



City of Austin

Law Department

City Hall, 301 West 2nd Street, P.O. Box 1546
Austin, Texas 78767-1546
(512) 974-2268

Writer's Direct Line
512-974-2173

Writer's Fax Line
512-974-6490

March 14, 2016

Mr. Richard A. Hyde, P.E.
Executive Director
Texas Commission on Environmental Quality
P.O. Box 13087
Austin, Texas 78711-3087

Re: City of Austin Petition for Rulemaking

Dear Mr. Hyde,

Please find enclosed one original and seven copies of a Petition for Rulemaking (the "Petition") filed on behalf of the City of Austin (the "City") seeking to initiate rulemaking related to beneficial reuse of treated effluent. In addition to the Petition and its exhibits, please find enclosed a resolution of support for this Petition from the Barton Springs Edwards Aquifer Conservation District.

We respectfully request that this Petition be set for consideration and Commission action. We look forward to working with all concerned on this matter.

Please feel free to contact me at 512-974-2173 or Chris Herrington at 512-974-2840 if you have any questions or need any additional information.

Sincerely,

Patricia (Trish) L. Link
Assistant City Attorney

PETITION FOR RULEMAKING §
§
BY THE CITY OF AUSTIN, TEXAS § **BEFORE THE TEXAS COMMISSION**
§ **ON ENVIRONMENTAL QUALITY**
CONCERNING WASTEWATER §
PERMITS AND BENEFICIAL §
REUSE OF WATER §

ORIGINAL PETITION FOR RULEMAKING

TO THE HONORABLE COMMISSIONERS:

The City of Austin (“City”) respectfully requests the Texas Commission on Environmental Quality (“TCEQ” or “Commission”) initiate rulemaking to adopt new rules under 30 Texas Administrative Code Chapters 222 and 309 concerning the beneficial reuse of treated effluent. The City submits this petition, by and through its City Attorney, pursuant to Texas Government Code §2001.021 and Rule 30 Texas Administrative Code Section 20.15 and respectfully shows the following:

INTRODUCTION

Texas’ water supply needs are steadily increasing. In order to sustain its existing population in times of drought, the 2012 State Water Plan (“Water Plan”) estimates that Texas needs 3.6 million of acre-feet of water per year. *See* pg. 174 (Quick Facts). In 2060, the Water Plan estimates the need will increase an additional 8.3 million acre-feet of water per year. *See* pg. 176 (Table 6.1). The Water Plan warns that an inability to meet water supply needs in 2060 could generate annual economic losses of \$115.7 billion and the loss of more than a million jobs. *See* pg. 183. To address Texas’ increasing water supply needs, Texas needs to find alternative water supplies or to reduce demand on potable water. This petition provides an opportunity for

the Commission to adopt rules that will incentivize wastewater permittees and applicants to reuse treated wastewater, which can help Texas address its future water needs.

PETITIONER INFORMATION

The City, Petitioner, is a home-rule municipality located in Travis, Hays, and Williamson Counties. For purposes of this Petition, contact with the City can be made by directing correspondence to the following:

City of Austin
City of Austin Law Department
ATTN: Patricia L. Link
P. O. Box 1088
Austin, Texas 78767-1088
patricia.link@austintexas.gov
512-974-2173
512-974-6490 (facsimile)

City of Austin
City of Austin Watershed Department
ATTN: Chris Herrington, P.E.
P.O. Box 1088
Austin, Texas 78767-1088
chris.herrington@austintexas.gov
512-974-2840
512-974-2846 (facsimile)

Petitioner drafted the proposed rules with input from a diverse group of regional stakeholders, including representatives of State lawmakers and governmental agencies located in central Texas, wastewater treatment professionals, and environmental advocacy organizations. This Petition is supported by the Austin City Council. See Exhibit “A”, attached and incorporated by reference.

STATEMENT OF COMMISSION’S AUTHORITY

Texas Water Code Sections 5.102 and 5.103 authorize the Commission to adopt rules as necessary to carry out its powers and duties, which includes administration and implementation of the State’s water quality program. Consistent with its authority, the Commission regulates and issues permits related to discharge of pollutants into or adjacent to waters of the State. *See Texas*

Water Code Section 26.027; 30 T.A.C. Chapters 222 and 310. The proposed rules are consistent with this authority.

