is not on-site, the producer shall also provide all information described in §210.4 of this title (relating to Notification).

Adopted November 20, 2002 Effective December 11, 2002

§210.56. Authorization Requirements.

(a) Requirements in other subchapters.

(1) Paragraphs (2) - (6) of this subsection do not apply to commingled water. The commingled wastewater is subject to all requirements of §§210.1 - 210.9 of this title (relating to Applicability; Purpose and Scope; Definitions; Notification; Authorization for the Use of Reclaimed Water; Responsibilities; Transfer and Conveyance of Reclaimed Water; Restrictions; and Enforcement), §§210.21 - 210.25 of this title (relating to Applicability; General Requirements; Storage Requirements for Reclaimed Water; Irrigation Using Reclaimed Water; and Special Design Criteria for Reclaimed Water Systems), and §§210.31 - 210.36 of this title

(relating to Applicability; Specific Uses of Reclaimed Water; Quality Standards for Using Reclaimed Water; Sampling and Analysis; Guidelines for Certain Distribution Systems; and Record Keeping and Reporting).

(2) Except as specified in this subchapter, the requirements for a reclaimed water producer, provider, and user described in Subchapters A - D of this chapter (relating to General Provisions; General Requirements for the Production, Conveyance, and Use of Reclaimed Water; Quality Criteria and Specific Uses For Reclaimed Water; and Alternative and Pre-Existing Reclaimed Water Systems) apply to a producer, provider, and user of industrial reclaimed water.

(3) A producer, provider, or user of industrial reclaimed water is not required to treat industrial water or hold a permit for treatment and disposal as described in §210.1 and §210.5(a) of this title.

(4) A producer who uses industrial reclaimed water on-site only is not required to comply with §210.4 of this title. The producer must comply with all applicable requirements of this subchapter pertaining to the industrial reclaimed water use.

(5) The requirements of §210.25(e), (f), and (h) of this title do not apply to the producer, provider, or user of industrial reclaimed water used on-site only.

(6) The requirements of §§210.22(a) and (e) and 210.31 - 210.36 of this title, do not apply to the producer, provider, or user of industrial reclaimed water.

(b) General requirements. Producers required to obtain Level I authorization to use industrial reclaimed water under this subchapter must comply with the following:

(1) have an authorized means of disposal as an alternative to reuse, which includes one or more of the following:

(A) have authority to discharge under a permit;

(B) have authority to route to a publicly-owned treatment works (POTW); or

(C) have the ability to recycle the industrial reclaimed water in a manner that does not discharge into or adjacent to water in the state;

(2) have an end use which includes one or more of the following and is on-site:

(A) irrigation, including landscape irrigation;

(B) fire protection;

(C) dust suppression and soil compaction;

(D) maintenance of impoundments;

(E) irrigation of non-food crops, including, but not limited to, sod farms and silviculture; and

(F) irrigation of pastures for milking animals.

(3) If the producer's facility is within the service area of a POTW, the producer must provide notice to the POTW of the producer's intent to use industrial wastewater under this subchapter.

(4) The distribution, use, and storage of industrial reclaimed water may not cause or result in nuisance conditions.

(5) The producer, provider, and user also shall comply with all applicable rules under Chapter 335 of this title (relating to Industrial Solid Waste and Municipal Hazardous Waste).

(c) Eligible Level I authorizations not able to meet §210.56(b). If the producer is eligible for Level I authorization but cannot meet the requirements of subsection (b) of this section, the producer shall submit an application for a Level II authorization to use reclaimed water.

(d) Industrial reclaimed limitations for Level II authorizations.

(1) The producer shall comply with the limitations and monitoring frequencies outlined in subparagraphs (A) - (C) of this paragraph for an authorization request which has been approved by the executive director:

(A) total organic carbon is limited to 55 milligrams per liter and shall be monitored once per month by grab sample;

(B) pH is limited to a minimum of 6.0 standards units (su) and a maximum of 9.0 su and shall be monitored once per week by grab sample; and

(C) the executive director may include additional limitations or increased monitoring frequencies based on information provided by the applicant, or any other available information.

(2) Sampling shall be conducted only if industrial reclaimed water use occurs during the monitoring period. If industrial reclaimed water use occurs less than the specified frequency, samples shall be obtained during use.

