

The Texas Commission on Environmental Quality (commission or agency) proposes the amendment of §210.33.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULE

The executive director and the United States Environmental Protection Agency (EPA) reached an agreement in July 2008 regarding bacterial effluent limitations and monitoring requirements in Texas Pollution Discharge Elimination System (TPDES) domestic wastewater permits. The agreement included the commission proposing rulemaking to establish requirements for bacteria limitations in all TPDES domestic wastewater permits.

Chapter 210, which authorizes the use of reclaimed wastewater, is being amended to allow the reclaimed water provider to select either the currently required fecal coliform or the new requirement for TPDES domestic permits, *Escherichia coli* (*E. coli*) as the indicator organism for disinfection. Both bacteria adequately demonstrate disinfection and are therefore protective of human health and the environment. This flexibility allows the provider to choose the more convenient, more cost-effective bacteria test for its facility. This rulemaking also amends 30 TAC Chapters 309 and 319 to include bacteria testing and set its frequency for TPDES domestic wastewater permits. A reclaimed water use authorization can only be issued to an entity that has a permitted method to dispose of the effluent if at any time there is not a beneficial use for it. The most typical scenario is for a domestic wastewater treatment facility to supply reclaimed water to a user for purposes of irrigation, dust suppression, cooling tower make-up water, or oil and gas drilling.

SECTION DISCUSSION

Proposed §210.33 requires the reclaimed water provider to demonstrate disinfection by measuring either fecal coliform or *E. coli* bacteria. This change is made so that reclaimed water providers that hold TPDES domestic wastewater permits with *E. coli* limits will not have to sample both *E. coli* and fecal coliform. It also allows providers with land application permits that do not require *E. coli* testing to continue to use fecal coliform testing. Both bacteria tests are adequate to demonstrate disinfection.

FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

Nina Chamness, Analyst, Strategic Planning and Assessment, has determined that, for the first five-year period the proposed rule is in effect, no significant fiscal implications are anticipated for the agency as a result of administration or enforcement of the proposed rule. The agency will have to modify operational practices and record data regarding bacteria present in reclaimed water, but the agency will use current resources to implement the proposed rule. Other units of state or local governments will not experience fiscal implications as a result of the proposed rule since they will be given the option to choose which bacterium to use to demonstrate the disinfection level of reclaimed water.

The proposed rulemaking will modify Chapters 210, 309, and 319 to implement an agreement between the agency and the EPA to include bacterial effluent limitations and monitoring requirements in TPDES domestic wastewater discharge permits. The proposed rulemaking for Chapter 210 addresses bacteria testing for reclaimed water use authorizations and allows the provider of reclaimed water to test for fecal coliform limits per current rules or for *E. coli* limits per the proposed rules in Chapter 309 and Chapter 319. This flexibility allows the reclaimed water provider to choose the bacteria test that is most convenient and cost effective for its facility, and the proposed rule for Chapter 210 should have no significant fiscal impact on the estimated 232 governmental entities and seven private businesses that

provide reclaimed water for beneficial reuse.

PUBLIC BENEFITS AND COSTS

Nina Chamness also determined that for each year of the first five years the proposed rule is in effect, the public benefit anticipated from the changes seen in the proposed rule will be a flexible, cost effective approach to providing a direct measure of the effectiveness of disinfection of reclaimed water.

The proposed rule is not expected to have a fiscal impact on businesses since the proposed rule contains no new requirements. The proposed rule offers reclaimed water providers a choice of which bacterium to sample and analyze to demonstrate disinfection of the reclaimed water. Staff estimates that there may be as many as seven private businesses that provide reclaimed water for beneficial reuse.

SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT

No adverse fiscal implications are anticipated for small or micro-businesses as a result of the proposed rule since the proposed rulemaking contains no new requirement but offers regulatory flexibility.

SMALL BUSINESS REGULATORY FLEXIBILITY ANALYSIS

The commission has reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rule does not have an adverse effect on small or micro-businesses and are required to protect the environment.

LOCAL EMPLOYMENT IMPACT STATEMENT

The commission has reviewed this proposed rulemaking and determined that a local employment impact

statement is not required because the proposed rule does not adversely affect a local economy in a material way for the first five years that the proposed rule is in effect.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed this rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking is not subject to §2001.0225, because it does not meet the criteria for a "major environmental rule" as identified in that statute. Major environmental rule is defined as a rule, the specific intent of which, is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. This proposal does not adversely affect, in a material way, the economy, a section of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The specific intent of this portion of the proposed rulemaking is to allow flexibility in the indicator bacteria used to demonstrate disinfection for reclaimed water usage. The proposed rulemaking modifies the state rules to allow a choice of indicator bacteria measured for demonstration of disinfection in reclaimed water authorizations.

Furthermore, the rulemaking is not subject to Texas Government Code, §2001.0225 because it does not meet any of the four applicable requirements specified in 2001.0225(a). Texas Government Code, §2001.0225(a) applies only to a state agency's adoption of a major environmental rule that: 1) exceeds a standard set by federal law, unless state law specifically requires the rule; 2) exceeds an express requirement of state law, unless federal law specifically requires the rule; 3) exceeds a requirement of a delegation agreement or contract between the state and an agency or representative of the federal

government to implement a state and federal program; or 4) is adopted solely under the general powers of the agency instead of under a specific state law.

The commission invites public comment regarding this draft regulatory impact analysis determination.

Written comments on the draft regulatory impact analysis determination may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

TAKINGS IMPACT ASSESSMENT

The commission evaluated the proposed rulemaking and performed an analysis of whether it constitutes a taking under Texas Government Code, Chapter 2007. The specific purpose of the proposed rulemaking is to modify the Texas Administrative Code to reflect bacteria effluent limitations and monitoring in all TPDES domestic wastewater permits, as mandated by the EPA. This rulemaking substantially advances that stated purpose by modifying 30 TAC §§210.33, 309.3, 319.9, and 319.10.

Promulgation and enforcement of the proposed rule will not be a statutory or constitutional taking of private real property. Specifically, the proposed rulemaking does not apply to or affect any landowner's rights in private real property because it does not burden (constitutionally), restrict, or limit any landowner's right to real property or reduce any property value by 25% or more beyond that which would otherwise exist in the absence of the regulations. These actions will not affect private real property.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed the proposed rulemaking and found that the proposal is subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act, Texas Natural

Resources Code, §§33.201 *et seq.*, and therefore must be consistent with all applicable CMP goals and policies. The commission conducted a consistency determination for the proposed rule in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22 and found the proposed rulemaking is consistent with the applicable CMP goals and policies.

CMP goals applicable to the proposed rule includes the protection, preservation, restoration, and enhancement of the diversity, quality, quantity, functions, and values of coastal natural resource areas and ensure sound management of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone.

CMP policies applicable to the proposed rule includes 31 TAC §501.21(b)(1) and (2), which state that discharges shall comply with water quality-based effluent limits and that discharges that increase pollutant loadings to coastal waters shall not impair designated uses of coastal waters and shall not significantly degrade coastal water quality unless necessary for important economic or social development.

This rulemaking would adopt bacteria limits for all domestic wastewater facilities that discharge into waters in the state. By adopting bacteria limits, there will be a more direct and possibly more accurate measure of the level of disinfection achieved in domestic effluent discharged to both fresh and salt water in the areas of concern to the CMP.

Promulgation and enforcement of this rulemaking will not violate or exceed any standards identified in the applicable CMP goals and policies because the proposed rule is consistent with those CMP goals and

policies and because the rule does not create or have a direct or significant adverse effect on any coastal natural resource areas.

Written comments on the consistency of this rulemaking may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

ANNOUNCEMENT OF HEARING

The commission will hold a public hearing on this proposal in Austin on June 30, 2009, at 10:00 a.m. in Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Michael Parrish, Office of Legal Services at (512) 239-2548. Requests should be made as far in advance as possible.

SUBMITTAL OF COMMENTS

Written comments may be submitted to Michael Parrish, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: <http://www5.tceq.state.tx.us/rules/ecomments/>. File size restrictions may apply to comments being submitted via the eComments system. All comments

should reference Rule Project Number 2009-005-309-PR. The comment period closes July 6, 2009.

Copies of the proposed rulemaking can be obtained from the commission's Web site at

http://www.tceq.state.tx.us/nav/rules/propose_adopt.html. For further information, please contact Sherry

Smith, Water Quality Division, (512) 239-0571.