The Commission is required by Section 11.1271 of the Texas Water Code to adopt rules that suggest best management practices for achieving the highest practicable levels of water conservation and efficiency. Conservation includes practices, techniques, and technologies that make water use more efficient. Tex. Water Code §11.002(8). Pursuant to this responsibility, the Commission also authorizes the beneficial reuse of reclaimed water. 30 T.A.C. 210. The proposed rules are consistent with this authority.

EXPLANATION OF PROPOSED RULES

This Petition proposes rules that will amend 30 Tex. Admin. Code Chapters 222 and 309, which concern subsurface irrigation and land application of treated wastewater. The amendments will allow permittees and applicants to rely on the beneficial reuse of treated wastewater as an additional alternative means to dispose of a portion of its treated wastewater when calculating the size of effluent storage and the amount of land required for disposal of treated wastewater.

Specifically, an applicant or permittee would rely on “firm reclaimed water demand” to dispose of a portion of its total volume of treated wastewater.¹ “Firm reclaimed water demand” will be the minimum volume of reclaimed water that can be guaranteed to be beneficially reused over a specified period of time and includes reclaimed water utilized for indoor and outdoor purposes. The proposed rules allow a permittee or applicant to demonstrate firm reclaimed water demand through contracts for the reclaimed water, the applicant’s or permittee’s historical use of reclaimed water, or appropriate regulations that obligate the use of reclaimed water. An applicant or permittee will be required to provide the Executive Director with information that identifies

¹ To show the application of the proposed rules, the City’s Watershed Protection Department created a hypothetical water balance, which is attached and incorporated by reference as Exhibit “B”.

water users, types of use, and locations of use. Prior to construction or operation of the wastewater facility, the applicant or permittee will be required to obtain a beneficial reuse authorization, as described in 30 Texas Admin. Code Chapter 210.

The proposed rules do not modify the standards for the treatment of wastewater or otherwise modify water quality standards set by the Commission. Moreover, the proposed rules do not modify the requirements in 30 Tex. Admin. Code Chapter 210. Lastly, the proposed rules do not preclude an existing or new permittee from seeking a permit to discharge treated wastewater effluent.

The proposed rules are attached as Exhibits “C-1” and “C-2”; and are incorporated by reference. The proposed rules will amend existing sections of 30 Texas Admin. Code Chapters 222 and 309, and add new sections, subsections, and subparagraphs as described in the charts below.

CHAPTER 222	ACTION
30 TAC §222.5 (<i>Definitions</i>)	Defines “firm reclaimed water demand.”
30 TAC §222.6 (<i>Firm Reclaimed Water Demand</i>)	Adds a new section to Chapter.
30 TAC §222.43 (<i>Construction Notices to Regional Offices</i>)	Adds a new subsection.
30 TAC §222.75 (<i>Site Preparation Plan</i>)	Adds a new subsection.
30 TAC §222.121 (<i>Dispersal Zones</i>)	Adds a new subsection.
30 TAC §222.128 (<i>Reclaimed Water Dispersal Sites</i>)	Adds a new section to Chapter.
30 TAC §222.157 (<i>Soil Sampling</i>)	Adds a new subsection.

CHAPTER 309	ACTION
30 TAC §309.11 (<i>Definitions</i>)	Defines “firm reclaimed water demand.”
30 TAC §309.20(a)(1) (<i>Technical Report. Location</i>)	Adds a new subparagraph.
30 TAC §309.20(b)(3)(A) (<i>Hydraulic Application Rate</i>)	Amends and adds a new subsection.
30 TAC §309.20(b)(3)(B) (<i>Effluent Storage</i>)	Amends subparagraph.
30 TAC §309.21 (<i>Firm Reclaimed Water Demand</i>)	Adds a new section.
30 TAC §309.22 (<i>Reclaimed Water Dispersal Sites</i>)	Adds a new section.

PUBLIC POLICY BENEFITS OF PROPOSED RULES

The proposed rules align with the Commission's mission statement and guiding principles. The proposed rules protect natural resources consistent with sustainable economic development because the rules provide a method that will encourage conservation of raw water resources. The proposed rules also provide an alternative to direct discharge of wastewater that is not cost-prohibitive and allows flexibility for applicants and permittees without endangering environmental goals. Lastly, the proposed rules will have the effect of conforming the Commission's regulations to existing industry practices.