(e) General or individual permits. Level II authorization does not change any general or individual permit limits or requirements for an industrial wastewater discharge activity.

(f) Irrigation requirements.

(1) The provider or user shall comply with all requirements regarding irrigation in §210.24 of this title, as well as the requirements of this subchapter.

(2) Irrigation practices shall be designed and managed to prevent contamination of groundwater or surface water and to prevent the occurrence of nuisance conditions. Tail water control facilities shall be provided, where necessary, to prevent the discharge of any industrial reclaimed water from irrigated lands into or adjacent to water in the state.

(3) No industrial reclaimed water may be land applied when the ground is frozen or saturated or during rainfall events.

(4) When applying industrial reclaimed water to land, a buffer area must be maintained around water wells to prevent the possibility of waste transport to groundwater via the well or well casing. Industrial reclaimed water shall not be applied within 250 feet of a private water well (used for domestic or irrigation use) or 500 feet of a public water supply well.

(5) The user shall provide adequate maintenance of the irrigation facilities to ensure that the facilities are in good working condition.

(g) Storage requirements.

(1) All industrial reclaimed water retention, holding, and transfer ponds shall be operated in such a manner as to maintain a minimum freeboard of two feet.

(2) Ponds shall not be used for disposal.

(h) Liner requirements. Under Level I and Level II authorizations, industrial reclaimed water is considered equivalent to Type I reclaimed water. The producer, provider, or user shall comply with liner requirements outlined in §210.23 of this title.

(i) Off-site use.

(1) Any proposed use of industrial reclaimed water which is not considered on-site must comply with the requirements in the following sections in addition to the applicable requirements of this subchapter:

(A) §210.4 of this title;

(B) §210.6 of this title;

(C) §210.7 of this title; and

(D) §210.25 of this title.

(2) If the producer provides domestic water or wastewater services to the public such as at a university, hospital, hotel, or similar institution then all exposed or buried piping receiving industrial reclaimed water constructed within the boundaries of the industrial facility is exempt from the color coding requirements of §210.25 of this title.

(j) Authorization to use industrial reclaimed water. Authorization to use industrial reclaimed water is separate from the general and individual permit requirements for wastewater discharges under Chapter 205 and Chapter 305 of this title (relating to General Permits for Waste Discharges; and Consolidated Permits).

Adopted November 20, 2002 Effective December 11, 2002

§210.57. Sampling and Record Keeping Requirements.

(a) Level I authorizations. No additional sampling or monitoring is required by the producer, user, or provider other than the requirements already established in this subchapter.

(b) Level II authorizations.

(1) Sampling.

(A) The producer shall sample the reclaimed water after final treatment, if any, but before distribution to a provider or user and analyze such samples to assure that the water quality meets the limitations required by the authorization. The producer shall sample for the parameters listed in §210.56(d) of this title (relating to Authorization Requirements) and any additional parameters required by the executive director in the authorization.

(B) If any of the sample results exceed the limitations in the authorization, the producer may not use the wastewater, may not route the

industrial wastewater to a user or provider, and shall use the means of disposal instead of reuse. The producer has the option to provide additional treatment to meet the limitations and, if the limitations are met, the water may be used as industrial reclaimed water.

(C) Analytical methods for the analyses shall meet the requirements specified in Chapter 319 of this title (related to General Regulations Incorporated into Permits).

(D) Monitoring samples and measurements shall be taken at times and in a manner so as to be representative of the monitored activity.

(2) Recordkeeping requirements.

(A) The producer shall maintain records of notifications made to the executive director under this subchapter concerning industrial reclaimed water use.

(B) The producer shall maintain records of all monitoring activities. These records shall be readily available for inspection by the executive director for a minimum period of five years. Records of monitoring activities shall include:

(i) date, time, and place of sample or measurement;

(ii) identity of individual who collected the sample or made the measurement;

(iii) date of analysis;

(iv) identity of the individual and laboratory who performed the analysis;

(v) the technique or method of analysis; and

(vi) the results of the analysis or measurement.

(C) The user shall maintain an operating log which records irrigation activities and shall be readily available for inspection by the executive director for a minimum period of five years. The operating log shall record irrigation activities which include:

(i) the volume of industrial reclaimed water used for irrigation each day; and

(ii) the actual surface area wetted each day.

Adopted November 20, 2002 Effective December 11, 2002

§210.58. Existing Authorizations.