SUBCHAPTER C: QUALITY CRITERIA AND SPECIFIC USES FOR RECLAIMED WATER

§210.33

STATUTORY AUTHORITY

The amendment is proposed under the Texas Water Code (TWC), §5.013, which establishes the general jurisdiction of the commission. TWC, §5.102, which provides the commission with the authority to carry out its duties and general powers under its jurisdictional authority provided by TWC. TWC, §5.103, which requires the commission to adopt any rule necessary to carry out its powers and duties under the code and other laws of the state. TWC, §5.104, which states that the commission, by rule, will develop memoranda of understanding necessary to clarify and provide for its respective duties, responsibilities, or functions on any matter under the jurisdiction of the commission that is not expressly assigned to the commission. TWC, §5.105, which authorizes the commission to adopt rules and policies necessary to carry out its responsibilities as provided by the TWC. TWC, §5.120, which requires the commission to "administer the law so as to promote the judicious use and maximum conservation and protection" of the environment and natural resources of the state. TWC, §26.011, which provides the commission with the authority to establish the level of quality to be maintained in, and to control the quality of, the water in the state. TWC, §26.013, which authorizes the executive director to conduct or have conducted any research and investigations it considers advisable and necessary for the discharge of the duties under Chapter 26 of the TWC. TWC, §26.027, which authorizes the TCEQ to issue permits for the discharge of waste or pollutants into or adjacent to water in the state.

This proposed amendment implements TWC, §§5.013, 5.102, 5.103, 5.104, 5.105, 5.120, 26.011, 26.013, 26.027, 26.034, and 26.041.

§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)

[Figure 1: 30 TAC §210.33(1)]

BOD ₅ or CBOD ₅	5 mg/l
Turbidity	3 NTU
Fecal coliform <u>or</u> <i>E. coli</i>	20 CFU/100 ml*
Fecal coliform <u>or</u> <i>E. coli</i> (not to exceed)	75 CFU/100 ml**

* geometric mean

* 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 2: 30 TAC §210.33(2)(A)

[Figure 2: 30 TAC §210.33(2)(A)]

BOD ₅	20 mg/l
or CBOD ₅	15 mg/l
Fecal coliform <u>or E. coli</u>	200 CFU/100 ml*
Fecal coliform <u>or E. coli</u> (not to exceed)	800 CFU/100 ml**
* geometric mean	
** single grab sample	

(B) for a pond system:

Figure 3: 30 TAC §210.33(2)(B)

[Figure 3: 30 TAC §210.33(2)(B)]

BOD ₅	30 mg/l
Fecal coliform <u>or E. coli</u>	200 CFU/100 ml*
Fecal coliform <u>or E. coli</u> (not to exceed)	800 CFU/100 ml**
* geometric mean	
** single grab sample	

The Texas Commission on Environmental Quality (commission or TCEQ) proposes the amendment of §309.3.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULE

The TCEQ typically includes chlorine exposure time and residual concentration requirements as the bacteria control mechanism for disinfection by chlorination in Texas Pollutant Discharge Elimination System (TPDES) domestic discharge permits. Starting in February 2007, the United States Environmental Protection Agency (EPA) took a new position that bacteria limits are required. This resulted in the EPA objecting to a subset of the commission's draft permits. As a result, the commission could not issue approximately 100 permits during this time. The executive director and EPA reached an agreement in July 2008 regarding bacteria effluent limitations and monitoring requirements in TPDES domestic wastewater permits. The agreement included an interim approach to require bacteria limitations and/or monitoring for selected facilities that met certain criteria for discharges to bacteria impaired water bodies. The agreement also included a long term approach in which the commission would propose rulemaking to establish requirements for bacteria limitations in all TPDES domestic wastewater permits. Conditions in the agreement stated that an adopted rule must be effective by December 31, 2009, and all TPDES domestic wastewater draft permits for which Notice of Application and Preliminary Decision is published on or after January 1, 2010 will have the new requirements as part of the permit language or EPA objections would begin again. The purpose of this rulemaking is to satisfy the agreement with the EPA.

The commission is proposing the contact recreation criterion in the Texas Surface Water Quality Standards as the bacteria limit for domestic TPDES permits. The Texas Surface Water Quality Standards program has determined that the contact recreation criterion is protective of both human health and the environment. It is also readily achievable with current technology.

SECTION DISCUSSION

The commission proposes administrative changes throughout this rulemaking to conform to Texas Register and agency guidelines. These changes include updating cross-references.

Proposed §309.3(g)(2) removes the last sentence in the paragraph that applies to renewal permits for wastewater systems constructed prior to October 8, 1990. There are no longer any active permits issued prior to this date that have not been renewed. The statement is being removed to simplify the rule.

Proposed §309.3(g)(3) replaces the fecal coliform limit with the *Escherichia coli* (*E. coli*) or *Enterococci* bacteria limitation set by §309.3(h) or (i) if applying for an alternative method of disinfection. The requirement was changed to be consistent with other bacteria requirements in this section.

Proposed §309.3(g)(4) allows a permittee to choose to test for *E. coli* or fecal coliform testing for effluent that is land applied through a subsurface area drip dispersal system in an area that has the potential for human contact. This change was made to allow flexibility in testing procedures. Both bacteria tests indicate the safety level of water for human contact. The permittee may choose the test that is more convenient or more cost effective. Subsurface area drip dispersal systems are authorized by a state-only permit and are not subject to the TPDES program, and therefore, not subject to the agreement with EPA.

Proposed §309.3(h) describes bacteria effluent limitations for domestic TPDES permits.

Proposed §309.3(h)(1) lists the bacteria required for fresh water discharges and salt water discharges. The Texas Surface Water Quality Standards and the agreement with EPA require *E. coli* testing for fresh

water and *Enterococci* testing for salt water.

Proposed §309.3(h)(2) sets the monthly average bacteria limitation at the geometric mean of the contact recreation standard. The current geometric mean for contact recreation is 126 colony forming units (cfu) per 100 milliliters (ml) for *E. coli* bacteria in fresh water and 35 cfu/100 ml for *Enterococci* in salt water. The Chief Engineer's Office is currently evaluating a change to the fresh water standard. If a change is adopted, staff will use the new the *E. coli* criterion for the most stringent contact recreation category for the bacteria limits in TPDES domestic permits issued, amended, or renewed after the date the new standards are adopted.

Proposed §309.3(h)(3) sets the maximum single grab sample bacteria limitation as the single grab sample for the contact recreation standard. Currently, the single grab sample criterion is 394 cfu/100 ml for *E. coli* in fresh water and 89 cfu/100 ml for *Enterococci* in salt water. The levels contemplated for the amended Water Quality Standards would change the grab sample criteria to 399 cfu/100 ml for *E. coli* and 104 cfu/100 ml for *Enterococci* for primary contact recreation, the most stringent contact recreation criteria. If changes are adopted, staff will use the new criterion for the most stringent contact recreation category for the bacteria limits in TPDES domestic permits issued, amended, or renewed after the date the new standards are adopted.

Proposed §309.3(i) is the former §309.3(h) with amendments. The subsection was relettered to allow for the insertion of the bacteria limits subsection. It allows the executive director to assign a more stringent parameter limit if necessary to protect human health or water quality. The bacteria limit was included in the parameters that can be adjusted by the executive director. Protection of human health was also added, consistent with the commission's mission and other regulations. The list of subsections to which it applies

was changed from (a) - (g) to (a) - (h) to include the new bacteria limitations subsection.

FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

Nina Chamness, Analyst, Strategic Planning and Assessment, has determined that, for the first five-year period the proposed rule is in effect, no significant fiscal implications are anticipated for the agency as a result of administration or enforcement of the proposed rule. The agency will have to modify operational practices and record data regarding bacteria present in domestic wastewater discharges but will use current resources to implement the proposed rule. Other units of state or local governments will experience fiscal implications as a result of the proposed rule since they will be required to test for bacteria present in domestic wastewater discharges. However, any fiscal implications to other units of state or local governments are not expected to be significant.

The proposed rulemaking will modify 30 TAC Chapters 210, 309, and 319 to implement an agreement between the executive director and the EPA to include bacteria effluent limitations and monitoring requirements in TPDES domestic wastewater discharge permits. The state previously controlled for bacteria in most TPDES domestic permits by requiring specific chlorine exposure times and residual chlorine concentrations. The EPA objected to TCEQ permits for the lack of bacteria limits in certain permits in February 2007, and the agency, through an interim agreement, began to require bacteria limitations and monitoring for selected facilities in order to issue TPDES permits to those facilities in July 2008. To retain EPA delegation of the TPDES permit program, the commission must establish bacteria criteria in its rules.