INJURY OR INEQUITY FOR FAILURE TO ADOPT THE PROPOSED RULES

Failure to adopt the proposed rules will continue an unsustainable practice of 100% redundancy with dedicated disposal fields and storage when wastewater applicants and permittees also utilize a beneficial reuse authorization. Current regulations that require an applicant to acquire or rely on disposal fields and storage create unnecessary burdens for applicants that seek to maximize beneficial reuse and unnecessarily increases costs for land application of treated wastewater. Moreover, existing practice acts as a disincentive to reuse precious and limited raw water supplies, which may have a catastrophic impact on the economic well-being of the State.

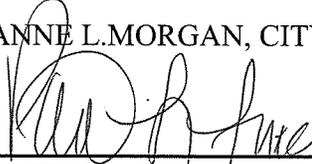
CONCLUSION

The Commission has the authority to adopt the proposed rules, which are consistent with state law, existing regulations, and industry practice. Because the proposed rules are designed to incentivize beneficial reuse of treated wastewater, the proposed rules are consistent with and implement a strategy the State has already determined is important to sustaining the State.

Accordingly, the City respectfully requests the Commission initiate rulemaking that is consistent with the rules proposed in this Petition.

RESPECTFULLY SUBMITTED,

ANNE L. MORGAN, CITY ATTORNEY



PATRICIA L. LINK

SBN 24041343

Assistant City Attorney

patricia.link@austintexas.gov

City of Austin Law Department

P.O. Box 1546

Austin, Texas 78767-1546

Telephone: (512) 974-2173

Facsimile: (512) 974-1311

ATTORNEYS FOR CITY OF AUSTIN

RESOLUTION NO. 20151217-054

WHEREAS, the stated mission of the Texas Commission on Environmental Quality (TCEQ) is to protect our state's public health and natural resources consistent with sustainable economic development; and

WHEREAS, the TCEQ is the regulatory agency that permits the land disposal of treated wastewater in Chapters 222 and 309 of Title 30 of the Texas Administrative Code and authorizes the beneficial reuse of treated wastewater in Chapter 210 of Title 30 of the Texas Administrative Code; and

WHEREAS, the purpose of beneficial reuse is to allow utilization of reclaimed wastewater for conservation of surface and ground water, and to ensure an adequate supply of water resources for present and future needs; and

WHEREAS, Central Texas is experiencing rapid population growth that exerts increasing demands on limited surface and ground water supplies; and

WHEREAS, many wastewater treatment facilities permitted for land application also utilize beneficial reuse of reclaimed wastewater in an effort to conserve water supplies, which results in only partial utilization of dedicated land disposal fields; and

WHEREAS, the Watershed Protection Department, in conjunction with other Central Texas governmental agencies and wastewater treatment professionals ("Stakeholders"), developed a draft rule to encourage beneficial reuse of treated wastewater; **NOW, THEREFORE**,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF AUSTIN:

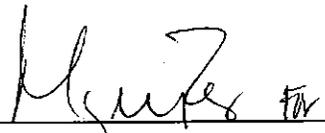
The City Council supports beneficial reuse of treated wastewater and the work of the Stakeholders.

BE IT FURTHER RESOLVED:

The City Council requests TCEQ initiate rulemaking consistent with the draft rule, developed by the Stakeholders, to modify land application of wastewater requirements to authorize reductions in disposal field size and effluent storage requirements when the permit holder utilizes beneficial reuse of treated wastewater.

ADOPTED: December 17, 2015

ATTEST:



Jannette S. Goodall
City Clerk

Exhibit B. Example application of proposed rule to a new land application permit

Introduction

The following is a hypothetical example intended to illustrate the intended application of the proposed rule to a new land application facility intending to treat 500,000 gallons per day (gpd) in the final phase with effluent disposal via surface irrigation. The scenario compares the potential impact on required effluent disposal area and effluent storage with and without the proposed rule.

