ADOPTED RULES

Adopted rules include new rules, amendments to existing rules, and repeals of existing rules. A rule adopted by a state agency takes effect 20 days after the date on which it is filed with the Secretary of State unless a later date is required by statute or specified in the rule (Government Code, §2001.036). If a rule is adopted without change to the text of the proposed rule, then the *Texas Register* does not republish the rule text here. If a rule is adopted with change to the text of the proposed rule, then the final rule text is included here. The final rule text will appear in the Texas Administrative Code on the effective date.

TITLE 1. ADMINISTRATION

PART 10. DEPARTMENT OF INFORMATION RESOURCES

CHAPTER 201. GENERAL ADMINISTRATION

1 TAC §§201.3, 201.4, 201.6, 201.9

The Texas Department of Information Resources (department/DIR) adopts the amendments to 1 TAC Chapter 201, §§201.3, 201.4, and 201.6 and adopts a new §201.9, concerning General Administration, without changes to the proposal as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5577) to ensure the rules accurately reflect the department's policies and procedures. The department published a formal notice of rule review in the March 13, 2015, issue of the *Texas Register* (40 TexReg 1527). Review of the sections implements Texas Government Code, §2001.039.

In §201.3, the department adopts amendments to add subsection (a) that describes the purpose and intent of the rule. All sequential letters have been changed for accuracy. In subsection §201.3(b), the department adopts amendments to accurately describe current process and procedures.

In §201.4, the department adopts amendments to clarify the policy and procedures for accepting gifts. In §201.4(c) and §201.4(c)(1), the department adopts amendments to add language clarifying the circumstances in which department may accept gifts to accurately reflect Texas Government Code §2255.01 and §2054.052(g).

In §201.6, the department adopts amendments to add new language to implement Section 18 of Senate Bill 20 (84R) effective September 1, 2015, regarding contract monitoring.

The department adopts new §201.9 to comply with §2001.021, Texas Government Code, as amended by House Bill 763 (84R).

The changes to the chapter apply to DIR and will have no effect on state agencies and institutions of higher education. The assessment of the impact of the proposed changes on institutions of higher education was prepared in consultation with the Information Technology Council for Higher Education (ITCHE) in compliance with §2054.121(c), Texas Government Code.

Martin Zelinsky, General Counsel, has determined that during the first five-year period following the amendments to 1 TAC Chapter 201 there will be no fiscal impact on state agencies, institutions of higher education and local governments.

Mr. Zelinsky has further determined that for each year of the first five years following the adoption of the amendments to 1 TAC Chapter 201 there are no anticipated additional economic costs to persons or small businesses required to comply with the amended rule.

No comments were received as a result of that notice.

The amendments to existing rules and new rule are adopted pursuant to 2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; §2255.01, Texas Government Code, which authorizes state agencies to develop rules; and §2001.021(b), Texas Government Code, which authorizes state agencies to, by rule, prescribe the form of a petition under the section.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 3, 2015.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
Effective date: November 23, 2015
Proposal publication date: September 4, 2015
For further information, please call: (512) 463-1634

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CHAPTER 203. MANAGEMENT OF ELECTRONIC TRANSACTIONS AND SIGNED RECORDS

The Texas Department of Information Resources (department) adopts the repeal of 1 TAC Chapter 203, §§203.20, 203.21, 203.22, 203.40, 203.41, and 203.42, adopts new 1 TAC 203, §§203.20, 203.22, 203.40, and 203.42, and adopts amendments to 1 TAC 203, §§203.1, 203.23, 203.24, 203.43, and 201.44 concerning Management of Electronic Transactions and Signed Records, without changes to the proposal as published in the September 11, 2015, issue of the *Texas Register* (40 TexReg 5995) to clarify the processes and policies of current practices. The department published a formal notice of rule review in the June 6, 2014, issue of the *Texas Register* (39 TexReg 4489). Review of the sections implements Government Code, §2001.039.

No comments were received as a result of that notice.

In §203.1, the department adopts amendments to definitions to clarify existing rule, and ensure consistency throughout the Chapter and with DIR policies.

In §203.20, DIR adopts the repeal of the current rule and replaces it with new language. The information in §203.20, while necessary and essential, was confusing and redundant. Therefore, DIR reorganized the information to be succinct. The information previously in §203.21 was added into §203.20.

In §203.21 DIR adopts the repeal of this rule. This language has been added to §203.20 to make the rule succinct.

In §203.22, DIR adopts the repeal of the current rule and replaces it with new language. The current paragraph inconsistently lists the content included in the *Guidelines for the Management of Electronic Transactions and Signed Records (also known as the UETA Guidelines)* in paragraph format. This makes the rule difficult to read. Therefore, DIR replaced the current language with the table of contents from the UETA Guidelines to ensure consistency and clarity throughout all documentation.

In §203.23(d), DIR adopts amendments specifying the referenced guidelines to clarify existing rule.

In §203.24, DIR adopts amendments to correct a grammatical error and allow state agencies to use a program operated by the Department of Defense (DoD) PKI Program Management Office (PMO) The program is certified and accredited in accordance with DoD Instruction 8510.01 "DoD Information Assurance Certification and Accreditation Process (DIACAP)".

In §203.40, DIR repeals the current rule and replaces it with new language. The information in §203.40, while necessary and essential, was confusing and redundant. Therefore, DIR reorganized the information to be succinct. The information previously in §203.41 was added into §203.40

In §203.41 DIR repeals this rule. This language has been added to §203.40 to make the rule succinct.

In §203.42, DIR repeals the current rule and replaces it with new language. The current paragraph inconsistently lists the content included in the *Guidelines for the Management of Electronic Transactions and Signed Records (also known as the UETA Guidelines)* in paragraph format. This makes the rule difficult to read. Therefore, DIR replaced the current language with the table of contents from the UETA Guidelines to ensure consistency and clarity throughout all documentation.

In §203.43(d), DIR adopts amendments specifying the referenced guidelines to clarify existing rule.

In §203.44, DIR adopts amendments to correct a grammatical and allow institutes of higher education to use a program operated by the Department of Defense (DoD) PKI Program Management Office (PMO) The program is certified and accredited in accordance with DoD Instruction 8510.01 "DoD Information Assurance Certification and Accreditation Process (DIACAP)".

The changes to the chapter apply to state agencies and institutions of higher education. The assessment of the impact of the adopted changes on institutions of higher education was prepared in consultation with the Information Technology Council for Higher Education (ITCHE) in compliance with §2054.121(c), Texas Government Code.

Deborah Hujar, Director of Technology Planning, Policy and Governance, determined that during the first five-year period following the amendments to 1 TAC Chapter 203 there will be no fiscal impact on state agencies, institutions of higher education and local governments.

Ms. Hujar further determined that for each year of the first five years following the adoption of the amendments to 1 TAC Chapter 203 there are no anticipated additional economic costs to persons or small businesses required to comply with the amended rule.

SUBCHAPTER A. DEFINITIONS

1 TAC §203.1

The rule is adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; §2054.06(a) and (b), Texas Government Code, which reference rules created by the department regarding digital signatures; and §322.017 et seq., Texas Business and Commerce Code, which allows the department to specify the management of electronic records.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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TRD-201504691
Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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SUBCHAPTER B. STATE AGENCY USE OF ELECTRONIC TRANSACTIONS AND SIGNED RECORDS

1 TAC §§203.20 - 203.22

The repeals are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; §2054.06(a) and (b), Texas Government Code, which reference rules created by the department regarding digital signatures; and §322.017 et seq., Texas Business and Commerce Code, which allows the department to specify the management of electronic records.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
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1 TAC §203.20, §203.22

The rules are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; §2054.06(a) and (b), Texas Government Code, which reference rules created by the department regarding digital signatures; and §322.017 et seq., Texas Business and Commerce Code, which allows the department to specify the management of electronic records.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
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For further information, please call: (512) 463-1634

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1 TAC §203.23, §203.24

The rules are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; §2054.06(a) and (b), Texas Government Code, which reference rules created by the department regarding digital signatures; and §322.017 et seq., Texas Business and Commerce Code, which allows the department to specify the management of electronic records.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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SUBCHAPTER C. INSTITUTIONS OF HIGHER EDUCATION USE OF ELECTRONIC TRANSACTIONS AND SIGNED RECORDS

1 TAC §§203.40 - 203.42

The repeals are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; §2054.06(a) and (b), Texas Government Code, which reference rules created by the department regarding digital signatures; and §322.017 et seq., Texas Business and Commerce Code, which allows the department to specify the management of electronic records.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
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For further information, please call: (512) 463-1634

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1 TAC §§203.40, 203.42 - 203.44

The rules are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; §2054.06(a) and (b), Texas Government Code, which reference rules created by the department regarding digital signatures; and §322.017 et seq., Texas Business and Commerce Code, which allows the department to specify the management of electronic records.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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CHAPTER 211. INFORMATION RESOURCES MANAGERS

The Texas Department of Information Resources (department/DIR) adopts amendments to 1 TAC Chapter 211, §§211.1, 211.11, 211.20, and 211.21, concerning Information Resources Managers without changes to the proposal as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5580). These adopted amendments are necessary to clarify and update the processes and policies of current practices. The department published a formal notice of rule review in the November 7, 2014, issue of the *Texas Register* (39 TexReg 8746). Review of the sections implements Government Code, §2001.039.

No comments were received as a result of that notice.

In §211.1, DIR adopts an amendment to add a definition for information resources managers. This definition came from DIR policy documents that are currently in existence.

In §211.11, DIR adopts an amendment to delete language requiring information resources managers to hold a four-year college or university degree. DIR staff worked with state agency subject matter experts and determined this additional language is unnecessary and burdensome. DIR made this rule applicable to information resources managers and joint information resources managers. It previously excluded joint information resources managers. DIR revised language to make it succinct and clear. Additionally, DIR adopts amendments to clarify language.

In §211.20(b), DIR adopts an amendment to delete the sentence that allows an institution to designate separate information resources managers for academic and administrative information resources. DIR worked with subject matter experts from state agencies and institutes of higher education who recommended removing this language since the practice is obsolete, as DIR has not permitted separate information resources managers in over ten years.

In §211.20(c), DIR adopts amendments to remove this section in its entirety. DIR worked with subject matter experts from state agencies and institutes of higher education who recommended removing this language since the practice is obsolete. DIR then changed the lettering of the subsequent rules to be consistent with this change.

In §211.21(1), DIR adopts amendments to delete the first sentence. DIR struck this language to make §211.21 consistent with §211.11. DIR worked with subject matter experts from state agencies and institutes of higher education who recommended removing this language to be consistent with §211.11. Additionally, DIR adopts amendments to clarify language.

The changes to the chapter apply to state agencies and institutions of higher education. The assessment of the impact of the adopted changes on institutions of higher education was prepared in consultation with the Information Technology Council for Higher Education (ITCHE) in compliance with §2054.121(c), Texas Government Code.

Deborah Hujar, Director of Technology Planning, Policy and Governance, has determined that during the first five-year period following the amendments to 1 TAC Chapter 211 there will be no fiscal impact on state agencies, institutions of higher education and local governments.

Ms. Hujar has further determined that for each year of the first five years following the adoption of the amendments to 1 TAC Chapter 211 there are no anticipated additional economic costs to persons or small businesses required to comply with the amended rule.

SUBCHAPTER A. DEFINITIONS

1 TAC §211.1

The rules are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; and §2054.071, Texas Government Code authorizing the department to approve the designation of joint information manager.

No other code, article or statute is affected by this adoption.

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 3, 2015.

TRD-201504685
Martin H. Zelinsky
General Counsel
Department of Information Resources
Effective date: November 23, 2015
Proposal publication date: September 4, 2015
For further information, please call: (512) 463-1634

SUBCHAPTER B. STATE AGENCY INFORMATION RESOURCES MANAGERS

1 TAC §211.11

The rule is adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; and §2054.071, Texas Government Code authorizing the department to approve the designation of joint information manager.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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Proposal publication date: September 4, 2015
For further information, please call: (512) 463-1634

SUBCHAPTER C. INSTITUTION OF HIGHER EDUCATION INFORMATION RESOURCES MANAGERS

1 TAC §211.20, §211.21

The rules are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; and §2054.071, Texas Government Code authorizing the department to approve the designation of joint information manager.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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CHAPTER 212. PURCHASES OF COMMODITY ITEMS

The Texas Department of Information Resources (department/DIR) adopts amendments to 1 TAC Chapter 212, §§212.1, 212.10, 212.11, 212.20, 212.30, and new rules 1 TAC Chapter 212, §§212.41, 212.42, 212.43, and 212.50, concerning Purchases of Commodity Items without changes to the proposal as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5582). These adoptions are necessary to ensure the rules reflect legislative actions and changes in the purchase of commodity items. The new rules are necessary as a result of the passage of Senate Bill 20 (84R) and House Bill 2000 (84R). The department published a formal notice of rule review in the June 19, 2015, issue of the *Texas Register* (40 TexReg 4011). Review of the sections implements Government Code, §2001.039.

No comments were received as a result of that notice.

In 1 TAC §212.1, the department added language making all words and terms defined in 1 TAC Chapter 217 to have the same meaning in Chapter 212. This change is necessary to include new definitions established by House Bill 2000 (84R) effective September 1, 2015. A definition for "contract" was added to the chapter to clarify the existing rule. Language was added to the definition of "software" to clarify and make it consistent with other definitions. A definition for "request for pricing" was added to implement Senate Bill 20 (84R) effective September 1, 2015. The definition for "state agency" was amended to include institutions of higher education that have been determined to be out of compliance with the purchasing standards required under §51.9337, Education Code. A definition for "statement of work" was added to clarify new rules and requirements as established by Senate Bill 20 (84R) effective September 1, 2015.

In 1 TAC §212.10, language was added to define "institutions of higher education" as established in House Bill 2000 (84R). Additionally, language was added to exclude from the cooperative contracts program all contracts over $1 million dollars. This exclusion was added to ensure compliance with Section 15 of Senate Bill 20 (84R) effective September 1, 2015.

Amendments to 1 TAC §212.11 are necessary to implement new requirements for state agencies purchasing commodity items under this chapter as established by Section 15 of Senate Bill 20 (84R) effective September 1, 2015.

In 1 TAC §212.20, language was added to clarify and emphasize the existing rule. Specifically, amendments clarify that the department shall not issue an exemption for a purchase that has already taken place or solely on the basis that a solicitation has already been issued.

In §212.20(d) and §212.30(d) "calendar day" was amended to "business day" to be consistent with the Chapter and DIR policy.

Subchapter E and subsequent new rules, §§212.41, 212.42 and 212.43, were added to account for the new responsibilities added to DIR by Section 16 of Senate Bill 20 (84R) effective September 1, 2015. In implementing Senate Bill 20 (84R), it is not the department's intent to interfere with agency fiscal management or operations.

Subchapter F and subsequent new rule, §212.50, were added to account for the institutions of higher education that have been determined to be out of compliance with the purchasing standards required under §51.9337, Education Code.

The changes to the chapter apply to state agencies and institutions of higher education. The assessment of the impact of the adopted changes on institutions of higher education was prepared in consultation with the Information Technology Council for Higher Education (ITCHE) in compliance with §2054.121(c), Texas Government Code.

Grace Windbigler, Director of the Technology Sourcing Office, anticipates that there may be a material impact on some state agencies, but DIR does not have sufficient information at this time to calculate such impact. There will be no impact to institutions of higher education or local governments.

Ms. Windbigler has further determined that for each year of the first five years following the adoption of the amendments to 1 TAC Chapter 212 there are no anticipated additional economic costs to persons or small businesses required to comply with the amended rule.

SUBCHAPTER A. DEFINITIONS

1 TAC §212.1

The amendments to existing rule are adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; §2157.068(f), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2157; and §2157.0685(b)(2), Texas Government Code, which authorizes the department to adopt rules as necessary to advise agencies regarding the posting of statements of work.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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TRD-201504677
Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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SUBCHAPTER B. REQUIRED PURCHASES

1 TAC §212.10, §212.11

The amendments to existing rules are adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; §2157.068(f), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2157; and §2157.0685(b)(2), Texas Government Code, which authorizes the department to adopt rules as necessary to advise agencies regarding the posting of statements of work.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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SUBCHAPTER C. EXEMPTIONS

1 TAC §212.20

The amendments to existing rule are adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; §2157.068(f), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2157; and §2157.0685(b)(2), Texas Government Code, which authorizes the department to adopt rules as necessary to advise agencies regarding the posting of statements of work.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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SUBCHAPTER D. CERTIFICATION TO PURCHASE FROM LOCAL GOVERNMENT PURCHASING COOPERATIVES

1 TAC §212.30

The amendments to existing rule are adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; §2157.068(f), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2157; and §2157.0685(b)(2), Texas Government Code, which authorizes the department to adopt rules as necessary to advise agencies regarding the posting of statements of work.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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SUBCHAPTER E. APPROVAL OF STATEMENT OF WORK

1 TAC §§212.41 - 212.43

The new rules are adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; §2157.068(f), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2157; and §2157.0685(b)(2), Texas Government Code, which autho-

rizes the department to adopt rules as necessary to advise agencies regarding the posting of statements of work.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
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For further information, please call: (512) 463-1634

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SUBCHAPTER F. INSTITUTIONS OF HIGHER EDUCATION

1 TAC §212.50

The new rule is adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; §2157.068(f), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2157; and §2157.068(b)(2), Texas Government Code, which authorizes the department to adopt rules as necessary to advise agencies regarding the posting of statements of work.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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CHAPTER 215. STATEWIDE TECHNOLOGY CENTERS FOR DATA AND DISASTER RECOVERY SERVICES

The Texas Department of Information Resources (department) adopts amendments to 1 TAC Chapter 215, §§215.2, 215.13, and 215.33, concerning Statewide Technology Centers For Data and Disaster Recovery Services, without changes to the proposal as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5586). The amendments are adopted to ensure the rule more accurately reflects legislative actions and changes in the use of statewide technology centers.

No comments were received as a result of that notice.

The amendment to 1 TAC §215.2 aligns the definition of cloud with House Bill 3707 (84R) effective September 1, 2105. The legislation amended §2157.007, Texas Government Code, to replace the term "Advanced Internet based computing service" and its definition with "Cloud computing services" as defined by the United States Department of Commerce National Institute of Standards and Technology (NIST). Amendments were also made to 1 TAC Chapter 215, §215.13 and §215.33 to ensure consistency with the newly defined Cloud computing service throughout the Chapter.

Additional amendments to 1 TAC Chapter 215, §215.13 and §215.33 include adding "Hosting and management of telecommunication hardware for emergency services" to the list of Data Center Services. The amended rule is necessary, in part, as the result of passage of Senate Bill 866 (83R), effective as of May 18, 2013, which legislation amended §2054.376(a), Texas Government Code, to exclude telecommunication services, advanced communication services, and information services from the scope of a statewide technology center. The amended rule reflects the distinction between the language of Senate Bill 866 (83R) and existing statute in which both data processing and telecommunication equipment, by definition, is considered to be in scope for statewide technology center services.

The department selected multiple service providers through competitive procurements for the management of statewide technology centers that included all information resources technologies. Section 2054.003, Texas Government Code, defines information resources technologies to include data processing and telecommunications hardware and services. The subsequent passage of Senate Bill 866 (83R) now excludes the ability of a statewide technology center to provide telecommunication services, as those services are defined in the legislation.

Although the statute distinguishes data processing equipment from telecommunications equipment, in the context of the current state of technology, the equipment used for either purpose is often one in the same. The statewide technology center currently host and manage data processing equipment for state agencies. The department has been approached by one or more state agencies regarding the ability for the statewide technology center to host and manage telecommunication equipment for emergency services. In addition, the current outsourcing arrangement realizes additional cost savings to the state through increased compute volumes. Therefore, given the lack of distinction between telecommunication equipment and data processing equipment and the fact that the addition of telecommunication equipment for emergency services to the technology center will result in increased overall compute volume, the department, through its service providers, anticipates the future likelihood of hosting and managing telecommunication equipment for emergency services. In providing for the management and hosting of telecommunication equipment for emergency services, the department will require our customers to coordinate with a third party provider of telecommunication services, leveraging existing or competitively procured contract separate and distinct from the statewide technology center contracts. The amendments to 1 TAC Chapter 215, §215.13 and §215.33 clarify that the department may provide the service of hosting and managing telecommunication equipment for emergency services, but may not provide the related telecommunication services.

The changes to the chapter apply to state agencies, local government and institutions of higher education. The assessment of the impact of the adopted changes on institutions of higher education was prepared in consultation with the Information Technology Council for Higher Education in compliance with §2054.121(c), Texas Government Code.

Sally Ward, Data Center Services Division Director, determined that during the first five-year period following the amendments to 1 TAC Chapter 215, §§215.2, 215.13, and 215.33, there will be no fiscal impact on state agencies, institutions of higher education and local governments. The alignment of certain defined terms with recognized national standards and clarification of those services that are statutorily permissible through the statewide technology center increases the effectiveness of the rule for existing and potential agency, institutions, and local government customers.

Ms. Ward further determined that for each year of the first five years following the adoption of the amendments to 1 TAC Chapter 215, §§215.2, 215.13, and 215.33, there are no anticipated additional economic costs to persons or to small businesses required to comply with the amended rules.

SUBCHAPTER A. GENERAL PURPOSE AND DEFINITIONS

1 TAC §215.2

The amendments to the existing rule are adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; and §2054.379, Texas Government Code, which authorizes the department to adopt rules related to Statewide Technology Centers.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 3, 2015.

TRD-201504688
Martin H. Zelinsky
General Counsel
Department of Information Resources
Effective date: November 23, 2015
Proposal publication date: September 4, 2015
For further information, please call: (512) 463-1634

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SUBCHAPTER B. DATA CENTER SERVICES FOR STATE AGENCIES AND LOCAL GOVERNMENT

1 TAC §215.13

The amendments to the existing rule are adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; and §2054.379, Texas Government Code, which authorizes the department to adopt rules related to Statewide Technology Centers.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
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For further information, please call: (512) 463-1634

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SUBCHAPTER C. DATA CENTER SERVICES FOR INSTITUTIONS OF HIGHER EDUCATION

1 TAC §215.33

The amendments to the existing rule are adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, Texas Government Code; and §2054.379, Texas Government Code, which authorizes the department to adopt rules related to Statewide Technology Centers.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 3, 2015.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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Proposal publication date: September 4, 2015
For further information, please call: (512) 463-1634

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CHAPTER 216. PROJECT MANAGEMENT PRACTICES

The Texas Department of Information Resources (department/DIR) adopts the repeal of 1 TAC 216, §216.2 and §216.3; adopts new §216.2 and §216.3; and adopts amendments to 1 TAC Chapter 216, §§216.1, 216.10, 216.11, 216.12, 216.20, 216.21, and 216.22 concerning Project Management Practices without changes to the proposal as published in the September 11, 2015, issue of the *Texas Register* (40 TexReg 6001). These adopted amendments are necessary to clarify and update the processes and policies of current practices. The department published a formal notice of rule review in the September 11,

2014 issue of the *Texas Register* (39 TexReg 7355). Review of the sections implements Government Code, §2001.039.

No comments were received as a result of that notice.

In §216.1, department staff adopts the amended and new definitions to clarify existing policies and procedures.

In §216.2 department staff adopts the repeal of the rule and adopts the new language. All DIR rules that have definitions for state agency and institutions of higher education consistently place the definitions in that order. 1 TAC 216 are in reverse order of other chapters. The adopted repeal and replace corrects this anomaly and ensures consistency throughout all the department's rules.

In §216.3 department staff adopts the repeal the rule and adopts the new language. All DIR rules that have definitions for state agency and institutions of higher education consistently place the definitions in that order. 1 TAC 216 are in reverse order of other chapters. The adopted amendment corrects this anomaly and ensures consistency throughout all the department's rules.

In §216.10, department staff adopts amendments to clarify the existing rule. Additionally, the department adopts new subsection (b) requiring a state agency to include in the agency's strategic plan a description of the extent to which the agency uses its project management practices to ensure compliance with Texas Government Code 2054.156(c).

In §216.11, department staff adopts amendments to language to clarify existing policies and best practices.

In §216.12, the department adopts the project management knowledge areas to be consistent with the Project Management Body of Knowledge Guide.

In §216.20, department staff adopts amendments to clarify the existing rule.

In §216.21, department staff recommended amendments to language to clarify existing policies and best practices.

In §216.22, the department amended the project management knowledge areas to be consistent with the Project Management Body of Knowledge Guide.

The changes to the chapter apply to state agencies and institutions of higher education. The assessment of the impact of the adopted changes on institutions of higher education was prepared in consultation with the Information Technology Council for Higher Education (ITCHE) in compliance with §2054.121(c), Texas Government Code.

Deborah Hujar, Director of Technology Planning, Policy and Governance, has determined that during the first five-year period following the amendments to 1 TAC Chapter 216 there will be no fiscal impact on state agencies, institutions of higher education and local governments.

Ms. Hujar has further determined that for each year of the first five years following the adoption of the amendments to 1 TAC Chapter 216 there are no anticipated additional economic costs to persons or small businesses required to comply with the amended rule.

SUBCHAPTER A. DEFINITIONS

1 TAC §§216.1 - 216.3

The rules are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; and §2054.453, Texas Government Code, which authorizes the department to adopt rules to implement §2054.453 et. seq.

No other code, article or statute is affected by this adoption.

This agency hereby certifies that the adoption has been reviewed by legal counsel and found to be within the agency's legal authority to adopt.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 3, 2015.

TRD-201504698
Martin H. Zelinsky
General Counsel
Department of Information Resources
Effective date: November 23, 2015
Proposal publication date: September 11, 2015
For further information, please call: (512) 463-1634

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1 TAC §216.2, §216.3

The repeals are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; §2054.453, Texas Government Code, which authorizes the department to adopt rules to implement §2054.453 et. seq.

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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TRD-201504697
Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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SUBCHAPTER B. PROJECT MANAGEMENT PRACTICES FOR STATE AGENCIES

1 TAC §§216.10 - 216.12

The amendments are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; §2054.453, Texas Government Code, which authorizes the department to adopt rules to implement §2054.453 et. seq.

No other code, article or statute is affected by this proposal.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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SUBCHAPTER C. PROJECT MANAGEMENT PRACTICES FOR INSTITUTIONS OF HIGHER EDUCATION

1 TAC §§216.20 - 216.22

The amendments are adopted under §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054; §2054.453, Texas Government Code, which authorizes the department to adopt rules to implement §2054.453 et. seq.

No other code, article or statute is affected by this proposal.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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TRD-201504700
Martin H. Zelinsky
General Counsel
Department of Information Resources
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For further information, please call: (512) 463-1634

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CHAPTER 217. PROCUREMENT OF INFORMATION RESOURCES

SUBCHAPTER A. DEFINITIONS

1 TAC §§217.1 - 217.5

The Texas Department of Information Resources (department/DIR) adopts amendments to 1 TAC Chapter 217, §§217.1, 217.2, and 217.3 and adopts new §217.4 and 217.5 without changes to the proposal as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5589) to ensure the rules accurately reflect policies and procedures and to implement House Bill 2000 (84R). The department published a formal notice of rule review in the June 19, 2015, issue of the *Texas Register* (40 TexReg 4011). Review of the sections implements Government Code, §2001.039.

In §217.1, the department adopts amendments to add language to the definition of "computer equipment". The current language is out of date and does not account for new technology. The adopted amendments reflect current policies and practices.

In §217.2, the department adopts amendments to clarify the definition of "institutions of higher education" to implement House Bill 2000 (84R).

In §217.3, the department adopts amendments to the definition of "state agency" to implement House Bill 2000 (84R).

In §217.4, the department adopts a new rule to define a "quasi-state agency" to implement House Bill 2000 (84R).

In §217.5 the department adopts a new rule to define a "private school" to implement House Bill 2000 (84R).

The changes to the chapter apply to state agencies and institutions of higher education. The assessment of the impact of the proposed changes on institutions of higher education was prepared in consultation with the Information Technology Council for Higher Education (ITCHE) in compliance with §2054.121(c), Texas Government Code.

Grace Windbigler, Director of the Technology Sourcing Office, has determined that during the first five-year period following the amendments to 1 TAC Chapter 217 there will be no fiscal impact on state agencies, institutions of higher education and local governments.

Ms. Windbigler has further determined that for each year of the first five years following the adoption of the amendments to 1 TAC Chapter 217 there are no anticipated additional economic costs to persons or small businesses required to comply with the amended rule.

No comments were received as a result of that notice.

The amendments to existing rule are adopted pursuant to §2054.052(a), Texas Government Code, which authorizes the department to adopt rules as necessary to implement its responsibilities under Chapter 2054, and House Bill 2000 (84R).

No other code, article or statute is affected by this adoption.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 3, 2015.

TRD-201504683
Martin H. Zelinsky
General Counsel
Department of Information Resources
Effective date: November 23, 2015
Proposal publication date: September 4, 2015
For further information, please call: (512) 463-1634

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PART 15. TEXAS HEALTH AND HUMAN SERVICES COMMISSION

CHAPTER 354. MEDICAID HEALTH SERVICES

SUBCHAPTER A. PURCHASED HEALTH SERVICES

The Texas Health and Human Services Commission (HHSC) adopts amendments to §354.1121, concerning Definitions; §354.1149, concerning Exclusions and Limitations; and §354.1371, concerning Tuberculosis Clinic Benefits and Limitations, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5593) and will not be republished.

BACKGROUND AND JUSTIFICATION

The amendments remove the prohibition against a tuberculosis (TB) institution receiving Texas Medicaid payment for inpatient services. The Texas Center for Infectious Disease (TCID), which is the only TB institution in Texas, is a public facility administered by the Texas Department of State Health Services that provides inpatient care to individuals diagnosed with TB. TCID is primarily funded through state general revenue. TCID could not receive Medicaid payment for inpatient services delivered to Medicaid clients under the previous rule prohibitions and under the Medicaid state plan. The amendments allow TCID to bill Medicaid for Medicaid-enrolled patients seeking inpatient treatment at TCID.

COMMENTS

The minimum 30-day comment period following publication of the proposed rules ended October 5, 2015. HHSC did not receive any comments regarding the amended rules.

DIVISION 10. DEFINITIONS

1 TAC §354.1121

STATUTORY AUTHORITY

The amendments are adopted under Texas Government Code §531.033, which provides the Executive Commissioner of HHSC with broad rulemaking authority; and Human Resources Code §32.021 and Texas Government Code §531.021(a), which provide HHSC with the authority to administer the federal medical assistance (Medicaid) program in Texas.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 5, 2015.

TRD-201504751
Karen Ray
Chief Counsel
Texas Health and Human Services Commission
Effective date: November 25, 2015
Proposal publication date: September 4, 2015
For further information, please call: (512) 424-4050

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DIVISION 11. GENERAL ADMINISTRATION

1 TAC §354.1149

STATUTORY AUTHORITY

The amendments are adopted under Texas Government Code §531.033, which provides the Executive Commissioner of HHSC with broad rulemaking authority; and Human Resources Code §32.021 and Texas Government Code §531.021(a), which provide HHSC with the authority to administer the federal medical assistance (Medicaid) program in Texas.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 5, 2015.

TRD-201504752
Karen Ray
Chief Counsel
Texas Health and Human Services Commission
Effective date: November 25, 2015
Proposal publication date: September 4, 2015
For further information, please call: (512) 424-6900

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DIVISION 28. TUBERCULOSIS

1 TAC §354.1371

STATUTORY AUTHORITY

The amendments are adopted under Texas Government Code §531.033, which provides the Executive Commissioner of HHSC with broad rulemaking authority; and Human Resources Code §32.021 and Texas Government Code §531.021(a), which provide HHSC with the authority to administer the federal medical assistance (Medicaid) program in Texas.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 5, 2015.

TRD-201504753
Karen Ray
Chief Counsel
Texas Health and Human Services Commission
Effective date: November 25, 2015
Proposal publication date: September 4, 2015
For further information, please call: (512) 424-6900

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TITLE 16. ECONOMIC REGULATION

PART 1. RAILROAD COMMISSION OF TEXAS

CHAPTER 12. COAL MINING REGULATIONS

SUBCHAPTER G. SURFACE COAL MINING AND RECLAMATION OPERATIONS, PERMITS, AND COAL EXPLORATION PROCEDURES SYSTEMS

DIVISION 2. GENERAL REQUIREMENTS FOR PERMITS AND PERMIT APPLICATIONS

16 TAC §12.108

The Railroad Commission of Texas (Commission) adopts amendments to §12.108, relating to Permit Fees, without changes to the proposed text as published in the September 11, 2015, issue of the *Texas Register* (40 TexReg 6005). The adopted amendments implement provisions of House Bill 1, 84th Texas Legislature (Regular Session, 2015), and, specifically, Article VI, Railroad Commission Rider 5, which requires the amounts appropriated from general revenue for state fiscal years 2016 and 2017 to cover the cost of permitting and inspecting coal mining operations. This appropriation is contingent upon the Commission assessing fees sufficient to generate, during the 2016-2017 biennium, revenue to cover the general revenue appropriations.

The Commission amends the fees set forth in subsection (b) by amending the calendar years to 2015 and 2016. The Commission deletes paragraph (1) to eliminate the annual fee for each acre of land within a permit area on which coal or lignite was actually removed during a calendar year, which is currently $84 per acre. The Commission renumbers paragraph (2) as paragraph (1) and increases the annual fee for each acre of land within a permit area covered by a reclamation bond on December 31st of each year, as shown on the map required at §12.142(2)(C) of this chapter (relating to Operation Plan: Maps and Plans), from the current $12 to $13.05. Finally, the Commission renumbers paragraph (3) as paragraph (2) and increases the annual fee for each permit in effect on December 31st of a year to $6,600 from the current amount of $6,540. The Commission anticipates that annual fees in these new amounts will result in revenue of $2,826,150 in each year of the 2016-2017 biennium.

The Commission received no comments on the proposal.

The Commission adopts the amendments under Texas Natural Resources Code, §134.013, which authorizes the Commission to promulgate rules pertaining to surface coal mining operations and §134.055, which authorizes the Commission to collect annual fees.

Texas Natural Resources Code, §134.013 and §134.055 are affected by the adopted amendments.

Statutory authority: Texas Natural Resources Code, §134.013 and §134.055.

Cross-reference to statute: Texas Natural Resources Code, §134.013 and §134.055.

Issued in Austin, Texas, on November 3, 2015.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 3, 2015.

TRD-201504672
Haley Cochran
Rules Attorney, Office of General Counsel
Railroad Commission of Texas
Effective date: November 23, 2015
Proposal publication date: September 11, 2015
For further information, please call: (512) 475-1295

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TITLE 19. EDUCATION

PART 1. TEXAS HIGHER EDUCATION COORDINATING BOARD

CHAPTER 1. AGENCY ADMINISTRATION

SUBCHAPTER G. APPLY TEXAS ADVISORY COMMITTEE

19 TAC §§1.128 - 1.134

The Texas Higher Education Coordinating Board adopts amendments to §§1.128 - 1.134, concerning the Apply Texas Advisory Committee (ATAC) without changes to the proposed text published in the August 21, 2015, issue of the *Texas Register* (40 TexReg 5223). Changes to these sections were made in accordance with Senate Bill 215, passed by the 83rd Texas Legislature, Regular Session, which called for the Board to engage institutions of higher education in a negotiated rulemaking process as described by Chapter 2008, Government Code, "when adopting a policy, procedure, or rule relating to...an admission policy regarding the common admission application under the Texas Education Code, Section 51.762." The ATAC rule amendments for these sections were reviewed and approved by the Negotiated Rulemaking Committee on Apply Texas on July 31, 2015. The report of the Negotiated Rulemaking Committee is available at the offices of the Texas Higher Education Coordinating Board located at 1200 East Anderson Lane, Austin, Texas.

There were no comments received regarding these amendments.

The amendments are adopted under the Texas Education Code, §51.762 which provides the Coordinating Board with the authority to adopt rules to administer Texas Education Code, Chapter 51, Subchapter S.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 5, 2015.

TRD-201504754
Bill Franz
General Counsel
Texas Higher Education Coordinating Board
Effective date: November 25, 2015
Proposal publication date: August 21, 2015
For further information, please call: (512) 427-6114

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CHAPTER 4. RULES APPLYING TO ALL PUBLIC INSTITUTIONS OF HIGHER EDUCATION IN TEXAS

SUBCHAPTER B. TRANSFER OF CREDIT, CORE CURRICULUM AND FIELD OF STUDY CURRICULA

19 TAC §4.28, §4.32

The Texas Higher Education Coordinating Board (Coordinating Board) adopts amendments to §4.28 and §4.32, concerning transfer of core curriculum courses and transfer of field of study courses without changes to the proposed text as published in the July 17, 2015, issue of the *Texas Register* (40 TexReg 4506). These amendments clarify that transfer of core curriculum courses and field of study courses is a mandatory substitution for courses required for the core curriculum or the field of study curriculum at a receiving institution.

There were no comments received concerning these amendments.

The amendments are adopted under Texas Education Code, Chapter 61, Subchapter S, §61.827, which provides the Coordinating Board with the authority to adopt rules to administer the section.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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TRD-201504755
Bill Franz
General Counsel
Texas Higher Education Coordinating Board
Effective date: November 25, 2015
Proposal publication date: July 17, 2015
For further information, please call: (512) 427-6114

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SUBCHAPTER C. TEXAS SUCCESS INITIATIVE

19 TAC §4.54, §4.58

The Texas Higher Education Coordinating Board (Coordinating Board) adopts amendments to §4.54 and §4.58, concerning the Texas Success Initiative (TSI) to support developmental education reform efforts as related to Texas Education Code (TEC), §51.3062 Success Initiative (HB 1054 and SB 1776, 84th Texas Legislature, Regular Session) without changes to the proposed text as published in the August 7, 2015, issue of the *Texas Register* (40 TexReg 4977). Specifically, these amendments incorporate into existing rules changes and provisions enacted by the 84th Texas Legislature (HB 1054, SB 1776). Specifically, the amendments would (1) add Basic Academic Skills Education (BASE) to the non-course competency-based developmental education intervention definition, outlining its co-enrollment requirements; (2) increase the TSI exemption for the college preparatory course under Texas Education Code Section 28.014 from twelve (12) months to twenty-four (24) months from the student's date of high school graduation, and would require the student to enroll in the entry-level college credit course in the exempted content area in the student's first year of enrollment at the institution of higher education; (3) require that students with the college preparatory course exemption who do not successfully complete the college credit course in the exempted content area must be advised of non-course based options for becoming college ready; and (4) require institutions of higher education with developmental education programs to provide differentiated instructional options for students assessed at BASE levels.

The following comments were received from The University of Texas at Austin:

Comment: Section 4.54(a)(10) - Tracking students to make sure they enroll in either a reading/writing or math course (depending on the student's needs) will surely be a challenge, one that advisors will likely be responsible for. I'm not sure institutions will have systems in place to ensure this. Additionally, it is not clear what will happen to the student's college-readiness eligibility if the institution fails to ensure the student enrolls in their first course in their first year. Will the responsibility lie with the institution? Will the student have to demonstrate college-readiness again with the TSI test because the institution failed to put them in the appropriate course?

Response: It is the responsibility of the College Preparatory Course teachers, high school counselors, and college and university advisors to ensure students who successfully completed a College Preparatory Course and qualified for the TSI exemption, as outlined in Section 4.54(a)(10), clearly understand the parameters of the exemption, including the requirement that the student enroll in the course to which the exemption applies within one year of enrollment at the institution of higher education. It is also important that students understand the two-part provision of the exemption as articulated in Texas Education Code, Section 51.3062(q-2): enrollment within 24 months of high school graduation and enrollment in the exempted course within one year. Not meeting *both* provisions will invalidate the exemption. No additional changes were made as a result of these comments.

Comment: Section 4.58(e) - The ambiguity in this section is more problematic. It states that a student who is eligible to take a college-level course through having completed a College Prep course in high school must earn a C or above or else be advised of NCBOs for becoming college-ready. This rule does not explicitly say that the student is no longer college-ready. In addition, the previous section simply says that the student must enroll in the college-level course in the first year. It's not clear if the student who earns less than a C can take the course again in the following semester; is considered "not college-ready" and must demonstrate college readiness in a different way (TSI Assessment); and Is required to enroll in an NCBO (vs. a semester long developmental course). In short, this section needs to be explicit about the college-readiness status of the student who earns less than a C and what the options or requirements are for that student.

Response: As first articulated in Texas Education Code, §51.3062(q-2), §4.58(e) states that a student with a TSI exemption as outlined §4.58(10) who earns less than a C in the course to which the exemption applies must be advised of non-course based options for becoming college ready, such as tutoring or accelerated learning. It does not require that the student follow the advice, nor does it state that a student not following the advice loses his/her exemption. In addition, this student may elect to enroll again in the following semester in the course to which the exemption applies. As long as the two provisions of the exemption are met (i.e., the student with the TSI exemption enrolled at an institution of higher education within 24 months of his/her date of high school graduation and the student enrolled in the course to which the exemption applies within one year of enrollment at the institution of higher education), then the exemption remains in effect, independent of the student's performance in the course to which the exemption applies. No additional changes were made as a result of these comments.

Comment: I have no problems with the changes in this subchapter. They follow logically and consistently from the new laws on dual credit. However, communication about dual credit eligibility is an area that THECB and TEA need to work together on as there is a great deal of miscommunication and misunderstanding about this among high school teachers and administrators. Many high schools are insisting that students pass the TSI Assessment to be eligible for dual credit. While this is clearly acceptable, it is not particularly appropriate in most cases, considering students will have taken the English II or Algebra I STAAR (+ Algebra II course).

Response: We continue to work closely with the Texas Education Agency and other organizations such as the regional Education Service Centers, AdviseTX, and P-16 Councils to ensure that administrators, counselors, and advisors understand and communicate to students and their parents rules related to Dual Credit and TSI exemptions. No additional changes were made as a result of these comments.

The amendments are adopted under the Texas Education Code, §51.307, which provides the Coordinating Board with the authority to adopt rules to implement the provisions of Texas Education Code, §51.3062, concerning the Texas Success Initiative.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 5, 2015.

TRD-201504756
Bill Franz
General Counsel
Texas Higher Education Coordinating Board
Effective date: November 25, 2015
Proposal publication date: August 7, 2015
For further information, please call: (512) 427-6114

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SUBCHAPTER D. DUAL CREDIT PARTNERSHIPS BETWEEN SECONDARY SCHOOLS AND TEXAS PUBLIC COLLEGES

19 TAC §4.85

The Texas Higher Education Coordinating Board (Coordinating Board) adopts amendments to §4.85, concerning the course load, grade level, and junior college service area restrictions on dual credit course enrollment at public institutions of higher education without changes to the proposed text as published in the August 7, 2015, issue of the *Texas Register* (40 TexReg 4968). The amendments remove from existing rules course load, grade level, and junior college service area restrictions on dual credit course enrollment at public institutions of higher education. Language has been removed that limits the number of dual credit courses or semester credit hours in which a high school student may enroll at public institutions of higher education during any semester or academic year. Language has been removed that limits the grade level at which a high school student may be eligible to enroll in a dual credit course at public institutions of higher education. Language that restricts dual credit course enrollment by junior college service area has also been removed.

There were no comments received concerning these amendments.

The amendments are adopted under Texas Education Code, Chapter 28, §28.009(b), Chapter 29, §29.182 and §29.184, Chapter 130, §§130.001(b)(3) - (4), 130.008, and 130.090, which provides the Coordinating Board with the authority to adopt rules to administer the section.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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TRD-201504757
Bill Franz
General Counsel
Texas Higher Education Coordinating Board
Effective date: November 25, 2015
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For further information, please call: (512) 427-6114

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SUBCHAPTER S. APPROVAL FOR PARTICIPATION IN THE STATE AUTHORIZATION RECIPROCITY AGREEMENT (SARA) FOR PUBLIC INSTITUTIONS OF HIGHER EDUCATION

19 TAC §§4.310 - 4.317

The Texas Higher Education Coordinating Board (Coordinating Board) adopts new §§4.310 - 4.317, concerning participation in the State Authorization Reciprocity Agreement without changes to the proposed text as published in the July 17, 2015, issue of the *Texas Register* (40 TexReg 4507). The intent of these new sections was to establish the Coordinating Board as the state agency tasked with overseeing state participation in SARA. Participation in SARA will allow Texas public institutions to offer distance education courses and programs in other SARA participating states for a flat annual fee. As the portal agency, Coordinating Board staff would serve as the point of contact for all other SARA states, evaluate SARA applications from Texas institutions to determine eligibility, serve as the initial contact for complaints about Texas institutions that participate in SARA, provide data and reports as requested by SARA, perform annual reviews of all Texas institutions participating in SARA. Texas institutions have shown interest and pledged support for participation in SARA.

Two comments were received. One comment was received from the University of North Texas System and another comment was received by Texas Tech University System.

Comment: Both comments expressed concern regarding §4.313(1) which requires SARA institutions to abide by the Council of Regional Accrediting Commissions (C-RAC) guidelines for the evaluation of distance education programs. Currently, institutions are required to adhere to the Coordinating Board's Principals of Good Practice for Academic Degree and Certification Programs and Credit Courses Offered Electronically for the evaluation of distance education programs. Requiring multiple

guidelines for the evaluation of distance education would cause confusion and increased workloads for Texas institutions.

Staff response: The C-RAC guidelines are required by the National Council-SARA and cannot be modified. Coordinating Board staff will consider revision of the Principals of Good Practice for Academic Degree and Certification Programs and Credit Courses Offered Electronically. There were no additional changes made as a result of this comment.

The new sections are adopted under Texas Education Code, Chapter 61, §61.05121, which provides the Coordinating Board with the authority to adopt rules to administer the section.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 5, 2015.

TRD-201504758
Bill Franz
General Counsel
Texas Higher Education Coordinating Board
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For further information, please call: (512) 427-6114

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CHAPTER 6. HEALTH EDUCATION, TRAINING, AND RESEARCH FUNDS

SUBCHAPTER C. TOBACCO LAWSUIT SETTLEMENT FUNDS

19 TAC §6.73

The Texas Higher Education Coordinating Board (Coordinating Board) adopts amendments to §6.73, concerning the nursing, allied health, and other health-related education grant programs without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5643). The intent of the amendments was to update the Board rules to align with the amendments to the Texas Education Code, Chapter 63, Subchapter C, §63.202(f) and (g), enacted by House Bill 495, 84th Texas Legislature, Regular Session, that extend institutions' eligibility to receive grant awards.

There were no comments received concerning these amendments.

The amendments are adopted under Texas Education Code, Chapter 63, Subchapter C, §63.202, which provides the Coordinating Board with the authority to adopt rules to administer the section.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bill Franz
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SUBCHAPTER F. PLANNING GRANTS FOR GRADUATE MEDICAL EDUCATION

19 TAC §§6.105, 6.107, 6.108

The Texas Higher Education Coordinating Board (Coordinating Board) adopts amendments to §§6.105, 6.107, and 6.108, concerning the definition of terms and eligibility for support under the planning and partnership grant program for graduate medical education. Section 6.108 is being adopted with a clarifying change to the proposed text as published in the July 17, 2015, issue of the *Texas Register* (40 TexReg 4508) and will be republished. Section 6.105 and §6.107 are being adopted without change. The intent of these amendments was to make the following changes required by Senate Bill (SB) 18, 2015, 84th Texas Legislature, Regular Session: rename the program to include a reference to the partnership aspect of the program, broaden the categories of entities eligible to apply for support under the grant program, and add and clarify definitions of certain eligible entities.

One comment was received from Tenet Healthcare, Dallas.

Comment: Tenet commended the Texas Legislature and the Board for their actions that will allow and encourage additional participants in the Planning and Partnership Grants program. The comment further noted that support through the grant program will provide a meaningful contribution to the process of developing additional, sustainable residency programs in the state.

Response: Staff agreed with comment. The Coordinating Board's General Counsel recommended adding the word "new" to §6.108(b) to further comply with Senate Bill 18.

The amendments are adopted under Texas Education Code, Chapter 58A, Subchapter B, §58A.021, which provides the Coordinating Board with the authority to adopt rules to administer the section.

§6.108. Eligibility.

(a) The following entities located in the state are eligible to apply for support under the Planning and Partnership Grant Program:

(1) a hospital; or

(2) a medical school; or

(3) a community-based, ambulatory patient care center.

(b) A grant under this subchapter must be used for the purpose of planning a new GME program that includes first-year residency positions.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bill Franz
General Counsel
Texas Higher Education Coordinating Board
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CHAPTER 7. DEGREE GRANTING COLLEGES AND UNIVERSITIES OTHER THAN TEXAS PUBLIC INSTITUTIONS

SUBCHAPTER B. APPROVAL FOR PARTICIPATION IN THE STATE AUTHORIZATION RECIPROCITY AGREEMENT (SARA) FOR PRIVATE OR INDEPENDENT INSTITUTIONS OF HIGHER EDUCATION AND PRIVATE POST-SECONDARY EDUCATIONAL INSTITUTIONS

19 TAC §§7.50 - 7.57

The Texas Higher Education Coordinating Board (Coordinating Board) adopts new §§7.50 - 7.57, concerning participation in the State Authorization Reciprocity Agreement without changes to the proposed text as published in the July 17, 2015, issue of the *Texas Register* (40 TexReg 4509). The intent of these new sections was to establish the Coordinating Board as the state agency tasked with overseeing state participation in SARA. Participation in SARA will allow Texas private and independent institutions to offer distance education courses and programs in other SARA participating states for a flat annual fee. As the portal agency, Coordinating Board staff would serve as the point of contact for all other SARA states, evaluate SARA applications from Texas institutions to determine eligibility, serve as the initial contact for complaints about Texas institutions that participate in SARA, provide data and reports as requested by SARA, perform annual reviews of all Texas institutions participating in SARA. Texas institutions have shown interest and pledged support for participation in SARA.

Two comments were received. One comment was received from the University of North Texas System and another comment was received by Texas Tech University System.

Comment: Both comments expressed concern regarding §7.53(a) which requires SARA institutions to abide by the Council of Regional Accrediting Commissions (C-RAC) guidelines for the evaluation of distance education programs. Currently, institutions are required to adhere to the Coordinating Board's Principals of Good Practice for Academic Degree and Certification Programs and Credit Courses Offered Electronically for the evaluation of distance education programs. Requiring multiple guidelines for the evaluation of distance education would cause confusion and increased workloads for Texas institutions.

Staff response: The C-RAC guidelines are required by the National Council-SARA and cannot be modified. Coordinating Board staff will consider revision of the Principals of Good Practice for Academic Degree and Certification Programs and Credit Courses Offered Electronically.

The new rules are adopted under Texas Education Code, Chapter 61, §61.05121, which provides the Coordinating Board with the authority to adopt rules to administer the section.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bill Franz
General Counsel
Texas Higher Education Coordinating Board
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For further information, please call: (512) 427-6114

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CHAPTER 9. PROGRAM DEVELOPMENT IN PUBLIC TWO-YEAR COLLEGES

SUBCHAPTER L. MULTIDISCIPLINARY STUDIES ASSOCIATE DEGREES

19 TAC §§9.550 - 9.555

The Texas Higher Education Coordinating Board (Coordinating Board) adopts new §§9.550 - 9.555, concerning the administration of multidisciplinary studies associate degrees at public community colleges. Section 9.552 is adopted with clarifying changes to the proposed text as published in the July 17, 2015, issue of the *Texas Register* (40 TexReg 4511) and will be republished. Sections 9.550, 9.551 and 9.553 - 9.555 are adopted without change. The intent of the new rules was to provide guidance concerning the administration of multidisciplinary studies associate degrees at public community colleges as required by Senate Bill 1189, 84th Legislature, Regular Session. The rules define the course requirements of a multidisciplinary studies associate degree and outlines how students enrolled in these programs must be advised on the required courses to complete the degree program after completing a cumulative total of 30 semester credit hours. The new rules will effect students enrolling in multidisciplinary studies associate degrees at public community colleges effective the 2016 fall semester.

There were no comments received, however a suggestion was made from the Coordinating Board's General Counsel that recommended adding specific statutory citations to §9.552(4) and (6).

The new rules are adopted under Texas Education Code, Chapter 130, §130.0104, which provides the Coordinating Board with the authority to adopt rules to administer the section.

§9.552. Definitions.

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

(1) Board or Coordinating Board--The Texas Higher Education Coordinating Board.

(2) Core Curriculum--Has the meaning as defined by §4.28 of this title (relating to Transfer of Credit, Core Curriculum and Field of Study Curricula).

(3) Degree Plan--The meaning as defined in Texas Education Code, §51.9685(a)(1).

(4) Four-year College or University--A degree-granting postsecondary institution as define in Texas Education Code, §61.003(3).

(5) Multidisciplinary Studies Associate Degree Program--A coordinating board approved associate of arts or associate of science degree composed of the college's core curriculum and enough additional courses to equal 60 semester credit hours (SCH). The SCH beyond the core curriculum must be selected by the student, in consultation with an academic advisor, and transfer to a specific field of study or major at a university of the student's choice.

(6) Public Community College--The meaning as defined in Texas Education Code, §61.003(2).

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bill Franz
General Counsel
Texas Higher Education Coordinating Board
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CHAPTER 13. FINANCIAL PLANNING
SUBCHAPTER G. RESEARCH DEVELOPMENT FUND

19 TAC §§13.121 - 13.127

The Texas Higher Education Coordinating Board (Coordinating Board) adopts amendments to §§13.121 - 13.127, concerning the standards and accounting methods for determining restricted research expenditures without changes to the proposed text as published in the July 17, 2015, issue of the *Texas Register* (40 TexReg 4512). The intent of the amendments was to rename the Subchapter to Restricted Research Expenditures; make text and name changes required by House Bill (HB) 1000, 84th Texas Legislature, Regular Session; and implement changes to the standards and accounting methods for restricted research expenditures in response to a State Auditor's Office (SAO) audit with SAO Report No. 12-038, June 2012.

There were no comments received concerning these amendments.

The amendments are adopted under the Texas Education Code, Chapter 62, Subchapter E, §62.096, which authorized the Coordinating Board to prescribe standards and accounting methods for determining the amount of restricted research funds expended.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bill Franz
General Counsel
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CHAPTER 21. STUDENT SERVICES
SUBCHAPTER R. DENTAL EDUCATION LOAN REPAYMENT PROGRAM

19 TAC §§21.560 - 21.566

The Texas Higher Education Coordinating Board (Coordinating Board) adopts new §§21.560 - 21.566, concerning the Dental Education Loan Repayment Program with changes to §21.564 of the proposed text as published in the July 31, 2015, issue of the *Texas Register* (40 TexReg 4871). Sections 21.560 - 21.563 and 21.565 and 21.566 are being adopted without changes. The General Appropriations Act passed by the 84th Texas Legislature includes appropriations for the Dental Education Loan Repayment Program for the 2016-2017 biennium. The program had not been funded for two consecutive biennia, and therefore the rules were repealed in January of 2014. Section 61.908 of the Texas Education Code states that the Coordinating Board shall adopt rules necessary for the administration of the program.

The following comments were received regarding these new rules:

Comment: The Texas Dental Association was in support of the rules as written and simply asked whether consideration could be made to a higher loan repayment level. In response to a comment on a rule for another healthcare provider loan repayment program, §21.564(b)(2) has been modified to clarify that dentists must have provided direct patient care to individuals enrolled in Medicaid or CHIP or both.

Staff Response: The rules do provide for the Commissioner or his designee to increase the maximum amount if the appropriated funding is sufficient to warrant an increase. If, at the end of the application period, less than eleven qualified applicants are identified, the agency will consider an increased repayment amount given the $110,000 in funding that has been appropriated for FY16.

The new sections are adopted under the Texas Education Code, §56.403, which gives the Coordinating Board the authority to adopt rules consistent with Texas Education Code, Chapter 56, Subchapter P.

§21.564. Eligible Dentist.

(a) To be eligible for conditional approval, contingent upon completion of the service period, an applicant must:

(1) be licensed by the Texas State Board of Dental Examiners and have no disciplinary action against him/her;

(2) agree to provide at least twelve consecutive months of comprehensive, general or pediatric dental services in an area that is underserved with respect to dental care; and

(3) submit a completed application to the Board by the published deadline.

(b) To be eligible for disbursement of a loan repayment award, a dentist whose application was conditionally approved must:

(1) have provided at least twelve consecutive months of comprehensive general or pediatric dental services, for an average of at least 32.5 hours of direct patient care per week, in an area that is underserved with respect to dental care;

(2) during the service period, have provided direct patient care to individuals enrolled in Medicaid or Chip or both; and

(3) ensure that the Board has received all required end-of-service period verification forms by the established deadline.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bill Franz
General Counsel
Texas Higher Education Coordinating Board
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CHAPTER 22. GRANT AND SCHOLARSHIP PROGRAMS

SUBCHAPTER M. TEXAS EDUCATIONAL OPPORTUNITY GRANT PROGRAM

19 TAC §22.262

The Texas Higher Education Coordinating Board (Coordinating Board) adopts amendments to §22.262, concerning the allocation process for the Texas Educational Opportunity Grant (TEOG) without changes to the proposed text as published in the July 24, 2015, issue of the *Texas Register* (40 TexReg 4759). These amendments were adopted on an emergency basis. The intent of the amendments is to incorporate into existing rule changes and provisions developed by the Negotiated Rule-Making Committees, one representing public community colleges and one representing public technical and state colleges.

The General Appropriations Act of the 2016-2017 Biennium creates two separate funding strategies for the Texas Educational Opportunity Grant program- Public community Colleges and Public State and Technical Colleges. Previously combined into one strategy, the delineation of separate strategies resulted in the Coordinating Board convening Negotiated Rule-Making Committees to develop allocation methods for each strategy.

The amendments to §22.262 remove the current temporary "hold harmless" language and outline an allocation process based on enrollments weighted by average tuition and fees. An 85% "hold harmless" component was agreed to by the committee in order to provide a two-year transition period to the new allocation levels.

The amendments to §22.262(b)(3) outline an allocation process based on enrollments weighted by average tuition and fees for public technical and state colleges. A separate section of the rule is necessary because the technical and state colleges did not propose the same hold harmless rule used by the community colleges.

Section 22.262(d) is struck from the rule, as it is no longer required.

The amendments to §22.262(g) align the rule with the G.A.A. Higher Education Coordinating Board Rider 22.

There were no comments received concerning these amendments.

The amendments are adopted under the Texas Education Code, §56.403, which gives the Coordinating Board the authority to adopt rules consistent with Texas Education Code, Chapter 56, Subchapter P.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bill Franz
General Counsel
Texas Higher Education Coordinating Board
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For further information, please call: (512) 427-6114

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SUBCHAPTER V. TEXAS SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS CHALLENGE SCHOLARSHIP PROGRAM

19 TAC §22.572

The Texas Higher Education Coordinating Board (Coordinating Board) adopts amendments to §22.572, concerning the Texas Science, Technology, Engineering, and Mathematics Challenge Scholarship Program without changes to the proposed text as published in the August 7, 2015, issue of the *Texas Register* (40 TexReg 4970). The amendments incorporated into existing rules changes and provisions that modify the requirements for continued participation in the T-STEM Program by a public junior or technical college. Language has been added to change the time frame for continuing eligibility from the year following the first academic year of participation to the beginning of the third year following implementation of a T-STEM Program. The length of time that institutions have to document their students' performance has been changed from three months to twelve months. The language describing whose performance must be documented is changed from graduates to scholarship recipients. The language requiring employment in a STEM field has been removed from the employment condition. The language describing enrollment eliminates the upper-division requirement and adds certificates and associate degrees to the baccalaureate degree qualification.

There were no comments received regarding the amendments.

The amendments are adopted under Texas Education Code, Chapter 61, §61.9792 which provides the Coordinating Board with the authority to adopt rules to administer the section.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bill Franz
General Counsel
Texas Higher Education Coordinating Board
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For further information, please call: (512) 427-6114

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PART 2. TEXAS EDUCATION AGENCY

CHAPTER 74. CURRICULUM REQUIREMENTS

SUBCHAPTER C. OTHER PROVISIONS

19 TAC §74.24, §74.26

The State Board of Education (SBOE) adopts amendments to §74.24 and §74.26, concerning other curriculum provisions. The amendments are adopted without changes to the proposed text as published in the August 7, 2015 issue of the *Texas Register* (40 TexReg 4993) and will not be republished. Section 74.24 addresses assessment for acceleration in Kindergarten through Grade 5 and assessment for course credit in Grades 6-12. Section 74.26 addresses the award of credit by a school district for high school courses. The adoption amends existing requirements to provide additional support and flexibility in meeting high school graduation requirements for students who are homeless or in substitute care and modifies the passing standard for credit by examination.

REASONED JUSTIFICATION. Students in substitute care, typically known as foster care, who often move from one school to another are faced with special challenges to learning and achievement during their formative years. Education-related issues for students in foster care were first addressed in the federal Fostering Connections Act of 2008, which encourages child welfare and education systems to work together in order to increase educational stability for children and youth in foster care.

The 81st Texas Legislature, Regular Session, 2009, passed Senate Bill (SB) 2248, adding the Texas Education Code (TEC), §25.007, in order to address school transition for students in substitute care. The statute charges the agency to assist with transition for students in substitute care from one school to another. The 83rd Texas Legislature, Regular Session, 2013, passed SB 1404 and House Bill (HB) 2619 amending the TEC, §25.007, by adding transition assistance requirements for students in substitute care.

The Supreme Court of Texas, Permanent Judicial Commission for Children, Youth and Families (Children's Commission) published *The Texas Blueprint: Transforming Education Outcomes for Children and Youth in Foster Care* in 2012. The Texas Education Agency (TEA) released a *Foster Care and Student Success Resource Guide,* co-authored with the Texas Department of Family and Protective Services and the Children's Commission, with preliminary guidance and information for schools in October 2013.

The 84th Texas Legislature, Regular Session, 2015, passed SB 1494, amending the TEC, §25.007 and §28.025, to include homeless students in the provisions regarding school transition for students in substitute care.

The 84th Texas Legislature, Regular Session, 2015, also passed SB 453, amending the TEC, §28.023(c-1), to reduce the minimum required scaled score on the College-Level Examination Program (CLEP) exams from 60 to 50 in order for a student to earn credit for a course or subject through credit by examination.

In meeting the statutory requirement for providing transition assistance, the agency identified two rules, §74.24, Credit by Examination, and §74.26, Award of Credit, that would require amendments to support transition assistance for students. Since the SBOE, rather than the agency, has statutory authority to adopt rules under this section, the SBOE approved the following amendments to provide additional support for students who are homeless or in substitute care.

Section 74.24 addresses assessment for acceleration in Kindergarten through Grade 5 and assessment for course credit in Grades 6-12. The rule also outlines general provisions for the administration of credit by examination. The adopted amendment to 19 TAC §74.24 adds language to address the administration of credit by examination for a student who is homeless or in substitute care.

Section 74.26 addresses the award of credit by a school district for high school courses. The rule was adopted in accordance with the statutory requirement that the SBOE adopt rules to establish graduation requirements and outlines the general provisions for the award of credit toward state graduation requirements, including the award of credit for transfer students and students who complete high school courses in earlier grade levels and academic requirements for the award of credit. The rule also permits districts to award credit proportionately to students who are able to successfully complete only one semester of a two-semester course. The adopted amendment to 19 TAC §74.26 adds language to address the award of credit to a student who is homeless or in substitute care.

Additionally, in accordance with statutory requirements resulting from SB 453, the adopted amendment to 19 TAC §74.24 modifies language to reduce the minimum required scaled score on a CLEP examination from 60 to 50.

The amendments to 19 TAC Chapter 74, Curriculum Requirements, Subchapter C, Other Provisions, §74.24, Credit by Examination, and §74.26, Award of Credit, were approved by the SBOE for first reading and filing authorization at its July 17, 2015 meeting and for second reading and final adoption at its September 11, 2015 meeting.

In accordance with the TEC, §7.102(f), the SBOE approved the amendments for adoption by a vote of two-thirds of its members to specify an effective date earlier than the beginning of the 2016-2017 school year. The earlier effective date will provide students who are homeless or in substitute care the opportunity for additional support and flexibility in meeting graduation requirements in a timely manner.

SUMMARY OF COMMENTS AND RESPONSES. Following is a summary of the public comments received and the corresponding responses regarding proposed amendments to 19 TAC §74.24 and §74.26.

Comment. Disability Rights Texas, one counselor, and three administrators expressed support for the proposed amendments to 19 TAC §74.24, Credit by Examination, and 19 TAC §74.26, Award of Credit.

Response. The SBOE agrees and took action to adopt amendments to §74.24 and §74.26 as proposed.

Comment. Disability Rights Texas, one counselor, and two administrators stated that the proposed amendments provide additional flexibility that will enable students in foster care or who are homeless to complete credits required to graduate.

Response. The SBOE agrees and took action to adopt amendments to §74.24 and §74.26 as proposed.

Comment. One administrator stated that the proposed amendments provide advocates who serve students in foster care or who are homeless with rules to ensure that districts act in the best interest of these students.

Response. This comment is outside of the scope of the proposed rulemaking.

Comment. One administrator stated that students are currently able to earn one-half credit; therefore, the proposed amendment to §74.26 is unclear.

Response. The SBOE disagrees that the rule is unclear and determined that the proposed language is sufficiently clear. Under §74.26(d), it is permissive for districts to award credit proportionately to a student who successfully completes one semester of a two-semester course in accordance with local district policy. The proposed amendment to §74.26 adds new subsection (e), which requires districts to award proportionate credit to students in foster care or who are homeless and successfully complete one semester of a two-semester course.

Comment. Disability Rights Texas asked that the SBOE ensure that admission, review, and dismissal committees are aware of the expanded opportunities to earn credits that the proposed amendments would offer students in foster care or who are homeless.

Response. This comment is outside of the scope of the proposed rulemaking.

STATUTORY AUTHORITY. The amendments are adopted under the Texas Education Code (TEC), §7.102(c)(4), which requires the SBOE to establish curriculum and graduation requirements, and §7.102(c)(12), which requires the SBOE to establish guidelines for credit by examination. TEC, §25.007, as amended by Senate Bill (SB) 1494, 84th Texas Legislature, Regular Session, 2015, requires the agency to assist the transition of students who are homeless or in substitute care from one school to another. TEC, §28.023, as amended by SB 453, 84th Texas Legislature, Regular Session, 2015, requires the SBOE to establish guidelines for school districts to follow in developing or selecting examinations for acceleration for elementary grade levels and for credit for secondary level academic subjects, including a requirement that a school district give a student in grade six or above credit for a subject if the student earns a scaled score of 50 or higher on an examination approved by the board of trustees and administered through the College-Level Examination Program.

CROSS REFERENCE TO STATUTE. The amendments implement the TEC, §7.102; §25.007, as amended by Senate Bill (SB) 1494, 84th Texas Legislature, Regular Session, 2015; and §28.023, as amended by SB 453, 84th Texas Legislature, Regular Session, 2015.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Cristina De La Fuente-Valadez
Director, Rulemaking
Texas Education Agency
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For further information, please call: (512) 475-1497

TITLE 22. EXAMINING BOARDS

PART 3. TEXAS BOARD OF CHIROPRACTIC EXAMINERS

CHAPTER 72. APPLICATIONS AND APPLICANTS

22 TAC §72.2

The Texas Board of Chiropractic Examiners (Board) adopts amendments to §72.2, concerning Application for Licensure, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5647). The rule will not be republished.

This section establishes requirements and procedures related to application for licensure.

The rule is amended to meet the legislative requirement of a reduction in occupational licensing fees as authorized by House Bill 7.

No comments were received regarding the adoption of the amendment.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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TRD-201504728

Bryan Snoddy
General Counsel
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For further information, please call: (512) 305-6715

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CHAPTER 73. CHIROPRACTIC FACILITIES

22 TAC §73.3

The Texas Board of Chiropractic Examiners (Board) adopts amendments to §73.3, concerning Annual Renewal of Facility Registrations, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5648). The rule will not be republished.

This section establishes requirements and procedures related to chiropractic facilities.

The rule is amended to meet the legislative requirement of a reduction in occupational licensing fees as authorized by House Bill 7.

No comments were received regarding the adoption of the amendment.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bryan Snoddy
General Counsel
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For further information, please call: (512) 305-6715

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CHAPTER 74. CHIROPRACTIC RADIOLOGIC TECHNOLOGISTS

22 TAC §74.2

The Texas Board of Chiropractic Examiners (Board) adopts amendments to §74.2, concerning Chiropractic Radiologic Technologists, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5649). The rule will not be republished.

This section establishes requirements and procedures related to chiropractic radiologic technologists.

The rule is amended to meet the legislative requirement of a reduction in occupational licensing fees as authorized by House Bill 7.

No comments were received regarding the adoption of the amendment.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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CHAPTER 75. LICENSES AND RENEWALS

22 TAC §75.2, §75.5

The Texas Board of Chiropractic Examiners (Board) adopts amendments to §75.2 and §75.5, concerning Renewal of Chiropractic License and Continuing Education, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5650). The rules will not be republished.

These sections establish requirements and procedures related to licenses and renewals.

The rules are amended to carry out the effect of Texas Occupations Code Chapter 55 as amended by Senate bills 807 and 1307 as enacted by the legislature to provide certain provisions concerning modified licensure for military service members, military veterans and military spouses.

No comments were received regarding the adoption of the amendments.

The rules are adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Texas Occupations Code Chapter 55.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bryan Snoddy
General Counsel
Texas Board of Chiropractic Examiners
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For further information, please call: (512) 305-6715

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22 TAC §75.8

The Texas Board of Chiropractic Examiners (Board) adopts new §75.8, concerning Exemption from Licensure Fee for Retired Chiropractor Providing Voluntary Charity Care, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5653). The rule will not be republished.

This section establishes requirements and procedures related to exemption from licensure fee for retired chiropractor providing voluntary charity care.

The rule is adopted in order to comply with Occupations Code §112.051 regarding reduced licensure requirements for persons whose only practice is voluntary charity care.

No comments were received regarding the adoption of the rule.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001 and Texas Occupations Code §112.051.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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For further information, please call: (512) 305-6715

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CHAPTER 76. LICENSURE OF CERTAIN OUT-OF-STATE APPLICANTS

22 TAC §76.1, §76.2

The Texas Board of Chiropractic Examiners (Board) adopts amendments to §76.1 and §76.2, concerning Requirements for Licensure of Out-of-State Applicants and Requirements for Licensure of Military Spouses, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5654). The rules will not be republished.

These sections establish requirements and procedures related to licensure of certain out-of-state applicants.

The rules are amended to carry out the effect of Texas Occupations Code Chapter 55 as amended by Senate Bills 807 and 1307 as enacted by the legislature to provide certain provisions concerning modified licensure for military service members, military veterans and military spouses.

No comments were received regarding the adoption of the amendments.

The rules are adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Texas Occupations Code Chapter 55.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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22 TAC §76.3

The Texas Board of Chiropractic Examiners (Board) adopts new §76.3, concerning Requirements for Licensure of Military Service Members and Military Veterans, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5656). The rule will not be republished.

The section establishes requirements and procedures related to licensure of certain out-of-state applicants.

The rule is adopted to meet the legislative requirement of Texas Occupations Code Chapter 55 as amended by Senate Bills 807 and 1307 as enacted by the legislature to provide certain provisions concerning modified licensure for military service members, military veterans and military spouses.

No comments were received regarding the adoption of the new rule.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Texas Occupations Code Chapter 55.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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CHAPTER 77. PROFESSIONAL CONDUCT

22 TAC §77.7

The Texas Board of Chiropractic Examiners (Board) adopts the repeal of §77.7, concerning Request for Information and Records from Licensees, without changes to the proposal as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5657). The rule will not be republished.

This section established requirements and procedures related to professional conduct.

The rule is repealed in order to clarify, restructure and draft a new rule regarding Board procedures to provide concise and clear guidance to the public and licensees.

No comments were received regarding the adoption of the repeal.

The repeal is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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For further information, please call: (512) 305-6715

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22 TAC §77.7

The Texas Board of Chiropractic Examiners (Board) adopts new §77.7, concerning Request for Information from Covered Entities, with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5657). The rule will be republished.

This section establishes requirements and procedures related to professional conduct.

The rule is adopted to meet the legislative requirement of House Bill 300 and the Health Insurance Portability and Accountability Act of 1996. Further, the rule was amended to ensure consistency with the law and address confusion with regard to the proper disclosure and disposition of x-ray films. Finally, the rule was amended to cover both licensed chiropractors and registered chiropractic facility owners with equal effect.

Comments were received regarding the adoption of the new rule from the Texas Medical Association (TMA). First, the TMA took issue with the Board adopting the definitions from HB 300 which utilized the term "covered entity." Board staff conducted an informal conference with TMA's general counsel staff and negotiated a modification of §77.7(a) to qualify the definition as applicable only to licensed chiropractors and registered chiropractic facility owners. Next, TMA noted that the utilization of "covered entity" created a potential issue with the description of "chiropractic records" as employed in §77.7(a)(2). However, after informal conference and an agreement to modify the definition of "covered entity", the issue no longer presented concern to TMA. Finally, TMA noted that the "reasonable fees" provisions contain in §77.7(g)(6) included fees such as off-site and expedited recovery charges that were likely prohibited by law. TMA's reliance upon the *Federal Register* (78 FedReg 5636) is well placed, and those provisions were accordingly removed. No additional comments or modification were received or suggested.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001, Texas Health and Safety Code Chapter 181 and the Health Insurance Portability and Accountability Act of 1996.

§77.7. Request for Information and Records from Covered Entities.

(a) The following words and terms, when used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise:

(1) Covered entity--Any person as identified within Health and Safety Code, Title 2. Health, Subchapter I. Medical Records, Chapter 181 Medical Records Privacy, Section 181.001. For the purposes of this rule, covered entities include only chiropractors or chiropractic facility owners regulated by Texas Occupations Code, Chapter 201.

(2) Chiropractic record--Any record regularly utilized, created, or stored by a covered entity in the ordinary course and scope of business pertaining to the history, diagnosis, treatment or prognosis of the patient, including records of other health care practitioners contained in the records of the covered entity.

(3) Patient--Any person who consults or is seen by a covered entity for the purposes of receiving chiropractic care.

(b) Request for chiropractic records. Upon request, a covered entity shall furnish copies of chiropractic records, a summary, or narrative of the records pursuant to a written consent for disclosure. A request may be in oral form if it is documented in writing by the covered entity. The requested information or record shall not be released if the covered entity determines that access to the information would be harmful to the physical, mental, or emotional health of the patient. If the covered entity determines that access to the information would be harmful, the covered entity will document in writing the reasons why the disclosure would be harmful. The covered entity may delete from the requested records confidential information about another person who has not authorized disclosure.

(c) Written consent.

(1) The written consent required by subsection (b) of this section shall be signed by:

(A) the patient;

(B) the patients' personal representative if the patient is deceased;

(C) a parent or legal guardian if the patient is a minor;

(D) a legal guardian if the patient has been adjudicated incompetent to manage his or her personal affairs; or

(E) an attorney ad litem for the patient as authorized by law, including the Health and Safety Code, Title 7, Family Code, Chapter 11 or the Probate Code, Chapter 5.

(2) The written consent shall contain the specific information or chiropractic records to be disclosed under the consent; the reasons or purposes for the disclosure; and the person to whom the information is to be disclosed.

(3) The patient, or other person authorized to consent, has the right to withdraw the consent to the release of any information. Withdrawal of consent does not affect any information disclosed prior to the written notice of the withdrawal. Any person who received information made confidential by the Chiropractic Act may disclose the information to others only to the extent consistent with the authorized purposes for which consent to disclose information was obtained.

(d) Oral consent.

(1) The oral consent permitted by subsection (b) of this section shall be documented by the covered entity by:

(A) identifying the patient by presentation of valid government identification; or

(B) the presentation of legal documents sufficient to identify a person as the patient's legal representative or guardian; and

(C) written documentation of the oral consent kept by the covered entity must include annotations recording the time, date, and identification of the patient, the patient's personal representative if the patient is deceased, a parent or legal guardian if the patient is a minor, a legal guardian if the patient has been adjudicated incompetent to manage his or her personal affairs; or an attorney ad litem for the patient as authorized by law, including the Health and Safety Code, Title 7, Family Code, Chapter 11 or the Probate Code, Chapter 5.

(2) The written documentation of the oral consent shall contain the specific information or chiropractic records to be disclosed under the oral consent; the reasons or purposes for the disclosure; and the person to whom the information is to be disclosed.

(3) The patient, or other person authorized to consent, has the right to withdraw the consent to the release of any information. Withdrawal of consent does not affect any information disclosed prior to the oral notice of the withdrawal. Any person who received information made confidential by the Chiropractic Act may disclose the information to others only to the extent consistent with the authorized purposes for which consent to disclose information was obtained.

(e) Reasonable time. A copy of chiropractic records or a summary or narrative of the records requested under subsection (b) of this section shall be furnished by the covered entity within a reasonable time, not to exceed 15 business days from the date of the request.

(f) Denial of request. If the covered entity denies the request under subsection (b) of this section for a copy of chiropractic records or a summary or narrative of the records, either in whole or in part, the covered entity shall furnish the patient a written statement, signed and dated, stating the reason for the denial. Chiropractic records requested pursuant to subsection (b) of this section may not be withheld based upon:

(1) a past due account for care or treatment previously rendered to the patient;

(2) on the lack of a letter of protection; or

(3) any other document having a similar effect.

(g) Fee for records. The covered entity may charge a reasonable fee for furnishing the information requested under subsection (a) of this section, in accordance with the following provisions:

(1) The fee shall be paid by the patient or someone else on the patient's behalf.

(2) A covered entity may require payment in advance except from another covered entity or other health care provider, including a chiropractor licensed by any other state, territory, or insular possession of the United States or any state or province of Canada, if requested for purposes of emergency or acute medical care.

(3) In the event payment is not received, within ten calendar days from notification of the charge, the covered entity shall notify the requesting party in writing of the need for payment.

(4) A reasonable fee for a paper copy shall be a charge not to exceed:

(A) $30 for retrieval of records and processing the request, including copies for the first 10 pages;

(B) $1.00 per page for pages 11-60;

(C) $.50 per page for pages 61-400; and

(D) $.25 per page for pages over 400.

(5) A reasonable fee for copies of films or other static diagnostic imaging studies shall be a charge not to exceed $45 for retrieval and processing, including copies for the first 10 pages, and $1.00 for each additional page over 10.

(6) Reasonable fees may also include actual costs for mailing, shipping, and delivery fees incurred by the covered entity.

(7) A reasonable fee for completing and signing an affidavit or questionnaire certifying that the information provided is a true and current copy of the records may not exceed $15.

(8) In addition to the fee contemplated in paragraph (7) of this subsection, reasonable fees may also include the actual costs paid by the covered entity to a notary for notarizing an affidavit, questionnaire, or other document.

(9) Notwithstanding subsection (g), a covered entity may not charge for records where prohibited as noted in Health and Safety Code, Title 2. Health, Subchapter H. Public Health Provisions, Chapter 161 Medical or Mental Health Records or any other applicable state and federal law.

(h) Subpoena not required. A subpoena shall not be required for the release of chiropractic records requested pursuant to subsection (b) of this section.