This proposed rulemaking will establish requirements for bacteria limitations in all TPDES domestic wastewater permits for which Notice of Application and Preliminary Decision is published on or after

January 1, 2010. In the proposed rule for Chapter 309, bacteria limits are added to TPDES domestic wastewater permits. In proposed rule for Chapter 319, frequency of testing for bacteria is specified. In the proposed rule for Chapter 210, flexibility is given to allow reclaimed water providers to choose the most economical bacteria test (either *E. coli* or fecal coliform bacteria) to verify disinfection. This fiscal note discusses the fiscal implications of proposed rule in Chapter 309, and fiscal implications for the proposed rule changes in Chapters 319 and 210 are discussed in separate, but related fiscal notes.

The agency estimates that there are 2,011 TPDES domestic facilities statewide. An estimated 1,395 of these are governmental entities that include state agencies, municipalities, counties, river authorities, and utility districts. The agency issues or renews TPDES domestic permits for a five-year period, and approximately 20% of these permits, or 402 statewide, are renewed annually. Of the 402 permits renewed annually, approximately 279 will be issued to governmental entities each year and 123 will be issued to private facilities.

The proposed rule for Chapter 309 uses the most stringent contact recreation criterion in the Texas Surface Water Quality Standards as the bacteria limit for domestic TPDES permits and replace the fecal coliform limit with limits for *E. coli* for fresh water discharges and *Enterococci* for salt water discharges. If effluent is land applied through a subsurface or drip dispersal system, facilities can choose to test for either *E. coli* or fecal coliform, depending on which is the more convenient or cost effective to test.

Governmental entities will see testing costs increase because the proposed rule requires bacteria testing not previously required. The impact of cost increases depends on many factors including frequency of testing required by proposed rule in Chapter 319, whether or not an outside contractor is utilized to obtain the bacteria count, the size of the wastewater system, and whether or not bacteria measurement costs can

be recouped through increased user fees. However, the proposed rule is not expected to have a significant fiscal impact on governmental entities because of the testing choices available to comply with the rule requirements.

Testing for bacteria also involves sampling costs, transportation costs, and staff training costs. These costs vary greatly among both contractors and entities that choose to verify bacteria limits in house. The fiscal impact of these costs will depend on the unique operating environment of each entity and methods chosen to train staff, obtain samples, and transport samples for laboratory analysis.

Total estimated annual average costs for laboratory analysis for *E. coli* if done by a contract laboratory can be found in the following table, which shows the relationship between testing frequency proposed in Chapter 319 and effluent limitations proposed in Chapter 309. Estimated average costs for laboratory analysis for *E. coli* is approximately \$51.50 per test. Ultra violet (UV) or other chemical systems are currently required to test for fecal coliform bacteria in effluent (\$41.20 per test), and the table shows the increase in laboratory costs for those systems.

	Tests/Year	Cost/Year Contract Lab	Tests/Year	Cost/Year Contract Lab	Tests/Year	Cost/Year Contract Lab
Flow (mgd)	Chlorine Systems	E. coli test \$51.50 (average cost)	UV Systems & Other Chemical Systems	Cost Increase for E. coli test \$51.50 - \$41.20 (average cost)	Natural Systems	E. coli test \$51.50 (average cost)
>10	260	\$13,390.00	365	\$3,759.50	365	\$18,797.50
5--10	156	\$8,034.00	365	\$3,759.50	260	\$13,390.00
1—5	52	\$2,678.00	365	\$3,759.50	156	\$8,034.00
0.5—1.0	24	\$1,236.00	365	\$3,759.50	52	\$2,678.00
0.1—0.5	12	\$618.00	260	\$2,678.00	24	\$1,236.00
<0.1	4	\$206.00	260	\$2,678.00	12	\$618.00

If governmental entities decide to do laboratory analysis in-house, they will incur initial costs for

equipment purchases, for staff training, and for supplies, but those costs are expected to be lower than using a contractor to analyze bacteria counts. Staff has estimated that one time equipment costs for laboratory analysis would be approximately \$1,500, and analysis costs would be approximately \$6 per test if done in house.

PUBLIC BENEFITS AND COSTS

Nina Chamness also determined that for each year of the first five years the proposed rule is in effect, the public benefit anticipated from the changes seen in the proposed rule will be a more direct measure of the effectiveness of disinfection processes at domestic wastewater facilities discharging into state water and compliance with EPA requirements to retain delegation of the TPDES domestic wastewater permit program.

TPDES permits are held by different business types statewide. These can include investor-owned utilities, resorts, apartment complexes, camps, campgrounds, motels, hotels, and recreational vehicle parks. Staff estimates that there may be as many as 15 large businesses that have TPDES domestic wastewater permits. The largest have a discharge rate of 1.0 million gallons per day (mgd) to 5.0 mgd. If a contractor is used to do laboratory analysis, these businesses could see their costs increase by as much as \$2,678 per year if they have chlorine systems. If they have a UV or other chemical disinfection system, they could pay approximately 20% more (an estimated \$3,760 increase per year) for *E. coli* laboratory analysis instead of fecal coliform by a contractor. If a natural disinfection system is used, these businesses could see contract laboratory analysis costs increase by as much as \$8,034 per year. If testing is done in-house, costs are expected to be lower and one time equipment costs for laboratory analysis would be approximately \$1,500, and analysis costs would be approximately \$6.00 per test.

SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT

Adverse fiscal implications are anticipated for some small or micro-businesses as a result of the proposed rule. Small systems are required to test less frequently than larger systems, and 98% of private wastewater treatment facilities (601) have a permitted flow under 0.5 mgd. Many of these small or micro-businesses rely on contractors for laboratory analyses, and annual cost increases are expected to range from \$206 to \$618 for chlorine disinfection systems to \$618 to \$1,236 for natural disinfection systems. In-house laboratory analysis could be done for approximately \$1,500 for initial set-up, and analysis costs would be approximately \$6.00 per test. The significance of the fiscal impact of the proposed rule depends on whether the small or micro-business can absorb the cost increases associated with bacteria testing or whether the customer base of the small business can absorb fee increases to cover increased costs for bacteria testing.

SMALL BUSINESS REGULATORY FLEXIBILITY ANALYSIS

The commission has reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rule is required to protect the environment and to comply with EPA requirements requiring bacteria limits in TPDES domestic wastewater permits. Small businesses with TPDES permits, 98% of which have a permitted flow under 0.5 mgd, are given flexibility under the proposed rule in the sense that they are allowed to test for bacteria less frequently than large businesses or large governmental entities. However, to retain federal delegation of TPDES, the commission is required to implement EPA requirements regarding bacteria limits in all TPDES domestic wastewater permits and more flexibility cannot be given.

LOCAL EMPLOYMENT IMPACT STATEMENT

The commission has reviewed this proposed rulemaking and determined that a local employment impact

statement is not required because the proposed rule does not adversely affect a local economy in a material way for the first five years that the proposed rule is in effect.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed this rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking is not subject to §2001.0225, because it does not meet the criteria for a "major environmental rule" as identified in that statute. Major environmental rule is defined as a rule, the specific intent of which, is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. This proposal does not adversely affect, in a material way, the economy, a section of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The specific intent of the proposed rulemaking is to establish requirements for bacteria limitations in all TPDES domestic wastewater permits.

The proposed rulemaking modifies the state rules and/or procedural documents to include bacteria effluent limitations and monitoring in all TPDES domestic wastewater permits.

Furthermore, the rulemaking is not subject to Texas Government Code §2001.0225 because it does not meet any of the four applicable requirements specified in §2001.0225(a). Texas Government Code, §2001.0225(a) applies only to a state agency's adoption of a major environmental rule that: 1) exceeds a standard set by federal law, unless state law specifically requires the rule; 2) exceeds an express requirement of state law, unless federal law specifically requires the rule; 3) exceeds a requirement of a delegation agreement or contract between the state and an agency or representative of the federal

government to implement a state and federal program; or 4) is adopted solely under the general powers of the agency instead of under a specific state law.

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Promulgation and enforcement of the proposed rule will not be a statutory or constitutional taking of private real property. Specifically, the proposed rulemaking does not apply to or affect any landowner's rights in private real property because it does not burden (constitutionally), restrict, or limit any landowner's right to real property or reduce any property value by 25% or more beyond that which would otherwise exist in the absence of the regulations. These actions will not affect private real property.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed the proposed rulemaking and found that the proposal is subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act, Texas Natural Resources Code, §§33.201 *et seq.*, and therefore must be consistent with all applicable CMP goals and

policies. The commission conducted a consistency determination for the proposed rule in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22 and found the proposed rulemaking is consistent with the applicable CMP goals and policies.

CMP goals applicable to the proposed rule includes the protection, preservation, restoration, and enhancement of the diversity, quality, quantity, functions, and values of coastal natural resource areas and ensure sound management of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone.