Development Scenario-Wastewater Generation

The applicant proposes to provide wastewater service to 3 phases of a subdivision, with 500 LUE per phase (Table 1). The applicant assumes 245 gpd of wastewater per living unit equivalent (LUE), equivalent to 70 gallons per person per day and 3.5 people per LUE.

The facility must provide 367,500 gpd of treatment capacity. The applicant assumes that some infill densification may occur after initial build-out, and thus assumes an additional 132,500 gpd of wastewater as a safety factor to account for future development such that the total design average daily flow of the wastewater treatment facility is 500,000 gpd.

Table 1. Summary of wastewater to be treated by the proposed wastewater treatment facility (assumes 245 gallons of wastewater per LUE per day).

Subdivision Phase	Planned # LUE per phase	Total Wastewater Volume (gpd)
A	500	122,500
B	500	122,500
C	500	122,500
Additional future growth	n/a	132,500
		500,000

Development Scenario Demonstrating Reclaimed Water Demand

The applicant intends to seek a beneficial reuse authorization under 30 TAC 210 after receiving a wastewater effluent land application permit. The applicant has an agreement to provide reclaimed water for outdoor irrigation of an adjacent golf course. The adjacent golf course is not owned by the applicant, and the applicant does not wish to incorporate the golf course as a co-permittee for the wastewater disposal permit.

The golf course has been in operation for 5 years and has established a record of average and minimum monthly irrigation water demands (Table 2). The applicant provides legal documentation demonstrating that the golf course is obligated to accept at least the minimum monthly amount recorded over the past 5 year period (75,000 gallons per month or 2,420 gpd). The applicant has also provided a separate water balance demonstrating that the golf course is properly irrigating such that no unauthorized or over-saturated conditions occur. As required by the proposed rule, the volume of firm reclaimed water demand for outdoor irrigation purposes must be reduced by 20%.

Table 2. Irrigation Water Demands (in gallons) over a 5-year period for Adjacent Golf Course. Values were estimated from a City of Austin municipal golf-course irrigated with reclaimed water.

Month	Average	Minimum
Jan	6,287,400	186,500
Feb	2,824,000	119,500
Mar	4,581,300	75,000
Apr	8,356,100	1,891,500
May	13,570,800	1,830,500
Jun	11,641,500	1,135,000
Jul	18,521,600	8,921,500
Aug	23,399,800	18,639,000
Sep	12,823,650	6,101,500
Oct	14,630,230	5,347,000
Nov	8,793,120	465,500
Dec	6,102,750	4,330,500

The applicant also intends to provide reclaimed water for certain indoor uses to the various phases of the subdivision (Table 3). The subdivision is new construction and thus able to install dual water supply plumbing systems in the new residential homes. Disaggregated water demand studies from an adjacent municipality are utilized by the applicant to develop reclaimed water demand estimates.

Based on local studies, the applicant estimates 700 gallons per residential LUE per day of potable water demand. Toilet flushing is estimated to account on average for 18.4% of total residential potable water demand. Clothes washing is estimated to account on average for 17.9% of total residential potable water demand.

The applicant provides legal documentation showing that the planned phases of the subdivision will be required by contract to utilize the reclaimed water demand for the purposes listed (Table 3).

Table 3. Reclaimed water demand by indoor use type for planned phases of the subdivision. Values estimated from preliminary citywide disaggregated demand modeling by City of Austin.

Subdivision Phase	Indoor Reclaimed Water Use Type	Daily Reclaimed Water Demand (gpd)*
A	None	0
B	Toilet flushing	64,400
C	Toilet flushing	64,400
	Clothes washing	62,650
		191,450

*(gallons of potable water demand per LUE per day) * (% potable demand by use) * (# LUE)

Wastewater Treatment Facility Design Under Current Rule

The wastewater effluent hydraulic application rate and storage requirements were determined using current regulations following the methods outlined in 30 TAC 309.20(b)(3). Monthly values are shown, but the water balance was conducted on a daily time step using 2004 as the wettest year. Additional values for variables utilized in the water balance include:

CN = 84
 S = 1.905 in
 K = 0.85
 Ce = 1.5
 Cl = 10

The total final phase flow of 500,000 gpd of wastewater was proposed by the applicant to be irrigated by surface irrigation on 163 acres (Table 4) with a storage pond volume of 99 ac-ft and storage pond surface area of 6 ac (Table 5). Dividing the design flow (500,000 gpd) by the accumulated volume of effluent to be land applied (Column 10 of Table 4) and adjusting for unit conversion demonstrates a need for approximately 162.2 acres for effluent disposal, less than the 163 acres proposed by the applicant.