(i) Nothing within this section should be construed to supersede Health and Safety Code, Title 2, Health, Subchapter I, Medical Records, Chapter 181 Medical Records Privacy or any other applicable state and federal law.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bryan Snoddy
General Counsel
Texas Board of Chiropractic Examiners
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For further information, please call: (512) 305-6715

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22 TAC §§77.13 - 77.17

The Texas Board of Chiropractic Examiners (Board) adopts new §§77.13 - 77.17, concerning Bribery, Coercion of Public Servant or Voter, Improper Influence, Tampering with a Witness, and Obstruction or Retaliation, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5659). The rules will not be republished.

These sections establish requirements and procedures related to professional conduct.

The rules are adopted in order to ensure fairness and transparency in all Board proceedings.

No comments were received regarding the adoption of the rules.

The rules are adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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For further information, please call: (512) 305-6715

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CHAPTER 78. RULES OF PRACTICE

22 TAC §78.6

The Texas Board of Chiropractic Examiners (Board) adopts the repeal of §78.6, concerning Required Fees and Charges, without changes to the proposal as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5660). The rule will not be republished.

This section established requirements and procedures related to rules of practice.

The rule is repealed in order to clarify, restructure and draft a new rule regarding Board procedures to provide concise and clear guidance to the public and licensees.

No comments were received regarding the adoption of the repeal.

The repeal is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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For further information, please call: (512) 305-6715

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22 TAC §78.6

The Texas Board of Chiropractic Examiners (Board) adopts new §78.6, concerning Required Fees and Charges, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5661). The rule will not be republished.

This section establishes requirements and procedures related to Rules of Practice.

The rule is adopted to meet the legislative requirement of a reduction in occupational licensing fees as authorized by House Bill 7.

No comments were received regarding the adoption of the new rule.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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For further information, please call: (512) 305-6715

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22 TAC §78.10

The Texas Board of Chiropractic Examiners (Board) adopts the repeal of §78.10, concerning Schedule of Sanctions, without changes to the proposal as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5662). The rule will not be republished.

This section established requirements and procedures related to rules of practice.

The rule is repealed in order to clarify, restructure and draft a new rule regarding Board procedures to provide concise and clear guidance to the public and licensees.

No comments were received regarding the adoption of the repeal.

The repeal is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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22 TAC §78.10

The Texas Board of Chiropractic Examiners (Board) adopts new §78.10, concerning Schedule of Sanctions, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5662). The rule will not be republished.

This section establishes requirements and procedures related to professional conduct.

The rule is adopted to conform the rule to the requirements of §201.503 of the Chiropractic Act and provide a comprehensive schedule of sanctions.

No comments were received regarding the adoption of the rule.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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For further information, please call: (512) 305-6715

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22 TAC §78.16

The Texas Board of Chiropractic Examiners (Board) adopts amendments to §78.16, concerning Cease and Desist Orders, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5663). The rule will not be republished.

This section establishes requirements and procedures related to rules of practice.

The rule is amended to conform the rule to the requirements of §201.6015 of the Chiropractic Act and remove the requirement of an informal hearing not required by law.

No comments were received regarding the adoption of the amendment.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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For further information, please call: (512) 305-6715

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CHAPTER 79. SOAH HEARINGS

22 TAC §79.2

The Texas Board of Chiropractic Examiners (Board) adopts amendments to §79.2, concerning Commencement of Enforcement Proceedings, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5663). The rule will not be republished.

This section establishes requirements and procedures related to SOAH Hearings.

The rule is amended to recognize the changes in notice and service requirements permitted by Texas Senate Bill 1267 which allows the use of electronic-mail upon the consent of the parties.

No comments were received regarding adoption of the amendment.

The amendment is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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22 TAC §79.10

The Texas Board of Chiropractic Examiners (Board) adopts amendments to §79.10, concerning Decision of the Board, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5664). The rule will not be republished.

This section establishes requirements and procedures related to SOAH Hearings.

The rule is amended to recognize the changes in notice and service requirements permitted by Texas Senate Bill 1267 which allows the use of electronic-mail upon the consent of the parties.

No comments were received regarding adoption of the amendment.

The amendment is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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For further information, please call: (512) 305-6715

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CHAPTER 80. GENERAL REGULATORY PROVISIONS

22 TAC §80.5

The Texas Board of Chiropractic Examiners (Board) adopts new §80.5, concerning Contract Monitoring, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5665). The rule will not be republished.

This section establishes requirements and procedures related to contract monitoring.

The new rule is necessary in order to comply with Legislative requirements regarding contract monitoring as Senate Bill 20 amends Chapter 2261 of the Texas Government Code.

No comments were received regarding the adoption of the rule.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code Chapters 2001 and 2261.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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22 TAC §80.6

The Texas Board of Chiropractic Examiners (Board) adopts new §80.6, concerning Tuition Reimbursement Payments, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5666). The rule will not be republished.

This section establishes requirements and procedures related to tuition reimbursement payments.

The rule is adopted in order to comply with Legislative requirements regarding job notices and training as House Bill 3337 amends §656.047(b) of the Texas Government Code.

No comments were received regarding the adoption of the rule.

The rule is adopted under Texas Occupations Code §201.152, which authorizes the Board to adopt rules necessary to regulate the practice of chiropractic to protect the public health and safety. The Board is further authorized to adopt rules based upon the relevant portions of the Administrative Procedure Act, Government Code §656.047 and Chapter 2001.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Bryan Snoddy
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PART 23. TEXAS REAL ESTATE COMMISSION

CHAPTER 531. CANONS OF PROFESSIONAL ETHICS AND CONDUCT

22 TAC §531.18, §531.20

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §531.18, Consumer Information, and new §531.20, Information About Brokerage Services, with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5685).

The amendments to Chapter 531 implement statutory changes in Senate Bill 699, adopted by the 84th Legislature. The legislature authorized the Commission to adopt the form and delivery method for a consumer notice regarding complaints and recovery fund availability and for Information About Brokerage Services (IABS).

The reasoned justification for the amendments is greater consumer protection and clarity.

The revisions to the rules as adopted do not change the nature or scope so much that the rules as adopted could be deemed different rules. The rules as adopted do not affect individuals other than those contemplated by the rules as proposed. The rules as adopted do not impose more onerous requirements than the proposed rules.

Five comments were received on this proposal as published. Four commenters thought a link to the IABS in an email should be allowed, stating that it was the same or better than an attachment to an email. One commenter agreed with the proposed rule that a link in the signature line of an agent was not proper delivery of the IABS because it could get lost.

The Broker Working Group recommended and the Commission agreed to modify the proposed rule in §531.20(c)(4) to allow a link to the IABS form in the body of an email as long as it was properly labeled but kept the prohibition against having a link to the IABS in the signature line. Grammatical changes were made in §535.18(b)(2) and §535.20(b)(1) changing "and" to "or" to make it clear that the intention was that all license holders had to have a link to the IABS and Consumer Notice on their websites. The word "protection" was added to the title of the Consumer Notice in §535.18 for greater clarity for consumers and the words "or inspector" were removed from the end of §535.18(a)(1) since there is a separate rule for inspectors for the Consumer Notice.

Two commenters requested pulling out and more clearly defining the role of a subagent in the IABS form adopted by reference. The Broker Working Group recommended and the Commission agreed to make that change to the form. Additional changes made to the IABS form included a clarifying change to the definition of Sales Agent and making the titles in the Contact Information section the same as the broker information section of the contracts.

The amendments and new rule are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by these amendments and new rule is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendment.

§531.18. Consumer Information.

(a) The Commission adopts by reference Consumer Protection Notice TREC No. CN 1-2. This document is published by and available from the Texas Real Estate Commission, P.O. Box 12188, Austin, Texas 78711-2188, www.trec.texas.gov.

(b) Each active real estate broker shall provide the notice adopted under subsection (a) by:

(1) displaying it in a readily noticeable location in each place of business the broker maintains; and

(2) providing a link to it labeled "Texas Real Estate Commission Consumer Protection Notice", in at least a 10 point font, in a readily noticeable place on the homepage of the business website of the broker and sponsored sales agents.

§531.20. Information About Brokerage Services.

(a) The Commission adopts by reference Information About Brokerage Services Form, TREC No. IABS 1-0 (IABS Form). The IABS Form is published by and available from the Texas Real Estate Commission, P.O. Box 12188, Austin, Texas 78711-2188, www.trec.texas.gov.

(b) Each active real estate broker and sales agent shall provide:

(1) a link to the IABS Form labeled "Texas Real Estate Commission Information About Brokerage Services", in at least a 10 point font, in a readily noticeable place on the homepage of the business website of the broker and sales agent; and

(2) the IABS Form as required under §1101.558, Texas Occupations Code.

(c) For purposes of §1101.558, Texas Occupations Code, the IABS Form can be provided:

(1) by personal delivery by the broker or sales agent;

(2) by first class mail or overnight common carrier delivery service;

(3) in the body of an email; or

(4) as an attachment to an email, or a link within the body of an email, with a specific reference to the IABS Form in the body of the email.

(d) Providing a link to the IABS Form in a footnote or signature block in an email does not satisfy the requirements of subsection (c).

(e) License holders may reproduce the IABS Form published by the Commission, provided that the text of the IABS Form is copied verbatim and the spacing, borders and placement of text on the page must appear to be identical to that in the published version of the IABS Form, except that the Broker Contact Information section may be prefilled.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 4, 2015.

TRD-201504745
Kerri Lewis
General Counsel
Texas Real Estate Commission
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Proposal publication date: September 4, 2015
For further information, please call: (512) 936-3092

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CHAPTER 533. PRACTICE AND PROCEDURE
SUBCHAPTER A. DEFINITIONS

22 TAC §533.1

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §533.1, regarding Definitions, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5686).

The amendments revise definitional terms to align them with statutory changes in Senate Bill 699 adopted by the 84th Legislature.

The reasoned justification for the amendments is greater clarity throughout the rules.

No comments were received on the proposal as published.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statutes affected by this amendment are Texas Occupations Code, Chapters 1101 and 1102. No other statute, code or article is affected by the amendments.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
General Counsel
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SUBCHAPTER B. GENERAL PROVISIONS RELATING TO PRACTICE AND PROCEDURE

22 TAC §§533.3, 533.7, 533.8, 533.10

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §533.3, Filing and Notice; §533.7, Final Decisions and Orders; §533.8, Motions for Rehearing; Finality of Decisions; and new §533.10, Hearing: Subpoenas and Fees. Section 533.3 is adopted with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5687). The other sections are adopted without changes.

The amendments align the rules with statutory changes to Chapter 2001, Texas Government Code, adopted by the 84th Legislature, to delegate authority to hear motions for rehearing to the Commission's Enforcement Committee and to move the text of §535.171 to new §533.10 where the subject matter more appropriately belongs.

The reasoned justification for the amendments is greater clarity throughout the rules and compliance with statutory changes.

The revisions to the rules as adopted do not change the nature or scope so much that the rules as adopted could be deemed a different rule. The rules as adopted do not affect individuals other than those contemplated by the rules as proposed. The rules as adopted do not impose more onerous requirements than the proposed rules.

No comments were received on the proposal as published. However, staff updated terminology from "salesperson" to "sales agent" to correspond with the new statutory terminology where applicable.

The amendments and new rule are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statutes affected by these amendments and new section are Texas Occupations Code, Chapters 1101 and 1102. No other statute, code or article is affected by the adoption.

§533.3. Filing and Notice.

(a) If the Commission denies an application for a license, the Commission shall send the applicant written notice of the denial. An applicant may accept the denial or make a written request for a hearing on that denial. If an applicant fails to request a hearing in writing not later than the 20th day after the date the notice denying an application is sent, the Commission's denial is final.

(b) If after investigation of a possible violation and the facts surrounding that possible violation the Commission determines that a violation has occurred, the Commission may issue a written Notice of

Alleged Violation to the Respondent. The Commission shall provide notice in accordance with the APA.

(c) Not later than the 20th day after the date on which the Notice of Alleged Violation is sent, the Respondent may:

(1) accept the determination of the Commission, including sanctions recommended by the Commission; or

(2) make a written request for a hearing on that determination.

(d) Upon receipt of a written request for hearing, the Commission shall submit a request to docket case to SOAH accompanied by copies of relevant documents giving rise to a contested case.

(e) When the Commission submits a request to docket case with SOAH, SOAH acquires jurisdiction over a contested case until SOAH issues final amendments or corrections to the Proposal for Decision. In case of a conflict with the Commission's rules, SOAH's rules control while SOAH has jurisdiction.

(f) Pleadings, other documents, and service to SOAH shall be filed in accordance with SOAH's rules.

(g) If a real estate sales agent is a Respondent, the Commission will notify the sales agent's sponsoring broker of the hearing. If an apprentice inspector or real estate inspector is a Respondent, the Commission will notify the sponsoring professional inspector of the hearing. Notice under this subsection need not be provided by certified or registered mail.

(h) Any document served upon a party is prima facie evidence of receipt, if it is directed to the party's mailing address or email address. This presumption is rebuttable. Failure to claim properly addressed certified or registered mail will not support a finding of nondelivery.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
General Counsel
Texas Real Estate Commission
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For further information, please call: (512) 936-3092

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CHAPTER 534. GENERAL ADMINISTRATION

22 TAC §534.2

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §534.2, Processing Fees for Dishonored Payments, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5689).

The amendments to Chapter 534 implement statutory renumbering changes in Senate Bill 699, adopted by the 84th Legislature.

The reason justification for the amendment is greater clarity.

No comments were received on this proposal as published.

The amendment is adopted under Texas Occupations Code, §1101.151, which authorizes TREC to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statutes affected by this adoption are Texas Occupations Code, Chapters 1101 and 1102. No other statute, code or article is affected by the amendment.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
General Counsel
Texas Real Estate Commission
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For further information, please call: (512) 936-3092

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CHAPTER 535. GENERAL PROVISIONS

SUBCHAPTER A. DEFINITIONS

22 TAC §535.1

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.1, Definitions, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5689).

The amendments to Chapter 535, Subchapter A clarify the definition of business entity, add a definition for trade association, Commission and Executive Director.

The reasoned justification for the amendments is greater consumer protection and clarity.

No comments were received on the amendments as published.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by this amendment is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 6, 2015.

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Kerri Lewis
General Counsel
Texas Real Estate Commission
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For further information, please call: (512) 936-3092

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SUBCHAPTER B. GENERAL PROVISIONS RELATING TO THE REQUIREMENTS OF LICENSURE

22 TAC §535.21

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.21, Mailing Address and Other Contact Information, with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5690).

The amendments to Chapter 535, Subchapter B align the rule with statutory changes to Chapter 1101, Texas Occupations Code, adopted by the 84th Legislature in Senate Bill 699.

The revision to the rule as adopted does not change the nature or scope so much that the rule as adopted could be deemed a different rule. The rule as adopted does not affect individuals other than those contemplated by the rule as proposed. The rule as adopted does not impose more onerous requirements than the proposed rule.

The reasoned justification for the amendments is greater consumer protection and clarity.

No comments were received on the amendments as published. However, "salesperson" was changed to "sales agent" to be consistent with the new statutory terminology.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by this amendment is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

§535.21 Mailing Address and Other Contact Information.

(a) Each license holder shall provide a mailing address, phone number, and email address used for business to the Commission and shall report all subsequent changes not later than the 10th day after the date of a change of any of the listed contact information. If a license holder fails to update the contact information, the last known contact information provided to the Commission is the license holder's contact information.

(b) The Commission shall send a notice or correspondence to an active broker or an inactive license holder to the mailing or email address of the broker or license holder as shown in the Commission's records. The Commission shall send a notice or correspondence to an active sales agent to the mailing or email address of the sales agent's sponsoring broker as shown in the Commission's records.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
General Counsel
Texas Real Estate Commission
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For further information, please call: (512) 936-3092

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SUBCHAPTER C. EXEMPTIONS TO REQUIREMENTS OF LICENSURE

22 TAC §535.32

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.32, Attorneys in Fact, with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5690).

The amendments to Chapter 535, Subchapter C align the rule with statutory changes to Chapter 1101, Texas Occupations Code, adopted by the 84th Legislature in Senate Bill 699.

The reasoned justification for the amendments is greater consumer protection and clarity.

The revision to the rule as adopted does not change the nature or scope so much that the rule as adopted could be deemed a different rule. The rule as adopted does not affect individuals other than those contemplated by the rule as proposed. The rule as adopted does not impose more onerous requirements than the proposed rule.

No comments were received on the amendments as published but staff recommended that the word "annually" be changed to "calendar year" for greater clarity and "salesperson" was changed to "sales agent" to be consistent with the new statutory terminology.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by this amendment is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

§535.32. Attorneys in Fact.

A person holding a valid power of attorney recorded in the county in which the particular real property is located and which specifically describes the real property may act as a real estate agent for the owner of such property without being licensed as a real estate broker or sales agent, provided the person does not use powers of attorney to engage in more than three real estate transactions per calendar year.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
General Counsel
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For further information, please call: (512) 936-3092

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SUBCHAPTER E. REQUIREMENTS FOR LICENSURE

22 TAC §§535.51, 535.53, 535.56, 535.57

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.51, General Requirements for a Real Estate License; §535.53, Business Entity; Designated Broker; §535.56, Education and Experience Requirements for a Broker; and §535.57, Examinations, with changes to the proposed text, as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5691).

The amendments to Chapter 535, Subchapter E align the rules with statutory changes in Senate Bill 1307 and Senate Bill 699, adopted by the 84th Legislature, including implementing new education and examination requirements and extending expedited license processing to active military service members and veterans and waives certain license and application fees for an applicant who meets designated criteria. The amendments also decrease the waiting period after disciplinary action has been completed for good standing qualification and correct typographical errors.

One comment was received on the amendments as published asking for clarification on which courses were required after failing the examination three times. Staff recommended a clarifying change to the language proposed in §535.57(e) to specify what was meant by "qualifying courses" for the courses that had to be taken after a third failure. The Commission agreed with the change.

Also, in §535.51(c)(1), extra language was removed to correct a formatting error that was published by mistake in the *Texas Register.* In §535.51, extra language was removed to make the sentence grammatically correct and in §535.56(e)(2), the number of hours of continuing education required for reinstatement was tied to "the number of hours required for continuing education courses by §535.92(a)" rather than a reinstatement of the actual number set out §535.92(a) for consistency throughout the rules when a change to that number of hours is adopted by the Commission. Throughout the chapter, "salesperson" was changed to "sales agent" to be consistent with the new statutory terminology.

The revision to the rules as adopted does not change the nature or scope so much that the rules as adopted could be deemed a different rule. The rules as adopted do not affect individuals other than those contemplated by the rules as proposed. The rules as adopted do not impose more onerous requirements than the proposed rules.

The reasoned justification for the amendments is greater consumer protection and clarity.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by this amendment is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

§535.51 General Requirements for a Real Estate License

(a) Application.

(1) A person who intends to be licensed by the Commission must file an application for the license:

(A) through the online process approved by the Commission; or

(B) on the form prescribed by the Commission for that purpose; and

(C) submit the required fee under §535.101 of this title.

(2) The Commission will reject an application submitted without a sufficient filing fee.

(3) The Commission may request additional information be provided to the Commission relating to an application.

(b) General Requirements for Licensure.

(1) To be eligible for a real estate license, an applicant must:

(A) meet the following requirements at the time of the application:

(i) be 18 years of age;

(ii) meet any applicable residency requirement;

(iii) be a citizen of the United States or a lawfully admitted alien;

(B) comply with the fingerprinting, education, experience and examination requirements of the Act; and

(C) meet the honesty, trustworthiness, and integrity requirements under the Act.

(2) Texas residents who enter military service and resume their Texas residence immediately upon separation from the military are not considered to have lost their Texas residence unless they have affirmatively established legal residence elsewhere.

(3) The fact that an individual has had disabilities of minority removed does not affect the requirement that an applicant be 18 years of age to be eligible for a license.

(c) License for military service members, military veterans, or military spouses. This subsection applies to an applicant who is a military service member, a military veteran, or the spouse of a person serving on active duty as a member of the armed forces of the United States.

(1) The Commission shall waive the license application and examination fees for an applicant who is:

(A) a military service member or military veteran whose military service, training, or education substantially meets all of the requirements for the license; or

(B) a military service member, military veteran, or military spouse who holds a current license issued by another jurisdiction that has licensing requirements that are substantially equivalent to the requirements for the license in this state.

(2) The Commission shall issue on an expedited basis a license to an applicant who holds a current certificate or license issued by a country, territory, or state other than Texas that has licensing requirements that are substantially equivalent to the requirements for the certificate or license issued in Texas.

(3) The Commission may issue a license to an applicant who, within the five years preceding the application date, held the license in Texas.

(4) The Commission may allow an applicant to demonstrate competency by alternative methods in order to meet the requirements for obtaining a particular license issued by the Commission. For purposes of this subsection, the standard method of demonstrating competency is the specific examination, education, and/or experience required to obtain a particular license.

(5) In lieu of the standard method(s) of demonstrating competency for a particular license and based on the applicant's circumstances, the alternative methods for demonstrating competency may include any combination of the following as determined by the Commission:

(A) education;

(B) continuing education;

(C) examinations (written and/or practical);

(D) letters of good standing;

(E) letters of recommendation;

(F) work experience; or

(G) other methods required by the administrator.

(d) Credit for military service. This subsection applies to an applicant who is serving on active duty or is a veteran of the armed forces of the United States.

(1) The Commission shall credit any verifiable military service, training or education obtained by an applicant that is relevant to a license toward the requirements of a license.

(2) This subsection does not apply to an applicant who holds a restricted license issued by another jurisdiction.

(3) The applicant must pass the qualifying examination, if any, for the type of license sought.

(e) A person applying for license under Subsection (c) or (d) of this section must also:

(1) submit the commission's approved application form for the type of license sought;

(2) submit the appropriate fee for that application;

(3) submit the supplemental form approved by the Commission applicable to subsection (c) or (d) of this section;

(4) comply with fingerprinting requirements for all license applicants and satisfy the Commission as to the applicant's honesty, trustworthiness and integrity.

(f) The Executive Director may waive any prerequisite to obtaining a license for an applicant issued under subsection (c) or (d).

(g) Termination of application. An application is terminated and is subject to no further evaluation or processing if:

(1) the applicant fails to satisfy a current, education, experience, or examination requirement within one year from the date the application is filed;

(2) the applicant fails to submit a required fee within twenty (20) days after the Commission makes written request for payment;

(3) the applicant fails to provide information or documentation requested by the Commission within one year from the date the application is filed; or

(4) the applicant fails to provide fingerprints to the Department of Public Safety within one year from the date the application is filed.

(h) Completion of applicable education and experience.

(1) An applicant is not eligible to take a qualifying examination for a license until the Commission has received evidence of completion of all education and experience required by this subchapter.

(2) The Commission will not grant credit to an applicant for completing a course with substantially the same content as a course for which the applicant received credit within the previous two-year period.

(3) Except as provided by this subchapter and the Act, the Commission will not accept a person's license in another state to meet experience requirements.

(i) Examination. An applicant must take and pass a written examination in accordance with §535.57 of this subchapter.

§535.53. Business Entity; Designated Broker.

(a) Business Entity.

(1) A business entity must be qualified to transact business in Texas to receive a broker license.

(2) A Franchise Tax Account Status page from the Texas Comptroller of Public Accounts issued within 21 days prior to the date of its license application constitutes evidence of being qualified to transact business in Texas.

(3) A foreign business entity must meet the additional requirements of §535.132 of this chapter to be eligible for a broker's license.

(b) Designated Broker.

(1) For the purposes of qualifying for, maintaining, or renewing a license, a business entity must designate an individual holding an active Texas real estate broker license in good standing with the Commission to act for it.

(2) An individual licensed broker is not in good standing with the Commission if:

(A) the broker's license is revoked or suspended, including probated revocation or suspension;

(B) a business entity licensed by the Commission while the broker was the designated broker for that business entity had its license revoked or suspended, including probated revocation or suspension, in the past two years;

(C) the broker has any unpaid or past due monetary obligations to the Commission, including administrative penalties and recovery fund payments; or

(D) a business entity licensed by the Commission has any unpaid or past due monetary obligations to the Commission, including administrative penalties and recovery fund payments, that were incurred while the broker was the designated broker for the entity;

(3) Regardless of the type of business entity, the designated broker must be a managing officer of the business entity.

(4) The business entity may not act as a broker during any period in which it does not have a designated broker to act for it who meets the requirements of the Act.

(5) To obtain or renew a license, or upon any change in the business entity's designated broker, the entity must provide to the Commission:

(A) proof of the designated broker's current status as an officer, manager or general partner for that entity; and

(B) proof that the business entity maintains appropriate errors and omissions insurance if the designated broker does not own directly at least 10 percent of the entity.

(6) A broker may not act as a designated broker at any time while the broker's license is inactive, expired, suspended, or revoked.

(c) If a licensed corporation or limited liability company is dissolved with the secretary of state then any license held by that corporation or company immediately becomes null and void.

§535.56. Education and Experience Requirements for a Broker License.

(a) Education requirements.

(1) An applicant for a broker license must provide the Commission with satisfactory evidence of completion of:

(A) 270 hours of qualifying real estate courses as required under §535.55, which must include the 30 hour qualifying real estate brokerage course completed not more than two years before the application date; and

(B) an additional 630 classroom hours in related qualifying courses in the subject areas defined under §535.64 or approved continuing education courses.

(2) An applicant who has earned a bachelor's degree or higher from an accredited college or university will be deemed to have satisfied the related qualifying education requirements for a broker license. A copy of the college transcript awarding the degree must be submitted as evidence of completion of the degree.

(b) Experience Requirements.

(1) An applicant for a broker license must have four years of experience actively practicing as a broker or sales agent in Texas during the five years preceding the date the application is filed. For purposes of this section:

(A) Experience is measured from the date a license is issued, and inactive periods caused by lack of sponsorship, or any other reason, cannot be included as active experience.

(B) A person licensed in another state may derive the required four years' experience from periods in which the person was licensed in one or more states. A person who is the designated broker of a business entity that is licensed as a real estate broker in another state is deemed to be a licensed real estate broker in another state.

(C) An applicant must have performed at least one transaction described in subsection (c) for four of the five years preceding the date the application is filed.

(2) An applicant for a broker license must demonstrate not less than 3600 points of qualifying practical experience obtained during the period required by subsection (b)(1) of this section, using TREC No. BL-A, Supplement A-Qualifying Experience Report for a Broker License. An applicant must use TREC No. BL-B, Supplement B-Qualifying Experience Report for a Broker License After an Application Has Been Filed, to report qualifying experience after an application for a broker license is filed.

(A) An applicant will receive credit for such experience according to the point system set forth in subsection (d) of this section.

(B) Upon request by the Commission, either prior to or after licensure, an applicant shall provide documentation to substantiate any or all of the experience claimed by the applicant.

(C) Failure to promptly provide the requested documentation or proof shall be grounds to deny the application. Any false claim of experience shall be grounds to deny the application, or shall be grounds to suspend or revoke the applicant's current license.

(c) Credit for experience. Experience points shall be credited to an applicant in accordance with the following schedule for active licensed sales agent or broker activity only:

(1) Residential transactions including single family, condo, co-op unit, multi-family (1 to 4-unit) and apartment unit leases:

(A) Closed purchase or sale--300 points per transaction.

(B) An executed lease, renewal or extension for a landlord or tenant--50 points per transaction.

(C) rental property management rent collection--25 points per property per year.

(D) Exclusive Right to Sell Listings--10 points per transaction.

(E) Buyer or Tenant Representation Agreements--10 points per transaction.

(F) Closed purchase or sale of an unimproved residential lot--50 points per transaction.

(2) Commercial transactions, including apartments (5 units or more), office, retail, industrial, mixed use, hotel/motel, parking facility/garage, and specialty:

(A) Closed purchase or sale--500 points per transaction.

(B) An executed lease, renewal or extension for a landlord or tenant--100 points per year of the lease, renewal or extension up to a five year maximum per transaction.

(C) rental property management rent collection--150 points per property per year.

(D) Listings--20 points per transaction.

(E) Buyer or Tenant Representation Agreements--20 points per transaction.

(3) Farm and Ranch and unimproved land transactions:

(A) Closed purchase or sale--300 points.

(B) An executed lease, renewal or extension for a landlord or tenant--50 points per transaction.

(C) Rental property management rent collection--50 points per property per year.

(D) Listings--10 points per transaction.

(E) Buyer or Tenant Representation Agreements--10 points per transaction.

(4) Brokerage branch office or team management--20 points per month with a maximum of 1200 points credit toward the 3,600 points total requirement.

(d) Documentation of applicable experience.

(1) An applicant shall have the burden of establishing to the satisfaction of the Commission that the applicant actually performed the work associated with the real estate transaction claimed for experience credit.

(2) If an applicant is unable to obtain documentation and/or the signature of a sponsoring broker to support their claim for experience, the applicant must use TREC No. AFF-A, Affidavit in Lieu of Documentation and/or Signature, to explain that the applicant made a good faith effort to obtain the documentation and/or signature, describing the effort to obtain the documentation and reasons why it is not available. In addition, the applicant must submit two TREC No. AFF-B, Affidavit in Support of Applicant's Claim of Experience, each signed by a different individual who knows the applicant or is familiar with the transaction(s) at issue attesting to the applicant's efforts to obtain the documentation and/or signature, and attesting to the fact that the applicant performed the work for which the applicant is requesting points.

(3) The Commission may request additional documentation, rely on the documentation provided under this section, or utilize any other information provided by the applicant to determine whether the applicant has sufficient experience as required by §1101.356 of the Act and this section.

(e) Waiver of education and experience requirements. Notwithstanding §1101.451(f) of the Act and subsections (a) - (d) of this section, the Commission may waive education and experience required for a real estate broker license if the applicant satisfies each of the following conditions.

(1) The applicant was licensed as a Texas real estate broker within two years prior to the filing of the application.

(2) The applicant has completed at least the number of hours of continuing education courses required by §535.92(a), within the two-year period prior to the filing of an application for an active license, including all applicable current non-elective courses.

(3) The applicant has at least two years of active experience as a licensed real estate broker or sales agent during the four-year period preceding the date the application is filed.

(f) Experience forms. Forms and affidavits required to be used to report experience under this section are adopted by reference, published by and available from the Texas Real Estate Commission, P.O. Box 12188, Austin, Texas 78711-2188, www.trec.texas.gov.

§535.57. Examinations.

(a) Administration of licensing examinations.

(1) An examination required for any license issued by the Commission will be conducted by the testing service with which the Commission has contracted for the administration of examinations.

(A) The testing service shall schedule and conduct the examinations in the manner required by the contract between the Commission and the testing service.

(B) The examination fee must be paid each time the examination is taken.

(2) The testing service administering the examinations is required to provide reasonable accommodations for any applicant with a verifiable disability. Applicants must contact the testing service to arrange an accommodation. The testing service shall determine the method of examination, whether oral or written, based on the particular circumstances of each case.

(3) To be authorized for admittance to an examination, the applicant must present to the testing service administering the examinations appropriate documentation required by the testing service under contract with the Commission. The testing service shall require official photo-bearing personal identification of individuals appearing for an examination and shall deny entrance to anyone who cannot provide adequate identification. The testing service may refuse to admit an applicant who arrives after the time the examination is scheduled to begin or whose conduct or demeanor would be disruptive to other persons taking examinations at the site. The testing service may confiscate examination materials, dismiss the applicant, and fail the applicant for violating or attempting to violate the confidentiality of the contents of an examination.

(4) An applicant is permitted to use hand-held calculators. If a calculator has printout capability, the testing service must approve use of such calculator before the examination. No other electronic devices are permitted.

(b) Conduct during examination.

(1) The following conduct with respect to licensing examinations is prohibited and is grounds to impose disciplinary action against any applicant, license holder, education provider accredited by the Commission, or instructor approved by the Commission, and shall further be grounds for disapproval of an application for any license, accreditation, or approval issued by the Commission:

(A) obtaining or attempting to obtain specific questions or answers from an applicant, a Commission employee or any person hired by or associated with the testing service;

(B) removing or attempting to remove questions or answers from an examination site; or

(C) providing or attempting to provide examination questions or answers to another person.

(2) The Commission, or the testing service under contract with the Commission, may file theft charges against any person who removes or attempts to remove an examination or any portion thereof or any written material furnished with the examination whether by actual physical removal or by transcription.

(c) Passing Scores. A broker applicant must attain a passing score of at least 75% in each portion of the broker licensing examination. A sales agent applicant must attain a passing score of at least 70% in each portion of the sales agent licensing examination.

(d) Waiver of examination requirement for licensure.

(1) The Commission shall waive the examination requirement for an applicant for a broker license who has been licensed as a broker in this state within two years before the filing of the application. The Commission shall waive the examination requirement for an applicant for a sales agent license who has been licensed in this state as a broker or sales agent within two years before the filing of the application.

(2) The Commission may waive the national portion of the examination of an applicant for a broker or sales agent license if the applicant maintains an active license in another state equivalent to the license being applied for, and has passed a comparable national examination accredited or certified by a nationally recognized real estate regulator association.

(e) An applicant who fails the examination three consecutive times may not apply for reexamination or submit a new license application unless the applicant submits evidence satisfactory to the Commission that the applicant has completed additional mandatory qualifying

education listed in §535.64(a) as follows, after the date the applicant failed the examination for the third time:

(1) for an applicant who failed the national part of the examination, 30 hours;

(2) for an applicant who failed the state part of the examination, 30 hours; and

(3) for an applicant who failed both parts of the examination, 60 hours.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
General Counsel
Texas Real Estate Commission
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For further information, please call: (512) 936-3092

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SUBCHAPTER F. REQUIREMENTS FOR EDUCATION PROVIDERS, COURSES AND INSTRUCTORS FOR QUALIFYING EDUCATION

22 TAC §§535.60 - 535.66

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.60, Definitions; §535.61, Approval of Providers of Qualifying Courses; §535.62, Approval of Qualifying Courses; §535.63, Approval of Instructors of Qualifying and Non-Elective CE; §535.64, Content Requirements for Qualifying Real Estate Courses; §535.65, Responsibilities and Operations of Providers of Qualifying Courses; and §535.66, Credit for Courses Offered by Accredited Colleges or Universities, with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5693).

The amendments to Chapter 535, Subchapter F align the rules with statutory changes to Chapter 1101, Texas Occupations Code, adopted by the 84th Legislature in Senate Bill 699, and clarify and improve performance and delivery standards for real estate and inspector education providers, courses and instructors recommend by the Commission's Education Standards Advisory Committee (ESAC) and Texas Real Estate Inspector Committee (TREIC).

Changes made to the text as published are as follows and were made in response to comments received or staff recommendations for greater clarity:

Throughout the chapter, "salesperson" was changed to "sales agent" to be consistent with the new statutory terminology.

In §535.62(b)(7), the number of "multiple versions" examinations was specifically named as "four"; language was added to quantify how each version of the examination had to be different; and the number of examination bank questions required was reduced from six to four per course credit hour.

In §535.62(e), language was added to allow the Commission, at the time new course requirements are adopted, to permit a course to be supplemented instead of resubmitted for a new approval within the same 12-15 month period.

In §535.65(c)(1)(G), a correction was made to remove the extra words "course and" where they appeared in the section.

In §535.65(f)(1), the revision clarified that the mandatory delivery of materials to a student online was only an option if the student had online access.

In §535.65(g)(2),subsection (E) was deleted because delaying the delivery of a certificate by the provider to a student is not required by the new statutory 60 hour waiting period, which applies only to delivery to the Commission.

In §535.65(h)(4), language was revised to clarify that the multiple versions of the final examination had to be rotated throughout the approval period for the course and proctoring requirements were modified to allow more flexibility in the use of technology in proctoring examinations and to clarify acceptable third party proctors.

In §535.65(i), the word "make-up" was replace with "subsequent" for a second final examination for greater clarity and more specific language was added to ensure that the subsequent examination was a different version than the first examination.

In §535.66(c)(1), clarifying language was added to specify that to receive credit, a course must be in "substantial compliance" with the Commission statute and rules.

In §535.66(g), subsection (3) was deleted since such scenario was highly unlikely since the rules as adopted no longer require an approved provider to offer correspondence courses through an accredited college or university.

Eighteen comments were received on the proposed amendments, the majority were from providers. Twelve commenters did not want third party proctoring to be required for distance education courses or wanted more flexibility in the use of technology to proctor remotely. Both ESAC and TREIC believe that some proctor standard needed to remain in place to ensure the integrity of the final examinations, but did recommend a modification to the amendments to allow more flexibility in the type of proctoring that could occur with the use of technology. The Commission agreed to this change.

Seven commenters did not like the new statutory requirement of not permitting submission of a course completion certificate to the Commission until twice the number of course credit hours had elapsed since registration for the course and the requirement in the amendments prohibiting providers from issuing a certificate to students during that time period. They pointed out the practical problem that could ensue for providers upon course completion if providers had to wait to issue certificates. After reviewing the statute ESAC determined that the restriction applied to delivery to the Commission and not the students and recommended deletion of §535.65(g)(2). The Commission agreed.

Two providers commented that an examination bank with 6 questions per credit hour was too onerous. ESAC and TREIC recommended that the number of questions be reduced to 4. The Commission agreed.

One commenter requested that §535.66(g)(3) be clarified or deleted. ESAC and TREIC recommend deletion since the rules as adopted no longer require an approved provider to offer correspondence courses through an accredited college or

university so the need to deny credit to whole programs of study was highly unlikely. The Commission agreed.

Single comments were received on the following issues: Change the definition of "distance education"; allow a 60 hour course to remain; don't have a requirement that the broker course be taken within 2 years of an application for a broker's license, do not allow any online course; permit related credit for a broker's license to be given for courses not given by an accredited college or approved for continuing education by the Commission; don't require subsequent approval of a course every four years; and a grace period should be given to students when a course expires.

ESAC and TREIC respectfully declined to make changes based on these comments since they did not serve to advance the purpose of higher standards for qualifying education or were already adequately addressed in the current rules. The Commission agreed.

One comment was received in favor of no longer requiring correspondence courses to be offered in association with accredited colleges and universities and one comment was received in favor of a single application for multiple delivery methods.

The revision to the rules as adopted does not change the nature or scope so much that the rules as adopted could be deemed a different rule. The rules as adopted do not affect individuals other than those contemplated by the rules as proposed. The rules as adopted do not impose more onerous requirements than the proposed rules.

The reasoned justification for the amendments is greater consumer protection and clarity.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statutes affected by this amendment are Texas Occupations Code, Chapters 1101 and 1102. No other statute, code or article is affected by the amendments.

§535.60. Definitions.

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

(1) Applicant--A person seeking approval to be an education provider or instructor of qualifying courses.

(2) Classroom delivery--A method of course delivery where the instructor and students interact face to face and in real time, in either the same physical location, or through the use of technology.

(3) Distance Education delivery--A method of course delivery other than classroom delivery, including alternative delivery and correspondence delivery.

(4) Instructor--A person approved by the Commission to teach qualifying courses.

(5) Mandatory qualifying course--A qualifying course that an applicant is required to take to fulfill licensing requirements as mandated by §1101.358 of the Act.

(6) Other qualifying course--A qualifying course, other than a mandatory qualifying course, for which the subject matter of the course is specified by the Act or Commission rule, that an applicant is required to take to fulfill licensing requirements.

(7) Person--Any individual, partnership, corporation, or other legal entity, including a state agency or governmental subdivision.

(8) Provider--Any person approved by the Commission; or specifically exempt by the Act, Chapter 1102, or Commission rule; that offers a course for which qualifying credit may be granted by the Commission to a license holder or applicant.

(9) Scenario-based learning--The use of scenarios to support active learning strategies such as problem-based or case-based learning where students must apply their subject knowledge, critical thinking and problem solving skills in a real-world context.

(10) Topic--Subject categories of what must be covered in a specific course as defined by the Act, Chapter 1102 and this chapter.

(11) Unit--A subtopic within a topic.

§535.61. Approval of Providers of Qualifying Courses.

(a) Application for approval.

(1) Unless otherwise exempt under subsection (b), a person desiring to be approved by the Commission to offer real estate or real estate inspection qualifying courses shall:

(A) file an application on the appropriate form approved by the Commission, with all required documentation;

(B) submit the required fee under §535.101 or §535.210 of this title;

(C) submit the statutory bond or other security acceptable to the Commission under §1101.302 of the Act; and

(D) maintain a fixed office in the state of Texas or designate a resident of this state as attorney-in-fact to accept service of process and act as custodian of any records in Texas which the provider is required to maintain by this Subchapter.

(2) The Commission may:

(A) request additional information be provided to the Commission relating to an application; and

(B) terminate an application without further notice if the applicant fails to provide the additional information not later than the 60th day after the Commission mails the request.

(3) An approved provider is permitted to offer courses in both real estate and real estate inspection that have been approved by the Commission.

(b) Exempt Providers.

(1) The following persons may submit real estate qualifying courses for approval for credit under §535.62(i) of this subchapter without becoming an approved provider of qualifying courses:

(A) a person approved by a real estate regulatory agency to offer qualifying real estate courses in another state;

(B) an accredited college or university in accordance with §535.66 of this subchapter;

(C) a post-secondary educational institution established in and offering qualifying real estate courses in another state;

(D) a United States armed forces institute; and

(E) a nationally recognized professional designation institute or council in the real estate industry.

(2) The following persons may submit real estate inspector qualifying courses for approval for credit under §535.62(i) of this subchapter without becoming an approved provider of qualifying courses:

(A) a provider approved by an inspector regulatory agency of another state;

(B) an accredited college or university in accordance with §535.66 of this subchapter;

(C) a United States armed forces institute;

(D) a unit of federal, state or local government;

(E) a nationally recognized building, electrical, plumbing, mechanical or fire code organization;

(F) a professional trade association in the inspection field or in a related technical field; or

(G) an entity whose courses are approved and regulated by an agency of this state.

(c) Standards for approval. To be approved as a provider by the Commission, the applicant must meet the following standards:

(1) the applicant must satisfy the Commission as to the applicant's ability to administer courses with competency, honesty, trustworthiness and integrity. If the applicant proposes to employ another person to manage the operation of the applicant, that person must meet this standard as if that person were the applicant;

(2) the applicant must demonstrate that the applicant has sufficient financial resources to conduct its proposed operations on a continuing basis without risk of loss to students taking courses from the approved provider; and

(3) that any proposed facilities will be adequate and safe for conducting courses.

(d) Financial review. An applicant shall provide the following information to enable the Commission to determine if an applicant has sufficient financial resources to conduct its proposed operations:

(1) business financial statements prepared in accordance with generally accepted accounting principles, which shall include a current income statement and balance sheet;

(2) a proposed budget for the first year of operation; and

(3) a market survey indicating the anticipated enrollment for the first year of operation.

(e) Insufficient financial condition. The existence of any of the following conditions shall constitute prima facie evidence that an applicant's financial condition is insufficient:

(1) nonpayment of a liability when due, if the balance due is greater than 5% of the approved provider's current assets in the current or prior accounting period;

(2) nonpayment of three or more liabilities when due, in the current or prior accounting period, regardless of the balance due for each liability;

(3) a pattern of nonpayment of liabilities when due, in two or more accounting periods, even if the liabilities ultimately are repaid;

(4) a current ratio of less than 1.75 for the current or prior accounting period, this ratio being total current assets divided by total current liabilities;

(5) a quick ratio of less than 1.60 for the current or prior accounting period, this ratio being the sum of all cash equivalents, marketable securities, and net receivables divided by total current liabilities;

(6) a cash ratio of less than 1.40 for the current or prior accounting period, this ratio being the sum of cash equivalents and marketable securities divided by total current liabilities;

(7) a debt ratio of more than .40 for the current or prior accounting period, this ratio being total liabilities divided by total assets;

(8) a debt-to-equity ratio of greater than .60 for the current or prior accounting period, this ratio being total liabilities divided by owners' or shareholders' equity;

(9) a final judgment obtained against the approved provider for nonpayment of a liability which remains unpaid more than 30 days after becoming final; or

(10) the execution of a writ of garnishment on any of the assets of the approved provider.

(f) Approval notice. An applicant shall not act as or represent itself to be an approved provider until the applicant has received written notice of approval from the Commission.

(g) Period of initial approval. The initial approval of a provider of qualifying courses is valid for four years.

(h) Payment of an annual operation fee.

(1) An approved provider shall submit the Commission approved form and pay an annual operation fee prescribed by §535.101 of this title no later than each anniversary of the date of the provider's approval.

(2) An approved provider who fails to pay the annual operation fee as prescribed shall be placed on inactive status and notified in writing by the Commission.

(3) The approved provider will remain on inactive status until the annual fee is paid.

(4) The Commission will not give credit for courses given by a provider on inactive status.

(i) Disapproval of application.

(1) If the Commission determines that an applicant does not meet the standards for approval, the Commission will provide written notice of disapproval to the applicant.

(2) The disapproval notice, applicant's request for a hearing on the disapproval, and any hearing are governed by the Administrative Procedure Act, Texas Government Code, Chapter 2001, and Chapter 533 of this title (relating to Practice and Procedure). Venue for any hearing conducted under this section shall be in Travis County.

(j) Subsequent Approval.

(1) Not earlier than 90 days before the expiration of its current approval, an approved provider may apply for subsequent approval for another four year period.

(2) Approval or disapproval of a subsequent application shall be subject to:

(A) the standards for initial applications for approval set out in this section; and

(B) whether the approved provider has met or exceeded the exam passage rate benchmark established by the Commission under subsection (k).

(3) The Commission will not require a financial review for subsequent approval if the applicant has provided a statutory bond or

other security acceptable to the Commission under §1101.302 of the Act, and there are no unsatisfied final money judgments against the applicant.

(k) Exam passage rates and benchmark.

(1) The exam passage rate for an approved provider shall be:

(A) calculated for each license category for which the provider offers courses; and

(B) displayed on the Commission website by license category.

(2) The Commission will calculate the exam passage rate of an approved provider on a monthly basis by:

(A) determining the number of students affiliated with that approved provider who passed the examination on their first attempt in the two-year period ending on the last day of the previous month; and

(B) dividing that number by the total number of students affiliated with that provider who took the exam for the first time during that same period.

(3) A student is affiliated with a provider under this subsection if the student took the majority of his or her hours of qualifying education with the provider in the two year period prior to taking the exam for the first time.

(4) For purposes of approving a subsequent application under subsection (j), the established exam passage rate benchmark for each license category is 80% of the average percentage of the total examinees for that license category who passed the examination on the first attempt in the two year period ending on the last day of the previous month.

(5) If at the time the Commission receives a subsequent application for a provider, the provider's exam passage rate does not meet the established benchmark for a license category the provider will be:

(A) disapproved for that license category if the provider's exam passage rate is less than 50% of the average percentage of the total examinees for that license category who passed the examination on the first attempt in the two year period ending on the last day of the previous month; or

(B) placed on probation by the Commission if the provider's exam passage rate is 50% or greater of the average percentage of the total examinees for that license category who passed the examination on the first attempt in the two year period ending on the last day of the previous month.

(6) The exam passage rate of a provider on probation will be reviewed annually at the time the annual operating fee is due to determine if the provider can be removed from probation, remain on probation or have its license revoked, based on the criteria set out in paragraph (5) of this subsection.

§535.62. Approval of Qualifying Courses.

(a) Application for approval of a qualifying course.

(1) For each qualifying course a provider intends to offer, the provider must:

(A) submit the course application and course approval forms, including all materials required; and

(B) pay the fee required by §535.101 or §535.210 of this title.

(2) A provider may file a single application for a qualifying course offered through multiple delivery methods. A fee is required for content and examination review of each qualifying course and for each distinct delivery method utilized by a provider for that course.

(3) A provider who seeks approval of a new delivery method for a currently approved qualifying course must submit a new application and pay all required fees, including a fee for content and examination review.

(4) The Commission may:

(A) request additional information be provided to the Commission relating to an application;

(B) terminate an application without further notice if the applicant fails to provide the additional information not later than the 60th day after the Commission mails the request; and

(C) prior to approval of a proposed qualifying real estate inspector course, submit the course to the Texas Real Estate Inspector Committee for review and recommendation.

(b) Standards for course approval. To be approved as a qualifying course by the Commission, a provider must satisfy the Commission that the course:

(1) covers all topic and unit areas for the specific course subject required by the Act, Chapter 1102 and this chapter;

(2) devotes the time prescribed for each topic required by a course approval form adopted by the Commission;

(3) will be scheduled for the full clock hours of time for which credit is awarded and presented in full hourly units;

(4) does not have daily course segments that exceed 12 hours;

(5) will be delivered by one of the following delivery methods:

(A) classroom delivery;

(B) distance education delivery; and

(C) a combination of (A) and (B), if at least 50% of the combined course is offered by classroom delivery; and

(6) include at a minimum, the following methods to assess a student's comprehension of the course material:

(A) topic quizzes, with at least three questions related to the subject matter of each course topic;

(B) at least one scenario-based learning exercise per every increment of 10 credit hours or less; and

(C) if the course is delivered by distance education delivery:

(i) Prevent the student from moving to the next topic until the student answers all topic quiz questions correctly and receives a passing grade on the scenario based learning exercises; and

(ii) for quiz questions answered incorrectly, employ a method to present the rationale behind the correct answer and ask a subsequent related quiz question that will count toward passing the topic if answered correctly; and

(7) will have at least four versions of a final examination, and ensure that each version of the examination:

(A) covers each topic required by the Act or Rules for the specific course;

(B) does not contain any true/false questions;

(C) does not repeat more than one third of the questions from any other version of the final examination;

(D) for all qualifying courses other than a real estate math course:

(i) consists of at least two questions per credit course hour; and

(ii) draws from a question bank consisting of at least four questions per credit course hour; and

(E) for all qualifying real estate math courses, consists of at least 20 questions that are drawn from a question bank consisting of at least 40 questions.

(c) If the course is currently certified by a distance learning certification center acceptable to the Commission, the provider will be deemed to have met requirements for verification of clock/course hours and design for distance education delivery.

(d) Approval of currently approved courses by a subsequent provider.

(1) If a subsequent provider wants to offer a course currently approved for another provider, the subsequent provider must:

(A) submit the course application and approval forms including all materials required;

(B) submit written authorization to the Commission from the author or provider for whom the course was initially approved granting permission for the subsequent provider to offer the course; and

(C) pay the fee required by §535.101 or §535.210 of this title.

(2) If approved to offer the previously approved course, the subsequent provider is required to:

(A) offer the course as originally approved, including expiration date, with any approved revisions, using all materials required for the course; and

(B) meet the requirements of §535.65 of this subchapter.

(e) Required revision of a currently approved qualifying course.

(1) Providers are responsible for keeping current on changes to the Act and Commission Rules and must supplement materials for approved courses to present the current version of all applicable statutes and rules on or before the effective date of those statutes or rules.

(2) If the Commission adopts new requirements for a course, including but not limited to a course approval form that divides selected qualifying course subjects into topics and units, the Commission will determine, at the time the Commission adopts the new requirements, whether a provider must revise the course or supplement the course. Any provider currently offering a course on that subject must:

(A) revise or supplement any currently approved classroom qualifying course covering that subject no later than 12 months after the effective date of the new requirements;

(B) revise or supplement any currently approved qualifying course offered by distance education delivery no later than 15 months after the effective date of the new requirements;

(3) If the Commission determines that a qualifying course should be supplemented, a provider must submit the supplemental materials required by the Commission. No fee will be required and the course will maintain its original expiration date.

(4) If the Commission determines that a qualifying course should be revised, a provider must:

(A) submit the course application and approval forms including all materials required; and

(B) pay the fee required by §535.101 or §535.210 of this title.

(5) A provider may not offer a currently approved course for qualifying credit after the deadlines established by this subsection following a required revision or supplement of a qualifying course.

(6) If a provider paid a fee for the initial course approval, the provider will receive a prorated credit on the fee paid under this subsection for a revised course for the unexpired time remaining on that initial approval. The Commission will calculate the prorated credit by dividing the fee paid for the initial approval by 48 months and multiplying that amount by the number of full months remaining between the approval date of the revised course and the expiration date of the currently approved version of the course.

(7) A revised course approved under this subsection expires four years from the date of approval of the revision.

(8) No later than 90 days before the effective date of a revised or supplemented course, a provider shall send written notice to all students who have purchased the currently approved course and not completed it, that credit will no longer be given for the current course as of the effective date of the revised or supplemented course.

(9) If an approved provider fails to give the notice set out in paragraph (8) of this subsection, the provider shall allow the student to take the revised or supplemented course at no additional charge.

(f) Voluntary revision of a currently approved qualifying course.

(1) A provider who voluntarily revises a currently approved course, shall, prior to implementation of any course materials:

(A) file any updated course materials and revisions of the course outline with the Commission; and

(B) pay the fee required by §535.101 and §535.210 of this title.

(2) If after review the Commission is not satisfied with the updated course materials and revised course outline, the Commission may direct a provider to:

(A) further revise the materials;

(B) cease use of materials; or

(C) withdraw a course text.

(3) If a provider paid a fee for the initial course approval, the provider will receive a prorated credit on the fee paid under this subsection for the unexpired time remaining on that initial approval. The Commission will calculate the prorated credit by dividing the fee paid for the initial approval by 48 months and multiplying that amount by the number of full months remaining between the approval date of the revised course and the expiration date of the currently approved version of the course.

(4) A revised course approved under this subsection expires four years from the date of approval of the revision.

(5) No later than 90 days before the effective date of a revised course, a provider shall send written notice to all students who have purchased the currently approved course and not completed it, that credit will no longer be given for the current course as of the effective date of the revised course.

(6) If an approved provider fails to give the notice set out in paragraph (5) of this subsection, the provider shall allow the student to take the revised course at no additional charge.

(g) Expiration of approval.

(1) Courses approved after January 1, 2011 are valid for four years from the date of approval.

(2) Courses approved before January 1, 2011 expire on December 31, 2015.

(3) Courses approved for use by a subsequent provider under subsection (d) expire on the same date that the originally approved course expires.

(4) Currently approved versions of a course expire 90 days after approval of a revised version of that course.

(h) Renewal of course approval. Not earlier than 90 days before the expiration of a course approval, a provider may obtain a renewal of course approval for another four year period by following the process and meeting the current standards for an initial course approval.

(i) Course preapproval for exempt providers.

(1) Providers exempt from approval by the Commission may submit courses to the Commission for preapproval by meeting the standards for course approval under this section, including submitting all applicable forms and fees.

(2) Any course offered by an exempt provider without preapproval by the Commission will be evaluated by the Commission to determine whether it qualifies for credit at such time as a student submits a course completion certificate to the Commission for credit.

(3) The Commission will determine whether or not a course offered by an exempt provider without preapproval by the Commission qualifies for credit using the standards set out under this section.

(4) An exempt provider may not represent that a course qualifies for credit by the Commission unless the exempt provider receives written confirmation from the Commission that the course has been preapproved for credit.

§535.63. Approval of Instructors of Qualifying Courses.

(a) Application for approval.

(1) A person desiring to be approved by the Commission to teach real estate or real estate inspection qualifying courses shall:

(A) file an application on the appropriate form approved by the Commission; and

(B) submit the required fee required by §535.101 or §535.210 of this title.

(2) The Commission may:

(A) request additional information be provided to the Commission relating to an application; and

(B) terminate an application without further notice if the applicant fails to provide the additional information not later than the 60th day after the Commission mails the request.

(b) Standards for instructor approval. To be approved as an instructor by the Commission to teach real estate or real estate inspection qualifying courses, the applicant must meet the following standards:

(1) The applicant must satisfy the Commission as to:

(A) the applicant's honesty, trustworthiness, and integrity; and

(B) the person's competency in the subject matter to be taught and ability to teach effectively.

(2) Except as provided by paragraph (3) of this subsection, the applicant must possess the following qualifications:

(A) a college degree in the subject area or five years of active experience as a license holder and three years of experience in teaching or training; or

(B) the equivalent of paragraph (2)(A) of this subsection as determined by the Commission after consideration of the applicant's professional experience, research, authorship, or other significant endeavors in real estate or real estate inspection; and

(C) beginning January 1, 2016, provide a completion certificate from an adult education instructor training course of at least 8 hours that is acceptable to the Commission and dated within four years of the date of application.

(3) To be approved as an instructor of Texas Standards of Practice, Texas Standards of Practice/Legal/Ethics Update, or as an instructor of a ride along inspection course as defined in §535.218 of this title, an applicant must have five years of active licensure as a Texas professional inspector, and have:

(A) performed a minimum of 200 real estate inspections as a Texas professional inspector; or

(B) three years of experience in teaching and/or sponsoring trainees or inspectors.

(c) Approval notice. An applicant shall not act as or represent that the applicant is an approved instructor until the applicant has received written notice of the approval from the Commission to teach specified courses.

(d) Period of approval. The approval of an instructor is valid for two years.

(e) Disapproval of an application.

(1) If the Commission determines that an applicant does not meet the standards for approval, the Commission shall disapprove the application and provide written notice of the disapproval to the applicant.

(2) The disapproval notice, applicant's request for a hearing on the disapproval, and any hearing are governed by the Administrative Procedure Act, Texas Government Code, Chapter 2001, and Chapter 533 of this title (relating to Practice and Procedure). Venue for any hearing conducted under this section shall be in Travis County.

(f) Subsequent approval.

(1) Not earlier than 90 days before the expiration of its current approval, an approved instructor may apply for subsequent approval for another two year period.

(2) Approval or disapproval of a subsequent approval shall be subject to the standards for initial applications set out in this section.

§535.64. Content Requirements for Qualifying Real Estate Courses.

(a) Mandatory qualifying courses. To be approved by the Commission, the following mandatory qualifying courses must contain the content outlined below:

(1) Principles of Real Estate I, which shall contain the following topics, the units of which are outlined in the PRINS 1-0, Qualifying Real Estate Course Approval Form, Principles of Real Estate I, hereby adopted by reference:

(A) Introduction to Modern Real Estate Practice - 200 minutes;

(B) Real Property - 60 minutes;

(C) Concepts and Responsibilities of Home Ownership - 95 minutes;

(D) Real Estate Brokerage and the Law of Agency - 180 minutes;

(E) Fair Housing Laws - 150 minutes;

(F) Ethics of Practice as a License Holder - 30 minutes;

(G) Texas Real Estate License Act - 180 minutes;

(H) Legal Descriptions - 100 minutes;

(I) Real Estate Contracts - 135 minutes;

(J) Interests in Real Estate - 180 minutes;

(K) How Home Ownership is Held - 70 minutes; and

(L) Listing Agreements - 120 minutes.

(2) Principles of Real Estate II, which shall contain the following topics, the units of which are outlined in the PRINS 2-0, Qualifying Real Estate Course Approval Form, Principles of Real Estate II, hereby adopted by reference:

(A) Real Estate Math - 200 minutes;

(B) Real Estate Appraisal - 200 minutes;

(C) Real Estate Financing Principles - 210 minutes;

(D) Control of Land Use - 115 minutes;

(E) Specializations - 50 minutes;

(F) Real Estate Investments - 110 minutes;

(G) Leases - 95 minutes;

(H) Property Management - 120 minutes;

(I) Estates, Transfers, and Titles - 200 minutes; and

(J) Closing Procedures/Closing the Real Estate Transaction - 200 minutes.

(3) Law of Agency, which shall contain the following topics, the units of which are outlined in the LOA-0, Qualifying Real Estate Course Approval Form, Law of, hereby adopted by reference:

(A) Agency Concepts - 130 minutes;

(B) Basic Agency Relationships, Disclosure & Duties to Client - 125 minutes;

(C) Duties and Disclosures to Third Parties - 125 minutes;

(D) Seller Agency - 120 minutes;

(E) Buyer Agency - 150 minutes;

(F) Representing More than one Party in a Transaction: Intermediary Brokerage - 165 minutes;

(G) Creation and Termination of Agency - 85 minutes;

(H) Clarifying Agency Relationships - 45 minutes;

(I) Employment Issues - 120 minutes;

(J) Agency, Ethics and the Law - 155 minutes;

(K) Deceptive Trade Practices & Consumer Protection Act - 140 minutes; and

(L) Implementation and Presentation - 140 minutes.

(4) Law of Contracts, which shall contain the following topics, the units of which are outlined in the LOC-0, Qualifying Real Estate Course Approval Form, Law of Contracts, hereby adopted by reference:

(A) Texas Contract Law - 155 minutes;

(B) Basics of Real Estate Law - 115 minutes;

(C) Introduction to Contracts - 75 minutes;

(D) Ownership Rights and Limitations - 120 minutes;

(E) Contracts Used in Real Estate - 275 minutes;

(F) The Sales Contract - 135 minutes;

(G) Contingencies, Addenda and Amendments - 105 minutes;

(H) Financing Real Estate - 235 minutes;

(I) Conveyance of Title - 90 minutes;

(J) Transaction Process and Closing - 135 minutes; and

(K) Common Contract Mistakes - 60 minutes.

(5) Promulgated Contract Forms, which shall contain the following topics, the units of which are outlined in the PCF-0, Qualifying Real Estate Course Approval Form, Promulgated Contract Forms, hereby adopted by reference:

(A) Contract Law Overview - 155 minutes;

(B) Laws, Rules and Regulations - 150 minutes;

(C) Parties, Properties and Financing - 155 minutes;

(D) Covenants, Commitments and Notices - 160 minutes;

(E) Closing, Possession and More - 220 minutes;

(F) The Remaining Promulgated Forms - 205 minutes;

(G) Promulgated Addenda, Notices and Other Forms - 205 minutes;

(H) Other Real Estate Matters - 115 minutes; and

(I) Practice Makes Perfect - 135 minutes.

(6) Real Estate Finance, which shall contain the following topics, the units of which are outlined in the REF-0, Qualifying Real Estate Course Approval Form, Real Estate Finance, hereby adopted by reference:

(A) The Nature & Cycle of Real Estate Finance - 105 minutes;

(B) Money & the Monetary System - 100 minutes;

(C) Additional Government Influence - 200 minutes;

(D) The Secondary Mortgage Market - 95 minutes;

(E) Sources of Funds - 110 minutes;

(F) Instruments of Real Estate Finance - 170 minutes;

(G) Loan Types, Terms & Issues - 200 minutes;

(H) Government Loans - 215 minutes;

(I) Lender Loan Processes - 220 minutes;

(J) Defaults & Foreclosures - 85 minutes.

(7) Real Estate Brokerage (mandatory for a broker's license) which shall contain the following topics, the units of which are outlined in the REB-0, Qualifying Real Estate Course Approval Form, Real Estate Brokerage, hereby adopted by reference:

(A) The Real Estate Industry - 30 minutes;

(B) Starting a Brokerage Business - 110 minutes;

(C) Ethical & Legal Business Practices- 300 minutes

(D) Analyzing the Market & the Competition- 110 minutes

(E) Managing Risk- 110 minutes;

(F) Financing Your Business- 110 minutes;

(G) Negotiating a Commercial Lease- 100 minutes;

(H) The Marketing Plan- 150 minutes;

(I) Management Style & Structure- 100 minutes;

(J) Recruiting & Hiring- 100 minutes;

(K) Professional Brokerage Competency & Associate License Holder Productivity- 180 minutes;

(L) Evaluating the Business- 50 minutes;

(M) Growth Opportunities- 50 minutes.

(b) Other qualifying courses. Other acceptable qualifying courses are those courses approved by the Commission that meet:

(1) the requirements of §1101.003 of the Act; or

(2) Residential Inspection for Real Estate Agents (or equivalent), which shall include but is not limited to:

(A) repair-related contract forms and addenda;

(B) inspector and client agreements;

(C) inspection standards of practice and standard inspection report form;

(D) tools and procedures;

(E) electromechanical systems (plumbing, heating, air conditioning, appliances, energy-saving considerations); and

(F) structures (lot and landscape, roofs, chimney, gutters, paved areas, walls, windows and doors, insect damage and storage areas).

(c) Related qualifying course. Acceptable related qualifying courses are those courses taken for credit from an accredited college or university, or course approved by the Commission for continuing education credit, that a broker is required to take to fulfill licensing requirements, in any one of the following areas:

(1) accounting;

(2) advertising;

(3) architecture;

(4) business or management;

(5) construction;

(6) finance;

(7) investments;

(8) law;

(9) marketing; and

(10) real estate.

(d) Course Approval forms. All forms adopted by this section are available from the Texas Real Estate Commission, P.O. Box 12188, Austin, Texas 78711-2188, www.trec.texas.gov.

§535.65. Responsibilities and Operations of Providers of Qualifying Courses.

(a) Responsibility of Providers.

(1) A provider is responsible for:

(A) the administration of each course, including, but not limited to, compliance with any prescribed period of time for any required course topics required by the Act, Chapter 1102, and Commission rules;

(B) maintaining student attendance records;

(C) verifying instructor qualification, performance and attendance;

(D) proper examination administration;

(E) validation of student identity acceptable to the Commission;

(F) maintaining student course completion records;

(G) ensuring all advertising complies with subsection (c);

(H) ensuring that instructors or other persons do not recruit or solicit prospective sales agents, brokers or inspectors during course presentation; and

(I) ensuring staff is reasonably available for public inquiry and assistance.

(2) A provider may not promote the sale of goods or services during the presentation of a course.

(3) A provider may remove a student and not award credit if a student does not participate in class, or disrupts the orderly conduct of a class, after being warned by the provider or the instructor.

(4) If a provider approved by the Commission does not maintain a fixed office in Texas for the duration of the provider's approval to offer courses, the provider shall designate a resident of this state as attorney-in-fact to accept service of process and act as custodian of any records in Texas that the provider is required to maintain by this section. A power-of-attorney designating the resident must be filed with the Commission in a form acceptable to the Commission.

(b) Use of approved Instructor.

(1) Except as provided by this subsection, a provider must use an instructor that is currently approved by the Commission to teach the specified course;

(2) Each instructor shall be selected on the basis of expertise in the subject area of instruction and ability as an instructor;

(3) A provider shall require specialized training or work experience for instructors teaching specialized subjects such as law, appraisal, investments, taxation or home inspection;

(4) An instructor shall teach a course in substantially the same manner represented to the Commission in the instructor's manual or other documents filed with the application for course approval form; and

(5) A provider may use the services of a guest instructor who is not approved as an instructor by the Commission for qualifying real estate or inspector courses provided that person instructs for no more than 10% of the total course time.

(c) Advertising.

(1) The following practices are prohibited:

(A) using any advertising which does not clearly and conspicuously contain the provider's name on the first page or screen of the advertising;

(B) representing that the provider's program is the only vehicle by which a person may satisfy educational requirements;

(C) conveying a false impression of the provider's size, superiority, importance, location, equipment or facilities, except that a provider may use objective information published by the Commission regarding pass rates;

(D) promoting the provider directly or indirectly as a job placement agency, unless the provider is participating in a program recognized by federal, state, or local government and is providing job placement services to the extent the services are required by the program;

(E) making any statement which is misleading, likely to deceive the public, or which in any manner tends to create a misleading impression;

(F) advertising a course under a course name other than the course name approved by the Commission; or

(G) advertising using a name that implies the course provider is the Texas Real Estate Commission, including use of the acronym "TREC", in all or part of the course provider's name.

(2) Any written advertisement by a provider that includes a fee that the provider charges for a course must display all fees that the provider charges for the course in the same place in the advertisement and with the same degree of prominence.

(3) The provider shall advertise a course for the full clock hours of time for which credit is awarded.

(4) The provider is responsible for and subject to sanctions for any violation of this subsection by any affiliate or other third party marketer or web hosting site associated with or used by the provider.

(d) Pre-enrollment agreements for approved providers.

(1) Prior to a student enrolling in a course, a provider approved by the Commission shall provide the student with a pre-enrollment agreement that includes all of the following information:

(A) the tuition for the course;

(B) an itemized list of any fees charged by the provider for supplies, materials, or books needed in course work;

(C) the provider's policy regarding the refund of tuition and other fees, including a statement addressing refund policy when a student is dismissed or withdraws voluntarily;

(D) the attendance requirements;

(E) the acceptable makeup procedures, including any applicable time limits and any fees that may be charged for makeup sessions; and

(F) the procedure and fees for taking any permitted makeup final examination or any permitted re-examination, including any applicable time limits.

(2) A pre-enrollment agreement must be signed by a representative of the provider.

(e) Refund of fees by approved provider.

(1) A provider shall establish written policies governing refunds and contingency plans in the event of course cancellation.

(2) If a provider approved by the Commission cancels a course, the provider shall:

(A) fully refund all fees collected from students within a reasonable time; or

(B) at the student's option, credit the student for another course.

(3) The provider shall inform the Commission when a student requests a refund because of a withdrawal due to the student's dissatisfaction with the quality of the course.

(f) Course materials.

(1) Before the course starts, a provider shall give each student copies of or, if a student has online access, provide online access to any materials to be used for the course.

(2) A provider shall update course materials to ensure that current and accurate information is provided to students as provided for under §535.62 of this subchapter.

(g) Presentation of courses.

(1) Classroom Delivery:

(A) The location for the course must be:

(i) conducive to instruction, such as a classroom, training room, conference room, or assembly hall that is separate and apart from work areas;

(ii) adequate for the class size;

(iii) pose no threat to the health or safety of students; and

(iv) allow the instructor to see and hear each student and the students to see and hear the instructor, including when offered through the use of technology.

(B) The provider must:

(i) check the photo identification of each student at class sign up and when signing in for each subsequent meeting of the class;

(ii) ensure the student is present for the course for the hours of time for which credit is awarded;

(iii) provide a 10 minute break per hour at least every two hours; and

(iv) not have daily course segments that exceed 12 hours.

(C) Makeup Session for Classroom Courses.

(i) A provider may permit a student who attends at least two-thirds of an originally scheduled qualifying course to complete a makeup session to satisfy attendance requirements.

(ii) A member of the provider's staff must approve the makeup procedure to be followed. Acceptable makeup procedures are:

(I) attendance in corresponding class sessions in a subsequent offering of the same course; or

(II) the supervised presentation by audio or video recording of the class sessions actually missed.

(iii) A student shall complete all class makeup sessions no later than the 90th day after the date of the completion of the original course.

(iv) Dropped status may not be changed by makeup sessions, and any hours accumulated by a student may not be transferred to any other course, prior to being dropped from a course.

(v) A student who attends less than two-thirds of the originally scheduled qualifying course is not eligible to complete a makeup session. The student shall automatically be dropped from the course with no credit and the provider shall report the student's status to the Commission.

(2) Distance Education Delivery. The provider must ensure that:

(A) the student taking all topics of the course and completing all quizzes and exercises is the student receiving credit for the course through a validation process that meets guidelines approved by the Commission;

(B) an approved instructor is available to answer students' questions or provide assistance as necessary in a timely manner;

(C) a student has completed all instructional modules and attended any hours of live instruction required for a given course; and

(D) an approved instructor is responsible for providing answers and rationale for the grading of the written course work.

(3) A provider is not required to present topics and units in the order outlined for a course on the corresponding course approval form.

(4) The periods of time prescribed to each unit of a topic for a qualifying course as outlined on the corresponding course approval form are recommendations and may be altered to allow instructors flexibility to meet the particular needs of their students.

(h) Course examinations.

(1) The final examination given at the end of each course must be given in a form and with questions that were submitted to the Commission with the course approval form.

(2) Final examination questions must be kept confidential and be significantly different from any quizzes and exercises used in the course.

(3) A provider shall not permit a student to view or take a final examination before the completion of regular course work and any makeup sessions required by this section.

(4) A provider must rotate all versions of the examination required by §535.62(b)(7) throughout the approval period for a course in a manner acceptable to the Commission and examinations must:

(A) require an unweighted passing score of 70%; and

(B) be proctored by a member of the provider faculty or staff, or third party proctor acceptable to the Commission, who:

(i) is present at the test site or able to monitor the student through the use of technology acceptable to the Commission; and

(ii) has positively identified that the student taking the examination is the student registered for and who took the course.

(5) The following are acceptable third party proctors:

(A) employees at official testing or learning/tutoring centers;

(B) librarians at a school, university, or public library;

(C) college or university administrators, faculty, or academic advisors;

(D) clergy who are affiliated with a specific temple, synagogue, mosque, or church; and

(E) educational officers of a military installation or correctional facility.

(6) A provider may not give credit to a student who fails a final examination and a subsequent final examination as provided for in subsection (i) of this section.

(i) Subsequent final course examination.

(1) If a student fails a final course examination, a provider may permit the student to take a subsequent final examination only after the student has:

(A) waited at least three calendar days; and

(B) completed any additional course work prescribed by the provider.

(2) A student shall complete the subsequent final examination no later than the 90th day after the date the original class concludes. The subsequent final examination must be a different version of the original final examination given to the student and must comply with §535.62(b)(1)(G) and subsection (h) of this section.

(3) If a student fails to timely complete the subsequent final examination as required by this subsection, the student shall be automatically dropped from the course with no credit.

(4) A student who fails the final course examination a second time is required to retake the course and the final course examination.

(j) Course completion certificate.

(1) Upon successful completion of a core course, a provider shall issue a course completion certificate that a student can submit to the Commission. The course completion certificate shall show:

(A) the provider's name and approval number;

(B) the instructor's name and instructor license number assigned by the Commission;

(C) the course title;

(D) course numbers;

(E) the number of classroom credit hours;

(F) the dates the student registered for, began and completed the course; and

(G) printed name and signature of an official of the provider on record with the Commission.

(2) A provider may withhold any official completion documentation required by this subsection from a student until the student has fulfilled all financial obligations to the provider.

(3) A provider shall maintain adequate security against forgery for official completion documentation required by this subsection.

(k) Instructor and course evaluations.

(1) A provider shall provide each student enrolled in a course with an instructor and course evaluation form and provide a link to an online version of the form that a student can complete and submit any time after course completion.

(2) An instructor may not be present when a student is completing the evaluation form and may not be involved in any manner with the evaluation process.

(3) When evaluating an instructor or course, a provider shall use the evaluation form approved by the Commission. A provider may also add additional questions to the end of the Commission evaluation form or request the students to also complete the provider's evaluation form.

(4) A provider shall maintain any comments made by the provider's management relevant to instructor or course evaluations with the provider's records.

(5) At the Commission's request, a provider shall produce instructor and course evaluation forms for inspection by Commission staff.

(l) Maintenance of records for a provider of qualifying courses.

(1) A provider shall maintain records of each student enrolled in a course for a minimum of four years following completion of the course, including course and instructor evaluations and student enrollment agreements.

(2) A provider shall maintain financial records sufficient to reflect at any time the financial condition of the school.

(3) A school's financial statement and balance sheets must be available for audit by Commission staff, and the Commission may require presentation of financial statements or other financial records.

(4) All records may be maintained electronically but must be in a common format that is legibly and easily printed or viewed without additional manipulation or special software.

(m) Changes in Ownership or Operation of an approved provider of qualifying courses.

(1) An approved provider shall obtain the approval of the Commission at least 30 days in advance of any material change in the operation of the provider, including but not limited to changes in:

(A) ownership;

(B) management; and

(C) the location of main office and any other locations where courses are offered.

(2) An approved provider, upon transfer to the new owner, must meet the financial review standards imposed by §535.61 of this subchapter.

(3) An approved provider requesting approval of a change in ownership shall provide all of the following information or documents to the Commission:

(A) a new bond of $20,000 for the proposed new owner, a statement from the bonding company indicating that the former bond will transfer to the proposed new owner, or other security acceptable to the Commission under §1101.302 of the Act;

(B) an Education Provider Application reflecting all required information for each proposed new owner;

(C) a Principal Information Form for each proposed new owner who would hold at least a 10% interest in the school; and

(D) pay the fee required by §535.101 or §535.210 of this title.

§535.66. Credit for Course Offered by Accredited Colleges or Universities.

(a) For the purposes of this section, an "accredited college or university" is defined as a college or university accredited by a regional accrediting association, such as the Commission on Colleges of the Southern Association of Colleges and Schools, or by a recognized national or international accrediting body.

(b) Exemption. Pursuant to §1101.301 of Tex. Occ. Code, the Commission does not approve qualifying educational programs or courses of study in real estate and real estate inspection offered by an accredited college or university; however, the Commission has the authority to determine whether a real estate or real estate inspection course satisfies the requirements of the Act and Chapter 1102.

(c) Credit for real estate courses offered by an accredited college or university. To be eligible to receive credit by the Commission, qualifying courses offered by an accredited college or university must meet the following requirements:

(1) cover the subject and topics set out in §1101.003 of Tex. Occ. Code in substantially the same manner as clarified by the Commission in §535.64; and

(2) comply with the curriculum accreditation standards required of the college or university by the applicable accreditation association for verification of clock/course hours, design and delivery method.

(d) Credit for real estate inspector courses offered by an accredited college or university. To be eligible to receive credit by the Commission, qualifying courses offered by an accredited college or university meet the following requirements:

(1) meet the subject and topic definitions set out in §1102.001(5) of Tex. Occ. Code as clarified by the Commission in §535.213; and

(2) comply with the curriculum accreditation standards required of the college or university by the applicable accreditation association for verification of clock/course hours, design and delivery method.

(3) any courses offered to fulfill the substitute experience requirements allowed under §1102.111 must meet the requirements set out in §535.212 of this title, including instructor qualifications.

(e) Preapproval of a course offered under subsections (c) or (d).

(1) An accredited college and university may submit qualifying courses to the Commission for preapproval by filing a form approved by the Commission.

(2) Any course offered by an accredited college and university without preapproval by the Commission will be evaluated by the Commission, using the standards set out in this section, to determine whether it qualifies for credit at such time as a student submits a transcript with the course to the Commission for credit.

(3) An accredited college or university may not represent that a course qualifies for credit by the Commission unless the accredited college or university receives written confirmation from the Commission that the course has been preapproved for credit.

(f) Required approval of qualifying courses not offered under subsections (c) or (d) or that are not subject to academic accreditation standards.

(1) To be eligible for credit from the Commission, a qualifying course offered by an accredited college and university that is not offered under subsections (c) or (d) or that is not subject to academic accreditation standards is required to be submitted for approval by the Commission in accordance with §535.62 of this subchapter, including payment of any fee required.

(2) An accredited college or university may not represent that a course qualifies for credit by the Commission unless the accredited college or university receives written confirmation from the Commission that the course has been approved.

(g) Complaints and audits.

(1) If the Commission receives a complaint, or is presented with other evidence acceptable to the Commission, alleging that an accredited college or university is not in compliance with their accreditation association's curriculum accreditation standards for a real estate or real estate inspection course offered under subsections (c) or (d), or is not complying with the requirements of this Subchapter for a real estate or real estate inspection course not offered under subsections (c) or (d), the Commission may investigate the allegation and/or anonymously audit the course in question.

(2) If after an investigation and/or audit, the Commission determines that an accredited college or university is not in compliance with their accreditation association's curriculum accreditation standards for a real estate or real estate inspection course offered under subsections (c) or (d), or is not complying with the requirements of this Subchapter for a real estate or real estate inspection course not offered under subsections (c) or (d), the Commission will no longer issue credit to applicants for that course.