CMP policies applicable to the proposed rule includes 31 TAC §501.21(b)(1) and (2), which state that discharges shall comply with water quality-based effluent limits and that discharges that increase pollutant loadings to coastal waters shall not impair designated uses of coastal waters and shall not significantly degrade coastal water quality unless necessary for important economic or social development.

This rulemaking would adopt bacteria limits for all domestic wastewater facilities that discharge into waters in the state. By adopting bacteria limits, there will be a more direct and possibly more accurate measure of the level of disinfection achieved in domestic effluent discharged to both fresh and salt water in the areas of concern to the CMP.

Promulgation and enforcement of this rulemaking will not violate or exceed any standards identified in the applicable CMP goals and policies because the proposed rule is consistent with these CMP goals and policies and because these rule does not create or have a direct or significant adverse effect on any coastal natural resource areas.

Written comments on the consistency of this rulemaking may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

ANNOUNCEMENT OF HEARING

The commission will hold a public hearing on this proposal in Austin on June 30, 2009, at 10:00 a.m. in Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Michael Parrish, Office of Legal Services at (512) 239-2548. Requests should be made as far in advance as possible.

SUBMITTAL OF COMMENTS

Written comments may be submitted to Michael Parrish, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: <http://www5.tceq.state.tx.us/rules/ecomments/>. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2009-005-309-PR. The comment period closes July 6, 2009. Copies of the proposed rulemaking can be obtained from the commission's Web site at http://www.tceq.state.tx.us/nav/rules/propose_adopt.html. For further information, please contact Sherry

Smith, Water Quality Division, (512) 239-0571.

SUBCHAPTER A: EFFLUENT LIMITATIONS

§309.3

STATUTORY AUTHORITY

The amendment is proposed under the Texas Water Code (TWC), §5.013, which establishes the general jurisdiction of the commission. TWC, §5.102, which provides the commission with the authority to carry out its duties and general powers under its jurisdictional authority provided by TWC. TWC, §5.103, which requires the commission to adopt any rule necessary to carry out its powers and duties under the code and other laws of the state. TWC, §5.104, which states that the commission, by rule, will develop memoranda of understanding necessary to clarify and provide for its respective duties, responsibilities, or functions on any matter under the jurisdiction of the commission that is not expressly assigned to the commission. TWC, §5.105, which authorizes the commission to adopt rules and policies necessary to carry out its responsibilities as provided by the TWC, TWC, §5.120, which requires the commission to "administer the law so as to promote the judicious use and maximum conservation and protection" of the environment and natural resources of the state. TWC, §26.011, which provides the commission with the authority to establish the level of quality to be maintained in, and to control the quality of, the water in the state. TWC, §26.013, which authorizes the executive director to conduct or have conducted any research and investigations it considers advisable and necessary for the discharge of the duties under Chapter 26 of the TWC. TWC, §26.027, which authorizes the TCEQ to issue permits for the discharge of waste or pollutants into or adjacent to water in the state.

The amendments is also proposed under the Texas Water Quality Control Act, which gives the TCEQ the authority to adopt rules for the approval of disposal system plans under TWC, §26.034 as well as the authority to set standards to prevent the discharge of waste that is injurious to the public health under

TWC, §26.041.

This proposed amendment implements TWC, §§5.013, 5.102, 5.103, 5.104, 5.105, 5.120, 26.011, 26.013, 26.027, 26.034, and 26.041.

§309.3 Application of Effluent Sets.

(a) Discharges into effluent limited segments.

(1) All discharges into effluent limited segments shall, at a minimum, achieve secondary treatment. An effluent limited segment is any segment which is presently meeting or will meet applicable water quality criteria following incorporation of secondary treatment for domestic sewage treatment plants and/or best practicable treatment for industries.

(2) New or increased discharges into effluent limited segments shall achieve that level of treatment deemed necessary by the commission, based on the assimilative capacity and uses of the receiving stream.

(b) Discharges into water quality limited segments.

(1) All discharges into water quality limited segments for which evaluations have been developed shall, at a minimum, achieve the treatment level specified in the recommendations of the evaluation for that discharge. A water quality limited segment is a surface water segment classified by the commission as water quality limited where conventional treatment of waste discharged to the segment is

not stringent enough for the segment to meet applicable water quality standards; monitoring data have shown significant violations of water quality standards; advanced waste treatment for point sources is required to protect existing exceptional water quality; or the segment is a domestic water supply reservoir used to supply drinking water.

(2) Discharges into water quality limited segments for which wasteload evaluations or total maximum daily loads have not been developed shall, at a minimum, achieve secondary treatment as provided by §309.1 of this title (relating to Scope and Applicability).

(c) Discharges into certain reservoirs. Any discharge made within five miles upstream of a reservoir or lake which is subject to on-site/private sewage facility regulation adopted under Texas Water Code, Chapter 26 or Texas Civil Statutes, Article 4477-7e, or which may be used as a source for public drinking water supply shall achieve, at a minimum, Effluent Set 2 in §309.4 of this title (relating to Table 1, Effluent Limitations for Domestic Wastewater Treatment Plants). Five miles shall be measured in stream miles from the normal conservation pool elevation. The commission may grant exceptions to this requirement where it can be demonstrated that the exception would not adversely impact water quality.

(d) Discharges from stabilization ponds. Effluent Set 3 in §309.4 of this title shall apply to stabilization pond facilities in which stabilization ponds are the primary process used for secondary treatment and in which the ponds have been designed and constructed in accordance with applicable design criteria. Effluent Set 3 in §309.4 of this title is considered equivalent to secondary treatment for stabilization pond systems.

(e) Discharge to an evaporation pond. Effluent discharged to evaporation ponds must receive, at a

minimum, primary treatment, be within the pH limits of 6.0 - 9.0 standard units, and have a quality of 100 milligrams per liter five-day biochemical oxygen demand or less on a grab sample. For the purpose of this subsection, primary treatment means solids separation which is typically accomplished by primary clarifiers, Imhoff tanks, facultative lagoons, septic tanks, and other such units.

(f) Land disposal of treated effluent. The commission may authorize land disposal of treated effluent when the applicant demonstrates that the quality of ground or surface waters in the state will not be adversely affected. Each project must be consistent with laws relating to water rights. The primary purpose of such a project must be to dispose of treated effluent and/or to further enhance the quality of effluent prior to discharge.

(1) When irrigation systems ultimately dispose of effluent on land to which the public has access, Effluent Set 4 in §309.4 of this title, at a minimum, shall apply. The pH shall be within the limits of 6.0 - 9.0 standard units unless a specific variance is provided in the permit based upon site-specific conditions. When lands to which the public does not have access are to be used for ultimate disposal of effluent, the effluent must, at a minimum, receive primary treatment. Effluent Set 5 in §309.4 of this title shall apply and the pH shall be within the limits of 6.0 - 9.0 standard units unless a specific variance is provided in the permit based upon site-specific conditions. For irrigation systems, primary treatment is the same as described in subsection (e) of this section. Effluent may be used for irrigation only when consistent with Subchapters B and C of this chapter (relating to Location Standards and Land Disposal of Sewage Effluent).

(2) When overland flow systems are utilized for effluent treatment, the public shall not have access to the treatment area. Primary treated effluent meeting Effluent Set 6 in §309.4 of this title,

within the pH limits of 6.0 - 9.0 standard units may be used consistent with environmental safeguards and protection of ground and surface waters. For overland flow systems, primary treatment is the same as described in subsection (e) of this section. At a minimum, Effluent Set 1 in §309.4 of this title shall apply to discharges from overland flow facilities except where more stringent treatment levels are required to meet water quality standards.

(3) When evapotranspiration beds, low pressure dosing, or similar soil absorption systems are utilized for on-site land disposal, the effluent shall, at a minimum, receive primary treatment and meet Effluent Set 7 in §309.4 of this title. Use of these on-site systems shall be consistent with environmental safeguards and the protection of ground and surface waters. Primary treatment is the same as described in subsection (e) of this section.

(4) When subsurface area drip dispersal systems, or similar soil absorption systems ultimately dispose of effluent on land where there is the significant potential for public contact, as defined in §222.5 of this title (relating to Definitions), Effluent Set 4 in §309.4 of this title, at a minimum, shall apply. The pH shall be within the limits of 6.0 - 9.0 standard units unless a specific variance is provided in the permit based upon site-specific conditions.

(5) When subsurface area drip dispersal systems, or similar soil absorption systems ultimately dispose of effluent on land where there is the minimal potential for public contact, as defined in §222.5 of this title, Effluent Set 5 in §309.4 of this title, at a minimum, shall apply. The pH shall be within the limits of 6.0 - 9.0 standard units unless a specific variance is provided in the permit based upon site-specific conditions.