(a) A person who has obtained executive director written approval to use industrial reclaimed water under this subchapter is authorized to continue as currently authorized.

(b) If a person is no longer authorized under a Level I authorization, the producer shall obtain authorization for the reuse of industrial wastewater within 180 days of the effective date of this subchapter.

Adopted November 20, 2002 Effective December 11, 2002

§210.59. Executive Director Denial or Suspension Authorization.

(a) The executive director may deny or suspend an authorization request to use industrial reclaimed water under this subchapter based on potential or actual adverse impact to the environment or on close proximity to a public park, school, recreational area, spring, aquifer, water supply well, surface water supply intake, water treatment plant intake, potable water storage facility, sewage treatment plant, or other location of concern. A determination of potential adverse impact may arise from consideration of such factors as, but not limited to, proposed flow rate, production rate, industrial reclaimed water quality, nature of the groundwater, soils, or geology of the disposal area. In making a determination of potential adverse impacts, the executive director may also consider such other factors, as he deems appropriate.

(b) The following requirements apply to suspensions of authorizations.

(1) The suspension issued under this subchapter will include a statement that requires the executive director to provide written notice to a person stating that the executive director intends to suspend a person's authority to use reclaimed water under the authorization, including:

(A) a brief statement of the basis for this decision under this subsection;

(B) a statement by the executive director of whether the person shall immediately cease the use of industrial reclaimed water; and

(C) a deadline for obtaining authorization under Texas Water Code (TWC), Chapter 26.

(2) The executive director may require the person whose authorization to use reclaimed water is suspended to apply for and obtain an individual permit.

(3) The executive director may suspend authorization to use industrial reclaimed water under an existing authorization issued under this subchapter for the following reasons:

(A) the quantity of industrial reclaimed water used, the type of waste or reclaimed water, or the type of operation does not comply with this chapter;

(B) the use, irrigation, or discharge causes a violation of the Texas Surface Water Quality Standards; or

(C) the wastewater used as industrial reclaimed water contains pollutants that cause or contribute to significant adverse effects on water quality. In making this determination, the executive director shall consider the following factors:

(i) the location of the end use for industrial reclaimed water;

(ii) the volume of wastewater used as industrial reclaimed water;

(iii) the quantity and nature of pollutants contained in the wastewater used as industrial reclaimed water;

(iv) whether the use of industrial reclaimed water would adversely affect groundwater quality, inconsistent with the policy specified in TWC, §26.401; and

(v) other factors relating to the protection of water quality.

(c) The compliance history of the producer, provider, and user will be evaluated prior to approval of any Level II authorization under this subchapter. Authorization may be suspended or denied or additional requirements may be established based on the evaluation of compliance history as outlined in Chapter 60 of this title (relating to Compliance History).

§210.60. Fees.

Each application submitted to the executive director for Level II authorization under this subchapter shall include a fee of $100.

Adopted November 20, 2002 Effective December 11, 2002

SUBCHAPTER F: USE OF GRAYWATER AND ALTERNATIVE ONSITE WATER
§§210.81 - 210.85
Effective December 29, 2016

§210.81. Applicability.

(a) This subchapter applies to graywater and alternative onsite water generated and used at a private residence, commercial facility, industrial facility, institution, or agriculture facility regardless of the disposal method for other wastewater.

(b) This subchapter does not apply to reclaimed water which is regulated by Subchapters A - E of this chapter (relating to General Provisions; General Requirements for the Production, Conveyance, and Use of Reclaimed Water; Quality Criteria and Specific Uses for Reclaimed Water; Alternative and Pre-Existing Reclaimed Water Systems; and Special Requirements for Use of Industrial Reclaimed Water).

(c) This subchapter does not regulate the design, construction, or operation of on-site sewage facilities (OSSFs) but instead regulates the design, construction, and operation of alternative water reuse systems, combined reuse systems, and graywater reuse systems that may be located at a site that uses an OSSF. The design, construction, and operation of OSSFs are regulated by Chapter 285 of this title (relating to On-Site Sewage Facilities).

(d) An existing graywater system shall comply with the requirements of this subchapter as they existed on the date installation was completed. The previous version of this subchapter is continued in effect for this purpose.

(e) This subchapter does not authorize the diversion or impoundment of state water, as defined in Chapter 297 of this title (relating to Water Rights, Substantive).