(h) Required approval of CE program and courses. An accredited college or university is not exempt from approval for real estate and real estate inspection CE programs and courses and must comply with all requirements for approval for providers, courses and instructors required by Subchapter G of this chapter.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
General Counsel
Texas Real Estate Commission
Effective date: January 1, 2016
Proposal publication date: September 4, 2015
For further information, please call: (512) 936-3092

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SUBCHAPTER G. REQUIREMENTS FOR CONTINUING EDUCATION PROVIDERS, COURSES AND INSTRUCTORS

22 TAC §§535.70 - 535.75

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.70, Definitions; §535.71, Approval of CE Providers; §535.72, Approval of Non-elective Continuing Education Courses; §535.73, Approval of Elective Continuing Education Courses; §535.74, Approval of continuing Education Instructors for Elective Courses; and §535.75, Responsibilities and Operations of Continuing Education Providers, with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5703).

The amendments to Chapter 535, Subchapter G align the rules with statutory changes to Chapter 1101, Texas Occupations Code, adopted by the 84th Legislature in SB 699, and clarify and improve performance and delivery standards for real estate and inspector education providers, courses and instructors recommended by the Commission's Education Standards Advisory Committee.

Changes made to the text as published are as follows and were made in response to comments received or staff recommendations to correct grammar or for greater clarity:

In §535.70, the second word in the following terms was revised to lower case for consistency throughout the subchapter: Course Instructor; CE Provider and Distance Education.

In §535.71(a)(2)(B), "mails" was changed to "Commission sends" to acknowledge email as a valid delivery method.

In §535.71(b), "educational" was corrected to "education."

In §535.72(j), the word "make-up" was replace with "subsequent" for a second final examination for greater clarity and more specific language was added to ensure that the subsequent examination was a different version than the first examination.

In §535.75(d)(2) the language was revised to clarify that the providers keep the Distance Education Reporting Form for their records and submit student information for credit electronically to TREC.

In §535.75(f), "Ownership", "Operations" and "Provider" were corrected to start with a lower case letter.

No comments were received specifically on amendments to Subchapter G. However, ESAC approved corresponding changes to Subchapter G that were made in Subchapter F for consistency where applicable. The Commission agreed with all revisions made.

The revisions to the rules as adopted do not change the nature or scope so much that the rules as adopted could be deemed different rules. The rules as adopted do not affect individuals other than those contemplated by the rules as proposed. The rules as adopted do not impose more onerous requirements than the proposed rules.

The reasoned justification for the amendments is greater consumer protection and clarity.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission

to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statutes affected by these amendments are Texas Occupations Code, Chapter 1101 and 1102. No other statute, code or article is affected by the amendments.

§535.70. Definitions.

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

(1) Applicant--A person seeking accreditation or approval to be a continuing education provider or instructor.

(2) CE instructor--A person approved by the Commission to teach continuing education courses.

(3) CE provider--Any person approved by the Commission; or specifically exempt by the Act, Chapter 1102, Texas Occupation Code, or Commission rule; that offers a course for which continuing education credit may be granted by the Commission to a license holder or applicant.

(4) Classroom delivery--A method of course delivery where the instructor and students interact face to face and in real time, in either the same physical location, or through the use of technology.

(5) Distance education delivery--A method of course delivery other than classroom delivery, including alternative delivery and correspondence delivery.

(6) Elective CE course--A continuing education course, other than a Non-elective CE course, approved by the Commission as acceptable to fulfil the continuing education hours needed to renew a license.

(7) Non-elective CE course--A continuing education course, for which the subject matter of the course is specifically mandated by the Act, Chapter 1102, or Commission rule, that a license holder is required to take prior to renewal of a license.

(8) Person--Any individual, partnership, corporation, or other legal entity, including a state agency or governmental subdivision.

§535.71. Approval of CE Providers.

(a) Application for approval.

(1) Unless otherwise exempt under this subsection (b), a person desiring to be approved by the Commission to offer real estate or real estate inspection continuing education courses shall:

(A) file an application on the appropriate form approved by the Commission, with all required documentation;

(B) submit the required fee under §535.101 or §535.210 of this title; and

(C) maintain a fixed office in the state of Texas or designate a resident of this state as attorney-in-fact to accept service of process and act as custodian of any records in Texas which the continuing education provider is required to maintain by this subchapter.

(2) The Commission may:

(A) request additional information be provided to the Commission relating to an application; and

(B) terminate an application without further notice if the applicant fails to provide the additional information not later than the 60th day after the Commission sends the request.

(3) A CE provider is permitted to offer continuing education courses in both real estate and real estate inspector that have been approved by the Commission.

(b) Exempt Providers. The following entities may offer real estate inspector continuing education courses without being approved by the Commission:

(1) a unit of federal, state or local government; or

(2) a nationally recognized building, electrical, plumbing, mechanical or fire code organization.

(c) Standards for approval. To be approved by the Commission to offer real estate or real estate inspector continuing education courses, the applicant must satisfy the Commission as to the applicant's ability to administer courses with competency, honesty trustworthiness and integrity. If the applicant proposes to employ another person to manage the operation of the applicant, that person must meet this standard as if that person were the applicant.

(d) Approval notice. An applicant shall not act as or represent itself to be an approved CE provider until the applicant has received written notice of the approval from the Commission.

(e) Period of initial approval. The initial approval of a CE provider is valid for two years.

(f) Disapproval.

(1) If the Commission determines that an applicant does not meet the standards for approval, the Commission will provide written notice of disapproval to the applicant.

(2) The disapproval notice, applicant's request for a hearing on the disapproval, and any hearing are governed by the Administrative Procedure Act, Texas Government Code, Chapter 2001, and Chapter 533 of this title (relating to Practice and Procedure). Venue for any hearing conducted under this section shall be in Travis County.

(g) Subsequent approval.

(1) Not earlier than 90 days before the expiration of its current approval, an approved provider may apply for subsequent approval for another two year period.

(2) Approval or disapproval of a subsequent application shall be subject to the standards for initial applications for approval set out in this section.

§535.72. Approval of Non-elective Continuing Education Courses.

(a) General requirements.

(1) The non-elective continuing education courses must be conducted as prescribed by the rules in this Subchapter.

(2) Elective continuing education course are approved and regulated under §535.73 of this subchapter.

(b) Application for approval to offer non-elective real estate CE courses.

(1) A CE provider seeking to offer a specific non-elective real estate CE course as outlined in this section shall:

(A) submit a CE Course Application Supplement to the Commission; and

(B) pay the fee required by §535.101 of this title.

(2) A provider may file a single application for a CE course offered through multiple delivery methods. A fee is required for content review of each CE course and for each distinct delivery method utilized by a provider for that course.

(3) A provider who seeks approval of a new delivery method for a currently approved CE course must submit a new application, and pay all required fees, including a fee for content review.

(4) The Commission may:

(A) request additional information be provided to the Commission relating to an application; and

(B) terminate an application without further notice if the applicant fails to provide the additional information not later than the 60th day after the Commission mails the request.

(c) Real estate non-elective CE courses. Every two years, the Commission shall approve subject matter and course materials to be used for the following non-elective real estate continuing education courses as required by the Act:

(1) a four hour Legal Update I: Laws, Rules and Forms course;

(2) a four hour Legal Update II: Agency, Ethics and Hot Topics course; and

(3) a six hour broker responsibility course.

(d) Course expiration.

(1) Each legal update course expires on December 31 of each odd-numbered year.

(2) Each broker responsibility course expires on December 31 of each even-numbered year.

(3) A CE provider must use a CE instructor who has received certification to teach the version of the real estate non-elective CE course being offered.

(e) Application for approval to offer non-elective inspector CE courses.

(1) A CE provider seeking to offer a specific non-elective inspector CE course as outlined in this section shall:

(A) submit:

(i) ICE Course Application form and the Texas Standards of Practice/Legal/Ethics Update Course approval form (PIEAC-SP_LEU-1); or

(ii) Qualifying Real Estate (or Inspector) Qualifying Course Application form and the Texas Standards of Practice/Legal/Ethics Update course approval form (PIEAC-SP_LEU-1); and

(B) pay the fee required by §535.210 of this title.

(2) A separate application is required for each course delivery method.

(f) Requirements for inspector non-elective CE courses.

(1) A Texas Standards of Practice/Legal/Ethics Update course shall contain the following topics, the units of which are outlined the Texas Standards of Practice/Legal/Ethics Update Course Approval form (PIEAC-SP_LEU-1), adopted herein by reference:

(A) 4 hours of Standards of Practice;

(B) 2 hours of Legal; and

(C) 2 hours of Ethics.

(2) A Texas Standards of Practice/Legal/Ethics Update course expires two years from the date of approval and providers must reapply and meet all current requirements of this section to offer the course for another two years.

(g) Delivery method. Non-elective CE courses must be delivered by one of the following delivery methods:

(1) classroom delivery;

(2) distance education delivery; or

(3) a combination of (1) and (2) of this subsection if at least 50% of the combined course is offered by classroom delivery.

(h) Except as provided in this section, non-elective CE courses must meet the presentation requirements of §535.65(g) of this title.

(1) Classroom Delivery. The provider must submit a course completion roster in accordance with §535.75(d) of this subchapter.

(2) Distance Education Delivery:

(A) Non-elective real estate courses are designed by the Commission for interactive classroom delivery. Acceptable demonstration of a method to engage distance education delivery students in interactive discussions and group activities, as well as additional material to meet the course objectives and time requirements are required for approval.

(B) The provider must submit a course completion roster in accordance with §535.75(d) of this subchapter.

(i) Course examinations.

(1) A provider must administer a final examination promulgated by the Commission for non-elective CE courses beginning January 1, 2017 as follows:

(A) For classroom delivery, the examination will be given as a part of class instruction with the correct answers being reviewed by the instructor and students will not be graded;

(B) For distance education delivery, the examination will be given after completion of regular course work and must be:

(i) proctored by a member of the provider faculty or staff, or third party proctor set out in §535.65(i)(5) of this title, who is present at the test site and has positively identified that the student taking the examination is the student registered for and who took the course; or

(ii) administered using a computer under conditions that satisfy the Commission that the student taking the examination is the student registered for and who took the course; and

(iii) graded with a pass rate of 70% in order for a student to receive credit for the course; and

(iv) kept confidential.

(2) A provider may not give credit to a student who fails a final examination and subsequent final examination as provided for in subsection (j) of this section.

(j) Subsequent final course examination.

(1) If a student fails a final course examination, a provider may permit the student to take one subsequent final examination.

(2) A student shall complete the subsequent final examination no later than the 30th day after the date the original class concludes. The subsequent final examination must be different from the first examination.

(3) A student who fails the subsequent final course examination is required to retake the course and the final course examination.

(k) Approval of currently approved courses by a subsequent provider.

(1) If a CE provider wants to offer a course currently approved for another provider, that subsequent provider must:

(A) submit the CE course application supplement form(s);

(B) submit written authorization to the Commission from the author or provider for whom the course was initially approved granting permission for the subsequent provider to offer the course; and

(C) pay the fee required by §535.101 or §535.210 of this title.

(2) If approved to offer the currently approved course, the subsequent provider is required to:

(A) offer the course as originally approved, including expiration date, with any approved revisions, using all materials required for the course; and

(B) meet the requirements of §535.75 of this subchapter.

(l) Approval notice. A CE Provider shall not offer non-elective continuing education courses until the provider has received written notice of the approval from the Commission.

(m) Required revision of a currently approved non-elective CE course. Providers are responsible for keeping current on changes to the Act and Commission Rules and must supplement materials for approved non-elective CE courses to present the current version of all applicable statutes and rules on or before the effective date of those statutes or rules.

§535.73. Approval of Elective Continuing Education Courses.

(a) General requirements.

(1) This subsection applies to continuing education providers seeking to offer an elective CE course approved by the Commission.

(2) Non-elective CE courses are approved and regulated under §535.72 of this subchapter.

(b) Application for approval of an elective CE course.

(1) For each continuing education course an applicant intends to offer, the applicant must:

(A) submit the appropriate CE Course Application form; and

(B) pay the fee required by §535.101 and §535.210 of this title.

(2) A provider may file a single application for a CE course offered through multiple delivery methods. A fee is required for content review of each CE course and for each distinct delivery method utilized by a provider for that course.

(3) A provider who seeks approval of a new delivery method for a currently approved CE course must submit a new application and pay all required fees, including a fee for content review.

(4) The Commission may:

(A) request additional information be provided to the Commission relating to an application; and

(B) terminate an application without further notice if the applicant fails to provide the additional information not later than the 60th day after the Commission mails the request.

(c) Standards for course approval of elective CE course.

(1) To be approved as an elective CE course by the Commission, the course must:

(A) cover subject matter appropriate for a continuing education course for real estate or real estate inspection license holders;

(B) be current and accurate; and

(C) be at least one and no more than 10 hours long.

(2) A provider must demonstrate that a course meets the requirements under paragraph (1) of this subsection by submitting a statement describing the objective of the course and the relevance of the subject matter to activities for which a real estate or inspector license is required, including but not limited to relevant issues in the real estate market or topics which increase or support the license holder's development of skill and competence.

(3) The course must be presented in full hourly units.

(4) The course must be delivered by one of the following delivery methods:

(A) classroom delivery;

(B) distance education delivery; or

(C) a combination of (A) and (B), if at least 50% of the combined course is offered by classroom delivery.

(d) Approval notice.

(1) A CE provider shall not offer elective continuing education courses until the provider has received written notice of the approval from the Commission.

(2) An elective CE course expires two years from the date of approval and providers must reapply and meet all current requirements of this Section to offer the course for another two years.

(e) Approval of currently approved courses by a subsequent provider.

(1) If a CE provider wants to offer a course currently approved for another provider, that subsequent provider must:

(A) submit the applicable course approval form(s);

(B) submit written authorization to the Commission from the provider for whom the course was initially approved granting permission for the subsequent provider to offer the course; and

(C) pay the fee required by §535.101 or §535.210 of this title.

(2) If approved to offer the currently approved course, the subsequent provider is required to:

(A) offer the course as originally approved, with any approved revisions, using all materials required for the course; and

(B) meet the requirements of §535.75 of this subchapter.

§535.74. Approval of Continuing Education Instructors.

(a) Application for approval.

(1) A person desiring to be approved by the Commission to be an instructor for elective real estate or real estate inspection CE courses shall:

(A) file an application on the appropriate form approved by the Commission; and

(B) pay the fee the required by §535.101 or §535.210 of this title.

(2) The Commission may:

(A) request additional information be provided to the Commission relating to an application; and

(B) terminate an application without further notice if the applicant fails to provide the additional information not later than the 60th day after the Commission mails the request.

(b) Certification required to teach real estate non-elective CE courses.

(1) An applicant may not teach a real estate non-elective CE course until the application has received written certification from the Commission to teach a specific non-elective continuing education course.

(2) To obtain certification to teach a real estate non-elective CE course, the applicant must:

(A) be currently approved by the Commission as an instructor for qualifying courses under §535.63 of this subchapter in the subject areas of:

(i) Principles of Real Estate, Law of Agency and Law of Contracts to teach Legal Update I and II; or

(ii) Principles of Real Estate, Law of Agency, Law of Contracts and Real Estate Brokerage to teach Broker Responsibility;

(B) successfully complete an instructor training program approved by the Commission for the non-elective CE course for which certification is sought; and

(C) receive a passing grade of at least 80% on the course final examination promulgated by the Commission.

(3) A previously certified instructor must be recertified to teach a non-elective CE course whenever the previous course has expired and a new course has been approved.

(4) An instructor's certification to teach a legal update course expires on December 31 of every odd-numbered year.

(5) An instructor's certification to teach the broker responsibility course expires on December 31 of every even-numbered year.

(c) To be approved as an instructor of Texas Standards of Practice/Legal/Ethics Update, or as an instructor of a ride along inspection course as defined in §535.218 of this title, an applicant must have five years of active licensure as a Texas professional inspector, and have:

(1) performed a minimum of 200 real estate inspections as a Texas professional inspector; or

(2) three years of experience in teaching and/or sponsoring trainees or inspectors.

(d) Approval notice. An applicant shall not act as or represent itself to be an approved real estate inspection instructor until the applicant has received written notice of the approval from the Commission.

(e) Standards for instructor approval for continuing elective education courses. To be approved as an instructor by the Commission to teach real estate or real estate inspection elective CE courses, the applicant must satisfy the Commission as to:

(1) the applicant's honesty, trustworthiness, and integrity; and

(2) the person's competency in the subject matter to be taught and ability to teach effectively.

(f) Approval notice. An applicant shall not act as or represent itself to be an approved elective CE instructor until the applicant has received written notice of the approval from the Commission.

(g) Period of approval. The approval of an elective CE instructor is valid for two years.

(h) Disapproval of an application.

(1) If the Commission determines that an applicant does not meet the standards for approval, the Commission shall disapprove the application and provide written notice of the disapproval to the applicant.

(2) The disapproval notice, applicant's request for a hearing on the disapproval, and any hearing are governed by the Administrative Procedure Act, Texas Government Code, Chapter 2001, and Chapter 533 of this title (relating to Practice and Procedure). Venue for any hearing conducted under this section shall be in Travis County.

(i) Subsequent approval.

(1) Not earlier than 90 days before the expiration of its current approval, a CE instructor may apply for approval for another two year period.

(2) Approval or disapproval of a subsequent application shall be subject to the standards for initial applications for approval set out in the section.

§535.75. Responsibilities and Operations of Continuing Education Providers.

(a) Except as provided by this Section, CE providers must comply with the responsibilities and operations requirements of §535.65 of this title.

(b) Use of approved Instructor. The use of approved CE instructor is governed by this subsection.

(1) Except as provided by this subsection, a CE provider must use an instructor that is currently approved by the Commission.

(2) Each CE instructor shall be selected on the basis of expertise in the subject area of instruction and ability as an instructor;

(3) An CE instructor shall teach a course in substantially the same manner represented to the Commission in the instructor's manual or other documents filed with the application for course approval form;

(4) A CE provider may use the services of a guest instructor who is not approved as a CE instructor by the Commission for real estate or inspector elective CE courses provided that:

(A) that guest instructor instructs for no more than a total of 50% of the course; and

(B) a commission approved CE instructor remains in the classroom during the guest instructor's presentation.

(5) A CE provider may use the services of a guest instructor who is not approved as a CE instructor by the Commission for 100% of a real estate or inspector elective CE courses provided that

(A) the CE provider is:

(i) an accredited college or university;

(ii) a professional trade association that is approved by the Commission as a CE provider under §535.71 of this subchapter; or

(iii) an entity exempt under §535.71 of this subchapter; and

(B) the course is supervised and coordinated by a Commission approved CE instructor who is responsible for verifying the attendance of all who request CE credit.

(c) CE course examinations. Examinations are only required for CE courses offered through distance education delivery and must comply with the requirements in §535.72(i)(1)(B) of this subchapter and have a minimum of four questions per course credit hour.

(d) Course completion roster. Instead of providing a course completion certificate, upon completion of a course, a CE provider shall submit a class roster to the Commission as outlined by this subsection.

(1) Classroom:

(A) A provider shall submit to the Commission a class roster in a format approved by the Commission not later than the 10th day after the date a course is completed.

(B) A course completion roster shall include:

(i) the provider's name and license;

(ii) a list of all instructors whose services were used in the course;

(iii) the course title;

(iv) course numbers;

(v) the number of classroom credit hours;

(vi) the date of issuance;

(vii) the dates the student registered for, began and completed the course; and

(viii) the signature of an authorized representative of the provider who was in attendance and for whom an authorized signature is on file with the Commission.

(C) The Commission shall not accept signature stamps or unsigned course completion rosters.

(2) Distance Education delivery method. A provider shall maintain a Distance Education Reporting form and submit information contained in that form by electronic means acceptable to the Commission, for each student completing the course not earlier than the number of hours for course credit after the student starts the course and not later than the 10th day after the student completed the course.

(3) A provider may withhold any official completion documentation required by this subsection from a student until the student has fulfilled all financial obligations to the provider.

(4) A provider shall maintain adequate security against forgery for official completion documentation required by this subsection.

(e) Maintenance of records. Maintenance of CE provider's records is governed by this subsection.

(1) A CE provider shall maintain records of each student enrolled in a course for a minimum of four years following completion of the course, including course and instructor evaluations and student enrollment agreements.

(2) All records may be maintained electronically but must be in a common format that is legibly and easily printed or viewed without additional manipulation or special software.

(3) A CE provider shall maintain any comments made by the provider's management relevant to instructor or course evaluations with the provider's records.

(4) Upon request, a CE provider shall produce instructor and course evaluation forms for inspection by Commission staff.

(f) Changes in Ownership or Operation of an approved CE Provider. Changes in ownership or operation of an approved CE provider are governed by this subsection.

(1) An approved provider shall obtain the approval of the Commission at least 30 days in advance of any material change in the operation of the provider, including but not limited to changes in:

(A) ownership;

(B) management; and

(C) the location of main office and any other locations where courses are offered.

(2) An approved provider requesting approval of a change in ownership shall provide a Principal Information Form for each proposed new owner who would hold at least a 10% interest in the provider to the Commission.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 6, 2015.

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Kerri Lewis
General Counsel
Texas Real Estate Commission
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Proposal publication date: September 4, 2015
For further information, please call: (512) 936-3092

SUBCHAPTER I. LICENSE RENEWAL

22 TAC §535.91, §535.92

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.91, Renewal of a Real Estate License, and §535.92, Continuing Education Requirement, in with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5708).

The amendments to Chapter 535, Subchapter I align the rule with statutory changes to Chapter 1101, Texas Occupations Code, adopted by the 84th Legislature in Senate Bill 699, to increase the number of hours of continuing education required for renewal, to allow continuing education credit for attendance at a Commission meeting, to only require designated brokers of entities that sponsor sales agents to take the broker responsibility course and to remove the provision regarding legislative waiver since it is adequately addressed in the statute. The Education Standards Advisory Committee recommended that the number of continuing education hours be increased by 2 hours; however, the Commission chose to increase it by 3 hours, as permitted by the statute.

The amendments also allow an active duty military service member two additional years to renew a license in compliance with

statutory changes in Senate Bill 1307, adopted by the 84th Legislature, effective September 1, 2015.

Changes made to the text as published are as follows and were made in response to comments received or staff recommendations for greater clarity:

In §535.91 and §535.92, "salesperson" was changed to "sales agent" to be consistent with the new statutory terminology.

In §535.91(d)(2), specific subsections were added to clearly identify the new statutory education requirements.

In §535.91(i)(2), text that was supposed to be struck from the rule was inadvertently left in due to a formatting error published by mistake in the *Texas Register.*

A new subsection (h) was added to reinsert language allowing continuing education credit for instructors that was inadvertently dropped, but remains the policy of the Commission.

Three comments were received on this subsection, all of which were against increasing the total continuing education hours to 18. ESAC and the Commission respectfully declined to make changes based on these comments since it would not advance the goal of increasing the education standards for license holders. One commenter was against the change requiring designated brokers to only take the broker responsibility course if the entity sponsored agents. The Commission declined to make a change based on this comment since the broker responsibility course is designed for brokers who sponsor agents.

The revision to the rules as adopted does not change the nature or scope so much that the rules as adopted could be deemed different rules. The rules as adopted do not affect individuals other than those contemplated by the rules as proposed. The rules as adopted do not impose more onerous requirements than the proposed rules.

The reasoned justification for the amendments is greater consumer protection and clarity.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statutes affected by this amendment are Texas Occupations Code, Chapters 1101 and 1102. No other statute, code or article is affected by the amendments.

§535.91. Renewal of a Real Estate License.

(a) Renewal application.

(1) A real estate license expires on the date shown on the face of the license issued to the license holder.

(2) If a license holder intends to renew an unexpired license, the license holder must, on or before the expiration date of the current license:

(A) file a renewal application through the online process on the Commission's website or on the applicable form approved by the Commission;

(B) submit the appropriate fee required by §535.101 of this title;

(C) comply with the fingerprinting requirements under the Act;

(D) comply with the policies established by the Texas Education Code, §57.491 regarding default of a student loan; and

(E) except as provided for by this subsection (g) of this section, satisfy the continuing education requirements applicable to that license.

(3) The Commission may request additional information be provided to the Commission in connection with an renewal application.

(4) A license holder is required to provide information requested by the Commission not later than the 30 day after the date the commission requests the information. Failure to provide information is grounds for disciplinary action.

(b) Renewal Notice.

(1) The Commission will deliver a license renewal notice to a license holder three months before the expiration of the license holder's current license.

(2) If a license holder intends to renew a license, failure to receive a license renewal notice from the Commission does not relieve a license holder from the requirements of this subsection.

(3) The Commission has no obligation to notify any license holder who has failed to provide the Commission with the person's mailing address and email address or a corporation, limited liability company, or partnership that has failed to designate an officer, manager, or partner who meets the requirements of the Act.

(c) Timely renewal of a license.

(1) A renewal application is considered to be filed timely if it is received by the Commission, or postmarked, on or before the expiration date of the license.

(2) If the license expires on a Saturday, Sunday or any other day on which the Commission is not open for business, a renewal application is considered to be filed timely if the application is received or postmarked no later than the first business day after the expiration date of the license.

(d) Initial renewal of sales agent license. A sales agent applying for the first renewal of a sales agent license must:

(1) submit documentation to the Commission showing successful completion of the additional educational requirements of §535.55 of this chapter no later than 10 business days before the day the sales agent files the renewal application; and

(2) fulfill the continuing education requirements of §535.92(a)(1) and (a)(2) of this subchapter and §535.92(a)(3) of this subchapter, if applicable.

(e) Renewal of license issued to a business entity. The Commission will not renew a license issued to a business entity unless the business entity:

(1) has designated an officer, manager, or partner who:

(A) is a licensed broker in active status and good standing with the Commission;

(B) completes any applicable continuing education required under of §535.92; and

(2) maintains errors and omissions insurance with a minimum annual limit of $1 million per occurrence if the designated person owns less than 10 percent of the business entity.

(f) Renewal and pending complaints.

(1) The Commission may renew the current license of a license holder that has a complaint pending with the Commission, provided the license holder meets all other applicable requirements of this section.

(2) Upon completion of the investigation of the pending complaint, the Commission may suspend or revoke the license, after notice and hearing in accordance with the Administrative Procedure Act, Texas Government Code, Chapter 2001.

(g) Renewal with deferred continuing education.

(1) A license holder may renew an active license without completion of required continuing education and may defer completion of any outstanding continuing education requirements for an additional 60 days from the expiration date of the current license if the license holder:

(A) meets all other applicable requirements of this section; and

(B) pays the continuing education deferral fee required by §535.101 of this title at the time the license holder files the renewal application with the Commission.

(2) If after expiration of the 60 day period set out in paragraph (1) of this subsection, the Commission has not been provided with evidence that the license holder has completed all outstanding continuing education requirements, the license holder's license will be placed on inactive status.

(3) To activate an inactive license, the license holder must meet the requirements of Subchapter L of this Chapter.

(4) Credit for continuing education courses for a subsequent licensing period does not accrue until after all deferred continuing education has been completed for the current licensing period.

(h) Student loan default. The Commission will advise a license holder in renewal notices and license application forms that default on a student loan guaranteed by an entity designated by the state of Texas may prevent a renewal of a license. Before the Commission disapproves a license renewal due to a default on a guaranteed student loan, a default on a repayment agreement, or a failure to enter a repayment agreement, the Commission will give notice and provide an opportunity for a hearing in accordance with the provisions of the Administrative Procedure Act, Texas Government Code, §§2001.001, et seq.

(i) Renewal of license for military service member. A license holder on active duty in the United States armed forces is entitled to two years of additional time to renew an expired license without being subject to any increase in fee, any education or experience requirements or examination if the license holder:

(1) provides a copy of official orders or other official documentation acceptable to the Commission showing that the license holder was on active duty during the license holder's last renewal period; and

(2) pays the renewal application fee in effect when the previous license expired.

§535.92. Continuing Education Requirements.

(a) Required continuing education. 18 hours of continuing education are required for each renewal of a real estate sales agent or broker license and must include:

(1) a four hour Legal Update I: Laws, Rules and Forms course;

(2) a four hour Legal Update II: Agency, Ethics and Hot Topics course; and

(3) a six hour broker responsibility course, if the license holder:

(A) sponsors one or more sales agent at any time during the current license period;

(B) is a designated broker of a business entity that sponsors one or more sales agent at any time during the designated broker's current license period; or

(C) is a delegated supervisor of one or more license holders for a period of six months or more during the supervisor's current license period.

(b) Awarding continuing education credit. The Commission will award credit to a license holder for an approved continuing education course upon receipt of a course completion roster from a CE provider as required under §535.75 of this title.

(c) Continuing education credit for qualifying courses. Real estate license holders may receive continuing education elective credit for qualifying real estate courses or qualifying real estate inspection courses that have been approved by the Commission or that are accepted by the Commission for satisfying educational requirements for obtaining or renewing a license. Qualifying real estate courses must be at least 30 classroom hours in length to be accepted for continuing education elective credit.

(d) Continuing education credit for course taken outside of Texas. A course taken by a Texas license holder to satisfy continuing education requirements of a country, territory, or state other than Texas may be approved on an individual basis for continuing education elective credit in Texas upon the Commission's determination that:

(1) the Texas license holder held an active real estate license in the a country, territory, or state other than Texas at the time the course was taken;

(2) the course was approved for continuing education credit for a real estate license by the a country, territory, or state other than Texas and, if a correspondence course, was offered by an accredited college or university;

(3) the Texas license holder's successful completion of the course has been evidenced by a course completion certificate, a letter from the provider or such other proof as is satisfactory to the Commission;

(4) the subject matter of the course was predominately devoted to a subject acceptable for continuing education credit in Texas; and

(5) the Texas license holder has filed a Credit Request for an Out of State Course Credit Request, with the Commission.

(e) Continuing education credit for courses offered by the State Bar. To request continuing education elective credit for real estate related courses approved by the State Bar of Texas for minimum continuing legal education participatory credit, a license holder is required to file an Individual Credit Request for State Bar Course.

(f) Continuing education credit for courses required for a professional designation. A course taken by a license holder to obtain any of the following professional designations, or any other real estate related professional designation course deemed worthy by the Commission, may be approved on an individual basis for continuing education elective credit if the license holder files for credit for the course using Individual Elective Credit Request for Professional Designation

Course and provides the Commission with a copy of the course completion certificate.

(1) ABR--Accredited Buyer Representative

(2) CRE--Counselor in Real Estate

(3) CPM--Certified Property Manager

(4) CCIM--Certified Commercial-Investment Member

(5) CRB--Certified Residential Broker

(6) CRS--Certified Residential Specialist

(7) GRI--Graduate, Realtor Institute

(8) IREM--Institute of Real Estate Management

(9) SIOR--Society of Industrial and Office Realtors

(g) Continuing education credit for attendance at Commission meeting. A real estate license holder may receive up to four hours of continuing education elective credit per license period for attendance in person at a February Commission meeting.

(h) Continuing education credit for instructors. Instructors may receive continuing education credit for real estate qualifying courses subject to the following guidelines:

(1) An instructor may receive credit for those segments of the course that the instructor teaches by filing a completed Instructor Credit Request.

(2) An instructor may receive full course credit by attending any segment that the instructor does not teach in addition to those segments the instructor does teach.

(i) Limitations. The Commission will not award credit to a license holder who attends the same course more than once during:

(1) the term of the current license period; or

(2) the two-year period preceding the filing of an renewal application for a license after the license expiration date as provided for under §535.93 of this section or return to active status as provided for under Subchapter L of this Chapter.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 6, 2015.

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Kerri Lewis
General Counsel
Texas Real Estate Commission
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SUBCHAPTER J. FEES

22 TAC §535.101

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.101, Fees, with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5710). The changes are grammatical and nonsubstantive.

The amendments to §535.101 align the rule with statutory changes to Chapter 1101, Texas Occupations Code, adopted by the 84th Legislature and rule changes to the education course delivery standards. A charge for providing certified copies of documents was also added.

The reasoned justification for the amendments is greater consumer protection and clarity.

The revision to the rule as adopted does not change the nature or scope so much that the rule as adopted could be deemed a different rule. The rule as adopted does not affect individuals other than those contemplated by the rule as proposed. The rule as adopted does not impose more onerous requirements than the proposed rule.

No comments were received on the amendments as published. However, staff revised "salesperson" to "sales agent" throughout the rule to be consistent with the new statutory terminology.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by this amendment is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

§535.101. Fees.

(a) The Commission shall charge and collect the following fees:

(1) a fee of $150 for filing an original or reinstatement application for a real estate broker license, which includes a fee for transcript evaluation;

(2) a fee of $72 for the timely renewal of a real estate broker license;

(3) a fee of $120 for filing an application to step down from a real estate broker license to a real estate sales agent license;

(4) a fee of $150 for filing an original or reinstatement application for a real estate sales agent license, which includes a fee for transcript evaluation;

(5) a fee of $72 for the timely renewal of a real estate sales agent license;

(6) a fee equal to 1-1/2 times the timely renewal fee for the late renewal of a license within 90 days of expiration;

(7) a fee equal to 2 times the timely renewal fee for the late renewal of a license more than 90 days but less than six months after expiration;

(8) a fee of $50 for filing a request for, or renewal of, a license for each additional office or place of business for a period of two years;

(9) a fee of $54 for taking a license examination;

(10) a fee of $10 for deposit into the real estate recovery trust account upon the filing of an original sales agent or broker application;

(11) a fee of $20 for filing a request for a license certificate due to a change of place of business, change of a license holder name, or to establish a relationship with a sponsoring broker:

(A) A change of address or name submitted with an application to renew a license, however, does not require payment of a fee in addition to the fee for renewing the license.

(B) The Commission may require written proof of a license holder's right to use a different name before issuing a license certificate reflecting a change of name.

(12) a fee of $50 to request an inactive broker license be returned to active status;

(13) a fee of $40 for preparing a certificate of license history, active licensure, or sponsorship;

(14) a fee of $50 for filing a moral character determination;

(15) a fee of $400 for filing an application for accreditation of a qualifying education program for a period of four years;

(16) after initial approval of accreditation, a fee of $200 a year for operation of a qualifying real estate education program;

(17) a fee of $50 plus the following fees per classroom hour approved by the Commission for each qualifying education course for a period of four years:

(A) $10 for content and examination review;

(B) $10 for classroom delivery design and presentation review; and

(C) $20 for distance education delivery design and presentation review;

(18) a fee of $400 for filing an application for accreditation as a Continuing Education provider for a period of two years;

(19) a fee of $50 plus the following fees per classroom hour approved by the Commission for each continuing education course for a period of two years:

(A) $5 for content and examination review;

(B) $5 for classroom delivery design and presentation review; and

(C) $10 for distance education delivery design and presentation review;

(20) the fee required under paragraphs (17)(C) and (19)(C) will be waived if the course has already been certified by a distance learning certification center acceptable to the Commission;

(21) a fee of $150 for filing an application for approval as an instructor for a two-year period for real estate qualifying or continuing education courses;

(22) the fee charged by the Federal Bureau of Investigation and Texas Department of Public Safety for fingerprinting or other service for a national or state criminal history check in connection with a license application or renewal;

(23) the fee required by the Department of Information Resources as a subscription or convenience fee for use of an online payment system;

(24) a continuing education deferral fee of $200;

(25) a late reporting fee of $250 to reactivate a license under §535.93 of this title;

(26) a fee of $30 for processing a check or other equivalent instrument returned by a bank or depository as dishonored for insufficient funds;

(27) a fee of $20 for filing any application, renewal, change request, or other record on paper that a person may otherwise file with the Commission electronically by accessing the Commission's website, entering the required information online, and paying the appropriate fee; and

(28) a fee of $20 per certification when providing certified copies of documents.

(b) Fees established by this section must be paid when an application is filed and are not refundable once an application has been accepted for filing.

(c) If the Commission receives an application that requires payment of a fee, and a sufficient fee was not submitted with the application, the Commission will return the application and notify the person filing the application that the person must pay the fee before the application will be processed.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
General Counsel
Texas Real Estate Commission
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For further information, please call: (512) 936-3092

SUBCHAPTER N. SUSPENSION AND REVOCATION OF LICENSURE

22 TAC §§535.144, 535.146, 535.148, 535.161

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.144, When Acquiring or Disposing of Own Property of Spouse, Parent or Child; §535.146, Maintaining Trust Money; §535.148, Receiving an Undisclosed Commission or Rebate; and §535.161, Failing to Provide Information. The amendments to §§535.144, 535.146, and 535.148 are adopted with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5711). The amendment to §535.161 is adopted without changes.

The amendments to Chapter 535, Subchapter N provide greater clarity in the rules and align §535.161 with statutory changes to Chapter 1101, Texas Occupations Code, adopted by the 84th Legislature in Senate Bill 699.

Additionally, TREC Form RSC-1 Disclosure of Relationship with Residential Service Company is updated and adopted by reference.

The reasoned justification for the amendments is greater consumer protection and clarity.

The revision to the rules as adopted does not change the nature or scope so much that the rules as adopted could be deemed a different rule. The rules as adopted do not affect individuals other than those contemplated by the rules as proposed. The rules as adopted do not impose more onerous requirements than the proposed rules.

No comments were received on the amendments as published, however staff recommended a grammatical and terminology correction and "salesperson" was changed to "sales agent" throughout the chapter to be consistent with the new statutory terminology.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by this amendment is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

§535.144. When Acquiring or Disposing of Own Property or Property of Spouse, Parent or Child.

(a) For purposes of §1101.652(a-1)(1) of the Act "license holder" includes a license holder acting on behalf of:

(1) the license holder's spouse, parent or child;

(2) a business entity in which the license holder is more than a 10% owner; or

(3) a trust for which the license holder acts as trustee or of which the license holder or the license holder's spouse, parent or child is a beneficiary.

(b) A license holder engaging in a real estate transaction on his or her own behalf or in a capacity described by subsection (a), is obligated to disclose in writing that he or she is a licensed real estate broker or sales agent acting on his or her own behalf or in a capacity described by subsection (a) in any contract of sale or rental agreement or in any other writing given before entering into any contract of sale or rental agreement.

(c) A license holder acting on his or her own behalf or in a capacity described by subsection (a) shall not use the license holder's expertise to the disadvantage of a person with whom the license holder deals.

§535.146. Maintaining Trust Money.

(a) Definitions. In this section:

(1) "Trust money" means client's money, earnest money, rent, unearned fees, security deposits, or any money held on behalf of another person.

(2) "Trust account" means an account managed by one party for the benefit of another in a banking institution authorized to do business in Texas.

(b) Acceptance of Trust Money.

(1) Any trust money accepted by a broker is held in a fiduciary capacity and must be maintained in a designated trust account maintained by the broker or delivered to an escrow agent authorized in Texas in accordance with the agreement of the principals of the transaction.

(2) A sales agent shall not maintain a trust account. Any trust money received by a sales agent must be immediately delivered to the sales agent's sponsoring broker.

(3) Unless a different time to deposit trust money is expressly agreed upon in writing by the principals to the transaction, any trust money received by the broker must be deposited in a trust account or delivered to an authorized escrow agent within a reasonable time, which the Commission has determined to be not later than the close of business of the second working day after the date the broker receives the trust money.

(4) The broker shall not:

(A) commingle trust money with the broker's personal money or other non-trust money; or

(B) deposit or maintain trust money in a personal account or any kind of business account.

(5) The following is prima facie evidence of commingling trust money with the broker's own money:

(A) placing trust money in a broker's personal or operating account; or

(B) paying operating expenses or making withdrawals from a trust account for any purpose other than proper disbursement of trust money.

(c) Trust account requirements.

(1) The trust account must be clearly identified as a trust account;

(2) The broker may, but is not required to, maintain separate trust accounts for each client or type of trust money maintained by the broker, such as earnest money deposits or security deposits received for the management of rental property.

(3) If trust money held by a broker is deposited in an interest bearing account:

(A) the money must be available for disbursal at the appropriate time; and

(B) unless otherwise provided for by an agreement signed by the party depositing the money with the broker, any interest earned on the money must be distributed to any parties to whom the money is disbursed.

(4) A broker may deposit and maintain a reasonable amount of money in the trust account to cover bank service fees, including fees charged for insufficient funds. Detailed records must be kept for any funds deposited under this exception.

(5) If a broker acquires ownership of trust money held in a trust account, including entitlement to compensation, such money must be removed from the trust account not later the 30th day after the date the broker acquires ownership of the money.

(6) The broker must retain a documentary record of each deposit or withdrawal from the trust account and provide an accounting to each beneficiary of trust money at least monthly if there has been any activity in the account.

(7) A broker may only authorize another license holder to withdraw or transfer money from any trust account but the broker remains responsible and accountable for all trust money received by that broker and all deposits to or disbursements from the trust account.

(8) If a broker deposits trust money in the form of a check in a trust account and the check is dishonored by the financial institution on which it was drawn, the broker shall immediately notify all parties to the transaction in writing.

(d) Disbursement of trust money.

(1) A broker may only disburse money from the broker's trust account in accordance with the agreement under which the money was received.

(2) If any or all of the parties to a real estate transaction make a written demand for payment of trust money, the broker must pay the trust money to the party or parties entitled to the money within a reasonable time, which the Commission has determined to be not later than the 30th day after the date the demand is made.

(3) If by a subsequent written agreement, all parties to a real estate transaction authorize the broker maintaining trust money to disburse the trust money in a manner not in accordance with the agreement under which the money was received, the broker must pay the trust money to the party or parties entitled to the money under the subsequent written agreement within a reasonable time, which the Commission has determined to be not later than the 30th day after the date the broker receives the subsequent written agreement.

(4) The broker must immediately notify all parties in writing of any disbursement of trust money under subsections (d)(2) or (3).

(5) If the broker cannot reasonably determine to which party or parties the trust money should be paid, the broker may pay the trust money into the registry of a court and interplead the parties.

(e) Records. A broker must maintain all documentation regarding a trust account for four years from the date the document is received or created by the broker.

§535.148. Receiving an Undisclosed Commission or Rebate.

(a) A license holder may not receive a commission, rebate, or fee in a transaction from a person other than the person the license holder represents without first disclosing to the license holder's client that the license holder intends to receive the commission, rebate or fee, and obtaining the consent of the license holder's client. This subsection does not apply to referral fees paid by one licensed real estate broker or sales agent to another active licensed broker or sales agent.

(b) If a party the license holder does not represent agrees to pay a service provider in the transaction, the license holder must also obtain the consent of that party to accept a fee, commission or rebate from the service provider. As used in this section, the term "service provider" does not include a person acting in the capacity of a real estate broker or sales agent.

(c) A license holder may not enter into a contract or agreement with a service provider to a real estate transaction in which the license holder represents one or both of the parties if, pursuant to the contract or agreement:

(1) the license holder provides services for or on behalf of the service provider; and

(2) the contract or agreement prohibits the license holder from offering similar services for or on behalf of a competing service provider.

(d) A license holder may not accept a fee or payment for services provided for or on behalf of a service provider to a real estate transaction the payment of which is contingent upon a party to the real estate transaction purchasing a contract or services from the service provider.

(e) A license holder must use TREC No. RSC-2, Disclosure of Relationship with Residential Service Company, to disclose to a party to a real estate transaction in which the license holder represents one or both of the parties any payments received for services provided for or on behalf of a residential service company licensed under Texas Occupations Code Chapter 1303.

(f) The Texas Real Estate Commission adopts by reference TREC No. RSC-2, Disclosure of Relationship with Residential Service Company, approved by the Commission for use by license holders to disclose payments received from a residential service company. This document is published by and available from the Texas Real Estate Commission, P.O. Box 12188, Austin, Texas 78711-2188, www.trec.texas.gov.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Texas Real Estate Commission
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SUBCHAPTER O. HEARING ON SUSPENSION OR REVOCATION OF LICENSURE

22 TAC §535.171

The Texas Real Estate Commission (TREC) adopts the repeal of 22 TAC §535.171, Hearing: Subpoenas and Fees, without changes to the proposal as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5712).

The repeal facilitates the move of the sole rule in Subchapter O to Chapter 533, Practice and Procedure, where the subject matter more appropriately belongs.

The reasoned justification for the repeal is to provide clarity and consistency within the rules.

No comments were received on the proposed repeal.

The repeal is adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by the repeal is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the repeal.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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General Counsel
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SUBCHAPTER P. ENFORCEMENT ACTION FOR UNLICENSED ACTIVITY

22 TAC §535.181

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.181, Investigation and Actions, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5713).

The amendments to Chapter 535, Subchapter P rename the subchapter and rule to more correctly reflect the subject matter.

The reasoned justification for the amendments is greater clarity.

No comments were received on the amendments as published.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by this amendment is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
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SUBCHAPTER Q. ADMINISTRATIVE PENALTIES

22 TAC §535.191

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.191, Schedule of Administrative Penalties, without changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5713).

The amendments to Chapter 535, Subchapter Q align the rule with statutory changes to Chapter 1101, Texas Occupations Code, adopted by the 84th Legislature in Senate Bill 699 and add missing rule violations.

The reasoned justification for the amendments is consistency with statutory provisions, greater consumer protection and clarity.

No comments were received on the amendments as published.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by this amendment is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
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SUBCHAPTER R. REAL ESTATE INSPECTORS

22 TAC §§535.208, 535.209, 535.216, 535.219, 535.220, 535.224

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §§535.208, 535.209, 535.216, 535.219, 535.220, and 535.224 in Subchapter R, Real Estate Inspectors. Section 535.520 is adopted with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5714). The other sections are adopted without changes.

The amendments to §535.208, Application for License, and §535.216, Renewal of License, align those rules with statutory changes to Chapter 55, Texas Occupations Code, adopted by the 84th Legislature.

The amendments to §535.209, Examinations, were recommended by the Texas Real Estate Inspector Advisory Committee to clarify when the Commission may waive the national portion of the inspector examination.

The amendments to §535.219, Schedule of Administrative Penalties, §535.220, Professional Conduct and Ethics, and §535.224, Practice and Procedure, align those rules with statutory changes to Chapter 1101, Texas Occupations Code, adopted by the 84th Legislature.

The reasoned justification for the amendments is consistency with statutory provisions, greater consumer protection and clarity.

No comments were received on this proposal as published; however, staff recommended a change to the name of the Consumer Notice to Consumer Protection Notice for greater clarity.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics

for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statutes affected by these amendments are Texas Occupations Code, Chapters 1101 and 1102. No other statute, code or article is affected by the amendment.

§535.220. Professional Conduct and Ethics.

(a) The responsibility of those persons who engage in the business of performing independent inspections of improvements in real estate transactions imposes integrity beyond that of a person involved in ordinary commerce. Each inspector must maintain a high standard of professionalism, independence, objectivity and fairness while performing inspections in a real estate transaction. Each inspector license holder must also uphold, maintain, and improve the integrity, reputation, and practice of the home inspection profession.

(b) The relationship between an inspector and a client should at a minimum meet the following guidelines.

(1) In accepting employment as an inspector, the inspector should protect and promote the interest of the client to the best of the inspector's ability and knowledge, recognizing that the client has placed trust and confidence in the inspector.

(2) In the interest of the client and the inspector's profession, the inspector should endeavor always to maintain and increase the inspector's level of knowledge regarding new developments in the field of inspection.

(3) The inspector should conduct the inspector's business in a manner that will assure the client of the inspector's independence from outside influence and interests that might compromise the inspector's ability to render a fair and impartial opinion regarding any inspection performed.

(c) The relationship between an inspector and the public should at a minimum meet the following guidelines.

(1) The inspector should deal with the general public at all times and in all manners in a method that is conducive to the promotion of professionalism, independence and fairness to the inspector's, the inspector's business and the inspection industry.

(2) The inspector should attempt to assist the general public in recognizing and understanding the need for inspections, whether the inspector is selected to perform such inspection or not.

(3) The inspector accepts the duty of protecting the public against fraud, misrepresentation or unethical practices in the field of real estate inspections.

(d) The relationship of the inspector with another inspector should at a minimum meet the following guidelines.

(1) The inspector should bind himself to the duty of maintaining fairness and integrity in all dealings with other inspectors and other persons performing real estate inspections.

(2) The inspector should cooperate with other inspectors to insure the continued promotion of the high standards of the real estate inspection profession and pledges himself to the continued pursuit of increasing competence, fairness, education and knowledge necessary to achieve the confidence of the public.

(3) If an inspector has knowledge of a possible violation of the rules of the Commission or Chapter 1102, the inspector should report the possible violation to the Commission.

(e) An inspector shall comply with the following requirements.

(1) An inspector shall not inspect a property when any compensation or future referrals depend on reported findings or on the closing or settlement of a property.

(2) In this section, "settlement service" means a service provided in connection with a prospective or actual settlement, and "settlement service provider" includes, but is not limited to, any one or more of the following:

(A) federally related mortgage loan originator;

(B) mortgage broker;

(C) title service provider;

(D) attorney;

(E) a person who prepares documents, including notarization, delivery, and recordation;

(F) appraiser;

(G) inspector;

(H) settlement agent;

(I) a person who provides mortgage insurance services;

(J) a person who provides services involving hazard, flood, or other casualty insurance or homeowner's warranties;

(K) real estate agent or broker; and

(L) a person who provides any other services for which a settlement service provider requires a borrower or seller to pay.

(3) An inspector shall not pay or receive a fee or other valuable consideration to or from any other settlement service provider for, but not limited to, the following:

(A) the referral of inspections;

(B) inclusion on a list of inspectors, preferred providers, or similar arrangements; or

(C) inclusion on lists of inspectors contingent on other financial agreements.

(4) An inspector shall not receive a fee or other valuable consideration, directly or indirectly, for referring services that are not settlement services or other products to the inspector's client without the client's consent.

(5) This section does not prohibit an inspector from paying or receiving a fee or other valuable consideration, such as to or from a contractor, for services actually rendered.

(6) An inspector shall not accept employment to repair, replace, maintain or upgrade systems or components of property covered by the Standards of Practice under this subchapter on which the inspector has performed an inspection under a real estate contract, lease, or exchange of real property within 12 months of the date of the inspection.

(7) Inspectors shall not disclose inspection results or client information without prior approval from the client. Inspectors, at their discretion, may disclose observed immediate safety hazards to occupants exposed to such hazards when feasible.

(8) This subsection does not prohibit an inspector from:

(A) engaging in legal promotional or educational activities to or with settlement service providers that are not conditioned on the referral of business; or

(B) purchasing advertising and promoting the inspector at market rates from any person in any publication, event or media.

(f) The inspector should make a reasonable attempt to cooperate with other professionals and related tradespersons at all times and in all manners in a method that is conducive to the promotion of professionalism, independence and fairness to the inspector, the inspector's business, and the inspection industry.

(g) Each active real estate inspector licensed by the Commission shall provide the consumer notice adopted under §531.18 of this title by:

(1) displaying it in a readily noticeable location in each place of business the inspector maintains; and

(2) providing a link to it labeled "Texas Real Estate Commission Consumer Protection Notice", in at least a 10 point font, in a readily noticeable place on the homepage of the business website of the inspector.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kristen Worman
Deputy General Counsel
Texas Real Estate Commission
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SUBCHAPTER T. EASEMENT OR RIGHT-OF-WAY AGENTS

22 TAC §535.401

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC §535.401, Required Notices, with changes to the proposed text as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5716).

The amendments to Chapter 535, Subchapter T implement statutory changes in Senate Bill 699, adopted by the 84th Legislature. The legislature authorized the Commission to adopt the form and delivery method for a consumer notice regarding complaints and recovery fund availability.

The reasoned justification for the amendments is greater consumer protection and clarity.

"TREC No." was added in front of the form name for consistency throughout the rules.

The revision to the rule as adopted does not change the nature or scope so much that the rule as adopted could be deemed a different rule. The rule as adopted does not affect individuals other than those contemplated by the rule as proposed. The rule as adopted does not impose more onerous requirements than the proposed rule.

No comments were received on this proposal as published; however, staff recommended a change to the name of the Consumer Notice to Consumer Protection Notice for greater clarity and made a grammatical correction.

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by this amendment is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

§535.401. Required Notices.

(a) The Commission adopts by reference TREC No. ERW 4-1, Notice Regarding Easements and Rights-of-Way, which is published by and available from the Commission, P.O. Box 12188, Austin, Texas 78711-2188.

(b) Each registrant shall, before a party in a transaction other than the party the registrant represents is obligated to sell, buy, lease, or transfer a right-of-way or easement, provide to the party a copy of TREC No. ERW 4-1 completed by the registrant.

(c) Each registrant shall provide the consumer notice adopted under §531.18 of this title by:

(1) displaying it in a readily noticeable location in each place of business the registrant maintains; and

(2) providing a link to it labeled "Texas Real Estate Commission Consumer Protection Notice", in at least a 10 point font, in a readily noticeable place on the homepage of the business website of the registrant.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kerri Lewis
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CHAPTER 537. PROFESSIONAL AGREEMENTS AND STANDARD CONTRACTS

The Texas Real Estate Commission (TREC) adopts amendments to 22 TAC Chapter 537, §§537.20, 537.28, 537.30 - 537.33, 537.37, 537.39, and 537.45 - 537.47, Professional Agreements and Standard Contracts, with changes to the proposed amendments as published in the September 4, 2015, issue of the *Texas Register* (40 TexReg 5717). The changes are to the proposed forms adopted by reference in the amended rules.

Texas real estate license holders are generally required to use forms promulgated by TREC when negotiating contacts for the sale of real property. These forms are drafted and recommended for adoption by the Texas Real Estate Broker-Lawyer Committee

(BLC), an advisory body consisting of six attorneys appointed by the President of the State Bar of Texas, six brokers appointed by TREC, and one public member appointed by the governor.

The reasoned justification for the amendments is conformity with statutory changes, greater clarity and consistency in the contract forms.

The BLC recommended revisions to the contract forms adopted by reference under the proposed amendments to Chapter 537 in order to align the contracts with federal rule changes promulgated by the CFPB in the TILA-RESPA Disclosure Rule (TRID), which are effective October 3, 2015; and with state statutory changes enacted by the 84th Legislature in House Bill 1665, Senate Bill 1367, and Senate Bill 1168, which are effective September 1, 2015.

Additional revisions to the contracts were recommended by the BLC to address issues that have arisen since the last contract revisions or due to recent case law.

The revisions to the contract forms adopted by reference in the rules as adopted do not change the nature or scope so much that the rules and contract forms as adopted could be deemed a different rule or form. The rules or contract forms as adopted do not affect individuals other than those contemplated by the rules as proposed. The rules and contract forms as adopted do not impose more onerous requirements than the proposed rules and contract forms.

One hundred and forty-eight commenters weighed in on the proposed contracts, two of whom were trade associations. One hundred and nine commenters, including both trade associations, did not want the automatic 10 day extension of closing to accommodate TRID. Most believed that this automatic extension would be abused by lenders and some buyers. Instead they preferred to handle any extension that may be needed through a negotiated amendment. The BLC agreed to remove that provision.

Nineteen comments, including both trade associations, were received on the Third Party Financing Addendum and Paragraph 3 of the contracts, asking for an option for when a buyer does not want the contract subject to credit approval, terminology revisions to be consistent with TRID, a clarification that the property approval can be given up to the closing and doesn't end the day before since the buyer's termination right extends to closing, and an authorization by the parties to title companies and lenders to release closing disclosures to their respective agents. The BLC made revisions to the contract forms to address these comments. One commenter wanted the addendum to address the situation where the property appraises for less than the contract price but the lender still approves the financing and two other commenters wanted the contracts to set out the amount of time a lender had to complete the property appraisal or grant property approval. The BLC did not think these situations should be addressed in the contract forms since there are many variables, including that the purchase price was negotiated and differing lender requirements and timeframes. Three commenters wanted the Third Party Financing Addendum and Paragraphs 3 and 4 of the contracts to remain as they currently are written and one commenter wanted instructions that multiple boxes could be checked in paragraph 3. The BLC declined to reverse the amendments and thought the instruction was unnecessary given the current wording.

Nine commenters were in favor of the change to a 5 p.m. end time for the option period in Paragraph 23, while four were against it. Three additional comments were received on this paragraph asking for greater clarification. The BLC left the 5 p.m. deadline in but clarified the language.

Five commenters requested that the order of the Associate and Associate's Licensed Supervisor be reversed so the consumer could find their agent's information more easily. The BLC agreed to make this change.

Four comments were received on Paragraph 6. One thought the Water Fluctuation Notice was ridiculous; however, since it is a statutory requirement, no change was made by BLC. One requested that the language in the Water Fluctuation level more closely track the statutory language and the other wanted a check box beside the HOA disclosure. The BLC agreed to the first request but thought the second request did not work with disclosure provisions in the contract. The last commenter wanted the contracts to more clearly reflect that the owner's title policy was optional. The BLC did not think such a change was necessary.

One commenter objected to the new requirement regarding hydrostatic testing in Paragraph 7 while another commenter wanted it expanded to include more tests. The BLC declined to make any changes based on these comments.

Two comments were received regarding the need for fax and phone numbers in Paragraph 21. The BLC will look at this issue in future contract proposals.

Single comments were received on Paragraphs 5, 6(A), 15, and 18D, none of which dealt with the current proposals so the BLC deferred action on the issues raised until its next meeting.

Based on discussion of these comments, the Broker Lawyer Committee made the following changes to the contracts as proposed. The changes listed below apply to all contract forms unless specified otherwise. Paragraph numbers referenced are from the *One to Four Family Residential Contract (Resale).*

Paragraph 6E(10), Title Notices, Notice of Water Fluctuations, was retitled "Notice of Water Level Fluctuations" and minor technical revisions were made to more closely follow the statutory language.

The proposed language in Paragraph 9A., Closing, allowing a ten-day extension of closing if the buyer's lender is required to provide additional disclosures mandated by TRID was removed and that paragraph will remain as it is in the current contracts.

In Paragraph 12 A.(2), the word "adjusted" was removed before "origination" since this term is no longer used under TRID.

In Paragraph 23, Termination Option, language was added to clarify that notice must be given at 5 p.m. local time "where the Property is located."

In the Broker Information Section, the order of the Associate's and Licensed Supervisor of the Associate's information was reversed and made consistent for all contracts to facilitate ease of use of contact information for consumers and license holders.

The proposed new Third Party Financing Addendum was revised to: remove the word "adjusted" before "origination" wherever it occurred since this term is no longer used under TRID; change "Credit Approval" to "Buyer Approval" to reflect the more encompassing nature of that approval; add an option in the addendum for a party to opt out of "Buyer Approval"; allow Property approval to be given up until closing instead of the "day before" closing; reordered subsections D. and E. so that Authorization to Release

Information comes last; and expanded the Authorization to Release Information section to include the parties' authorization to lenders, title companies and escrow agents to release the closing disclosure to the parties' respective agents.

The proposed Seller's Financing Addendum and Amendment forms were revised to be consistent with changes to the contract forms and Third Party Financing Addendum and to add a reference to the amount of the loan in Paragraph 3B to the Seller's Financing Addendum.

The Commission agreed to adopt the revised proposed contracts presented by the Broker Lawyer Committee for voluntary use immediately and mandatory use beginning January 1, 2016, with the exception of the Condominium Resale Certificate, which is effective 20 days after submission to the *Texas Register.*

22 TAC §§537.20, 537.28, 537.30 - 537.33, 537.37, 537.45 - 537.47

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by these amendments is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

§537.20. Standard Contract Form TREC No. 9-12.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 9-12 approved by the Commission in 2015 for use in the sale of unimproved property where intended use is for one to four family residences.

§537.28. Standard Contract Form TREC No. 20-13.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 20-13 approved by the Commission in 2015 for use in the resale of residential real estate.

§537.30. Standard Contract Form TREC No. 23-14.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 23-14 approved by the Commission in 2015 for use in the sale of a new home where construction is incomplete.

§537.31. Standard Contract Form TREC No. 24-14.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 24-14 approved by the Commission in 2015 for use in the sale of a new home where construction is completed.

§537.32. Standard Contract Form TREC No. 25-11.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 25-11 approved by the Commission in 2015 for use in the sale of a farm or ranch.

§537.33. Standard Contract Form TREC No. 26-7.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 26-7 approved by the Commission in 2015 for use as an addendum concerning seller financing.

§537.37. Standard Contract Form TREC No. 30-12.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 30-12 approved by the Commission in 2015 for use in the resale of a residential condominium unit.

§537.45. Standard Contract Form TREC No. 38-5.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 38-5 approved by the Commission in 2015 for use as a notice of termination of contract.

§537.46. Standard Contract Form TREC No. 39-8.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 39-8 approved by the Commission in 2015 for use as an amendment to promulgated forms of contracts.

§537.47. Standard Contract Form TREC No. 40-7.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form, TREC No. 40-7 approved by the Commission in 2015 for use as an addendum to be added to promulgated forms of contracts when there is a condition for third party financing.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 6, 2015.

TRD-201504802
Kerri Lewis
General Counsel
Texas Real Estate Commission
Effective date: January 1, 2016
Proposal publication date: September 4, 2015
For further information, please call: (512) 936-3092

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22 TAC §537.39

The amendments are adopted under Texas Occupations Code, §1101.151, which authorizes the Texas Real Estate Commission to adopt and enforce rules necessary to administer Chapters 1101 and 1102; and to establish standards of conduct and ethics for its license holders to fulfill the purposes of Chapters 1101 and 1102 and ensure compliance with Chapters 1101 and 1102.

The statute affected by these amendments is Texas Occupations Code, Chapter 1101. No other statute, code or article is affected by the amendments.

§537.39. Standard Contract Form TREC No. 32-4.

The Texas Real Estate Commission (Commission) adopts by reference standard contract form TREC No. 32-4 approved by the Commission in 2015 for use as a condominium resale certificate.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 6, 2015.

TRD-201504804
Kerri Lewis
General Counsel
Texas Real Estate Commission
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Proposal publication date: September 4, 2015
For further information, please call: (512) 936-3092

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TITLE 30. ENVIRONMENTAL QUALITY

PART 1. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

CHAPTER 217. DESIGN CRITERIA FOR DOMESTIC WASTEWATER SYSTEMS

The Texas Commission on Environmental Quality (TCEQ, agency, or commission) adopts the repeal of §§217.1, 217.36, 217.63, 217.69, 217.70, 217.94, 217.162, and 217.193; new §§217.1, 217.18, 217.36, 217.40, 217.63, 217.69 - 217.71, 217.90, 217.94, 217.120, 217.162, 217.193, and 217.194; and amendments to §§217.2 - 217.17, 217.31 - 217.35, 217.37 - 217.39, 217.51 - 217.62, 217.64 - 217.68, 217.91 - 217.93, 217.95 - 217.100, 217.121 - 217.129, 217.151 - 217.161, 217.163, 217.164, 217.182 - 217.192, 217.201 - 217.213, 217.241 - 217.252, 217.271 - 217.283, 217.291 - 217.300, 217.321 - 217.330, 217.332, and 217.333.

The repeal of §§217.1, 217.36, 217.63, 217.69, 217.70, 217.94, 217.162, and 217.193; new §§217.1, 217.18, 217.40, 217.63, 217.71, 217.90, 217.94, and 217.120; and the amendments to §§217.3 - 217.5, 217.8 - 217.15, 217.17, 217.31 - 217.35, 217.38, 217.39, 217.51 - 217.54, 217.58, 217.59, 217.61, 217.62, 217.64 - 217.68, 217.91, 217.93, 217.95 - 217.97, 217.99, 217.100, 217.121 - 217.128, 217.151, 217.153, 217.157 - 217.161, 217.183 - 217.189, 217.191, 217.192, 217.201, 217.202, 217.204, 217.205, 217.241 - 217.249, 217.251, 217.252, 217.271, 217.273 - 217.280, 217.282, 217.283, 217.291 - 217.300, 217.321 - 217.328, 217.330, and 217.333 are adopted *without changes* to the proposed text as published in the May 29, 2015, issue of the *Texas Register* (40 TexReg 2935). The amendments to §§217.2, 217.6, 217.7, 217.16, 217.37, 217.55 - 217.57, 217.60, 217.92, 217.98, 217.152, 217.154 - 217.156, 217.163, 217.164, 217.182, 217.190, 217.203, 217.206 - 217.213, 217.250, 217.272, 217.281, 217.329, and 217.332; and new §§217.36, 217.69, 217.70, 217.129, 217.162, 217.193, and 217.194 are adopted *with changes* to the proposed text.

Background and Summary of the Factual Basis for the Adopted Rules

On July 11, 2011, Eric J. Dupre filed a petition for rulemaking that proposed amending §217.55 (Manholes and Related Structures) and §217.60 (Lift Station, Wet Well, and Dry Well Designs) to include design criteria for rehabilitation of existing manholes, lift stations, and other wastewater treatment plant structures. On August 31, 2011, TCEQ's commissioners instructed the executive director to initiate rulemaking on Chapter 217.

The executive director held stakeholder meetings on November 1, 2011, and March 6, 2012, in Austin, Texas. Both meetings were webcast for the public. The executive director's staff requested that stakeholders provide comments and propose changes to the existing rules. The executive director's staff received comments from: the rule petitioner; engineers and service providers (Aqua-Aerobic Systems, Inc., Freese and Nichols, Dr. Clifford Fedler, Ph.D., P.E., Houston Council of Engineering Companies, Jones & Carter, Inc., Don Vandertulip, P.E.); a professional association (Water Environment Association of Texas - collection systems subcommittee); city utilities (Austin Water Utility, San Antonio Water System); and a local government (Harris County).

Proposed changes from stakeholders and the executive director's staff received before the stakeholder meetings were discussed at the stakeholder meetings. The executive director provided additional outreach at TCEQ's Environmental Trade Fair, TCEQ's Water Quality/Stormwater Seminar, TCEQ's Water Quality Advisory Work Group meetings, and the Water Environment Association of Texas's Texas Water conference.

The commission adopts amendments to Chapter 217 that will: add new definitions and clarify existing definitions; add design criteria and approval requirements for rehabilitation of existing infrastructure, based on the petition for rulemaking; add design criteria for new technologies, including cloth filters and air lift pumps; update existing requirements or develop new requirements to reflect current commission and industry practices, standards and trends; and clarify rule language to improve understanding of the chapter.

In an effort to clarify rule language to improve understanding of the chapter and to enhance compliance with and enforceability of the chapter, a rule team was established with representatives from the Office of Legal Services, Office of Compliance and Enforcement, and the Office of Water to provide input on the rules. These efforts resulted in a significant number of changes throughout the chapter, with nearly every section affected.

Adopted new §217.69 establishes minimum requirements for collection system rehabilitation projects, and requires a collection system owner to develop and implement a maintenance and inspection program in response to the petition for rulemaking filed by Eric J. Dupre on July 11, 2011. Stakeholders generally agree that corrosion and improper rehabilitation are problems that need to be addressed, but there was no consensus about how to address the issue. The adopted new section seeks to address the essence of the petition request, while also providing engineering flexibility when deciding how to address this issue.

A corresponding rulemaking is adopted in this issue of the *Texas Register* concerning 30 TAC Chapter 317, Design Criteria Prior to 2008 (Rule Project Number 2013-025-317-LS).

Section by Section Discussion

This rulemaking adopts various non-substantive changes throughout the chapter to conform to Texas Register requirements and the executive director's current practices and guidelines. These adopted changes include: improving the rule structure; using consistent terms; correcting grammatical, syntactic, and typographical errors; using appropriate and consistent acronyms; and updating section references. These non-substantive changes are not addressed in the Section by Section Discussion.

Additionally, certain terms were revised to prevent ambiguity by clarifying the term used, using consistent terms where the meaning is the same, and using defined terms. These changes are non-substantive and are not addressed in the Section by Section Discussion.

Subchapter A: Administrative Requirements

§217.1, Applicability

This rulemaking adopts the repeal of §217.1; and adopts new §217.1. The adopted repeal and new section are necessary to clearly identify when and how the adopted amendments to this chapter apply to wastewater collection systems, wastewater treatment facilities, and their various components. The adopted amendments are not intended to retroactively apply to a project

that was approved for construction before the effective date of the adopted amendments unless the project proposes to: 1) alter or re-rate existing infrastructure, 2) rehabilitate existing collection system infrastructure, or 3) re-approve a facility with an expired wastewater permit.

The commission is concurrently adopting new Chapter 317. On August 28, 2008, Chapter 317 was repealed and replaced with the initial adoption of Chapter 217, Design Criteria for Domestic Wastewater Systems. The repeal of Chapter 317 created regulatory uncertainty for the owners and operators of existing facilities not subject to Chapter 217 requirements, because Chapter 217 applies to facilities constructed or renovated after its adoption, but does not otherwise apply to existing facilities. Although those existing facilities are subject to permit requirements, because Chapter 317 was repealed and no savings clause was included in Chapter 217 to address existing facilities, it has been unclear under what regulations those permitted existing facilities should operate and the basis for applying those regulations. This adoption will clarify the commission's initial and ongoing position that facilities designed and approved under Chapter 317 must be installed, operated, and maintained in accordance with the design criteria of Chapter 317 and the plans and specifications approved by the executive director.

This rulemaking will provide that certain wastewater collection systems, wastewater treatment facilities, and their various components will be subject to the requirements in adopted Chapter 317, while others will be subject to the requirements of Chapter 217 effective on August 28, 2008, and others will be subject to the requirements of Chapter 217 effective after this adoption. Adopted §217.1(a)(2) contains a savings clause that will allow the version of Chapter 217 that became effective on August 28, 2008 to remain in effect for compliance purposes for components of wastewater treatment facilities and collection systems that were originally subject to the requirements effective on August 28, 2008. Treatment units and collection system units that were approved under the August 28, 2008 criteria will not need to comply with the adopted amendments to this chapter unless they are altered, as defined in these amendments, or an owner allows a wastewater permit to expire. The executive director prepared Table 1 in Figure: 30 TAC Chapter 217--Preamble to clarify how the various rules would apply to wastewater treatment facilities and collection systems.

Figure: 30 TAC Chapter 217--Preamble

§217.2, Definitions

This chapter contains many technical terms which have established meanings within the appropriate technical context. Terms that are explicitly defined in this chapter have meanings that are: different from the common language meaning (e.g., *surcharge);* difficult to ascertain from common language or technical context (e.g., *effective size);* or necessary for accurate classification (e.g., *collection system* versus *alternative collection system).*

The adopted amendment to §217.2 changes some definitions to enhance understanding and readability, specifically: advanced nutrient removal, alternative collection system, building lateral, bypass, collection system, constructed wetland, design flow, diurnal flow, domestic wastewater, effective size, engineer, equivalent dwelling unit, filter media, firm pumping capacity, force main, free water surface wetland, grinder pump, headworks, innovative technology, interceptor tank, lift station, membrane bioreactor system, minimum grade effluent sewer, multiple equivalent dwelling unit, non-conforming technology, off-site component, on-site component, overflow, owner, pressure sewer, project, sequencing batch reactor, small diameter effluent sewer, variable grade effluent sewer, and wasting. Stakeholders requested amendment of the grinder pump definition to avoid limiting grinder pumps to those connected to a building lateral. The definition adopted by the commission does not limit grinder pumps to those connected to a building lateral.

The adopted amendment to §217.2 adds definitions for activated sludge; activated sludge process; air gap; alter or alteration; appurtenance; auxiliary pump; collection system unit; completely mixed aerated lagoon; construct; day; decanter; design life; dry well; effluent; emergency overflow; engineering report; equalization basin; gravity relief sewer; influent; maintenance; partially mixed aerated lagoon; plans; preliminary treatment; primary sedimentation unit; primary treatment; processing unit; rehabilitate; re-rate; secondary treatment; sludge stabilization; specifications; stabilization lagoon; subsurface flow wetland; summary transmittal letter; surcharge; totalizing meter; treatment unit; twenty-five-year, 24-hour rainfall event; two-year, 24-hour rainfall event; wastewater treatment facility; weir overflow; and wet well. Stakeholders requested the new definitions for auxiliary pump, dry well, equalization basin, gravity relief sewer, and wet well. Stakeholders requested amendment of the new sludge stabilization definition to include reduction of volatile suspended solids.

The adopted amendment to §217.2 deletes the definitions for facility, material alteration, proposed facility, and report, which are no longer used in Chapter 217. The term facility was replaced with wastewater treatment facility. The term material alteration was replaced with alter or alteration.

The definitions for: flat plate system; gross flux rate; hollow fiber system; net flux rate; transmembrane pressure; and tubular system were deleted from §217.2 and added to §217.157 because the terms are only used in §217.157.

The definition of building lateral was amended to include a pipe that conveys raw wastewater and connects the plumbing of a structure to a collection system pipe or an on-site component to clearly define the point where the collection system ends and plumbing begins for the purposes of this chapter, based on comments from stakeholders. The commission is not authorized to review plumbing.

The definition of bypass was amended to include the intentional diversion of a waste stream from the collection system to include an additional way that the term is commonly used in the industry.

The definition of design flow was deleted and replaced with new language so that the term is broad enough to include individual pipes and treatment units, and also to prevent any conflict between a wastewater treatment facility's design flow and the flow an owner applies for in a wastewater permit application. The commission expects that owners will be familiar with the requirements of these rules before they apply for a wastewater permit. A stakeholder requested clarification of the definition of design flow, noting that the definition makes design flow and permitted flow the same value. The adopted design flow definition is needed because the design flow of individual pipes and treatment units may not be the same as a wastewater treatment facility's permitted flow, and also because a wastewater treatment facility may not have a permit during the design phase of a project.

The definition of equivalent dwelling unit was amended to include that, for calculation purposes, an equivalent dwelling unit is occu-

pied by 3.5 individuals. An equivalent dwelling unit is essentially a synthetic unit used to measure expected use.

The definition of innovative technology was amended to include methods, products, and materials to clarify non-process innovative technologies that the executive director reviews.

The definition of lift station was amended to recognize that, although belowground construction is typical, lift stations are not always constructed below ground level.

The definition of on-site component was deleted and replaced with new language that defines the term as it was used in the text of the existing rules. The previous rule defined the term "on-site component" as equipment, structure, or pipe located within a wastewater treatment facility's site boundary, but only used the term to refer to alternative collection system equipment that is placed on private property.

The definition of overflow was deleted and replaced with a new definition that includes the unauthorized flow of untreated or partially treated wastewater from a collection system or from a treatment unit at a wastewater treatment facility. This adopted definition matches how the term "overflow" is commonly used in other commission program areas. The previous rules used the term in other technical contexts, therefore the terms "weir overflow" and "emergency overflow" were defined and used in the appropriate places throughout the chapter to clarify the technical context.

The definition of owner was amended to clarify that the term "owner" refers to the owner and the owner's representatives, agents, and designees because the owner is the party that is ultimately responsible to the commission. Use of the term "owner," as it is defined in the adopted rule, also makes it possible to clearly distinguish between a general obligation of an owner and specific obligation that must be assigned to an engineer or operator.

The definition of project was deleted and replaced with a new definition that describes the actions which constitute a project, to reflect the way the term is actually used in the rules. The adopted definition includes all phases of a project, from the design phase to permanent decommissioning. The adopted definition of the term "project" also makes it easier to clearly identify which version of the design criteria apply to each component of a wastewater treatment facility or collection system.

The definition of variance was amended to clarify that a variance requires executive director approval to further clarify the commission's procedures and rules for granting variances. Any deviation from the requirements in this chapter is a violation of this chapter, unless the deviation is specifically approved according to the substantive requirements in §217.4 or §217.12 or is otherwise allowed by §217.14(b) for problems that emerge during construction.

§217.3, Purpose

The adopted amendment to §217.3(a) clarifies that the rules in this chapter are intended to apply to projects that involve individual units, and adds that the design criteria in this chapter is intended to promote the design of facilities in accordance with good public health and water quality engineering practices. Adopted §217.3(b) requires that a project must be installed, operated and maintained to function as it was designed to function, and to ensure the safety of the public and all individuals authorized to access a wastewater treatment facility or collection system, and to ensure protection of the environment. The commission has always intended for infrastructure to be appropriately installed, operated, and maintained, but is adding this language to enhance compliance and enforceability. Adopted §217.3(c) provides that this chapter includes procedures for the review of plans and specifications, and clarifies the commission's existing practice that an approval granted by a municipality or by the Texas Water Development Board, in accordance with §217.8 or §217.9, is equivalent to approval by the executive director. Adopted §217.3(c) was motivated, in part, by comments from a stakeholder. The previous §217.3(b) was moved to adopted §217.5(h) to improve the structure of the rule.

§217.4, Variances

The adopted amendment to §217.4(b) adds that the executive director may determine what level of justification is acceptable for a variance request. This amendment reflects the executive director's practice and makes it clear that the executive director is not obliged to accept an insubstantial or inadequate justification for a variance. The adopted amendment to §217.4(c) clarifies that any compensatory measures the executive director requires in a design are for the purpose of preventing a nuisance or potential endangerment of public health or the environment. The adopted amendment to §217.4(e) provides criteria that clarify when a variance may be automatically approved (i.e., without written approval by the executive director) to improve rule structure. These criteria were already present in the rules, but were not clearly expressed.

§217.5, Plans and Specifications General Requirements

Adopted §217.5(b) requires an owner to construct a project according to the approved plans and specifications. TCEQ has always intended for infrastructure to be appropriately installed, operated, and maintained, but is adding this language to enhance enforceability. Subsequent subsections were re-lettered.

Adopted §217.5(f) provides that the executive director's approval of plans and specifications must be in writing, unless the project is approved through the automatic approval processes in §217.6(f) or (h) (Submittal Requirements and Review Process). This amendment reflects the executive director's practice and clarifies that verbal agreement or consent does not constitute approval.

Adopted §217.5(g) requires the plans and specifications for an alteration project to comply with the adopted rule to ensure that outdated standards are not used for the design. Additionally, adopted §217.5(g) provides that any existing infrastructure that is not altered does not need to meet additional requirements resulting from these rule amendments unless specifically required by this chapter or requested by the executive director. Adopted §217.5(h) was moved from §217.3(b) to improve the structure of the rule.

§217.6, Submittal Requirements and Review Process

Adopted §217.6(b) specifies that an owner is not required to submit collection system or wastewater treatment facility plans and specifications for approval if the project only consists of maintenance, because the executive director does not need to review projects that clearly fit within the adopted definition of maintenance.

Additionally, to promote more efficient communication between the applicant and the executive director, the adopted amendment to §217.6(d) requires that the summary transmittal letter include an email address for the engineer. Adopted §217.6(d)(8)(B) and (C) adds a requirement that the summary transmittal letter must provide a description of each treatment unit or collection system

unit that will be altered, constructed, rehabilitated, or re-rated, and a map that identifies the location of these units. This information will assist owners and the executive director in determining the regulations that apply to each treatment unit or collection system unit.

The adopted amendment to §217.6(h) provides consistency with §217.6(f). Specifically, an automatic approval granted when the executive director does not respond within 30 business days after receiving additional information is a conditional approval subject to an executive director determination under §217.4(c) or (d). The adopted amendment to §217.6(h) also clarifies that the conditional approval is not valid if there is any conflict with a provision that requires written approval from the executive director.

§217.7, Types of Plans and Specifications Approvals

The adopted amendment to §217.7(b)(1) clarifies that standard approvals are for plans and specifications that do not include innovative or non-conforming technologies because approval of these technologies is subject to the requirements of §217.4. The adopted amendment to §217.7(b)(2)(E) limits the expenses that a performance bond must guarantee to those associated with removal and replacement of the innovative or non-conforming technology covered by the bond, instead of costs associated with replacing the entire wastewater treatment facility or collection system.

§217.8, Municipality Reviews

The adopted amendment to §217.8(f)(3) clarifies that if a municipality approves a variance, the approval must be in writing. The adopted amendment to §217.8(g)(2) requires the municipality to retain all files related to its review and approval activities for the life of each reviewed project. The files must be kept for the life of the reviewed project so that the municipality can enforce the approved design, if necessary, and so that the executive director can confirm whether approved projects comply with the requirements of this chapter.