(6) Treated effluent may be land applied only when consistent with Subchapters B and C of this chapter. Use of subsurface area drip dispersal systems shall be consistent with environmental safeguards and the protection of ground and surface waters.

(7) For the purpose of this subsection, primary treatment means solids separation which is typically accomplished by primary clarifiers, Imhoff tanks, facultative lagoons, septic tanks, and other such units.

(g) Disinfection.

(1) Except as provided in this subsection, disinfection in a manner conducive to the protection of both public health and aquatic life shall be achieved on all domestic wastewater which discharges into waters in the state. Any appropriate process may be considered and approved on a case-by-case basis.

(2) Where chlorination is utilized, any combination of detention time and chlorine residual where the product of chlorine (Cl_2 mg/l) X Time (T minutes) equals or exceeds 20 is satisfactory provided that the minimum detention time is at least 20 minutes and the minimum residual is at least 0.5 mg/l. The maximum chlorine residual in any discharge shall in no event be greater than four mg/l per grab sample, or that necessary to protect aquatic life. [Where an existing system, constructed prior to October 8, 1990, has a detention time of less than 20 minutes at peak flow, the waste discharge permit will be amended at renewal by the commission to require limits for both chlorine residual and fecal coliform.]

(3) On a case-by-case basis, the commission will allow chlorination or disinfection

alternatives to the specific criteria of time and detention described in paragraph (2) of this subsection that achieve equivalent water quality protection. These alternatives will be considered and their performance standards determined based upon supporting data submitted in an engineering report, prepared and sealed by a registered, professional engineer. The report should include supporting data, performance data, or field tracer studies, as appropriate. The commission will establish effluent limitations as necessary to verify disinfection is adequate, including chlorine residual testing, other chemical testing, and bacteria testing as specified in subsections (h) or (i) of this section [and/or fecal coliform].

(4) Except as provided herein, disinfection of domestic wastewater which is discharged by means of land disposal or evaporation pond shall be reviewed on a case-by-case basis to determine the need for disinfection. All effluent discharged to land to which the public has access must be disinfected and if the effluent is to be transferred to a holding pond or tank, the effluent shall be rechlorinated to a trace chlorine residual at the point of irrigation application. All effluent discharged to land via a subsurface area drip dispersal system to which there is a potential for public contact shall be disinfected and shall comply with an *Escherichia coli* (*E. coli*) bacteria effluent limitation of 126 colony forming units per 100 milliliters of water or a fecal coliform effluent limitation of 200 colony forming units per 100 milliliters water, per grab sample, in accordance with paragraph (1) of this subsection [§309.3(g)(1) of this title (relating to Application of Effluent Sets)].

(5) Unless otherwise specified in a permit, chemical disinfection is not required for stabilization ponds when the total retention time in the free-water-surface ponds (based on design flow) is at least 21 days.

(h) Effluent limitations for bacteria.

(1) To demonstrate the disinfection level in effluent discharged into water in the state by its wastewater treatment facility, a permittee shall measure the amount of bacteria in the effluent.

(A) To demonstrate disinfection, *Escherichia coli* (*E. coli*) must be the indicator bacteria measured for discharges to fresh water.

(B) To demonstrate disinfection, *Enterococci* must be the indicator bacteria measured for discharges to salt water.

(2) The monthly average bacteria effluent limitation in a Texas Pollutant Discharge Elimination System (TPDES) permit must be the applicable geometric mean for the most stringent contact recreation category as specified in Chapter 307 of this title (relating to Texas Surface Water Quality Standards).

(3) The daily maximum bacteria effluent limitation in a TPDES permit must be the applicable single grab sample for the most stringent contact recreation category in Chapter 307 of this title.

(i) [(h)] More stringent requirements. The commission may impose more stringent requirements in permits than those specified in subsections (a) - (h) [(a) - (g)] of this section, on a case-by-case basis, where appropriate to maintain desired water quality levels or protect human health.

The Texas Commission on Environmental Quality (commission or TCEQ) proposes the amendment of §319.9 and the repeal of §319.10.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE PROPOSED RULES

The TCEQ typically includes chlorine exposure time and residual concentration requirements as the bacteria control mechanism for disinfection by chlorination in Texas Pollutant Discharge Elimination System (TPDES) domestic discharge permits. Starting in February 2007, the United States Environmental Protection Agency (EPA) took a new position that bacteria limits are required. This resulted in the EPA objecting to a subset of the commission's draft permits. As a result, the commission could not issue approximately 100 permits during this time. The executive director and EPA reached an agreement in July 2008 regarding bacteria effluent limitations and monitoring requirements in TPDES domestic wastewater permits. The agreement included an interim approach to require bacteria limitations and/or monitoring for selected facilities that met certain criteria for discharges to bacteria impaired water bodies. The agreement also included a long term approach in which the commission would propose rulemaking to establish requirements for bacteria limitations in all TPDES domestic wastewater permits. Conditions in the agreement stated that an adopted rule must be effective by December 31, 2009, and all TPDES domestic wastewater draft permits for which Notice of Application and Preliminary Decision is published on or after January 1, 2010 will have the new requirements as part of the permit language or EPA objections would begin again. The purpose of this rulemaking is to satisfy the agreement with the EPA.

The frequency of effluent parameter measurements is addressed in Chapter 319. Different frequencies of measuring bacteria are required based on both the amount of wastewater permitted for discharge and the disinfection method. Larger flows are given more frequent measurement requirements than small flows because of the amount of potential harm to human health and the environment are proportionate to the

pollutant loadings from the amount of wastewater discharged from a treatment facility.

Frequencies also vary with the disinfection method. Because facilities with chlorine disinfection systems have chlorine contact time and concentrations as another method to evaluate disinfection, those facilities are assigned a proportionately less frequent measurement schedule than facilities that use ultraviolet light, natural attenuation, or a chemical system other than chlorine. The natural attenuation, or pond, systems were given a more frequent measurement schedule than chlorine systems, but less frequent than other chemical systems or ultraviolet light systems. Although there is no other method to measure disinfection with these systems, their treatment levels change slowly. Ultraviolet light and other chemical systems are given the highest frequency of measurement because they are subject to equipment failure, and therefore, a lack of disinfection in a short time span.

SECTION BY SECTION DISCUSSION

Proposed §319.9 includes proposed Table 2, located in proposed §319.9(b), and renumbers the current Table 2, located in existing §319.9(b) and Table 3, located in existing §319.9(c), as Table 3, located in proposed §319.9(c) and Table 4, located in proposed §319.9(d). Table 1, located in §319.9(a), is the *Frequency of Measurement* for domestic discharges. It includes measurement frequencies for flow, biochemical oxygen demand, total suspended solids, chlorine residual, and pH. The proposed Table 2, located in proposed §319.9(b), is the *Frequency of Measurement of Bacteria* for domestic discharges, the amended Table 3, located in proposed §319.9(c), is the *Frequency of Measurement* for nondomestic discharges, and the amended Table 4, located in proposed §319.9(d), is the *Required Quality Control Analyses*. For better organization and easier reading, proposed Table 2 was inserted after Table 1 rather than added after Table 4 to keep the domestic discharge tables together.

The rulemaking proposes to repeal §319.10. Bacteria limits will replace and supersede this requirement. It is being removed to simplify the rule.

FISCAL NOTE: COSTS TO STATE AND LOCAL GOVERNMENT

Nina Chamness, Analyst, Strategic Planning and Assessment, has determined that, for the first five-year period the proposed rules are in effect, no significant fiscal implications are anticipated for the agency as a result of administration or enforcement of the proposed rules. The agency will have to modify operational practices and record data regarding bacteria present in domestic wastewater discharges but will use current resources to implement the proposed rules. Other units of state or local governments will experience fiscal implications as a result of the proposed rules since they will be required to test for bacteria present in domestic wastewater discharges. However, any fiscal implications to other units of state or local governments are not expected to be significant.

The proposed rules are part of a rulemaking that modifies 30 TAC Chapters 210, 309, and 319 to implement an agreement between the executive director and the EPA to include bacteria effluent limitations and monitoring requirements in TPDES domestic wastewater discharge permits. This fiscal note estimates the fiscal impact caused by the proposed changes in Chapter 319 and is closely related to proposed changes in Chapter 309 since fiscal impacts are a function of both frequency of testing and indicator bacteria levels. Fiscal impacts for Chapter 210 can be found in a separate fiscal note.

The agency estimates that there are 2,011 TPDES domestic facilities statewide. An estimated 1,395 of these are governmental entities that include state agencies, municipalities, counties, river authorities, and utility districts. The agency issues or renews TPDES domestic permits for a five-year period, and approximately 20% of these permits, or 402 statewide, are renewed annually. Of the 402 permits renewed

annually, approximately 279 will be issued to governmental entities each year and 123 will be issued to private facilities.