Over the annual analysis, the maximum accumulated storage volume on any individual day was determined to be 7.16 in/irrigated acre. Multiplying by the acreage irrigated and adjusting for unit conversion demonstrates a need for approximately 97.2 ac-ft of storage, less than the 99 ac-ft of storage proposed by the applicant.

Table 4. Water balance under existing regulations (all units are inches per acre irrigated).

Month	Avg. Precip.	Avg. Runoff	Avg. Infiltrated Rainfall (2)-(3)	Evapo-transp.	Required Leaching	Total Water Needs (5)+(6)	Effluent Needed in Root Zone (7)-(4)	Reservoir Surface Evaporation	Effluent to be Applied to Land (8)/K	Consump. from Reservoir (9)+(10)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Jan	2.07	0.185	1.885	2.56	0.39	2.95	2.62	0.09	2.17	2.26
Feb	2.18	0.016	2.164	3.15	0.41	3.56	2.73	0.11	1.86	1.98
Mar	2.38	0.156	2.224	4.42	0.63	5.05	4.20	0.16	3.70	3.86
Apr	2.02	0.009	2.011	4.97	0.66	5.63	4.40	0.18	3.44	3.62
May	4.70	0.958	3.742	5.6	0.80	6.40	5.32	0.20	3.81	4.01
Jun	4.51	0.348	4.162	6.77	0.82	7.59	5.47	0.24	4.25	4.49
Jul	1.66	0.167	1.493	7.46	1.23	8.69	8.18	0.26	5.63	5.90
Aug	2.56	0.251	2.309	6.99	1.05	8.04	6.97	0.25	5.70	5.95
Sep	2.68	0.821	1.859	5.41	0.86	6.27	5.70	0.19	4.71	4.90
Oct	4.07	1.057	3.013	4.42	0.62	5.04	4.14	0.16	2.95	3.11
Nov	3.41	0.431	2.979	3.15	0.38	3.53	2.56	0.11	1.60	1.71
Dec	2.58	0.698	1.882	2.56	0.41	2.97	2.72	0.09	1.60	1.69
Total	34.82	5.098	29.722	57.46	8.25	65.71	55.01	2.03	41.45	43.48

Table 5. Storage volume requirement calculations under current regulations.

Month	Effluent Recvd for Application or Storage	Rainfall Worst Year in Past 25 Years	Runoff Worst Year in Past 25 Years	Infiltrated Rainfall (14)-(15)	Available Water (13)+(16)	Net 25 Year Low Evaporation from Reserv. Surf.	Storage	Accumulated Storage	Maximum Daily Accumulated Storage
(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
Jan	3.49	2.56	0.34	2.22	5.71	0.06	2.64	5.26	5.05
Feb	3.27	5.38	0.72	4.66	7.93	0.06	3.27	6.72	6.45
Mar	3.49	1.96	0.08	1.88	5.37	0.11	-0.28	6.46	7.16
Apr	3.38	2.89	0.06	2.83	6.20	0.13	0.01	6.44	6.66
May	3.49	2.44	0.17	2.27	5.77	0.14	-1.43	5.97	6.71
Jun	3.38	14.18	4.85	9.33	12.71	0.18	3.26	5.59	6.66
Jul	3.49	3.20	0.93	2.27	5.77	0.22	-4.21	3.32	5.92
Aug	3.49	1.25	0.01	1.24	4.73	0.22	-4.65	1.29	2.54
Sep	3.38	1.17	0.12	1.05	4.43	0.17	-2.86	0.00	1.42
Oct	3.49	6.76	2.67	4.09	7.59	0.13	2.31	0.25	0.93
Nov	3.38	9.91	3.53	6.38	9.76	0.09	3.35	2.01	1.93
Dec	3.49	0.20	0.00	0.20	3.69	0.06	0.24	3.91	3.79

Total 41.23 51.90 13.47 38.43 79.66 1.57

Wastewater Treatment Facility Design Under Proposed Rule

The wastewater effluent hydraulic application rate and storage requirement calculations were repeated using the methodology of the proposed rule. The total volume of wastewater effluent was reduced by the firm reclaimed water demand prior to populating the hydraulic application rate and storage calculation tables.