§217.9, Texas Water Development Board Reviews

The adopted amendment to this section was made to ensure consistent use of defined terms.

§217.10, Final Engineering Report

The adopted amendment to this section changes the heading from "Final Engineering Design Report" to "Final Engineering Report" to use defined terms. The adopted amendment to §217.10(a) establishes when an owner must submit an engineering report to the executive director. The previous rule required an owner to submit an engineering report for each project, but did not establish a clear timeline for providing the engineering report to the executive director. Adding the 30-day time limit adds certainty for both the owner and the commission.

The adopted amendment to §217.10(c) specifies the minimum information required in a final engineering report to clarify the meaning of "demonstrate compliance with this chapter;" this information will also assist the executive director in determining whether a project is installed, operated, and maintained according to an approved design.

The adopted amendment to §217.10(d) specifies the minimum information required to justify a variance from a requirement of this chapter; this information will aid the commission in its decision on variance requests.

A stakeholder recommended an amendment to §217.10(f)(13) to better protect human health, safety, and the environment. The executive director agreed with this recommendation. The adopted amendment to §217.10(f)(13) expands the list of safety considerations for a collection system project to include methods for rerouting flow from a portion of the collection system during collection system repair work, which will protect human health, safety, and the environment.

The adopted amendment to §217.10(g) delineates the information required by the following sections to improve rule structure and to comply with *Texas Register* formatting requirements. Adopted §217.10(g)(2)(A) requires a general location map for the proposed wastewater treatment facility because the information will give the executive director useful context that will facilitate the review. The adopted amendment to §217.10(g)(2)(C) requires a map of the wastewater treatment facility site, including the site boundary, buffer zones, and the 100-year floodplain because the information will assist the executive director during the review. Adopted §217.10(g)(2)(D) requires a map of the discharge route or land application unit because the information will assist the executive director during the review.

§217.11, Construction of an Approved Project

The adopted amendment to §217.11 changes the title from "Construction of an Approved Facility" to "Construction of an Approved Project" to better describe the section.

Adopted §217.11(b) incorporates the previous §217.11(c), which was moved to improve rule structure, so that the general concept of permit phases is introduced before addressing specific permit phases.

Adopted §217.11(f) establishes that rehabilitation projects must comply with this chapter, but provides that the executive director may grant variances from specific requirements. The executive director recognizes that variances may be reasonable for ensuring compatibility between the adopted requirements for rehabilitation projects and existing infrastructure that was constructed under previous requirements. In this adoption, previous §217.11(f) was divided into two subsections (§217.11(g) and (h)) for improved rule structure. Section 217.11(g) addresses compliance measures for an owner that allows a wastewater permit to expire, and §217.11(h) addresses compliance measures for an existing project that was never approved by the executive director.

The adopted amendment to §217.11(i) clarifies that the requirement to comply with the current design criteria at the time lack of approval is discovered also applies to collection system units, not just entire collection systems.

§217.12, Substantial Design Changes

The adopted amendment to this section was made to ensure consistent use of defined terms.

§217.13, Final Construction Drawings and Specifications

The adopted amendment to the section heading and to the section was made to ensure consistent use of defined terms. In the section, the word "technical" was deleted from the phrase "technical specifications." A stakeholder raised ethical concerns about design engineers sealing as-built plans. As a result, the phrase "an engineer" replaced the phrase "the engineer who is responsible for the facility design" in the adopted amendments to §217.13(b). The executive director encourages engineers with

concerns about certifying record drawings to review the August 15, 2006 policy advisory by the Texas Board of Professional Engineers.

§217.14, Completion Notice

To clarify the existing requirement, the adopted amendment to §217.14(b) requires an engineer to certify that all substantial design changes were submitted for approval.

§217.15, Inspection

Adopted §217.15(b) specifies that all documents required by this chapter must be available for review by the executive director according to the requirements of adopted new §217.18. This requirement will ensure that the executive director has access to documents within a reasonable amount of time (available for inspection within 24 hours of a request from the executive director and submitted to the executive director within 15 days of a written request).

§217.16, Wastewater Treatment Facility Operation and Maintenance Manual

The adopted amendment to §217.16 changes the title from "Treatment Facility Operation and Maintenance Manual" to "Wastewater Treatment Facility Operation and Maintenance Manual" for consistent use of terms.

The adopted amendment to §217.16(a) adds a requirement to update the operation and maintenance manual and adds criteria for when updates are required. This will ensure that the operation and maintenance manual contains the most recent and accurate information for the proper operation and maintenance of the facility.

The adopted amendment to §217.16(b)(1)(D) - (G) requires the operation and maintenance manual to include staff contact information, a copy of the final engineering report, approved plans and specifications, and all other documents required by this chapter, to ensure that staff can be contacted during an emergency and to assist the executive director in determining which requirements apply to each project. The commission adopts to re-letter §217.16(b)(2)(I) as §217.16(b)(2)(J) and add §217.16(b)(2)(I) that requires the operation and maintenance manual to include the design life of each treatment unit, which will establish a standardized location to identify the design life of a given treatment unit. Documenting the design life of each treatment unit in a centralized location will also assist owners with planning and management of their infrastructure. The commission adopts to re-letter §217.16(b)(3)(C) - (J) as §217.16(b)(3)(D) - (K) and add §217.16(b)(3)(C). Adopted §217.16(b)(3)(C) requires the operation and maintenance manual to include a schedule for servicing all personal safety, respiratory, and protective equipment, which will ensure that a service schedule is developed and equipment is operational when needed.

The adopted amendment to §217.16(c) requires the operation and maintenance manual to be immediately available for inspection by the executive director upon request, which will allow inspectors immediate access to the manual during inspections.

§217.17, Collection System Records

The adopted amendment to §217.17 requires collection system records to be retained for the life of the project and to be available to the executive director upon request. The adopted amendment to §217.17(a)(1) - (3) provides consistency between collection system records and the administrative and recordkeeping requirements for wastewater treatment facilities in §217.16(b)(1), which will make it easier for owners to maintain records.

§217.18, Provisions that Apply to All Sections in this Chapter

The commission adopts a new section that identifies provisions applicable to all sections of this chapter. Adopted new §217.18(a) requires each component designed in accordance with this chapter to be installed, operated, and maintained in a manner consistent with the design. This provision will enhance enforceability of the chapter as a whole.

Adopted new §217.18(b) requires all safety and emergency equipment required by this chapter to be operational for its intended use and maintained in a readily accessible location. This provision will ensure that safety and emergency equipment is working and available when needed.

Adopted new §217.18(c) requires all executive director approvals to be maintained with other required records. This provision ensures that records will be centrally located and easy to access for the owner's and executive director's use.

Adopted new §217.18(d) requires records to be available for inspection within 24 hours of a request by the executive director and submitted to the executive director within 15 days of a written request. This provision ensures that the executive director will have reasonable access to records.

Subchapter B: Wastewater Treatment Facility Design Requirements

The adopted amendment to Subchapter B changes the title from "Treatment Facility Design Requirements" to "Wastewater Treatment Facility Design Requirements" to use consistent terms.

§217.31, Applicability

The adopted amendment to §217.31 clarifies that existing wastewater treatment facilities that do not have a valid wastewater permit must comply with the requirements in this subchapter. This will enhance the enforceability of this chapter because these adopted amendments to this chapter will be the only version of the chapter under which an owner will be able to submit plans and specifications for review.

§217.32, Organic Loadings and Flows for New Wastewater Treatment Facilities

The title of adopted §217.32 is changed from "Organic Loadings and Flows" to "Organic Loadings and Flows for New Wastewater Treatment Facilities" for clarification.

The adopted amendment to §217.32(a)(1) restructures the wording in subparagraphs (A) and (B) to clarify how design flow must be calculated so that the design flow is consistent with the permitted flow. The adopted amendment to §217.32(a)(1)(A) and (B) was based on comments received from a stakeholder who noted that wastewater treatment facilities should use this section to calculate flow when applying for a wastewater permit. Adopted subparagraph (C) requires the design flow for a wastewater treatment facility to be based on the facility's wastewater permit to further clarify subparagraphs (A) and (B), and to ensure that a wastewater treatment facility is actually designed to treat the flow authorized in its wastewater permit. The adopted amendment to §217.32(a)(2) adds a requirement that site-specific data must be used to calculate the peak flow, if it is available, to ensure that a wastewater treatment facility is capable of treating the actual peak flow. The adopted amendment to §217.32(a)(2)(A) requires a facility to be designed on

the actual daily peaking factor if the actual daily peaking factor exceeds 4.0, to ensure that a wastewater treatment facility is capable of treating the actual peak flow. The adopted amendment to §217.32(a)(2)(A) provides that a facility may be designed using a lower daily peaking factor if equalization is provided to reduce the peak flow that the wastewater treatment facility must treat. Adopted §217.32(a)(2)(B) is added to require the event-based peaking factor to be used to calculate peak flow when the peaking factor exceeds 5.0 to ensure that a wastewater treatment facility is capable of treating the actual peak flow. Subsequent subparagraphs (B) and (C) were re-lettered. The amendment to re-lettered §217.32(a)(2)(C) provides that a facility may be designed using a lower event-based peaking factor if equalization is provided to reduce the peak flow that the wastewater treatment facility must treat. Section 217.32(a)(2)(D) was deleted and moved to §217.33(c)(4)(A) to improve rule structure because §217.33(c)(4)(A) already requires all flow through a wastewater treatment facility to be totalized. The adopted amendment to §217.32(a)(3) improves readability and makes the following changes to Table B.1. in Figure: 30 TAC §217.32(a)(3). "Persons" is corrected to "individuals" because the term "person" can include entities, corporations, and other organizations that differ from the common language meaning of the word. Some five-day biochemical oxygen demand (BOD_5) concentrations were increased to reflect increased wastewater BOD_5 concentrations, which are commonly attributed to the widespread use of household water saving devices and garbage disposals, based on comments from stakeholders. Additionally, a new column was added to include ammonia-nitrogen concentration values because increasing ammonia-nitrogen concentrations were also observed across the state and can have a substantial impact on the treatability of wastewater.

The adopted amendment to §217.32(b) improves readability and makes the use of existing historical data a requirement instead of an option.

§217.33, Flow Measurement

The adopted amendment to §217.33(a) deletes the word "accurate" and instead defines the level of accuracy as less than 10% error in the expected range of flows to prevent ambiguity.

The adopted amendment to §217.33(c)(1)(C) no longer requires the primary flow measuring device to be installed upstream of a secondary measuring device because a primary flow measuring device is customarily installed downstream of a secondary measuring device, such that the secondary measuring device measures the liquid level discharging through the primary measuring device. The adopted amendment to §217.33(c)(2)(A) allows the executive director to consider a manufacturer's recommendations, supplied by the engineer, in instances where the channel approach section to a weir is not straight for a length at least 20 times the maximum expected height on a weir at peak flow. This adopted amendment was based on comments received from a stakeholder who noted that it is difficult for small facilities to meet the existing requirement using weirs designed to accurately measure small flow rates. The adopted amendment to §217.33(c)(2)(B) clarifies that the minimum distance requirements between a channel bottom and weir crest apply to the peak flow. The adopted amendment to §217.33(c)(2)(F)(i) improves readability and clarifies that the head height on a weir is at peak flow. The adopted amendment to §217.33(c)(4)(A) clarifies that a totalizing meter must be used to develop totalized flow and incorporates language from deleted §217.32(a)(2)(D). Adopted §217.33(c)(4)(D) requires that a secondary measuring device be designed to allow periodic calibration, which will allow the operator to adjust the secondary measuring device to improve its accuracy.

Adopted §217.33(d)(4)(E) requires a secondary flow measuring device not to interfere with the accuracy of the primary flow measuring device. This requirement will ensure both devices work independently and accurately at all times.

§217.34, Organic Loadings and Flows for Existing Wastewater Treatment Facilities, Re-Ratings, and Alternations

The adopted amendment to §217.34 changes the section title from "Re-Rating, Expanding, or Materially Altering an Existing Facility" to "Organic Loadings and Flows for Existing Wastewater Treatment Facilities, Re-Ratings, and Alternations" to clearly describe the section. The adopted amendment also clarifies what operating data is required when an owner proposes to alter or re-rate an existing wastewater treatment facility.

The adopted amendment to §217.34(1)(A) incorporates data standards from the previously existing subparagraphs (B) and (C) for clarity and readability. Section 217.34(1)(B) and (C) were deleted and subsequent subparagraphs were re-lettered.

Adopted §217.34(1)(D) requires the design flow, for a re-rating or alteration, to be based on the average flow, plus one standard deviation for a wastewater treatment facility that will not be affected by future growth, to reflect the executive director's practice for evaluating re-ratings and alterations. For a wastewater treatment facility that will be affected by future growth, adopted §217.34(1)(E) requires the design flow, for a re-rating or alteration of a facility, to be based on future flow using a linear regression or other appropriate statistical method for predicting the design flow when significant data exists, to ensure that facilities are designed to accommodate the anticipated growth.

The following adopted amendment to §217.34(2) ensures that the executive director has access to all information necessary to determine whether a re-rating or alteration may be hazardous to human health or the environment. The adopted amendment to §217.34(2)(A) deletes the last sentence because the sentence was moved to adopted §217.34(2)(C) to improve organizational structure. The adopted amendment to §217.34(2)(A)(i) requires data to include samples collected during both wet and dry weather conditions, requires composite samples, and provides that the executive director may request additional samples that are representative of actual conditions at a facility. This information will ensure that the executive director has the information necessary to understand how the facility operates and will assist the executive director in determining whether the proposal is likely to ensure compliance with the effluent limits in the facility's wastewater permit. The adopted amendment to §217.34(2)(A)(ii) clarifies that samples must be representative of the peak loading only if the samples are not 24-hour flow weighted composite samples. The adopted amendment to §217.34(2)(A)(iii) clarifies that the data regarding organic loading only needs to include the parameters included in the existing wastewater permit. The adopted amendment also divides the parameters into subclauses to improve organizational structure. The adopted amendment to §217.34(2)(A)(iv) clarifies that the owner must provide the engineering analysis and re-designates the clause as §217.34(2)(B). Section 217.34(2)(B) and (C) were deleted and the information was integrated into the revised section.

Adopted §217.34(2)(C) requires that the design organic loading, for a re-rating or alteration, must be calculated using the waste-

water treatment facility's average organic loading plus one standard deviation for a wastewater treatment facility that will not be affected by future growth, to reflect the executive director's practice for evaluating re-ratings and alterations.

Adopted §217.34(2)(D) requires the design organic loading, for a re-rating or alteration of a facility, to be based on future loading calculated using anticipated changes from the existing loading. The design analysis may use a linear regression or other appropriate statistical method for predicting the design organic load when significant data exists, to ensure that facilities are designed to accommodate anticipated growth.

§217.35, One Hundred-Year Flood Plain Requirements

The adopted amendment to §217.35 updates terms, corrects grammatical errors, and uses acronyms consistently.

§217.36, Emergency Power Requirements

The commission adopts the repeal of §217.36 and replaces it with a new §217.36 that is organized for improved clarity and consistency with the emergency power requirements for lift stations in §217.63. Most of the new language existed in the previous rule, but the section was reorganized for clarity and consistency. Specific changes are noted in the discussion of the appropriate subsection.

Adopted new §217.36(a) clarifies that the design of a wastewater treatment facility must prevent the discharge of untreated or partially treated wastewater during electrical power outages.

Adopted new §217.36(b) requires that wastewater treatment facilities must have an audiovisual alarm system that transmits alarm conditions via a Supervisory Control and Data Acquisition (SCADA) system, or a telemetering system connected to a continuously monitored location. This new requirement will provide for additional protection of human health and safety and protection of the environment by ensuring that the operator will be immediately notified of a power outage.

Adopted new §217.36(c) provides that the alarm must self-activate under certain conditions. This new requirement will provide for additional protection of human health and safety and protection of the environment by ensuring that alarm will be activated under the appropriate conditions.

Adopted new §217.36(d) provides that the alarm system must include self-testing capability at the control panel to ensure the system is working appropriately.

Adopted new §217.36(e) describes how an owner shall determine the reliability of the existing commercial power service; this provision will provide owners and the commission with a consistent method of determining the reliability of commercial power services.

Adopted new §217.36(f) allows the executive director to consider documentation of commercial power system upgrades. This provision will allow owners to design emergency systems based on the current reliability of commercial power, rather than on the historical reliability commercial power, if the commercial power provider has made appropriate upgrades to improve its commercial power reliability.

Adopted new §217.36(g) defines the length of time a system for preventing the discharge of untreated or partially treated wastewater must be able to operate. This provision will provide consistency between wastewater treatment facilities and will provide for additional protection of human health and safety and protection of the environment by ensuring that untreated or partially treated wastewater is not discharged, even during a typical power outage.

Adopted new §217.36(h) provides that a system for preventing the discharge of untreated or partially treated wastewater must be either a permanent feature of the wastewater treatment facility or be a temporary power system. This provision will help ensure that wastewater treatment facilities have adequate safeguards to prevent the discharge of untreated or partially treated wastewater. This provision will provide consistency between wastewater treatment facilities and will provide for additional protection of human health and safety and protection of the environment by ensuring that untreated or partially treated wastewater is not discharged, even during a typical power outage.

Adopted new §217.36(i) describes the systems that an owner may use to prevent the discharge of untreated or partially treated wastewater. This provision will provide consistency between wastewater treatment facilities and will provide for additional protection of human health and safety and protection of the environment by ensuring that untreated or partially treated wastewater is not discharged, even during a typical power outage.

Adopted new §217.36(j) describes what an owner must include in the engineering report regarding emergency operation of a wastewater treatment facility. This information in the engineering report will help the owner and commission staff determine which treatments should be operating during a power outage or other emergency situation.

§217.37, Disinfection System Power Reliability

The adopted amendment to §217.37(a) adds the requirement that the disinfection backup power system must be capable of providing power to operate continuously during power outages as defined in §217.36. The new language provides clarification and rule consistency.

§217.38, Buffer Zones and Odor Abatement

The adopted amendment to this section was made to ensure proper punctuation and consistent use of defined terms.

§217.39, Wastewater Treatment Facility Use of Reclaimed Water

The adopted amendment to §217.39 changes the section title from "Facility Use of Reclaimed Water" to "Wastewater Treatment Facility Use of Reclaimed Water" to better describe the section. In subsections (a) and (b) "the effective date of this chapter" is replaced with "August 28, 2008," which was the effective date of the previous Chapter 217.

Adopted §217.39(c) requires that reclaimed water must undergo secondary treatment before it can be used and specifies that untreated or partially treated wastewater may not be used as reclaimed water. The adopted subsection also requires that a reclaimed water system must provide for screening or filtration, a backup pump, and a pressure-sustaining device. These adopted provisions add clarity, enhance enforcement and provide for greater protection of human health and the environment. The subsections that follow were re-lettered.

§217.40, Signs with Emergency Contact Information

Adopted new §217.40 requires an owner to post a sign with emergency contact information at a wastewater treatment facility and defines the location and minimum font size of the sign. This new requirement provides the public with access to the 24-hour

contact, and is important in case there is an emergency situation at the wastewater treatment facility.

Subchapter C: Conventional Collection Systems

§217.51, Applicability

The adopted amendment to this section was made to ensure consistent use of defined terms.

§217.52, Edwards Aquifer

The adopted amendment to §217.52 adds a cross reference for the definition of "recharge zone."

§217.53, Pipe Design

The adopted amendment to §217.53(a)(1) deletes the term "dry weather" because a distinction between dry weather and wet weather flow is not necessary for the purposes of determining compliance with this chapter based on the definitions of "design flow" and "peak flow." To ensure consistency, the adopted amendment also adds that flow calculations must be included in the engineering report and that a design must minimize inflow and infiltration. The adopted amendment to §217.53(a)(2) deletes the term "dry weather" because the limiting peak flow value for design must consider the effects of wet weather.

The adopted amendment to §217.53(b) deletes previously existing §217.53(b)(2)(B) because it was redundant. Subsequent subparagraphs were re-lettered.

The adopted amendment to §217.53(c)(2) adds the term "inflow." Though the potential for inflow at a pipe joint is rare, it must be considered in the design of a gravity collection system.

Generally, the adopted amendment to §217.53(d) revises the subsection to improve clarity, structure, and readability. To ensure protection of human health, a requirement that pipe joints must be designed to seal at atmospheric pressure was added throughout the subsection. The adopted amendment to §217.53(d)(1) deletes the term "public" in favor of a more general reference to "water supply trenches" to ensure safety of all water used for domestic purposes.

Adopted §217.53(d)(2) requires that all collection system pipes must be located below a water supply pipe whenever possible and adds that, if location below a water supply pipe cannot be achieved, the owner must provide justification in the engineering report. The requirement to locate a collection system pipe below water supply pipes was moved from previously existing §217.53(d)(3)(A)(iv) and (B)(i)(II).

Adopted §217.53(d)(3) continues the requirement from previously existing §217.53(d)(2) and (4) that all collection system pipes and manholes must be at least nine feet in any direction from a water supply pipe whenever possible and adds a new requirement that, if a nine-foot separation cannot be achieved, the owner must provide justification in the engineering report. Adopted §217.53(d)(3) also includes a table that will assist owners in determining which requirements apply if a nine foot separation distance cannot be achieved.

Adopted §217.53(d)(4) addresses collection system pipes that run parallel above a water supply pipe within nine feet, and requires that all portions of a collection system pipe within nine feet of a water supply pipe must be encased in a casing pipe that is sealed on both ends. This situation was not addressed in the previous rules, but is being addressed in these amendments to ensure that acceptable standards of protection are applied consistently for the protection of human health.

Adopted §217.53(d)(5) replaces previously existing §217.53(d)(3)(B)(iii) for collection system pipes that cross above a water supply pipe within nine feet, both of which allow a pipe to be either encased or constructed of at least 150 per square inch (psi) pressure class material. Adopted §217.53(d)(5)(B) adds the phrase "150 psi pressure class, corrosion-resistant, non-brittle" to indicate the properties of acceptable pipes, instead of listing individual materials.

Adopted §217.53(d)(6) replaces previously existing §217.53(d)(3)(A)(i) - (iii) for collection system pipes that run parallel below a water supply pipe within nine feet. Adopted §217.53(d)(6)(B) adds the option of encasing the collection system pipe in a casing pipe.

Adopted §217.53(d)(7) replaces previously existing §217.53(d)(3)(B)(i) - (iii) for collection system pipes that cross below a water supply pipe within nine feet. Adopted §217.53(d)(7)(A) adds the phrase "150 psi pressure class, corrosion-resistant, non-brittle" to indicate the properties of acceptable pipes, instead of listing individual materials. Adopted §217.53(d)(7)(C) adds the option of encasing the collection system pipe in a casing pipe. Adopted new §217.53(d)(7)(D) replaces existing §217.53(d)(3)(B)(ii)(II) related to requirements for cement-stabilized sand.

Adopted §217.53(d)(8) replaces previously existing §217.53(d)(4) for manholes within nine feet of a water supply pipe and provides that a manhole must either: 1) pass a leakage test with no measureable leakage, or 2) be encased in at least one foot of cement-stabilized sand for all portions within nine feet of a water supply pipe.

The adopted amendment to §217.53(e)(1) requires a manufactured fitting to prevent infiltration and root entrance, to ensure protection of human health and the environment. The adopted amendment to §217.53(e)(2) clarifies that service lines must not protrude into a collection system pipe, to prevent pipe blockages that require additional maintenance and can lead to corrosion.

The adopted amendment to §217.53(g)(1) requires that the engineering report must include calculations or other information to demonstrate the structural integrity of a pipe during the minimum 50-year design life cycle; this ensures that the minimum information necessary to demonstrate the structural integrity of the pipe is included in the engineering report. The amendment to §217.53(g)(2) requires that the functional life of a pipe, for corrosion analysis purposes, must be based on the structural analysis in §217.53(k); this ensures all engineers calculate the functional life of a pipe in the same manner.

The adopted amendment to §217.53(h) requires an owner to implement necessary odor control measures. The adopted amendment also deletes the phrase "based on the potential of the collection system to generate hydrogen sulfide" because a nuisance may have other causes. Subsection (h)(2) was deleted because the adopted amendment to the subsection makes it redundant.

The adopted amendment to §217.53(i)(1)(B)(ii) clarifies that manholes must be provided on each side of a geologic fault so that a pump may be used to prevent the unauthorized discharge of wastewater. This provision provides additional protection of human health and the environment in the event of a collection system failure near a fault.

The adopted amendment to §217.53(j)(1) clarifies that the population estimates must be based on the area served by the project.

The adopted amendment to §217.53(j)(5) adds that any connection between a stormwater collection system and a wastewater collection system is prohibited because connecting a domestic wastewater system to a stormwater system would result in unauthorized discharges. The adopted amendment to §217.53(j)(6) specifies characteristics of a "similar system" to add clarity and certainty. The adopted amendment to §217.53(j)(7)(A) specifies that the minimum considerations the owner must use in determining initial and future flows include: the peak flow of domestic wastewater, peak flow of wastewater from industrial sites, and maximum expected infiltration rates. This provision will ensure that collection systems are appropriately designed, constructed and operated, which will add additional protection of human health, safety, and the environment.

The adopted amendment to §217.53(k)(2) deletes the introductory phrase in subparagraph (G); and redesignates the clauses in §217.53(k)(2)(G) as separate subparagraphs to provide improved organizational structure. The adopted amendment to §217.53(k)(3) deletes the phrase "the design procedure dictates a minimum pipe stiffness" because the statement is redundant and unnecessary.

The adopted amendment restructures §217.53(k)(4) for clarity.

The adopted amendment to Figure: 30 TAC §217.53(l)(2)(A) provides recalculated minimum pipe slopes. The minimum pipe slopes were re-calculated to correct rounding errors.

The adopted amendment to §217.53(m)(1) provides that, if possible, a gravity collection system must have a uniform grade and straight alignment between manholes. The requirement for straight alignment was moved from previously existing §217.53(m)(2). Additionally, the requirement that all deviations from uniform grade and straight alignment must be justified in the engineering report was moved from §217.53(m)(2) to §217.53(m)(1) to clarify what must be in the engineering report. The adopted amendment to §217.53(m)(2) delineates prohibited deviations. This adopted amendment to §217.53(m)(1) and (2) will enhance compliance and enforceability by clarifying what must be included in the engineering report and what deviations from uniform grade and straight alignment are prohibited. Adopted §217.53(m)(2)(B) specifies how both segmented pipes and non-segmented pipes can be horizontally curved. This provision will provide clarity and certainty, and will ensure that pipes are not structurally compromised by bending, and that pipe joints are sealed properly and will not leak because of improper joining and bending techniques. Adopted §217.53(m)(2)(C) specifies how pipe joints may be offset. This provision will provide clarity and certainty and will ensure that pipe joints are sealed properly and will not leak because of improper joining techniques.

The adopted amendment to §217.53(m)(3) clarifies that details of a proposed curvature must be displayed on the plan drawings (instead of in the engineering report). This provision provides clarity and certainty about what must be included in the engineering report.

The adopted amendment to §217.53(n)(1)(C) clarifies that sag pipe appurtenances should make routine flushing possible. The adopted amendment to §217.53(n)(5) clarifies that taking a pipe out of service for cleaning must be temporary, and that the pipe will be returned to service in a reasonable amount of time. The adopted amendment to §217.53(n)(7) replaces "prevent" with "minimize" for clarity.

§217.54, Criteria for Laying Pipe

The adopted amendment to §217.54(a)(1) and (2) clarifies that adequate bedding means bedding that will meet the appropriate standards and will support the anticipated load. This provision prevents ambiguity by ensuring that accepted standards are used. The adopted amendment to §217.54(a)(3) clarifies that all of the materials on the list are prohibited for use as bedding, haunching, or initial backfill. The adopted amendment to §217.54(a)(5) clarifies that a significant fracture, fault zone, cave or solutional modification to the rock strata is one that would prevent pipe bedding, and that the report that must be prepared when a fracture, fault zone, cave, or solutional modification is encountered must be submitted with the final engineering report.

In the adopted amendment to §217.54(b) and (c), the words "embedment" replaces "envelope" and "embedment envelope," and the phrase "embedment thickness" replaces "envelope size" for clarity and consistent use of terms.

The adopted amendment to §217.54(d)(3) adds a cross reference to §217.54(a) to ensure that accepted standards are used to place and compact haunching materials in a trench.

§217.55, Manholes and Related Structures

The adopted amendment to §217.55(e) clarifies that the materials used in a manhole must be made of material that is designed to withstand the anticipated live and static loads. Additionally, polymer-concrete was added to the list of materials that can be used for a manhole because the executive director has determined that polymer-concrete has suitable strength characteristics and helps prevent corrosion.

The adopted amendment to §217.55(f) clarifies the acceptable materials for manhole cover adjustment rings.

The adopted amendment to §217.55(g) clarifies that the executive director's approval of different manhole spacing distances must be in writing.

The adopted amendment to §217.55(h) deletes "because of construction constraints" because the phrase is not necessary.

The adopted amendment deletes previously existing §217.55(i) because it was redundant, given §217.55(a)(2). The remaining subsections are re-lettered.

The adopted amendment to §217.55(i) clarifies that a manhole must be accessible. This clarification enhances compliance and enforceability.

The adopted amendment to §217.55(k)(1)(B) makes gasketing and bolting a manhole cover the only acceptable means of preventing inflow, unless a variance is granted in accordance with §217.4. This adopted provision enhances compliance and enforceability and provides for greater protection of human health and safety, and the environment.

The adopted amendment to §217.55(k)(1)(C) clarifies that a manhole cover may not have holes that could allow inflow. This adopted provision enhances compliance and enforceability and provides for greater protection of human health and safety, and the environment.

Adopted §217.55(k)(1)(E) requires an owner to follow an appropriate national reference standard for manhole gaskets. This adopted provision enhances compliance and enforceability and provides for greater protection of human health and safety, and the environment.

Adopted §217.55(k)(1)(F) defines acceptable materials for manhole covers. This adopted provision enhances compliance

and enforceability and provides for greater protection of human health and safety, and the environment.

The adopted amendment to §217.55(k)(2)(E) clarifies that the slope between gravity pipes of different sizes must prevent backpressure.

The adopted amendment §217.55(n) rewrites the subsection to improve organizational structure.

§217.56, Trenchless Pipe Installation

The adopted amendment to §217.56(a) expands the list of approved trenchless technologies available for installing new pipes. The additional technologies were based on input from a stakeholder and the executive director's research on technologies that were reviewed by the Trenchless Technology Center at Louisiana Tech University. The addition of technologies will provide engineers with additional design flexibility. Section 217.56(a)(1) - (3) were deleted because they do not state a requirement and are not appropriate to include in the rules.

The adopted amendment to §217.56(b) expands the list of trenchless technologies available for replacing pipes. The additional technologies were based on input from a stakeholder and the executive director's research on technologies that were reviewed by the Trenchless Technology Center at Louisiana Tech University. The addition of technologies will provide engineers with additional design flexibility. Section 217.56(b)(1) - (3) are deleted because they do not state a requirement and are not appropriate to include in the rule.

The adopted amendment to §217.56(c) expands the list of trenchless technologies available for lining existing collection system pipes. The additional technologies were based on input from a stakeholder and the executive director's research on technologies that were reviewed by the Trenchless Technology Center at Louisiana Tech University. The addition of technologies will provide engineers with additional design flexibility. Section 217.56(c)(1) - (4) were deleted because they do not state a requirement and are not appropriate to include in the rule.

The adopted amendment to §217.56(e) adds that a collection system using trenchless technology must be operated and maintained in accordance with the standards used for design and construction. This new provision enhances compliance and enforceability and provides for greater protection of human health and safety, and the environment.

The adopted amendment deletes previously existing §217.56(g) because it was redundant.

§217.57, Testing Requirements for Installation of Gravity Collection System Pipes

The adopted amendment to §217.57(a)(1)(A) clarifies that the executive director's approval of an alternate low pressure air test procedure must be in writing and that Equation C.3. must be used regardless of the testing procedure used. The adopted amendment to §217.57(a)(1)(B)(i) clarifies that the pipe must be pressurized to 3.5 psi gauge (3.5 psi above the local atmospheric pressure) if groundwater is not present. In the adopted amendment to §217.57(a)(1)(B)(ii), Equation C.3., the definitions of the variables were updated to correct errors introduced during software conversion and to clarify the meaning of the variable "L." The adopted amendment to §217.57(a)(1)(E) adds "of the test" to clarify that "failure" refers to a test failure (as opposed to material failure) for the purposes of this section. However, a material failure would also constitute a test failure. The adopted amendment to §217.57(a)(1)(G) clarifies that the executive director's approval of pipe with an inside diameter greater than 33 inches must be in writing. The adopted amendment to §217.57(a)(2)(A) combines the requirements from previously existing §217.57(a)(2)(A), (C), and (D). This amendment applies a standard allowable exfiltration rate of 10 gallons per inch diameter per mile of pipe per day to all collection system pipes, regardless of their location relative to the floodplain, because the standard is achievable using commonly available materials and will improve protection of human health and the environment. Subparagraphs (C) and (D) were deleted because they were combined with subparagraph (A). Previously existing §217.57(a)(2)(E) is re-lettered as §217.57(a)(2)(C), and clarifies that if the infiltration or exfiltration tests exceeds the limits in Equation C.3., the owner must perform remedial action and ensure the remedial action was effective before putting the collection system into service.

The adopted amendment to §217.57(b) deletes the phrase "The following procedures must be followed:..." because it was redundant. In §217.57(b)(1)(A)(i), the phrase "or any related appendix" was deleted because it was redundant. In §217.57(b)(1)(A)(ii), the term "sizing" was deleted because it was redundant. The adopted amendment to §217.57(b)(1)(A)(ii) and (iii) deletes the phrase "appropriate standard" to make it clear that the standard to apply should come from one of the sources listed in §217.57(b)(1)(A)(i), and that the same standard should be applied throughout the design. The adopted amendment to §217.57(b)(1)(B)(i) includes a prohibition on adjustable or flexible mandrels, which was moved from the previously existing §217.57(b)(1)(C)(i). The term "rigid" was deleted from §217.57(b)(1)(B)(i) because it is redundant. In the adopted amendment to §217.57(b)(1)(B)(ii), the previously existing §217.57(b)(1)(B)(ii) is divided into clauses (ii) and (iii) to improve clarity and structure. Subsequent clauses are renumbered. The adopted amendment deletes §217.57(b)(1)(C)(i) because the section was moved to §217.57(b)(1)(B)(i), and renumbers §217.57(b)(1)(C)(ii) and (iii) as §217.57(b)(1)(C)(i) and (ii). The adopted amendment to §217.57(b)(1)(C)(iii) also clarifies that the executive director's approval of a deflectometer or mandrel with removable legs or runners must be in writing. Adopted §217.57(b)(1)(D) provides that the executive director may exempt pipe sections installed using trenchless technologies from mandrel testing on a case-by-case basis. This provision acknowledges that there are locations where mandrel testing is not technically possible, or is not reasonably necessary because the construction method and overlying earth do not pose any risk that the pipe will be crushed. However, because the exemption must be in writing, the executive director will have made a determination based on the site specific information, considering the impact to human health, safety, and the environment. The adopted amendment to §217.57(b)(2) clarifies that the executive director's approval of alternate deflection testing methods for large pipes must be in writing. The adopted amendment to §217.57(b)(6) clarifies that problems found after a pipe section fails a deflection test must be corrected immediately, rather than leaving the time frame indefinite. Adopted amendment to §217.57(c) replaces the word "analysis" with "integrity" to clarify that it is the structural integrity of the collection system that must be inspected during the construction and testing phase of the project.

§217.58, Testing Requirements for Manholes

The adopted amendment to §217.58(b) clarifies that manholes be tested for leakage after assembly, but before backfilling; manholes must be tested separately and independently from the collection system pipes; and that alternate testing methods must be approved by the executive director in writing. The adopted amendment to §217.58(b)(2) clarifies that an owner can choose either of two options in this section for vacuum testing. This amendment clarifies that if a manhole fails a vacuum test, additional grout must be applied to the exterior of the manhole before the manhole is retested. The adopted amendment to §217.58(b)(2)(B) adds American Society for Testing and Materials D1244-11 as an acceptable vacuum test method.

§217.59, Lift Station Site Requirements

The adopted amendment to §217.59(a)(1) requires that a lift station must be located in a dedicated right-of-way or a permanent easement, and delete the requirement that the design include a road because a road is not necessary for access in all cases. Adopted §217.59(a)(2) provides that a lift station site must be reasonably accessible by truck during all weather conditions, including a 25-year, 24-hour rainfall event. These provisions will enhance compliance and enforceability and protection of human health, safety, and the environment. The adopted amendment renumbers previously existing §217.59(a)(2) as §217.59(a)(3). The adopted amendment to renumbered §217.59(a)(3) clarifies that the referenced road is the road to the lift station. The adopted amendment will delete previously existing §217.59(a)(3) because it is redundant based on the amendment to §217.59(a)(1).

The adopted amendment to §217.59(b)(2) adds requirements for intruder-resistant fences and enclosures. The adopted requirements will provide clarity, which will enhance compliance and enforceability. The adopted requirements are consistent with similar requirements in 30 TAC Chapter 290 (Public Drinking Water). In the adopted amendments, the term "intruder-resistant" was used to describe the purpose of the fence or enclosure. The adopted requirements for intruder-resistant fences will require that fences be locked at each access point, be at least 6.0 feet tall, extend close enough to the ground that a human cannot get under the fence, and either have three strands of barbed wire or outwardly-directed iron bars. Fences that are at least 8.0 feet tall no longer require barbed wire, for consistency with Chapter 290. The adoption also requires approval, in writing, from the executive director for fences made of any material other than wood, concrete, masonry, or metal. The adopted amendment also allows use of outwardly-directed iron bars in place of barbed wire, based on comments from a stakeholder, which requested that intruder-resistant ornamental fences without barbed wire be allowed for aesthetic reasons. The necessary intruder-resistance capabilities of the fence should also be adequate using outwardly-directed iron bars in place of barbed wire. Additionally, an intruder-resistant enclosure must be approved in writing by the executive director to ensure that "intruder-resistant" is interpreted consistently. Adopted §217.59(b)(3) requires that above-ground valves located outside of an intruder-resistant fence must be chained and locked to prevent unauthorized operation, while above-ground valves located inside of an intruder resistant fence or enclosure do not have to be chained and locked. Additionally, an intruder-resistant enclosure must be locked at each access point to prevent unauthorized operation. This adopted provision will provide consistency and enhanced compliance and enforceability. Previously existing §217.59(b)(3) is deleted because the language was moved to adopted §217.59(b)(2)(C).

§217.60, Lift Station, Wet Well, and Dry Well Designs

Adopted §217.60(a)(1) adds a requirement that pump controls must be designed to prevent surcharges in the collection system and designed to prevent adverse effects on the operation of the facility. This requirement will prevent unauthorized discharges and protect human health and the environment. Adopted §217.60(a)(7) requires an electronic wet well level control system to use a float switch or similar manual backup to ensure control at all times, to prevent overflows and protect human health and the environment. Adopted §217.60(a)(8) requires wet well level control settings to be designed to discourage septic conditions in a lift station. This requirement will provide additional protection for human health, safety, and the environment by ensuring that septic conditions (which can cause odors and corrosion, and may interfere with treatment) will be minimized. Adopted §217.60(a)(9) requires wet well control settings to be designed to prevent overloading of downstream pipes and treatment units to prevent overflows and protect human health and the environment.

The adopted amendment to §217.60(b)(7) adds new language to clarify that pumps must run continuously during the pump cycle time, which begins when the pump is activated by the pump controls.

The adopted amendment to §217.60(c)(1) clarifies that an underground dry well must be accessible for maintenance and shall be ventilated according to §217.60(d).

The adopted amendment to §217.60(d)(1)(A) adds that screening on a passively-ventilated wet well must be corrosion-resistant for consistency with §217.60(d)(2)(B)(ii). The adopted amendment to §217.60(d)(2)(B)(ii) clarifies that air exchanges must be complete air exchanges. The adopted amendment to §217.60(d)(2)(B)(iii) deletes the previously existing language and replaces it with new language that requires owners to prevent a wet well from creating nuisance odor conditions and lists factors the owner must consider when implementing odor control measures. This provision adds clarity and will enhance compliance and enforceability. Adopted §217.60(d)(2)(B)(iv) requires that all mechanical and electrical equipment in a wet well must be fire code compliant. This new provision adds clarity and will enhance compliance and enforceability.

The adopted amendment to §217.60(e)(2) clarifies that a wet well design must prevent the deposition of grease and debris under normal operating conditions.

The adopted amendment to §217.60(h)(1)(A) replaces the word "generated" with "to prevent accumulation of water from condensation and incidental leaks," in order to minimize the potential for flooding of a wet well. The adopted amendment to §217.60(h)(1)(C) clarifies that the floor of a dry well must slope towards the sump, and the sump pumps must be sized to prevent accumulation of water from condensation and incidental leaks in a dry well. The adopted amendment to §217.60(h)(2)(A) clarifies a sump pump must prevent overflow of the associated wet well by using independent piping that is capable of discharging more than the maximum liquid level necessary to prevent overflow. This requirement ensures that an overflow can be prevented if there is a clogged pipe or if a leak is isolated on the discharge side of a dry well.

§217.61, Lift Station Pumps

Adopted §217.61(b)(5) requires that a lift station be designed to prevent the discharge of wastewater from the lift station and

at all points in the upstream collection system. This provision will protect public health, safety and the environment, and will enhance compliance and enforceability.

The adopted amendment to §217.61(c) clarifies the existing requirement that a lift station must have a minimum of two pumps.

The adopted amendment to §217.61(d)(1) clarifies that the owner must determine the pressure head requirements of a single pump operating alone, and with other pumps. The adopted amendment to §217.61(d)(3) requires the friction coefficient used in the head loss calculations to be included in the engineering report so that the executive director will have access to all of the information necessary to determine whether a project complies with this chapter. The adopted amendment to §217.61(d)(4) replaces "proposed and existing pipe" with "the force main pipe" to prevent ambiguity.

The adopted amendment to §217.61(e)(2) clarifies that each lift station that discharges to a wastewater treatment facility with a peak flow greater than 300,000 gallons per day (gpd) must use at least three pumps, which will provide flow rate control in accordance with §217.61(e)(1). Adopted §217.61(e)(3) was added to clarify that a lift station that discharges to a wastewater treatment facility with a peak flow less than or equal to 300,000 gpd must use at least two pumps, to provide flow rate control in accordance with §217.61(e)(1).

The adopted amendment to §217.61(i) improves organizational structure and clarify that a grinder pump is not subject to the requirements of this subchapter if it is part of an alternative collection system or if it serves only a single connection.

§217.62, Lift Station Pipes

The adopted amendment to §217.62(b)(1)(A) adds that a check valve must have either an external lever or an external position indicator, and was based on comments from stakeholders. These stakeholders noted that the existing rules would not allow certain products capable of satisfying the requirement which are now available on the market. Therefore, the commission determined that it was appropriate to allow check valves with external position indicators because an external position indicator will also make it easy for an operator to see whether a valve is open or closed. The adopted amendment to §217.62(b)(3) deletes the redundant term flow.

§217.63, Emergency Provisions for Lift Stations

The adopted repeal of and new §217.63 replaces all of the previously existing emergency power requirements with requirements consistent with the emergency power requirements for lift stations in §217.36. Most of the new language existed in the previous rules, but the section was reorganized for clarity and consistency. When new requirements are added or previously existing requirements are deleted, the changes are noted in the discussion of the appropriate subsection.

Adopted new §217.63(a) requires that a sign with emergency contact information be posted at all lift stations. The new language also defines the location and minimum font size of the sign. This provision provides the public with access to the 24-hour emergency contact information, and is important in case there is an emergency situation at the wastewater treatment facility.

Adopted new §217.63(b) clarifies that the lift station must be designed to prevent the discharge of wastewater from the lift station and all points upstream of the lift station during power outages. This new provision ensures that lift stations will be able to prevent the discharge of untreated wastewater, thereby, protecting human health, safety and the environment. This provision will also enhance compliance and enforceability.

Adopted new §217.63(c) requires a lift station to have an audiovisual alarm and provides specific requirements for the alarm. The adopted new language clarifies the alarm conditions that must be monitored by an alarm system, and that audiovisual alarms are not required if the control system alerts the operator about communication loss. This new requirement will provide for additional protection of human health, safety, and the environment by ensuring that the operator will be immediately notified of a power outage.

Adopted new §217.63(d) requires that an alarm system include a self-testing capability at the control panel to provide lift stations with additional protective safety measures.

Adopted new §217.63(e) describes how an owner shall determine the reliability of the existing commercial power service. This provision will provide owners and the commission with a consistent method of determining the reliability of commercial power services.

Adopted new §217.63(f) allows the executive director to consider documentation of commercial power system upgrades. This provision will allow owners to design emergency systems based on the current reliability of commercial power, rather than on the historical reliability commercial power, if the commercial power provider has made appropriate upgrades to improve its commercial power reliability.

Adopted new §217.63(g) defines the length of time a system must be able to operate during electric power outages to prevent the discharge of untreated or partially treated wastewater. The power reliability determination requirements were increased from the longest power outage on record for the past 24 months to the past 60 months to use more reliable data and reduce unauthorized discharges during electrical power outages. This provision will provide consistency between wastewater treatment facilities and will provide for additional protection of human health, safety, and the environment by ensuring that untreated or partially treated wastewater is not discharged, even during a typical power outage.

Adopted new §217.63(h) provides that for calculating the hydraulic capacity of spill containment structures or collection system storage, the owner must assume that the wet well is full to the pump activation level when the power outage begins. This provision provides assurance that an owner will not design a spill containment system that is too small, thus providing for greater protection of human health, safety and the environment, as well as enhancing compliance and enforceability.

Adopted new §217.63(i) describes the systems that an owner may use to prevent the discharge of wastewater. Gravity relief sewers were added as a system for preventing unauthorized discharges. The new language also describes the systems that may not be used to prevent the unauthorized discharge of wastewater, and requirements for portable generators, if used. The adopted new language provides that spill containment structures or collection system storage must not be used as a stand-alone system for preventing discharge. Both of these technologies have a fixed volume with only a finite capacity to absorb and contain flow, while pumps and other similar systems have the ability to control flow rates and volume accumulation. This subsection will provide consistency between wastewater treatment fa-

cilities and will provide for additional protection of human health, safety, and the environment by ensuring that untreated or partially treated wastewater is not discharged, even during a typical power outage.

Adopted new §217.63(j) requires that the system for preventing the discharge of wastewater at a lift station must either be a permanent feature or must be deployable during an electrical power outage. The subsection also includes requirements for deployable systems. This subsection will provide consistency between wastewater treatment facilities and will provide for additional protection of human health, safety, and the environment by ensuring that untreated or partially treated wastewater is not discharged, even during a typical power outage.

Adopted new §217.63(k) provides the requirements for a spill containment structure. A detailed plan for cleaning and maintaining the spill containment structure is required. The provision also will ensure public safety by requiring an intruder-resistant fence that meets the requirements of §217.59(b).

Adopted new §217.63(l) provides that a lift station must be accessible during a 25-year, 24-hour rainfall event for the area where the facility is located. This provision will ensure that a collection system can be controlled under reasonably-foreseeable weather circumstances and creates conditions so that generators can be delivered, if necessary, to provide additional protection of human health and the environment.

Adopted new §217.63(m) requires that lift station pump controls must prevent over-pumping and surcharge when normal power resumes. This provision will ensure that lift stations do not cause an overflow further downstream in the collection system, to protect human health, safety, and the environment.

§217.64, Materials for Force Main Pipes

The adopted amendment to §217.64(d) deletes the phrase "suitable for the material being pumped" in the previously existing rule and replaces it with the term "non-corrosive" to clarify that any suitable material must also be non-corrosive.

§217.65, Force Main Pipe Joints

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

§217.66, Identification of Force Main Pipes

The adopted amendment to §217.66(a) clarifies that "detector tape" means "detectable underground warning tape." The adopted amendment to §217.66(b) also clarifies that the minimum size lettering is 1.5 inches tall.

§217.67, Force Main Design

The adopted amendment to §217.67(a)(1) clarifies that force main pipes may have a diameter of less than 4.0 inches, if approved by the executive director in writing, so that the executive director can determine whether the selected pipe diameter will ensure protection of human health, safety, and the environment.

The adopted amendment to §217.67(a)(3)(A) allows owners to calculate the velocity of flow in a force main based on the smallest pump operating at full speed. This amendment was based on comments from a stakeholder. The commission concurs with the recommended change, which will allow owners to reduce electricity consumption by reducing the operating speed of variable-speed pumps when their full capacity is not needed to accommodate the incoming flow. The adopted amendment to §217.67(a)(3)(B) increases the required flushing to twice per day. This change is expected to offset additional deposition of solids that might occur if pump operating speeds are reduced, to prevent solids buildup and corrosion.

The adopted amendment to §217.67(d)(1) provides specific locations and structures where a force main may terminate to prevent ambiguity and to enhance enforceability. The adopted amendment to §217.67(d)(2) clarifies that the discharge end of the force main must be restrained to prevent movement, to ensure that the pipe will not be damaged by vibration and that the connection to the manhole will remain watertight.

The adopted amendment to §217.67(f)(1) requires that the flow entering a manhole from a force main must match the flowline of the gravity pipe leaving the manhole, based on comments from a stakeholder. The stakeholder noted that matching flowlines will minimize turbulence, odor, and corrosion issues. The commission concurs with the recommended change. The adopted amendment to §217.67(f)(2) requires an owner to implement odor control measures necessary to prevent a collection system from creating nuisance odor conditions.

The adopted amendment to §217.67(g)(4) requires that an air relief valve must be made of corrosion-resistant material to prevent deterioration of the valve and to protect human health, safety, and the environment.

Adopted §217.67(i) requires the engineering report to include fatigue life calculations that show the strength of a force main pipe, taking into consideration the fluctuation between the pressurized and a depressurized state of a pipe. This provision will help owners and the executive director determine whether pipes are likely to rupture during the design life of the force main.

Adopted §217.67(j) prohibits bending a segmented force main pipe unless the joints are welded or heat-fused and requires that alignment changes must be accomplished using a manufactured fitting. The provision also requires thrust blocks or joint restrains at force main pipe joints, unless calculations justify the absence of a restraint. These adopted provisions will ensure that pipes are not structurally compromised by bending, that pipe joints are sealed properly, and there is no leakage because of improper joining and bending techniques.

§217.68, Force Main Testing

The adopted amendment to §217.68(c) clarifies that a temporary valve used for pressure testing must be removed after a successful test has taken place. The adopted amendment to §217.68(g) updates the equation for determining the leakage rate for force main pipes so that the equation is based on the allowable leakage rate of 10.0 gallons per inch of diameter per mile of pipe per day.

§217.69, Maintenance, Inspection, and Rehabilitation of the Collection System

Adopted new §217.69 establishes minimum requirements for collection system rehabilitation projects, and requires a collection system owner to develop and implement a maintenance and inspection program in response to the petition for rulemaking filed by Eric J. Dupre on July 11, 2011. The petition requested that the commission adopt design criteria for rehabilitation of existing manholes, lift stations, and other vital system components. The essence of the petition was that the effects of

corrosion and improper rehabilitation result in substantial costs for taxpayers across the state.

Stakeholder meetings were held to receive public input on this issue. Stakeholders generally agree that corrosion and improper rehabilitation are problems that need to be addressed, but there was no consensus about how to address the issue. Some stakeholders strongly favored detailed design criteria for surface coating and rehabilitation projects to promote uniformity and provide guidance. Other stakeholders strongly opposed detailed design criteria and noted that extensive latitude for engineering judgment is necessary to ensure that the rehabilitation or protection method solves the underlying cause of corrosion for each project.

The adopted section seeks to address the essence of the petition request, while also providing engineering flexibility when deciding how to address this issue. Owners will be required to follow a surface preparation plan and the manufacturer's installation procedures to increase the effectiveness of rehabilitation product installations. Owners will also be required to conduct two post-installation inspections that are intended to identify failed installations before warranty periods expire. For maintenance programs, owners will be required to develop and follow a schedule for inspecting, cleaning, and maintaining the collection system and estimating the remaining functional life of the collection system.

To accommodate adopted new §217.69, this rulemaking adopts the repeal of §217.69 and §217.70, and adopts them as renumbered §217.70 and §217.71.

Adopted new §217.69(a) requires an owner to develop and implement a collection system maintenance and inspection program that includes: 1) a schedule and methods for inspections, cleaning, and maintenance; 2) methods for estimating the life expectancy of each collection system unit; and 3) a requirement to estimate the structural integrity of collection system units. The requirements in this subsection are intended to help owners identify, halt, and prevent the effects of corrosion on collection system infrastructure. The section also makes the owner responsible for ensuring that all maintenance, inspection, and rehabilitation activity records are maintained by the collection system operator.

Adopted new §217.69(b) requires the plans and specifications for a rehabilitation project to include, at minimum, a surface preparation plan, a volatile chemical and dust management plan, a requirement to follow the manufacturer's installation procedures and specifications, a requirement to re-inspect a rehabilitation between six and 11 months after installation, and a requirement to re-inspect a rehabilitation 18 months after installation. The requirements in this subsection are intended to improve the success and safety of rehabilitation projects and to identify failed installations within standard warranty periods to ensure protection of the environment and to minimize the impact of failed rehabilitation projects on ratepayers.

Adopted new §217.69(c) requires an owner to maintain records of all activities related to collection system inspection, maintenance, cleaning, and rehabilitation. This subsection is intended to assist the executive director in monitoring compliance with the requirements of this chapter.

§217.70, Reclaimed Water Facilities

Adopted new §217.70 was §217.69 in the previously existing rules, which the commission adopts to repeal and move to this section to accommodate new §217.69.

In adopted new §217.70, several subsections are re-lettered because of improvements to the structure of the section. For example, previously existing §217.69(d) is divided into §217.70(d) and (e). In adopted §217.70(f)(1), the phrase "accessible to authorized personnel" replaces the phrase "trained staff has access to" from the previously existing rules to clarify that authorized personnel may include non-staff, such as contract operators or consultants. Adopted §217.70(f)(2) provides additional flexibility by allowing a hose bib to be located in a non-lockable service box, if the hose bib can only be operated by a special tool (e.g., not by hand or with a standard screw driver). The requirement to label the hose bib was deleted because it was redundant *(See* §217.70(f)(3)). Adopted §217.70(f)(3) updates the Spanish-language text in the required signage to prevent ambiguity.

Adopted new §217.70(g)(3) is rephrased for clarity and provides a cross-reference to requirements for public drinking water connections. Adopted §217.70(g)(3) also replaces the phrase "an appurtenance" with the phrase "backflow prevention" for clarity. Adopted §217.70(g)(4)(A)(i), requires a reclaimed water pipe to be located below a potable water pipe for consistency with §217.53(d). The requirements in §217.70(g)(4)(A)(iii) - (D) were rearranged from previously existing §217.69 for improved organizational structure. Adopted §217.70(g)(4)(B)(i) clarifies that a pipe segment centered on a crossing must be a full-length pipe segment. Adopted §217.70(g)(4)(B)(iii) adds that there must be a separation of at least six inches between the outsides of the pipes for consistency with the separation distances in §217.53 and to ensure protection of human health and safety. Adopted §217.70(g)(4)(D) clarifies that all portions of a reclaimed water pipe within 4.0 feet of a potable water pipe must be embedded in cement stabilized sand, to prevent ambiguity associated with the word "any." Adopted new §217.70(g)(4)(D)(i) and (ii) was moved from previously existing §217.69(f)(4)(A)(iv).

Adopted §217.70(i)(1)(A) replaces the phrase "operable during" with the phrase "protected from." This provision provides that reclaimed water facilities do not need to operate during a 100-year flood event because reclaimed water is used on an as-needed basis and is not needed during a flood event. Adopted §217.70(i)(2)(B) adds "readily" to clarify that replacement of a lift station pump should be a reasonably unhindered process. Adopted §217.70(i)(3)(B) adds that a check valve must have either an external lever or an external position indicator, based on comments from stakeholders that noted that the existing rules would not allow certain products capable of satisfying the requirement which are now available on the market. Therefore, the commission determined that it was appropriate to allow check valves with external position indicators because an external position indicator will also make it easy for an operator to see whether a valve is open or closed.

Adopted §217.70(j)(2) corrects the units for polyethylene sleeve thickness because mils (thousands of an inch), not millimeters, are the conventional unit of measurement.

§217.71, Storage Tanks for Reclaimed Water

Adopted new §217.71 was §217.70 in the previously existing rules, which the commission adopts to repeal and move to this section without changes to accommodate new §217.69.

Subchapter D: Alternative Collection Systems

§217.90, Applicability

Adopted new §217.90 was added to clarify the section's applicability with regard to conventional collection systems, alternative collection systems, and individual private grinder pumps or septic tank effluent pumps that discharge directly into a conventional collection system.

§217.91, Edwards Aquifer

The adopted amendment to §217.91 adds a cross reference to the definition of "recharge zone" in Chapter 213 for clarification and to improve consistency.

§217.92, Component Sizing

The adopted amendment to §217.92(a) replaces the phrase "similar system and service area" with "system and service area with similar characteristics" for clarity. The adopted amendment also adds paragraphs (1) - (6) to define what "similar characteristics" include, which will provide certainty for engineers and the executive director.

§217.93, General Requirements

The adopted amendment to §217.93(e) deletes the phrase "ponding of surface water is probable" and replaces it with the phrase "surface water accumulates" to improve clarity. Adopted §217.93(f), which was deleted from §217.94(a) to improve organizational structure, adds language that requires an alternative wastewater collection system to discharge to a permitted wastewater treatment facility or to a collection system that flows to a permitted wastewater treatment facility to provide additional design options for alternative collection systems.

§217.94, Maintenance and Inspection Program

The commission adopts the repeal of §217.94 and adopts a new §217.94 that requires alternative collection system owners to comply with the adopted maintenance and inspection program requirements for a conventional collection system. This will provide consistency for the inspection and maintenance of all collection systems.

The requirements in the section that are repealed are no longer necessary because subsection (a) was moved to §217.93(f), subsection (b) did not provide any meaningful substantive requirements that were not already addressed by §217.95, and subsection (c) is no longer necessary based on the adopted amendment to §217.61(i).

§217.95, Alternative Collection System Service Agreements

The adopted amendment to §217.95 changes the title from "Service Agreements" to "Alternative Collection System Service Agreements" to better describe the contents of the section.

The adopted amendment to §217.95(a) clarifies that each real property owner served by the alternative collection system must sign the service agreement. Additionally, the amendment requires the service agreement to authorize the collection system owner to place and maintain the collection system components. These provisions will provide additional protection of human health, safety, and the environment by ensuring that the owner of the collection system has access to the collection system components. Additionally, the provision will enhance compliance and enforceability by ensuring the appropriate persons are parties to the service agreement.

The adopted amendment to §217.95(b) requires the owner of on-site components to be identified in the alternative collection system service agreement. The words "proper" and "competent" were deleted to reduce ambiguity.

The adopted amendment to §217.95(c) clarifies that a copy of the alternative collection system service agreement must be provided to the executive director. In the last sentence, the phrase "for the executive director to review" was added for clarity, certainty, and readability.

The adopted amendment to §217.95(d)(5) deletes the phrase "utility owned" to clarify that an alternative collection system owner can make emergency repairs to an on-site collection system component, regardless of ownership of the component. Adopted §217.95(d)(6) requires a service agreement to include a statement of whether the alternative collection system owner or the property owner is responsible for non-emergency maintenance, to ensure that all parties are aware of who is responsible for maintenance. The previously existing §217.95(d)(7)(A)(i) and (ii) dealt with maintenance costs, but did not address which party would be responsible for performing non-emergency maintenance. Adopted §217.95(d)(7) replaces the previously existing §217.95(d)(7)(A)(i) and (ii), which dealt with maintenance costs, and also provides that maintenance costs may be shared between a property owner and an alternative collection system owner. Adopted §217.95(d)(8) replaces the previously existing §217.95(d)(6), which dealt with electrical power costs, and also provides that power costs may be shared between a property owner and an alternative collection system owner. Adopted §217.95(d)(9) and (10) replaces the previously existing §217.95(d)(7)(A)(iii) and (iv), and also provides that payment methods and payment schedules should be provided for costs that a property owner owes to an alternative collection system owner, and vice versa. Adopted §217.95(d)(11) was moved from previously existing §217.95(d)(7)(B)(i) to improve rule structure, and was also amended to allow an alternative collection system owner to inspect and approve pretreatment units before they are installed. Subsequent paragraphs were renumbered. The requirements in previously existing §217.95(d)(7)(B)(ii) and (iii) were deleted in this rulemaking because they are redundant.

§217.96, Small Diameter Effluent Sewers

The adopted amendment to §217.96(a)(3), Equation D.5. deletes the phrase "average daily flow" from the definition of "VIE" for consistency. Additionally, in the definition of "VCZ," 1.0 is inserted in front of "ADF" to improve clarity.

The adopted amendment to §217.96(b)(1) clarifies that residential contributors are not required to trap fats, oils, and grease from wastewater before it enters an interceptor tank.

The adopted amendment to §217.96(c)(5) adds that a check valve must be a swing-type valve with an external position indicator based on comments from a stakeholder. The commission adopts this amendment because, as with an external lever, it will be easy to see whether a valve is open or closed. The adopted amendment deletes §217.96(c)(6) because the odor control provision is contained in adopted §217.96(d)(3).

Adopted §217.96(d)(3) provides the requirements for odor control. This requirement was moved from §217.96(c)(6) to improve organizational structure and clarify that odor control devices must be permanent features of the alternative collection system to ensure that nuisance odors are prevented at all times.

§217.97, Pressure Sewers

The adopted amendment moves §217.97(d)(11) to §217.97(d)(7) to improve organizational structure. The subse-

quent paragraphs are renumbered. The adopted amendment to §217.97(d)(7) clarifies that a wet well must include an audiovisual alarm system. Additionally, the amendment clarifies that the alarm for an equivalent dwelling unit must activate at the high water level specified in the engineering report, plans, or specifications for the project, and that an alarm for a multiple equivalent dwelling unit must activate in the event of unit failure or in high water level conditions. The adopted amendment renumbers §217.97(d)(7) - (10) as §217.97(d)(8) - (11), respectively. The adopted amendment to §217.97(d)(13)(C) clarifies that the water level in a septic tank effluent pump system chamber should be independent of the water level in an interceptor tank to prevent the disturbance of settleable and floatable solids in the interceptor tank. The adopted amendment to §217.97(d)(14)(A) changes "or" to "and" to clarify that the housing must be both lockable and tamper-resistant.

The adopted amendment to §217.97(f)(8) deletes this paragraph and combines the information into paragraph (12) to improve clarity and organizational structure. The adopted amendment renumbers §217.97(f)(9) - (13) as §217.97(f)(8) - (12), respectively. The adopted amendment to renumbered §217.97(f)(11) deletes the word "public" to clarify that the paragraph applies to all buildings, and adds a requirement for the owner to implement odor control measures to prevent a collection system from becoming a nuisance, which will protect human health, safety, and the environment; and will also enhance compliance and enforceability.

§217.98, Vacuum Sewer Systems

The adopted amendment to §217.98(b)(5) deletes the phrase "vented externally to the equipment housing" and replaces it with the phrase "on the lateral line" to clarify and correct the paragraph. The adopted amendment to §217.98(b)(12) only requires a service pipe to have a minimum 0.2% slope, to avoid confusion about whether a 2.0 inch minimum drop or a 0.2% slope is required.

The adopted amendment to §217.98(c)(3)(B) inserts the word "maximum" in front of "length" for clarification. The adopted amendment to §217.98(c)(5) adds, for clarity, a requirement that the vacuum sewer system be "designed to balance pressures within the system." The adopted amendment to §217.98(c)(8)(A) clarifies that the options for a division valve only include a plug valve or a resilient-seated gate valve.

The adopted amendment to §217.98(c)(8)(B) replaces "a" with "each" to clarify that a gauge tap is required downstream of each division valve so the pressure can be measured.

The adopted amendment to §217.98(e)(1) clarifies that the purpose of evacuating a vacuum sewer system is to restore the design vacuum pressure. The commission recognizes that a vacuum sewer system may reach the design vacuum pressure before the system is completely evacuated and does not expect that an evacuated system will be totally empty.

The adopted amendment to §217.98(g)(2) clarifies that the liquid from a vacuum pump must be piped to the top of the vacuum reservoir tank. The adopted amendment to §217.98(g)(8) adds the word "automatic" to clarify what type of vacuum switch controls are required, and clarifies that the controls must operate based on the liquid level in the reservoir tank. The adopted amendment to §217.98(g)(8) adds the word "audiovisual" to clarify the type of alarm required.

§217.99, Testing Requirements

The adopted amendment to §217.99(c)(1) adds that the hydrostatic head test must demonstrate that the tank in not leaking to prevent owners or their contractors from placing fill material around a tank that fails a hydrostatic head test. Additionally, the amendment replaces "rigid tank" with "tank" for clarity.

§217.100, Termination

The requirement in §217.100(c) was deleted because it unnecessarily limited where alternative collection systems could be located to areas near conventional collection systems. One major application of alternative collection systems is that they can serve areas that are impractical for a conventional collection system to serve. The adopted amendment re-letters §217.100(d) as §217.100(c), and adds the phrase "or the influent lift station" to allow another location option in determining where to terminate an alternative wastewater collection system and because discharge to an influent lift station is a commonly accepted practice in the industry.

Subchapter E: Preliminary Treatment Units

In the adopted amendments, the term "bypass channel" was changed to "emergency overflow" throughout the subchapter to ensure consistent use of defined terms. This change also avoids limiting emergency overflow structures to only bypass channels.

§217.120, General Preliminary Treatment Requirements

Adopted new §217.120 combines requirements from several preliminary treatment sections into a single section that broadly applies to preliminary treatment design. Specifically, the requirements from §217.121(e)(1) - (4) and §217.122(h) were consolidated into adopted new §217.120. Adopted new §217.120(a) requires that facilities be designed with the ability to add provisions for removal of fats, oils, and grease (FOG). This requirement originally applied only to facilities using fine screens for preliminary treatment, but the executive director's staff noted that several existing facilities that use coarse screens have significant trouble managing FOG that the facilities were not designed to receive. Requiring facilities to be designed with the ability to add FOG treatment at a future date will help protect the environment and ensure that treatment infrastructure can be protected from the harmful effects of FOG.

Adopted new §217.120(b) requires that FOG removal must be provided if FOG has caused operational failures in a treatment unit that is being altered to ensure protection of the environment and treatment infrastructure.

The requirements of §217.120(c) - (h) were added to prevent damage to wastewater treatment facility pumps, ensure operator safety, and ensure protection of human health and the environment. Adopted new §217.120(c) requires a wastewater treatment facility to have a screening or grinding device. Adopted new §217.120(d) requires a screening or grinding device to be separated from offices and other work areas by a gas-tight partition if the areas are located in the same structure. Adopted new §217.120(e) requires an area that houses a screening or grinding device to be ventilated at a minimum rate of 30 air exchanges per hour. Adopted new §217.120(f) requires a screening or grinding device to be readily accessible for maintenance and screenings removal. Adopted new §217.120(g) requires any screening device located 4.0 feet or more below ground level to include mechanical equipment capable of lifting the screenings to ground level. Adopted new §217.120(h) requires that screenings be collected, managed, and disposed of in accordance with §217.123 at a frequency that prevents creation of a nuisance.

§217.121, Coarse Screens

The adopted amendment changes the section heading from "Coarse Screening Devices" to "Coarse Screens" to better describe the section.

The adopted amendment to §217.121(a) adds that coarse screens are required, unless all flow entering a facility is processed through a grinder pump. This amendment was based on comments from a stakeholder, who noted that processing ground debris through a coarse screen would be ineffective and redundant.

Section 217.121(e) was deleted because the requirements were moved into adopted new §217.120 and subsequent subsections were re-lettered. The adopted amendment to re-lettered §217.121(e)(1) and (2) reduces the maximum spacing between bars in coarse screen devices from 1.75 inches to 1.0 inch to reduce the impact of debris and other solids on pumps, pipes, and treatment processes within a facility. The adopted amendment to §217.121(e)(4) clarifies that the purpose of the horizontal storage platform on a coarse bar screen is to prevent unauthorized discharges, which can be caused by a clogged bar screen. Adopted §217.121(e)(5) requires the design of a mechanically cleaned coarse screen to include automatic disposal equipment because the executive director's staff observed that congested mechanically cleaned bar screens are commonly a source of unauthorized discharges.

§217.122, Fine Screens

The adopted amendment changes the section heading from "Fine Screening Devices" to "Fine Screens" to better describe the section.

The adopted amendment to §217.122(c) includes a cap of 35% on the BOD_5 reduction that can be claimed to ensure that appropriate food to microorganism ratios are maintained for efficient biological treatment processes.

The adopted amendment to §217.122(j) is a stylistic change that clarifies that fine screens must use a bar rack or perforated plate design.

§217.123, Screenings and Debris Handling

The adopted amendment to §217.123(b) clarifies that the purpose of the tight-fitting cover on a container that holds screenings or debris, or an alternative method approved by the executive director, is to reduce vector attraction. The amendment to §217.123(c) clarifies that the phrase "head of the facility" includes the influent lift station. The amendment to §217.123(d) clarifies that grit must be collected in appropriate containers before disposal.

§217.124, Grit Removal Systems

The adopted amendment to §217.124(c) clarifies that a design needs to include a minimum of two grit removal units when grit removal is required by §217.124(a). A design may include a single grit chamber if grit removal is not required by §217.124(a).

§217.125, Grit Chambers

The adopted amendment to §217.125(b)(1) replaces the phrase "separate the size of grit planned for removal" with the phrase "not interfere with the removal of particles with the design particle size and density" because aeration inhibits the settling of grit. The adopted amendment to §217.125(b)(2) updates incorrect units of measurement. The adopted amendment to §217.125(d)(1) implements consistent terms used elsewhere in the rule and clarify that all possible modes of short-circuiting must be prevented, not just short circuits from the inlet to the emergency overflow during non-emergency conditions.

§217.126, Grit Handling

The adopted amendment to this section was made to improve sentence structure.

§217.127, Pre-aeration Units

The adopted amendment to this section deletes flocculation of solids from the list of pre-aeration units because flocculation typically requires inactive or dormant conditions. The section was also reorganized to enhance readability.

§217.128, Flow Equalization Basins

The adopted amendment to §217.128(a)(1) and (2) adds influent organic loading as a consideration for the flow equalization basin requirements to prevent chronic overloading or underloading of biological treatment processes. Section 217.128(a)(3) was deleted because unusually high peak flows are addressed in §217.32(a)(2).

The adopted amendment to §217.128(b) updates the subsection to include grinding devices for consistency with adopted new §217.120(b).

§217.129, Primary Clarifiers

The adopted amendment to §217.129(b)(5) clarifies that skimming is required for all primary clarifiers, and that mechanical or hydraulic differential skimming are both acceptable methods for a primary clarifier with a flow less than 25,000 gpd.

The adopted amendment to §217.129(c)(1) clarifies that an effluent weir must not cause a localized high vertical flow velocity that can draw solids over the weir. The adopted amendment to §217.129(c)(3) clarifies that a clarifier weir must be leveled, not merely designed with the ability to be leveled. The adopted amendment to §217.129(c)(4) requires the effluent weir loading to be based on peak flow for a primary clarifier with a design flow less than 1.0 million gpd. This change makes §217.129(c)(4) consistent with the flow design basis for large clarifiers in §217.129(c)(5) and for secondary clarifiers in §217.152.

The adopted amendment to §217.129(d)(3)(a) clarifies that "the design criteria," as used in this section refers to surface loading rates and detention times for primary clarifiers. In the adopted amendment, the term "overflow rate" is deleted from §217.129(d)(3)(B)(iii) because the provision only applies to side water depth (SWD). The phrase "must be allowed for development of maximum return sludge concentration" in §217.129(d)(3)(B)(iv)(III) was deleted because the information is not necessary for compliance or the purposes of this chapter.

In the adopted amendment to §217.129(e) the definition of "side water depth" was added for consistency with the secondary clarifier requirements in §217.152.

The adopted amendment to §217.129(g)(1) requires drained liquid from a primary clarifier to be routed through a secondary treatment process to ensure that liquids drained from a primary clarifier do not bypass proper treatment.

The adopted amendment to §217.129(j)(1) clarifies that the purpose of removing sludge rapidly is to reduce the potential for nuisance odor development.

Subchapter F: Activated Sludge Systems

§217.151, Requirements for an Aeration Basin

The adopted amendment to this section was made to ensure consistent use of defined terms.

§217.152, Requirements for Clarifiers

The adopted amendment to §217.152 improves the organization of the section in general. Specifically, the language from §217.152(f) was moved to §217.152(b). Previously existing §217.152(b) - (e) were re-lettered as §217.152(c) - (f). Previously existing §217.152(b)(5) and (6) were moved to adopted §217.152(c)(1). The adopted amendment to §217.152 also contains substantive changes. Specific substantive changes and the reasons for organizational changes are discussed in this section of the preamble.

Adopted §217.152(b) contains all of the language from §217.152(f) so that requirements related to clarifier inlets and inflows will be grouped together. All subsequent subsections were re-lettered. The previously existing §217.152(f) was deleted.

The adopted amendment to §217.152(c)(1) ensures that all requirements related to scum removal are in the same location. Adopted §217.152(c)(1)(A) contains all of the language from the previously existing §217.152(c)(5), without changes. Adopted §217.152(c)(1)(B) contains the language from the previously existing §217.152(b)(6), but also adds that a mechanical skimmer must be used, if a hydraulic differential scum pickup is not capable of removing scum from the entire surface, to ensure that scum is not discharged to the environment. The adopted amendment to §217.152(c)(2) clarifies that a facility using either an activated sludge process or an aerated lagoon is required to either re-route scum within the facility for further processing, or dispose of the scum using a method that complies with 30 TAC Chapter 312. Adopted §217.152(c)(3) was added to require removal of debris and foreign materials before scum will be applied to the land because disposal of debris and foreign materials is not authorized by the land application rules in Chapter 312. Subsequent paragraphs were renumbered. Adopted §217.152(c)(6) prohibits scum from being stored in a vessel that is open to the atmosphere, which will help prevent odors and vectors, thereby ensuring protection of public health, safety, and the environment. This requirement will also provide for enhanced compliance and enforceability.

The adopted amendment to §217.152(e)(1) clarifies that the transfer of sludge within a wastewater treatment facility must not negatively affect the treatment efficiency of a treatment unit that receives the sludge.

Section 217.152(e)(3) was updated to make sludge velocity allowances, based on comments from a stakeholder, which noted that many small wastewater treatment facilities cannot meet a sludge velocity of 2.0 feet per second using pipes that are at least 4.0 inches in diameter. The commission concurs with the stakeholder recommendation.

Section 217.152(e)(4) was added to require a sludge pipe to be accessible for cleaning. The previously existing requirement only applied to blockages, and to enhance maintenance of the system, sludge pipes must also be accessible for cleaning, even if the pipe is not entirely blocked. Section 217.152(f)(2) was added to address sludge collection equipment requirements for a wastewater treatment facility with a design flow less than 10,000 gpd. This provision will ensure that smaller wastewater treatment plants will have a way to route sludge to the sludge collection pipe.

The adopted amendment to §217.152(g)(1)(B) clarifies that the SWD definition applies to all flat bottom clarifier tanks, whether or not the tank has a hydraulic sludge removal mechanism. The minimum SWD limit of 5.0 feet for hopper bottom clarifiers was moved from §217.152(g)(4) to §217.152(g)(3). A statement was added to the end of §217.152(g)(4) to clarify that the lower two-thirds of a hopper must not be included in SWD calculations.

The adopted amendment to §217.152(h) prohibits the use of hopper bottom clarifiers at a wastewater treatment facility with a design flow of 10,000 gpd or more, whether or not mechanical sludge collection equipment is provided.

The adopted amendment to §217.152(i)(2) requires two sludge return pumps. The adopted amendment to §217.152(i)(4) requires that a wastewater treatment facility be designed with the ability to control and vary the return sludge flow.

§217.153, Requirements for Both Aeration Basins and Clarifiers

Adopted §217.153(a)(1) - (3) enhance enforceability and ensure safety and infrastructure protection by preventing aeration basins and clarifiers from leaking, collapsing, or floating. The adopted amendment to §217.153(c)(1) clarifies that diffusers are included in the aeration equipment that must be removable for certain facilities to be exempt from the requirement to have at least two aeration basins and clarifiers.

§217.154, Aeration Basin and Clarifier Sizing--Traditional Design

The adopted amendment to §217.154(b)(1) establishes a minimum design dissolved oxygen concentration of 2.0 milligrams per liter to ensure adequate dissolved oxygen throughout an aeration basin for effective biological treatment and to enhance compliance and enforceability. The amendment provides that the executive director may consider different dissolved oxygen specifications for biological nutrient removal or tapered aeration for energy conservation because uniform dissolved oxygen concentrations throughout a basin are not usually desirable for these designs. The adopted amendment to §217.154(b)(3) changes "reactor" to "aeration basin" to use consistent terms. The amendment also defines the characteristics to be used when identifying a similar wastewater treatment facility, which will improve consistency in the selection of a design temperature for water in an aeration basin.

The adopted amendment to §217.154(c)(1) deletes the phrase "an activated sludge" so that the requirement applies generally to all clarifiers, whether or not sludge is returned to an aeration basin, to enhance compliance and enforceability. Also, the adopted amendment to §217.154(c)(1) replaces "overflow" with "surface loading" in the fourth column heading of Table F.2. to use defined terms accurately. The adopted amendment to §217.154(c)(2) removes "proposed" from "proposed clarifier" to prevent ambiguity in the enforcement of these rules.

§217.155, Aeration Equipment Sizing

The adopted amendment to §217.155(a)(2) adds "whichever is greater" to clarify that the design aeration rate must never be lower than the minimum rates in §217.155(a)(3), Table F.3., based on comments from a stakeholder, and the commission agrees that the clarification is helpful to ensure proper design and improve enforceability.

The adopted amendment updates the first column, second row of §217.155(b)(1), Table F.4., to include all activated

sludge process that are intended to nitrify, to be consistent with §217.155(a)(3), Table F.3.

The adopted amendment to §217.155(b)(2)(D) allows an engineer to use manufacturer-supplied oxygen transfer testing results to determine the design airflow rate under certain conditions, based on comments from a stakeholder. The stakeholder noted that actual test data is the most accurate information available. The commission concurs with the stakeholder's recommendation. If data from the manufacturer is not available, the engineer must adjust the design airflow rate using Table F.5. as required by the existing rule. Additionally, the adopted amendment to §217.155(b)(2)(D) clarifies that linear interpolation is allowed to reflect the executive director's current practice. The adopted amendment to §217.155(b)(3)(A) clarifies which edition of the referenced text should be used.