Some governmental entities will see testing costs increase because the proposed rules require bacteria testing not previously required. The impact of cost increases depend on many factors including the proposed frequency of testing in this chapter, whether or not an outside contractor is utilized to obtain bacteria count, the size of the wastewater system, and whether or not bacteria measurement costs can be recouped through increased user fees. However, the proposed rules for Chapter 319 and related rules proposed for Chapters 309 and 210 are not expected to have a significant fiscal impact on governmental entities because of the testing options available to comply with the rule requirements.

Testing for bacteria also involves sampling costs, transportation costs, and staff training costs. These costs vary greatly among both contractors and entities that choose to verify bacteria limits in-house. The fiscal impact of these costs will depend on the unique operating environment of each entity and methods chosen to train staff, obtain samples, and transport samples for laboratory analysis.

Total estimated annual average costs for laboratory analysis for *Escherchia coli* (*E. coli*) if done by a contract laboratory can be found in the following table, which shows the relationship between testing frequency proposed in Chapter 319 and effluent limitations proposed in changes to Chapter 309.

	Tests/Year	Cost/Year Contract Lab	Tests/Year	Cost/Year Contract Lab	Tests/Year	Cost/Year Contract Lab
Flow (mgd)	Chlorine Systems	E. coli test \$51.50 (average cost)	UV System & Other Chemical Systems	Cost Increase for E. coli test \$51.50 - \$41.20 (average cost)	Natural Systems	E. coli test \$51.50 (average cost)
>10	260	\$13,390.00	365	\$3,759.50	365	\$18,797.50

5--10	156	\$8,034.00	365	\$3,759.50	260	\$13,390.00
1—5	52	\$2,678.00	365	\$3,759.50	156	\$8,034.00
0.5—1.0	24	\$1,236.00	365	\$3,759.50	52	\$2,678.00
0.1—0.5	12	\$618.00	260	\$2,678.00	24	\$1,236.00
<0.1	4	\$206.00	260	\$2,678.00	12	\$618.00

If governmental entities decide to do laboratory analysis in-house, they will incur initial costs for equipment purchases, for staff training, and for supplies, but those costs are expected to be lower than using a contractor to analyze bacteria counts. Staff has estimated that one time equipment costs for laboratory analysis would be approximately \$1,500, and analysis costs would be approximately \$6 per test if done in-house.

PUBLIC BENEFITS AND COSTS

Nina Chamness also determined that for each year of the first five years the proposed rules are in effect, the public benefit anticipated from the changes seen in the proposed rules will be a more direct measure of the effectiveness of disinfection processes at domestic wastewater facilities discharging into state waters and compliance with EPA requirements to retain delegation of the TPDES domestic wastewater permit program.

TPDES domestic permits are held by different business types statewide. These can include investor-owned utilities, resorts, apartment complexes, camps, campgrounds, motels, hotels, and recreational vehicle parks. Staff estimates that there may be as many as 15 large businesses that have TPDES domestic wastewater permits. The largest have a discharge rate of 1.0 million gallons per day (mgd) to 5.0 mgd. If a contractor is used to do laboratory analysis, these businesses could see their costs increase by as much as \$2,678 per year if they have chlorine systems and contractors are used. If they have an ultraviolet light

or other chemical disinfection system, they could pay approximately 20% more (an estimated \$3,760 increase per year) for *E. coli* laboratory analysis instead of fecal coliform by a contractor. If a natural disinfection system is used, these businesses could see contract laboratory analysis costs increase by as much as \$8,034 per year. If testing is done in-house, costs are expected to be lower and one time equipment costs for laboratory analysis would be approximately \$1,500, and analysis costs would be approximately \$6.00 per test.

SMALL BUSINESS AND MICRO-BUSINESS ASSESSMENT

Adverse fiscal implications are anticipated for some small or micro-businesses as a result of the proposed rules. Small businesses can be expected to incur the same costs as those incurred by governmental entities. The following table summarizes the annual estimated laboratory analysis costs if a contractor is used.

	Tests/Year	Cost/Year Contract Lab	Tests/Year	Cost/Year Contract Lab	Tests/Year	Cost/Year Contract Lab
Flow (mgd)	Chlorine Systems	E. coli test \$51.50 (average cost)	UV Systems & Other Chemical Systems	Cost Increase for E. coli test \$51.50 - \$41.20 (average cost)	Natural Systems	E. coli test \$51.50 (average cost)
>10	260	\$13,390.00	365	\$3,759.50	365	\$18,797.50
5--10	156	\$8,034.00	365	\$3,759.50	260	\$13,390.00
1—5	52	\$2,678.00	365	\$3,759.50	156	\$8,034.00
0.5—1.0	24	\$1,236.00	365	\$3,759.50	52	\$2,678.00
0.1—0.5	12	\$618.00	260	\$2,678.00	24	\$1,236.00
<0.1	4	\$206.00	260	\$2,678.00	12	\$618.00

Small systems are required to test less frequently than larger systems, and 98% of private wastewater treatment facilities (601 facilities) have a permitted flow under 0.5 mgd. If testing is done in-house, costs are expected to be lower and one time equipment costs for laboratory analysis would be approximately \$1,500 and analysis costs would be approximately \$6.00 per test.

However, many of these small or micro-businesses rely on contractors for laboratory analyses. The significance of the fiscal impact of the proposed rules depends on whether the small or micro-business can absorb the cost increases associated with bacteria testing or whether the customer base of the small business can absorb fee increases to cover increased costs for bacteria testing.

SMALL BUSINESS REGULATORY FLEXIBILITY ANALYSIS

The commission has reviewed this proposed rulemaking and determined that a small business regulatory flexibility analysis is not required because the proposed rules are required to protect the environment and to comply with EPA requirements requiring bacteria limits in TPDES domestic wastewater permits.

Small businesses with TPDES permits, 98% of which have a permitted flow under 0.5 mgd, are given flexibility under the proposed rules in the sense that they are allowed to test for bacteria less frequently than large businesses or large governmental entities. However, to retain federal delegation of the TPDES program, the commission is required to implement EPA requirements regarding bacteria limits in all TPDES domestic wastewater permits and more flexibility cannot be given.

LOCAL EMPLOYMENT IMPACT STATEMENT

The commission has reviewed this proposed rulemaking and determined that a local employment impact statement is not required because the proposed rules do not adversely affect a local economy in a material way for the first five years that the proposed rules are in effect.

DRAFT REGULATORY IMPACT ANALYSIS DETERMINATION

The commission reviewed this rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking is not subject to §2001.0225,

because it does not meet the criteria for a "major environmental rule" as identified in that statute. Major environmental rule is defined as a rule, the specific intent of which, is to protect the environment or reduce risks to human health from environmental exposure and that may adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. This proposal does not adversely affect, in a material way, the economy, a section of the economy, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state. The specific intent of this portion of the proposed rulemaking is to establish frequency requirements for bacteria monitoring in all TPDES domestic wastewater permits. The proposed rulemaking modifies the state rules and/or procedural documents to include bacteria effluent limitations and monitoring frequencies in all TPDES domestic wastewater permits.

Furthermore, the rulemaking is not subject to Texas Government Code, §2001.0225 because it does not meet any of the four applicable requirements specified in §2001.0225(a). Texas Government Code, §2001.0225(a) applies only to a state agency's adoption of a major environmental rule that: 1) exceeds a standard set by federal law, unless state law specifically requires the rule; 2) exceeds an express requirement of state law, unless federal law specifically requires the rule; 3) exceeds a requirement of a delegation agreement or contract between the state and an agency or representative of the federal government to implement a state and federal program; or 4) is adopted solely under the general powers of the agency instead of under a specific state law.

The commission invites public comment regarding this draft regulatory impact analysis determination. Written comments on the draft regulatory impact analysis determination may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

TAKINGS IMPACT ASSESSMENT

The commission evaluated the proposed rulemaking and performed an analysis of whether it constitutes a taking under Texas Government Code, Chapter 2007. The specific purpose of the proposed rulemaking is to modify the Texas Administrative Code to reflect bacteria effluent limitations and monitoring in all TPDES domestic wastewater permits, as mandated by the EPA. This rulemaking substantially advances that stated purpose by modifying 30 TAC §§210.33, 309.3, 319.9, and 319.10.