Adopted December 7, 2016 Effective December 29, 2016

§210.82. Definitions and General Requirements.

(a) Definitions. For the purposes of this subchapter, the following terms have the following meanings.

(1) Alternative onsite water--rainwater, air-conditioner condensate, foundation drain water, stormwater, swimming pool backwash and drain water, or reverse osmosis reject water. Cooling tower blowdown is regulated by Subchapter E

of this chapter (relating to Special Requirements for Use of Industrial Reclaimed Water); therefore, for the purposes of this subchapter, all references to alternative onsite water do not include cooling tower blowdown. Reverse osmosis reject water generated at industrial facilities, commercial facilities, and institutions is regulated by Subchapter E of this chapter; therefore, for the purposes of this subchapter, all references to alternative onsite water do not include reverse osmosis reject water generated at industrial facilities, commercial facilities, and institutions. Reverse osmosis reject water generated at private residences and agriculture facilities may be used in accordance with this subchapter.

(2) Alternative water reuse system--a system designed and constructed to store and distribute one or more sources of alternative onsite water. An alternative water reuse system shall not contain, store, or distribute any graywater.

(3) Combined reuse system--a system designed and constructed to store and distribute graywater and one or more sources of alternative onsite water.

(4) Graywater-- wastewater from showers, bathtubs, handwashing lavatories, sinks that are used for disposal of household or domestic products, sinks that are not used for food preparation or disposal, and clothes-washing machines. Graywater does not include wastewater from the washing of material, including diapers, soiled with human excreta or wastewater that has come into contact with toilet waste.

(5) Graywater reuse system--a system designed and constructed to store and distribute graywater only. A graywater reuse system shall not contain, store, or distribute any source of alternative onsite water.

(b) Alternative water reuse systems. The following requirements apply to alternative water reuse systems used at a private residence, industrial facility, commercial facility, institution, or agriculture facility.

(1) Water from an alternative water reuse system may be reused for beneficial purposes including but not limited to landscape irrigation, gardening, composting, foundation stabilization, and toilet and urinal flushing. An alternative water reuse system may store and use either a single source or a combination of sources of alternative onsite water, and in any volume.

(2) Reverse osmosis reject water generated at an industrial facility, commercial facility, or an institution is prohibited from being stored and used in an alternative water reuse system. Reverse osmosis reject water generated by an industrial facility, commercial facility, or an institution is regulated by Subchapter E of this chapter.

(3) Reuse of water from an alternative water reuse system does not require authorization from the commission if used in accordance with this subchapter. The property owner is responsible for ensuring that the alternative water reuse system is properly operated and maintained to comply with the requirements of this subchapter.

(4) Water from an alternative water reuse system must be applied at a rate that will not result in ponding or pooling, or cause runoff across the property lines or onto any paved surface.

(5) Water from an alternative water reuse system shall not be applied using a spray distribution system except in accordance with the following conditions.

(A) Water from the spray distribution system must be applied at times when people and pets are not actively using the distribution area.

(B) Water from the spray distribution system must not be applied during rainfall events, when the ground is frozen, or within 24 hours after one-half inch or more of rain.

(C) Water from the spray distribution system must be applied at a rate to prevent ponding, puddling, or runoff.

(D) Water from the spray distribution system must not be sprayed or allowed to drift off the property.

(E) The spray distribution system must not be connected to a potable or raw water irrigation system unless suitable backflow prevention is provided to protect the potable or raw water system.

(F) The spray distribution system must be inspected and repaired as needed to prevent discharges to water in the state or off the property.

(6) The storage and use of water from an alternative water reuse system must not create a nuisance, threaten human health, or damage the quality of surface water or groundwater.

(7) Swimming pool backwash and drain water cannot be used within five days of adding chemicals for shock or acid treatment.

(8) Water from an alternative water reuse system that is used for toilet or urinal flushing must meet the following requirements. Property owners may

refer to the regulatory guidance document that is required by the Texas Health and Safety Code, §341.039, for assistance in complying with these requirements.

(A) For residential toilet or urinal flushing, *Escherichia coli* (*E. coli)* must be less than 14 most probable number (MPN) or colony-forming units (CFU) per 100 milliliters for 30-day geometric mean and less than 240 MPN or CFU per 100 milliliters maximum single grab sample. For industrial, commercial, or agricultural toilet or urinal flushing, *E. coli* must be less than 2.2 MPN or CFU per 100 milliliters for 30-day geometric mean and less than 200 MPN or CFU per 100 milliliters maximum single grab sample.