The adopted amendment to §217.155(b)(4)(A) and (B) requires blowers to provide enough air for biological treatment and mixing based on the maximum air requirements, for the specific conditions at the location of the wastewater treatment facility. A stakeholder recommended the rule amendment and the commission concurs with the recommendation. The adopted amendment to §217.155(b)(4)(G) requires that blowers and air compressor systems are able to provide the design aeration rate at 20 degrees Fahrenheit, regardless of location, to prevent ambiguity in the compliance and enforceability of this chapter. Adopted §217.155(b)(4)(H) requires a blower to include a governor or other means to regulate airflow so that the requirements of this chapter will not cause unnecessary electricity consumption. The adopted amendment to §217.155(b)(5)(A)(iii) provides more flexibility by allowing diffuser submergence to be less than 7.0 feet if certain conditions are met, based on comments from a stakeholder, which suggested that the previous prohibition was too absolute for small wastewater treatment facilities. The commission concurs with this comment.

The adopted amendment to §217.155(c)(1)(B)(i) requires an owner to provide the actual oxygen transfer efficiency (not theoretical) in the engineering report for a mechanical aeration system. The adopted amendment to §217.155(c)(3)(B)(iv) requires equipping certain mechanical components with a splash guard. In the adopted amendment to §217.155(c)(3)(B)(iv) and (v), "any" was changed to "each" to prevent ambiguity by clarifying that these requirements apply to all bearings, motors, and gear reducers in a mechanical aerator.

§217.156, Sequencing Batch Reactors

In the adopted amendment to §217.156(a)(5), "peak" replaces "design" because a sequencing batch reactor must always be designed with a decanting system that can accommodate the design flow.

The adopted amendment to §217.156(b)(6) clarifies that the performance of a decanter and related pipes and valves must not be affected by freezing, regardless of the location of the wastewater treatment facility.

The adopted amendment to §217.156(c)(14) requires that walkways shall be provided to allow inspection, maintenance, and process control sampling and to allow access to instrumentation, mechanical equipment, and electrical equipment. These changes will allow owners to verify adequate treatment of wastes. The adopted amendment to §217.156(c)(17) clarifies that there must be adequate treatment capacity when one tank is out of service, regardless of which tank is out of service.

The adopted amendment to §217.156(e)(1) requires that a sequencing batch reactor must be able to be operated manually to ensure that a facility can be controlled during an emergency that prevents electronic control, which will provide greater protection of human health, safety, and the environment.

§217.157, Membrane Bioreactor Systems

The adopted amendment to §217.157 adds adopted §217.157(b), which includes definitions that are specific to the rules for membrane bioreactor systems. These definitions were moved, without changes, from previously existing §217.2(18), (22), (24), (32), (46), and (47). It is more appropriate for these definitions to be in this section, because the definitions are only used in this section. The subsections that follow adopted §217.157(b) were re-lettered.

The adopted amendment to §217.157(c)(2) defines the characteristics of a "similar" wastewater treatment facility for the purposes of this section, to ensure that the executive director has the information necessary to assist in the review of a project and to enhance compliance and enforceability.

The adopted amendment to §217.157(d)(1)(A) divides the requirements of §217.157(d)(1)(A)(i) into §217.157(d)(1)(A)(i) - (iii) to improve readability. In the adopted amendment to §217.157(d)(1)(C), "fat" is added to "fat, oil, and grease" to use consistent terms. The adopted amendment to §217.157(d)(1)(D) clarifies "excessive grit accumulation" as grit accumulation in any treatment unit following the headworks. The adopted amendment to §217.157(d)(3)(D) clarifies that the phrase "potential or actual oxygen deprivation" means that oxygen levels are outside of the design dissolved oxygen range or that the dissolved oxygen decreases rapidly. In the adopted amendment to §217.157(d)(4), "nutrient removal" replaces "treatment" to use consistent terms. The nutrient removal models in §217.157(d)(5)(B) were deleted, based on the commission's concurrence with comments from stakeholders, which suggested that the requirements should be as generic as possible because there are a variety of accepted nutrient removal models and because of the technological advancement occurring in that field. The commission encourages innovation and progress in the field of advanced nutrient removal. The adopted amendment to §217.157(d)(8)(B) subdivides the requirements into §217.157(d)(8)(B)(i) - (iv) to improve readability. In the adopted amendment to §217.157(d)(8)(B)(iv), the phrase "design flow" replaces the term "average," and the phrase "peak flow" replaces the phrase "peak two-hour design" to use consistent terms. The term "peak day" was deleted because the peak flow is already a more limiting design value.

In the adopted amendment to §217.157(d)(9)(A), "design flow" replaces "daily average flow" to use consistent terms, and "the largest" replaces "one" to ensure adequate treatment capacity in a facility that uses more than one membrane bioreactor unit size.

Previously existing §217.157(d)(10)(B)(ii) and (iii) were deleted because they did not include substantive requirements. The adopted amendment to §217.157(d)(10)(C) requires that an alternative process or mechanism for cleaning and maintaining membranes must be approved by the executive director to approve, in writing, to enhance compliance and enforceability.

The adopted amendment to §217.157(e)(1)(D), deletes the phrase "which is short periods of air scouring without filtration" because it is an unnecessary definition within the context of this requirement.

The adopted amendment to §217.157(e)(2)(A) deletes the phrase "or an equivalent" to prevent ambiguity and require an alarm to notify the operator of high turbidity so that damaged membranes can be isolated and repaired or replaced. The adopted amendment to §217.157(e)(3) requires that a membrane bioreactor must be able to be operated manually in case of emergencies that prevent electronic control.

§217.158, Solids Management

In the adopted amendment to §217.158(a)(1), "as designed" replaces "satisfactorily" to prevent ambiguity. In the adopted amendment to §217.158(c)(2), the phrase "allow for cleaning without removal from a basin" was deleted and was replaced by a requirement to comply with the adopted new §217.162 (Air Lift Pump Design) because the adopted section contains comprehensive requirements for air lift pumps. The adopted amendment to §217.158(e)(2) provides more design flexibility by decreasing the minimum flushing flow velocity in a sludge pipe based on the solids wasting rate. The suggestion for the amendment was made by a stakeholder and the commission concurs with the suggestion.

§217.159, Process Control

The adopted amendment to §217.159(a)(1) deletes the phrase "from either a mixed liquor tank, a sludge re-aeration tank, or the return sludge" to avoid unnecessarily limiting the locations where sludge can be wasted. The adopted amendment to §217.159(b)(1) changes the word "include" to the phrase "provide the operator with" to prevent ambiguity and also change the phrase "wastewater facility" to just "wastewater" because the wastewater is what actually exerts the oxygen demand.

Adopted §217.159(c) incorporates the process control requirement from the previously existing §217.162 (Internal Process Flow Measurement), except that totalized flow measurement is now required, so that owners and operators will have more accurate information about the amount of activated sludge returned within the process.

§217.160, Operability and Maintenance Requirements

The adopted amendment to §217.160(a) clarifies that a temperature controlled enclosure is mandatory if equipment is not able to operate at the temperature extremes of the wastewater facility location. The adopted amendment to §217.160(c) adds the word "safely" to clarify that the work area required to remove equipment must be sufficiently large, but must also provide a safe working area. For example, installing or removing equipment that is accessed by an elevated platform might require more working space than simply accessing the equipment for inspection.

§217.161, Electrical and Instrumentation Systems

The adopted amendment to §217.161(c) adds that the executive director may require an owner to monitor clarifier failure and other conditions as a condition for project approval. The suggestion for the amendment was made by a stakeholder and the commission concurs with the suggestion. The adopted amendment to §217.161(d) clarifies that a telemetry system must notify an operator of any malfunction listed in §217.161(c).

§217.162, Air Lift Pump Design

The contents of previously existing §217.162 were moved to §217.159(c). The commission, therefore, adopts the repeal of §217.162 and adopts new §217.162, which will establish minimum requirements for air lift pump design. A stakeholder suggested the commission establish minimum requirements for air lift pumps, and the commission concurs with the suggestion. Air lift pumps are commonly used at wastewater treatment facilities, but no set of minimum criteria for air lift pump design exists in this state.

Adopted new §217.162(a) requires the engineering report to include air lift pump calculations and certain information related to the design air and fluid flow rates, and also requires air lift pump systems to be designed to meet the range of required flow rates. Adopted new §217.162(b) sets minimum design criteria for air lift pumps that address types of sludge that cannot be pumped, the minimum pump diameter, the relationship between submergence and airflow, splash prevention, cleaning, releasing trapped air, minimum dynamic submergence, and flow measurement. Adopted new §217.162(c) sets minimum requirements for air lift pump system redundancy, including a requirement to provide a backup pump or other means of transfer and a requirement that a system must be able to operate at full capacity with the largest pump out of service.

§217.163, Advanced Nutrient Removal

The adopted amendment to §217.163(b) states that fixed-film processes are not exempt from the innovative and non-conforming technology requirements in §217.7(b)(2). In the commission's experience, closer review and performance bonding is sometimes necessary for fixed-film processes because of the wide variety of designs and the accompanying variability in performance. The adopted amendment to §217.163(d) adds a requirement that chemical addition in an advanced nutrient removal process must be approved by the executive director in writing. The previously existing §217.163(e) was deleted because it is redundant.

§217.164, Aeration Basin and Clarifier Sizing--Volume-Flux Design Method

The adopted amendment to §217.164(a) clarifies that the volume-flux design method for aeration basins and clarifiers must not be used in conjunction with traditional design methods. In the adopted amendment to §217.164(b)(1), (c)(1)(A) - (D), and (c)(2) "BOD_5" replaces "$CBOD_5$" for consistency with the effluent limits in 30 TAC Chapter 309. Previously existing §217.164(d)(8) was deleted because it was unnecessary.

Subchapter G: Fixed Film and Filtration Units

§217.182, Trickling Filters--General Requirements

The adopted amendment to §217.182(a)(1) clarifies that the word "strength" means BOD_5 concentration.

The adopted amendment to §217.182(b)(2) more completely describe a secondary treatment filter to prevent ambiguity and to reference the appropriate BOD_5 and total suspended solids (TSS) requirements. The adopted amendment to §217.182(b)(3) more completely describe a combined BOD_5 and nitrifying filter to prevent ambiguity and to reference the appropriate BOD_5, TSS, and ammonia nitrogen requirements.

The adopted amendment to §217.182(d)(1)(B) replaces the word "have" with "remove" to clarify that the requirement intends for pretreatment preceding a trickling filter to remove particles rather than leave particles in place.

The adopted amendment to §217.182(e)(2)(C) clarifies the rule by replacing the word "fines" with the more descriptive phrase "other fine particles."

The adopted amendment to §217.182(f)(2) requires that the use of synthetic trickling filter media be approved by the executive director in writing, because potentially innovative or non-conforming technologies cannot be approved through an automatic approval process. The adopted amendment to §217.182(f)(2)(A) clarifies that the suitability of synthetic media material must be based on real performance data from similar media to ensure that the evaluation will be useful to the executive director during the review of a project.

The adopted amendment to §217.182(g)(1) changes the phrase "suitable flow characteristics must be used for the application of wastewater to a filter by" to "dosing rates to a trickling filter must be within the design dosing rate range, even if the trickling filter receives flow from a" to clarify the meaning of "suitable flow characteristics."

The adopted amendment to §217.182(i)(1)(A) adds a requirement to include a mechanism to maintain minimum circulation during periods of low flow to ensure active biological growth in the filter media at all times. The adopted amendment to §217.182(i)(1)(B) clarifies that this requirement applies specifically to all trickling filters with continuous recirculation. The adopted amendment to §217.182(i)(2)(A) adds the word "compensatory" to clarify that the additional recirculating flow is required to compensate for a lack of influent flow under certain conditions.

The adopted amendment to §217.182(j)(1) deletes the phrase "area cross section" because it is unnecessary and adds ambiguity. The adopted amendment also clarifies that "for the initial year and the design year" means "for the flow expected in the initial year and at full design capacity."

The adopted amendment to §217.182(k)(5) requires that the manufacturer's recommendations for modular synthetic media design be included in the engineering report so that proper construction of the trickling filter can be verified. In the adopted amendment to §217.182(m)(7), "the trickling filter basin surface" area replaces "plan" area for clarity.

The adopted amendment to §217.182(m)(8) requires that the manufacturer's recommendations for synthetic media underdrain ventilating area be included in the engineering report so that proper construction of the trickling filter can be verified.

The adopted amendment to §217.182(n)(1)(C) establishes a minimum ventilation rate for passive ventilation of a trickling filter.

The adopted amendment to §217.182(o)(2)(A)(i), deletes the word "new" because it is not necessary within the context of these rules. The adopted amendment to §217.182(o)(2)(B) inserts the phrase "be designed to prevent sludge accumulation that attracts snails" to replace the phrase "minimize areas where sludge may accumulate" to reduce ambiguity and make the requirement more specific. The adopted amendment to §217.182(o)(3) inserts the phrase "must be designed to prevent" to replace the phrase "design must minimize" to prevent ambiguity.

The adopted amendment to §217.182(p) clarifies that a trickling filter system must include a means to measure the flow and recirculation flow of each trickling filter. In §217.182(q)(1)(A), "altered" replaces "expanded or materially altered" to use consistent terms. The adopted amendment to §217.182(q)(2) defines high influent organic strength as a BOD_5 concentration greater than 200 milligrams per liter to prevent ambiguity.

§217.183, Nitrifying Trickling Filters--Additional Requirements

The adopted amendment to §217.183(g)(2) deletes the phrase "and by control of influent instantaneous application rates, by means other than compensatory recirculation" to provide design engineers with additional flexibility. This deleted portion is not necessary to convey the minimum requirement and limits design flexibility.

In the adopted amendment to §217.183(h)(2), the second sentence was deleted because it is not necessary to convey the minimum requirement and it limited design flexibility. The adopted amendment to §217.183(h)(2) deletes language that states "the design must not take credit for nitrification in sections of the filter having soluble BOD_5 of <20 mg/l" because the effluent quality requirement alone is a sufficient performance criteria. The adopted amendment to §217.183(h)(3) added "BOD_5" to the phrase "combined BOD_5 and nitrification filter design" for consistency with the rest of the section.

§217.184, Dual Treatment Using Trickling Filters

The adopted amendment to §217.184(c) lists pretreatment, snail control, return sludge, aeration, sludge age, hydraulic residence time, and nitrification design to clarify that they must be addressed in the design of a suspended and attached growth system and to improve the rule structure. The adopted amendment to §217.184(c)(3)(B) adds the phrase "design that uses" to clarify that trickling filters in this scenario incorporate a vertical flow design that uses fully corrugated media.

§217.185, Rotating Biological Contactors

The adopted amendment to §217.185(a)(1) clarifies disposal requirements for grit, debris, and excess oil and grease by adding references to §217.123 and §217.126. The adopted amendment to §217.185(a)(2) clarifies that primary clarification, fine screening, or grit removal may be required before influent enters a rotating biological contactor (RBC) to protect the RBC from damage or upset.

In the adopted amendment to §217.185(b)(1), the phrase "at least six complete air exchanges per hour" replaces the phrase "appropriate levels of ventilation" for clarity. In the adopted amendment to §217.185(f), the phrase "filamentous bacteria that oxidize sulfur compounds (e.g., *Beggiatoa* species)" replaces the word "beggiatoa" to clarify that the requirement applies to species other than *Beggiatoa*.

The adopted amendment to §217.185(g)(2) clarifies that an RBC system must be designed to treat the design flow, even when the largest process train is out of service for maintenance or cleaning. The adopted amendment to §217.185(h) adds that bearings in an RBC must be easily accessible for replacement, based on comments from a stakeholder. The commission concurs because the change will ensure that an RBC will not be out of service for an excessive amount of time during repairs.

The adopted amendment to §217.185(k)(1) clarifies that justification for less than three RBC stages must demonstrate equivalent treatment.

§217.186, Nitrifying Rotating Biological Contactors

The adopted amendment to §217.186(b) clarifies that the nitrification rate of a system must be justified using calculations, to ensure that the executive director has all of the information necessary to determine whether a project will be protective of the environment.

§217.187, Submerged Biological Contactor

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

§217.188, Submerged Biological Contactor

The adopted amendment to §217.188(a)(1) defines the term "submerged biological contactor" for the purposes of this section. The adopted amendment to §217.188(c) clarifies that if a submerged biological contactor has moving parts, they must have lubrication access above the water level to ensure that the submerged biological contactor can be maintained.

§217.189, Dual Treatment Systems Using Submerged Biological Contactor

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

§217.190, Filtration

The adopted amendment to §217.190(a)(1) defines the term "tertiary effluent limits" for the purposes of this section. The adopted amendment to §217.190(b)(1) clarifies the requirement by replacing "filter units" with "independent, fully functional filter basins with independent, fully functional equipment," based on comments from a stakeholder, who noted that the effect of all types of repairs should be considered in determining whether duplicate equipment is required. The commission concurs. The adopted amendment to §217.190(d) gives design engineers additional flexibility for routing filter backwash within a wastewater treatment facility by adding the phrase "or to the influent lift station."

§217.191, Additional Requirements for Deep Bed, Intermittently Backwashed, Granular Media Filters

The adopted amendment to §217.191(b)(3) changes the phrase "perform an hydraulic grading of material during backwash" to "maintain stratification of media during backwash, based on the particle size distribution" for improved clarity. The adopted amendment to §217.191(b)(3) also deletes the phrase "that will result in a filter bed with a pore space graded from progressively coarse to fine from the top of the media to the supporting layer" to allow for upflow, downflow, and other design configurations.

The adopted amendment to §217.191(c)(2)(A) adds "not" to clarify that if a facility does not have flow equalization or other means of surge control, a backwash tank must be provided. The adopted amendment to §217.191(c)(2)(B) and (C) gives design engineers additional flexibility for routing filter backwash within a wastewater treatment facility. The adopted amendment to §217.191(d) requires that the manufacturer's recommendations for maximum filtration head loss be included in the engineering report so that proper construction can be verified.

§217.192, Additional Design Requirements for Multi-Compartmented, Low Head, Automatically Backwashed Filters

The adopted amendment to §217.192(a)(1) adds the phrase "multi-compartmented, low head, automatically backwashed (multi-compartmented) filter" to prevent ambiguity. The adopted amendment to §217.192(a)(2) requires that the manufacturer's recommended application rates be included in the engineering report to ensure that the executive director has all of the information needed to review the project.

The adopted amendment to §217.192(b) clarifies that an engineer must use calculations to justify different media sizes or depths from those listed in §217.192(b), Table G.5.

The adopted amendment to §217.192(c)(2) clarifies that "expand the media a minimum of 20%" does not refer to individual pieces of media, but instead refers to all of the media that is in fluid. The adopted amendment to §217.192(c)(2) also clarifies that the manufacturer's data provided to support an exemption from the backwash duration or media expansion requirements must justify the shorter backwash duration or decreased expansion of the fluidized media.

The adopted amendment to §217.192(e) deletes the phrase "and regular" to prevent ambiguity.

§217.193, Cloth or Disk Filter Systems

The commission adopts the repeal of §217.193 and replaces it with new §217.193. The commission adopts previously existing §217.193 as new §217.194 so that similar sections will be grouped together.

Adopted new §217.193 introduces new requirements for cloth or disk filter systems, based on comments from a stakeholder, who requested minimum design criteria for these types of filters. Cloth and disk filter systems are becoming more common, and minimum design standards will provide certainty that designs proposed by owners, engineers, and manufacturers will be acceptable to the executive director.

Adopted new §217.193(a) requires a cloth or disk filter system to meet the requirements in §217.190, which contains general requirements for filtration systems. Adopted new §217.193(b) sets a minimum average pore size of 30 microns for filtration media, requires media thickness to be based on the manufacturer's recommendations, and requires the media to be resistant to disinfectants and chlorine to ensure the integrity of the media. Adopted new §217.193(c) sets minimum standards for filtration rates and backwashing requirements to ensure effective filtration. Adopted new §217.193(d) sets minimum standards for the disposal of filter backwash to ensure that the disposal of filter backwash material will not be harmful to the environment. Adopted new §217.193(e) sets minimum requirements for monitoring and controls to ensure that the integrity of the media will be maintained and that an operator will be able to monitor a filter for process control. Adopted new §217.193(f) requires a filter to be protected from freezing conditions, ultraviolet light (UV) exposure, and similar environmental concerns to ensure that protection of the environment and the integrity of the media will be maintained at all times.

§217.194, Alternative Designs for Effluent Polishing

Adopted new §217.194 is previously existing §217.193 verbatim, except that the word "alternative" was added to prevent ambiguity.

Subchapter H: Natural Treatment Units

The adopted amendment to Subchapter H changes the title from "Natural Treatment Facilities" to "Natural Treatment Units" to better describe the contents of the subchapter.

§217.201, Applicability

The adopted amendment to §217.201(a) clarifies that all lagoons used to store treated, untreated, or partially treated domestic wastewater must be lined to control seepage, including raw influent storage lagoons. The adopted amendment also clarifies that lagoons used to store reclaimed water must comply with 30 TAC Chapter 210.

§217.202, Primary and Secondary Treatment Units

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

§217.203, Design Criteria for Natural Treatment Units

The adopted amendment to §217.203 changes the section title from "Design Criteria for Natural Treatment Facilities" to "Design Criteria for Natural Treatment Units" to clearly describe the section.

The adopted amendment to §217.203 combines language related to the section's applicability from the previously existing §217.203(a) and (c)(5) into adopted §217.203(a) to enhance readability and organization in the section. Subsequent subsections were re-lettered.

The adopted amendment to §217.203(b) deletes the requirement for uniform sheet flow for overland flow terraces because it was moved to §217.212(b).

The adopted amendment to §217.203(c)(1) rephrases "presents a risk of contact with the public" as "could cause spray to drift off of the property" to prevent ambiguity. The adopted amendment to §217.203(c)(2) clarifies that the executive director's approval of windbreaks or vegetative screening is only valid if given in writing.

The adopted amendment to §217.203(d)(3) deletes language related to variances because it unnecessarily duplicates language in §217.4.

Adopted §217.203(e)(1) - (3) were revised to improve organizational structure and to ensure consistent requirements for preconstruction soil sampling, liner construction, and post-construction soil sampling. However, preconstruction sampling requirements differ between unamended in-situ soils and amended or imported soils because the composition of amended or imported soils can be controlled during liner construction. Undisturbed core samples are required for unamended in-situ soil liners before construction to verify that the native soil has suitable characteristics before final compaction. These adopted revisions allow molded samples of the liner material (pre-construction) for amended or imported soil liners. Also, these adopted revisions provide additional flexibility related to the thickness of soil lifts before and after compaction, and the moisture content at which soils are compacted. These adopted revisions clarify that post-construction sampling must include samples from the bottom and the sides of a pond to ensure that no portion of soil liner below a pond waterline will be susceptible to leakage rates in excess of those prescribed in this rule. Finally, these revisions require that, for synthetic liners, soil compaction below the liner must meet the synthetic liner manufacturer's requirements.

The adopted amendment to §217.203(f)(4) clarifies that the executive director's approval of any erosion control method not identified in §217.203(f)(4) must be in writing.

The adopted amendment to §217.203(g) clarifies that chemical or UV disinfection is not required for a natural wastewater treatment facility, unless required by the facility's wastewater permit. The adopted amendment clarifies that the phrase "entire, free water surface," for the purposes of ensuring wastewater disinfection, means "the plant-free water surface with full sun exposure."

The adopted amendment to §217.203(h) deletes the previously existing §217.203(h)(2) because the statement does not always correspond to actual permitting practice, as sampling points can be located between treatment lagoons. Permits sometimes designate more than one sampling point, with different pollutants monitored at each sampling point. In addition, a lagoon downstream of a permitted sampling point may be a reclaimed water storage lagoon regulated under to Chapter 210. Adopted §217.203(j) ensures that all lagoons will have piping that allows flow to be re-routed for lagoon maintenance.

Adopted §217.203(k) contains requirements that were moved from the previously existing §217.207(d)(5) and (6) because freeboard requirements should apply to all types of wastewater lagoons. Adopted §217.203(l) was moved from the previously existing §217.203(d)(4)(D).

§217.204, Imhoff Tanks

The adopted amendment to §217.204(a)(3) contains septum wall overhang requirements that were moved from the previously existing §217.204(a)(6) to improve organizational structure.

The adopted amendment to §217.204(d)(1) requires the final engineering report to include the Imhoff tank surface area, so that proper construction can be verified.

The adopted amendment to §217.204(f) restates the minimum depth requirements for an Imhoff tank to clarify that the minimum depth from the water surface is 16.5 feet, which includes a 1.5 foot zone for digesting solids. The adopted amendment to §217.204(i) deletes paragraph (3) to remove an invalid design assumption about the performance of subsequent treatment units. The performance of treatment units should be addressed on the design and merits of those subsequent treatment units.

§217.205, Facultative Lagoons

The adopted amendment to §217.205(a)(1) deletes the phrase "unless other dimensions are justified in the engineering report" so that the executive director will have an opportunity to determine whether alternative dimensions are reasonable. Alternative dimensions can be considered according to the variance procedures in §217.4.

In the adopted rules, §217.205(d)(2), the phrase "but not further below the water surface than a distance equal to one-half the depth of the lagoon at the outlet" replaces the phrase "and not disturb the anaerobic zone" to establish a clear and consistent standard.

§217.206, Aerated Lagoons

In the adopted amendment to §217.206, subsection (c) was deleted because the necessary piping is covered in adopted §217.203(j). The re-lettered §217.206(c) more thoroughly defines expectations for alarms systems at a wastewater treat-

ment facility with an aerated lagoon. This amendment was based on comments from a stakeholder, which noted that the rules need to clarify the level of telemetry required, and the commission agrees with the recommendation. Equation H.1. in the re-lettered §217.206(d) was corrected by inserting "1 -" before the rest of the expression so that the pollutant removal efficiency will increase with the aeration volume. In the adopted amendment to the re-lettered §217.206(d)(2) and (3), "must" replaces "may" to clarify that adjustment of the reaction rate constant for temperature or high strength wastes is not optional.

§217.207, Stabilization Lagoons

The adopted amendment to §217.207(b) replaces the phrase "so that the local prevailing winds will be toward a less populated area" with the phrase "so that odors from the stabilization lagoon will not cause a nuisance" to clarify that facilities should minimize nuisance odors to the extent practicable. Previously existing §217.207(d)(5) was deleted and its contents moved to §217.203(k)(1); and previously existing §217.207(d)(6) was deleted and its contents moved to §217.203(k)(2). Adopted amendment to §217.207(e)(2) changes the phrase "during normal operating depths per day at the available head" to the phrase "based on the normal water level at design flow and the corresponding pressure head" to prevent ambiguity.

§217.208, Evaporative Lagoons

The adopted amendment to §217.208(a)(3) defines the evaporation rate used for design purposes as the lowest annual evaporation rate in the past 25 years from the Texas Water Development Board's precipitation and lake evaporation dataset for the quadrangle where the evaporation lagoon is located. This new language will prevent ambiguity and ensure that evaporative lagoons are sized to prevent unauthorized discharges.

The adopted amendment to §217.207(b) replaces the phrase "so that the local prevailing winds will be toward a less populated area" with the phrase "so that odors from the evaporative lagoon will not cause a nuisance" to clarify that facilities should minimize nuisance odors to the extent practicable.

Section 217.208(c) was deleted and the requirements were moved to §217.203(d)(3). Subsequent subsections were re-lettered.

The adopted amendment to re-lettered §217.208(c)(2)(A) clarifies that the phrase "the area around an inlet must be designed for solids deposition" means that there needs to be a deeper area around the inlet to store deposited solids, and that the deeper area must be designed according to §217.205.

Section 217.208(d)(3)(D) was deleted because it is redundant.

Section 217.208(f)(4)(B) was deleted so that the executive director will have an opportunity to determine whether the alternative discharge apron materials under consideration for use are reasonable. The adopted amended rule intends that alternative materials should be considered according to the variance procedures in §217.4.

§217.209, Constructed Wetlands

The adopted amendment to §217.209(b) defines the meaning of the term "natural wetland" for the purposes of this chapter to provide additional guidance to owners regarding which lands are prohibited from use for wastewater treatment.

In the adopted amendment to §217.209(c)(4), "will" replaces "may" to clarify that designing a constructed wetland to meet effluent limits in a wastewater permit is not optional.

In the adopted amendment to §217.209(d), "must" replaces "may" to clarify that the inclusion of plant species is not optional. In this subsection, *Typha* species (cattails) are removed from the approved plant list because of their tendency to displace other plant species and inhibit plant diversity. Additionally, the section adds to the list "other appropriate emergent plant species approved in writing by the executive director" to provide design engineers with more flexibility in choosing plant species.

The adopted amendment to §217.209(e)(2)(A) requires designing each cell of a constructed wetland so that algal mats and floating plant material can be removed because plant material and detritus could interfere with downstream cells when it is produced within a wetland cell. In the adopted amendment to §217.209(e)(2)(B), "must" replaces "may" to clarify that selecting a plant removal method is not optional. Removal methods not explicitly listed in §217.209(e)(2)(B) must be approved by the executive director in writing prior to use. The adopted amendment to §217.209(e)(3) adds that a constructed wetland maintenance plan must include a schedule for removing overabundant live plant material and dead plant material so that the executive director can ensure that removal of excess vegetation will be done in a way that promotes a healthy wetland system and that the disposal of dead plant material will not harm the environment.

The adopted amendment to §217.209(f) clarifies that a constructed wetland must have an established plant community.

Adopted amendment to §217.209(g) updates cross references and adds a reference to the amended §217.203(e) because that section contains liner construction requirements.

The adopted amendment to §217.209(h) deletes all of the existing berm design requirements because embankment design and construction is addressed in §217.203(f). While §217.209 provides the details for constructed wetlands, the berm of a constructed wetland must comply with the design requirements for an embankment around a natural treatment facility, therefore, the change to §217.209(h) will ensure that the design requirements for berms and embankments are consistent throughout the chapter.

§217.210, Constructed Wetlands--Free Water Surface (FWS) Design

The adopted amendment to the section heading changes "system" to "surface." The adopted amendment to §217.210(a) primarily includes changes that clarify syntax, except that the phrase "based on" was changed to "have" to enhance enforceability.

The adopted amendment to §217.210(b)(2) clarifies that a free water surface wetland that contains floating plants must also contain emergent plants, to ensure that treatment occurs throughout the constructed wetlands under all flow conditions. This amendment is partially based on comments from a stakeholder and is also necessary because the previously existing paragraph conflicted with §217.209(d).

In the proposal, §217.210(e)(2) was rewritten to clarify that the purpose of having a range of water depths is to support the growth of the selected wetland plant species under all operational flow conditions. The adopted amendment to §217.210(e)(2) requires an owner to select plants for a free

water surface wetland that are compatible with the water depths under all operational flow conditions. This change from the proposal accommodates the common practice of designing wetlands for hydraulic efficiency before selecting suitable plants.

The adopted amendment to §217.210(h)(2) clarifies that multiple inlets devices (e.g., an inlet manifold) are required to prevent scouring because of the shallow depth of wetland cells.

The adopted amendment to §217.210(i)(1) clarifies that a constructed wetland design must be based on the design organic loading of the influent to the constructed wetland. The adopted amendment to §217.210(i)(2) requires that the organic removal efficiency for a free water surface wetland must be calculated using the area-based loading equation provided in the paragraph. The adopted amendment to §217.210(i)(2) primarily involves syntax, but also clarifies that calculations must be performed.

§217.211, Constructed Wetlands--Subsurface Flow System (SFS) General Design

The adopted amendment to §217.211(a) clarifies that the subsurface media must be identified in the engineering report.

The adopted amendment to §217.211(e)(3)(A) changes the minimum 6.0 inches of dry media cover to a range between 6.0 and 9.0 inches to be consistent with the previously existing §217.211(e)(4)(B). Previously existing §217.211(e)(4)(B) was deleted and the requirements were moved to §217.211(e)(3)(A). The adopted amendment to §217.211(e)(3)(B) clarifies that the engineering report must identify any alternate design method used, not just the source of the method and supporting calculations. The previously existing Equation H.4. was not the correct Darcy's Law equation, therefore, it was entirely replaced with the correct Darcy's Law equation. The adopted amendment to §217.211(f)(3) adds "maintenance" to "inspection and cleaning" because inlet and outlet devices must be maintained to function properly.

In §217.211(f)(4) the phrase "a high influent BOD_5" was ambiguous, therefore, the phrase was replaced with a defined average BOD_5 concentration greater than 200 milligrams per liter in the adopted amendment.

In the adopted amendment, §217.211(g)(1) was rewritten to clarify that a constructed wetland design must be based on the design organic loading of the influent to the constructed wetland. The adopted amendment to §217.211(g)(2) requires the engineering report to include any alternate design method used, the source of the method, and supporting calculations for consistency with the amendment to §217.211(e)(3)(B). In Equation H.5., the C* value for TSS in the calculations was corrected because the commission concurs with the comments from a stakeholder, which noted that the coefficient in the previously existing rule was inconsistent with *Treatment Wetlands* (authored by Robert Kaldec, 1996).

In the adopted amendment to §217.211(i), "limit" replaces "prevent" to recognize that mosquito production is not entirely preventable. In the adopted amendment to §217.211(j)(7), "prevent" replaces "avoid" to prevent unnecessary ambiguity. Additionally, to clarify the purpose of the requirement to use light-weight equipment the phrases "clogging of the media" and "damage to the liner" replace the phrase "to avoid creating ruts in the subgrade."

§217.212, Overland Flow Process

Adopted §217.212(b) was moved from previously existing §217.203(a).

§217.213, Integrated Facultative Lagoons

The adopted amendment to §217.213(b)(1) deletes the phrase "unless other dimensions are justified in the engineering report" so that the executive director will have an opportunity to determine whether alternative dimensions are reasonable. Alternative dimensions can be considered according to the variance procedures in §217.4. The adopted amendment to §217.213(b)(2) changes the requirement that a pit must have a minimum total surface area of 0.40 acre to 0.25 acre based on recommendations from a stakeholder, who documented that the smaller pit area provided equivalent performance in actual applications of the technology. The adopted amendment to §217.213(b)(4)(B) replaces the phrase "hydraulic retention time" with the phrase "design flow" for clarity and to use defined terms. The adopted amendment to §217.213(b)(6) clarifies the volume of flow that must be sent to each pit is relative to the size of the pit by replacing the phrase "each pit must receive an amount of wastewater influent equivalent to the size of a pit" with the phrase "influent flow must be split proportional to the pit volumes." The adopted amendment to §217.213(b)(9) clarifies that the buffer zones must be met and eliminates unnecessary restrictions on how lagoons are arranged by replacing the phrase "a design must locate an integrated facultative lagoon in a central location with regards to surrounding secondary lagoons and" with the phrase "an integrated facultative lagoon must." In §217.213(b)(10)(B), the phrase "or other deflection devices" was deleted to prevent unnecessary ambiguity. Adopted §217.213(b)(12)(B) was moved from previously existing §217.213(b)(12)(C) to improve readability. The adopted amendment to §217.213(b)(13)(B), deletes the phrase "which is 20% of the original BOD_5" because the phrase is confusing within the context of the existing requirement. Adopted §217.213(b)(13)(C) was added to state the requirement affirmatively as "the design organic removal efficiency for the entire integrated facultative lagoon must not exceed 80%." The adopted amendment to §217.213(b)(14) clarifies that hydraulic retention time must be based on design flow to prevent ambiguity.

Subchapter J: Sludge Processing

The subchapter name was changed from "Sludge Treatment Units" to "Sludge Processing" to better describe the contents of the subchapter.

§217.242, Control of Sludge and Supernatant Volumes

The adopted amendment to §217.242(a) provides additional design flexibility by allowing supernate, filtrate, and centrate to be returned to either the wastewater treatment facility headworks or the influent lift station, which is necessary because many wastewater treatment facilities route return and recycle flows through the influent lift station. The adopted amendment to §217.242(c) deletes the previously existing language and adds language that clarifies that the returned supernate, filtrate or centrate that is returned to the headworks must not interfere with the wastewater treatment process in other treatment units.

§217.243, Sludge Pipes

In the adopted amendment to §217.243(g), the terms "primary sludge" and "digested" were deleted to clarify that all sludge pipes must allow for sludge removal. Adopted §217.243(k) requires that sludge pipes must not contain any bends that form

acute angles, to prevent trapping of solids and facilitate cleaning.

§217.244, Sludge Pumps

In the adopted amendment to §217.244, subsection (c) was moved to adopted subsection (f) to improve organizational structure. Previously existing §217.244(f) was deleted because it was redundant (see the re-lettered §217.244(e)).

§217.245, Exclusion of Grit, Grease, and Debris from Sludge Processing Units

The updated section heading references debris in addition to grit and grease, and "processing" replaces "treatment" to use consistent terms. The adopted amendment to §217.245(c) clarifies the requirements by adding the phrase "before land application of the sludge" to replace the phrase "which must be disposed of separately from the sludge." Grit, grease, and debris do not need to be separated from sludge disposed of in a landfill or sludge-only monofill.

§217.246, Ventilation and Odor Control

In the adopted amendment to §217.246(a), the phrase "adversely impact health, safety, welfare, or the environment" replaces the phrase "might be a health hazard or a threaten air quality" to prevent ambiguity and use consistent terms across TCEQ programs. In the adopted amendment to §217.246(b)(1) and (2), the units used to express air exchanges were changed to prevent ambiguity.

§217.247, Chemical Pretreatment of Sludge

The adopted amendment to §217.247(a) adds that a chemical used to treat sludge must not adversely affect any other treatment unit to prevent a treatment unit upset that could be harmful to human health or the environment.

The adopted amendment to §217.247(c) adds that each chemical must be handled and disposed of according to its safety data sheet to ensure protection of human health and the environment, and enhance compliance and enforceability.

In the adopted amendment to §217.247(f), the phrase "are present" is replaced with "or conditions may occur" to prevent ambiguity. The adopted amendment also clarifies that owners must follow the National Fire Protection Association 70 National Electrical Code® in effect when the storage or handling area was constructed, which will ensure protection of human health and the environment, and enhance compliance and enforceability.

The adopted amendment to §217.247(l) adds that chemicals must only be combined in a feed solution to clarify the existing prohibition and prevent ambiguity.

The adopted amendment to §217.247(m) clarifies that a container that stores concentrated acid must be enclosed and acid-resistant. This adopted amendment will also ensure protection of human health and the environment, and enhance compliance and enforceability.

The adopted amendment to §217.247(r)(8)(B) sets minimum standards for protecting potable water supplies for chemical solution water to ensure protection of human health and to provide consistency with Chapter 290.

§217.248, Sludge Thickening

In the adopted amendment to §217.248(b)(1)(A)(i), the phrase "within the zone of sludge concentration" was deleted to prevent ambiguity. In the adopted amendment to §217.248(b)(1)(B), "must" replaces "may" to clarify that the requirement is not optional. In the adopted amendment to §217.248(c)(1)(B), the phrase "or secondary effluent" was deleted because it was redundant.

§217.249, Sludge Stabilization

The adopted amendment to §217.249(b) clarifies that any deviations from the requirements must be documented in the variance request for consistency with other variances in this chapter.

The adopted amendment to §217.249(c)(2) clarifies that anaerobic digesters may be operated in a series or parallel.

The adopted amendment to §217.249(j)(3) clarifies the basis for the minimum anaerobic sludge digestion temperature to prevent ambiguity. The adopted amendment to §217.249(j)(4) incorporates §217.249(j)(5) from the previously existing rules for improved organizational structure and clarity.

The adopted amendment to §217.249(l)(1) clarifies that a waste gas burner must specifically be accessible for inspection and maintenance activities. The adopted amendment to §217.249(q)(1)(A) clarifies that a perched water table must be considered in identifying the shallowest water table when constructing a digester, for purposes of passive temperature control.

The adopted amendment to §217.249(r)(2)(C) adds that the engineering report must specify where the emergency overflow for the digester supernatant is routed to enhance compliance and enforceability. In the adopted amendment to §217.249(r)(4)(B), "must" replaces "may" to clarify that supernatant treatment is not optional, and clarifies that executive director approval of an alternate method must be in writing. The adopted amendment to §217.249(r)(4)(D)(ii) clarifies that "per capita" refers to the population of the area served by the wastewater treatment facility.

The adopted amendment to §217.249(t)(2) clarifies that the design temperature for an aerobic digester is based on the temperature of the water in the aerobic digester. The adopted amendment to §217.249(t)(7)(C) clarifies that removable diffusers are not required if the wastewater treatment facility is designed with a redundant basin.

The adopted amendment to §217.249(u)(8) clarifies that a sludge grinder installed to protect a heat exchanger must protect the heat exchanger from damage or clogging from any sort of debris.

The adopted amendment to §217.249(w)(7) clarifies that the engineering report must include specifications about external heat necessary for sludge stabilization, to prevent ambiguity.

§217.250, Sludge Dewatering

The adopted amendment to §217.250(c)(2) changes the word "threatens" to the phrase "adversely impact" to prevent ambiguity and adds that human health, safety, or welfare must not be impacted. The adopted amendment to §217.250(c)(3)(B) clarifies that mechanical dewatering units must be capable of dewatering the daily average sludge flow in all circumstances. The adopted amendment to §217.250(c)(6) adds that the engineering report must specify in the engineering report where the dewatering unit bypass flow is routed to assist the executive director during review of a project. The adopted amendment will also enhance compliance and enforceability.

The adopted amendment to §217.250(d)(1) deletes the existing language and adds language to clarify that both the design

and location of a chemical addition point must consider interactions of the chemical with other chemicals used in the wastewater treatment facility to ensure that chemicals are applied in a way that will be effective and will not cause harm. In the adopted amendment §217.250(d)(7) and (8) were rewritten for clarity and were modified so that the storage requirements for both chemical and batch processes are based on the maximum chemical demand and the total amount of chemical needed per shift, instead of amount of chemical needed every eight hours, which will help ensure effective and safe operation of the treatment unit. Adopted §217.250(d)(7) incorporates the previously existing §217.250(d)(9). The adopted amendment to renumbered §217.250(d)(9) clarifies that the engineering report must justify any storage volume reduction and any other method used to ensure a continuous supply of chemicals by accounting for chemical use throughout a full operating day or a full batch.

The adopted amendment to §217.250(e)(2)(A)(ii) and (iii) requires that weather data be derived from the nearest National Oceanic and Atmospheric Administration weather station that has at least 10 years of data and that the entire period of record for the weather station must be used in calculations to set a clear and consistent standard for ambient temperature data used for the design of wastewater treatment facility components. The adopted amendment to §217.250(e)(2)(A)(iv) clarifies that accelerated sludge dewatering is intended to ensure dewatering during times when the local climate is abnormally wet and adds that a sludge drying bed must be designed to prevent unauthorized discharges. The adopted amendment to §217.250(e)(2)(B) clarifies that the gravel around underdrains must be sized to allow proper drainage and clarifies that the design requirements in the current rule apply to gravel around the underdrain. Adopted §217.250(e)(2)(D)(iii) requires the engineering report to specify where flow from drying bed underdrains will be routed to assist the executive director in the review of a project and to enhance compliance and enforceability. The adopted amendment to §217.250(e)(2)(E) adds that decanted liquid from a sludge drying bed must be routed to the headworks or the beginning of a secondary treatment process for processing before discharge to ensure that no unauthorized discharge of waste occurs. The adopted amendment to §217.250(e)(5)(C) clarifies that "adequate" storage must be based on the disposal process used by the facility. For example, disposing of sludge at an adjacent landfill that is open 365 days per year may only require one day's worth of storage capacity for a centrifugal dewatering system. The adopted amendment to §217.250(e)(7)(A)(ii) clarifies that the executive director's approval of alternate methods must be in writing. The adopted amendment to §217.250(e)(7)(B)(i) - (ix) provides consistent structure for the items in the list. The adopted amendment to §217.250(e)(7)(H)(iii) adds that all electrical equipment subject to corrosion in a belt press area must be protected from splashes and corrosive gases, or must be located outside of the belt press area to ensure that electrical panels will not be exposed to a corrosive environment that could cause them to fail.

§217.251, Sludge Storage

The adopted amendment to §217.251(c)(1) prevents ambiguity, recognizing that a small degree of vector attraction is expected, so the requirement was changed to "minimize" vector attraction.

In the adopted amendment to §217.251(d)(2), "must" replaces "may to clarify that compliance is mandatory and a requirement was added requiring storage basins to include gas release valves and control measures to prevent explosive pressure conditions.

The adopted amendment to §217.251(e)(1) incorporates container materials (steel and concrete) from the previously existing §217.251(e)(3) and deletes the re-wetting prevention requirement that was incorrectly applied to open stockpiles. The adopted amendment to §217.251(e)(2) incorporates the previously existing §217.251(e)(4).

The adopted amendment to §217.251(g)(1) clarifies that dried solids must be stored in a covered bin or container (to prevent rewetting) and include a storage time limit of two years for consistency with federal regulations. The adopted amendment to §217.251(g)(2) clarifies that air exchanges for ventilation must be complete air exchanges and not partial air exchanges.

§217.252, Final Use or Disposal of Sludge

The adopted amendment to §217.252(b) combines the previously existing §217.252(b)(1) and (2), and adds additional flexibility by allowing design engineers to use actual data for design purposes. The amendment also adds that the methods, calculations, and analyses must be included in the engineering report to assist the executive director during the review of the project and enhance compliance and enforceability of this chapter. The adopted amendment to §217.252(d) changes the methods for determining the concentrations of metals in sludge to those methods approved in 40 Code of Federal Regulations §136.3 for consistency with federal regulations.

Subchapter K: Chemical Disinfection

The terms "gaseous chlorine" and "sulfur dioxide" were added throughout the subchapter, where appropriate, in place of "Cl_2" and "SO_2."

§217.271, Gaseous Chlorine (Cl_2) Disinfection and Sulfur Dioxide (SO_2) Dechlorination System Redundancy Requirements

The updated section heading clarifies that the contents apply to gaseous chlorine disinfection systems. The adopted amendment to §217.271(a) reduces the number of additional chlorine cylinders required from two full banks of cylinders to at least one additional cylinder, based on comments from a stakeholder, who noted safety and storage hazards associated with storing large volumes of unused chlorine gas. The commission concurs with the recommended change.

The adopted amendment to §217.271(b) clarifies that the requirement applies to both chlorination and dechlorination chemicals, and allows a device to switch between cylinders, instead of only banks of cylinders, for consistency with the adopted amendment to §217.271(a).

The adopted amendment to §217.271(c) changes the storage space required for empty cylinders by setting the minimum storage space as the space required to store the number of cylinders required for normal operation at peak flow.

The adopted amendment to §217.271(e) requires a duplicate backup pump, to clarify that the backup pump must deliver the same performance as the booster pump.

The adopted amendment to §217.271(f) references the emergency power requirements in §217.37 to prevent any conflicting language with that section. The commission adopts deleting the phrase "of the minimum flow necessary to keep the facility from being inundated by influent" to prevent a conflict with §217.37.

§217.272, Capacity and Sizing of Gaseous Chlorine Disinfection and Sulfur Dioxide Dechlorination Systems

The updated section heading clarifies that the contents apply to gaseous chlorine disinfection systems.

§217.273, Cylinder Requirements for Gaseous Chlorine Disinfection and Sulfur Dioxide Dechlorination Systems

The updated section heading clarifies that the contents apply to gaseous chlorine disinfection systems. The adopted amendment to §217.73(a)(1), Equation K.2. and Table K.2. changes lb/EF/day to lb/°F/day to correct a transcription error. The adopted amendment to §217.73(a)(1)(A) establishes that the averaging method for ambient temperature records must be based on seven consecutive days, and require that the temperatures used come from the nearest National Oceanic and Atmospheric Administration weather station that has at least 10 years of temperature records to set a clear and consistent standard for ambient temperature data used for the design of wastewater treatment facility components. In §217.273(b), the phrase "required for normal operation at peak flow" replaces "per cylinder bank" to prevent ambiguity.

§217.274, Dosage Control for Gaseous Chlorine Disinfection and Sulfur Dioxide Dechlorination Systems

The updated section heading clarifies that the contents apply to gaseous chlorine disinfection systems. The adopted amendment to the section deletes the specific reference to "a new, expanded or materially altered" system to prevent potential conflict with §217.1 and §217.5 of this adoption.

§217.275, Requirements for 150 Pound Cylinders used in Gaseous Chlorine Disinfection and Sulfur Dioxide Dechlorination Systems

The updated section heading clarifies that the contents apply to gaseous chlorine disinfection systems and makes it clear that the section applies to 150-pound cylinders.

The adopted amendment to §217.275(a)(1) clarifies that the minimum temperature for a room where cylinders are stored indoors is 65 degrees Fahrenheit. The phrase "all connected" clarifies that disconnected cylinders do not need to be stored at 65 degrees Fahrenheit. The adopted amendment to §217.275(a)(2) clarifies that the minimum temperature of a cylinder before it is connected to a disinfection system is based on the surface temperature. The adopted amendment to §217.275(a)(4) clarifies that the maximum temperature of a sulfur dioxide cylinder that uses a heating blanket is based on the surface temperature.

The adopted amendment to §217.275(b)(2)(A) incorporates the previously existing §217.275(b)(2)(B) and subsequent subparagraphs are re-lettered. The word "dechlorination" replaces "disinfection" in the adopted amendment to §217.275(b)(2)(B) to make it clear that heating blankets should only be used on dechlorination chemical cylinders. The adopted amendment to §217.275(b)(2)(C) clarifies that heating blankets must shut down automatically if high pressures are detected in the cylinders or at any point in the disinfection system between the cylinders and the point where the chemicals are applied.

Adopted §217.275(c) establishes criteria for outdoor storage of 150-pound cylinders to address unsafe cylinder storage conditions. The commission moved the previously existing §217.275(c) and incorporated it into §217.278(e).

§217.276, Requirements for One-Ton and Larger Cylinders used in Gas-Withdrawal Chlorine Disinfection and Sulfur Dioxide Dechlorination Systems

The section heading was updated to improve readability. The adopted amendment to §217.276(b)(3) clarifies that the provision is intended to prevent chlorine gas from liquefying in the pipes that transfer the chlorine from the cylinder to the point of use.

The adopted amendment to §217.276(c)(2) clarifies that heating blankets may only be used on cylinders that store sulfur dioxide, establish that the averaging method for ambient temperature records must be based on seven consecutive days, and require that the temperatures used come from the nearest National Oceanic and Atmospheric Administration weather station that has at least 10 years of temperature records to set a clear and consistent standard for ambient temperature data used for the design of wastewater treatment facility components. The adopted amendment to §217.276(c)(4) requires the engineer to provide calculations in the engineering report that document that the heating blanket settings will be maintained at less than 100 degrees Fahrenheit as an additional safety measure to ensure that heating blankets are evaluated before being put into use. Adopted §217.276(c)(5) and (6) rephrase the previously existing §217.276(c)(5) for consistency with §217.275(b)(2)(C).

Previously existing §217.276(d) was moved to adopted §217.278(e), except that previously existing §217.276(d)(2)(A) and (B) were deleted to prevent storing chlorine and sulfur dioxide gas cylinders together to ensure the safety of operators and the public.

§217.277, Requirements for One-Ton and Larger Cylinders used in Liquid-Withdrawal Chlorine Disinfection and Sulfur Dioxide Dechlorination Systems

The section heading was updated to improve readability. The adopted amendment to §217.277(b) clarifies that withdrawal rates from cylinders must be based on calculations from §217.273(a)(2).

§217.278, Safety Requirements for Gaseous Chlorine Disinfection and Sulfur Dioxide Dechlorination Systems

The section heading was revised to more appropriately describe the section content. The amendment to §217.278(a) requires that drainage from floor drains must be routed for safe disposal or processing at a rate that does not cause interference with the wastewater treatment process or violate a water quality permit requirement, to ensure that chemicals in the drainage will be handled in a way that is protective of the environment.

The adopted amendment to §217.278(b)(2) clarifies that an exterior door on a chlorine room must be gas-tight to ensure operator safety. The adopted amendment to §217.278(b)(3) requires that all windows be gas-tight in a room that houses chlorine or sulfur dioxide to ensure operator safety.

The adopted amendment to §217.278(c)(1) requires ventilation equipment to run continuously in a disinfection chemical storage or feed room to prevent toxic gasses from accumulating and to ensure operator safety. The phrase "one complete" replaces "1.0" in the required ventilation air exchange rate to clarify there should be one complete air exchange every 3.0 minutes. The adopted amendment to §217.278(c)(3) defines minimum standards for the position of exhaust vents and fans in a chlorine room, and provide a figure that illustrates the new minimum standards. The word "vacuum" replaces "negative" for clarity in

§217.278(c)(4). The adopted amendment to §217.278(c)(5) enhances safety by providing specific areas where not to locate a chlorine or sulfur dioxide exhaust vent, setting a minimum font size of four inches for language on signs that identify hazardous exhaust from disinfection and dechlorination chemical rooms, and prescribing specific language on warning signs.

The adopted amendment to §217.278(d)(2)(A) clarifies that both respiratory and protective equipment must be immediately accessible at a wastewater treatment facility and requires information regarding the location and use of respiratory and protective equipment be included in the wastewater treatment facility's operation and maintenance manual. Additionally, the adopted amendment to §217.278(d)(2)(A) clarifies that instructions for using both respiratory and protective equipment must be kept with or posted next to the equipment.

Adopted §217.278(e) incorporates the chlorine and sulfur dioxide separation requirements from the existing §217.275(e) and §217.276(f).

§217.279, Equipment and Material Requirements for Gaseous Chlorine Disinfection and Sulfur Dioxide Dechlorination Systems

The updated section heading clarifies that the contents apply to gaseous chlorine disinfection systems. The adopted amendment to §217.279(c) removes the requirement for a chlorine scale to report the amount of chemical used daily, and clarify that a chlorine scale must be capable of weighing every cylinder that is connected to the chlorine delivery system (disconnected cylinders and empty cylinders do not need to be weighed).

The adopted amendment to §217.279(d)(1) changes the structure to clarify that the existing schedule 80 steel pipe equivalent standard applies to pipes, and that the existing 2,000 pound forged steel standard applies to fittings. The adopted amendment to §217.279(d)(7) defines the corrosion resistance and brittle strength as the minimum considerations for comparison with 316 stainless steel to ensure consistent understanding of the phrase "equivalent to 316 stainless steel."

The adopted amendment to §217.279(f)(1) defines the corrosion resistance as a minimum consideration for comparison with 316 stainless steel, to ensure consistent understanding of the phrase "equivalent to 316 stainless steel." The adopted amendment to §217.279(g) prevents ambiguity by clarifying that an owner is exempt from providing calculations to justify chlorine or sulfur dioxide mixing if the diffuser has a mechanical mixer.

§217.280, Design of Sodium Hypochlorite Disinfection and Sodium Bisulfite Dechlorination Systems

In the adopted amendment to §217.280(b)(2)(C), "sodium bisulfite" replaces "chemical" for clarity.

The adopted amendment to §217.280(d)(1)(A) removes the ambiguous term "bulk," to clarify the daily supply is based on the design average daily consumption, and establish that a storage facility with a residual analyzer or oxidation-reduction potential monitor must not be sized to store more than a 30-day supply of sodium hypochlorite (moved from §217.280(d)(1)(B)) and clarifies that the daily supply is based on the design average daily consumption. The adopted amendment to §217.280(d)(1)(C) clarifies that duplicate chemical storage tanks for each chemical are required if the design flow of the wastewater treatment facility is greater than or equal to 1.0 million gpd. The adopted amendment to §217.280(d)(2)(B) requires that the temperatures used must come from the nearest National Oceanic and Atmospheric Administration weather station that has at least 10 years of temperature records to set a clear and consistent standard for ambient temperature data used for the design of wastewater treatment facility components.

The adopted amendment to §217.280(f)(3)(B) establishes a containment standard for tanks with manifold piping that is designed to prevent a combined release, with the intent that a chemical spill will be completely contained within a secondary containment structure. The adopted amendment to §217.280(f)(3)(C)(ii) clarifies that secondary spill containment structures must be drainable to prevent the tank from floating, based on comments from a stakeholder, who asked the commission to clarify the phrase "positive drainage from below the tank."

§217.281, Application of Chlorination and Dechlorination Chemicals

Previously existing §217.281(a)(1) was moved into the following paragraph and the paragraphs were renumbered. The adopted amendment in the renumbered §217.281(a)(1) deletes the phrase "of an existing facility" for consistency between new and existing facilities. The adopted amendment in the renumbered §217.281(a)(2) allows owners to use a serpentine disinfection channel in place of turbulent initial mixing if the length-to-width ratio is at least 40-to-1 and complete mixing is demonstrated by a dye test, based on comments from a stakeholder and commission concurrence with those comments. This amendment may allow some owners to save on modeling costs by using a well-established disinfection technology. In the renumbered §217.281(a)(3)(A), "permitted effluent limits" replace "all relevant permit requirements" to more accurately portray the intent of the requirement and the units for the velocity gradient were corrected.

The adopted amendment to §217.281(b)(2) clarifies that chlorine contact basin sizing must be based on peak flow, for consistency with requirements in wastewater permits. Adopted §217.281(b)(3) requires rectangular chlorine contact chambers to have rounded corners to prevent accumulation of chlorine-demanding solids and promote effective disinfection. Adopted §217.281(b)(4) requires certain design features in a facility with more than one chlorine contact basin, so that appropriate sampling points are provided, and contact time and residual chlorine concentration can be verified. Adopted §217.281(b)(5) requires a design analysis that ensures the chlorine feed rate will be capable of offsetting chlorine volatilization for an aerated chlorine contact chamber.

In the adopted amendment to §217.281(c)(1), "dechlorination" replaces "disinfection" because the subsection applies to dechlorination.

§217.282, Other Chemical Disinfection and Dechlorination Processes

Adopted §217.282(b) requires that chemical disinfection processes not discussed in this chapter must be flow-paced and must use chemicals approved by the manufacturer for the purpose of wastewater disinfection. This requirement will prevent the use of chemical disinfectants that are not designed to disinfect wastewater, such as chlorine tablets designed for use in swimming pools, and will ensure that wastewater treatment plant operators are kept safe from chemical vapor and explosion hazards that are associated with certain products not designed to disinfect wastewater.

§217.283, Post-Disinfection Requirements

The adopted amendment to §217.283(a) adds that there must be enough sampling points to allow monitoring of permitted effluent limits to assist operators with compliance monitoring. The existing requirement to identify sampling points in the engineering report was moved within the section to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015 regarding parallel structure. The adopted amendment to §217.283(b) provides additional design flexibility by requiring the facility design to include the ability to add post-aeration if needed to meet wastewater permit effluent limitations for dissolved oxygen. The commission recognizes that a wastewater treatment facility may be able to consistently meet effluent limits for dissolved oxygen in its wastewater permit without post-aeration.

Subchapter L: Ultraviolet Light Disinfection

§217.291, Ultraviolet Light Disinfection System Definitions

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

§217.292, Ultraviolet Light Disinfection Systems Effluent Limitations

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

§217.293, Ultraviolet Light Disinfection Systems Effluent Limitation

The adopted amendment to §217.293(c) includes adding "quartz sleeves" to the replacement equipment that the owner must maintain in inventory to match the existing inventory requirements in §217.298(b). The adopted amendment to §217.293(c) also includes a reference to the minimum inventory requirements in §217.298(b).

§217.294, Ultraviolet Light Disinfection Systems Monitoring and Alarms

The adopted amendment to §217.294(a)(2) changes "a lamp" to "the lamps" to more accurately reflect the industry standard for monitoring the relative intensity in one bank of a disinfection channel. The adopted amendment to §217.294(a)(5) adds "the lamps in" to clarify that it is the number of operating hours of the lamps in each bank that shall be continuously monitored. Adopted §217.294(a)(7) adds a requirement to monitor the transmissivity of UV light in the disinfection channel because effective disinfection is dependent on the transmissivity.

The adopted amendment to §217.294(b) rewrites the sentence to require flow pacing and clarify that UV light banks must be automatically turned on or off in proportion to effluent flow. This measure was added to help insure adequate disinfection regardless of flow and to optimize energy usage.

The adopted amendment to §217.294(c)(1) adds a requirement for the telemetry system to be able to distinguish between major and minor alarms so that the operator will know the difference when notified by the telemetry system. The adopted amendment to §217.294(c)(2)(A)(i) and (B)(i) adds wording to clarify that "relative" is relative to the peak intensity after the 100-hour burn-in of the lamps. Adopted §217.294(c)(2)(B)(v) provides a basis for determining when transmissivity is low by basing it on the manufacturer's recommendations.

§217.295, Ultraviolet Light Disinfection Dosage and System Sizing

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

§217.296, Ultraviolet Light Disinfection Bioassay Test Procedure

The adopted amendment to §217.296(a) deletes the bioassay protocol in paragraph (1) because this protocol is significantly older than the other two and it has not been updated or revised. Subsequent paragraphs (2) and (3) were renumbered. The adopted amendment in renumbered paragraph (1) revises the National Water Research Institute's *Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse* from "May 2003" to "3rd edition, 2012." The adopted amendment to §217.296(b)(5) and (6) adds wording to clarify the intent that all test results are to be reported in order for the bioassay to be valid.

§217.297, Ultraviolet Light Disinfection Reactor Design

The adopted amendment to §217.297(d) modifies the wording requiring UV lamps to remain submerged "according to the manufacturer's recommendations" instead of "at a near constant depth," which was ambiguous. The adopted amendment to §217.297(e) rewrites the subsection to clarify that the intent is not to cover the UV reactor channel, but rather prevent an individual's exposure to UV light from the UV system. Adopted §217.297(f) adds a requirement that an enclosed UV system must have a dehumidifier or be designed to prevent corrosion of electrical components to prevent premature failure of the unit and discharge of non-disinfected effluent.

§217.298, Ultraviolet Light Disinfection System Cleaning and Maintenance

In the adopted amendment to §217.298(a), "an ultraviolet (UV) disinfection system" replaces "a design" for clarity. The adopted amendment to subsection (a) also adds that drainage from a disinfection channel must be routed to another treatment unit within the wastewater treatment facility. The adopted amendment to §217.298(c) clarifies that a UV system must ensure continuous disinfection during maintenance. The commission intends that available spare parts will be used to ensure continuous disinfection.

§217.299, Ultraviolet Light Disinfection System Safety

The adopted amendment to §217.299 adds a requirement to post warning signs, in English and Spanish, in UV reactor areas to improve safety precautions for individuals entering UV areas.

§217.300, Post-Disinfection Requirements

The adopted amendment to §217.300(a) adds that there must be enough sampling points to allow monitoring of permitted effluent limits and clarify that the existing requirement for an operator to monitor the system relates to process control. The existing requirement to identify sampling points in the engineering report was moved within the section to conform to the drafting rules

in the *Texas Legislative Council Drafting Manual,* January 2015 regarding parallel structure.

The adopted amendment to §217.300(b) consolidates the requirements from the existing paragraphs (1) and (2), and provide additional design flexibility by requiring the facility design to include the ability to add post-aeration, if needed, to meet wastewater permit effluent limitations for dissolved oxygen. The commission recognizes that a wastewater treatment facility may be able to consistently meet effluent limits for dissolved oxygen in its wastewater permit without post-aeration.

Subchapter M: Safety

§217.321, Safety Design

Adopted §217.321 changes the title from "Safety Design" to "Safety Design of a Wastewater Treatment Facility" for clarification. The adopted amendment to §217.321 deletes subsection (e) because it is redundant. The adopted amendment to §217.321(a) specifies the 5th edition of the Water Environment Federation Manual of Practice No. 8 as the edition that must be used to design safety aspects of a wastewater treatment facility because it is the most current edition available. The adopted amendment to subsection (a) adds a provision that other safety design guidelines may only be used if submitted in the design submittal and approved in writing by the executive director to ensure that alternate safety guidelines are reasonable.

§217.322, Safety and Security Audits

The adopted amendment to §217.322(a)(1) changes the requirements for an existing wastewater treatment plant owner to conduct a safety audit, regardless of whether the facility has been materially altered or expanded, and clarifies that the safety audit should be conducted annually. The amendment also adopts to include the collection system in the safety audit and to change the evaluation period from the prior three years to just the prior year. Adopted §217.322(a)(1)(A) and (B) adds a definition for "injury" and "incident" as it applies to this subchapter. The adopted amendment to §217.322(a)(2) and (3) adds a requirement for the owner to develop a corrective action plan with a reasonable risk-based schedule for implementing corrective action to address the cause of injuries and incidents, to ensure worker and commission staff safety.

The adopted amendment to §217.322(b)(1) clarifies that the annual security audit is mandatory rather than optional. The adopted amendment to §217.322(b)(2) clarifies that the security audit requires the use of the *Asset Based Vulnerability Checklist for Wastewater Utilities* instead of allowing it to be optional.

§217.323, Hazardous Operation and Maintenance

The adopted amendment to §217.323(a) changes "analysis of operational and maintenance tasks" to the more commonly used term "job safety analysis" and clarify the "facility" means "wastewater treatment unit or collections system unit."

§217.324, Chemical Handling

To provide additional safety, the adopted amendment to §217.324(a) adds a requirement that the owner make additional protective equipment recommended by the safety data sheets available for all individuals, and not just operating staff.

The adopted amendment to §217.324(b) clarifies that "in all appropriate locations" means "within the chemical work area" to prevent ambiguity and require that the design specifications must reference a recognized national reference standard for the location of eye wash stations and showers to ensure that they are installed according to accepted industry standards. The adopted amendment to §217.324(c) replaces "stored near but outside" with "immediately accessible outside" to prevent ambiguity and to allow personal protective equipment to be stored elsewhere as long as it is transported to the work area and immediately available for use. These changes are expected to increase operator safety by reducing the potential for theft of personal protective equipment.

§217.325, Railings, Ladders, Walkways, and Stairways

The adopted amendment to §217.325(a) adds that a guard rail with an opening designed to provide access must have a removable chain across the opening when it is not in use. The new language clarifies that a chain should be across the opening whenever the opening is not in use. The purpose of the chain is to ensure safety of individuals by preventing a fall through a guard rail opening.

The adopted amendment to §217.325(b) sets a minimum railing height of 4.0 feet above ground level and for an open valve box, pit, tank, or basin that is recessed into the ground with walls that extend less than 4.0 feet above ground level to ensure safety.

The adopted amendment to §217.325(c) rewords the subsection to clarify that a ladder cannot be used to access equipment or work areas that are more than 4.0 feet above or below ground level. Additional wording was added requiring a stairway for access for equipment and work areas that are more than 4.0 feet above or below ground level to improve worker and commission staff safety, unless the work area is a manhole or similar confined space.

The adopted amendment to §217.325(d) sets a minimum standard of 4.0 feet above ground level for railings on open valve boxes, pits, tanks, and basins to prevent ambiguity in the phrase "capable of preventing a person from falling into it."

The adopted amendment to §217.325(e) changes the term "raised edge" to "toe board at least four inches tall" for clarification and consistency with the *Occupational Safety and Health Administration's* standards.

The adopted amendment to §217.325(f) specifies that the vertical rise between adjacent steps on a stairway must not exceed 9.5 inches and stairways must be designed with no horizontal gap between the tread run of adjacent steps, to be consistent with the *Occupational Safety and Health Administration's* standards.

The adopted amendment to §217.325(g) adds that all overhead obstructions must meet the same 7.0-foot clearance requirement as overhead pipe.

Adopted §217.325(h) adds a requirement that basins with vertical walls terminating more than 4.0 feet above or below ground level must be designed with a stairway, to ensure safety and consistency.

Adopted §217.325(i) adds a requirement that guard rails on walkways must have adequate clearance space for maintenance operations to ensure safer working conditions for wastewater treatment facility staff and TCEQ inspectors.

Adopted §217.325(j) requires a grating across the discharge pipe in the launder or stop bars across the launder before the discharge pipe, to prevent an individual from being swept into the discharge pipe from the clarifier.

Adopted §217.325(k) requires all guard rails, railings, ladders, walkways, and associated appurtenances to be designed and constructed to ensure the safety of individuals at the wastewater treatment facility.

§217.326, Electrical and Fire Code Compliance

Adopted §217.326(c) adds a requirement that electrical elements must be protected from environmental hazards with a housing, and lists specific environmental conditions (moisture, extreme temperatures, and pests) that are included within the term environmental hazard. The provision ensures that controls and electrical components are reasonably protected from corrosive and destructive forces and ensures safer working conditions for operators.

§217.327, Non-Potable Water

The adopted amendment to §217.327 adds a requirement to include signs in both English and Spanish, and the Spanish translation was revised for consistency with rules in Chapter 210.

§217.328, Facility Access Control

The adopted amendment to the section heading for §217.328 changes it from "Facility Access Control" to "Wastewater Treatment Facility Access Control" for consistent use of terms. The adopted amendment to §217.328(a) clarifies that the required fence around a wastewater treatment facility must be intruder-resistant. Adopted §217.238(a)(1) requires the fence to have a locked gate at each access point. Adopted §217.238(a)(2) requires that the intruder-resistant fence be at least 6.0 feet tall and the bottom of the fence close enough to the surface grade to prevent human access. Adopted §217.238(a)(3) defines what materials should be used when constructing an intruder-resistant fence and allows other materials if approved in writing by the executive director. Adopted §217.238(a)(4) adds a requirement that the top of the intruder-resistant fence must have at least three strands of barbed wire, the top of the fence may instead have outwardly-directed iron bars spaced on four-inch centers instead of barbed wire. Adopted §217.238(a)(5) allows a five-strand barbed wire fence in a rural area for fencing lagoons or overland-flow plots if approved in writing by the executive director.

The adopted amendment to §217.328(b) requires the posting of wastewater treatment facility hazard signs whether a facility has an open tank or not. It also specifies posting outward-facing signs that read "DANGER - NO TRESPASSING" in both English and Spanish on each side of the fence and on the gate.

The previously existing §217.328(c) and (c)(1) were revised and moved to §217.328(a) to improve organizational structure. The adopted amendment to §217.328(d) re-letters it to §217.328(c) and clarify that a wastewater treatment facility must also be accessible by truck during all weather conditions, including a 25-year, 24-hour rainfall event, to ensure that a wastewater treatment facility is reasonably accessible during inclement weather for the purpose of protecting human health and the environment from improperly treated wastewater discharges.

§217.329, Color Coding of Pipes

The adopted amendment to §217.329(b) changes the term "tracer tape" to "detectable underground warning tape" for clarity. The adopted amendment to §217.329(d) changes the stenciled wording on a non-potable water pipe to read "NON-POTABLE WATER, DO NOT DRINK" and adds the Spanish translation "NO BEBA EL AGUA" for rule consistency.

§217.330, Drinking Water Supply Connections

The adopted heading for §217.328 deletes the word "public" to clarify that the rule applies to connections with any drinking water supply. The adopted amendment to §217.330(a) deletes the word "public" to clarify that the rule applies to connections with any drinking water supply and collection systems were added to ensure public safety.

The adopted amendment to §217.330(b) adds additional wording to clarify that each reduced-pressure backflow assembly has to pass an annual test by a commission-licensed backflow prevention assembly tester, and that a reduced-pressure backflow assembly that fails a test must be repaired or replaced and then retested. Adopted §217.330(d) requires vacuum breakers on all potable water spigots as added measure to protect a drinking water supply system.

§217.331, Freeze Protection

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

§217.332, Noise Levels

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

§217.333, Confined Spaces

To conform with commission and Texas Register formatting requirements, non-substantive revisions are made throughout the section to correct citations, acronym usage, and other minor issues. The commission also adopts the amendment to conform to the drafting rules in the *Texas Legislative Council Drafting Manual,* January 2015.

Final Regulatory Impact Analysis Determination

The commission reviewed the adopted rulemaking in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the rulemaking action is not subject to Texas Government Code, §2001.0225 because it does not meet the definition of a "major environmental rule" as defined 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 rulemaking 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 adopted rules will add definitions and clarify existing definitions; add design criteria and approval requirements for rehabilitation of existing infrastructure; add design criteria for new technologies, including cloth filters and air lift pumps; update existing requirements or include new requirements to reflect modern practices, standards and trends; and to modify rule language to enhance understanding and clarity. The adopted amendments

to Chapter 217 do not meet the definition of "major environmental rule" because they are not specifically intended to protect the environment or reduce risks to human health from environmental exposure. Therefore, the commission finds that this rulemaking is not a "major environmental rule."

Furthermore, the rulemaking does not meet any of the four applicability requirements listed in Texas Government Code, §2001.0225(a). Texas Government Code, §2001.0225 only applies to a state agency's adoption of a major environmental rule that: 1) exceeds a standard set by federal law, unless the rule is specifically required by state law; 2) exceeds an express requirement of state law, unless the rule is specifically required by federal law; 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) adopts a rule solely under the general powers of the agency instead of under a specific state law.

Specifically, the adopted rules do not exceed federal standards because no applicable federal standards exist. Also, the adopted rules do not exceed an express requirement of state law nor exceed a requirement of a delegation agreement. Finally, the adopted rules were not developed solely under the general powers of the agency; but also under the specific authority of Texas Water Code, §26.034. Under Texas Government Code, §2001.0225, only a major environmental rule requires a regulatory impact analysis. Because the adopted rules do not constitute a major environmental rule, a regulatory impact analysis is not required.

The commission invited public comment regarding the Draft Regulatory Impact Analysis Determination during the public comment period. No comments were received on the Draft Regulatory Impact Analysis Determination.

Takings Impact Assessment

The commission performed an assessment of these rules in accordance with Texas Government Code, §2007.043. The specific purpose of the rulemaking is to add definitions and clarify existing definitions; add design criteria and approval requirements for rehabilitation of existing infrastructure; add design criteria for technologies, including cloth filters and air lift pumps; update existing requirements or include new requirements to reflect modern practices, standards and trends; and to modify rule language to enhance understanding and clarity. Promulgation and enforcement of these rules will constitute neither a statutory nor a constitutional taking of private real property. This rulemaking will impose no burdens on private real property because the adopted rules neither relates to, nor has any impact on the use or enjoyment of private real property, and there is no reduction in value of the property as a result of this rulemaking.

The commission invited public comment regarding the Takings Impact Assessment during the public comment period. No comments were received on the Takings Impact Assessment.

Consistency with the Coastal Management Program

The commission reviewed the adopted rulemaking and found that it 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, it must be consistent with all applicable CMP goals and policies. The commission conducted a consistency determination for the adopted rules in accordance with Coastal Coordination Act Implementation Rules at 31 TAC §505.22 and found the adopted rulemaking is consistent with the applicable CMP goals and policies.

CMP goals applicable to the adopted rules include: to protect, preserve, restore, and enhance the diversity, quality, quantity, functions, and values of coastal natural resource areas and to ensure sound management of all coastal resources by allowing for compatible economic development and multiple human uses of the coastal zone.

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

The commission invited public comment regarding the consistency of the proposed rules with the CMP during the public comment period. No comments were received on the consistency of the proposed rules with the CMP.

Public Comment

The commission held a public hearing on June 23, 2015. The comment period closed on June 29, 2015. The commission received comments from Binkley and Barfield, Inc.; Harris County, Texas (Harris Co.); Hartwell Environmental Corporation on behalf of Aqua-Aerobic Systems, Inc. (Aqua-Aerobic); Jones and Carter, Inc. (Jones and Carter); Process Engineered Equipment Company (PEECO); River City Engineering; Texas Association of Clean Water Agencies (TACWA); and Water Environment Association of Texas (WEAT).

Response to Comments

Preamble

Comment

Harris Co. requested that the original effective date of Chapter 317 be identified in Figure: 30 TAC Chapter 217--Preamble.

Response

The commission agrees that adding the effective date of Chapter 317 would provide additional clarity. The table was revised to reflect the effective date of Chapter 317. Chapter 317 was adopted to be effective April 16, 1990 with amendments effective October 3, 1991; March 23, 1994; January 1, 1996; March 3, 1997; and January 6, 2005.

Comment

Harris Co. commented that all plants should be grandfathered to the set of adopted rules that were in effect at the time of their most recent plan approval. The current table only grandfathers those plants constructed under current Chapter 217 rules and those approved under the last revised version of Chapter 317 rules. To assist all involved, TCEQ should post online or make otherwise accessible all historical updates to the Chapter 217/317 rules and amendments, including the adoption dates of each version.

Response

The commission agrees that all wastewater treatment plants and collection systems should be regulated by the set of adopted rules that were in effect at the time of their plan approval. However, a new project at an existing facility must meet the current design criteria, regardless of the rules in effect at the time of the most recent plan approval for the facility. The concurrent

rulemaking to re-adopt Chapter 317 will not only re-adopt the last revision of that chapter, but also all previous versions of that chapter through the savings clauses in place during its amendments.

The commission only provides the current version of rules online. This eliminates confusion as to which version is the most current. Official copies of TCEQ Rules, including previous versions of rules, are available from the Office of the Secretary of State by e-mail at *register@sos.texas.gov,* or by phone at (512) 463-5561. No change was made in response to this comment.

Subchapter A

Comment

WEAT and TACWA commented that §217.1(b) includes language that seeks to address existing facilities that do not have a Texas Pollutant Discharge Elimination System permit or Texas Land Application Permit, and imposes the amended rules on those facilities for compliance. While the intent of this is understood, it is not uncommon for permittees to not meet the statutory and regulatory deadlines for filing a permit renewal. These permittees already have to apply for a new permit, and saddling them with the burden of upgrading technology to comply with Chapter 217 could be excessive. WEAT and TACWA recommend some grace period be given for permittees that experience a lapse in permit coverage.

Response

Although the commission recognizes the significant cost of upgrading a wastewater treatment facility or collection system, the commission respectfully disagrees that a grace period be given to permittees that allow their permit to expire. Providing a grace period simply moves the date of compliance and it is expected that some permittees will exceed the grace period. The adopted rule allows a permittee to request variances to the requirements in Chapter 217. This variance process can be used by permittees that let their permit expire to avoid unnecessary costly upgrades. No change was made in response to this comment.

Comment

WEAT and TACWA commented that §217.2(5) includes language addressing what it means to alter a technology. They encourage the commission to consider some percentage adjustment and clarity. For example, there is no percentage of capacity adjustment that triggers this definition, so any minor alteration could be considered. Likewise, this would apply to the configuration. These concerns come into play when addressing what constitutes "maintenance" pursuant to §217.2(43).

Response

An alteration requires the owner to submit a summary transmittal letter to TCEQ. Following review of the summary transmittal letter, TCEQ will determine if a full review of the plans and specifications is needed. The commission respectfully disagrees that an arbitrary percent change is adequate to determine the impact of an alteration. Some alterations may be a small percentage of equipment being replaced, but the impact of the replacement could result in an inability to meet permitted effluent limits or other design requirements in these rules. Additionally, the cumulative effects of several small percentage changes could result in an inability to meet permitted effluent limits. The commenter also requested clarification of the terms "intended function" and "major design assumption." For example, converting a chlorine contact basin into a tertiary filtration basin would be a change in the intended function. Changing the design operating temperature range for a process beyond what was considered in the original design is an example of a change in a major design assumption. No change was made in response to this comment.

Comment

Jones and Carter requested that the definition of "alteration" be modified to clarify "any alteration" is limited to the equipment or process basin being altered. Replacement of equipment or repair of a process basin should not necessitate upgrading the entire facility and all process basins and equipment. This is not practical or possible in many cases at existing facilities.