Firm reclaimed water demand is the minimum monthly amount of outdoor irrigation on the golf course (75,000 gallons per month or 2,420 gpd less 20% as shown in Table 2), plus the total amount of reclaimed water that is to be utilized indoors (191,400 gallons per day as shown in Table 3). Thus, the total volume of wastewater effluent used in the revised hydraulic application rate and storage calculations is reduced to 306,664 gpd. With the credit for firm reclaimed water demand, the applicant now proposes to irrigate 100 acres and provide 60 ac-ft of storage with a surface area of 3.5 ac.

Dividing the reduced design flow (306,664 gpd) by the accumulated volume of effluent to be land applied (Column 10 of Table 4) and adjusting for unit conversion demonstrates a need for approximately 99.46 acres for effluent disposal, or less than the 100 acres proposed by the applicant. Multiplying the maximum daily accumulated storage (Table 5) by the acreage irrigated and adjusting for unit conversion demonstrates a need for approximately 59.7 ac-ft of storage, or less than the 60 ac-ft proposed by the applicant.

Conclusion

By taking advantage of firm reclaimed water demand, the applicant is able to reduce the required area for dedicated effluent disposal and the required effluent storage volumes by approximately 39% (Table 6) which would not have been possible under current regulations which require 100% redundancy for all reclaimed water use. This reduction would potentially be a substantial cost savings by avoiding costs associated with more land acquisition, installation of more effluent irrigation infrastructure, and construction of a larger effluent storage facility. Because the reclaimed water demand is firm as established by engineering analysis and supported by legal obligations, there is minimal risk of an unauthorized discharge. Additionally, the applicant is effectively requiring the conservation of more than 193,336 gpd of potable water.

Table 6. Summary of Effluent Disposal Field Size and Storage Requirements under Current and Proposed Regulations.

Scenario	Required Effluent Disposal Area (ac)	Required Effluent Storage (ac-ft)
Current regulation, no reduction for firm reclaimed water demand	163	99
Proposed regulations, with reduction for firm reclaimed water demand	100	60

PROPOSED RULE CHANGES 30 T.A.C CHAPTER 222

30 TAC §222.5 Definitions.

Firm reclaimed water demand means the minimum volume of reclaimed water that can be guaranteed to be beneficially reused over a specified time and includes reclaimed water used for indoor and outdoor purposes.

30 TAC §222.6 Firm Reclaimed Water Demand.

- (a) An applicant establishes that reclaimed water demand is firm when the applicant:
 - (1) demonstrates to the satisfaction of the executive director that it is able to transfer a specific volume of reclaimed water on a periodic basis; or
 - (2) demonstrates a specific amount of reclaimed water use by the applicant.
- (b) An applicant may demonstrate its ability to transfer reclaimed water on a periodic basis when it requires a user to accept a specific amount of reclaimed water by contract or by appropriate regulation.
- (c) Applicant must provide the executive director with a list of users, type of use, and areas that receive firm reclaimed water demand. Areas receiving firm reclaimed water demand for outdoor irrigation purposes must be shown on a map that identifies the buffer zones in compliance with 30 TAC 222.81 (*Buffer Zone Requirements*). If the users or areas change, the applicant is required to provide an updated list within 30 days. A change in user or area is not an amendment to the permit.
- (d) Firm reclaimed water demand include the uses described in 30 TAC §210.32 (*Specific Uses of Reclaimed Water*).
- (e) Reclaimed water dispersal sites must meet the standards in 30 TAC §222.128 (*Reclaimed Water Dispersal Sites*).
- (f) An applicant cannot rely on a transfer of reclaimed water to a user if the user has been found substantially noncompliant, as described in 30 TAC §70.51 (*Mandatory Enforcement Hearings*), within the last five years.
- (g) Applicant is responsible for recording the volume of firm reclaimed water demand that is transferred.
- (h) An applicant that relies on firm reclaimed water demand that will be used for outdoor purposes must demonstrate in the water balance that the firm reclaimed water will not result in an unauthorized discharge to waters of the State or a contamination of groundwater.
- (i) An applicant and, to the extent applicable, user must maintain its authorization under 30 TAC Chapter 210 (*Use of Reclaimed Water*) during the term of the permit.
- (j) A permittee that relies on firm reclaimed water demand must receive an authorization required by 30 TAC Chapter 210 (*Use of Reclaimed Water*) prior to initiating construction or, if already constructed, operating a subsurface area drip dispersal system.
- (k) In any phase of a permit, the volume of firm reclaimed water demand an applicant relies upon must be less than the total permitted volume of wastewater.