(B) Total suspended solids must be less than 10.0 milligrams per liter for 30-day geometric mean and less than 30.0 milligrams per liter maximum single grab sample.

(C) All exposed piping and piping carrying alternative onsite water within a building must be either purple pipe or painted purple; all buried piping must be either manufactured in purple, painted purple, taped with purple metallic tape, or bagged in purple; and all exposed piping must be stenciled in yellow with a warning reading "NON-POTABLE WATER." An alternative water reuse system that stores only rainwater, commonly referred to as a rainwater harvesting system, and uses the water for potable purposes in accordance with §290.44 of this title (relating to Water Distribution) is exempt from this subparagraph.

(9) An alternative water reuse system cannot have a physical connection to an organized wastewater collection system or an on-site sewage facility (OSSF). When the system reaches capacity, it is allowed to overflow onto the ground only if the overflow is caused by inflow of rainwater or stormwater. Overflow under these conditions is exempt from the requirement of paragraph (4) of this subsection.

(10) An alternative water reuse system may be subject to backflow prevention requirements in §290.44 of this title to protect public water supply systems from cross-contamination.

(c) Graywater reuse systems and combined reuse systems. The following requirements apply to all graywater reuse systems and combined reuse systems.

(1) Construction of a graywater reuse system or a combined reuse system, including storage and distribution systems, must comply with this subchapter and any requirements of the local permitting authority.

(2) Water from a graywater reuse system or a combined reuse system must be applied at a rate that will not result in ponding or pooling and will not cause runoff across the property lines or onto any paved surface.

(3) The storage and use of water from a graywater reuse system or a combined reuse system must not create a nuisance, threaten human health, or damage the quality of surface water or groundwater.

(4) A graywater reuse system or combined reuse system may be subject to backflow prevention requirements in §290.44 of this title to protect public water supply systems from cross-contamination.

Adopted December 7, 2016 Effective December 29, 2016

§210.83. Residential Use of Graywater and Alternative Onsite Water.

(a) An authorization from the commission is not required for the residential use of graywater and alternative onsite water from a graywater reuse system or a combined reuse system when the total combined average is less than 400 gallons per day and the water is used in accordance with this subchapter. Unless directed by the executive director, an authorization from the commission is not required for the residential use of graywater and alternative onsite water from a graywater reuse system or a combined reuse system when the total combined average is greater than or equal to 400 gallons per day and the water is used in accordance with this subchapter.

(b) The graywater and alternative onsite water must originate from a private residence.

(c) Water from a graywater reuse system or a combined reuse system may only be used at the private residence for the following purposes:

(1) to minimize foundation movement and cracking;

(2) for gardening;

(3) for composting;

(4) for landscaping; or

(5) for toilet or urinal flushing.

(d) Graywater reuse systems and combined reuse systems are not authorized to overflow onto the ground under any circumstance.

(1) Graywater reuse systems must be designed and constructed so that the storage tank required by subsection (e) of this section overflows to an organized wastewater collection system or an on-site sewage facility (OSSF) unless prohibited by Chapter 285, Subchapter H of this title (relating to Disposal of Graywater). The graywater must enter the organized wastewater collection system or OSSF through either one air gap or two backflow valves or backflow preventers.

(2) Combined reuse systems must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system or an OSSF, unless prohibited by Chapter 285, Subchapter H of this title, prior to entering the storage tank required by subsection (e) of this section. Graywater must be diverted to the organized wastewater collection system or OSSF during periods of non-use of the system or if the storage tank required by subsection (e) of this section reaches 80% capacity. The graywater must enter the organized wastewater collection system or the OSSF through either one air gap or two backflow valves or backflow preventers.

(3) Combined reuse systems that store stormwater, rainwater, and/or foundation drain water must have an automatic shutoff system to stop the inflow of stormwater, rainwater, and foundation drain water into the combined reuse system. The automatic shutoff system must activate when the storage tank required by subsection (e) of this section reaches 80% capacity.