Response

The commission respectfully disagrees that it is necessary to modify the definition of "alteration." The definition of "alteration," as currently worded, does not require an entire facility or all process basins and equipment to be upgraded if they are outside the scope of the project being considered. The definitions of "appurtenance," "collection system unit," "project," and "treatment unit" already provide the requested clarification as they are currently worded.

The term "alteration" is important for determining which projects require a summary transmittal letter for the engineering design and will possibly be subject to further review of the project plans and specifications. The following examples illustrate the concept. For example, if an entire lift station is removed and replaced: 1) this action would be an alteration because a lift station meets the definition of "collection system unit," 2) a summary transmittal letter is required, and 3) the entire lift station must meet the current design criteria.

If a pump at a lift station is replaced with a pump that has a different flow rate or pressure head characteristics: 1) this action meets the definition of "alteration," 2) a summary transmittal letter is required, 3) the pump and any pump appurtenances must comply with the current rules, and 4) the remainder of the lift station must comply with the rules in effect when the lift station was approved. An owner may choose to upgrade additional portions of the lift station to meet the current rules, but there is no duty to do so unless it is found to be necessary during the commission's review of the project plans and specifications.

If a pump in a lift station is replaced by a pump with the same flow rate and pressure head characteristics: 1) this action would meet the definition of "maintenance," 2) no summary transmittal letter is required, 3) the pump and any appurtenances must comply with the rules in effect when the lift station was approved, and 4) the remainder of the lift station must comply with the rules in effect when the lift station was approved. However, if the replacement pump has a different flow rate, this action would meet the definition of "alteration" and the new pump would be required to comply with the requirements of the adopted rule. In neither case would the adopted rule require upgrading the entire lift station. An owner may choose to upgrade additional portions of the lift station to meet the current rules. No change was made in response to this comment.

Comment

Harris Co. requested that TCEQ add a definition for "commercial wastewater."

Response

The commission respectfully disagrees that a definition for "commercial wastewater" is needed. The term "wastewater" is de-

fined in the adopted rule and the adjective "commercial," as used throughout the adopted rules, is defined as the term is commonly understood. No change was made in response to this comment.

Comment

Harris Co. requested that TCEQ add a definition of "debris" to include wipes, rags, cleaning cloths, other similar products, and other pollutants not normally found in domestic wastewater.

Response

The commission respectfully disagrees that a definition for "debris" is needed. The term "debris," as used in the adopted rules, is defined as the term is commonly understood. No change was made in response to this comment.

Comment

WEAT and TACWA recommended that the definition of "domestic wastewater" be revised as follows: "Domestic wastewater may contain commercial or industrial wastewater contributions, in so much as the commercial or industrial wastewater is amenable to biological treatment at the receiving facility."

Response

The commission respectfully disagrees that the suggested change in the definition of "domestic wastewater" is needed. TCEQ permitting staff will determine whether a facility would be more appropriately regulated under an industrial or a domestic wastewater permit. An industrial permit may be required if the characteristics of the wastewater require treatment or effluent limits uncommon to domestic permits. The definition in the adopted rule is broad enough to capture all reasonably foreseeable circumstances that should be regulated by these rules. No change was made in response to this comment.

Comment

Harris Co. requested that TCEQ add a definition of "domestic wastewater treatment facility" which should include publicly and privately-owned treatment facilities.

Response

The commission respectfully disagrees that a definition for "domestic wastewater treatment facility" is needed. The adopted rule defines "domestic wastewater" and "wastewater treatment facility." The applicability section clearly states that this chapter applies to domestic wastewater treatment facilities. No distinction is made between publicly and privately owned facilities in these definitions, so the chapter clearly applies to both. No change was made in response to this comment.

Comment

Harris Co. requested that TCEQ add a definition for "industrial wastewater."

Response

The commission respectfully disagrees that a definition for "industrial wastewater" is needed. The term "wastewater" is defined in the adopted rule and the adjective "industrial," as used throughout the adopted rules, is defined as the term is commonly understood. No change was made in response to this comment.

Comment

Harris Co. requested that TCEQ add a definition for "municipality."

Response

The commission respectfully disagrees that a definition for "municipality" is needed. The term "municipality," as used in the adopted rules, is defined as the term is commonly understood. No change was made in response to this comment.

Comment

WEAT and TACWA commented that the definition for "rehabilitate" only applies to collection systems. Other technologies can be rehabilitated as well.

Response

At this time, the commission finds that it is necessary to define "rehabilitate" only in the context of collection systems to make it clear when an owner has a duty to submit a summary transmittal letter for the engineering design. Coating a collection system unit may reduce the diameter of the unit which can impact its carrying capacity. This type of change triggers a duty to submit a summary transmittal letter for the engineering design so that TCEQ has an opportunity to review the plans and specifications.

Although treatment units within a wastewater treatment plant can be coated for a variety of reasons, coating these structures does not impact the ability of the unit to function properly. This activity would meet the definition of maintenance which does not trigger a plans and specifications review by TCEQ or a duty to submit a summary transmittal letter. No change was made in response to this comment.

Comment

WEAT and TACWA requested that TCEQ add a definition for "repair." Given the potential for a disagreement between the commission and the regulated interests on what actions constituted an alteration, we would strongly recommend some clarity be given to defining repair activities pursuant to the rules. Most of the daily activities of operating a utility involve repair work and should not be governed by these rules.

Response

The commission respectfully disagrees that a definition for "repair" is needed. The adopted rule defines "maintenance," "rehabilitate," and "alteration." A repair can fit within maintenance, rehabilitation, or alteration depending on the facts of the repair. The existing definitions provide the necessary clarity based on the types of changes occurring during the repair.

The term "alteration" identifies specific changes to a treatment unit or collection system unit. Alterations require an owner to submit a summary transmittal letter to TCEQ. The term "rehabilitate" is specific to collection system repairs using trenchless technologies for lining pipes or using any other lining or coating method. Rehabilitations require an owner to submit a summary transmittal letter to TCEQ. The term "maintenance" includes preventative care; repairs to existing appurtenances, treatment units, or collection system units without replacement; and replacement of appurtenances or components of treatment units or collection system units that do not meet the definition of alteration. Maintenance does not require an owner to submit a summary transmittal letter to TCEQ. No change was made in response to this comment.

Comment

Regarding the definition of "treatment unit," Harris Co. asked how a lift station is a treatment unit.

Response

The adopted rule defines "collection system unit" and "treatment unit." Both definitions include lift stations. In the context of the adopted rule, the location of the lift station determines whether it is a collection system unit or a treatment unit. Lift stations located at the wastewater treatment facility must be treatment units subject to the 30 TAC Chapter 309 buffer zone requirements for nuisance odors. No change was made in response to this comment.

Comment

WEAT and TACWA commented that §217.16 should not require operation and maintenance manuals to include staff names for contacts, but only titles instead. Names of staff may change frequently.

Response

The commission agrees that staff names may change frequently and that the contact's job title is sufficient. In response to this comment, §217.16(b)(1)(D) was revised to include "or job titles."

Comment

Harris Co. requested that §217.11(d) be revised as follows: "A person is prohibited from allowing a bypass discharge of untreated or partially treated wastewater during construction without a commission order for such discharge, such as an Emergency Order or a Temporary Order according to the requirements of chapter 35 of this title (relating to Emergency and Temporary Orders and Permits; Temporary Suspension or Amendment of Permit Conditions), and without notification to the local pollution control authority, prior to the discharge."

Response

The commission respectfully disagrees that the local pollution control authority must be notified prior to discharging. The adopted rule requires a person to obtain an emergency or temporary order from TCEQ prior to initiating bypass discharges during construction. However, the local pollution control authority may request to be placed on mailing lists maintained by TCEQ's Office of the Chief Clerk for emergency and temporary orders issued by TCEQ. No change was made in response to this comment.

Comment

WEAT and TACWA commented that §217.13(c)(1)(A) should not apply to trenchless technologies.

Response

The commission respectfully disagrees that trenchless technologies should be exempt from final construction drawings. Final construction drawings provide the final locations of system components. No change was made in response to this comment.

Comment

Harris Co. recommended that §217.14(a)(3) be revised to allow the operation and maintenance manual to be located at the wastewater treatment facility or at a reasonably accessible location if document storage facilities are not available at the wastewater treatment facility.

Response

The commission respectfully disagrees that the operation and maintenance manual can be located offsite. This manual provides essential information, including emergency operation procedures, shut down procedures, emergency contacts, the location and method of use for personal protective equipment, and evacuation and shelter-in-place plans. During emergency situations, it may not be feasible to obtain the operation and maintenance manual from an offsite location in a timely manner. No change was made in response to this comment.

Subchapter B

Comment

PEECO recommended that TCEQ use a design peak flow factor of 4Qa (four times the average design flow) to determine design peak flow.

Response

The commission acknowledges this comment and notes that §217.32(a)(2) already requires that the wastewater treatment plant peak flow design be based on a factor of four times the design flow. No change was made in response to this comment.

Comment

Harris Co. recommended revising §217.33(c)(4)(A) to require a non-resettable totalizing meter.

Response

The commission agrees with the comment and a new definition for "totalizing meter" was added as §217.2(73) and subsequent definitions were renumbered.

Comment

Harris Co. recommended revising §217.35(c) to require the design of a proposed treatment unit within a 100-year flood plain to provide flood protection to an elevation 18-inches above the effective 100-year flood plain elevation for all open process tanks and electric units.

Response

The commission respectfully disagrees that open tanks and electric units must be protected to an elevation 18 inches above the 100-year flood plain. The adopted rule requires the design to provide protection from inundation during a 100-year flood event, which the commission finds to be a reasonable minimum standard. Additionally, the commenter did not provide rationale for the recommended 18 inches. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ either revise §217.36(i) to remove portable generators as an allowable alternate power source at wastewater treatment plants or revise §217.36(i)(3) to state that if a portable generator is used, then it must be sized to run the entire wastewater treatment plant, be stored on-site, and used to run the wastewater treatment plant during the entire power outage without interruption. Jones and Carter commented that unless power is provided continuously at the wastewater treatment facility, then there is no way to prevent partially treated wastewater from passing through the plant, which violates §217.36(h). Portable generators cannot be utilized in conjunction with any other facility and still provide full treatment.

Response

The commission respectfully disagrees with this comment, but recognizes that engineers must use sound engineering judgment when selecting and designing systems to prevent unauthorized discharge during power outages. Section 217.36(h) pro-

vides the requirement to have either permanent or temporary emergency power equipment to prevent untreated or partially treated wastewater. Section 217.36(h) also requires that temporary power systems be capable of being made operational before an unauthorized discharge occurs during any power outage. Wastewater that is treated to the level required by the wastewater permit is considered to be treated wastewater. Section 217.36(i) provides a list of options, including various types of equipment and operational processes, that can be used to meet the requirement in §217.36(h). The following example illustrates how an off-site portable generator can be used in combination with other systems to comply with §217.36(h). In this example, a city owns a wastewater treatment facility and determines that emergency power may be needed for a minimum of six hours. The owner only has four hours of guaranteed collection system storage and onsite retention at the wastewater treatment facility. However, enough portable generators to run the wastewater treatment facility can reliably be delivered from a city warehouse and made operational in less than two hours. Then, the city may use portable generators to comply with §217.36(h).

Section 217.36(i)(3) and (j)(4) provide additional restrictions on the use of portable generators and additional information that must be included in the engineering report if portable generators are used to guarantee service during a power outage. The commission recognizes that clarification is necessary in §217.36(j)(1) and (2) and §217.37(a) because of the issues raised in this comment. The language in those sections was revised to clarify that primary treatment and disinfection are required during all power outages, including outages that are longer than the outage predicted based on the power reliability determination required in §217.36(e).

Comment

Jones and Carter recommended that TCEQ revise §217.36(i)(3)(A) to replace "automatic" with "manual," noting that a manual transfer switch is required with a portable generator. A portable generator will not remain hooked up and the switch must be manual to allow the operator the ability to hook up a portable generator and then switch power over safely.

Response

The commission respectfully disagrees that a transfer switch should be manual. The purpose of an automatic transfer switch is to change the power source from grid power to generator power. It is not to activate (turn on) the generator. This switch prevents sending generator power to the grid. The switch is not located on the generator. It is part of the wastewater treatment facility's electrical system. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ either delete §217.36(j)(3), which requires return activated sludge pumps to be operational during any power outage lasting longer than four hours, or revise §217.36(j)(3) to require return activated sludge pumps to be operational at any point during a power outage. Jones and Carter commented that the proposed requirement conflicts with §217.36(h), which prohibits the discharge of partially treated wastewater.

Response

The commission agrees with this comment and revised §217.36(j)(3) to remove the language "lasting longer than four hours." This change will help ensure that a facility will be able to meet permitted effluent limits during a reasonably foreseeable power outage.

Subchapter C

Comment

WEAT and TACWA questioned why §217.53(d)(4) requires a collection system pipe that is above and runs parallel to a water supply pipe to be encased. WEAT and TACWA commented that this should pertain to §217.53(d)(5) "when a collection system pipe crosses above a water supply pipe," not parallel and requested that TCEQ switch the language of §217.53(d)(4) with §217.53(d)(5).

Response

The commission respectfully disagrees with this comment. Because the collection system pipe is running parallel to the water supply pipe, there is an increased risk of cross-contamination along the length of the pipe. Therefore, a collection system pipe located above and running parallel to a water supply pipe must be encased to provide cross-contamination protection for the water supply pipe. However, an owner can request a variance for an alternative design that provides equivalent cross-contamination protection. The variance process provides the executive director an opportunity to review the request to determine if the design is protective of the water supply pipe. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ revise §217.53(h) and §217.59(d) by adding "Should odor become a nuisance," to the beginning of these subsections. Jones and Carter commented that a design should consider odor concerns and include anticipated mitigation needs, but in many instances, odor is not anticipated and the ability to react to the nuisance should be allowed in lieu of the uneconomical preemptive approach that will install many unneeded odor control systems.

Response

The commission partially agrees with this comment. The rule requires the owner to implement odor control measures to prevent nuisance conditions from occurring. It does not require the owner to implement odor control measures to prevent all odors. The commission expects prompt action will be taken to mitigate emergent nuisance conditions. No change was made in response to this comment.

Comment

Harris Co. recommended that TCEQ revise §217.55(i) as follows: "A manhole must not be located in an area that prevents access to the manhole. If the manhole is located in a stream bed or other area in which inundation may occur, provisions to prevent the entry of inflow into the system are constructed."

Response

The commission respectfully disagrees with the recommended change that would allow manholes in a stream bed; however, an owner can request a variance to install a manhole in a stream bed. The variance process provides the executive director an opportunity to review the request to determine if additional requirements are necessary. The accessibility requirement in §217.55(i) refers to access to a manhole during high water or flooding conditions. Section 217.55(j) provides requirements for personnel and equipment access to a manhole. No change was made in response to this comment.

Comment

WEAT and TACWA recommended that TCEQ revise §217.56(c) to remove cement mortar lining as a trenchless technology to rehabilitate existing collection system pipes. Cement mortar lining should not be used in wastewater applications due to the potential for corrosion with the application of any cement based product.

Response

The commission agrees with this comment and revised §217.56(c) to remove cement mortar lining as a trenchless technology to rehabilitate existing collection system pipes.

Comment

Harris Co. recommended that TCEQ revise §217.60(a)(5) to require motor control centers to be mounted at least 6.0 inches above grade and be protected from the entrance of corrosive gases from wet well or piping.

Response

The commission partially agrees with this comment. The commenter did not provide justification for raising the height from 4.0 inches to 6.0 inches. However, 4.0 inches is required as a minimum distance, but may not be sufficient to prevent water intrusion. Adding a requirement to prevent the entrance of corrosive gasses into the motor control center protects human safety and prevents equipment failures. In response to this comment, the commission revised §217.60(a)(5) to read:

"(5) Motor control centers must be mounted high enough above grade, but in no case less than 4.0 inches above grade, to prevent water intrusion and corrosion from standing water in the enclosure. Motor control centers must also be protected from the entrance of corrosive gases from wet wells or piping."

Comment

Harris Co. recommended that TCEQ revise §217.60(b)(4) to require a gravity pipe discharging to a wet well to be located so that the invert elevation is at least 6 inches above the liquid level of the lead pump's "on" setting.

Response

The commission respectfully disagrees that the change recommended in this comment is necessary. The design of each wet well and the height of the invert elevation above the pumps "on" setting need to be established as part of the engineer's design, based on physical characteristics of the wet well, such as elevations of other incoming pipes and the potential for nuisance odors. No change was made in response to this comment.

Comment

Harris Co. recommended that TCEQ revise §217.60(b)(6) to add a requirement that valve vaults must be designed for continuous occupancy.

Response

The commission partially agrees with this comment and revised §217.60(b)(6) to add that valve vaults shall be ventilated according to §217.60(d).

Comment

Harris Co. recommended that TCEQ add a new §217.60(b)(9) to address disposable cleaning products and rag build up.

Response

While the commission recognizes that disposable wipes and rag buildup pose a problem in collection systems, the commission is not aware of appropriate and effective minimum design criteria to prevent or remove blockages. No change was made in response to this comment.

Comment

Harris Co. recommended that TCEQ revise §217.60(c)(1) to require an underground dry well to be accessible for maintenance and designed for continuous occupancy.

Response

The commission partially agrees with this comment and revised §217.60(c)(1) to add that an underground dry well shall be ventilated according to §217.60(d).

Comment

Jones and Carter recommended that TCEQ revise §217.60(d)(2)(B)(iii) to add "Should odor become a nuisance," to the beginning of this requirement. Jones and Carter commented that a design should consider odor concerns and include anticipated mitigation needs, but in many instances, odor is not anticipated and the ability to react to the nuisance should be allowed in lieu of the uneconomical pre-emptive approach that will install many unneeded odor control systems.

Response

The commission partially agrees with this comment. The rule requires the owner to implement odor control measures to prevent nuisance conditions from occurring. It does not require the owner to implement odor control measures to prevent all odors. The commission expects prompt action will be taken to mitigate emergent nuisance conditions. No change was made in response to this comment.

Comment

WEAT and TACWA commented that §217.69(a)(4) includes a requirement to evaluate the structural integrity of each collection system unit material. Estimating the wall thickness for all corrodible pipes can only be performed through either excavation and coring or more generally estimated through the application of sonar/laser internal pipe inspection technologies. This is a very expensive undertaking for most utilities and a specialized service offering from a limited number of pipe inspection companies. Determining the thickness of a manhole wall and any associated coatings is readily performed from wall coring and repair.

Response

The commission agrees that estimates of wall thickness and coating integrity are not required by the rule. Additionally, the commission revised §217.69(a)(4) to remove the following language: "including the thickness of the walls for all corrodible pipes, and the integrity of any coatings."

Comment

WEAT and TACWA recommended that TCEQ revise §217.69(b) as follows:

"(b) The plans and specifications for a rehabilitation project must include, at a minimum:

(1) a pre-rehabilitation preparation plan that includes:

(A) a cleaning plan to facilitate the rehabilitation process being applied;

(B) references for the cleaning method to be applied;

(C) dewatering or bypassing provisions, as required by the method; and

(D) field installation and rehabilitation process logs.

(2) a confined space entry plan, as required for the rehabilitation process being

applied;..."

WEAT and TACWA commented that the current wording only applies to manhole coating applications and the wording above should apply to pipe, manhole, and lateral rehabilitation.

Response

The commission respectfully disagrees with this comment. Nothing in §217.69(b) or the definitions of "rehabilitate" or "project" limits the applicability of a rehabilitation project to manholes. Section 217.69(b), as written, applies to pipes, manholes, lateral rehabilitation, and any other collection system unit that is rehabilitated. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ revise §217.70(f)(1) to remove the prohibition and add language allowing an aboveground hose bib so long as it is secured within a lockable enclosure. Jones and Carter commented that an aboveground lockable enclosure is as safe as below ground lockable enclosure.

Response

The commission agrees with this comment and revised §217.70(f)(1) to add the following language: "a lockable, secured area that is only accessible to authorized personnel."

Subchapter D

Comment

WEAT and TACWA commented that §217.96(c)(4) and (5) address minimum pipe sizes. Language should be added to state that these are the minimum sizes unless the system cannot ensure that the velocity requirements of §217.96(f)(2) will be met.

Response

The commission assumes that this comment is referring to §217.97(c)(4) and (5) and is responding accordingly. The commission agrees that the sizes in §217.97(c)(4) and (5) are minimum pipe sizes. However, the commission respectfully disagrees that the minimum sizes are based on ensuring velocity. The minimum pipe size ensures that the pipe can pass debris and solids that make it through the pumps. No change was made in response to this comment.

Comment

WEAT and TACWA commented that §217.96(f)(1) added language requiring system pressure maintained in every part of the system. They commented that this requirement is overly burdensome and will increase the cost of pressure systems, and can lead to subsequent disputes over compliance based on actual hydraulic conditions and requested that TCEQ delete the proposed additional language.

Response

The commission assumes that the commenter is referring to §217.97(f)(1) and is responding accordingly. The adopted rule does not require the owner to maintain pressure in the pressure sewer, but does require the owner to design the system to reach a velocity of three feet per second at least once per day. No new requirements were proposed in §217.97(f)(1). No change was made in response to this comment.

Subchapter E

Comment

Jones and Carter recommended that TCEQ revise §217.120(a) to provide design criteria for FOG removal that clarifies the level and type of treatment required.

Response

The commission respectfully disagrees with this comment and has elected not to establish prescriptive criteria for FOG removal at this time. The design engineer must determine the level and type of FOG treatment depending on the amount of FOG in the influent, whether or not FOG has caused operational failures in the past, and whether or not the facility is meeting the effluent limits in its wastewater permit. If additional FOG treatment is needed, §217.120(a) ensures that the wastewater treatment facility was designed with the ability to add provisions to remove FOG. The commission's interest in owners addressing operational issues caused by FOG is addressed by §217.120(b).

Comment

WEAT and TACWA commented that §217.120(a) requires wastewater treatment facilities to be designed with the ability to add provisions for removing FOG from the wastewater. They commented that the previous version of Chapter 217 required FOG removal only prior to fine screen facilities which is still appropriate. Since FOG affects the collection system and is a major focus of TCEQ's Sanitary Sewer Overflow Initiative, they recommend that FOG control remain in pretreatment provisions.

WEAT and TACWA recommend that TCEQ delete this provision because the new §217.120(b) is adequate to require FOG removal.

Response

The commission respectfully disagrees with this comment, and finds that FOG not only affects collection systems and fine screens, but also the performance of other treatment units and pumps at a wastewater treatment facility. Section 217.120(a) requires the facility to be designed so that an owner has the ability to add FOG treatment in the future. Section 217.120(b) requires the addition of FOG removal if FOG has caused operational failures in a treatment unit that is being altered. Without the design requirement in §217.120(a), the owner may not have the ability to add FOG removal to comply with §217.120(b). No change was made in response to this comment.

Comment

WEAT and TACWA recommended that TCEQ revise §217.121(e)(5) as follows: "Mechanically cleaned coarse screens must be designed with equipment that automatically collects and disposes of screenings for a wastewater treatment facility with a design flow greater than 1.0 million gpd. All mechanically cleaned coarse screens must be designed for daily removal to covered storage or with equipment that automatically conveys screenings to a storage area or processing unit that complies with §217.123 of this title (relating to Screenings and Debris Handling)."

WEAT and TACWA commented that the previous version of Chapter 217 required this only for fine screens which is ap-

propriate. They further comment that there are some smaller treatment facilities where the coarse screenings volume can be handled by manual daily removal to covered storage.

Response

The commission respectfully disagrees with this comment. Inadequate frequency of screenings disposal has been a recurring operational issue with mechanically cleaned screens. The requirements of §217.121(e)(5) are intended to prevent unauthorized discharge from the bar screen area and to ensure odor and vector control. Owners of smaller wastewater treatment facilities are not obligated to select mechanically cleaned coarse screens, as manually cleaned coarse screens may be selected instead. If there is a compelling reason why automatic screenings removal is unnecessary for a mechanically cleaned bar screen, then an owner may request a variance. The variance process provides the executive director an opportunity to review the request and to determine whether the design will prevent unauthorized discharge and ensure odor and vector control. No change was made in response to this comment.

Comment

Harris Co. recommended that TCEQ revise §217.122(a) to add the following sentence: "A fine screen or similar debris removal device is required for all facilities > 0.4 mgd."

Response

The commission respectfully disagrees that the additional requirement proposed in this comment is necessary. Coarse screens may be acceptable in some facilities whereas other facilities may need fine screens. The type of screen must be determined as part of the engineering design. No change was made in response to this comment.

Comment

WEAT and TACWA recommended that TCEQ revise §217.128(a) as follows:

"(a) A wastewater treatment facility must be designed with the use of a flow equalization basin if:

(1) the total daily influent organic loading occurs during a period of time less than or equal to ten hours unless process modeling shows the treatment system can handle the organic load or other procedures are used to handle the organic loading; or

(2) the wastewater treatment facility receives an influent organic loading less than 10% of its design organic loading during a period of time equal to or greater than 48 hours in any period of seven consecutive days unless the treatment facility has multiple treatment trains and demonstrates that adequate minimum loading of 25% per treatment train/unit can be maintained through operational procedures."

WEAT and TACWA commented that fluctuations in organic loading can be handled with the use of multiple treatment trains in addition to flow equalization.

Response

The commission respectfully disagrees that the modifications proposed in this comment are necessary. An owner may request a variance to use multiple treatment trains in lieu of an equalization basin. Multiple treatment trains may or may not accommodate fluctuations in organic loadings. The variance process provides the executive director an opportunity to review the request to determine if multiple treatment trains are adequate to reduce fluctuations in organic loadings. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ revise §217.129(e) by changing the minimum SWD to 10 feet for clarifiers with a diameter less than or equal to 40 feet, 11 feet for 41 to 69 feet diameter clarifiers, 12 feet for 70 to 99 feet diameter clarifiers, 13 feet for 100 to 139 feet diameter clarifiers, and 14 feet for clarifiers with a diameter greater than or equal to 140 feet. Jones and Carter commented that the current minimum depth is only adequate for small plants and that settleability in larger clarifiers is a real concern. They recommend increasing the minimum depths to those recommended by Manual of Practices (MOP) 8, Table 11.17, to prevent overly shallow, large clarifiers.

Response

The commission agrees that some facilities may require deeper clarifiers, but disagrees that the recommended revision is necessary. Although MOP 8 is one of several reliable design references, the design engineer must take into account the settleability of the solids in a primary clarifier and the sludge removal system to determine the appropriate clarifier depth. The rule establishes a minimum SWD. No change was made in response to this comment.

Subchapter F

Comment

Harris Co. had a question concerning §217.152(d)(2): What about weirs that are part of a concrete wall?

Response

The commission agrees that weirs attached to the wall would not be able to be located a minimum of 6.0 inches from an outer wall and revised §217.152(d)(2) to add the following language: "except for a clarifier effluent weir and launder that is attached to a wall."

Comment

Jones and Carter recommended that TCEQ revise §217.152(g) by changing the minimum SWD to 10 feet for clarifiers with a diameter less than or equal to 40 feet, 11 feet for 41 to 69 feet diameter clarifiers, 12 feet for 70 to 99 feet diameter clarifiers, 13 feet for 100 to 139 feet diameter clarifiers, and 14 feet for clarifiers with a diameter greater than or equal to 140 feet. Jones and Carter commented that the current minimum depth is only adequate for small plants and that settlability in larger clarifiers is a real concern. They recommend increasing the minimum depths to those recommended by MOP 8, Table 11.17, to prevent overly shallow, large clarifiers.

Response

The commission agrees that some facilities may require deeper clarifiers, but disagrees that the recommended revision is necessary. Although MOP 8 is one of several reliable design references, the design engineer must take into account the settleability of the solids in a secondary clarifier and the design of the sludge removal system to determine the appropriate clarifier depth. The rule establishes a minimum SWD. No change was made in response to this comment.

Comment

PEECO recommended that TCEQ revise §217.152(g) to: 1) require a minimum SWD for any hopper type clarifier to be 8 feet

and excluding any part of the hopper or sump; 2) add the following requirement:

"Calculate the proposed volume (Vp) for the proposed basin above the top of any hopper or sump.

Surface area proposed: SA = Vp / 8 feet SWD.

Surface settling rate proposed: SSR = Qp / SA

SSR proposed should be less than maximum value shown in Table 2."; and

3) require that the maximum vertical depth for a hopper or sump for clarifiers with Qp up to 50,000 gpd (12,500 gpd Qa) to be 4 feet.

Response

The commission partially agrees with this comment. The commission revised §217.152(g)(3) by removing the equation for the SWD and replacing it with a minimum depth of 8.0 feet. The commission added a surface loading equation similar to that requested by the commenter. The commission revised §217.152(g)(4) to set a minimum depth of 4.0 feet for the hopper portion of a hopper bottom clarifier.

Comment

PEECO commented that §217.152(g) and (h) limit design average daily flow of facilities using hopper bottom clarifiers to 10,000 gpd or less. PEECO recommended that the maximum design daily flow allowed be calculated using the retention time values in Figure: 30 TAC §217.154(c)(1), Table F.2. and a minimum 8 feet SWD. PEECO further recommended that the flow limit be on the clarifier instead of the facility. PEECO stated that they have furnished treatment plants to several users who experience periodic, or seasonal flows, like state parks, recreation area and schools, where the use of two parallel clarifiers have been very beneficial. The owner can close one clarifier down during periods of low flow and prevent problems of long detention time, and if maintenance is required one clarifier can be taken off line for short periods by closing its inlet gate. PEECO stated that they are confident in recommending design average daily flows of up to 25,000 gpd if two clarifiers per the above calculations and minimum 8 feet SWD are provided.

Response

The commission partially agrees with this comment. The commission recognizes the benefit of using two hopper bottom clarifiers in a parallel arrangement. However, the inherent difficulty with operating and maintaining hopper bottom clarifiers outweighs any benefit of increasing the maximum capacity. For example, hopper bottom clarifiers, by design, must be manually cleaned. If the clarifiers are not cleaned daily, the wastewater treatment facility may have difficulty meeting their permitted effluent limitations. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ revise §217.153(c)(1) by deleting the statement "Aeration basins are exempt from this requirement if the aeration equipment, including the diffusers, is removable without taking the aeration basin out of service." Jones and Carter commented that the redundancy requirement should remain in the rules because removable aeration equipment is not a realistic substitute for redundancy.

Response

The commission respectfully disagrees that the revision recommended in this comment is necessary. The previous Chapter 217 rule required two aeration basins unless the aeration equipment was removable. The adopted rule did not add the exemption, but rather revised the language to improve readability and understanding. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ replace §217.155(b)(2)(A)(iii) with a table showing maximum allowed percent transfer efficiency at depths varying from 7 - 22 feet for coarse and fine bubble systems. Jones and Carter commented that the percent value maximums are dependent on depth. Equipment is capable of producing transfer efficiencies far in excess of the values in §217.155(b)(2)(A)(iii) in deeper tanks. For example, a typical 16 feet deep tank can commonly achieve a 30 percent transfer efficiency. No matter what values are listed, the rules should require testing lab data to support the manufacturer's equipment.

Response

The commission respectfully disagrees with the request to add a depth-based table for percent transfer efficiencies based on depth and the requirement to submit lab data to support the manufacturer's equipment for all transfer efficiency percentages used. The rule provides an equation that accounts for criteria other than depth. If the owner wants to use a different percentage for transfer efficiency based on the type of diffuser and water depth, the owner can request a variance. The variance process provides the executive director with an opportunity to review the request to determine if the transfer efficiency used is consistently achievable. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ revise §217.155(b)(5)(A)(iii) by removing the prohibition on wastewater treatment systems with a design flow over 5,000 gpd. Jones and Carter commented that prohibition is too strong for a situation that may be applicable and not harmful to the environment. Shallow basins used for RBCs or similar equipment have been successfully converted to diffused air activated sludge in the past to comply with ammonia-nitrogen limits. This should be an allowable variance.

Response

The commission agrees with this comment and revised the first sentence in §217.155(b)(5)(A)(iii) to read: "The submerged depth for a diffuser must be at least 7.0 feet."

Comment

WEAT and TACWA commented that §217.156(a)(2) currently states that a sequencing batch reactor (SBR) must have a minimum decantable volume that is sufficient to pass the design flow without changing cycle times with the largest basin out of service. Precluding changing cycle times to pass the higher flows through the tanks in service is not necessary. Most SBR systems make adjustments to cycle structures when a tank is taken off line, but are designed to still meet minimum effluent limits. For example, less anoxic fill time and/or idle time is used and more aeration time is used to accommodate the higher organic loading experienced by the tanks still in service. Therefore, WEAT and TACWA recommend that TCEQ revise §217.156(a)(2) as follows:

"An SBR must have a minimum decantable volume that is sufficient to pass the design flow, and must be capable of meeting permitted effluent limits, with the largest basin out of service."

Response

The commission agrees with this comment and revised §217.156(a)(2) as recommended.

Comment

Aqua-Aerobics commented that §217.156(c)(14) should not require a platform for sampling on a complete mix SBR basin. This environment is no different for SBR basins than traditional flow through activated sludge.

River City Engineering recommended that TCEQ revise §217.156(c)(14) to remove the requirement for a walkway that bisects the tank because it would make it difficult to remove certain types of equipment located below the walkway in the basin, i.e. jet aeration headers, sludge collection headers and/or diffusers; it is not necessary to provide visibility to the entire surface area of the basin for inspection or to allow process control sampling; and it would create additional project costs. River City Engineering commented that the number and location of walkways needed depends on whether the tank is rectangular or circular, size of the tank, and type and location of any equipment and/or instrumentation located in the basin. River City Engineering commented that the rule should allow the engineer and owner to determine the location of walkways necessary to provide for the purposes intended in the proposed language, and suggested the following language:

"All equipment must be accessible for inspection, maintenance, and operation. Adequate walkways shall be provided to allow inspection and process control sampling and to allow access to any instrumentation and any mechanical or electrical equipment."

Response

The commission agrees with these comments and revised §217.156(c)(14) to read: "All equipment must be accessible for inspection, maintenance, and operation. Walkways shall be provided to allow inspection, maintenance, and process control sampling and to allow access to instrumentation, mechanical equipment, and electrical equipment."

Comment

Aqua-Aerobics recommended that TCEQ revise §217.156(d)(3) because it is common for SBR systems to have anoxic and anaerobic periods within their fill cycle and a dissolved oxygen concentration of 2.0 milligrams per liter would not be maintained during these periods.

Response

The commission respectfully disagrees with this comment. If the engineer designs the SBR process for nutrient removal, the owner can request a variance. The variance process provides the executive director with an opportunity to review the request and to determine if the dissolved oxygen concentration is appropriate for the designed modes of operation. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ delete §217.159(c). Jones and Carter commented that TCEQ should only require the instantaneous flow rate because this information is not necessary to adequately operate small wastewater treatment facilities and the equipment and controls necessary to obtain the instantaneous flow rate is difficult to install, especially in package plants.

Response

The commission partially agrees with this comment. A totalizing flow meter is not needed to operate small wastewater treatment facilities. However, no change was made in response to this comment because the adopted language only requires a totalizing flow meter for a wastewater treatment facility with a design flow greater than 0.4 million gallons per day.

Comment

Jones and Carter recommended that TCEQ revise §217.162(b)(8) and (9) by changing "static submergence" to "dynamic submergence." Jones and Carter commented that the dynamic submergence is the telling factor in the operating efficiency of an airlift and must be considered in the design.

Response

The commission agrees with this comment and revised §217.162(b)(8) and (9) as recommended.

Comment

Aqua-Aerobics noted that in Subchapter F, Activated Sludge Systems, the aeration calculations are still unique, but they can live with them.

Response

The commission acknowledges this comment.

Subchapter G

Comment

Harris Co. recommended that TCEQ revise §217.188(c) as follows: "If an SBC has any moving parts that require lubrication or replacement, an SBC must have lubrication access above the water level and provisions for safe removal without affecting process."

Response

The commission respectfully disagrees the revision recommended in this comment is necessary. Section 217.188(b) requires the SBC system to meet the criteria in §217.185, which requires redundant basins to allow for maintenance, including replacement; therefore the requested revision is not necessary. No change was made in response to this comment.

Comment

Aqua-Aerobics commented that the redundancy requirement in §217.190(b)(1) for a minimum of two independent and fully functional filter basins makes sense to ensure safe operation. The filter is not fully operational when an individual disk/plate is being isolated and replaced. To safely remove the individual disk/plate, the backwash mechanism is required to be isolated, too. Once the backwash mechanism is disabled, even just for a short time period, the filter is no longer fully operational. In addition, the failure of mechanical components including motors, pumps, and valves etc. can also put the filter out of service. Therefore, it is prudent to have at least two filters to meet the redundancy requirement.

Response

The commission agrees with this comment. However, the adopted rule already requires two independent and fully func-

tional filter basins. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ clarify §217.190(b)(2). Jones and Carter questioned if the redundancy requirement is full peak flow treatment in each independent basin or if it is just multiple basins with a combined treatment capacity of peak flow. Jones and Carter recommended that the design be based on full peak flow in each basin if filters are needed for permit compliance.

Response

The commission partially agrees with this comment. The composition of a filter unit varies between manufacturers and may vary based on design. The design of a filtration system must specify the filter surface area required to treat the peak flow with the largest filter unit out of service. No change was made in response to this comment.

Comment

Aqua-Aerobics recommended that TCEQ revise §217.190(b)(2) to require that the filter surface area be the effective submerged filter surface area; and for partially submerged filters, the effective submerged filter surface area should be the average of maximum and the minimum submerged area.

Response

The commission partially agrees with this comment and revised §217.190(b)(2) to read: "The design of a filtration system must specify the submerged filter surface area required to treat the peak flow with the largest filter unit out of service."

Comment

Aqua-Aerobics recommended that TCEQ revise §217.193(c)(1) to define the submerged filter surface area needs as the effective submerged filter surface area. For the partially submerged filters, the effective submerged media surface area is variable depending on the operational mode.

Response

The commission agrees with this comment and revised §217.193(c)(1) to read: "The design filtration rate must be based on the effective submerged surface area of the media. If the submerged surface area of the media varies based on the operational mode, the design filtration rate must account for the variability."

Comment

Aqua-Aerobics recommended that TCEQ revise §217.193(c)(3). Aqua-Aerobics commented that with one cloth media filter in backwash mode, only a fraction of the number of disks are backwashed while the remaining cloth media disks still do the filtration work. In addition, the cloth media backwash shoes only contact a very small surface area of the disks, which leaves the vast amount of cloth media surface area available for filtration regardless the backwash mode. Therefore, even with one cloth media filter unit in backwash mode, filtration still takes place simultaneously.

Response

The commission agrees with this comment. The process described by the commenter meets the requirements of §217.193(c)(3) as that paragraph is currently worded; therefore, no change was made in response to this comment.

Comment

Aqua-Aerobics questioned whether the media surface area is based on the total effective submerged filtration area or only the media surface area that contacts the backwash shoe. Aqua-Aerobics also questioned the basis of the 6.0 gallons per minute per square foot (gpm/ft^2) requirement in §217.193(c)(4), stating that due to the difference of filter media and configuration, it seems reasonable that different backwash flux rates are required. Aqua-Aerobics further commented that for their cloth media filters, approximately 1.2 gpm/ft^2 based on total effective submerged filtration area has proved to provide effective cleaning.

Response

The commission used the phrase "based on the portion of the filter surface that is being actively backwashed" to allow for different backwash designs. For a design that uses a backwash shoe, the media area that is directly sprayed with water from the backwash shoe at a given instant is the area being actively backwashed. The commission respectfully disagrees with the remainder of this comment. Although cloth filters are not a new technology, the inclusion of this technology in the design criteria is new. The commission prefers to adopt conservative initial minimum design criteria for this technology. Based on discussions with stakeholders, including manufacturers and retailers of cloth filters, the commission determined that 6.0 gpm/ft^2 is a reasonable minimum standard backwash rate to maintain filter efficiency. However, an owner can request a variance. The variance process provides the executive director an opportunity to review the request to determine if a lower backwash rate will maintain the filter efficiency. No change was made in response to this comment.

Comment

Aqua-Aerobics recommended that TCEQ revise §217.193(b)(3) to require the media to be chlorine-resistant if the filter will be exposed to chlorine.

Response

The commission agrees with this comment and revised §217.193(b)(3) to add "if the filter will be exposed to disinfectants" to the end of the paragraph.

Comment

Binkley and Barfield, Inc. recommended that TCEQ revise §217.193(c)(2) as follows:

"The maximum design filtration rate for peak flow must be between 3.25 and 6.5 gallons per minute per square foot of submerged media." Binkley and Barfield, Inc. stated that the design filtration rates (hydraulic loading requirements) should be lower than 3.25 gpm/ft^2, in order to provide sufficient filtration surface area; while the peak filtration rate should not exceed 6.5 gpm/ft^2.

Response

The commission agrees with this comment and revised §217.193(c)(2) to read: "The maximum design filtration rate for peak flow must not exceed 6.5 gallons per minute per square foot of submerged media." The lower design limit of 3.25 gpm/ft^2 of submerged media was removed because it was not necessary, as Binkley and Barfield, Inc. suggested in the comment.

Subchapter H

Comment

WEAT and TACWA commented that §217.203(e)(1)(C) requires four samples per 11,000 cubic feet of loose material, or one sample per 2,750 cubic feet, and noted that each of these samples must include a permeability test. They commented that the number of permeability tests required for imported and amended in-situ soil liners is disproportionately high in comparison to that required for in-situ soil liners. WEAT and TACWA noted that §217.203(e)(1)(B) requires one permeability test every 0.25 acres and for a 2-foot thick liner, this equates to one permeability test for every 21,780 cubic feet of in-situ soil liner material. The rule as proposed requires 10 times more preconstruction permeability tests for imported soil liner material than for in-situ soil liners. Furthermore, the finished imported soil liner must still undergo post-construction sampling with one permeability test every 0.25 acres. It is recognized that frequent analysis of imported materials is important in ensuring a quality linter; however, the number of permeability samples as proposed for preconstruction sampling is an onerous burden. WEAT and TACWA recommended that TCEQ revise §217.203(e)(1)(C) as follows:

"(C) Preconstruction Sampling for Imported Soil Liners and Amended In-situ Soil Liners. Molded samples of the liner material are allowed for imported soil liners and amended in-situ soil liners. Four samples are to be analyzed per 11,000 cubic feet of loose liner material or amended in-situ soil liner mixture in accordance with subparagraphs (e)(1)(A)(ii), (iii) and (iv). One sample every 22,000 cubic feet of loose liner material or amended in-situ soil liner mixture shall be analyzed for permeability in accordance with subparagraph (e)(1)(A)(i)."

Response

The commission partially agrees with this comment. It is recognized that amending or importing soil is sometimes necessary to meet the permeability standard of less than 1×10^{-7} centimeters per second. When soil is amended or imported, more samples are required to ensure that the completed soil liner meets the permeability standard. However, the commission also recognizes the need to clarify the requirements in §217.203(e)(1)(C). The revised language will actually result in fewer permeability samples than the commenters proposed, but will provide enough samples to establish a reasonable relationship between permeability and the results of the analyses for clay content, liquid limit, and plasticity index. These changes allow the commission to reasonably verify that the liner meets the permeability requirement without placing an onerous burden on owners.

Comment

WEAT and TACWA requested clarification on §217.203(e)(1)(C). They questioned if "loose liner material" means the soil amendment only, or the mixture of amendment material and in-situ soil. They assumed that it means the mixture.

Response

The commission agrees that "loose liner material" is the mixture of amendment material and in-situ soil. In response to this comment, the commission revised §217.203(e)(1)(C) to provide clarity.

Comment

WEAT and TACWA recommended that TCEQ revise Figure: 30 TAC §217.206(d), Equation H.1., as follows:

"E = fraction of five-day biochemical oxygen demand removed in aerated lagoon"

Response

The commission agrees to make this correction and revised Equation H.1. as recommended.

Comment

WEAT and TACWA commented that §217.207(e)(2) includes a requirement to "evacuate the top 6.0 inches of a lagoon volume within a 24 hour period" seems to imply that the inlet and outlet structures must be designed to drain the top 6 inches, essentially creating a decreasing head condition within the lagoon. WEAT and TACWA recommended revising this paragraph as follows:

"(2) The inlet and outlet structures must be sized to convey the volume contained within the top 6.0 inches of the lagoon within a 24-hour period, based on the normal water level at design flow and the corresponding pressure head."

Response

The commission agrees with this comment and revised §217.207(e)(2) as recommended.

Comment

WEAT and TACWA commented that §217.207(g)(2) addresses algae, which is prevalent throughout the entire water column; however duckweed is a floating plant commonly found in stabilization lagoons. WEAT and TACWA recommended revising this paragraph as follows:

"(2) An outlet must be at least 18 inches but not more than 24 inches below the water surface in a stabilization lagoon to control the discharge of duckweed or floating algae."

Response

The commission agrees with this comment and revised §217.207(g)(2) to read: "An outlet must be at least 18 inches but not more than 24 inches below the water surface in a stabilization lagoon to control the discharge of duckweed and floating algae."

Comment

WEAT and TACWA commented that §217.207(g)(3) addresses multi-purpose flow control structures to prevent the discharge of floatable materials as addressed in §217.207(g)(1) and (2). Also the phrase "construction sites" is ambiguous and the intent would be more clearly represented by replacing this with the phrase "flow control structures." Given these comments, WEAT and TACWA recommended revising §217.207(g)(3) as follows:

"(3) A multipurpose control structure may be used to facilitate normal operational functions such as drawdown, flow distribution, adjusting water depth, flow measurement, sampling, access for pump recirculation, chemical addition, and exclusion of floating materials. A multipurpose control structure may also be used to minimize the number of special purpose structures in a stabilization lagoon."

Response

The commission agrees with this comment and revised §217.207(g)(3) as recommended.

Comment

WEAT and TACWA commented that §217.208(e)(2) addresses sufficient gradient to install an inlet manhole with the invert lo-

cated above the maximum high water level of the downstream evaporation lagoon. It is assumed that the reason for this requirement is to prevent backflow into an upstream unit. If so, WEAT and TACWA recommended revising this paragraph as follows to allow for other arrangements that accomplish the same goal:

"(2) An inlet manhole invert must be a minimum of 6.0 inches above the maximum high water level of a primary evaporative lagoon or provide other means to prevent backflow into an upstream treatment unit."

Response

The commission agrees with this comment and revised §217.208(e)(2) as recommended.

Comment

WEAT and TACWA commented that §217.209(d) implies that a constructed wetland must include all plants from the list of emergent plants, floating plants or both. WEAT and TACWA recommended revising the second sentence as follows: "A constructed wetland must include a diversity of plants selected from the following categories of emergent plants, floating plants, or both."

Response

The commission agrees with this comment and revised §217.209(d) to read: "Vegetation. A constructed wetland must have a diverse vegetative community of emergent and floating plants to minimize any adverse impact from potential disease, insect pests, or species-specific toxicity. A constructed wetland must include a diversity of plants selected from the following categories of emergent plants, floating plants, or both."

Comment

WEAT and TACWA recommended that TCEQ revise §217.209(d)(1)(A) and (F) as follows:

"(A) Schoenoplectus spp. (bulrush)"

"(F) Carex spp. (sedges)"

Response

The commission agrees with this comment and revised §217.209(d)(1)(A) and (F) as recommended.

Comment

WEAT and TACWA recommended that TCEQ delete §217.209(d)(1)(G) because *Caladium* spp. (elephant ear) is an exotic plant not native to Texas.

Response

The commission partially agrees with this comment. Although the *Caladium* spp. of elephant ear is not native to Texas, it is not known to be an invasive plant in Texas and it works well in subsurface constructed wetland systems. However, the *Colocasia* spp. of elephant ear is an invasive plant, and it is therefore not included in the list of approved wetland plants. No change was made in response to this comment.

Comment

WEAT and TACWA commented that §217.209(e)(3) addresses harvesting, which is not a recommended measure for nutrient removal or for reducing thatch. WEAT and TACWA recommended revising the paragraph as follows: "The operation and maintenance manual for a wastewater treatment facility that has a constructed wetland must include a detailed description and schedule for maintaining the constructed wetland. The maintenance plan must include a schedule and procedure for addressing excessive accumulated thatch."

Response

The commission notes that the term "harvesting" was intended to mean the removal of excess vegetation to maintain a healthy wetland system. In response to this comment, the commission revised the last sentence of §217.209(e)(3) to read: "...The maintenance plan must include a schedule and procedure for removing overabundant live plant material and dead plant material."

Comment

WEAT and TACWA commented that §217.210(e)(2) appears to require the designer to create multiple water depths within a wetland cell to accommodate the plants, whereas in practice, the wetland cell is designed to achieve hydraulic efficiency and then selects the plants as needed to accommodate the resulting water depths. WEAT and TACWA recommended revising the paragraph as follows:

"(2) Plants selected for a FWS wetland cell shall be compatible with the water depths under all operational flow conditions."

Response

The commission agrees with the comment and revised §217.210(e)(2) as recommended.

Comment

WEAT and TACWA commented that in §217.210(i)(2) Equation H.3., the first order areal rate constant for TSS is mistakenly placed on the line defining the area. WEAT and TACWA recommended moving "(1,000 m/yr @ 20 degrees C for TSS)" within the line defining "K."

Response

The commission agrees with this comment and revised the variable definitions for the first-order areal rate constant and required wetland area in Figure: 30 TAC §217.210(i)(2), Equation H.3.

Comment

WEAT and TACWA commented that in Figure: 30 TAC §217.211(g)(2), Equation H.5., the first order areal rate constant for TSS is mistakenly placed on the line defining the area. WEAT and TACWA recommended moving "(3,000 m/yr @ 20 degrees C for TSS)" within the line defining "K."

Response

The commission agrees with this comment and revised the variable definitions for the first-order areal rate constant and required wetland area in Figure: 30 TAC §217.211(g)(2), Equation H.5.

Subchapter J

Comment

Harris Co. recommended that TCEQ revise §217.246(b) by adding language as follows: "(b) An enclosed area that is accessible to individuals must have automatic mechanical ventilation and be designed for continuous occupancy."

Response

The commission respectfully disagrees that the revision recommended in this comment is necessary. The automatic mechanical ventilation requirements in §217.246(b)(1) or (2) are pro-

tective of human health while accessing an enclosed area. No change was made in response to this comment.

Comment

Jones and Carter recommended that TCEQ revise §217.249(t)(4)(B) by adding "If a multi-stage aerobic digester is used, the minimum detention time may be reduced in accordance with EPA published standards for multi-stage digesters." Jones and Carter commented that the stabilization time in a multi-stage digester is significantly less and facilities designed for this do not need 40 days.

Response

The commission agrees that an owner can meet the requirements for sludge land application with less than 40 days in the aerobic digester depending on such factors as the temperature of the digester. However, the commission did not make a change to the rule because the owner can ask for a variance to the rule. The variance process provides the executive director an opportunity to review the request to determine if a shorter detention time will meet the pathogen and vector attraction requirements.

Subchapter K

Comment

Jones and Carter recommended that TCEQ revise §217.272(c) as follows: "A dechlorination system must provide a least one unit of sulfur dioxide gas for each unit of residual chlorine." Jones and Carter commented that the sulfur dioxide system should not be sized on the influent chlorine amount. It should be sized to remove excess residual chlorine.

Response

The commission agrees with this comment and revised §217.272(c) to read: "At the point of dechlorination, a dechlorination system must provide a least one unit of sulfur dioxide gas for each unit of residual chlorine."

Comment

Harris Co. recommended that TCEQ add the following requirement to §217.281(b): "(5) Install floor drain to remove sludge accumulation."

Response

The commission partially agrees with this comment and revised §217.281(b) to add the following requirement: "(7) A chlorine contact basin must include a drain to facilitate removal of accumulated settled solids."

Subchapter M

Comment

Harris Co. requested that TCEQ revise §217.328(b) to require sign placement "at a minimum of one on each side and on each gate" and not requiring the signs to be placed within 50-feet of each other minimum.

Response

The commission partially agrees with this comment. The adopted rule requires at least one clearly visible and legible hazard sign to be placed on each gate and each side fence. The adopted rule does not require signs to be placed within 50 feet of each other. No change was made in response to this comment.

Comment

WEAT and TACWA commented that the color coding specified in §217.329 is inconsistent with the American Society of Mechanical Engineers (ASME) standard and Occupational Safety and Health Administration (OSHA) provisions in 29 Code of Federal Regulations, Part 1910. WEAT and TACWA recommended that TCEQ revise these accordingly.

Response

The commission partially agrees with this comment; however, the ASME and OSHA standards are not universally recognized and the commission is choosing not to adopt retroactive requirements. The commission therefore finds that keeping the existing color codes at facilities in Texas will maintain consistency between wastewater treatment facilities across the state. Maintaining the existing color codes also prevents a facility from using two conflicting sets of color codes if a treatment unit or collection system unit is constructed or altered after the effective date of these amendments. To differentiate between reclaimed water and gray water, the commission revised §217.329(e)(10) and added §217.329(e)(11) to read as follows and renumbered subsequent paragraphs:

"(10) reclaimed water - purple with black writing;

(11) gray water - purple with yellow writing;..."

Comment

Jones and Carter recommended that TCEQ either delete §217.332(b) or provide clarification of what is intended. Sound enclosures for items such as blowers and generators have and require removable panels for maintenance access.

Response

The commission agrees with this comment and revised §217.332(b) to read: "Removable noise attenuation equipment, such as removable mufflers or removable noise reducing panels, must remain attached to the equipment at all times to reduce noise, unless the noise attenuation equipment is removed for maintenance activities."

SUBCHAPTER A. ADMINISTRATIVE REQUIREMENTS

30 TAC §217.1

Statutory Authority

The repeal of this section is adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted repeal of this section implements TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

Filed with the Office of the Secretary of State on November 6, 2015.

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Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
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Proposal publication date: May 29, 2015
For further information, please call: (512) 239-6812

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30 TAC §§217.1 - 217.18

Statutory Authority

The amendments and new sections are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments and new sections implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.2. Definitions.

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

(1) Activated sludge--A collection of actively growing biological organisms that results from combining wastewater, organisms, and air in an aerated treatment process.

(2) Activated sludge process--A biological wastewater treatment process in which activated sludge is aerated. The activated sludge microorganisms are subsequently separated from the wastewater and wasted or returned to the process.

(3) Advanced nutrient removal--A process to remove phosphorus, nitrogen, or both, that is intended to produce higher quality effluent than is normally achieved by secondary treatment processes.

(4) Air gap--The unobstructed vertical distance through the free atmosphere between the lowest opening from any pipe or faucet conveying water to a tank, fixture, receptor, sink, or other assembly and the flood level rim of the receptacle. To qualify as an air gap under this chapter, the vertical, physical separation must be at least twice the diameter of the water supply outlet, but never less than 1.0 inch.

(5) Alter or alteration--

(A) To replace a treatment unit or a collection system unit.

(B) To modify a treatment unit, a collection system unit, or an associated appurtenance, in a way that changes any of the following for a treatment unit or collection system unit:

(i) the capacity;

(ii) the intended function;

(iii) the process;

(iv) the mode of operation;

(v) the configuration;

(vi) a design parameter;

(vii) a major design assumption; or

(viii) the function of any other treatment unit or collection system unit.

(6) Alternative collection system--A collection system that uses components such as grinder pumps, septic tanks, or vacuum valves, which are installed throughout the collection system, specifically including the types of collection systems identified in Subchapter D of this chapter (relating to Alternative Collection Systems). An alternative collection system is comprised of both on-site and off-site components.

(7) Annual average flow--The arithmetic average of all daily flow determinations taken within a period of 12 consecutive months.

(8) Appurtenance--An appliance or a component associated with a treatment unit or collection system unit that is not considered integral to the identity of the unit.

(9) Auxiliary pump--A secondary or supplementary pump that is available for use as needed.

(10) Biotower--A biological filtration system that involves biological film on a plastic media that reduces the biochemical oxygen demand of the effluent.

(11) Building lateral--A pipe that conveys raw wastewater and connects the plumbing of a structure to a collection system pipe. For an alternative collection system, a pipe that conveys raw wastewater and connects the plumbing of a structure to an on-site component (e.g., grinder pump, vacuum valve pit, septic tank effluent pump). A building lateral is not a part of a collection system.

(12) Bypass--The intentional diversion of a waste stream from any portion of a wastewater treatment facility or collection system.

(13) Collection system--Pipes, conduits, lift stations, force mains, and all other constructions, devices, and appurtenant appliances used to transport domestic wastewater to a wastewater treatment facility.

(14) Collection system unit--A part of a collection system that performs a basic step in the transport of wastewater to a wastewater treatment facility, provides access to the collection system, or is an integral safety feature of the collection system (e.g., pipeline, lift station, manhole, air release valve, etc.).

(15) Completely mixed aerated lagoon--A lagoon in which oxygen is supplied mainly through mechanical or diffused aeration, and in which the aeration system is designed to keep solids in suspension.

(16) Construct--To build, erect, place, assemble, remodel, alter, or otherwise create a treatment unit, a collection system unit or an associated component or appurtenance of a treatment unit or collection system unit. For purposes of this chapter, construction also includes installation of fencing, excavation, site preparation, and placement of skid-mounted or modular units.

(17) Constructed wetland--A wastewater treatment unit designed to replicate the processes that occur in natural wetlands. Constructed wetlands are complex, integrated systems in which wastewa-

ter, plants, animals, microorganisms, and the environment (including sun, soil, and air) interact to improve water quality.

(18) Day--A period of 24 consecutive hours beginning at 12:00 a.m. local time.

(19) Decanter--A device used to draw off liquid without disturbing solids that are in the process of sedimentation.

(20) Design flow--The highest anticipated 30-day average flow rate.

(21) Design life--The length of time that an engineered structure or device is intended to function without failing.

(22) Diurnal flow--The daily cycle of high and low influent flows to a wastewater treatment facility.

(23) Domestic wastewater--Wastewater which originates primarily from kitchen, bathroom, and laundry sources, including waste from food preparation, dishwashing, garbage grinding, toilets, baths, showers, and sinks of a residential dwelling. Domestic wastewater may contain commercial or industrial wastewater contributions.

(24) Dry Well--The portion of a pumping station where non-submersible pumps and controls are housed separately from the liquid being pumped.

(25) Effective size--The particle diameter that represents the smallest 10th percentile of a sample of filter media particles on a mass basis. In other words, 10% of the sample mass consists of particles that are smaller than the effective size and 90% of the sample mass consists of particles that are larger than the effective size.

(26) Effluent--Liquid that flows out of a process or confined space. This term may also be used to identify items or properties associated with effluent (e.g., effluent constituents, effluent limits, or effluent pump).

(27) Emergency overflow--A conduit or spillway designed to prevent an unauthorized discharge of wastewater by redirecting excess flow for processing in a treatment unit.

(28) Engineer--A professional engineer, licensed by the Texas Board of Professional Engineers, with expertise in design and construction of wastewater treatment facilities and collection systems.

(29) Engineering Report--The final engineering design report prepared, signed, and sealed by the engineer. The report must include calculations and written descriptions of processes, equipment, and structures that demonstrate compliance with this chapter, as described in §217.10 of this title (relating to Final Engineering Report) and as required throughout this chapter.

(30) Equalization basin--A treatment unit designed primarily to dampen fluctuations of flow or concentration before wastewater flows into a subsequent treatment unit.

(31) Equivalent dwelling unit--Any building or section of a building that produces wastewater of a composition and quantity equal to that discharged by a single, private residence. For calculation purposes, an equivalent dwelling unit is occupied by 3.5 individuals, unless a different number is justified by actual data.

(32) Filter media--The material placed in a filter containment structure to separate solids from a liquid.

(33) Firm pumping capacity--The maximum flow rate achievable, under design conditions, with the largest pumping unit out of service.

(34) Force main--A pressure-rated conduit that conveys wastewater from a lift station.

(35) Free water surface wetland--A constructed wetland designed to have the water surface above the wetland bed or substrate.

(36) Gravity relief sewer--A part of a collection system built to manage the flow of wastewater that exceeds the capacity of the existing collection system.

(37) Grinder pump--A collection system unit that receives raw wastewater, grinds the solids in the wastewater into a slurry, and provides the motive force for transporting the slurry to a lift station or a collection system.

(38) Headworks--The location where wastewater enters a wastewater treatment facility and preliminary treatment occurs, typically by removing large solids or grit.

(39) Influent--Liquid that flows into a process or confined space. This term may also be used to identify items or properties associated with influent (e.g., influent constituents, influent limits, or influent pump).

(40) Innovative technology--A process, method, product, or material not addressed in this chapter or a process specifically identified as innovative by this chapter.

(41) Interceptor tank--A collection system unit that receives raw wastewater, removes floatable and settleable solids, stores the removed solids, and provides flow attenuation.

(42) Lift station--A structure that collects wastewater and uses pumps to raise it to a higher elevation. The term lift station applies to a structure in which the static head exceeds the frictional head losses.

(43) Maintenance--The scheduled preventative care, repair, or equivalent replacement of components or appurtenances of a treatment unit or a collection system unit (e.g., replacing a pump with an equivalent pump - not replacing an entire lift station, and not replacing a pump in a lift station with a pump that will operate at a different flow rate or pressure). Replacement must not cause alteration, as defined in this chapter. Maintenance does not include replacement of a treatment unit or a collection system unit.

(44) Membrane bioreactor system--An activated sludge process that uses membrane filtration rather than clarification to remove solids.

(45) Minimum grade effluent sewer--An alternative collection system pipeline with a constant downward slope that transports effluent from an interceptor tank by gravity flow.

(46) Multiple equivalent dwelling unit--Either:

(A) a group of two or more residences served by a common service connection; or

(B) a commercial, industrial, institutional, or other non-residential establishment that produces wastewater:

(i) in excess of 1,500 gallons per day; or

(ii) not comparable in composition to that discharged by a single private residence.

(47) Non-conforming technology--Technology or a process that does not conform to the design criteria of this chapter or a technology or process specifically identified as non-conforming in this chapter.

(48) Off-site component--A collection system component that includes collection system pipes, force mains, pump stations, lift stations, vacuum stations, and related appurtenances not located at a wastewater treatment facility.

(49) On-site component--Alternative collection system equipment placed on private property.

(50) Overflow--An unauthorized flow of untreated or partially treated wastewater from a collection system or from a treatment unit at a wastewater treatment facility.

(51) Owner--A person who owns a collection system or a wastewater treatment facility or part of a collection system or wastewater treatment facility. For the purposes of this chapter, "owner" refers to the owner and to the owner's representatives, agents, and designees (for example, an operator, an engineer, a staff member, a contractor).

(52) Partially mixed aerated lagoon--A lagoon in which oxygen is supplied mainly through mechanical or diffused aeration, in which the aeration system is designed to allow solids to settle out of suspension.

(53) Peak flow--The highest two-hour flow expected under any operational conditions, including times of high rainfall, based on a two-year, 24-hour storm or a prolonged period of wet weather.

(54) Plans--Construction drawings or other documents that show details of the design of a project.

(55) Preliminary treatment--Removal of wastewater constituents such as rags, sticks, floating material, and grit that may cause maintenance or operational problems in subsequent treatment units.

(56) Pressure sewer--A collection system that is pressurized by pumps at each service connection.

(57) Primary sedimentation unit--A treatment unit that removes solids from the wastewater by physical settling before the wastewater enters a unit that removes waste by biological conversion.

(58) Primary treatment--A physical treatment process, other than preliminary treatment, that removes biologically available wastewater constituents primarily by settling or floatation.

(59) Processing unit--A component of a wastewater treatment facility that performs a basic step in preparing sludge for disposal after the sludge has been separated from the wastewater (e.g., sludge thickener, digester, sludge drying bed, belt press). Processing units are considered a subset of treatment units for the purposes of this chapter.

(60) Project--A construction, repair, alteration, or rehabilitation of a collection system, a wastewater treatment facility, or an associated component, beginning with design initiation and ending with permanent decommissioning.

(61) Pump--A device that raises, transfers, or compresses fluids by suction, pressure, or both.

(62) Rehabilitate--To repair a collection system using a technology that is described in §217.56(c) of this title (relating to Trenchless Pipe Installation) or using any other lining or coating method.

(63) Re-rate--To change the design flow or design organic loading of a treatment unit, without altering the unit, based on actual performance data.

(64) Secondary treatment--The level of treatment defined as secondary treatment in §309.1(b) of this title (relating to Scope and Applicability).

(65) Sequencing batch reactor (SBR)--A fill and draw activated sludge treatment system where secondary aeration and secondary clarification processes are carried out sequentially in the same tank. An SBR system has the following five steps that are carried out in the following sequence:

(A) fill - the basin is filled with the influent;

(B) react - the influent in the basin is aerated;

(C) settle - the mixed liquor within the basin is settled (clarification);

(D) draw - the basin is decanted; and

(E) idle - the sludge is removed from the basin.

(66) Sludge stabilization--The process of destroying or inactivating pathogens in sludge and reducing volatile solids content.

(67) Small diameter effluent sewer--A collection system that receives effluent from an interceptor tank and transports the flow by gravity. A small diameter effluent sewer may include minimum grade and variable grade effluent sewers.

(68) Specifications--Precise standards of performance for construction work, materials, and manufactured products, which make possible the expression of expected value when they are purchased or contracted for and which provide means of determining their conformance with expectations after they are purchased or constructed.

(69) Stabilization lagoon--A shallow lagoon used to achieve secondary treatment through natural processes. In this chapter, "stabilization lagoon" is synonymous with "stabilization pond," "oxidation lagoon," and "oxidation pond."

(70) Subsurface flow wetland--A wetland system that maintains the water level below the surface of the gravel or other media placed in the wetland bed or cell.

(71) Summary transmittal letter--A letter submitted to the executive director that provides basic information about a project so that the executive director can determine whether to require a full review of the project plans and specifications.

(72) Surcharge--The hydraulic overloading of a portion of a gravity collection system. A surcharge causes wastewater to rise within manholes and may cause an overflow.

(73) Totalizing meter--A water measuring device that registers or accumulates total flow. The totalizing meter shall be non-resettable.

(74) Treatment unit--A component of a wastewater treatment facility that performs a basic step in the wastewater treatment process (e.g., lift station, bar screen, aeration basin, clarifier, chlorine contact chamber).

(75) Twenty-five-year, 24-hour rainfall event--The maximum rainfall event with a probable recurrence interval of once in 25 years, with a duration of 24 hours, as defined by the National Weather Service in Technical Paper Number 40, *Rainfall Frequency Atlas of the United States,* May 1961; or equivalent regional or state rainfall information.

(76) Two-year, 24-hour rainfall event--The maximum rainfall event with a probable recurrence interval of once in two years, with a duration of 24 hours, as defined by the National Weather Service in Technical Paper Number 40, *Rainfall Frequency Atlas of the United States,* May 1961; or equivalent regional or state rainfall information.

(77) Variable grade effluent sewer--A small diameter gravity collection system that does not require a uniform gradient, but will allow for both positive and negative gradients. A variable grade effluent collection system may be used with septic tank effluent pumps.

(78) Variance--A deviation from a specific requirement of this chapter. A variance requires executive director approval.

(79) Wastewater--A waterborne industrial waste, recreational waste, domestic waste, or combination of these wastes.

(80) Wastewater treatment facility--All contiguous land and fixtures, structures, and appurtenances used for storing, processing, and treating wastewater. A wastewater treatment facility does not include the collection system located outside of the fenced area around a wastewater treatment facility.

(81) Wasting--The practice of removing sludge from a wastewater treatment process.

(82) Weir overflow--The flow of liquid through or over a clarifier weir or a weir used for flow measurement.

(83) Wet well--A pumping station or a portion of a pumping station that stores the fluid being pumped. A wet well may be used in conjunction with a dry well, or may contain its own submersible pumps and equipment.

§217.6. Submittal Requirements and Review Process.

(a) An owner is not required to submit collection system or wastewater treatment facility plans and specifications to the executive director for approval prior to the commission issuing the wastewater treatment facility's wastewater permit.

(b) An owner is not required to submit collection system or wastewater treatment facility plans and specifications for approval if the project only consists of maintenance, as defined in this chapter.

(c) A wastewater treatment facility's plans and specifications must be based on a design that will at least meet the requirements and effluent limits in the associated wastewater permit.

(d) An owner shall submit a summary transmittal letter to the executive director and a copy to the appropriate regional office for each collection system project and wastewater treatment facility project, except as provided by §217.8 of this title (relating to Municipality Reviews). A summary transmittal letter must include:

(1) the name and address of the design firm;

(2) the name, phone number, facsimile number, and email address of the engineer;

(3) the county or counties where the project will be located;

(4) an identifying name for the project;

(5) the collection system or wastewater treatment facility owner's name, and if applicable, the wastewater treatment facility permit number and wastewater treatment facility name;

(6) a statement certifying that the plans and specifications are in substantial compliance with all requirements of this chapter, with the exception of any variance requests, which must be listed in the letter;

(7) a statement certifying that any variances will not threaten public health or the environment, based on the best professional judgment of the engineer who prepared the engineering report and the project plans and specifications;

(8) a brief description of the project scope including:

(A) a brief engineering summary of the collection system or wastewater treatment facility;

(B) a list of every treatment unit or collection system unit that will be altered, constructed, rehabilitated, or re-rated within the project scope;

(C) a map of the collection system or wastewater treatment facility that identifies the location of every treatment unit or collection system unit that will be altered, constructed, rehabilitated, or re-rated within the project scope;

(D) a description of all variances from the requirements of this chapter, including the use of non-conforming or innovative technology; and

(E) an explanation of the reasons for all variances in accordance with §217.4 of this title (relating to Variances).

(9) the signature and seal of the engineer responsible for the design of the collection system or wastewater treatment facility.

(e) The executive director may review the plans and specifications for any collection system or wastewater treatment facility.

(f) If the executive director does not notify an owner in writing within 30 business days of the receipt of a summary transmittal letter that a review will occur, the project is approved. However, such approval is conditional, and remains subject to an executive director determination under §217.4(c) or (d) of this title. Additionally, if this provision conflicts with a requirement in this chapter that requires executive director approval in writing, then this provision does not apply.

(g) If the executive director notifies an owner in writing of the intent to review a collection system or wastewater treatment facility's design, the owner shall submit the following within 30 days from the date of the notice:

(1) a complete set of plans and specifications;

(2) a complete engineering report as defined in §217.10 of this title (relating to Final Engineering Report);

(3) all requested variances; and

(4) sufficient information to satisfy the executive director that a project is in compliance with this chapter.

(h) If the executive director does not notify an owner of any deficiencies within 30 business days of receipt of any additional information requested, the project is approved as long as the project does not violate any expressed prohibition in this chapter. However, such approval is conditional, subject to an executive director determination under §217.4(c) or (d) of this title. Additionally, if this provision conflicts with a requirement in this chapter for written approval from the executive director, then this provision does not apply.

§217.7. Types of Plans and Specifications Approvals.

(a) Approval given by the executive director or other review authority authorized under Texas Water Code, §26.034(d) and §217.8 of this title (relating to Municipality Reviews) or §217.9 of this title (relating to Texas Water Development Board Reviews) does not relieve an owner of any liability or responsibility with respect to designing, constructing, or operating a collection system or wastewater treatment facility in accordance with applicable commission rules and the associated wastewater permit.

(b) The executive director, a municipality authorized under §217.8 of this title, or the Texas Water Development Board, as authorized in §217.9 of this title, may grant the following types of approvals: standard approvals; innovative and non-conforming technology approvals; and conditional approvals.

(1) Standard approval. The executive director may grant a standard approval for plans and specifications that do not include any variance requests, do not include any innovative or non-conforming technologies, and comply with all applicable parts of this chapter.

(2) Approval of innovative and non-conforming technologies. The executive director may grant approval of innovative and

non-conforming technologies in accordance with §217.4 of this title (relating to Variances).

(A) An owner who requests approval for an innovative or non-conforming technology must submit a summary transmittal letter in accordance with §217.6(d) of this title (relating to Submittal Requirements and Review Process) and must describe the technology and give the reason(s) for selecting the technology.

(B) An owner must receive written approval from the executive director before constructing, installing, or operating any innovative or non-conforming technology.

(C) The executive director may require a pilot or demonstration study for an innovative or non-conforming technology. Performance data from a similarly designed full-scale process that has operated for a reasonable period under conditions similar to those of a proposed design, as determined by the executive director, may be submitted in addition to or in lieu of a pilot or demonstration study.

(D) The executive director may require an owner to submit evidence that the owner, the manufacturer, or the supplier of the equipment for innovative or non-conforming technology has provided a performance bond that:

(i) is acceptable to the executive director;

(ii) is from a surety company listed on the United States Treasury Department's current Listing of Certified Companies; and

(iii) insures the performance of the equipment for innovative or non-conforming technology.

(E) The performance bond referenced in subparagraph (D) of this paragraph must guarantee the innovative or non-conforming technology for at least two years from the date the treatment unit or equipment is put into service, and must include:

(i) the full cost of removing equipment and closing the innovative or non-conforming technology;

(ii) the full cost of replacing the innovative or non-conforming technology with standard processes and equipment that conform to this chapter; and

(iii) all associated engineering costs necessary for the removal and replacement of any failing treatment unit or equipment.

(F) The executive director may require an owner to submit a supplement to the report on the performance of an innovative or non-conforming technology after a collection system or wastewater treatment facility is constructed and operating.

(3) Conditional approval.

(A) The executive director may grant conditional approval for a specific set of operating conditions.

(B) If a conditional approval is granted, an owner is responsible for ensuring that the conditions, stipulations, and restrictions outlined in the approval letter are met. Operating outside the conditions, stipulations, or restrictions in a conditional approval is a violation of commission rules.

§217.16. Wastewater Treatment Facility Operation and Maintenance Manual.

(a) An owner of a wastewater treatment facility is responsible for developing an operation and maintenance manual with the assistance of an engineer and certified wastewater operations staff. The manual must be updated when there are personnel changes, construction of treatment units, alteration of treatment units, re-rating of treatment units, or changes in the influent quality or quantity that require permanent changes in the operation of the wastewater treatment facility.

(b) An owner must ensure that the operation and maintenance manual includes all information specific to the wastewater treatment facility that is necessary to ensure efficient and safe operation, maintenance, monitoring, and reporting. The operation and maintenance manual must include administrative and recordkeeping items, operation and maintenance information, and safety information.

(1) Administrative and recordkeeping items must include:

(A) a table of contents;

(B) a copy of the current wastewater permit;

(C) names and telephone numbers for contacts with the appropriate state and federal regulatory agencies;

(D) names or job titles and current telephone numbers of staff contacts;

(E) a copy of the final engineering report, construction drawings, and specifications for each project, as required by §217.10 and §217.13 of this title (relating to Final Engineering Report; and Final Construction Drawings and Specifications);

(F) a copy of all documents required by this chapter, including correspondence with the executive director regarding approval of plans and specifications for each project;

(G) a copy of all manufacturer's recommendations relied on in the design of each project;

(H) a sample of each type of Discharge Monitoring Report or Monthly Effluent Report an owner is required to submit for the wastewater treatment facility;

(I) a sample daily activity report for documenting internal monitoring done in association with internal process control, including flow rates from treatment units, dissolved oxygen levels, pH, solids concentrations, sludge settling, clarifier sludge blanket depths, sludge age or retention time, and disinfection residuals; and

(J) a description of the quality assurance and quality control recordkeeping requirements for all laboratory analyses performed.

(2) Operation and maintenance information must include:

(A) expected flow patterns, size, and capacity of all treatment units and processing units within the wastewater treatment facility;

(B) start-up procedures, routine operational procedures, emergency operations procedures, and shut down procedures for all treatment units and processing units;

(C) the manner and expected volumes in which solids return to aeration or waste;

(D) expected solids concentrations in each treatment unit and processing unit;

(E) expected clarifier weir overflow rates;

(F) expected disinfectant and dechlorination usage and dosage amounts during normal and emergency operating conditions;

(G) descriptions and frequencies of all routine in-situ and laboratory analyses to be performed and a list of references to standard analytical procedures;

(H) description and schedule of routine maintenance activities to be performed, including lubrication and inspection of all pumps, motors, and other equipment;

(I) the design life of each treatment unit; and

(J) a recommended spare parts inventory with source information.

(3) Safety requirements information must include:

(A) all known potential or actual safety hazards within a wastewater treatment facility;

(B) the location and method of use for all personal protective equipment in accordance with §217.324(a) of this title (relating to Chemical Handling);

(C) a schedule for servicing all personal protective equipment, respiratory equipment, and protective equipment;

(D) evacuation, shelter, and shelter-in-place plans;

(E) the names and phone numbers of entities and individuals to be contacted during emergencies;

(F) emergency operation plans for power outages, flooding, and other site specific emergency situations that may develop;

(G) annual safety training curriculum and schedule for all wastewater treatment facility staff;

(H) first aid precautions, location of first aid supplies and description of appropriate emergency medical treatment;

(I) chemical disposal methods that comply with §217.247(q) of this title (relating to Chemical Pretreatment of Sludge), if applicable;

(J) ultraviolet light precautions in accordance with §217.299 of this title (relating to Ultraviolet Light Disinfection System Safety), if applicable; and

(K) hazardous task precautions in accordance with §217.323(b) of this title (relating to Hazardous Operation and Maintenance), if applicable.

(c) An owner shall keep a copy of a current operation and maintenance manual at the wastewater treatment facility site. The operation and maintenance manual shall be immediately available for inspection by the executive director upon request.

(d) An owner shall submit a copy of the operation and maintenance manual to the executive director within 30 days of a written request from the executive director.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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SUBCHAPTER B. WASTEWATER TREATMENT FACILITY DESIGN REQUIREMENTS

30 TAC §§217.31 - 217.40

Statutory Authority

The amendments and new sections are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments and new sections implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.36. Emergency Power Requirements.

(a) A wastewater treatment facility must be designed to prevent the discharge of untreated or partially treated wastewater during electrical power outages.

(b) A wastewater treatment facility must include an audiovisual alarm system. The alarm system must transmit all alarm conditions through the use of an auto-dialer system, a Supervisory Control and Data Acquisition (SCADA) system, or a telemetering system connected to a continuously monitored location. Audiovisual alarms are not required if the SCADA system notifies the operator about communication loss, in addition to all other alarm conditions.

(c) An alarm system must self-activate if:

(1) the power supply is interrupted;

(2) a pump fails; or

(3) a high water level alarm is triggered.

(d) An alarm system must include self-testing capability at the control panel.

(e) An owner shall determine the reliability of the existing commercial power service for a wastewater treatment facility using records from the past 60 consecutive months from the electric utility that serves the wastewater treatment facility. The entire record must be used if 60 months of records are not available. The owner must provide the power outage records and the reliability determination in the engineering report. The records must:

(1) be in writing;

(2) be on the electric utility's letterhead and bear a signature of an electric utility employee who has knowledge of data about power outages;

(3) identify the location of the wastewater treatment facility;

(4) list the total number of power outages that have occurred during the past 60 consecutive months; and

(5) indicate the date and duration of each recorded power outage.

(f) The executive director may consider documentation of commercial power system upgrades and their effects on the reliability of commercial power. Documentation of upgrades and their effects on power reliability must be submitted to the executive director in writing on the electric utility's letterhead and must bear the signature of an electric utility employee.