Promulgation and enforcement of the proposed rules will not be a statutory or constitutional taking of private real property. Specifically, the proposed rulemaking does not apply to or affect any landowner's rights in private real property because it does not burden (constitutionally), restrict, or limit any landowner's right to real property or reduce any property value by 25% or more beyond that which would otherwise exist in the absence of the regulations. These actions will not affect private real property.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission reviewed the proposed rulemaking and found that the proposal is subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Act, Texas Natural Resources Code, §§33.201 *et seq.*, and therefore must be consistent with all applicable CMP goals and policies. The commission conducted a consistency determination for the proposed rules in accordance with Coastal Coordination Act Implementation Rules, 31 TAC §505.22 and found the proposed rulemaking is consistent with the applicable CMP goals and policies.

CMP goals applicable to the proposed rules include the protection, preservation, restoration, and enhancement of the diversity, quality, quantity, functions, and values of coastal natural resource areas and

ensure sound management of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone.

CMP policies applicable to the proposed rules include 31 TAC §501.21(b)(1) and (2), which state that discharges shall comply with water quality-based effluent limits and that discharges that increase pollutant loadings to coastal waters shall not impair designated uses of coastal waters and shall not significantly degrade coastal water quality unless necessary for important economic or social development.

These rules would adopt bacteria limits for all domestic wastewater facilities that discharge into waters in the state. By adopting bacteria limits, there will be a more direct and possibly more accurate measure of the level of disinfection achieved in domestic effluent discharged to both fresh and salt water in the areas of concern to the CMP.

Promulgation and enforcement of these rules will not violate or exceed any standards identified in the applicable CMP goals and policies because the proposed rules are consistent with those CMP goals and policies and because these rules do not create or have a direct or significant adverse effect on any coastal natural resource areas.

Written comments on the consistency of this rulemaking may be submitted to the contact person at the address listed under the SUBMITTAL OF COMMENTS section of this preamble.

ANNOUNCEMENT OF HEARING

The commission will hold a public hearing on this proposal in Austin on June 30, 2009, at 10:00 a.m. in

Building E, Room 201S, at the commission's central office located at 12100 Park 35 Circle. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Michael Parrish, Office of Legal Services at (512) 239-2548. Requests should be made as far in advance as possible.

SUBMITTAL OF COMMENTS

Written comments may be submitted to Michael Parrish, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: <http://www5.tceq.state.tx.us/rules/ecomments/>. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2009-005-309-PR. The comment period closes July 6, 2009. Copies of the proposed rulemaking can be obtained from the commission's Web site at http://www.tceq.state.tx.us/nav/rules/propose_adopt.html. For further information, please contact Sherry Smith, Water Quality Division, (512) 239-0571.

SUBCHAPTER A: MONITORING AND REPORTING SYSTEM

§319.9

STATUTORY AUTHORITY

The amendment is proposed under the Texas Water Code (TWC), §5.013, which establishes the general jurisdiction of the commission. TWC, §5.102, which provides the commission with the authority to carry out its duties and general powers under its jurisdictional authority provided by TWC. TWC, §5.103, which requires the commission to adopt any rule necessary to carry out its powers and duties under the code and other laws of the state. TWC, §5.104, which states that the commission, by rule, will develop memoranda of understanding necessary to clarify and provide for its respective duties, responsibilities, or functions on any matter under the jurisdiction of the commission that is not expressly assigned to the commission. TWC, §5.105, which authorizes the commission to adopt rules and policies necessary to carry out its responsibilities as provided by the TWC. TWC, §5.120, which requires the commission to "administer the law so as to promote the judicious use and maximum conservation and protection" of the environment and natural resources of the state. TWC, §26.011, which provides the commission with the authority to establish the level of quality to be maintained in, and to control the quality of, the water in the state. TWC, §26.013, which authorizes the executive director to conduct or have conducted any research and investigations it considers advisable and necessary for the discharge of the duties under Chapter 26 of the TWC. TWC, §26.027, which authorizes the TCEQ to issue permits for the discharge of waste or pollutants into or adjacent to water in the state.

The amendment is also proposed under the Texas Water Quality Control Act which gives the TCEQ the authority to adopt rules for the approval of disposal system plans under TWC, §26.034, as well as the authority to set standards to prevent the discharge of waste that is injurious to the public health under

TWC, §26.041.

This proposed amendment implements TWC, §§5.013, 5.102, 5.103, 5.104, 5.105, 5.120, 26.011, 26.013, 26.027, 26.034, and 26.041.

§319.9. Self-Monitoring and Quality Assurance Schedules.

(a) The following table sets forth the self-monitoring schedules applicable to treated domestic sewage effluent.

Figure: 30 TAC §319.9(a)

[Figure: 30 TAC §319.9(a)]

Table 1 FREQUENCY OF MEASUREMENT						
Design Capacity MGD	Flow	BOD5	Total Suspended Solids	Chlorine Residual	pH	Collecting of Samples and Taking Measurements
0 to less than 0.10	One instantaneous measurement each working day but not less than five measurements per week (b) (c)	One each week	One each week	One each working day but not less than five measurements per week (c)	One each month	The laboratory tests shall be made on a grab sample collected at peak loading periods, and flow measurements shall be taken concurrently with such grab samples. (d)
0.50 less than 0.10 to	One instantaneous measurement each working day but not less than five measurements per week (b) (c)	One each week	One each week	One each working day but not less than five measurements per week (c)	One each month	The laboratory tests shall be made on a grab sample collected at peak loading periods, and flow measurements shall be taken concurrently with such grab samples. (d)

0.50 to less than 1.00	The daily flow measured by a totalizing meter	One each week	One each week	One each day of the week	Two each month	The laboratory test excepting the pH and chlorine residual test which are performed on grab samples or insitu shall be made on a composite sample proportioned according to flow, made up of three portions collected no closer together than 2 hours and with the first sample collected no earlier than 10:00 a.m.
1.00 to less than 5.00	The daily flow measured by a totalizing meter	Two each week	Two each week	One each day of the week	One each week	The laboratory test excepting the pH and chlorine residual test which are performed on grab sample or insitu shall be made on a composite sample proportioned according to flow, made up of six portions collected no closer together than 2 hours and with the first sample collected no earlier than 10:00 a.m.
5.00 to less than 10.00	The daily flow measured by a totalizing meter	One each weekday (a)	One each weekday (a)	One each day of the week	One each week-day	The laboratory test excepting the pH and chlorine residual test which are performed on grab samples or insitu shall be made on (a) 24-hour composite samples proportioned according to flow collected no closer together than 2 hours in 12 individual portions.
10.00 or greater	The daily flow measured by a	One each day of	One each day of the	One each day of the week	One each	The laboratory test excepting the pH and

	totalizing meter	the week	week		day of the week	the chlorine residual test which are performed on grab samples or insitu shall be made on 24-hour composite samples proportioned according to flow collected no closer together than 2 hours in 12 individual portions.
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- (a) Weekday - Monday thru Friday.
- (b) Where a totalizing meter is provided, the actual volume of water which has been processed each day should be determined and reported.
- (c) Working Day - A day when the plant is visited for routine work.
- (d) Peak loading period - That time during the calendar day when the maximum flow rate is experienced within the facility.
- (e) Flow - Determined by actual measurement of effluent flow or determined by calculation based upon influent measurement unless effluent flow is specified in the permit.

NOTE: See 30 TAC 319.5(e) concerning additional measurements and documentation.

(b) The following table sets forth the bacteria self-monitoring schedules applicable to treated domestic sewage effluent that is discharged to water in the state.

Figure: 30 TAC §319.9(b)

Table 2
 FREQUENCY OF BACTERIA MEASUREMENT

Minimum Required Frequency ^{1, 2, 3, 4}			
Flow (mgd)	Chlorine Systems	Ultraviolet Systems	Natural Systems
>10	5/week	Daily	Daily
5--10	3/week	Daily	5/week
1—5	1/week	Daily	3/week
0.5—1.0	2/month	Daily	1/week
0.1—0.5	1/month	5/week	2/month
<0.1	1/quarter	5/week	1/month

(1) Sampling must be spaced across the time period at approximately equal intervals, with the exceptions of the five times per week sampling schedule. Five samples per week must be taken one on each of five days during a seven day period.

(2) A permittee that has at least twelve months of uninterrupted compliance with its bacteria limit may notify the commission of its compliance and request a less frequent measurement schedule.

(a) If the commission finds that a less frequent measurement schedule is protective of human health and the environment, the permittee will be given a less frequent measurement schedule. Daily will drop to 5/week, 5/week to 3/week, 3/week to 1/week, 1/week to 2/month, 2/month to 1/month, 1/month to 1/quarter, 1/quarter to 1/6 months.

(b) A violation of the bacteria limit by a facility that has been granted a less frequent measurement schedule will require the permittee to return to the standard frequency schedule.