(e) Except as authorized by subsection (j) of this section, graywater reuse systems and combined reuse systems must store the water in tanks and the tanks must:

(1) be clearly labeled as non-potable water;

(2) restrict access, especially to children;

(3) eliminate habitat for mosquitoes and other vectors;

(4) be able to be cleaned; and

(5) meet the structural requirements of §210.25(i) of this title (relating to Special Design Criteria for Reclaimed Water Systems).

(f) Graywater reuse systems and combined reuse systems must use piping that meets the piping requirement of §210.25 of this title.

(g) Water from a graywater reuse system or a combined reuse system shall not be applied using a spray distribution system except in accordance with the following conditions.

(1) Water from the spray distribution system must meet the following limits: *Escherichia coli* (*E. coli*) must be less than 14 most probable number (MPN) or colony-forming units (CFU) per 100 milliliters for 30-day geometric mean and less than 240 MPN or CFU per 100 milliliters maximum single grab sample.

(2) Water from the spray distribution system must be applied at times when people and pets are not actively using the distribution area.

(3) Water from the spray distribution system must not be applied during rainfall events, when the ground is frozen, or within 24 hours after one-half inch or more of rain.

(4) Water from the spray distribution system must be applied at a rate to prevent ponding, puddling, or runoff.

(5) Water from the spray distribution system must not be sprayed or allowed to drift off property.

(6) The spray distribution system must not be connected to a potable or raw water irrigation system unless suitable backflow prevention is provided to protect the potable or raw water system.

(7) The spray distribution system must be inspected and repaired as needed to prevent discharges to water in the state or off property.

(h) The property owner is responsible for ensuring that the graywater reuse system or combined reuse system is properly operated and maintained to achieve the following requirements. Monitoring and recordkeeping for *E. coli* and total suspended solids is not required. Property owners may refer to the regulatory guidance document that is required by the Texas Health and Safety Code, §341.039, for assistance in complying with these requirements.

(1) Graywater and alternative onsite water shall be treated to remove debris such as lint, leaves, twigs, and branches prior to entering the storage tank by use of a 50 mesh screen.

(2) Swimming pool backwash and drain water cannot be used within five days after adding chemicals for shock or acid treatment.

(3) Water from a graywater reuse system or a combined reuse system that is used for toilet or urinal flushing must meet the following requirements.

(A) *E. coli* must be less than 14 MPN or CFU per 100 milliliters for 30-day geometric mean and less than 240 MPN or CFU per 100 milliliters maximum single grab sample.

(B) Total suspended solids must be less than 10.0 milligrams per liter for 30-day geometric mean and less than 30.0 milligrams per liter maximum single grab sample.

(C) All exposed piping and piping carrying graywater and/or alternative onsite water within a building must be either purple pipe or painted purple; all buried piping must be either manufactured in purple, painted purple, taped with purple metallic tape, or bagged in purple; and all exposed piping must be stenciled in yellow with a warning reading "NON-POTABLE WATER."

(i) Builders of private residences are encouraged to:

(1) install plumbing in new housing to collect graywater and alternative onsite water from all allowable sources, taking into consideration end-use requirements and maintaining sufficient blackwater waste flow; and

(2) design and install a subsurface distribution system around the foundation of new housing to minimize foundation movement or cracking.

(j) Property owners who have been disposing of wastewater from residential clothes-washing machines, otherwise known as laundry graywater, directly onto the ground prior to January 6, 2005, may continue disposing of laundry graywater under the following conditions.

(1) The disposal area must not create a nuisance or threaten human health.

(2) Surface ponding must not occur in the disposal area.

(3) The disposal area must support plant growth or be sodded with vegetative cover.

(4) The disposal area must have limited access and use by residents and pets.

(5) Laundry graywater that has been in contact with human or animal waste must not be disposed onto the ground surface.

(6) Laundry graywater must not be disposed onto an area where the soil is wet.

(7) A lint trap must be affixed to the end of the discharge line.

(8) The system has not been altered after January 6, 2005, has not created a nuisance, and does not discharge graywater from any source other than clothes-washing machines.

Adopted December 7, 2016 Effective December 29, 2016

§210.84. Industrial, Commercial, or Institutional Use of Graywater and Alternative Onsite Water.

(a) For the purposes of this section, alternative onsite water does not include reverse osmosis reject water, as this source of water is regulated by Subchapter E of this chapter (relating to Special Requirements for Use of Industrial Reclaimed Water).