(g) Systems for preventing discharge of untreated or partially treated wastewater must operate for a duration at least equal to the longest power outage on record for the past 60 consecutive months, or at least 20 minutes, whichever is longer. The design must consider the effects of peak flow, inflow, and infiltration. If the longest power outage on record for the past 60 consecutive months is greater than 48 hours and generators will be used to provide backup power, then the owner must have a contract in place that guarantees fuel supply during an emergency. The owner must also have sufficient storage capacity at the wastewater treatment facility for the fuel for the duration of the emergency.

(h) Systems for preventing discharge of untreated or partially treated wastewater at a wastewater treatment facility must either be permanent features of the wastewater treatment facility, or be temporary power systems that are capable of being made operational before an unauthorized discharge occurs during any electrical power outage. The engineer must describe how a temporary power system will be deployed and operated in the engineering report, and must address deployment during all types of weather events that might reasonably cause a power outage at the wastewater treatment facility.

(i) Systems for preventing discharge of untreated or partially treated wastewater may include any combination of alternate power sources, on-site generators, interceptor systems, on-site retention, collection system storage, portable generators, mechanical backup systems, or other similar systems.

(1) Collection system storage may not be used as a sole means of preventing the discharge of untreated or partially treated wastewater during a power outage.

(2) The main power source and an alternate power source may not be provided by the same power plant.

(3) Portable generators and pumps may only be used to guarantee service if:

(A) a tested quick-connect mechanism and a properly sized automatic transfer switch is provided where the generator will be used; and

(B) a licensed operator that is knowledgeable in operation of the portable generators and pumps will be on call 24 hours per day every day.

(j) The engineering report must include a description of emergency operation of the wastewater treatment facility. Treatment units that require continuous operation during a power outage must be identified in the engineering report. The minimum requirements for the systems that must be operational and additional engineering report requirements are listed in paragraphs (1) - (4) of this subsection.

(1) A wastewater treatment facility must be designed to achieve primary treatment and to disinfect the wastewater to ensure compliance with the bacteria limits established in the wastewater treatment facility's wastewater permit during all power outages, including outages that are longer than outage predicted based on the power reliability determination required in subsection (e) of this section.

(2) All components of the disinfection system, including any reclaimed water used to make a chemical solution, must operate at full capacity during all power outages according to the requirements of §217.37 of the title (relating to Disinfection System Power Reliability), including outages that are longer than outage predicted based on the power reliability determination required in subsection (e) of this section.

(3) Return activated sludge pumps must be operational during any power outage.

(4) If portable generators or pumps are used to guarantee service, the engineering report must include:

(A) the storage location of each generator and pump;

(B) the amount of time that will be needed to transport each generator or pump to where it will be used;

(C) the treatment units to which each generator or pump is designated as a backup; and

(D) the routine maintenance and upkeep that will be done for each portable generator and pump to ensure that they will be operational when needed.

§217.37. Disinfection System Power Reliability.

(a) A disinfection system must include a backup power system capable of providing sufficient power to operate continuously during all power outages in accordance with the requirements of §217.36 of this title (relating to Emergency Power Requirements), including outages that are longer than outage predicted based on the power reliability determination required in §217.36(e) of this title.

(b) A backup power system must automatically restart the disinfection system during a power outage.

(c) A backup power system must meet the requirements of §217.36 of this title.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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SUBCHAPTER B. TREATMENT FACILITY DESIGN REQUIREMENTS

30 TAC §217.36

Statutory Authority

The repeal of this section is adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environ-

ment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted repeal of this section implements TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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SUBCHAPTER C. CONVENTIONAL COLLECTION SYSTEMS

30 TAC §§217.51 - 217.71

Statutory Authority

The amendments and new sections are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments and new sections implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.55. Manholes and Related Structures.

(a) An owner must include manholes in a collection system at:

(1) all points of change in alignment, grade, or nominal diameter;

(2) at all intersections of collection system pipes; and

(3) at the end of all pipes that may be extended at a future date.

(b) Manholes placed at the end of a collection system pipe that may be extended in the future must include pipe stub outs with plugs.

(c) A cleanout with watertight plugs may be installed in lieu of a manhole at the end of a collection system pipe if no extensions are anticipated.

(d) Cleanout installations must pass all applicable testing requirements outlined for gravity collection pipes in §217.57 of this title (relating to Testing Requirements for Installation of Gravity Collection System Pipes).

(e) A manhole must be made of monolithic, cast-in-place concrete, fiberglass, pre-cast concrete, high-density polyethylene, polymer concrete, or other material designed to withstand the anticipated live and static loads.

(f) The use of bricks to adjust a manhole cover to grade or construct a manhole is prohibited. Adjustment rings used to adjust a manhole cover to grade must be constructed of concrete, high density polyethylene, or other material that is designed to withstand the anticipated live and static loads.

(g) Manholes may not be spaced farther apart than the distances specified in the following table for a wastewater collection system with straight alignment and uniform grades. The executive director may approve different distances, in writing, if the owner has equipment that can clean longer distances.
Figure: 30 TAC §217.55(g)

(h) Tunnels are exempt from manhole spacing requirements.

(i) A manhole must not be located in a stream bed or other area that prevents access to the manhole.

(j) The inside diameter of a manhole must be no less than 48 inches. A manhole diameter must be sufficient to allow personnel and equipment to enter, exit, and work in the manhole, and to allow proper joining of the collection system pipes in the manhole wall.

(k) Manholes must meet the following requirements for covers, inlets, and bases.

(1) Manhole Covers.

(A) A manhole where personnel entry is anticipated requires a clear opening with at least a 30 inch diameter.

(B) A manhole located within a 100-year flood plain must be gasketed and bolted down to prevent inflow.

(C) A manhole cover must be constructed of impervious material with no holes that could allow inflow.

(D) A manhole cover that is located in a roadway must meet or exceed the American Association of State Highways and Transportation Officials standard M-306 for load bearing.

(E) The engineering report must specify and the owner must follow an appropriate national reference standard for manhole gaskets.

(F) Manhole covers must be constructed of cast iron, steel, non-metallic composite material, fiberglass, or other material approved in writing by the executive director.

(2) Manhole Inverts.

(A) The bottom of a manhole must contain a U-shaped channel that is a smooth continuation of the inlet and outlet pipes.

(B) A manhole connected to pipes less than 15 inches in diameter must have a channel depth equal to at least half the largest pipe's diameter.

(C) A manhole connected to a pipe that is at least 15 inches in diameter but not more than 24 inches in diameter must have a channel depth equal to at least three-fourths of the largest pipe's diameter.

(D) A manhole connected to a pipe that is greater than 24 inches in diameter must have a channel depth equal to at least the largest pipe's diameter.

(E) In a manhole with pipes of different sizes, the tops of all the pipes must be at the same elevation and flow channels in the invert must be sloped evenly from pipe to pipe to prevent backpressure.

(F) A bench provided above a channel must slope at a minimum of 0.5 inch per foot.

(G) A manhole invert must be filleted to prevent solids from being deposited if a collection system pipe enters a manhole higher than 24 inches above a manhole invert.

(H) A collection system pipe entering a manhole more than 24 inches above an invert must have a drop pipe.

(l) Steps are prohibited in a manhole.

(m) Connections. A manhole-pipe connection must use watertight, size-on-size resilient connectors that allow for differential settlement and must conform to American Society for Testing and Materials C 923.

(n) Venting.

(1) An owner must ensure that the collection system is vented at least every 1,500 feet.

(2) Vents must be designed to minimize inflow and must be located above a 100-year flood event elevation.

(3) Tunnels must be vented in compliance with this subsection.

(o) Cleanouts. A cleanout diameter must be at least equal to the diameter of the pipe to which it is attached.

§217.56. Trenchless Pipe Installation.

(a) Trenchless technologies that may be used for installation of new collection system pipe include impact moling, pipe ramming, microtunneling, conventional tunneling, bore and jack, and horizontal directional drilling.

(b) Trenchless technologies that may be used for replacement of collection system pipe include pipe bursting, pipe splitting, and pipe jacking.

(c) Trenchless technologies that may be used for lining existing collection system pipes include epoxy spray lining, cured-in-place pipe, and sliplining. These technologies reduce the inside diameter of a pipe.

(d) All other trenchless methods of installing, replacing, or repairing collection system pipe are non-conforming technologies subject to the requirements of §217.7(b) of this title (relating to Types of Plans and Specifications Approvals).

(e) A collection system using a trenchless technology must be designed, installed, operated, maintained, and constructed in accordance with American Society for Testing and Materials (ASTM) or American Water Works Association (AWWA) standards with reference to materials used and construction procedures. In the absence of ASTM or AWWA standards, the executive director review may be based upon other recognized standards used by industry engineers.

(f) The engineering report must include the following:

(1) the trenchless method;

(2) the type of pipe;

(3) the type(s) of soil;

(4) the pipe length and diameter;

(5) the pipe slope;

(6) the method for disconnecting and reconnecting lateral and service connections;

(7) the provisions for flow bypass for existing system; and

(8) the pipe standard.

(g) Collection system pipe that is installed using a trenchless technology is subject to the testing requirements in §217.57 of this title (relating to Testing Requirements for Installation of Gravity Collection System Pipes) and §217.68 of this title (relating to Force Main Testing).

§217.57. Testing Requirements for Installation of Gravity Collection System Pipes.

(a) For a collection system pipe that will transport wastewater by gravity flow, the design must specify an infiltration and exfiltration test or a low-pressure air test. The test must conform to the following requirements:

(1) Low Pressure Air Test.

(A) A low pressure air test must follow the procedures described in American Society for Testing and Materials (ASTM) C 828, ASTM C 924, or ASTM F 1417 or other procedure approved in writing by the executive director. The testing times listed in Table C.4. in Figure: 30 TAC §217.57(a)(1)(C) or Equation C.3 in Figure: 30 TAC §217.57(a)(1)(B)(ii) must be used, regardless of the testing procedure.

(B) For sections of collection system pipe with an average inside diameter less than 36 inches, the following procedure applies, unless a pipe is to be tested as required by paragraph (2) of this subsection.

(i) A pipe must be pressurized to 3.5 pounds per square inch (psi) gauge. If groundwater is present, then a pipe must be pressurized to 3.5 psi gauge greater than the pressure exerted by groundwater above the pipe.

(ii) Once the pressure is stabilized, the minimum time allowable for the pressure to drop from 3.5 psi gauge to 2.5 psi gauge is computed from the following equation:
Figure: 30 TAC §217.57(a)(1)(B)(ii)

(C) Since a K value of less than 1.0 may not be used, the minimum testing time for each pipe diameter is shown in the following table:
Figure: 30 TAC §217.57(a)(1)(C)

(D) An owner may stop a test if no pressure loss has occurred during the first 25% of the calculated testing time.

(E) If any pressure loss or leakage has occurred during the first 25% of a testing period, then the test must continue for the entire test duration as outlined above or until failure of the test.

(F) Collection system pipes with a 27 inch or larger average inside diameter may be air tested at each joint instead of following the procedure outlined in this section.

(G) A testing procedure for a pipe with an inside diameter greater than 33 inches must be approved in writing by the executive director.

(2) Infiltration/Exfiltration Test.

(A) The total exfiltration, as determined by a hydrostatic head test, must not exceed 10 gallons per inch of diameter per mile of pipe per 24 hours at a minimum test head of 2.0 feet above the

crown of a pipe at an upstream manhole, or at least two feet above the existing groundwater level, whichever is greater.

(B) An owner shall use an infiltration test in lieu of an exfiltration test when pipes are installed below the groundwater level.

(C) If the quantity of infiltration or exfiltration exceeds the maximum quantity specified, an owner shall take remedial action in order to reduce the infiltration or exfiltration to an amount within the limits specified by Equation C.3. in Figure: 30 TAC §217.57(a)(1)(B)(ii) before putting the system into service. An owner shall retest a pipe following a remedial action according to the requirements of this chapter.

(b) If a gravity collection system pipe is composed of flexible pipe, deflection testing is also required.

(1) For a collection system pipe with an inside diameter less than 27 inches, deflection measurement requires a rigid mandrel.

(A) Mandrel Sizing.

(i) A rigid mandrel must have an outside diameter not less than 95% of the base inside diameter or average inside diameter of a pipe, as specified in the appropriate standard by the ASTM, American Water Works Association, UNI-BELL, or American National Standards Institute.

(ii) If the mandrel diameter is not specified in the standard used in clause (i) of this subparagraph, the mandrel must have an outside diameter equal to 95% of the inside diameter of a pipe. In this case, the inside diameter of the pipe, for the purpose of determining the outside diameter of the mandrel, must equal the average outside diameter minus two minimum wall thicknesses for outside diameter controlled pipe and the average inside diameter for inside diameter controlled pipe.

(iii) All mandrel dimensions must meet the standard used in clause (i) of this subparagraph.

(B) Mandrel Design.

(i) A mandrel must be constructed of a metal or a rigid plastic material that can withstand 200 psi without being deformed. Adjustable or flexible mandrels are prohibited.

(ii) A mandrel must have an odd number of runners or legs.

(iii) A mandrel must have nine or more runners or legs.

(iv) The length of the mandrel's barrel section must equal at least 75% of the inside diameter of the collection system pipe.

(v) Each mandrel size must use a separate proving ring.

(C) Method Options.

(i) An owner may not use television inspection as a substitute for a deflection test.

(ii) If requested, the executive director may approve, in writing, the use of a deflectometer or a mandrel with removable legs or runners on a case-by-case basis.

(D) Trenchless Testing. The executive director may exempt pipe sections installed by trenchless technologies from mandrel testing in writing on a case-by-case basis.

(2) For a gravity collection system pipe with an inside diameter of 27 inches and greater, other test methods approved in writing by the executive director may be used to determine vertical deflection.

(3) A deflection test method must be accurate to within plus or minus 0.2% deflection.

(4) An owner shall not conduct a deflection test until at least 30 days after the final backfill.

(5) Collection system pipe deflection must not exceed 5%.

(6) If a pipe section fails a deflection test, an owner shall correct the problem immediately, and then must conduct a second test after the final backfill has been in place at least 30 days.

(7) An owner shall not use any mechanical pulling devices during deflection testing.

(8) An owner shall include a certification in the notice of completion required in §217.14 of this title (relating to Completion Notice), that the collection system passed the deflection tests.

(c) An owner of a collection system must inspect the structural integrity of the collection system under the direction of an engineer during the construction and testing phases of the project.

§217.60. Lift Station, Wet Well, and Dry Well Designs.

(a) Pump Controls.

(1) A lift station pump must operate automatically, based on the water level in a wet well. Pump controls must be designed to prevent surcharges in the collection system and must be designed to prevent adverse effects on the operation of the wastewater treatment facility.

(2) The location of a wet well water level mechanism must ensure that the mechanism is unaffected by currents, rags, grease, or other floating materials.

(3) A wet well water level mechanism must be accessible without entering the wet well.

(4) Wet wells with a bubbler system require dual air supplies and dual controls.

(5) Motor control centers must be mounted high enough above grade, but in no case less than 4.0 inches above grade, to prevent water intrusion and corrosion from standing water in the enclosure. Motor control centers must also be protected from the entrance of corrosive gases from wet wells or piping.

(6) Electrical equipment and electrical connections in a wet well or a dry well must meet National Fire Protection Association 70 National Electrical Code® explosion prevention requirements, unless continuous ventilation is provided.

(7) Electronic wet well level control systems must also use a float switch or similar manual backup.

(8) Wet well control settings must be designed to discourage septic conditions in a lift station.

(9) Wet well control settings must be designed to prevent overloading of downstream pipes and treatment units.

(b) Wet Wells.

(1) A wet well must be enclosed by watertight and gas tight walls.

(2) A penetration through a wall of a wet well must be gas tight.

(3) A wet well must not contain equipment requiring regular or routine inspection or maintenance, unless inspection and maintenance can be done without a person entering the wet well.

(4) A gravity pipe discharging to a wet well must be located so that the invert elevation is above the liquid level of a pump's "on" setting.

(5) Gate valves and check valves are prohibited in a wet well.

(6) Gate valves and check valves may be located in a valve vault next to a wet well or in a dry well. Valve vaults shall be ventilated according to subsection (d) of this section.

(7) A pump must run continuously during the pump cycle time, which begins when the pump is activated by the pump controls. Pump cycle time, based on peak flow, must equal or exceed those in the following table:
Figure: 30 TAC §217.60(b)(7)

(8) An evaluation of minimum wet well volume requires the following formula:
Figure: 30 TAC §217.60(b)(8)

(c) Dry well access.

(1) An underground dry well must be accessible for maintenance and shall be ventilated according to subsection (d) of this section.

(2) A stairway in a dry well must use non-slip steps and conform to Occupational Safety and Health Administration regulations with respect to rise and run.

(3) A ladder in a dry well must be made of non-conductive material and be rated for the load necessary for staff and equipment to descend and ascend.

(d) Lift Station Ventilation.

(1) Passive Ventilation for Wet Wells.

(A) Passive ventilation structures must include screening to prevent the entry of birds and insects to a wet well. The screening must be made of corrosion-resistant material.

(B) All mechanical and electrical equipment in a wet well with passive ventilation must be constructed in compliance with explosion requirements in the National Fire Protection Association 70 National Electrical Code®.

(C) A passive ventilation system must be sized to vent at a rate equal to the maximum pumping rate of a lift station, but not to exceed 600 feet per minute through a vent pipe.

(D) The minimum acceptable diameter for an air vent is 4.0 inches.

(E) All vent outlets must be at least 1.0 foot above a 100-year flood plain elevation.

(2) Mechanical Ventilation in Lift Stations.

(A) Dry Wells.

(i) A dry well must use mechanical ventilation.

(ii) Ventilation equipment under continuous operation must have a minimum capacity of six complete air exchanges per hour.

(iii) Ventilation equipment under intermittent operations must provide a minimum capacity of 30 complete air exchanges per hour and be connected to the lift station's lighting system.

(B) Wet Wells.

(i) Mechanical ventilation systems for wet wells must operate continuously.

(ii) The ventilation equipment must provide at least 12 complete air exchanges per hour and be constructed of corrosion-resistant material.

(iii) An owner shall implement odor control measures necessary to prevent a wet well from becoming a nuisance. An owner shall consider the source of potential odor, turbulence, residence time, and other factors that contribute odor at a lift station when selecting odor control measures.

(iv) All mechanical and electrical equipment in a wet well with mechanical ventilation must be constructed in compliance with explosion requirements in National Fire Protection Association 70 National Electrical Code®.

(e) Wet Well Slopes.

(1) A wet well floor must have a smooth finish and minimum slope of 10% to a pump intake.

(2) A wet well design must prevent deposition of solids, grease, and debris under normal operating conditions.

(3) A lift station with greater than 5.0 million gallons per day firm pumping capacity must have anti-vortex baffling.

(f) Hoisting Equipment. A lift station must have permanent hoisting equipment or be accessible to portable hoisting equipment for removal of pumps, motors, valves, pipes, and other similar equipment.

(g) Valve Vault Drains. A floor drain from a valve vault to a wet well must prevent gas from entering a valve vault by including flap valves, "P" traps, submerged outlets, or a combination of these devices.

(h) Dry Well Sump Pumps.

(1) Pumps.

(A) A dry well must use dual sump pumps, each with a minimum capacity of 1,000 gallons per hour and capable of handling the volume of liquid necessary to prevent accumulation of water from condensation and incidental leaks during peak pumping operations.

(B) A sump pump must have a submersible motor and watertight wiring.

(C) A dry well floor must slope toward the sump. A sump must include sump pumps sized to prevent accumulation of water from condensation and incidental leaks.

(D) The minimum sump depth is 6.0 inches. The sump must prevent standing water from accumulating on a dry well floor under normal operation.

(E) A sump pump must operate automatically by use of a float switch or another level-detecting device.

(2) Pipes.

(A) A sump pump must use independent piping that is capable of discharging more than the maximum liquid level of an associated wet well at a rate that will prevent overflow of the wet well.

(B) A sump pump outlet pipe must be at least 1.5 inches in diameter and have at least two check valves in series.

§217.69. Maintenance, Inspection, and Rehabilitation of the Collection System.

(a) The owner of a collection system shall develop a maintenance and inspection program for its collection system with the assistance of an engineer and licensed operators. The owner is responsible

for ensuring that the maintenance and inspection program includes all the information pertaining to inspection, maintenance, and rehabilitation of the collection system necessary to ensure efficient, safe, and environmentally compliant operation. The owner is also responsible for ensuring that all records pertaining to maintenance, inspection, and rehabilitation activities are maintained by the licensed collection system operators. The inspection program must include, at a minimum:

(1) a schedule for inspections, cleaning, and maintenance;

(2) methods for inspecting, cleaning, and maintaining each unit within the collection system;

(3) methods for estimating the current condition and life expectancy of each unit; and

(4) a requirement to estimate the structural integrity of each collection system unit.

(b) The plans and specifications for a rehabilitation project must include, at a minimum:

(1) a surface preparation plan that includes:

(A) a cleaning plan to remove all contaminants;

(B) references for the cleaning method;

(C) dewatering or bypassing provisions; and

(D) field preparation and application logs;

(2) a plan for managing volatile chemicals and dust in confined spaces;

(3) a requirement to follow the manufacturer's installation procedures and specifications;

(4) a requirement to re-inspect the rehabilitation project, including the underlayment and coating, between six months and 11 months after installation; and

(5) a requirement to re-inspect the rehabilitation project, including the underlayment and coating, 18 months after installation.

(c) The owner must maintain records of all activities related to collection system inspection, maintenance, cleaning, and rehabilitation. The records must be made available to the executive director upon request according to the requirements of §217.18 of this title (relating to Provisions that Apply to All Sections in this Chapter).

§217.70. Reclaimed Water Facilities.

(a) In accordance with §217.6 of this title (relating to Submittal Requirements and Review Process), the design of a distribution system that will convey reclaimed water to a user must be submitted, reviewed, and approved in writing by the executive director before the distribution system may be used.

(b) A municipality may be the review authority in accordance with §217.8 of this title (relating to Municipality Reviews), and may approve a reclaimed water distribution system.

(c) A distribution system designed to transport Type II reclaimed water, as defined by §210.33(2) of this title (relating to Quality Standards for Using Reclaimed Water), must comply with this subchapter, as applicable to the project.

(d) A distribution system designed to transport Type I reclaimed water, as defined by §210.33(1) of this title must meet the requirements of subsections (e) - (j) of this section.

(e) Type I reclaimed water gravity pipes must comply with §§217.53 - 217.55, 217.58, and 217.59 of this title (relating to Pipe Design; Criteria for Laying Pipe; Manholes and Related Structures; Testing Requirements for Manholes; and Lift Station Site Requirements). Type I reclaimed water pipe design must prevent pipe and bedding displacement.

(f) Each appurtenance designed to handle reclaimed water must be identified in the plans and the engineering report.

(1) An above-ground hose bib, spigot, or other hand-operated connection is prohibited, except in a lockable, secured area that is only accessible to authorized personnel.

(2) An underground hose bib must:

(A) be located in a locked, below-grade vault, or be operated only by a special tool in a non-lockable, underground service box;

(B) be clearly labeled "NON-POTABLE WATER, DO NOT DRINK" and "NO BEBA EL AGUA;"

(C) be purple; and

(D) be designed to prevent a connection to a standard water hose.

(3) Reclaimed water storage areas, hose bibs, and spigots must include signs in both English and Spanish reading "NON-POTABLE WATER, DO NOT DRINK" and "NO BEBA EL AGUA."

(g) Cross Connection Control and Separation Distances.

(1) A Type I reclaimed water pipe must be at least 4.0 feet from a potable water pipe, as measured from the outside surface of each of the respective pipes.

(2) A physical connection between a potable water pipe and a reclaimed water pipe is prohibited.

(3) Backflow prevention must be provided for all potable water connections to prevent any possibility of reclaimed water entering a drinking water system according to the requirements of §217.330 of this title (relating to Drinking Water Supply Connections).

(4) Where a 4.0 foot separation distance cannot be achieved, a reclaimed water pipe must meet the requirements of subparagraph (A) of this paragraph if the reclaimed water pipe runs parallel to the potable water pipe or subparagraph (B) of this paragraph if the reclaimed water pipe crosses the potable water pipe.

(A) If a new Type I reclaimed water pipe is installed parallel to an existing potable water pipe, the reclaimed water pipe must:

(i) be located below the potable water pipe and maintain a horizontal separation distance of no less than 3.0 feet;

(ii) have a minimum pipe stiffness of 115 pounds per square inch (psi) with compatible joints, or a pressure rating of 150 psi for both pipe and joints; and

(iii) be embedded in cement stabilized sand that meets the requirements of subparagraph (D) of this paragraph.

(B) If a new Type I reclaimed water pipe crosses a potable water pipe, the design of the reclaimed water pipe must:

(i) include one full segment of reclaimed water pipe that is centered on the potable water pipe such that the joints of the reclaimed water pipe are equidistant from the center point of the potable water pipe;

(ii) cross the potable water pipe at a point that is equidistant between the joints of the potable water pipe; and

(iii) have a separation of at least six inches between the outsides of the pipes.

(C) A Type I reclaimed water pipe must have either a pressure rating of 150 psi for both pipe and joints or a pipe stiffness of at least 115 psi with compatible joints for a minimum distance of 4.0 feet in each direction, as measured perpendicularly from any point on the potable water pipe to the Type I reclaimed water pipe.

(D) All portions of reclaimed water pipe within 4.0 feet of a potable water pipe must be embedded in cement stabilized sand that:

(i) has a minimum content of 10% cement, based on loose dry weight volume;

(ii) is installed a minimum of 6.0 inches above and one quarter of the pipe diameter on either side and below a reclaimed water pipe.

(h) Site Selection of Type I Reclaimed Water Pump Stations. A design must comply with §217.59(a) - (c) of this title.

(i) Design of Type I Reclaimed Water Pump Stations. A design must comply with §§217.60(d) and (g); 217.61(d); and 217.62(a) and (c) of this title (relating to Lift Station, Wet Well, and Dry Well Designs; Lift Station Pumps; and Lift Station Pipes), and paragraphs (1) - (3) of this subsection.

(1) Pump Controls.

(A) All electrical equipment must be protected from a 100-year flood event and be protected from potential flooding from a wet well.

(B) Motor control centers must be mounted at least 4.0 inches above grade to prevent water intrusion and corrosion from standing water in the enclosure.

(2) Pumps.

(A) A pump support must prevent movement or vibration during operation.

(B) A submersible pump must use a rail-type pump support incorporating manufacturer-approved mechanisms designed to allow an operator to readily remove and replace any single pump without first entering or dewatering the wet well.

(C) Submersible pump rails and lifting chains must be made of a material that is equivalent to Series 300 stainless steel at minimum.

(3) Pump Station Valves.

(A) The discharge side of each pump must include a check valve followed by a full-closing isolation valve.

(B) Check valves must be swing type with an external lever or external position indicator to show the open and closed positions.

(C) All valve types other than rising stem gate valves must include a position indicator to show the open and closed positions.

(j) Force Main Pipe for Type I Reclaimed Water. A force main pipe for Type I reclaimed water must comply with §§217.54, 217.64, 217.65, 217.67(a) - (c) and (e), and 217.68 of this title (relating to Criteria for Laying Pipe; Materials for Force Main Pipes; Force Main Pipe Joints; Force Main Design; and Force Main Testing) and the following:

(1) A valve casing for an underground isolation valve must include "REUSE" or "NPW" cast into its lid.

(2) A force main pipe must either be purple in color or be contained in an 8.0 mils thick purple polyethylene sleeve conforming to American Water Works Association C105, Class C. In-line isolation valves for reuse pipes must open clockwise to distinguish them from potable water isolation valves.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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30 TAC §§217.63, 217.69, 217.70

Statutory Authority

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The adopted repeal of these sections implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

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SUBCHAPTER D. ALTERNATIVE COLLECTION SYSTEMS

30 TAC §§217.90 - 217.100

Statutory Authority

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commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments and new sections implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.92. Component Sizing.

(a) The components of an alternative collection system must be sized based on existing flow data from a system and service area with similar characteristics, if such data is available. Similar characteristics for sizing alternative collection systems include:

(1) location;

(2) inflow and infiltration characteristics;

(3) peak flows;

(4) pipe materials;

(5) customer base, including sources of wastewater and percent contribution from the wastewater sources; and

(6) any other characteristics required by the executive director.

(b) If flow data from a similar service area with a conventional collection system is used, the engineering report must include the expected effects of inflow and infiltration on the peak flow of the conventional collection system.

(c) Design and construction of an alternative collection system must minimize excess flows from inflow and infiltration.

(d) Roof drains, street drains, or other types of drains that allow entrance of stormwater into an alternative collection system are prohibited.

(e) In the absence of existing data, the sizing of on-site components in an alternative collection system must be based on Table B.1. in Figure: 30 TAC §217.32(a)(3) of this title (relating to Organic Loadings and Flows for New Wastewater Treatment Facilities), in conjunction with the following equation:
Figure: 30 TAC §217.92(e) (No change.)

(f) Design of the off-site components must be based on the maximum flow rate expected, calculated using the following equation:
Figure: 30 TAC §217.92(f)

(1) An equivalent dwelling unit (EDU) is assumed to have an occupancy of 3.5 people. For EDU populations greater than 3.5, the following equation must be used:
Figure: 30 TAC §217.92(f)(1)

(2) The safety factor, "B,"may be adjusted if higher wastewater flows are anticipated. A discharge from commercial or institutional dischargers must be measured directly or calculated under this subsection.

§217.98. Vacuum Sewer Systems.

(a) A vacuum sewer system is a non-conforming technology. The executive director may review a vacuum sewer in accordance with §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals) and the criteria described in this section.

(b) On-Site Component Design.

(1) A building lateral must be constructed using pipe material that has performance characteristics at least equivalent to American Society for Testing and Materials (ASTM) D 2241 Class 160 polyvinyl chloride (PVC) pipe.

(2) A building lateral must use a screened auxiliary vent no less than 4.0 inches in diameter and located no closer than 10.0 feet to a vacuum valve.

(3) A vacuum valve control must be in a tamper-resistant, watertight, and corrosion-resistant structure.

(4) A vacuum valve pit must be watertight to prevent surface and groundwater inflow.

(5) A control mechanism that uses a pressure differential must use atmospheric air supplied by a screened breather on the lateral line.

(6) A vacuum valve must have a minimum capacity of 30 gallons per minute.

(7) A service pipe must be at least 3.0 inches in diameter.

(8) The performance characteristics of a service pipe must meet or exceed the performance characteristics of ASTM D 2241 Class 200 PVC pipe.

(9) A service pipe joint must be made using either vacuum-rated elastomeric gasket or solvent welding.

(10) A vacuum valve and a main pipe must be separated by at least 5.0 feet of service pipe.

(11) If there is a vertical profile change in a service pipe, the vacuum sewer system must have at least 5.0 feet between the vacuum valve and the first profile change, and between the last profile change and the main pipe.

(12) A service pipe must have a minimum slope of 0.2%.

(13) The connection of a service pipe to a main pipe must use a wye and a long radius elbow, oriented so that the invert of the service pipe is higher than the crown of the collection pipe, and must not be located within 6.0 feet of a collection pipe vertical profile change.

(c) Vacuum Sewer System Design.

(1) The performance characteristics of a pipe in a vacuum sewer must meet or exceed the performance characteristics of ASTM D 2241 Class 200 PVC pipe.

(2) A pipe joint must have a vacuum-rated rubber gasket or be solvent welded.

(3) A pipe in a vacuum sewer must be at least 4.0 inches in diameter. A service pipe must be at least 3.0 inches in diameter.

(A) The length of a 4.0 inch diameter vacuum pipe must not exceed 2,000 feet.

(B) The maximum length of a pipe larger than 4.0 inches in diameter must be determined by the amount of friction and lift head loss.

(4) The total available head loss from the farthest input point in a system is 18 feet, consisting of five feet to operate the vacuum valve and 13 feet available for wastewater transport.

(5) A vacuum sewer system must be laid out in a branched pattern designed to balance pressures within the system. A pipe must have a saw-tooth profile that slopes toward a vacuum station.

(6) The design of an upgrade main line transport pipe must reduce the risk of blocking a pipe with trapped sewage.

(7) A collection pipe that is depressed in order to avoid an obstruction must have at least a 20 foot segment centered on the obstruction.

(8) An intersection of collection pipes must include a division valve at both sides of a watercourse crossing, at both sides of an area of unstable soil, and at intervals of no more than 1,500 feet.

(A) A division valve must be either a plug valve or a resilient-seated gate valve capable of sustaining a vacuum of 24 inches of mercury.

(B) A gauge tap must be located downstream of each division valve.

(d) Vacuum station design. The vacuum pump capacity must be the greater of the capacities calculated using the following equations, but not less than 150 gallons per minute:
Figure: 30 TAC §217.98(d)

(e) Vacuum Pumps.

(1) A vacuum pump must be capable of evacuating the system to restore the design vacuum pressure in less than 180 seconds.

(2) The vacuum system must include duplicate vacuum pumps. Each vacuum pump must be capable of delivering 100% of the required airflow and be capable of operating continuously.

(3) A vacuum pump may be either liquid-ring or sliding-vane type. Liquid-ring pumps must be sized at least 15% larger than the necessary vacuum pump capacity.

(4) The transfer pipe must have an electrically or pneumatically controlled plug valve between the collection tank and the reservoir to prevent carryover of liquid into the pump.

(f) Duplicate discharge pumps.

(1) Duplicate discharge pumps are required and must have the capacity to deliver the peak flow with one pump out of service.

(2) A discharge pump must be:

(A) designed for vacuum sewage duty;

(B) equipped with equalizing pipes;

(C) capable of passing a 3.0 inch sphere; and

(D) constructed from corrosion-resistant material.

(3) A discharge pump must use double mechanical shaft seals and have shut-off valves on both the suction and discharge pipes.

(4) The total dynamic head calculation must include the head attributed to overcoming the vacuum in the collection tank.

(5) The available net positive suction head must be greater than the required net positive suction head for the expected vacuum operating range.

(6) The pump suction pipe must be sized 2.0 inches larger than the discharge pipe to prevent wastewater from forming a vortex in the collection tank.

(7) The pump design calculations and pump curves must be included in the engineering report.

(g) Vacuum Reservoir.

(1) A vacuum system that requires a collection tank of 1,600 gallons or more must also include a vacuum reservoir tank with a capacity of at least 400 gallons.

(2) Liquid from a vacuum pump must be piped to the top of the vacuum reservoir tank.

(3) A vacuum reservoir tank must include internal access for periodic cleaning and inspection.

(4) All main pipes must connect to the collection tank.

(5) The wastewater pump suction pipe must lie at the lowest point on the collection tank and away from the main pipe inlet.

(6) The main pipe must enter at the top of the collection tank with the inlet elbows inside the tank turned at an angle away from the pump suction opening.

(7) The collection tank must include probes for liquid level sensing for operation of the discharge pumps.

(8) A vacuum pump must include automatic vacuum switch controls, which must operate based on the liquid level in the reservoir tank.

(9) The collection tank and low system vacuum must include an audiovisual alarm for high liquid level.

(h) An owner shall include a description of the alternative collection system's anti-corrosive protection in the engineering report.

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30 TAC §217.94

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The adopted repeal of this section implements TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

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SUBCHAPTER E. PRELIMINARY TREATMENT UNITS

30 TAC §§217.120 - 217.129

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The adopted amendments and new section implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.129. Primary Clarifiers.

(a) Inlets.

(1) A primary clarifier inlet must provide uniform flow and stilling.

(2) Vertical flow velocity through an inlet stilling well must not exceed 0.15 feet per second at peak flow.

(3) An inlet distribution channel must not have a dead-end corner and must prevent the settling of solids in the channel.

(4) An inlet structure must allow floating material to enter the clarifier.

(b) Scum removal.

(1) A primary clarifier must have scum baffles and a means of collecting and disposing of scum.

(2) A primary clarifier must discharge scum to a sludge digester, or must use an alternative method of disposal approved in writing by the executive director.

(3) The discharge of scum to any open drying area is prohibited.

(4) A primary clarifier with a design flow equal to or greater than 25,000 gallons per day must include a mechanical skimmer.

(5) A primary clarifier with a design flow less than 25,000 gallons per day must use a mechanical skimmer or hydraulic differential skimming. If hydraulic differential skimming is used, it must be capable of removing scum from the entire operating surface of the clarifier.

(6) A pump used for pumping scum must be specifically designed to pump scum.

(c) Effluent weirs.

(1) An effluent weir must not cause turbulence or a localized vertical flow velocity that would pull solids over the effluent weir in the primary clarifier.

(2) An effluent weir must be designed to prevent hydraulic short circuiting through a primary clarifier.

(3) An effluent weir must be level, and must be designed to be adjustable for re-leveling.

(4) Effluent weir loading must not exceed 20,000 gallons per day at peak flow per linear foot of weir length for a wastewater treatment facility with a design flow of 1.0 million gallons per day or less.

(5) Weir loading must not exceed 30,000 gallons per day at peak flow per linear foot of weir length for a wastewater treatment facility with a design flow greater than 1.0 million gallons per day.

(d) Primary clarifier basin sizing.

(1) The surface area of a primary clarifier must be used to determine the proper weir overflow rates.

(2) The actual primary clarifier size must be based on the larger of two surface area calculations: peak flow rate and design flow surface loading rate.

(3) Surface loading rates and detention times for a primary clarifier in subparagraphs (A) and (B) of this paragraph are based upon a minimum side water depth of 10.0 feet.

(A) Surface loading rates, excluding recirculation flow, must not exceed:

(i) 1,800 gallons per day per square foot at peak flow; and

(ii) 1,000 gallons per day per square foot at design flow.

(B) Detention Time.

(i) Detention time at peak flow must be at least 54 minutes (0.9 hour).

(ii) Detention time at design flow must be at least 108 minutes (1.8 hours).

(iii) Side water depth may be adjusted from a minimum of 10 feet to a maximum of 18 feet, as long as the detention time remains unchanged.

(iv) The detention time must be based on the effective volume and the weir overflow rate of a circular or rectangular clarifier.

(I) The effective volume includes all liquid above the sludge blanket.

(II) For a cone bottom tank, the top of the sludge blanket is considered to be at the top of the cone.

(III) The design of a flat bottom tank must include additional depth for a sludge blanket with a thickness of 3.0 feet.

(e) Side Water Depth. The minimum side water depth for primary clarifiers is 10.0 feet. For a primary clarifier, the side water depth is defined as:

(1) the water depth from the top of the cone in a cone bottom tank to the water surface; or

(2) the water depth from 3.0 feet above the bottom of a flat bottom tank to the water surface.

(f) Freeboard. The walls of a primary clarifier must extend at least 6.0 inches above the surrounding ground surface and must provide a minimum freeboard of 12.0 inches at peak flow.

(g) Drains.

(1) A primary clarifier must have the capability of draining completely without bypassing secondary treatment.

(2) A portable dewatering pump may be used for complete dewatering.

(h) Accessibility. A primary clarifier must be accessible for operation and maintenance.

(i) Five-day biochemical oxygen demand (BOD_5) Removal. The design of a primary clarifier must be based on no greater than 35% BOD_5 reduction, unless a higher efficiency is justified by a pilot study or data from a similar full-scale operation.

(j) Sludge Transfer.

(1) A primary clarifier unit must include mechanical sludge collection equipment designed to remove sludge in a manner that will minimize odor development and transfer the sludge for subsequent processing.

(2) A gravity sludge transfer pipe must be at least 8.0 inches in diameter.

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SUBCHAPTER F. ACTIVATED SLUDGE SYSTEMS

30 TAC §§217.151 - 217.164

Statutory Authority

The amendments and new section are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments and new section implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.152. Requirements for Clarifiers.

(a) Inlets.

(1) A clarifier must have an inlet valve or gate.

(2) A clarifier inlet must provide uniform flow and stilling.

(3) A transfer pipe must not trap or entrain air.

(4) Vertical flow velocity through an inlet stilling well must not exceed 0.15 feet per second at peak flow.

(5) An inlet distribution channel must be designed to prevent the settling of solids in the channel.

(b) Pumped Inflow.

(1) For a wastewater treatment facility with pumped inflow, a clarifier must be able to accommodate all flow without overloading or overtopping the clarifier effluent weir.

(2) A clarifier must hydraulically accommodate peak flows without adversely affecting treatment in the clarifier or in subsequent treatment units.

(c) Scum removal.

(1) A clarifier must include scum baffles and a means for scum collection and disposal.

(A) A clarifier at a wastewater treatment facility with a design flow equal to or greater than 10,000 gallons per day must use a mechanical skimmer.

(B) A clarifier at a wastewater treatment facility with a design flow less than 10,000 gallons per day may use either mechanical skimming or hydraulic differential skimming. Hydraulic differential skimming may only be used if the scum pickup is capable of removing scum from the entire operating surface of the clarifier.

(2) Scum collected from a clarifier in a wastewater treatment facility using an activated sludge process or an aerated lagoon must be:

(A) discharged to an aeration basin or digester; or

(B) disposed of using any method that complies with Chapter 312 of this title (relating to Sludge Use, Disposal, and Transportation).

(3) If scum contains debris or foreign materials that were not removed by preliminary treatment, debris and foreign materials must be removed from the scum before the scum is discharged to a digester or applied to the land. Otherwise, scum containing debris or other foreign materials must be sent to a landfill or a sludge-only monofill.

(4) Scum collected from a clarifier in a wastewater treatment facility not using an activated sludge process and not using an aerated lagoon must be discharged to a sludge digester or must be disposed of using any disposal method that complies with Chapter 312 of this title.

(5) Discharge of scum to a drying area that is open to the atmosphere is prohibited.

(6) Storage or holding of scum in a containment vessel that is open to the atmosphere is prohibited. Scum must be contained in a vessel that is not open to the atmosphere or must be routed to a treatment unit in the wastewater treatment facility for further processing.

(7) A pump used for pumping scum must be specifically designed to pump scum.

(d) Clarifier Effluent Weirs.

(1) A clarifier effluent weir must prevent turbulence or localized high vertical flow velocity in a clarifier.

(2) A clarifier effluent weir must be located a minimum of 6.0 inches from an outer wall or baffle, except for a clarifier effluent weir and launder that is attached to a wall. A clarifier effluent weir must prevent the short-circuiting of flow throughout the clarifier.

(3) A clarifier effluent weir must be level, and must be adjustable to allow re-leveling of the weir and to provide for minor changes to the water surface elevation in the clarifier.

(4) For a wastewater treatment facility with a design flow of less than 1.0 million gallons per day, the clarifier effluent weir loading must not exceed 20,000 gallons per day at the peak flow per linear foot of weir length.

(5) For a wastewater treatment facility with a design flow equal to or greater than 1.0 million gallons per day, the clarifier effluent weir loading must not exceed 30,000 gallons per day at the peak flow per linear foot of weir length.

(6) A center-feed circular clarifier must have effluent weirs around the entire perimeter of the clarifier.

(e) Sludge Pipes.

(1) The transfer of sludge from a clarifier to a treatment or processing unit must not negatively affect treatment efficiency of the unit that receives the sludge.

(2) A sludge pipe must be a minimum of 4.0 inches in diameter.

(3) The flow velocity in a sludge pipe must be greater than 2.0 feet per second for a wastewater treatment facility with a design flow greater than 150,000 gallons per day. For a wastewater treatment facility with a design flow of 150,000 gallons per day or less, the flow velocity in the sludge pipe must be greater than 0.5 feet per second. The executive director may consider approving lower velocities in writing for a wastewater treatment facility that uses a biological nutrient removal process, on a case-by-case basis.

(4) A sludge pipe must be accessible for cleaning.

(5) A means to remove a blockage from all sludge pipes must be provided at the wastewater treatment facility.

(f) Sludge Collection Equipment.

(1) A clarifier that is part of a wastewater treatment facility with a design flow of 10,000 gallons per day or greater must include mechanical sludge collecting equipment.

(2) A clarifier that is part of a wastewater treatment facility with a design flow of less than 10,000 gallons per day must include manual equipment designed to move settled sludge to the sludge collection pipe, unless mechanical sludge collecting equipment is provided.

(g) Side Water Depth.

(1) For a secondary clarifier, the side water depth is defined as:

(A) the water depth from the top of the cone in a cone bottom tank to the water surface; or

(B) the water depth from 2.0 feet above the bottom of a flat bottom tank to the water surface.

(2) The minimum side water depth for a clarifier with a mechanical sludge collector is:

(A) 10.0 feet if the surface area is equal to or greater than 300 square feet; and

(B) 8.0 feet if the surface area is less than 300 square feet.

(3) A clarifier with a hopper bottom must have a minimum side water depth of 8.0 feet, not including the hopper and sump. The corresponding surface area and surface loading relationships in Figure: 30 TAC §217.152(g)(3) must be used.
Figure: 30 TAC §217.152(g)(3)

(4) The hopper portion of a hopper bottom clarifier must have a vertical depth of at least 4.0 feet.

(h) Restrictions on Hopper Bottom Clarifiers.

(1) A hopper bottom clarifier is prohibited for use in a wastewater treatment facility with a design flow equal to or greater than 10,000 gallons per day.

(2) Each hopper cell of a hopper bottom clarifier must have individually controlled sludge removal equipment.

(3) A hopper bottom clarifier must have a smooth wall finish.

(4) A hopper bottom clarifier must have an upper hopper slope of not less than 60 degrees from horizontal.

(i) Restrictions on Short Circuiting. The influent stilling baffle and effluent clarifier weir must prevent hydraulic short circuiting.

(j) Return Sludge Pumping Capacity.

(1) The capacity of a return sludge pumping system must be calculated based on the area of the activated sludge clarifier or clarifiers, including the stilling well area.

(2) The return sludge pumping capacity must be equal to or greater than the clarifier underflow rate in gallons per day per square foot (gpd/sf) with the largest pump out of service.

(3) A return sludge pumping system must be capable of pumping at least 200 gpd/sf but not more than 400 gpd/sf.

(4) The return sludge pumping capacity must be controlled via throttling, variable speed drives, or multiple pump operation.

§217.154. Aeration Basin and Clarifier Sizing--Traditional Design.

(a) This section applies to the traditional approach for sizing an aeration basin and clarifier, and is based on empirically-derived design values that have been used historically as standard engineering practice.

(b) Aeration Basin Sizing.

(1) An aeration system must be designed to maintain a minimum dissolved oxygen concentration of 2.0 milligrams per liter (mg/l) throughout the aeration basin at the maximum diurnal organic loading rate determined in §217.32(a)(3) and Figure: 30 TAC §217.32(a)(3) of this title (relating to Organic Loading and Flows for New Wastewater Treatment Facilities). The executive director may consider alternative dissolved oxygen specifications for designs that include biological nutrient removal or tapered aeration for energy conservation, which must be approved in writing.

(2) Based on the calculated organic load, the aeration basin volume must be designed to ensure that the organic loading on the aeration basin does not exceed the organic loading rates in the following table:
Figure: 30 TAC §217.154(b)(2)

(3) When identifying the aeration basin temperature for the process design in Table F.1. in Figure: 30 TAC §217.154(b)(2), the owner must use the average of the lowest consecutive seven-day mean aeration basin temperature from a wastewater treatment facility with similar characteristics. For purposes of this subsection, a similar wastewater treatment facility:

(A) is located within 50 miles of the wastewater treatment facility where the planned aeration basin or system will be installed;

(B) uses the same placement of the aeration basin (in-ground or above-ground); and

(C) has any other characteristics required by the executive director in writing.

(c) Clarifier Sizing.

(1) The following table establishes the maximum surface loading rates and the minimum detention times that must be used to determine the size of a clarifier:
Figure: 30 TAC §217.154(c)(1)

(2) A clarifier must meet both the detention time and weir overflow rate criteria in Table F.2. in Figure: 30 TAC §217.154(c)(1).

(A) When calculating weir overflow rates for a clarifier, return activated sludge flow must not be used in the calculation of the maximum weir overflow rate, in compliance with Table F.2. in Figure: 30 TAC §217.154(c)(1).

(B) When calculating the weir overflow rate for a clarifier, the surface area of the stilling well may be included as part of the clarifier surface area.

§217.155. Aeration Equipment Sizing.

(a) Oxygen Requirements (O_2R) of Wastewater.

(1) An aeration system must be designed to provide a minimum dissolved oxygen concentration in the aeration basin of 2.0 milligrams per liter (mg/l).

(2) Mechanical and diffused aeration systems must supply the O_2R calculated by Equation F.2. in Figure: 30 TAC §217.155(a)(3), or use the recommended values presented in Table F.3. in Figure: 30 TAC §217.155(a)(3), whichever is greater.

(3) The O_2R values in Table F.3. in Figure: 30 TAC §217.155(a)(3) use concentrations of 200 mg/l five-day biochemical oxygen demand (BOD_5) and 45 mg/l ammonia-nitrogen (NH3-N) in Equation F.2. in Figure: 30 TAC §217.155(a)(3):
Figure: 30 TAC §217.155(a)(3)

(b) Diffused Aeration System. An airflow design must be based on either paragraph (1) or (2) of this subsection.

(1) Design Airflow Requirements - Default Values. A diffused aeration system may use Table F.4. in Figure: 30 TAC §217.155(b)(1) to determine the airflow for sizing aeration system components:
Figure: 30 TAC §217.155(b)(1)

(2) Design Airflow Requirements - Equipment and Site Specific Values. A diffused aeration system may be based on calculations of the airflow requirements for the diffused aeration equipment in accordance with subparagraphs (A) - (D) of this paragraph.

(A) Determine Clean Water Oxygen Transfer Efficiency.

(i) A diffused aeration system design may be based on a clean water oxygen transfer efficiency greater than 4%, only if the clean water oxygen transfer efficiency is supported by full scale diffuser performance data. Full scale performance data must be developed by an accredited testing laboratory or a licensed professional engineer. Data developed by a professional engineer must be sealed by the engineer.

(ii) A testing laboratory or licensed engineer shall use the oxygen transfer testing methodology described in the most current version of the American Society of Civil Engineers (ASCE) publication, *A Standard for the Measurement of Oxygen Transfer in Clean Water.*

(iii) A diffused aeration system with a clean water transfer efficiency greater than 18% for a coarse bubble system or greater than 26% for a fine bubble system is considered an innovative technology and is subject to §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals).

(iv) A design for clean water transfer efficiencies obtained at temperatures other than 20 degrees Celsius must be adjusted for a diffused aeration system to reflect the approximate transfer efficiencies and air requirements under field conditions by using the following equation:
Figure: 30 TAC §217.155(b)(2)(A)(iv) (No change.)

(B) Determining Wastewater Oxygen Transfer Efficiency (WOTE).

(i) The WOTE must be determined from clean water test data by multiplying the clean water transfer efficiency by 0.65 for a coarse bubble diffuser or by multiplying the clean water transfer efficiency by 0.45 for a fine bubble diffuser.

(ii) The executive director may require additional testing and data to justify actual WOTE for a wastewater treatment facility treating wastewater containing greater than 10% industrial wastes.

(C) Determining Required Airflow (RAF). The RAF must be calculated using the following equation to determine the size needed for a diffuser submergence of 12.0 feet. If the diffuser submergence is other than 12.0 feet, a diffused aeration system must correct the RAF, as detailed in subparagraph (D) of this paragraph.
Figure: 30 TAC §217.155(b)(2)(C)

(D) Corrections to RAF based on varying diffuser submergence depths. The engineer shall provide the manufacturer's laboratory testing data if the diffuser submergence depth in the design is the same as the diffuser submergence depth in the manufacturer's testing. The engineer shall apply a correction factor from Table F.5. in Figure: 30 TAC §217.155(b)(2)(D) to the required airflow rate calculated using Equation F.4. in Figure: 30 TAC §217.155(b)(2)(C) if the manufacturer's laboratory testing data is not available for the design diffuser submergence depth. Linear interpolation is allowed for dif-

fuser submergence depths not shown in Table F.5. in Figure: 30 TAC §217.155(b)(2)(D).
Figure: 30 TAC §217.155(b)(2)(D) (No change.)

(3) Mixing Requirements for Diffused Air. The air requirements for mixing must be calculated using an airflow rate:

(A) from *Design of Municipal Wastewater Treatment Plants, Fifth Edition,* Chapter 11, a joint publication of the ASCE and the Water Environment Federation, for mixing requirements; or

(B) greater than or equal to 20 standard cubic feet per minute (scfm) per 1,000 cubic feet for a coarse bubble diffuser and greater than or equal to 0.12 scfm per square foot for a fine bubble diffuser.

(4) Blowers and Air Compressors.

(A) A blower and an air compressor system must provide the required design airflow rate for biological treatment and mixing, based on paragraphs (1) - (3) of this subsection, and the air requirements of all other supplemental units where air must be supplied.

(B) The engineering report must include blower and air compressor calculations that show the maximum air requirements for the temperature range where the wastewater treatment facility is located, including both summer and winter conditions, and the impact of elevation on the air supply.

(C) A diffused aeration system must have multiple compressors arranged to provide an adjustable air supply to meet the variable organic load on the wastewater treatment facility.

(D) The air compressors must be capable of handling the maximum design air requirements with the largest single air compressor out of service.

(E) A blower unit and a compressor unit must restart automatically after a power outage, or have a telemetry system or an auto-dialer with battery backup to notify an operator of any outage.

(F) The design of a blower and air compressor system must specify blowers and air compressors with sufficient capacity to handle air intake temperatures that may exceed 100 degrees Fahrenheit (38 degrees Celsius), and pressures that may be less than standard (14.7 pounds per square inch absolute).

(G) The design of a blower and air compressor system must specify the capacity of the motor drive necessary to handle air intake temperatures that may be 20 degrees Fahrenheit (-7 degrees Celsius) or less.

(H) A blower must include a governor or other means to regulate airflow.

(5) Diffuser Systems - Additional Requirements.

(A) Diffuser Submergence.

(i) For a new wastewater treatment facility, the submergence depth for any diffuser must meet the minimum depths in the following table:
Figure: 30 TAC §217.155(b)(5)(A)(i) (No change.)

(ii) For an alteration or expansion of an existing wastewater treatment facility, the diffuser submergence depth may vary from the values in Table F.6. in Figure: 30 TAC §217.155(b)(5)(A)(i) to match existing air pressure, delivery rate, and hydraulic requirements.

(iii) The submerged depth for a diffuser must be at least 7.0 feet. A wastewater treatment facility with a design flow of less than 5,000 gallons per day may have a diffuser submergence depth of less than 7.0 feet, but only if justified by the engineer and approved in writing by the executive director.

(B) Grit Removal. A wastewater treatment facility that uses diffusers and has wastewater with concentrations of grit that would interfere with the operation of a diffuser must either include a grit removal unit upstream of an aeration process, or include multiple aeration basins so that one basin may be taken out of service to allow for grit removal.

(C) Aeration System Pipes.

(i) Each diffuser header must include an open/close or throttling type control valve that can withstand the heat of compressed air.

(ii) A diffuser header must be able to withstand temperatures up to 250 degrees Fahrenheit.

(iii) The capacity of an air diffuser system, including pipes and diffusers, must equal 150% of design air requirements.

(iv) The design of an aeration system must minimize head loss. The engineering report must include a hydraulic analysis of the entire air pipe system that quantifies head loss through the pipe system and details the distribution of air from the blowers to the diffusers.

(v) An aeration system may use non-metallic pipes only in the aeration basin, but the pipes must be a minimum of 4.0 feet below the average water surface elevation in the aeration basin.

(c) Mechanical Aeration Systems.

(1) Required Airflow - Equipment and Site Specific Values. The airflow requirements for a mechanical aeration system must be calculated in accordance with subparagraphs (A) and (B) of this paragraph.

(A) Clean Water Oxygen Transfer Efficiency.

(i) The engineering report must include the clean water oxygen transfer efficiency rate for the mechanical equipment.

(ii) The clean water oxygen transfer efficiency must not exceed 2.0 pounds of oxygen per horsepower-hour unless justified by full scale performance data. Full scale performance data must be developed by an accredited testing laboratory or a licensed professional engineer. Data developed by a professional engineer must be sealed by the engineer. Full scale performance tests must follow the oxygen transfer testing methodology described in the most current version of the ASCE publication, *A Standard for the Measurement of Oxygen Transfer in Clean Water.*

(iii) A technology with a proposed clean water oxygen transfer efficiency in excess of 2.0 pounds of oxygen per horsepower-hour is innovative technology and subject to the requirements of §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals).

(B) Wastewater Oxygen Transfer Efficiency.

(i) The engineering report must include the actual wastewater oxygen transfer efficiency and data to justify the actual wastewater oxygen transfer efficiency.

(ii) If a wastewater treatment facility will receive more than 10% industrial wastewater by volume, all mechanical aeration equipment must be sized based on a wastewater oxygen transfer efficiency of no more than 0.65 times the clean water oxygen transfer efficiency.

(2) Mixing Requirements.

(A) A mechanical aeration device must provide mixing to prevent mixed liquor suspended solids (MLSS) deposits under any flow condition.

(B) A mechanical aeration device must be capable of re-suspending the MLSS after a shutdown period.

(C) Mechanical aeration devices with a channel or basin layout must have a minimum of 100 horsepower per million gallons of aeration basin volume or 0.75 horsepower per thousand cubic feet of aeration basin volume.

(3) Mechanical Components.

(A) Process Reliability.

(i) Each aeration basin must include a minimum of two mechanical aeration devices.

(ii) A mechanical aeration device must meet the maximum design requirements for oxygen transfer with the largest single unit out of service.

(iii) A mechanical aeration device must either automatically restart after a power outage, or have a telemetry system or an auto-dialer with battery backup to notify an operator of any outage.

(B) Operation and maintenance.

(i) A mechanical aeration device must have two-speed or variable-speed drive units, unless another means of varying the output is provided.

(ii) To vary the output, a mechanical aeration device may use single-speed drive units with timer-controlled operation if the device also includes an independent means of mixing.

(iii) A wastewater treatment facility must be designed such that an operator is able to perform routine maintenance on the aeration equipment without coming into contact with wastewater.

(iv) Each bearing, drive motor, or gear reducer must be accessible to an operator for maintenance and must be equipped with a splash prevention device. A splash prevention device must be designed to protect the operator from contact with wastewater and to prevent wastewater from escaping the basin.

(v) Each gear reducer must have a drainage system to prevent operator contact with mixed liquor.

§217.156. Sequencing Batch Reactors.

(a) System Sizing and Reliability.

(1) A sequencing batch reactor (SBR) must meet the reliability requirements in §217.155(b) and (c)(3) of this title (relating to Aeration Equipment Sizing), and power source reliability requirements in §217.36 of this title (relating to Emergency Power Requirements).

(2) An SBR must have a minimum decantable volume that is sufficient to pass the design flow, and must be capable of meeting permitted effluent limits, with the largest basin out of service.

(3) A two-basin wastewater treatment facility without removable aeration devices is required to have aerated storage of mixed liquor separate from the SBR tank(s).

(4) An SBR with a fixed level decanter must have more than two basins and additional decantable storage volume.

(5) An equalization basin is required if an SBR has fixed decant equipment and decant volumes that do not accommodate the peak flow.

(6) Organic loadings must conform to the values in Table F.1. in Figure: 30 TAC §217.154(b)(2) of this title (relating to Aeration Basin and Clarifier Sizing--Traditional Design). Organic loadings must be below 35 pounds of five-day biochemical oxygen demand per 1,000 cubic feet of tank volume.

(7) The reactor mixed liquor suspended solids (MLSS) level at the normal operating level must range from at least 3,000 milligrams per liter (mg/l) to not more than 5,000 mg/l.

(8) The minimum depth of the MLSS during a react phase is 9.0 feet.

(9) The minimum side water depth of an SBR tank is 12 feet.

(10) An SBR must include sludge digestion pursuant to the requirements in Subchapter J of this chapter (relating to Sludge Processing).

(b) Decanter Design.

(1) A decanter must control the velocity at an inlet port or at the edge of submerged weirs to prevent vortexing, disturbance of the settled sludge, and entry of floating materials.

(2) The entrance velocity to a decanter must not exceed 1.0 foot per second.

(3) A decanter must draw effluent from below the water surface and include a device that excludes scum.

(4) A decanter must maintain a zone of separation between the settled sludge and the decanter of no less than 12 inches.

(5) A decanter must prevent solids from entering the decanter during a react cycle by using one the following methods:

(A) recycling treated effluent to wash out solids trapped in a decanter;

(B) mechanically closing a decanter when it is not in use; or

(C) filling a decanter with air except during a decant period.

(6) The performance of a decanter and related pipes and valves must not be affected by ambient temperatures below 32 degrees Fahrenheit.

(7) A fixed decanter is prohibited in a basin where simultaneous fill and decant may occur.

(8) For any system of tanks that is fed sequentially, the size of the decant system must accommodate the design flow with a constant cycle time with the largest tank out of service.

(9) An SBR system utilizing more than two basins must allow the decanting of at least two tanks simultaneously.

(10) If units downstream of an SBR are not capable of accepting the peak flow rate of the decanting cycle, flow equalization must be provided between the decanter and the downstream units.

(c) SBR Tank Details.

(1) An SBR requires multiple tanks.

(2) An SBR with two tanks or an SBR system operating with a continuous feed during settling and decanting phases must include influent baffling and physical separation from the decanter.

(3) An elongated tank must be used for an SBR system if influent baffling is required.

(4) An SBR tank must have a minimum freeboard of 18 inches at the maximum liquid level.

(5) An SBR tank must not be buoyant when empty.

(6) Structures using a common wall must be designed to accommodate the stresses generated when one basin is full and an adjacent basin is empty.

(7) Each SBR wall must be watertight.

(8) A sump must be provided in any basin with a flat bottom.

(9) An SBR system must have a dedicated means of transferring sludge between aeration basins.

(10) An SBR system must include a means of scum removal in each aeration basin.

(11) Each SBR tank must include a dewatering system and an emergency overflow to another aeration tank or a storage tank.

(12) At a wastewater treatment facility that is not staffed 24-hours per day, a manually operated SBR tank must include a high-level alarm that notifies wastewater treatment facility staff in accordance with §217.161 of this title (relating to Electrical and Instrumentation Systems).

(13) A design must specify the means and frequency for removal of grit and other debris from the SBR tanks.

(14) All equipment must be accessible for inspection, maintenance, and operation. Walkways shall be provided to allow inspection, maintenance, and process control sampling and to allow access to instrumentation, mechanical equipment, and electrical equipment.

(15) An SBR may use fine screens pursuant to §217.122 of this title (relating to Fine Screens).

(16) An SBR preceded by a primary clarifier may use a comminutor.

(17) An SBR must have a sufficient number of tanks to operate at design flow with the largest tank out of service.

(d) Aeration and Mixing Equipment.

(1) In addition to the requirements of §217.155 of this title, aeration equipment must handle the cyclical operation in an SBR.

(2) The aeration and mixing equipment must not interfere with settling.

(3) A dissolved oxygen concentration of 2.0 mg/l must be maintained in a tank during the fill cycle.

(4) The design must specify the blower discharge pressure at the maximum water depth.

(5) An SBR used for biological nutrient removal or reduction must meet the design requirements of §217.163 of this title (relating to Advanced Nutrient Removal).

(6) The design of an SBR must allow for the removal of air diffusers or mechanical aeration devices without dewatering the tank.

(e) Control Systems.

(1) The motor control center must include programmable logic controllers (PLC) that are able to operate with limited operator adjustment and be programmed to meet the effluent limitations in the wastewater permit at the design loadings. An SBR must have the ability to run in full manual mode.

(2) A hard-wired backup means of operating the SBR is required.

(3) The PLC must include battery backup. A duplicate set of all circuit boards must be kept at the wastewater treatment facility.

(4) Adequate controls for the separate operation of each tank must be provided.

(5) A tank level system must include floats or pressure transducers.

(A) A float system must be protected from prevailing winds and freezing.

(B) A bubbler system in a tank level system is prohibited.

(6) The control panel switches must include the following switches:

(A) pumps - hand/off/automatic;

(B) valves - open/closed/automatic;

(C) blowers or aerators - hand/off/automatic; and

(D) selector switch for tank(s) - in operation/standby.

(7) The control panel visual displays must include:

(A) a mimic diagram of the process that shows the status and position of all pumps, valves, blowers, aerators, and mixers;

(B) process cycle and time remaining;

(C) instantaneous and totalized influent flow to the wastewater treatment facility and effluent flow of the final discharge;

(D) tank level gauges or levels;

(E) sludge pumping rate and duration; and

(F) airflow rate and totalizer.

(8) The annunciator panel must include the following alarm condition indicators:

(A) high and low water levels in each tank;

(B) failure of all automatically operated valves;

(C) decanter failure;

(D) blowers, if used - low pressure, high temperature, and failure;

(E) mechanical aerator, if used - high temperature and failure;

(F) pump - high pressure and failure; and

(G) mixers, if used - failure.

§217.162. Air Lift Pump Design.

(a) Required Calculations.

(1) The engineering report must include calculations to determine static and dynamic pressure head necessary for operation of each air lift pump. Static and dynamic pressure head requirements for the suction line must be considered in the calculations.

(2) Air lift pump systems must be designed to meet the range of required flow rates.

(3) The engineering report must include the number of air lift pumps required and the minimum and maximum:

(A) design airflow rate for each air lift pump;

(B) design flow rate for each air lift pump; and

(C) design flow rate for the system.

(b) Design.

(1) Air lift pumps may not be used to pump sludge from a primary clarifier.

(2) Air lift pumps must be at least three inches in diameter.

(3) The design air flow rates must be based on the actual submergence of an air lift pump.

(4) Blowers for an air lift pump system must be sized to provide the maximum design airflow rate required by the system.

(5) The discharge end of an air lift pump must prevent splashing.

(6) Air lift pumps located inside of a basin must allow for cleaning without removal from the basin.

(7) An air lift pump must provide a way to release trapped air.

(8) Air lift pump systems for return activated sludge, waste activated sludge, internal recycle, and other systems that affect overall process performance must have a minimum dynamic submergence of 60%.

(9) Air lift pump systems for scum removal, grit removal, or for transfers that do not affect overall process performance must have a minimum dynamic submergence of 50%.

(10) Air lift pump systems for return activated sludge, waste activated sludge, internal recycle, and other systems that affect overall process performance must provide a method for flow measurement using:

(A) an external box with a weir; or

(B) a rotameter, or other flow measurement device approved in writing by the executive director on the air line to each pump. When flow is measured on the air line, the engineering report must include a graph correlating the air flow rate in the air line to the liquid flow rate of the air lift pump.

(c) Redundancy.

(1) A backup pump or other means of transfer must be provided for each air lift pump system.

(2) Air lift systems for return activated sludge, waste activated sludge, and internal recycle must be able to operate at full capacity with the largest pumping unit out of service.

§217.163. Advanced Nutrient Removal.

(a) For a wastewater treatment facility designed to provide advanced nutrient removal, the engineering report must specify the process units needed to achieve the effluent limits established in the wastewater treatment facility's wastewater permit.

(b) Biological nutrient removal using an activated sludge process, membrane filtration, sand filtration, or a combination of these processes may be used for advanced nutrient removal without applying for the executive director's approval under the innovative or non-conforming technology criteria in §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals). A biological nutrient removal process that involves fixed-film treatment is subject to the executive director's determination under §217.7(b)(2) of this title.

(c) If a biological nutrient removal unit is proposed, the engineering report must include the:

(1) anticipated food to microorganism ratio in both the anoxic and anaerobic zones;

(2) volatile fatty acid recycle ratio; and

(3) design of a foaming control system.

(d) If a chemical addition unit is proposed, it must comply with the chemical containment requirements in Subchapter K of this chapter (relating to Chemical Disinfection). Chemical addition may only be used if approved in writing by the executive director.

§217.164. Aeration Basin and Clarifier Sizing--Volume-Flux Design Method.

(a) A volume-flux design must size an aeration basin and clarifier on the relationship between the volume-flux of solids in the secondary clarifier, the sludge volume index (SVI), and the sludge blanket depth. The following design approach may be used as an alternative to the traditional design approach. If the volume-flux design approach is used, it must be used consistently throughout the design. No other design method may be used in combination with the volume-flux design method.

(1) A design may base the aeration tank volume and the clarifier volume on a mixed liquor suspended solids (MLSS) and floc volume (at SVI of 100) for the required minimum solids retention time.

(2) Larger values of MLSS require less aeration tank volume and greater clarifier volume.

(3) By examining a range of values of the MLSS and the floc volume, the most favorable arrangement for a wastewater treatment facility may be selected.

(4) When using the volume-flux design method, the size of an aeration basin and a clarifier must be in accordance with the requirements of this section.

(b) Design approach.

(1) Determine the solids retention time (SRT) needed to meet the permit requirement for five-day biochemical oxygen demand (BOD_5) and ammonia-nitrogen (NH_3-N) effluent limitations.

(2) Select a trial value mixed liquor floc volume (for example, MLSS at an SVI of 100).

(3) Using the design organic loading rate, the required SRT and yield, and the trial MLSS, determine the aeration tank volume.

(4) Using the trial value of mixed liquor flow volume, determine the clarifier area.

(5) For clarifiers overloaded in thickening at the peak flow, determine the final MLSS during storm flow and the resulting sludge blanket depth.

(6) Observing effluent limitations, determine the side water depth (SWD) and volume of the clarifier.

(7) Repeat the steps in paragraphs (2) - (6) of this subsection at different mixed liquor floc volumes and select the most favorable conditions for the wastewater treatment facility design.

(c) Aeration Basin Sizing.

(1) For a wastewater treatment facility that does not require nitrification, the minimum SRT is as follows:

(A) for a wastewater treatment facility with an effluent BOD_5 monthly average limitation of 20 milligrams per liter (mg/l), the minimum SRT is three days;

(B) for an extended aeration wastewater treatment facility with an effluent BOD_5 monthly average limitation of 20 mg/l, the minimum SRT is 22 days;

(C) for a wastewater treatment facility with an effluent BOD_5 monthly average limitation less than 20 mg/l, the minimum SRT is 4.5 days; and

(D) for an extended aeration wastewater treatment facility with an effluent BOD_5 monthly average limitation of less than 20 mg/l, the minimum SRT is 25 days.

(2) For a wastewater treatment facility that requires nitrification, the minimum SRT is based on the winter reactor temperature as set forth in §217.154(b) of this title (relating to Aeration Basin and Clarifier Sizing--Traditional Design) and the values of SRT and net solids production (Y), as listed in Table F.8. in Figure: 30 TAC §217.164(c)(3). The maximum BOD_5 loading limitation for a single-step aeration process is 50 pounds (lb) BOD_5 per 1,000 cubic feet (cf) and for the first step of multi-step aeration process facilities is 100 lb BOD_5/1,000 cf.

(3) An above-ground steel or fiberglass tank requires 2 degrees Celsius lower minimum operating temperature than a wastewater treatment facility utilizing a reinforced concrete tank. A wastewater treatment facility must be designed for an MLSS concentration of at least 2,000 mg/l but no more than 5,000 mg/l. The net solids production, (Y), in the following table includes both coefficients for yield and endogenous respiration:
Figure: 30 TAC §217.164(c)(3) (No change.)

(4) To calculate the SRT, divide the safety factor by the maximum growth rate as shown in the following equation. The safety factor includes the design factor for the ratio of average to maximum diurnal ammonia loading. A value of 3.0, as recommended in the United States Environmental Protection Agency manual *Nitrogen Control,* is used in calculating the values in Table F.8. in Figure: 30 TAC §217.164(c)(3).
Figure: 30 TAC §217.164(c)(4) (No change.)

(5) To determine the aeration basin volume, select a trial value of MLSS. The aeration basin volume is calculated as the maximum value from the following equations:
Figure: 30 TAC §217.164(c)(5)

(d) Clarifier Sizing.

(1) A clarifier basin size is based on volume-flux from the floc volume of solids entering the clarifier.

(2) Biological solids may occupy different volumes for the same mass of solids as indicated by the SVI.

(3) For purposes of determining weir overflow rates for clarifier sizing, the design flow and the peak flow must include any return flows from units downstream of the clarifier, including flow from skimmers, thickeners, and filter backwash.

(4) A clarifier must be sized to prevent overloading under any design condition.

(5) The settling velocity of the mixed liquor solids must equal or exceed the two-hour peak weir overflow rate.

(6) A clarifier must be sized to prevent overloading in the thickening process at the design flow.

(7) The wastewater treatment facility's operation and maintenance manual must state the design maximum mixed liquor floc volume.

(e) Determine Weir Overflow Rate and Area. The values in Table F.9 in Figure 1: 30 TAC §217.164(e)(2)(I) determine the maximum surface loading rates. The MLSS concentration must include the same concentration used for sizing the aeration basin. The design must be based on the underflow rate. The design must include calculations for maximum weir overflow rate for the clarifier at the peak flow (Table F.9. in Figure 1: 30 TAC §217.164(e)(2)(I)), the aeration basin MLSS concentration, and a selected underflow rate. The area of the clarifier is determined by the following equation:
Figure: 30 TAC §217.164(e)

(1) Determine Volume of a Clarifier. The volume of a clarifier must exceed the values determined from the minimum side wall depth (SWD) in Equation F.9. in Figure: 30 TAC §217.164(e)(1) or the minimum detention time in Equation F.10. in Figure: 30 TAC §217.164(e)(1):
Figure: 30 TAC §217.164(e)(1)

(2) Dimensions for Clarifiers Designed for Solids Storage Capabilities. The design of a clarifier that may be overloaded in thickening at the design flow must include the ability to store solids during peak flow events. The design must be based on the values in Table F.9. in Figure 1: 30 TAC §217.164(e)(2)(I), Table F.10. in Figure 2: 30 TAC §217.164(e)(2)(I), and Table F.11. in Figure 3: 30 TAC §217.164(e)(2)(I). The process for designing a clarifier based on this concept must be completed as follows:

(A) Determine the area of a clarifier. The area calculations must be based on the trial MLSS value selected for the sizing of the aeration basin in paragraph (1) of this subsection. The area of a clarifier must exceed the greater of the areas determined by Equation F.11. or Equation F.12. in Figure: 30 TAC §217.164(e)(2)(A):
Figure: 30 TAC §217.164(e)(2)(A)

(B) The final MLSS value must be the result of the transfer of solids from an aeration tank to a clarifier at the peak flow. A clarifier design must allow for rates of flow that will transfer solids from an aeration tank to a clarifier if the clarifier becomes overloaded in thickening until the mixed liquor solids are reduced to the concentration that no longer causes the overload.

(C) Using Table F.11. in Figure 3: 30 TAC §217.164(e)(2)(I) and the selected underflow rate, the MLSS concentration at peak flow is determined using the following equation:
Figure: 30 TAC §217.164(e)(2)(C)

(D) Determine depth of sludge blanket at peak flow. The depth of a sludge blanket is determined by the aeration basin volume, the change in MLSS, the area of the clarifier, and the concentration of the blanket solids at the selected underflow rate as shown in the following equation:
Figure: 30 TAC §217.164(e)(2)(D)

(E) Determine the SWD. The SWD of a clarifier is the maximum value resulting from the following conditions:

(i) 10 ft, unless a lower depth is allowed by §217.152(g) of this title (relating to Requirements for Clarifiers);

(ii) 3.0 times the sludge blanket depth; and

(iii) minimum detention time per the following equation:
Figure: 30 TAC §217.164(e)(2)(E)(iii)

(F) Determine clarifier volume. The volume of a clarifier is the surface area multiplied by the SWD determined in subparagraph (E) of this paragraph.
Figure: 30 TAC §217.164(e)(2)(F)

(G) The formulas for Equation F.17. in Figure: 30 TAC §217.164(e)(2)(G)(i); Equation F.18. in Figure: 30 TAC §217.164(e)(2)(G)(ii); and Table F.10. in Figure 2: 30 TAC §217.164(e)(2)(I); calculate the rates that are equal to the settling velocity of activated sludge at various floc volume concentrations. For values less than 30%, the floc volume is the 30-minute settled volume in an unstirred one-liter graduated cylinder. For values greater than 30%, the sample is diluted so that the settled volume is at least 15% but not more than 30%, and the result multiplied by the dilution factor.

(i) For floc volume less than 40%, use the following equation; or
Figure: 30 TAC §217.164(e)(2)(G)(i)

(ii) For floc volume greater than 40%, use the following equation:
Figure: 30 TAC §217.164(e)(2)(G)(ii)

(H) Table F.9. in Figure 1: 30 TAC §217.164(e)(2)(I) and Table F.11. in Figure 3: 30 TAC §217.164(e)(2)(I) are based on an analysis of the floc volume-flux, i.e. floc volume times settling velocity, calculated from Equation F.17. in Figure: 30 TAC §217.164(e)(2)(G)(i) and Equation F.18. in Figure: 30 TAC §217.164(e)(2)(G)(ii). Table F.11. in Figure 3: 30 TAC §217.164(e)(2)(I) is a tabulation of the maximum concentration of the underflow at different underflow rates. Equation F.19. is for Table F.11. in Figure 3: 30 TAC §217.164(e)(2)(I).
Figure: 30 TAC §217.164(e)(2)(H)

(I) Table F.9. in Figure 1: 30 TAC §217.164(e)(2)(I) determines the weir overflow rate that, along with the underflow rate and MLSS, determines the same floc volume-flux as shown in Table F.11. in Figure 3: 30 TAC §217.164(e)(2)(I).
Figure 1: 30 TAC §217.164(e)(2)(I)
Figure 2: 30 TAC §217.164(e)(2)(I)
Figure 3: 30 TAC §217.164(e)(2)(I)

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Robert Martinez
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Texas Commission on Environmental Quality
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For further information, please call: (512) 239-6812

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30 TAC §217.162

Statutory Authority

The repeal of this section is adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted repeal of this section implements TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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SUBCHAPTER G. FIXED FILM AND FILTRATION UNITS

30 TAC §§217.182 - 217.194

Statutory Authority

The amendments and new sections are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments and new sections implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.182. Trickling Filters--General Requirements.

(a) Trickling filters are classified according to applied hydraulic loading, including recirculation, in million gallons per day per acre of filter media surface area and influent organic loadings in pounds of five-day biochemical oxygen demand (BOD_5) per day per 1,000 cubic feet of filter media. The following factors must be used as the basis for the selection of the design hydraulic and influent organic loadings:

(1) BOD_5 concentration of the influent wastewater;

(2) effectiveness of pretreatment;

(3) type of filter media; and

(4) treatment efficiency required.

(b) A trickling filter may be classified as:

(1) a roughing filter, which provides at least 50%, but not more than 75% removal of soluble BOD_5;

(2) a secondary treatment filter, which provides the removal of pollutants required to meet the effluent limits for BOD_5 and total suspended solids (TSS) of effluent set 1 or 2 in §309.4 of this title (relating to Table 1, Effluent Limitations for Domestic Wastewater Plants);

(3) a combined BOD_5 and nitrifying filter, which provides the removal of pollutants required to meet the effluent limits for BOD_5, ammonia-nitrogen (NH_3-N), and TSS of effluent set 2N or 2N1 in §309.4 of this title; or

(4) a tertiary nitrifying filter, which provides removal of NH_3-N, if the influent to the trickling filter is a clarified secondary effluent.

(c) The following table lists the hydraulic and organic loadings for different classes of trickling filters.
Figure: 30 TAC §217.182(c) (No change.)

(d) Pretreatment.