(c) A permittee that has had a violation while on a less frequent measurement schedule may not apply for another reduction in measurement frequency for at least 24 months from the last violation.

(3) A chemical system other than chlorine will be required to comply with the ultraviolet frequency schedule.

(4) The executive director may establish a more frequent measurement schedule if necessary to protect human health or the environment.

(c) [(b)] The following table sets forth the self-monitoring schedules applicable to nondomestic wastewater effluent.

Figure: 30 TAC §319.9(c)

[Figure: 30 TAC §319.9(b)]

Table 3 [2]
 Frequency of Measurement
 Volume of MGD

Parameter	0 to less than 0.05	0.05 to less than 0.50	0.50 to less than 2.00	2.00 to less than 10.00	10.00 to greater
Flow	One instantaneous measurement per operating day except on	One instantaneous measurement per operating shift - on	One instantaneous measurement per operating shift - on	Six instantaneous measurements per day spaced at equal	Instantaneous measurements made each operating hour or the reading

	sample days when 3 instantaneous measurements made concurrently with the collection of sample portions are required.	sample days concurrent with the collection of a sample portion.	sample days concurrent with the collection of a sample portion or the reading from a totalizing flow meter.	intervals during the operating period or the reading from a totalizing flow meter.	from a totalizing flow meter.
pH (a)	1 per day	1 per day	1 per day	1 per day	1 per day
Temperature (b)	1 per day	3 per day	3 per day	6 per day	12 per day
BOD	1 per week	2 per week	2 per week	3 per week	1 per day
COD	1 per week	2 per week	2 per week	3 per week	1 per day
TOC	1 per week	2 per week	2 per week	3 per week	1 per day
Oil & Grease (c)	1 per week	2 per week	2 per week	3 per week	1 per day
Ammonia Nitrogen	1 per week	2 per week	2 per week	3 per week	1 per day
Arsenic	1 per week	2 per week	2 per week	3 per week	1 per day
Barium	1 per week	2 per week	2 per week	3 per week	1 per day
Boron	1 per week	2 per week	2 per week	3 per week	1 per day
Cadmium	1 per week	2 per week	2 per week	3 per week	1 per day
Chromium	1 per week	2 per week	2 per week	3 per week	1 per day
Copper	1 per week	2 per week	2 per week	3 per week	1 per day
Lead	1 per week	2 per week	2 per week	3 per week	1 per day
Manganese	1 per week	2 per week	2 per week	3 per week	1 per day
Mercury	1 per week	2 per week	2 per week	3 per week	1 per day
Nickel	1 per week	2 per week	2 per week	3 per week	1 per day
Selenium	1 per week	2 per week	2 per week	3 per week	1 per day

Silver	1 per week	2 per week	2 per week	3 per week	1 per day
Zinc	1 per week	2 per week	2 per week	3 per week	1 per day
TSS	1 per week	2 per week	2 per week	3 per week	1 per day
TDS	1 per week	2 per week	2 per week	3 per week	1 per day
Chloride	1 per week	2 per week	2 per week	3 per week	1 per day
Sulphate	1 per week	2 per week	2 per week	3 per week	1 per day
Nitrate Nitrogen	1 per week	2 per week	2 per week	3 per week	1 per day
Sulfide (c)	1 per week	2 per week	2 per week	3 per week	1 per day
Phenol (c)	1 per week	2 per week	2 per week	3 per week	1 per day
Collection of Samples	Samples shall be composite samples made up of three portions, sized proportional to flow, collected to no closer together than one hour and over a span of time not exceeding 24 hours.	Samples shall be composite samples made up of three portions, sized proportional to flow, one portion being collected during each operating shift or otherwise suitably distributed throughout the operating day.	Samples shall be composite samples made up of three portions, sized proportional to flow, one portion being collected during each operating shift or otherwise suitably distributed throughout the operating day.	Samples shall be composite samples made up of six portions, sized proportional to flow, collected concurrently with the instantaneous flow measurements made during a 24 hour time span.	Samples shall be 24 hour composite samples collected in 12 or more individual portions, sized proportional to flow, equally spaced throughout the operating day.

(a) The required laboratory tests shall be made on grab samples and analyzed immediately after collection or analyzed in situ at the permit sampling point.

(b) The temperature shall be measured in situ on the water at the permit sampling point.

(c) The required laboratory tests shall be made on grab samples.

(d) [(c)] The following table sets forth the quality assurance requirements for wastewater analyses.

Figure: 30 TAC §319.9(d)

[Figure: 30 TAC §319.9(c)]

Table 4 [3]

REQUIRED QUALITY CONTROL ANALYSES

<u>Parameter</u>	<u>Blank</u>	<u>Standard</u>	<u>Duplicate</u>	<u>Spike</u>
Bacterial	A		B	
Alkalinity		A	B	
Ammonia Nitrogen	A	A	B	B
BOD	A	A	B	
BOD-carbonaceous	A	A	B	
COD	A	A	B	B
Chloride	A	A	B	B
Chlorine-Total or Free		D		
Cyanide-Total or Amenable to Chlorination	A	A	B	B
Fluoride	A	A	B	B
pH		C		
Kjeldahl Nitrogen	A	A	B	B
Metals (all)	A	A	B	B
Nitrate Nitrogen	A	A	B	B
Nitrite Nitrogen	A	A	B	B
Oil & Grease	A	D		
Orthophosphate	A	A	B	B
Oxygen (dissolved)		A	B	

Phenols	A	A	B	
Phosphorus-Total	A	A	B	B
Specific Conductance	A	A		
Sulfate	A	A	B	B
Sulfide	A	A	B	
Sulfite	A	A	B	
TOC	A	A	B	B
TSS	A		B	
TDS	A	A	B	
Organics by GC or GC/MS or other approved methods	A	A	E	E

Where:

A - Wherever specified, at least one blank and one standard shall be performed each day that samples are analyzed.

B - Wherever specified, duplicate and spike analyses shall be performed on a 10% basis each day that samples are analyzed. If one to 10 samples are analyzed on a particular day, then one duplicate and one spike analyses shall be performed.

C - For pH analysis, the meter shall be calibrated each day that samples are analyzed using a minimum of two standards which bracket the pH value(s) of the sample(s).

D - For the oil and grease analysis and chlorine-total or free analysis, standards shall be analyzed on a 10% basis. If one to 10 samples are analyzed on a particular day, then one standard shall be analyzed. Duplicates may be analyzed in lieu of standards for the oil and grease analysis and chlorine-total or free analysis.

E - For GC and GC/MS analyses, duplicate and spike analyses shall be performed on a 5% basis. If one to 20 samples are analyzed in a month, then one duplicate and one spike analyses per month shall be performed.

§319.10

STATUTORY AUTHORITY

The repeal is proposed under the Texas Water Code (TWC), §5.013, which establishes the general jurisdiction of the commission. TWC, §5.102, which provides the commission with the authority to carry out its duties and general powers under its jurisdictional authority provided by TWC. TWC, §5.103, which requires the commission to adopt any rule necessary to carry out its powers and duties under the code and other laws of the state. TWC, §5.104, which states that the commission, by rule, will develop memoranda of understanding necessary to clarify and provide for its respective duties, responsibilities, or functions on any matter under the jurisdiction of the commission that is not expressly assigned to the commission. TWC, §5.105, which authorizes the commission to adopt rules and policies necessary to carry out its responsibilities as provided by the TWC. TWC, §5.120, which requires the commission to "administer the law so as to promote the judicious use and maximum conservation and protection" of the environment and natural resources of the state. TWC, §26.011, which provides the commission with the authority to establish the level of quality to be maintained in, and to control the quality of, the water in the state. TWC, §26.013, which authorizes the executive director to conduct or have conducted any research and investigations it considers advisable and necessary for the discharge of the duties under Chapter 26 of the TWC. TWC, §26.027, which authorizes the TCEQ to issue permits for the discharge of waste or pollutants into or adjacent to water in the state.

The repeal is also proposed under the Texas Water Quality Control Act which gives the TCEQ the authority to adopt rules for the approval of disposal system plans under TWC, §26.034, as well as the authority to set standards to prevent the discharge of waste that is injurious to the public health under TWC, §26.041.

The proposed repeal implements TWC, §§5.013, 5.102, 5.103, 5.104, 5.105, 5.120, 26.011, 26.013, 26.027, 26.034, and 26.041.

[§319.10. Fecal Coliform Requirements.]

[The commission may impose disinfection in accordance with § 309.3(g) of this title (relating to Application of Effluent Sets), fecal coliform concentration, or total coliform concentration requirements for domestic wastewater discharges on a case-by-case basis in order to maintain and enhance water quality and associated public health needs.]