30 TAC §222.43 Construction Notices to Regional Offices.

- (e) The addition or modification of users or areas for firm reclaimed water demand does not constitute field layout or construction under this Section.

PROPOSED RULE CHANGES 30 T.A.C CHAPTER 222

30 TAC §222.75 Site Preparation Plan.

- (a) The applicant shall develop and submit, with the permit application, a site preparation plan that illustrates how site preparation will alleviate potential site-specific limitations and ensure suitability for the subsurface area drip dispersal system of wastewater. This plan must include the following if applicable:
- (b) A site preparation plan is not necessary for reclaimed water dispersal sites.

30 TAC §222.121 Dispersal Zones.

- (d) The permittee shall include the dispersal zone design in the engineering report, including the following elements:
 - (10) the total volume of firm reclaimed water demand less 20% if the reclaimed water will be land applied, unless the permittee, during the first term of the permit, owns, leases, or otherwise reserves land to apply the total volume of effluent less the volume of firm reclaimed water demand utilized for indoor uses.

30 TAC §222.128. Reclaimed Water Dispersal Sites.

- (a) An applicant that relies upon firm reclaimed water demand to reduce the land required for the subsurface area dispersal system required under this Chapter, shall ensure that indoor and outdoor dispersal sites for the reclaimed water have the appropriate authorization under 30 TAC Chapter 210 (*Use of Reclaimed Water*).
- (b) Outdoor reclaimed water dispersal sites described in subsection (a) must meet the distance standards set in 30 TAC §222.81 (*Buffer Zone Requirements*).

30 TAC §222.157 Soil Sampling.

- (j) The requirements in this section do not apply to a reclaimed water dispersal site described in 30 TAC §222.128 (*Reclaimed Water Dispersal Sites*).

PROPOSED RULE CHANGES TO 30 T.A.C. CHAPTER 309

30 TAC §309.11 Definitions.

Firm reclaimed water demand means the minimum volume of reclaimed water that can be guaranteed to be beneficially reused over a specified time and includes reclaimed water used for indoor and outdoor purposes.

30 TAC §309.20(a)(1) Technical Report. Location.

- (A) Site map. A copy of the United States Geological Survey topographic map of the area which indicates the exact boundaries of the disposal operation will be included in the technical report. A map from the 7 ½ minute series is required if it is published for the site area.
- (B) Site drawing. A scale drawing and legal description of all land which is to be a part of the disposal operation will be included in the technical report. The drawing will show the location of all existing and proposed facilities to include: buildings, waste disposal or treatment facilities, effluent storage and tail water control facilities, buffer zones, and water wells. This drawing should have an index tracts adjacent to be irrigated land shall be shown on the site drawing and identified by listing legal ownership.
- (C) For purposes of this subparagraph, the disposal operation does not include the land utilized for firm reclaimed water demand.