(1) A trickling filter must have upstream preliminary treatment units that:

(A) remove grit, debris, suspended solids, oil, and grease;

(B) remove particles with a diameter greater than three millimeters; and

(C) control the release of hydrogen sulfide.

(2) A primary clarifier equipped with scum and grease removal devices must precede a rock media trickling filter.

(e) Rock Filter Media.

(1) Materials.

(A) Rock filter media composed of crushed rock, slag, or similar material is prohibited if more than 5% of the media, by weight, consists of pieces with their longest dimension measuring more than three times greater than their shortest dimension.

(B) Rock filter media must conform to the following size distribution and grading. Mechanical grading over a vibrating screen with square openings must meet the following:

(i) passing 5.0 inch sieve - 100% by weight;

(ii) retained on 3.0 inch sieve - 95 to 100% by weight;

(iii) passing 2.0 inch sieve - 0.2% by weight;

(iv) passing 1.0 inch sieve - 0.1% by weight; and

(v) the loss of weight by the 20-cycle test, as described in American Society of Civil Engineers' *Manual of Engineering and Engineering Practice No. 13,* must be less than 10%.

(2) Placement.

(A) Rock filter media must be at least 4.0 feet deep at the shallowest point.

(B) Dumping rock filter media directly on a trickling filter is prohibited. Rock media must be placed by hand to a depth of 12 inches above the underdrains. The remainder of the rock filter media may be placed by belt conveyor or an equivalent mechanical method.

(C) Crushed rock, slag, and other similar media must be washed and screened or forked to remove clay, organic material, and other fine particles prior to placement.

(D) The placement of any material must not damage the underdrains.

(E) Vehicles and equipment are prohibited from driving over the rock filter media.

(f) Synthetic (Manufactured or Prefabricated) Media Materials.

(1) Any synthetic media material must be used in accordance with all of the manufacturer's recommendations.

(2) Synthetic media material may be considered innovative or non-conforming technology and may be subject to §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals), and requires executive director approval in writing.

(A) Suitability. The suitability of synthetic media material must be evaluated based on performance data from a wastewater treatment facility with similar media operating under similar hydraulic and organic loading conditions. The engineering report must include a relevant case history involving the use of the synthetic media.

(B) Durability. A synthetic media must be insoluble in wastewater and resistant to flaking, spalling, ultraviolet degradation, disintegration, erosion, aging, common acids and alkalis, organic compounds, and biological attack.

(C) Structural Integrity.

(i) The structural design of synthetic filter media must support the synthetic media, water flowing through or trapped in voids, and the maximum anticipated thickness of the wetted biofilm.

(ii) The synthetic filter media must support the weight of an individual, unless a separate provision is made for maintenance access to the entire top of the trickling filter media and to the distributor.

(D) Placing of Synthetic Filter Media. Modular synthetic filter media must be installed with the edges of the modules matched as closely as possible to provide consistent hydraulic conditions within the trickling filter.

(g) Trickling Filter Dosing.

(1) Dosing rates to a trickling filter must be within the design dosing rate range, even if the trickling filter receives flow from a siphon, pump, or gravity discharge from a preceding treatment unit.

(2) A trickling filter must be designed to control instantaneous dosing rates under both normal operating conditions and filter-flushing conditions.

(3) The distributor speed and the recirculation rate of a trickling filter must be adjusted for the dosing intensity as a compensatory measure under low-flow conditions. The following table provides design ranges of dosing intensity for both normal usage periods and for flushing periods:
Figure: 30 TAC §217.182(g)(3) (No change.)

(4) A design may be based on instantaneous dosing intensity for rotary distributors using Equation G.1. in Figure: 30 TAC §217.182(g)(4).
Figure: 30 TAC §217.182(g)(4)

(h) Distribution Equipment.

(1) The design of a trickling filter must include a rotary, horizontal, or traveling wastewater distribution system that distributes wastewater uniformly over the entire surface of a filter at the design and flushing dosing intensities.

(2) A design must include filter distributors that operate properly at all anticipated flow rates.

(3) A design must not deviate from the design dosing intensity by more than 10%.

(4) A new trickling filter or an upgrade of an existing trickling filter must include an electrically driven, variable speed filter distributor to allow operation at optimum dosing intensity independent of recirculation pumping.

(5) If an existing rectangular trickling filter is retrofitted with rotary distributors, any filter media that will not be fully wetted must not be considered part of the required effective treatment area.

(6) The center column of a rotary trickling filter distributor must have emergency overflow ports that are sized to prevent water from reaching the bearings in the center column.

(7) A filter distributor must include cleanout gates on the ends of the distributor arms and an end spray nozzle to wet the edges of the trickling filter media.

(8) The trickling filter walls must extend at least 12.0 inches above the top of the ends of the distributor arms.

(9) The use of a mercury seal in a distributor of a trickling filter is prohibited in a new wastewater treatment facility. If an existing wastewater treatment facility is materially altered, any mercury seal in a trickling filter must be replaced with an oil or mechanical seal.

(10) The minimum clearance between the top of the trickling filter media and the distributing nozzles is 6.0 inches.

(11) Rotary distributors must be capable of operating at speeds as low as one revolution per 30 minutes.

(12) A trickling filter with a height or diameter that does not allow distributors to be removed and replaced by a crane must provide jacking columns and pads at the distributor column.

(i) Recirculation.

(1) Low Flow Conditions.

(A) The design of a trickling filter must include a mechanism to maintain minimum recirculation during periods of low flow to ensure that the biological growth on the filter media remains active at all times.

(B) For all trickling filters with continuous recirculation, the design must include the minimum recirculation rate in the evaluation of the efficiency of the filter.

(C) Minimum flow to the filters must be equal to or greater than 1.0 million gallons per day per acre of filter aerial surface and must ensure the proper operation of the distribution nozzles.

(D) The minimum flow rate for a trickling filter design using hydraulically driven distributors must keep rotary distributors turning at the minimum design rotational velocity.

(E) For a wastewater treatment facility designed with a design flow equal to or greater than 0.4 million gallons per day and recirculation for BOD_5 removal, the recirculation system must include variable speed pumps and a method of conveniently measuring the recycle flow rate.

(2) Compensatory Recirculation.

(A) The design of a trickling filter must provide compensatory recirculation to supplement influent flow if design and flushing dosing intensities are not achieved solely by the control of distributor operation.

(B) Controls for the distributor speed and recycle pumping rate must provide optimum dosing intensity under all anticipated influent flow conditions.

(3) Process Calculations. The engineering report must:

(A) provide design details about removal of the remaining organic matter by recirculation;

(B) identify the effect of dilution of the influent on the rate of diffusion of dissolved organic substrates into the biofilm; and

(C) identify the effect of reduced influent concentrations on reaction rates in each section of a filter having first order kinetics.

(4) Recirculation Rate. A recirculation rate may exceed four times the design flow if calculations to justify the higher rate are included in the engineering report.

(5) Configuration.

(A) In a wastewater treatment facility with influent that has constant organic loadings, direct recirculation of unsettled trickling filter effluent must be used.

(B) A design must ensure that the distributor nozzles can handle the recirculated sloughed biofilm.

(C) In a wastewater treatment facility with variable influent organic loadings, effluent must recirculate from a final clarifier to either a primary clarifier or a trickling filter to equalize organic loading.

(j) Average Hydraulic Surface Loading.

(1) The engineering report must include calculations of the maximum, design, and minimum surface loadings on the trickling filters in terms of million gallons per acre of filter area per day for the flow expected in the initial year and at full capacity.

(2) The average hydraulic surface loadings of a trickling filter with crushed rock, slag, or similar media:

(A) must not exceed 40 million gallons per day per acre based on design flow, except in roughing applications;

(B) must not be less than 1.0 million gallons per day per acre; and

(C) must be within the ranges specified by the manufacturer.

(k) Underdrain System Design.

(1) A trickling filter must include an underdrain with semicircular inverts that cover the entire floor of the trickling filter.

(2) An underdrain must be constructed of vitrified clay or pre-cast reinforced concrete.

(3) An underdrain constructed of half tile is prohibited.

(4) Underdrain inlet openings must have a gross cross-sectional area greater than 15% of a trickling filter's surface area.

(5) A modular synthetic media design must be supported above a trickling filter floor by beams and grating with support and clearances in accordance with the trickling filter media manufacturer's

recommendations. The manufacturer's recommendations must be included in the engineering report.

(l) Underdrain Slopes.

(1) An underdrain and trickling filter effluent channel floor must have a minimum slope of 1%.

(2) An effluent channel must produce a minimum velocity of 2.0 feet per second at the design flow rate to a trickling filter.

(3) The floor of a new trickling filter using stackable modular or synthetic media must slope toward a drainage channel at a slope of at least 1% and not more than 5%, based on filter size and hydraulic loading.

(m) Passive Ventilation.

(1) The effluent channels and effluent pipes of an underdrain system or a synthetic media support structure must permit free passage of air.

(2) Any drain, channel, or effluent pipe must have a cross-sectional area with not more than 50% of the area submerged at peak flow plus recirculation.

(3) The effluent channels must accommodate the specified flushing hydraulic dosing intensity and allow the possibility of increased hydraulic loading.

(4) A passive ventilation system may include an extension of an underdrain through a trickling filter sidewall, a ventilation opening through a sidewall, or an effluent discharge conduit designed as a partially full flow pipe or an open channel.

(5) A vent opening through a trickling filter wall must include hydraulic closure to allow flooding of a trickling filter for nuisance organism control.

(6) A passive ventilation design must provide at least 2.5 square feet of ventilating area per 1,000 pounds of primary effluent BOD_5 per day.

(7) An underdrain system for a rock media filter must provide at least 1.0 square foot of ventilating area for every 250 square feet of the trickling filter basin surface area.

(8) The minimum required ventilating area for a synthetic media underdrain is the area recommended by the manufacturer. The manufacturer's recommendations must be included in the engineering report.

(9) The ventilating area must be equal to the greater of 1.0 square foot per 175 square feet of synthetic media area or 2.6 square feet per 1,000 cubic feet of media volume.

(n) Forced Ventilation.

(1) Forced ventilation is required for a trickling filter designed for:

(A) nitrification;

(B) a trickling filter design with a media depth in excess of 6.0 feet; and

(C) a location where seasonal or diurnal temperatures do not provide sufficient difference between the ambient air and wastewater temperatures to sustain passive ventilation of one cubic foot of air per square foot of trickling filter area per minute.

(2) A design must specify the minimum airflow for forced ventilation and optimized process performance, and the engineering report must include all calculations associated with this determination.

(3) The design of a down-flow forced ventilation system must include a provision for:

(A) the removal of entrained droplets; or

(B) the return of air containing entrained moisture to the top of a trickling filter; and

(C) a reversible fan or other mechanism to reverse the airflow when a wide temperature difference between the ambient air and wastewater creates strong updrafts.

(4) A ventilation fan and the associated controls must withstand flooding of a trickling filter without sustaining damage.

(5) The following equation and the values in Table G.3. in Figure: 30 TAC §217.182(n)(5) determine the minimum airflow rate for forced ventilation.
Figure: 30 TAC §217.182(n)(5)

(o) Maintenance.

(1) Cleaning and Sloughing.

(A) A flow distribution device, an underdrain, a channel, and a pipe must allow for maintenance, flushing, and drainage.

(B) A trickling filter system must hydraulically accommodate the specified flushing hydraulic dosing intensity and must facilitate cleaning and rodding of the distributor arms.

(C) A trickling filter system must prevent recirculation of sloughed biomass in pieces larger than the distributor nozzle openings or the filter media voids.

(2) Nuisance Organism Control. A trickling filter system must control nuisance organisms by operation of trickling filters at proper design dosing intensities, with periodic flushing at higher dosing intensities.

(A) Filter Flies.

(i) The structural and hydraulic design of a trickling filter must enable flooding of the trickling filter for fly control.

(ii) The executive director may approve an alternate method of fly control for a trickling filter that exceeds 6.0 feet in height if the effectiveness of the alternate method is verified at a full-scale installation and documented in the engineering report.

(B) Snails. A trickling filter system must be designed to prevent sludge accumulation that attracts snails. A trickling filter system must include a low-velocity, open channel between a trickling filter and final clarifier for manual removal of snails.

(3) Corrosion Protection. A trickling filter must be designed to prevent corrosion. Corrosion-resistant materials must be used for all equipment and for construction of a trickling filter, including ventilation equipment and covers.

(p) Flow Measurements. A trickling filter system must include a means to measure the flow to each trickling filter and the recirculation flow of each trickling filter.

(q) Odor Control. A trickling filter system must use ventilation and periodic flushing at a higher dosing intensity to minimize potential odor.

(1) Covers.

(A) The executive director may require an owner of a wastewater treatment facility with prior odor complaints to install a cover over a new or altered trickling filter.

(B) A cover must allow access to the entire top of the trickling filter media and to the distributor for maintenance and removal.

(C) A covered trickling filter must have a forced ventilation system with a scrubber or an adsorption column for odor control.

(2) Stripping. A trickling filter with an influent organic strength of BOD_5 greater than 200 milligrams per liter must have forced ventilation in a down-flow mode to minimize odor. Odorous off-gases may be:

(A) recycled through a trickling filter;

(B) used to ventilate a tertiary nitrifying trickling filter in an up-flow mode;

(C) diffused into an aeration basin; or

(D) treated separately for odor control using a scrubber or an adsorption column.

(r) Final Clarifiers. The size of the final clarifiers for a wastewater treatment facility with a trickling filter must ensure the required effluent total suspended solids removal at the peak flow with all recirculation pumps in operation.

(s) Report Requirements.

(1) The engineering report must specify the trickling filter efficiency formula used in the design calculations.

(2) The engineering report must include the operating data from any existing trickling filter of similar construction and operation to justify the projected treatment efficiency, kinetic coefficients, and other design parameters as required in this subchapter.

(3) The engineering report may include more than one set of applicable design equations to allow crosschecking of predicted treatment efficiency.

§217.190. Filtration.

(a) Reasons for Use.

(1) Permit Requirements. A wastewater treatment facility that requires tertiary effluent limitations must use filtration as a unit of operation to supplement suspended solids removal. Tertiary effluent limits are any limits less than or equal to five milligrams per liter for five-day biochemical oxygen demand or total suspended solids.

(2) Specific Water Quality Requirements. A wastewater treatment facility designed for secondary or advanced secondary treatment effluent limitations may use filtration as a unit of operation to supplement suspended biological floc removal. Filters may be designed for intermittent operation if filters are not necessary to meet permitted effluent limitations.

(b) Redundancy.

(1) A wastewater treatment facility using filtration to provide tertiary treatment to comply with a permit requirement must have a minimum of two independent, fully functional filter basins with independent, fully functional equipment.

(2) The design of a filtration system must specify the submerged filter surface area required to treat the peak flow with the largest filter unit out of service.

(3) If a filter is provided solely to polish wastewater in situations where permit compliance does not depend on the use of a filter, such as in some cases of reclaimed water use, one filter is allowed.

(c) Source of Backwash Water. A filtration system must use filtered effluent as the source of backwash water.

(d) Disposition of Backwash Water. A filtration system must return backwash water containing material cleaned from a filter to the headworks of the wastewater treatment facility or to the influent lift station for processing.

(e) Sequence of Treatment Units.

(1) A final clarifier must precede a filter.

(2) A filter system may be used in conjunction with a disinfection tank to provide additional detention time, provided the filter is backwashed to the headworks of the wastewater treatment facility or to the influent lift station.

(f) Overload Conditions. A design must prevent effluent or partially treated effluent from overflowing from any filtration unit.

(g) Control of Slime Growth. A filtration system must provide periodic disinfectant in the influent stream to control slime growth in the filter and backwash storage tank.

§217.193. Cloth or Disk Filter Systems.

(a) Cloth or disk filter systems must meet the requirements in §217.190 of this title (relating to Filtration).

(b) Media Design.

(1) The average pore size of cloth or disk filter media must not exceed 30 microns.

(2) The media thickness must be based on the manufacturer's recommendations, considering frequent pressure changes. The manufacturer's recommendations must be included in the engineering report.

(3) The media must be disinfectant-resistant if the filter will be exposed to disinfectants.

(4) The media must be chlorine-resistant if the filter will be exposed to chlorine.

(c) Filtration Rates and Hydraulic Requirements.

(1) The design filtration rate must be based on the effective submerged surface area of the media. If the submerged surface area of the media varies based on the operational mode, the design filtration rate must account for the variability.

(2) The maximum design filtration rate for peak flow must not exceed 6.5 gallons per minute per square foot of submerged media.

(3) The filtration system must be able to treat the design flow rate with one filter unit in backwash mode.

(4) The backwash flux rate must be at least 6.0 gallons per minute per square foot of media, based on the portion of the filter surface that is being actively backwashed.

(d) Disposal of Backwashed Material.

(1) Liquid filter backwash must be re-filtered or must be returned to the headworks of the wastewater treatment facility or to the influent lift station.

(2) Solid filter backwash material must be pumped to the influent lift station, the headworks, the digester, or to another location approved in writing by the executive director for processing at least once per day.

(e) Monitoring and Controls.

(1) Cloth or disk filters must use an automatic control system.

(2) An automatic control system must include manual override capability.

(3) Each filter unit must monitor head loss across the unit and must have a head loss gauge or readout.

(4) Each filter unit must monitor effluent turbidity and have a turbidity gauge or readout.

(5) Gauges and readouts must be readable from the control panel.

(f) Weather Resistance. Cloth or disk filter systems must be protected from the environment. The engineering report must describe how the system will be protected from freezing conditions, ultraviolet light, and similar environmental concerns.

§217.194. Alternative Designs for Effluent Polishing.
The executive director shall review alternative processes for tertiary suspended solids removal, other than filters, as non-conforming technologies subject to the requirements of §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals).

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Robert Martinez
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For further information, please call: (512) 239-6812

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30 TAC §217.193

Statutory Authority

The repeal of this section is adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The repeal of this section implements TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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SUBCHAPTER H. NATURAL TREATMENT UNITS

30 TAC §§217.201 - 217.213

Statutory Authority

The amendments are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.203. Design Criteria for Natural Treatment Units.

(a) This section applies to all earthen lagoons and earthen treatment units in a wastewater treatment facility, including constructed wetlands, facultative lagoons, aerated lagoons, partially aerated lagoons, stabilization lagoons, evaporative lagoons, and storage lagoons. Storage lagoons are considered treatment units for the purposes of this chapter if they hold wastewater that is not final treated effluent, such as raw influent or wastewater that has received intermediate treatment.

(b) Flow Distribution.
The shape and size of a treatment unit must ensure uniform distribution of the wastewater flow.

(c) Windbreaks and Screening.

(1) A windbreak or vegetative screening must be used if operation of the treatment system could cause spray to drift off of the property.

(2) The use, type, and extent of windbreaks or vegetative screening must be approved in writing by the executive director.

(d) Maximum Liner Permeability.

(1) Except as provided in paragraph (3) of this subsection, constructed wetlands, facultative lagoons, aerated lagoons, partially aerated lagoons, stabilization lagoons, evaporative lagoons, and storage lagoons must be constructed with a liner material that has a coefficient of permeability less than 1×10^{-7} centimeters per second for a thickness of:

(A) 2.0 feet for water depths less than or equal to 8.0 feet; and

(B) 3.0 feet for water depths greater than 8.0 feet.

(2) A liner must extend from the lowest elevation in a lagoon or constructed wetland, up to an elevation of 2.0 feet above normal water elevation in the lagoon or constructed wetland.

(3) If a lagoon is constructed to store treated wastewater authorized as reclaimed water under Chapter 210 of this title (relating to Use of Reclaimed Water), the lagoon liner must comply with §210.23 of this title (relating to Storage Requirements for Reclaimed Water).

(e) Compliance with the Liner Permeability Requirements. A lagoon must be lined and tested according to the requirements of this subsection. The engineering report must include the results of all tests required by this subsection.

(1) Sampling Requirements for Soil Liners.

(A) Sample Analysis. Soil liner material must be sampled and analyzed before construction. All samples of the liner material must meet the following requirements:

(i) the coefficient of permeability must be less than 1×10^{-7} centimeters per second;

(ii) at least 30% of the liner material must pass through a 200 mesh sieve;

(iii) the liner material must have a liquid limit greater than 30%; and

(iv) the liner material must have a plasticity index of 15 or greater.

(B) Preconstruction Sampling for Unamended In-Situ Liners. Permeability testing for an unamended in-situ soil liner requires undisturbed core samples of the liner material. At least one undisturbed core sample must be analyzed for every 0.25 acre of liner surface area on the bottom of each lagoon or constructed wetland. At least one additional undisturbed core sample must be analyzed for every 0.25 acre of liner surface area from each side of each lagoon or constructed wetland. All undisturbed core samples must have a coefficient of permeability less than 1×10^{-7} centimeters per second. The engineering report must demonstrate that the in-situ soil liner meets the minimum thickness requirements in subsection (d)(1) of this section.

(C) Preconstruction Sampling for Imported Soil Liners and Amended In-Situ Soil Liners. Four samples must be tested for every 0.25 acres of liner surface area in each lift according to subparagraph (A)(ii) - (iv) of this paragraph. At least one out of every four samples must be tested for permeability according to subparagraph (A)(ii) of this paragraph. If samples are collected before compaction, molded samples of the liner material mixture may be tested instead of undisturbed core samples for imported soil liners and amended in-situ soil liners.

(D) Post-construction Sampling. A minimum of one undisturbed core sample must be analyzed after the liner is complete for each 0.25 acre of liner surface area on the bottom of each lagoon or constructed wetland. At least one additional undisturbed core sample must be analyzed for every 0.25 acre of liner surface area from each side of each lagoon or constructed wetland. The coefficient of permeability must be less than 1×10^{-7} for each sample. An unamended in-situ liner does not require post-construction sampling if it meets the pre-construction requirements in subparagraphs (A) and (B) of this paragraph and the construction requirements in paragraph (2)(B) of this subsection.

(2) Soil Liner Construction.

(A) Amended In-situ or Imported Soil Liner Construction. All amended in-situ or imported soil liners must comply with the following requirements:

(i) liner material must be placed in loose lifts that are each no more than 8.0 inches in thickness;

(ii) each lift must be compacted to at least 95% standard proctor density at -1% to +3% optimum moisture according to American Standards for Testing and Materials (ASTM) D 698;

(iii) each lift must be no more than 6.0 inches thick after compaction and the completed liner must meet the minimum thickness requirements in subsection (d)(1) of this section; and

(iv) the in-situ subgrade must be scarified before placement of the lowest lift.

(B) Unamended In-situ Soil Liner Construction. All unamended in-situ soil liners must comply with the following requirements.

(i) The liner must include at least one 8.0 inch loose lift of excavated in-situ material that is compacted to no more than 6.0 inches at 95% standard proctor density at -1% to +3% optimum moisture according to ASTM D 698.

(ii) The in-situ subgrade must be scarified before placement of the lowest lift.

(3) Synthetic Membrane Liner Construction. All synthetic membrane liners must comply with the following requirements.

(A) A synthetic membrane liner must have a minimum thickness of 40 mils.

(B) A synthetic membrane liner must include an underdrain with a leachate detection and collection system.

(C) Synthetic membrane liner material must be able to withstand constant sunlight without degrading.

(D) Soil compaction beneath a synthetic liner must meet the liner manufacturer's requirements.

(f) Embankment Design and Construction.

(1) The top of an embankment must be at least 10.0 feet wide.

(2) The engineering report must justify all inner and outer embankment slopes steeper than 1.0 foot vertical to 4.0 feet horizontal from the top of the embankment.

(3) Inner and outer embankment slopes steeper than 1.0 foot vertical to 3.0 feet horizontal are prohibited.

(4) All embankments must be protected against erosion by establishing grass, paving, riprapping, or any other method approved in writing by the executive director.

(5) All vegetated embankments must have a minimum cover of 6.0 inches of topsoil.

(g) Disinfection. Unless otherwise specified in the wastewater treatment facility's wastewater permit, chemical or ultraviolet disinfection is not required if a detention time of at least 21 days is provided in the plant-free water surface with full sun exposure in accordance with §309.3(g) of this title (relating to Application of Effluent Sets).

(h) Sampling Point Significance.
The size or design of a treatment unit upstream of the permitted sampling point must not be based on the design of any storage lagoon or other structure downstream of the permitted sampling point.

(i) Stormwater Drainage. A natural treatment system must be designed and constructed to prevent stormwater from draining into the system.

(j) Piping. A natural system must have piping that allows water in each lagoon or wetland cell to be re-routed to a different lagoon or wetland cell for maintenance.

(k) Freeboard.

(1) A lagoon must have a minimum of 2.0 feet of freeboard above the normal operating level if the lagoon's normal water surface area is less than 20 acres.

(2) A lagoon must have a minimum of 3.0 feet of freeboard above the normal operating level if the lagoon's normal water surface area is 20 acres or more.

(3) A constructed wetland cell must have at least 2.0 feet of freeboard above the normal operating level, or the freeboard required to manage the selected wetland plant population, whichever is greater.

(l) Prohibition of Synthetic Liners for Constructed Wetlands. The use of a synthetic membrane liner for a free water surface constructed wetland is prohibited.

§217.206. Aerated Lagoons.

(a) The requirements of this section apply to both completely mixed aerated lagoons and partially mixed aerated lagoons, unless otherwise specified.

(b) A minimum of 1.6 pounds of oxygen per pound of influent five-day biochemical oxygen demand (BOD_5) must be maintained in an aerated lagoon system, even with the largest single aeration unit in a lagoon system out of service.

(c) The aeration equipment must have an audio-visual alarm system. If a wastewater treatment facility is not staffed 24 hours per day, the alarm system must be connected to a telemetry system, such as an auto dialer or Supervisory Control and Data Acquisition system, with battery backup.

(d) The BOD_5 removal in each aerated lagoon must be calculated using the following equation:
Figure: 30 TAC §217.206(d)

(1) The value of K for domestic wastewater in a completely mixed lagoon is 0.50 day^{-1} at 20 degrees Celsius. The value of K for domestic wastewater in a partially mixed lagoon is 0.28 day^{-1} at 20 degrees Celsius.

(2) The value of K must be adjusted for the minimum monthly water temperature using the following equation:
Figure: 30 TAC §217.206(d)(2)

(3) The value of K must be determined for high-strength or industrial wastewater by either a laboratory study or an evaluation of an existing wastewater treatment facility treating wastewater with similar organic strength and industrial contributions.

(e) Aeration Equipment.

(1) The size of the aeration equipment in an aerated lagoon must be able to supply the oxygen demand determined in subsection (b) of this section.

(2) For the purpose of sizing aeration equipment, an aerated lagoon must comply with the mechanical and diffused air requirements in §217.155(c) of this title (relating to Aeration Equipment Sizing).

(3) If multiple partially mixed aerated lagoons are used in series, the power input may be reduced as the influent BOD_5 to each lagoon decreases.

(f) Aerated Lagoon Design Requirements. An aerated lagoon system must be designed according to the requirements for a wastewater treatment lagoon in §217.203(f) of this title (relating to Design Criteria for Natural Treatment Facilities) and §217.207(d) of this title (relating to Stabilization Lagoons).

(g) Scour Prevention. An earthen-lined aerated lagoon system must include a concrete scour pad in each area of the earthen liner that is subject to a velocity equal to or greater than 1.0 foot per second.

§217.207. Stabilization Lagoons.

(a) Primary treatment must remove the settleable and floatable solids in the influent prior to the wastewater entering a stabilization lagoon.

(b) Odor Management.

(1) A stabilization lagoon must be located so that odors from the stabilization lagoon will not cause a nuisance.

(2) If uncontaminated water is available, a stabilization lagoon must be pre-filled with uncontaminated water to the 2.0 foot level at start-up.

(3) A stabilization lagoon system must include a piping arrangement that allows the recirculation of effluent from a final lagoon to the influent side of an initial stabilization lagoon.

(4) A stabilization lagoon may return recirculation water by surface spray to assist in maintaining aerobic conditions at the lagoon surface and to reduce potential odor.

(c) Minimum Number of Wastewater Stabilization Lagoons. At least two stabilization lagoons are required to comply with secondary treatment limits. The stabilization lagoons must be operated in series, following the primary treatment unit.

(d) Stabilization Lagoon Design.

(1) The minimum length-to-width ratio of a stabilization lagoon is 3.0 to 1.0.

(2) Inlet and outlet structures must be adjustable to assist in controlling vegetative growth. Inlet and outlet structures must allow the water level to be raised and lowered by at least 6.0 inches.

(e) Pipe and Hydraulic Equipment.

(1) All structures and pipes in a stabilization lagoon must be sized to transport at least 250% of the wastewater treatment facility's design flow.

(2) The inlet and outlet structures must be sized to convey the volume contained within the top 6.0 inches of a lagoon within a 24-hour period, based on the normal water level at design flow and the corresponding pressure head.

(3) The pipe and recirculation system must allow a stabilization lagoon system to comply with the wastewater treatment facility's permitted effluent limitations, even with any one lagoon out of service.

(f) Maximum Surface Organic Loading Rate for Stabilization Lagoons.

(1) The maximum surface organic loading rate on a stabilization lagoon series is 35 pounds (lbs) of five-day biochemical oxygen demand (BOD_5) per acre per day.

(2) The maximum surface organic loading rate on the first lagoon in a stabilization lagoon series is 75 lbs of BOD_5 per acre per day.

(3) The surface organic loading rate applied to a stabilization lagoon series is equal to the total influent organic loading minus any reduction in organic load provided by the primary treatment units.

(g) Inlet and Outlet Structures.

(1) A stabilization lagoon outlet must include removable baffles to prevent floating material from being discharged, and must be constructed to operate correctly as the level of the lagoon surface varies under normal operating conditions.

(2) An outlet must be at least 18 inches but not more than 24 inches below the water surface in a stabilization lagoon to control the discharge of duckweed and floating algae.

(3) A multipurpose control structure may be used to facilitate normal operational functions such as drawdown, flow distribution, adjusting water depth, flow measurement, sampling, access for pump for recirculation, chemical addition, and exclusion of floating materials. A multipurpose control structure may also be used to minimize the number of special purpose structures in a stabilization lagoon.

(4) A pipe embankment penetration must have a seep water-stop collar.

(5) A stabilization lagoon must have a drainpipe that allows the stabilization lagoon to be emptied for maintenance and may use a pump as part of a drainage system. If a permanent drain pipe will not be installed, a temporary pipe suction station must be provided.

§217.208. Evaporative Lagoons.

(a) Design.

(1) If evaporative lagoons are used, the wastewater treatment facility must have at least two evaporative lagoons.

(2) The primary evaporative lagoon must provide at least 60% of the total surface area of the total evaporative lagoon system.

(3) The number and size of evaporative lagoons must provide adequate evaporation for the design flow during periods of low evaporation. For the purposes of this chapter, the low evaporation rate used in design must be the lowest annual evaporation rate in the past 25 years from the Texas Water Development Board's precipitation and lake evaporation dataset for the quadrangle where the evaporation lagoon is located.

(b) Odor Management. An evaporative lagoon must be located so that odors from the evaporative lagoon will not cause a nuisance.

(c) Configuration, Depth, and Loading.

(1) An evaporative lagoon may be constructed in a round, square, or rectangular shape. The corners of a square or rectangular shaped evaporative lagoon must be rounded in order to minimize accumulation of floating materials.

(2) The depth of an evaporative lagoon is dependent on its location within the lagoon system, as set forth in subparagraphs (A) and (B) of this paragraph.

(A) The maximum operating depth for a primary evaporative lagoon is 5.0 feet, but the area around an inlet must be designed with additional depth for solids deposition according to the criteria in §217.205 of this title (relating to Facultative Lagoons).

(B) The maximum operating depth for a secondary evaporative lagoon is 8.0 feet.

(3) Evaporation and Organic Loading.

(A) The size of an evaporative lagoon system must be based on the evaporation rate for the site and a maximum allowable organic loading rate.

(B) The evaporation loss must be calculated by using the Penman-Monteith method or a comparable, established method.

(C) An evaporative lagoon system must be sized to account for the influent flows and precipitation from a 25-year frequency, one-year rainfall event in accordance with §309.20(b)(3)(B) of this title (relating to Land Disposal of Sewage Effluent), unless the engineering report includes an alternate method of disposing of the wastewater, along with supporting documentation.

(D) The five-day biochemical oxygen demand (BOD_5) loading on a primary evaporative lagoon must not exceed 150 pounds of BOD_5 per acre of surface area per day.

(d) Embankment. The embankments for an evaporative lagoon must be constructed in accordance with §217.203(f) of this title (relating to Design Criteria for Natural Treatment Facilities).

(e) Inlet and Outlet Structures.

(1) An influent line for an evaporative lagoon must terminate into a manhole located along the embankment edge.

(2) An inlet manhole invert must be a minimum of 6.0 inches above the maximum high water level of a primary evaporative lagoon or provide other means to prevent backflow into an upstream treatment unit.

(3) A submerged discharge pipe must extend from a manhole along and anchored to the bottom of an evaporative lagoon.

(4) An inlet discharge pipe must discharge onto a concrete apron in a depression near the center of the primary evaporative lagoon to prevent scour.
A concrete apron must be at least 2.0 square feet in surface area, be at least 8.0 inches thick, and be resistant to the corrosive effects of a wastewater environment.

(5) Inlet and outlet structures for an evaporative lagoon must be designed and constructed in a manner that allows the water surface elevation to be varied during normal operating conditions.

§217.209. Constructed Wetlands.

(a) Types of Constructed Wetlands. A constructed wetland may be either a free water surface system or subsurface flow system.

(b) Natural Wetlands. The use of natural wetlands for wastewater treatment is prohibited. For the purposes of this chapter, a natural wetland is an area which was not constructed for wastewater treatment that meets the definition of wetlands in 40 Code of Federal Regulations, Part 230.

(c) Constructed Wetland Design.

(1) A constructed wetland must be preceded by primary treatment or secondary treatment.

(2) A primary treatment system that precedes a constructed wetland must be designed to control odor and algae.

(3) A primary treatment system must produce an effluent quality with no more than 150 milligrams per liter of five-day biochemical oxygen demand to discourage anaerobic conditions and stress on vegetative communities in any subsequent wetland treatment unit.

(4) A wastewater treatment facility that uses a constructed wetland as the means of complying with a permit effluent limit must be sized and designed to ensure that the permit limitations will be met even when any one wetland cell is out of service. The engineering report must include water balance calculations and the potential effect of evaporation on the predicted effluent concentrations.

(d) Vegetation. A constructed wetland must have a diverse vegetative community of emergent and floating plants to minimize any adverse impact from potential disease, insect pests, or species-specific toxicity. A constructed wetland must include a diversity of plants selected from the following categories of emergent plants, floating plants, or both.

(1) Emergent plants for use in constructed wetlands include:

(A) *Schoenoplectus spp.* (bulrush);

(B) *Sagittaria spp.* (arrowhead);

(C) *Phragmites spp.* (reeds);

(D) *Juncus spp.* (rushes);

(E) *Eleocharis spp.* (spikerush);

(F) *Carex spp.* (sedges);

(G) *Caladium spp.* (elephant ear);

(H) various aquatic grass species (e.g., wild rice); and

(I) other appropriate emergent plant species approved in writing by the executive director.

(2) Floating plants for use in constructed wetlands include:

(A) *Lemna spp.* (duckweed);

(B) *Hydrocotyle umbellata* (water pennywort);

(C) *Limnobium spongia* (frogbit);

(D) *Nymphaea spp.* (water lily);

(E) *Wolffia spp.* (water meal); or

(F) other appropriate floating plant species approved in writing by the executive director.

(3) The vegetation used in a constructed wetland must be suitable for the local growing conditions. The use of indigenous plants is recommended if the species have been demonstrated effective in a constructed wetland wastewater environment. The engineering report must identify the plants that will be used in each constructed wetland.

(4) Plans for harvesting aquatic plants from water in the state must be reviewed with the United States Army Corps of Engineers to determine if regulatory coordination is required.

(5) Gathering seed plants from natural wetlands must minimize any impact on the harvested plant community and the natural wetlands.

(6) The use of any harmful or potentially harmful wetland plant or organism is subject to review by the Texas Parks and Wildlife Department, as required by 31 TAC §§57.111 - 57.118 and §§57.251 - 57.258 (relating to Definitions; General Rules; Exceptions; Health Certification of Harmful or Potentially Harmful Exotic Shellfish; Transportation of Harmful or Potentially Harmful Exotic Species; Exotic Species Transport Invoice; Exotic Species Permit: Application Requirements; Exotic Species Permit Issuance; Definitions; General Provisions; Permit Application; Denial; Renewal; Amendment; Reporting and Recordkeeping; and Prohibited Acts, respectively).

(e) Maintenance of a constructed wetland must not result in a deterioration of effluent quality.

(1) The use of herbicides, insecticides, and fertilizers in a constructed wetland is prohibited.

(2) Floating Material Removal.

(A) A constructed wetland must be designed to allow the removal of an algal mat or other floating material prior to the effluent entering each cell of the constructed wetland.

(B) A removal mechanism must be a screen, a submerged adjustable inlet, a baffle, or another method approved in writing by the executive director. The removal mechanism must be justified in the engineering report.

(C) The removed floating material must be stored and disposed of in a manner that minimizes odor and complies with the requirements of Chapter 330 of this title (relating to Municipal Solid Waste).

(3) The operation and maintenance manual for a wastewater treatment facility that has a constructed wetland must include a detailed description and schedule for maintaining the constructed wetlands. The maintenance plan must include a schedule and procedure for removing overabundant live plant material and dead plant material.

(f) A constructed wetland system must have an established plant community and must be functioning properly before wastewater effluent is processed. The engineering report must include a management and oversight program that specifies construction scheduling, plant species selection, planting practices, and start-up procedures.

(g) Liners.

(1) The liner for a constructed wetland system must comply with the requirements of §217.203(d) and (e) of this title (relating to Design Criteria for Natural Treatment Facilities).

(2) A layer of productive topsoil at least 6.0 inches thick must be placed above a liner to encourage root propagation.

(h) Berms.
A berm of a constructed wetland must comply with the requirements of §217.203(f) of this title.

(i) Flood Hazard Analysis. A constructed wetland must be protected from flooding according to the requirements of §217.35 of this title (relating to One Hundred-Year Flood Plain Requirements).

(j) Nitrification. A constructed wetland that provides nitrification is an innovative and non-conforming technology and is subject to the requirements of §217.7(b)(2) of this title (relating to Types of Plans and Specification Approvals).

(k) Allowed Uses. A constructed wetland may be used as a secondary treatment unit, as an advanced secondary treatment unit, or for polishing wastewater effluent. A constructed wetland may not be used for primary treatment.

§217.210. Constructed Wetlands--Free Water Surface Design.

(a) Areas of emergent vegetation in a free water surface (FWS) wetland must have a maximum water depth less than or equal to 24 inches at design flow.

(b) Plants.

(1) Emergent plant spacing must be no more than 66 inches on center.

(2) If floating plants are used in a FWS wetland, the wetland must also contain emergent plants.

(c) Multiple Cells. An FWS wetland must include multiple cells that can be operated independently, allowing an individual cell to be removed from service while maintaining system operations.

(d) System Size. An FWS wetland system must be sized to meet permit effluent limits, even when any single cell is removed from service.

(e) Bottom slope.

(1) An FWS wetland cell must have adequate bottom slope, or other means such as strategically placed deep-water zones, to facilitate drainage for maintenance.

(2) Plants selected for an FWS wetland cell shall be compatible with the water depths under all anticipated operational flow conditions.

(f) Parallel trains. An FWS wetland must have parallel treatment trains to increase operational flexibility.

(g) Wind protection. An FWS wetland cell must either be oriented to avoid prevailing winds perpendicular to the process flow direction, or must use elevated berms or vegetative windbreaks.

(h) Inlets and Outlets.

(1) The inlets and outlets of an FWS wetland cell must ensure uniform distribution of influent flow and uniform collection of effluent flow across the entire cell cross section.

(2) An FWS wetland must have multiple inlet and outlet devices designed to minimize scouring of wetland substrate caused by locally high velocity effluent flow.

(3) Each inlet and outlet device in an FWS wetland must be adjustable to allow variations in the operational water level.

(4) Submergence. An FWS wetland inlet must be submerged under normal operational conditions.

(5) Inspection and Cleaning. An FWS wetland must be designed to allow for the inspection and cleaning of inlet and outlet devices.

(i) Organic Loading and Treatment Efficiency.

(1) The design of an FWS wetland must be based on the design organic loading of the influent to the FWS wetland.

(2) Organic removal efficiency for FWS wetlands must be calculated from the area-based loading rate equation found in Figure: 30 TAC §217.210(i)(2), unless the engineering report justifies an alternate method to determine the organic removal efficiency by identifying a method, the sources of the method, and all supporting calculations.
Figure: 30 TAC §217.210(i)(2)

(j) Vector Control.

(1) The design of an FWS wetland must include mosquito control by:

(A) using mosquito fish *(Gambusia spp.)* or other natural predators;

(B) maintaining aerobic conditions; or

(C) using other biological controls.

(2) A design must minimize the potential for damage to wetlands caused by mammals such as nutria and muskrats.

§217.211. Constructed Wetlands--Subsurface Flow System General Design.

(a) A wetted subsurface media must allow adequate root penetration. The type of subsurface media must be identified in the engineering report.

(b) The operational water depth of a subsurface flow system (SFS) wetland must not exceed the lesser of:

(1) 18 inches at design flow; or

(2) the maximum normal root depth of the emergent plant species used in the SFS wetland.

(c) Seasonal draw down of the water level must be performed to encourage deeper root penetration into the wetted media.

(d) Plant spacing must be sufficient to allow maturity of a wetlands flora ecosystem, but must not exceed 36 inches on center.

(e) Configuration. An SFS wetland must include the following minimum configuration standards:

(1) Multiple cells. An SFS wetland must include multiple cells that can be operated independently, allowing individual cells to be removed from service while maintaining system operations.

(2) Cell Size. SFS wetland cells must meet permit effluent limitations, even when any single cell is removed from service.

(3) Hydraulic profile.

(A) An SFS wetland must maintain between 6.0 inches and 9.0 inches of dry media cover at design flow. The wetland must have at least 2.0 inches of upstream media cover during peak flow conditions, and not more than 12.0 inches of upstream media cover during diurnal low flow conditions.

(B) An SFS wetland hydraulic profile must be based on Figure 1: 30 TAC §217.211(e)(3)(B), unless an alternate design method is justified in the engineering report. The engineering report must include the method, the source of the method, and all supporting calculations and documentation.
Figure 1: 30 TAC §217.211(e)(3)(B)
Figure 2: 30 TAC §217.211(e)(3)(B)

(4) Maximum depth.
The maximum wetted media depth of an SFS wetland is the lesser of:

(A) 24 inches at design flow; or

(B) the maximum normal root depth for a planned primary population of emergent plant species.

(5) Minimum slope. An SFS wetland cell must have an adequate bottom slope to facilitate drainage for maintenance and to maintain media water depth over the entire cell length under all operational flow conditions.

(6) Parallel trains. An SFS wetland must have parallel treatment trains to increase operational flexibility.

(f) Flow Distribution. An SFS wetland must be designed with effective flow distribution and collection by meeting the following standards for inlets and outlets, submergence, maintenance, and staged influent feed.

(1) Inlets and Outlets.

(A) The inlet and outlet system of an SFS wetland cell must ensure uniform distribution of influent flow and uniform collection of effluent flow across an entire cell.

(B) The inlet and outlet devices of an SFS wetland cell must not cause locally high velocities that could result in movement of wetland media.

(C) Each inlet and outlet system must be adjustable to allow variation in operational water level and flooding of a cell for weed control.

(2) Submergence. Each inlet and outlet of an SFS wetland must be below the media surface.

(3) Maintenance. Inlet and outlet devices must allow inspection, cleaning, and maintenance.

(4) Staged influent feed. If an average influent five-day biochemical oxygen demand concentration greater than 200 milligrams per liter is anticipated, an SFS wetland must allow for staged influent feed to improve process control.

(g) Organic Loading and Treatment Efficiency.

(1) A constructed wetland process must be based on the design organic loading of the influent to the constructed wetland.

(2) The design of an SFS wetland must be based on the organic removal treatment efficiency for an SFS wetland on Equation H.5. in Figure: 30 TAC §217.211(g)(2), unless an alternate method to determine the organic removal treatment efficiency is justified in the engineering report. The engineering report must include the method, the source of the method, and all supporting calculations.
Figure: 30 TAC §217.211(g)(2)

(h) Temperature. An SFS wetland must be able to treat the wastewater treatment facility's wastewater at all water temperatures.

(i) Vector Control. Vegetation maintenance, including removal of excessive plant litter and detritus, is required to limit mosquito production.

(j) Media Design. SFS wetland media must meet the following minimum requirements.

(1) The media must be hard rock, slag, or other clean, comparable media material.

(2) The media must contain less than 0.1% by weight of clay, sand, and other fine materials.

(3) The media materials must have a Mohs hardness of at least 5.0.

(4) The media must be resistant to acidic conditions.

(5) Synthetic media is a non-conforming or innovative technology and is subject to the requirements of §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals).

(6) Media gradation and uniformity must be used to determine the SFS wetland's hydraulic conductivity.

(7) The media must be placed in an SFS wetland by lightweight equipment to prevent introduction of clay or other undesirable materials, to avoid compaction, clogging of the media, and damage to the liner.

(8) If an SFS wetland has gravel media larger than 1.5 inches in diameter, it must include a top layer of smaller gravel to encourage healthy plant rooting. The layer of smaller gravel must be above the normally saturated media zone. Also, an SFS wetland must include a transitional (medium grade) layer between small gravel and coarse gravel to minimize small gravel migration into lower void spaces.

§217.212. Overland Flow Process.

(a) An overland flow process is a non-conforming technology and is subject to the requirements of §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals).

(b) The distribution system for an overland flow process must ensure uniform sheet flow of the wastewater onto and across the overland flow terraces.

§217.213. Integrated Facultative Lagoons.

(a) Non-conforming technology. An integrated facultative lagoon is a non-conforming technology and is subject to the requirements of §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals).

(b) Integrated Facultative Lagoon Design.

(1) The length-to-width ratio of an integrated facultative lagoon must be 3.0 to 1.0.

(2) A pit must not be less than 0.25 acre in total surface area.

(3) The outer lagoon area must not be less than 10 times the surface area of the pit.

(4) A pit must have adequate volume to contain:

(A) 0.1 cubic foot per capita per year of sludge storage for a minimum of 20 years; and

(B) two days of design flow above the sludge storage area.

(5) The up-flow velocity in the pit must be less than 2.0 feet per day at design flow.

(6) If an integrated facultative lagoon has more than one pit, influent flow must be split proportional to the pit volumes.

(7) An inlet must be located in the pit portion of a lagoon.

(8) An outlet must be at a depth of 1.0 foot from the lagoon surface.

(9) An integrated facultative lagoon must meet the buffer zone requirements specified in §309.13 of this title (relating to Unsuitable Site Characteristics).

(10) Depth.

(A) A pit must be at least 15 feet deep during normal operating conditions, measured from the water surface to the influent inlet point.

(B) An integrated facultative lagoon must have berms around the pit.

(C) The berm height must be at least 5.0 feet or one-half the depth of the outer lagoon, whichever is greater.

(D) The distance from the water surface elevation during normal operating conditions to the top of the berm around a pit must be at least 5.0 feet.

(11) Organic Loading. The organic loading into a pit must not exceed 300 pounds of five-day biochemical oxygen demand per acre of total lagoon area per day.

(12) Odor Control.

(A) An inlet to a pit must be 3.0 feet above the bottom of the lagoon and the influent flow must be directed downward.

(B) An integrated facultative lagoon must be capable of recirculating at least 50% of the design flow from an outlet of the downstream lagoon.

(C) Oxygenated water from a downstream stabilization lagoon must be recirculated to the surface of the integrated facultative lagoon.

(D) An integrated facultative lagoon must prevent siphoning of lagoon contents through a submerged inlet.

(13) Removal Efficiency.

(A) The design of an integrated facultative lagoon must not be based on more than 60% organic removal efficiency in the pit.

(B) The design of an integrated facultative lagoon must not be based on a subsequent organic removal efficiency of more than 50% in the outer portion of the integrated facultative lagoon.

(C) The design organic removal efficiency for the entire integrated facultative lagoon must not exceed 80%.

(14) Detention Time. An integrated facultative lagoon must provide a minimum of 21 days hydraulic retention time at design flow.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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SUBCHAPTER J. SLUDGE PROCESSING

30 TAC §§217.241 - 217.252

Statutory Authority

The amendments are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.250. Sludge Dewatering.

(a) The engineering report must include a justification for the proposed sludge dewatering units, including design calculations, results from any pilot studies, all assumptions, and appropriate references.

(b) The design of a dewatering unit must be based on mass balance principles.

(c) General Requirements.

(1) Centrate or Filtrate Recycle.

(A) The drainage from beds and centrate or filtrate from dewatering units must be returned to the headworks of the wastewater treatment facility for treatment.

(B) The design of a treatment unit downstream from a dewatering unit must be based on the organic load from the centrate or filtrate recycle.

(2) Sludge with Industrial Waste Contributions. A dewatering system must prevent the release of any constituent (such as a free metal, an organic toxin, or a strong reducing or oxidizing compound) that adversely impacts human health, safety, or welfare, water quality, or compliance with the associated wastewater permit.

(3) Redundancy.

(A) A mechanical dewatering system must have at least two dewatering units, unless the engineering report justifies adequate storage or an alternative means of sludge handling.

(B) Mechanical dewatering units must be able to dewater the average daily sludge flow with the largest dewatering unit out of service.

(4) Storage Requirements.

(A) A mechanical dewatering system must have separate storage if the equipment will not operate on a continuous basis and the wastewater treatment facility has no digesters with built-in short-term storage.

(B) In-line storage of stabilized or unstabilized sludge must not interfere with any treatment unit.

(C) The separate sludge storage from a primary digester must be aerated and mixed to prevent nuisance odor conditions.

(5) Sampling Points. A dewatering system must have sampling stations before and after each dewatering unit and must allow periodic evaluation of the dewatering process.

(6) Maintenance. Each dewatering system unit must have a bypass to allow for maintenance, repair, and replacement. The engineer must specify where the bypass flow will be routed in the engineering report.

(d) Sludge Conditioning.

(1) The design and location of a chemical addition point must consider interactions of the chemical with other chemicals and processes used in the wastewater treatment facility.

(2) A dewatering system must provide adequate mixing time for the reaction between an additive and the sludge. Any subsequent handling must eliminate floc shearing.

(3) The engineering report must include a pilot plant or full-size performance data used to determine the characteristics and design dosage of any sludge additive.

(4) The engineering report must justify the in-stream flocculation and coagulation system design by including comparable performance data or pilot plant data.

(5) The engineering report must include whether the mixers require conditioning tanks.

(6) The engineering report must include calculations for a range of detention times.

(7) Solution storage capacity, at maximum chemical demand, must be based on:

(A) the amount of chemical needed per shift for continuous processes; or

(B) the amount of chemical needed for a full batch for intermittent and batch processes.

(8) Solution storage capacity may be reduced if the specific chemical or additive selected is adversely affected by storage.

(9) The engineering report must justify any storage volume reduction and any other method used to ensure a continuous supply of chemicals by accounting for chemical use through a full operating day or a full batch.

(e) Sludge Drying Beds.

(1) The size of sludge drying beds must be based on data from a similar wastewater treatment facility in the same geographical area with the same influent sludge characteristics.

(2) If the data required by paragraph (1) of this subsection is not available, or if the executive director determines that the data is not appropriate for a proposed wastewater treatment facility, the design of sludge drying beds must be based on the following:

(A) Open Beds.

(i) A sludge drying bed system must have at least two sludge drying beds.

(ii) The engineering report must include the calculation of the minimum surface area for a sludge drying bed using the values in the following figure for an area of the state with less than 45 inches annual average rainfall or less than 50% annual average relative humidity, as determined by data from the nearest National Oceanic and Atmospheric Administration's weather station that has at least ten years of data. The entire period of record for the weather station must be used.
Figure: 30 TAC §217.250(e)(2)(A)(ii)

(iii) Another method of sludge dewatering is required in lieu of a sludge drying bed in an area of the state that experiences either 45 or more inches of average annual rainfall or 50% or greater annual average relative humidity, as determined by data from the nearest National Oceanic and Atmospheric Administration's weather station that has at least ten years of data. The entire period of record for the weather station must be used.

(iv) A sludge drying bed system must:

(I) dewater sludge during normal operations;

(II) provide accelerated sludge dewatering during abnormally wet conditions;

(III) store accumulated sludge during periods of extended high humidity and rainfall;

(IV) use an alternative dewatering method to dewater the sludge during periods of extended high humidity and rainfall; and

(V) prevent the unauthorized discharge of solids from the sludge drying beds.

(v) The engineering report must justify the use of innovative or non-conforming sludge drying beds in high rainfall, high relative humidity areas of the state, as described in clause (iii) of this subparagraph.

(B) Gravel Media Beds. A gravel media bed must be laid in two or more layers. The gravel around the underdrains must be properly sized to allow drainage. The gravel around the underdrains must be at least 12 inches deep, extending at least 6.0 inches above the top of the underdrains. The top layer of a gravel media bed must be at least 3.0 inches thick and must consist of gravel 1/8 inch to 1/4 inch in size.

(C) Sand Media Beds. A sand media bed must consist of at least 12 inches of sand with a uniformity coefficient of less than 4.0 and an effective grain size of at least 0.3 millimeters but not more than 75 millimeters above the top of the underdrain.

(D) Underdrains.

(i) The underdrains must be at least 4.0 inches in diameter and a slope of at least 1.0% to the drain.

(ii) The underdrains must not be spaced more than 20 feet apart.

(iii) The engineering report must specify where the flow from the underdrains will be routed.

(E) Decanting. A sludge drying bed may have a method of decanting supernatant installed on the perimeter of the bed. The decanted liquid from a sludge drying bed must be returned to the headworks of the wastewater treatment facility or to the beginning of the secondary treatment process.

(F) Walls.

(i) The interior walls of a sludge drying bed must be watertight and extend 12 inches to 24 inches above and at least 6 inches below the bed surface.

(ii) The exterior walls of a sludge drying bed must be watertight and extend 12 inches to 24 inches above the bed surface or ground elevation, whichever is higher.

(G) Sludge Removal.

(i) A sludge drying bed system must be arranged to facilitate sludge removal.

(ii) The sludge drying beds must have concrete pads for vehicle support tracks on 20 foot centers for all percolation type sludge beds.

(H) Sludge Influent.

(i) A sludge pipe to the sludge drying beds must terminate at least 12 inches above the surface of the media and be arranged so that the pipe drains to a sump that pumps to the headworks of the wastewater treatment facility or the influent lift station.

(ii) A sludge discharge point must have a concrete splash plate.

(I) Drying Bed Bottom.

(i) The bottom of a sludge drying bed must consist of a layer of clayey subsoil having a thickness of a least 1.0 foot and a permeability of less than 1×10^{-7} centimeters per second.

(ii) An impermeable concrete pad must be installed over a liner in locations where the groundwater table is within 4.0 feet of the bottom of the liner.

(3) Innovative or Non-Conforming Sludge Drying Beds. The executive director will review any vacuum assisted sludge drying beds or other variations to the gravity drying bed concept as innovative and non-conforming technologies subject to §217.7(b)(2) of this title (relating to Types of Plans and Specifications Approvals).

(4) Rotary Vacuum Filtration.

(A) Filtration Rate. The engineering report must justify the value calculated for the rates of filtering for various types of sludge with proper conditioning, using Table J.4. in Figure: 30 TAC §217.250(e)(4)(A).
Figure: 30 TAC §217.250(e)(4)(A)

(B) Duplicate Equipment. Unless two treatment trains are provided, a feed pump, a vacuum pump, and a filtrate pump must be provided in duplicate to allow equipment alternation. Spare filter fabric must be kept at the wastewater treatment facility, except when metal coil filters are used.

(C) Filter Equipment. Parts that will get wet must be constructed of corrosion-resistant material. Drum and agitator assemblies must be equipped with variable-speed drives, and provisions must be made for adjusting the liquid level in the filtration system.

(D) Pumps.

(i) A vacuum pump with a capacity of at least 1.5 cubic feet per minute per square foot must be provided for metal-covered drums.

(ii) A dry-type vacuum pump must have a vacuum receiver.

(iii) A filtrate pump must have adequate capacity to pump the maximum amount of liquid to be removed from the sludge.

(iv) Each filter must be fed by a separate feed pump to ensure a proper feed rate.

(5) Centrifugal Dewatering.

(A) The engineering report must justify the sizing and design of a centrifugation system. A centrifuge design must be based on performance data from a similar centrifuge when available. If no performance data is available, the results of a pilot or full-scale test must be used.

(B) Selection of a material for a scroll must include consideration of the amount of grit expected in the sludge.

(C) A centrifugation system must include adequate sludge storage, based on the disposal process.

(D) Unless two treatment trains are provided, a centrifugation system must have the following spare equipment, including necessary connecting pipes and electrical controls:

(i) drive motor;

(ii) gear assembly; and

(iii) feed pump.

(E) A feed pump must have a variable speed drive.

(F) Each centrifuge must have a separate feed system.

(G) A centrifuge must be equipped for variable scroll speed and pool depth.

(H) A centirugation system must have a crane or monorail for equipment removal and maintenance.

(I) A centrifuge system must provide access for wash down of the interior of each centrifuge.

(6) Plate and Frame Presses.

(A) Sizing.

(i) The design of a plate and frame press must be based on performance data developed from a plate and frame press of similar size with similar operational characteristics. If no performance data is available, the results of pilot scale tests or full-scale tests must be used.

(ii) The design of a plate and frame press may be based on appropriate scale-up factors for full size designs if pilot scale testing is done in lieu of full-scale testing.

(iii) The engineering report must justify the size of a plate and frame press.

(B) Duplicate Equipment and Spare Parts. Unless multiple units are provided, a plate and frame press system must include the following spare equipment:

(i) one duplicate feed pump;

(ii) two extra plates, or at least one extra plate for every ten plates required for startup, whichever is greater;

(iii) one complete filter fabric set;

(iv) one closure drive system;

(v) one air compressor; and

(vi) one washwater booster pump.

(C) Operational Requirements.

(i) The filter feed pumps must be able to handle initial high volume flow, low pressure filling, and sustained periods of operating at 100 pounds per square inch to 225 pounds per square inch.

(ii) A plate and frame press system may include an integral pressure vessel to produce initial high volume flow.

(iii) A plate and frame press system may use operating pressures less than 225 pounds per square inch if the engineering report justifies the design operating pressure using actual performance data from a plate and frame press that processes similar sludge.

(iv) A plate and frame press system may include provisions for sludge-cake breaking to protect or enhance down line processes.

(D) Maintenance.

(i) A plate and frame press system must have a crane or monorail capable of removing the plates.

(ii) A plate and frame press system must have a high-pressure water or acid wash system to clean the filter.

(7) Belt Presses.

(A) Sizing.

(i) Actual performance data developed from a wastewater treatment facility with similar operational characteristics must be used to size a belt press system. If pilot plant testing is performed in lieu of full-scale testing, appropriate scale-up factors must be used to develop a full-scale design.

(ii) A belt press system must have a duplicate belt press, or another method of sludge processing or disposal that has been approved in writing by the executive director, if the design flow exceeds 4.0 million gallons per day.

(iii) The engineering report must include all data used to size a belt press system.

(B) Duplicate Equipment and Spare Parts. Unless multiple belt press units are provided, a belt press system must have the following spare equipment:

(i) one duplicate feed pump;

(ii) one washwater booster pump;

(iii) one complete set of belts;

(iv) one set of bearings for each type of press bearing;

(v) one set of tensioning equipment;

(vi) one set of tracking sensors;

(vii) one set of wash nozzles;

(viii) one doctor blade; and

(ix) conditioning or flocculation drive equipment.

(C) Conditioning. The engineering report must include the polymer selection methodology, account for sludge variability, and document the anticipated sludge loading to the belt press.

(D) Sludge Feed.

(i) The sludge must be fed at a relatively constant rate that does not interfere with polymer addition and belt press operation.

(ii) The engineering report must include the range in feed rate variability.

(iii) A belt press system may include grinders ahead of a flocculation system.

(iv) The sludge feed must provide a method for uniform sludge dispersion on a belt.

(v) A belt press system must use thickening of the feed sludge, unless the engineering report justifies separate thickening or dual purpose thickening.

(E) Filter Press Belts.

(i) A belt must have a variable speed drive.

(ii) A belt press system must have belt tracking and tensioning equipment.

(iii) The engineering report must justify the weave, material, width, and thickness of the belts.

(F) Filter Press Rollers.

(i) The rollers must have a protective finish.

(ii) The maximum roller deflection and operating tension of the belt must be included in the engineering report to justify equipment selection.

(iii) The roller bearings must be watertight and rated for a life of 100,000 hours.

(G) Spray Wash System.

(i) A belt press system must use high-pressure wash water for each belt.

(ii) The design of a spray wash system must specify the operating pressure at the point of washwater discharge.

(iii) A spray wash system must allow cleaning without interfering with the spray wash system operation.

(iv) The engineering report must justify the nozzle and nozzle cleaning system selection.

(v) A belt press system must have replaceable spray nozzles and spray curtains.

(H) Maintenance Requirements.

(i) A belt press system must have drip trays under the belt press and under the thickener when gravity belt thickening is employed.

(ii) The side and floor of a belt press must have adequate clearance for maintenance and removal of the dewatered sludge.

(iii) An electrical panel or other component subject to corrosion must be protected from splashes and corrosive gases, or be located outside of the belt press area.

(iv) A doctor blade clearance must be adjustable.

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SUBCHAPTER K. CHEMICAL DISINFECTION

30 TAC §§217.271 - 217.283

Statutory Authority

The amendments are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.272. Capacity and Sizing of Gaseous Chlorine Disinfection and Sulfur Dioxide Dechlorination Systems.

(a) The capacity of a chlorine or a sulfur dioxide gas-withdrawal system must be based on the peak flow, in compliance with §217.32(a)(1) of this title (relating to Organic Loadings and Flows for New Wastewater Treatment Facilities) and Equation K.1. in Figure: 30 TAC §217.272(a).
Figure: 30 TAC §217.272(a)

(b) Table K.1. in Figure: 30 TAC §217.272(b) establishes the minimum acceptable design chlorine dosage for disinfection:
Figure: 30 TAC §217.272(b)

(c) At the point of dechlorination, a dechlorination system must provide at least one unit of sulfur dioxide gas for each unit of residual chlorine.

§217.281. Application of Chlorination and Dechlorination Chemicals.

(a) Mixing Requirements.

(1) Mixing Zones. A mixing zone within a chlorine contact basin must not be considered as part of the volume needed for disinfection. A mixing zone must be designed to ensure that the chlorine is thoroughly mixed with the wastewater before entering a chlorine contact chamber, as described in paragraph (2) of this subsection.

(2) Chlorine and Sodium Hypochlorite Application. A disinfection system must apply the chlorine gas or solution in a highly turbulent flow regime created by in-line diffusers, mechanical mixers, or jet mixers. Effective initial mixing for the mean velocity gradient (G value) in the area of turbulent flow must exceed 500 per second. A serpentine disinfection channel may be used in place of turbulent initial mixing if the length-to-width ratio is at least 40-to-1 and complete mixing is demonstrated by a dye test.

(3) Sulfur Dioxide and Sodium Bisulfite Application.

(A) The mixing for a sulfur dioxide or sodium bisulfite system must ensure compliance with the effluent limits in the wastewater permit.

(B) A disinfection system must provide a mean velocity gradient (G value) of at least 250 per second.

(b) Chlorine Contact Basins.

(1) A chlorine contact basin must provide a minimum chlorine contact time of 20 minutes at the peak flow.

(2) A chlorine contact basin must prevent short-circuiting to ensure that the wastewater is retained in a chlorine contact basin for at least 20 minutes at peak flow.

(3) A rectangular chlorine contact basin must have rounded corners.

(4) If a wastewater treatment facility is designed with more than one chlorine contact basin:

(A) the design must provide a means of verifying the chlorine contact time and residual chlorine in each basin; and

(B) separate sampling points must be provided after each chlorine contact basin, unless the effluent from the basins is commingled at a single sampling point.

(5) The design of an aerated chlorine contact basin must include an analysis of the chlorine feed rate required to offset chlorine volatilization.

(6) The engineering report must include supporting data from a chlorine contact basin design model, performance data of a similar design, or a field tracer study.

(7) A chlorine contact basin must include a drain to facilitate removal of accumulated settled solids.

(c) Dechlorination Contact Time.

(1) A dechlorination system must have sufficient mixing and contact time between the disinfected wastewater and a dechlorinating agent to ensure continuous compliance with the chlorine limits in the wastewater permit.

(2) A dechlorination system must prevent short-circuiting and provide a minimum contact time of 20 seconds at the peak flow.

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SUBCHAPTER L. ULTRAVIOLET LIGHT DISINFECTION

30 TAC §§217.291 - 217.300

Statutory Authority

The amendments are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Robert Martinez
Director, Environmental Law Division
Texas Commission on Environmental Quality
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SUBCHAPTER M. SAFETY

30 TAC §§217.321 - 217.330, 217.332, 217.333

Statutory Authority

The amendments are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environ-

ment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

The adopted amendments implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

§217.329. Color Coding of Pipes.

(a) A new wastewater treatment facility must have color-coded pipes in accordance with subsection (e) of this section.

(b) A new wastewater treatment facility must have detectable underground warning tape for each non-metallic underground pipe.

(c) An existing wastewater treatment facility must color-code and install detectable underground warning tape for each pipe installed as part of an alteration.

(d) A non-potable water pipe must be painted purple and be stenciled "NON-POTABLE WATER, DO NOT DRINK" and "NO BEBA EL AGUA."

(e) A wastewater treatment facility design must use the following color-coding for pipes:

(1) sludge - brown;

(2) natural gas - red;

(3) potable water - light blue;

(4) chlorine - yellow;

(5) sulfur dioxide - lime green with yellow bands;

(6) sewage - grey;

(7) compressed air - light green;

(8) heated water - blue with 6 inch red bands spaced 30 inches apart;

(9) power conduit - in compliance with the National Fire Protection Association 70 National Electrical Code®;

(10) reclaimed water- purple with black lettering;

(11) gray water- purple with yellow writing;

(12) instrument air - light green with dark green bands;

(13) liquid alum - yellow with orange bands;

(14) alum (solution) - yellow with green bands;

(15) ferric chloride - brown with red bands;

(16) ferric sulfate - brown with yellow bands;

(17) polymers - white with green bands;

(18) ozone - stainless steel with white bands;

(19) raw water - tan; and

(20) effluent after clarification - dark green.

§217.332. Noise Levels.

(a) An area accessed by individuals must be designed to comply with 29 Code of Federal Regulations §1910.95.

(b) Removable noise attenuation equipment, such as removable mufflers or removable noise-reducing panels, must remain attached to the equipment at all times to reduce noise, unless the noise attenuation equipment is removed for maintenance activities.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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CHAPTER 317. DESIGN CRITERIA PRIOR TO 2008

30 TAC §§317.1 - 317.13, 317.15

The Texas Commission on Environmental Quality (TCEQ, agency, or commission) adopts new §§317.1 - 317.13, and 317.15 *without changes* to the proposed text as published in the May 29, 2015, issue of the *Texas Register* (40 TexReg 3070) and, therefore, will not be republished.

Background and Summary of the Factual Basis for the Adopted Rules

On August 28, 2008, Chapter 317 was repealed and replaced with the initial adoption of 30 TAC Chapter 217, Design Criteria for Domestic Wastewater Systems (Rule Project No. 2006-044-217-PR). This repeal and adoption were done primarily to update standards and design criteria in keeping with current engineering practices and technology as well as fulfil the commission's goal of having water-related rules in the Chapter 200 series. It was never the intent that certain facilities would not be subject to regulation due to the repeal. However, as time has gone by, it has become apparent that the repeal of Chapter 317 created some regulatory uncertainty for the owners and operators of those existing facilities not subject to Chapter 217 requirements. Chapter 217 applies to facilities constructed, renovated, or re-rated, after its adoption, but does not otherwise apply to existing facilities. Although those existing facilities are subject to permit requirements, because Chapter 317 was repealed and no savings clause was included in Chapter 217 to address existing facilities, it has been argued that it is unclear under what regulations those permitted existing facilities should operate and the basis for applying those regulations. Accordingly, the executive director initiated this rulemaking to re-adopt Chapter 317 as the most expeditious means to address this uncertainty; to clarify which facilities are subject to Chapter 317; and to clarify the commission's initial and ongoing position that facilities must be installed, operated, and maintained in accordance with the approved specifications, plans, and design criteria of Chapter 317. With the exception of an amendment to §317.1(a) to provide this clarification, the adopted rules are identical to those repealed in 2008. Adopted new Chapter 317 will clarify the commission's requirements, thereby simplifying the regulated community's efforts to comply, while maintaining the commission's duty to protect human health and the environment.

A corresponding rulemaking is published in this issue of the *Texas Register* concerning Chapter 217, Design Criteria for Domestic Wastewater Systems (Rule Project No. 2012-040-217-OW).

Section by Section Discussion

§317.1, General Provisions

Adopted §317.1 clarifies the commission requirements for obtaining construction approval of a sewerage project for systems not governed by Chapter 217.

§317.2, Sewage Collection System

Adopted §317.2 clarifies the minimum standards for the installation of gravity sewage collection lines not governed by Chapter 217.

§317.3, Lift Stations

Adopted §317.3 clarifies the minimum specifications for sewage lift stations and associated piping not governed by Chapter 217.

§317.4, Wastewater Treatment Facilities

Adopted §317.4 clarifies the minimum requirements for various types of wastewater treatment facilities processes not governed by Chapter 217.

§317.5, Sludge Processing

Adopted §317.5 clarifies the commission requirements for stabilization and dewatering of sludge produced at municipal wastewater treatment plants not governed by Chapter 217.

§317.6, Disinfection

Adopted §317.6 clarifies the commission requirements for wastewater disinfection facilities not governed by Chapter 217.

§317.7, Safety

Adopted §317.7 clarifies the minimum requirements to ensure the safety of operating personnel at wastewater treatment facilities not governed by Chapter 217.

§317.8, Design and Operation Features

Adopted §317.8 clarifies commission guidance with respect to laboratories, offices, workshops, and landscaping not governed by Chapter 217.

§317.9, Appendix A

Adopted §317.9 is a map of Texas indicating maximum 24-hour rainfall intensities (based upon a two-year return frequency) for all counties in the state for systems not governed by Chapter 217.

§317.10, Appendix B--Overland Flow Process

Adopted §317.10 clarifies minimum requirements relating to land disposal of sewage effluent by the overland flow process for systems not governed by Chapter 217.

§317.11, Appendix C--Hyacinth Basins

Adopted §317.11 clarifies commission requirements for the utilization of water hyacinths in the treatment process for systems not governed by Chapter 217.

§317.12, Appendix D

Adopted §317.12 is a map of Texas which provides minimum required sludge drying bed areas (based on influent five-day biochemical oxygen demand (BOD_5) loading) for all counties within the state for systems not governed by Chapter 217.

§317.13, Appendix E--Separation Distances

Adopted §317.13 clarifies minimum separation distances between water and wastewater treatment plants as well as between potable water lines and sanitary sewers for systems not governed by Chapter 217.

§317.15, General Guidelines for the Design of Constructed Wetlands Units for Use in Municipal Wastewater Treatment

Adopted §317.15 clarifies minimum standards for facilities which use constructed wetland units to treat and dispose of primarily domestic wastewater and are not governed by Chapter 217.

Final Regulatory Impact Determination

The commission has reviewed the adopted rules to determine whether a regulatory analysis is required by Texas Government Code, §2001.0225, and has determined that the adopted rules are not subject to Texas Government Code, §2001.0225, because they do not meet the definition of a "major environmental rule" as defined in that statute. "Major environmental rule" is defined under Texas Government Code, §2001.0225(g)(3), 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, productivity, competition, jobs, the environment, or the public health and safety of the state or a sector of the state." The adopted rules maintain a regulatory status quo and do not introduce a new regulatory burden.

Furthermore, the rulemaking does not meet any of the four applicability requirements listed in Texas Government Code, §2001.0225(a). Texas Government Code, §2001.0225 only applies to a state agency's adoption of a major environmental rule that: 1) exceeds a standard set by federal law, unless the rule is specifically required by state law; 2) exceeds an express requirement of state law, unless the rule is specifically required by federal law; 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) adopts a rule solely under the general powers of the agency instead of under a specific state law.

Specifically, the adopted rules do not exceed federal standards because no applicable federal standards exist. Also, the adopted rules do not exceed an express requirement of state law nor exceed a requirement of a delegation agreement. Finally, the adopted rules were not developed solely under the general powers of the agency; but also under the specific authority of Texas Water Code, §26.034. Under Texas Government Code, §2001.0225, only a major environmental rule requires a regulatory impact analysis. Because the adopted rule making does not constitute a major environmental rule, as set forth above, a regulatory impact analysis is not required.

The commission invited public comment regarding the Draft Regulatory Impact Analysis Determination during the public comment period. No comments were received on the regulatory impact analysis determination.

Takings Impact Assessment

The commission has prepared a takings impact assessment for these adopted rules in accordance with Texas Government Code, §2007.043. The commission's preliminary assessment is

that implementation of these adopted rules would not constitute a taking of real property.

The adopted rules maintain a regulatory status quo and do not introduce a new regulatory burden. Therefore, the adopted rules would not affect real property in a manner that is different than real property would have been affected without the adopted rules.

Consistency with the Coastal Management Program

The commission reviewed the adopted rules and found that they are neither identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11(b)(2) or (4), nor will they affect any action/authorization identified in Coastal Coordination Act Implementation Rules, 31 TAC §505.11(a)(6). Therefore, the adopted rules are not subject to the Texas Coastal Management Program (CMP).

The commission invited public comment regarding the consistency with the CMP during the public comment period. No comments were received on the consistency with the CMP.

Public Comment

The commission held a public hearing on June 23, 2015. The comment period closed on June 29, 2015. The commission received comments from Texas Association of Clean Water Agencies (TACWA) and Water Environment Association of Texas (WEAT) supporting adoption of the rules and suggesting a change.

Response to Comments

Comment

TACWA and WEAT commented that enforcement guidance, particularly the documentation required to be available during inspection, would be helpful to a regulated entity and recommends that a list of such documentation be included in the rule.

Response

The commission respectfully disagrees with limiting such documentation to a list within a rule. Although both Chapters 217 and 317 indicate the documents a facility must maintain, the fluid nature of an investigation may require flexibility to obtain the information necessary to ascertain compliance. TCEQ Publication RG-088, "Most Frequently Needed Records for Wastewater Investigations," available at *https://www.tceq.texas.gov/assistance/publications/rg/rg-088.html,* provides a list of documentation that may be needed for an investigation. No changes were made based on the comments.

Comment

TACWA and WEAT commented that, because systems upgrade, expand and replace various components throughout the life of the facility, it will be very difficult and time-consuming to track which components were approved for construction under Chapter 317 versus Chapter 217 criteria. TACWA and WEAT additionally ask if TCEQ will provide a database of construction approvals for each wastewater system.

Response

Although it is a regulated entity's responsibility to maintain copies of approvals and variances granted by the commission, TCEQ has a public database of approvals subject to Chapter 217 with corresponding data from October 28, 2008, to the present. Facilities or components that do not appear on this database are presumed to be subject to Chapter 317 requirements. The database is located at: *http://www4.tceq.texas.gov/wwdp.* No changes were made based on the comments.

Statutory Authority

These rules are adopted under the authority of Texas Water Code (TWC), §5.013, which provides the commission's general jurisdiction; TWC, §5.103, which provides the commission's authority to adopt any rules necessary to carry out its powers and duties under the laws of Texas; TWC, §5.105, which provides the commission's authority to, by rule, establish and approve general policy of the commission; TWC, §5.120, which provides the commission's authority to administer the law to promote conservation and protection of the quality of the environment; TWC, §26.027, which authorizes the commission to issue permits; TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

These rules implement TWC, §§5.013, 5.103, 5.105, 5.120, 26.027, 26.034, and 26.121.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Kathleen C. Decker
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Texas Commission on Environmental Quality
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For further information, please call: (512) 239-2613

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TITLE 37. PUBLIC SAFETY AND CORRECTIONS

PART 13. TEXAS COMMISSION ON FIRE PROTECTION

CHAPTER 421. STANDARDS FOR CERTIFICATION

37 TAC §421.5

The Texas Commission on Fire Protection (the commission) adopts an amendment to Chapter 421, Standards For Certification, concerning §421.5, Definitions. The amendments are adopted without changes to the proposed text as published in the September 4, 2015, *Texas Register* (40 TexReg 5747) and will not be republished.

The amendment is adopted to limit the use of a TEEX Pro Board certificate toward obtaining an initial commission certification only.

The adopted amendment will provide clear and concise rules regarding requirements for using the TEEX Pro Board certificates toward obtaining a commission certification.

No comments were received from the public regarding adoption of the amendment.

The amendment is adopted under Texas Government Code, Chapter 419, §419.008, which provides the commission the authority to adopt rules for the administration of its powers and duties; and §419.032, which gives the commission the authority to appoint fire protection personnel.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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TRD-201504805
Tim Rutland
Executive Director
Texas Commission on Fire Protection
Effective date: November 26, 2015
Proposal publication date: September 4, 2015
For further information, please call: (512) 936-3812

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CHAPTER 441. CONTINUING EDUCATION

37 TAC §441.5

The Texas Commission on Fire Protection (the commission) adopts an amendment to Chapter 441, Continuing Education, concerning §441.5, Requirements. The amendment is adopted without changes to the proposed text as published in the July 10, 2015, *Texas Register,* (40 TexReg 4455) and will not be republished.

The amendment is adopted to delete obsolete language.

The adopted amendment will provide clear and concise rules regarding continuing education requirements.

No comments were received from the public regarding adoption of the amendment.

The amendment is adopted under Texas Government Code, Chapter 419, §419.008, which provides the commission the authority to adopt rules for the administration of its powers and duties.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Tim Rutland
Executive Director
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CHAPTER 455. MINIMUM STANDARDS FOR WILDLAND FIRE PROTECTION CERTIFICATION

37 TAC §455.3

The Texas Commission on Fire Protection (the commission) adopts an amendment to Chapter 455, Minimum Standards For Wildland Fire Protection Certification, concerning §455.3, Minimum Standards For Basic Wildland Fire Protection Certification. The amendment is adopted without changes to the proposed text as published in the September 4, 2015, *Texas Register,* (40 TexReg 5750) and will not be republished.

The amendment is adopted to delete obsolete language regarding testing for basic wildland certification.

The adopted amendment will provide clear and concise rules regarding requirements for obtaining basic wildland fire protection certification.

No comments were received from the public regarding adoption of the amendment.

The amendment is adopted under Texas Government Code, Chapter 419, §419.008, which provides the commission the authority to adopt rules for the administration of its powers and duties; and §419.026, which authorizes the commission to set and establish fees for each certificate the commission issues or renews.

The agency certifies that legal counsel has reviewed the adoption and found it to be a valid exercise of the agency's legal authority.

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Tim Rutland
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