(b) An authorization from the commission is not required for the use of graywater and alternative onsite water from a graywater reuse system or a combined reuse system at an industrial facility, commercial facility, or institution. Treatment required by this section does not require authorization from the commission.

(c) The graywater and alternative onsite water must be generated and used onsite.

(d) Graywater reuse systems and combined reuse systems are not authorized to overflow onto the ground under any circumstances.

(1) Graywater reuse systems must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system, on-site sewage facility (OSSF), authorized outfall in a wastewater discharge permit, or authorized disposal area in a Texas Land Application Permit (TLAP). The graywater must be diverted to the organized wastewater collection system, OSSF, authorized outfall in a wastewater discharge permit, or authorized disposal area in a TLAP during periods of non-use of the graywater reuse system or if the system reaches maximum capacity. The graywater must enter the organized wastewater system or OSSF through either one air gap or two backflow valves or backflow preventers.

(2) Combined reuse systems must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system, OSSF, authorized outfall in a wastewater discharge permit, or authorized disposal area in a TLAP prior to entering the combined reuse system. Graywater must be diverted to the organized wastewater collection system, OSSF, authorized outfall in a wastewater discharge permit, or authorized disposal area in a TLAP during periods of non-use of the system or if the combined reuse system reaches 80% capacity. The graywater must enter the organized wastewater collection system or the OSSF through either one air gap or two backflow valves or backflow preventers.

(3) Combined reuse systems that store stormwater, rainwater, and/or foundation drain water must have an automatic shutoff system to stop the inflow of stormwater, rainwater, and foundation drain water into the combined reuse system. The automatic shutoff system must activate when the combined reuse system reaches 80% capacity.

(e) Water from a graywater reuse system or a combined reuse system may be used onsite for the following activities.

(1) Process water. Water from a graywater reuse system or a combined reuse system that is used for process water must be treated to a standard that allows the water to be used in operational processes.

(2) Landscape maintenance. Water from a graywater reuse system or a combined reuse system that is used for landscape maintenance must meet the following limits.

(A) If the water will be applied in areas with public access, the water must meet the following limits:

(i) *Escherichia coli* (*E. coli*), 20 most probable number (MPN) or colony-forming units (CFU) per 100 milliliters (ml), 30-day geometric mean; or

(ii) *E. coli* (not to exceed), 75 MPN or CFU per 100 ml, single grab sample.

(B) If the water will be applied in areas with restricted access to the public, the water must meet the following limits:

(i) *E. coli*, 200 MPN or CFU per 100 ml, 30-day geometric mean; or

(ii) *E. coli* (not to exceed), 800 MPN or CFU per 100 ml, single grab sample.

(3) Dust control. Water from a graywater reuse system or a combined reuse system that is used for dust control must meet the *E. coli* limits in paragraph (2)(B) of this subsection.

(4) Toilet or urinal flushing. Water from a graywater reuse system or a combined reuse system that is used for toilet or urinal flushing must meet the following requirements.

(A) *E. coli* must be less than 2.2 MPN or CFU per 100 ml for 30-day geometric mean and less than 200 MPN or CFU per 100 ml maximum single grab sample.

(B) Total suspended solids must be less than 10.0 milligrams per liter for 30-day geometric mean and less than 30.0 milligrams per liter maximum single grab sample.

(C) All exposed piping and piping carrying graywater and/or alternative onsite water within a building must be either purple pipe or painted purple; all buried piping installed after January 6, 2005, must be either manufactured in purple, painted purple, taped with purple metallic tape, or bagged in purple; and all exposed piping must be stenciled in yellow with a warning reading "NON-POTABLE WATER."

(5) Other uses. Water from a graywater reuse system or a combined reuse system that is used for other similar activities must:

(A) meet the *E. coli* limits in paragraph (2)(A) of this subsection if used in a way that the public may come into contact with the water; or

(B) meet the *E. coli* limits in paragraph (2)(B) of this subsection if used in a way that the public will not come into contact with the water.

(f) Water from a graywater reuse system or a combined reuse system that is required to meet the *E. coli* limits in subsection (e) of this section must be monitored for *E. coli* at least monthly. These records must be maintained at the site and be readily available for inspection by the commission for a minimum of five years.

§210.85. Agricultural Use of Graywater and Alternative Onsite Water.

(a) An authorization from the commission is not required for the use of graywater and alternative onsite water from a graywater reuse system or a combined reuse system for agricultural purposes. Treatment required by this section does not require authorization from the commission.