30 TAC §309.20(b)(3)(A) Hydraulic application rate.

- (1) A water balance study shall be provided as part of a detailed application rate analysis in order to determine the irrigation water requirement, including a leaching requirement if needed, for the crop system on the wastewater application areas. Except as otherwise provided in Subsection (2), the total volume of effluent to be land applied to dedicated disposal fields may be reduced by a maximum of 80% of the total volume of firm reclaimed water demand that will be used for outdoor purposes and the total volume of firm reclaimed water demand utilized for indoor purposes. The water balance study should generally follow the example development shown in Table 1 of this subparagraph. Precipitation inputs to the water balance shall utilize the average yearly rainfall and the monthly precipitation distribution based on past rainfall records. The consumptive use requirements (evapotranspiration losses) of the crop system shall be developed on a monthly basis. The method of determining the consumptive use requirement shall be documented as a part of the water balance study. A leaching requirement, calculated as shown in Table 1 of this subparagraph, shall be included in the water balance study when the total dissolved solids concentration of the effluent presents the potential for developing excessive soil salinity buildup due to the long term operation of the irrigation system.
- (2) An applicant, during the first term of the permit, that owns, leases, or otherwise reserves sufficient land to apply the total volume of effluent less the volume of firm reclaimed water demand utilized for indoor uses may reduce the volume of total effluent in the water balance study by the firm reclaimed water demand utilized for outdoor purposes.

PROPOSED RULE CHANGES TO 30 T.A.C. CHAPTER 309

30 TAC §309.20(b)(3)(B) Effluent storage. An effluent storage study shall be performed to determine the necessary storage requirements. The storage requirements shall be based on a design rainfall year with a return frequency of at least 25 years (the expected 25 year-one year rainfall, alternatively the highest annual rainfall during the last 25 years of record may be used) and a normal monthly distribution, the application rate and cycle, the effluent available on a monthly basis, and evaporation losses. Storage may be reduced based on the volume of firm reclaimed water demand. An example of an effluent storage study is shown in Table 3 of this subparagraph.

30 TAC §309.21 Firm Reclaimed Water Demand.

- (a) An applicant establishes that reclaimed water demand is firm when the applicant:
 - (1) demonstrates to the satisfaction of the executive director that a user will accept a specific volume of reclaimed water on a periodic basis; or
 - (2) demonstrates a specific amount of reclaimed water use by the applicant.
- (b) An applicant may demonstrate its ability to transfer reclaimed water on a periodic basis when it requires a user to accept a specific amount of reclaimed water by contract or by appropriate regulation.
- (c) Applicant must provide the executive director with a list of users, type of use, and areas that receive firm reclaimed water demand. Areas receiving firm reclaimed water demand for outdoor irrigation purposes must be shown on a map that also identifies the buffer zones in compliance with 30 TAC 309.22 (*Reclaimed Water Dispersal Sites*). If the users or areas change, the applicant is required to provide an updated list within 30 days. A change in user or area is not an amendment to the permit.
- (d) Firm reclaimed water demand includes the uses described in 30 TAC §210.32 (*Specific Uses of Reclaimed Water*).
- (e) Reclaimed water dispersal sites must meet the standards in 30 TAC §309.22 (*Reclaimed Water Dispersal Sites*).
- (f) An applicant cannot rely on a transfer of reclaimed water to a user if the user has been found substantially noncompliant, as described in 30 TAC §70.51 (*Mandatory Enforcement Hearings*), within the last five years.
- (g) Applicant is responsible for recording the volume of firm reclaimed water demand that is transferred.
- (h) An applicant that relies on firm reclaimed water demand that will be used for outdoor purposes must demonstrate in a water balance that the firm reclaimed water demand will not result in an unauthorized discharge to waters of the State or a contamination of groundwater.
- (i) An applicant and, to the extent applicable, user must maintain its authorization under 30 TAC Chapter 210 (*Use of Reclaimed Water*) during the term of the permit.
- (j) A permittee that relies on firm reclaimed water demand must receive an authorization required by 30 TAC Chapter 210 (*Use of Reclaimed Water*) prior to initiating construction or, if already constructed, operating a wastewater treatment plant.
- (k) In any phase of a permit, the volume of firm reclaimed water demand an applicant relies upon must be less than the total permitted volume of wastewater.

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30 TAC §309.22 Reclaimed Water Dispersal Sites.

- (a) An applicant that relies upon firm reclaimed water demand to reduce the required dedicated disposal fields or effluent storage required under this Chapter, shall ensure that indoor and outdoor dispersal sites for the reclaimed water have the appropriate authorization under 30 TAC Chapter 210 (*Use of Reclaimed Water*).
- (b) Outdoor reclaimed water dispersal sites must meet the distance standards set in 30 TAC §309.13(c)(1), (2), and (3) (*Unsuitable Site Characteristics*); and 30 TAC §222.81(a)(3) (*Buffer Zone Requirements*).