(b) The graywater and alternative onsite water must be generated and used onsite.

(c) Graywater reuse systems and combined reuse systems are not authorized to overflow onto the ground under any circumstances.

(1) Graywater reuse systems must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system or on-site sewage facility (OSSF), unless prohibited by Chapter 285, Subchapter H of this title (relating to Disposal of Graywater). The graywater must be diverted during periods of non-use of the graywater reuse system or if the system reaches maximum capacity. The graywater must enter the organized wastewater collection system or OSSF through either one air gap or two backflow valves or backflow preventers.

(2) Combined reuse systems must be designed and constructed so that 100% of the graywater can be diverted to an organized wastewater collection system or OSSF, unless prohibited by Chapter 285, Subchapter H of this title prior to entering the combined reuse system. Graywater must be diverted to the organized wastewater collection system or OSSF during periods of non-use of the system or if the combined reuse system reaches 80% capacity. The graywater must enter the organized wastewater collection system or the OSSF through either one air gap or two backflow valves or backflow preventers.

(3) Combined reuse systems that store stormwater, rainwater, and/or foundation drain water must have an automatic shutoff system to stop the inflow of stormwater, rainwater, and foundation drain water into the combined reuse system. The automatic shutoff system must activate when the combined reuse system reaches 80% capacity.

(d) Water from a graywater reuse system or a combined reuse system may be used for the following activities.

(1) Process water. Water from a graywater reuse system or a combined reuse system that is used for irrigation and other agricultural purposes may be treated to a standard that allows the water to be used in operational processes.

(2) Landscape maintenance. Water from a graywater reuse system or a combined reuse system that is used for landscape maintenance must meet the following limits.

(A) If the water will be applied in areas with public access, the water must meet the following limits:

(i) *Escherichia coli* (*E. coli*), 20 most probable number (MPN) or colony-forming units (CFU) per 100 milliliters (ml), 30-day geometric mean; or

(ii) *E. coli* (not to exceed), 75 MPN or CFU per 100 ml, single grab sample.

(B) If the water will be applied in areas with restricted access to the public, the water must meet the following limits:

(i) *E. coli*, 200 MPN or CFU per 100 ml, 30-day geometric mean; or

(ii) *E. coli*, 800 MPN or CFU per 100 ml, single grab sample.

(3) Dust control. Water from a graywater reuse system or a combined reuse system that is used for dust control must meet the *E. coli* limits in paragraph (2)(B) of this subsection.

(4) Irrigation of fields. Water from a graywater reuse system or a combined reuse system that is used to irrigate fields where edible crops are grown or fields that are pastures for milking animals, the water must meet the *E. coli* limits in paragraph (2)(A) of this subsection. *E. coli* limits do not apply to graywater and alternative onsite water that is used to irrigate fields other than those where edible crops are grown or fields that are pastures for milking animals.

(5) Toilet or urinal flushing. Water from a graywater reuse system or a combined reuse system that is used for toilet or urinal flushing must meet the following requirements.

(A) *E. coli* must be less than 2.2 MPN or CFU per 100 ml for 30-day geometric mean and less than 200 MPN or CFU per 100 ml maximum single grab sample.

(B) Total suspended solids must be less than 10.0 milligrams per liter for 30-day geometric mean and less than 30.0 milligrams per liter maximum single grab sample.

(C) All exposed piping and piping carrying graywater and/or alternative onsite water within a building must be either purple pipe or painted purple; all buried piping must be either manufactured in purple, painted purple, taped with purple metallic tape, or bagged in purple; and all exposed piping must be stenciled in yellow with a warning reading "NON-POTABLE WATER."

(6) Other uses. Water from a graywater reuse system or a combined reuse system that is used for other similar activities must:

(A) meet the *E. coli* limits in paragraph (2)(A) of this subsection if used in a way that the public may come into contact with the water; or

(B) meet the *E. coli* limits in paragraph (2)(B) of this subsection if used in a way that the public will not come into contact with the water.

(e) Water from a graywater reuse system or a combined reuse system that is required to meet the *E. coli* limits in subsection (d) of this section must be monitored for *E. coli* at least monthly. These records must be maintained at the site and be readily available for inspection by the commission for a minimum period of five years.

Adopted December 7, 2016 Effective December 29, 2016