The Texas Commission on Environmental Quality (TCEQ, agency, or commission) proposes to amend §331.19.

**Background and Summary of the Factual Basis for the Proposed Rule**

This rulemaking implements Senate Bill (SB) 483 and SB 520, 86th Texas Legislature, 2019, addressing the commission’s regulation of certain injection wells in portions of the Edwards Aquifer and the storage and recovery of water in portions of the Edwards Aquifer. SB 483 revises the definition of "Edwards Aquifer" for a certain portion of Texas, expands commission authorization mechanisms to include rule and individual permit, adds to the permissible sources of injected water, and revises risk assessment requirements. SB 520 adds to the permissible sources of injected water in certain portions of the Edwards Aquifer and limits injection of those added sources to utilities owned by the City of New Braunfels.

Section 331.19 currently addresses injection into or through the Edwards Aquifer and must be revised to implement the changes enacted by SB 483 and SB 520.

**Section Discussion**

In addition to adopting amendments to implement SB 483 and SB 520, the commission adopts grammatical, stylistic, and various other non-substantive changes to update the rules in accordance with current Texas Register style and format requirements, improve readability, and establish consistency in the rules. These non-substantive
changes are not intended to alter the existing rule requirements in any way and are not specifically discussed in this preamble.

§331.19, Injection Into or Through the Edwards Aquifer

The commission proposes §331.19(a)(4) to allow authorization of Class V wells operated by a City of New Braunfels-owned utility that inject water meeting certain requirements into a portion of the Edwards Aquifer as established by SB 520 in Texas Water Code (TWC), §27.051(i)(3).

The remaining changes are proposed to implement changes specified in SB 483.

The commission proposes to amend §331.19(b) to establish the applicability of the definition of "Edwards Aquifer" within the section.

The commission proposes to amend §331.19(c) to describe the geographic area applicable to §331.19(c), as described in TWC, §27.0516(b).

The commission proposes to remove Figure: 30 TAC §331.19(c) because illustrating the areas where the requirements of §331.19(c) apply is no longer necessary as SB 483 revised the area to apply to the entire geographic area within the boundaries of the Barton Springs-Edwards Aquifer Conservation District but not within the jurisdiction of the Edwards Aquifer Authority.
The commission proposes §331.19(c)(1), (2), and (3)(A) to incorporate the revisions to authorization mechanisms, exclusions for the geographic area described in §331.19(c), and definition of "Edwards Aquifer", as established in TWC, §27.0516(f); TWC, §27.0516(b); and TWC, §27.0516(a)(1), respectively. As a result, existing paragraphs or subparagraphs are proposed to be renumbered or re-lettered accordingly.

The commission proposes to amend renumbered §331.19(c)(5) to add the authorization mechanisms of "rule" and "individual permit," as established in TWC, §27.0516(f), for the geographic area described in §331.19(c).

The commission proposes §331.19(c)(5)(E)(i) – (v) to provide the detailed requirements, as established in TWC, §27.0516(f)(5), for injection wells that transect and isolate the Edwards Aquifer for the injection of certain water from a public water system as part of an aquifer storage and recovery facility.

The commission proposes to amend renumbered §331.19(c)(7)(A)(i) and (ii) to allow monitoring for the geographic area described in §331.19(c) to be performed by "one or more" monitoring wells, rather than "a monitor well," to conform to TWC, §27.0516(h)(1).

The commission proposes §331.19(c)(8) to provide more details, as established in
TWC, §27.0516(k) and (n), of the requirements for the injection projects under §331.19(c)(5)(B), (C), or (E) that may be authorized by rule, individual permit, or general permit.

The commission proposes §331.19(c)(9) to prescribe that authorizations under §331.19(c)(5)(B) or (C) must require monitoring reports be filed with the executive director at least every three months, as established in TWC, §27.0516(h)(5).

**Fiscal Note: Costs to State and Local Government**

Jené Bearse, Analyst in the Budget and Planning Division, determined that for the first five-year period the proposed rule is in effect, no fiscal implications are anticipated for the agency or for other units of state or local government as a result of administration or enforcement of the proposed rule.

This rulemaking is required to comply with the changes to state law which address injection into or through the Edwards Aquifer.

**Public Benefits and Costs**

Ms. Bearse determined that for each year of the first five years the proposed rule is in effect, the public benefit anticipated will be compliance with state law and the possibility for an encouraging effect on the initiation of aquifer storage and recovery projects in the region. It expands the range of allowable injection projects in the
Edwards Aquifer geographic area, but it does not require injection projects to be initiated.

The proposed rulemaking is not anticipated to result in adverse fiscal implications for businesses or individuals.

**Local Employment Impact Statement**

The commission reviewed this proposed rulemaking and determined that a Local Employment Impact Statement is not required because the proposed rule does not adversely affect a local economy in a material way for the first five years that the proposed rule is in effect.

**Rural Communities Impact Assessment**

The commission reviewed this proposed rulemaking and determined that the proposed rule does not adversely affect rural communities in a material way for the first five years that the proposed rule is in effect. The affected geographic area includes all or part of the following counties: Bexar, Comal, Hays, Kendall, Kinney, Medina, Travis, Uvalde, and Williamson.

**Small Business and Micro-Business Assessment**

No adverse fiscal implications are anticipated for small or micro-businesses due to the
implementation or administration of the proposed rule for the first five-year period the proposed rule is in effect.

The proposed rule would allow the commission to authorize underground injection that is currently prohibited. The commission is not aware of any known small or micro-businesses performing injections at the present time.

**Small Business Regulatory Flexibility Analysis**

The commission reviewed this proposed rulemaking and determined that a Small Business Regulatory Flexibility Analysis is not required because the proposed rule does not adversely affect a small or micro-business in a material way for the first five years the proposed rule is in effect.

**Government Growth Impact Statement**

The commission prepared a Government Growth Impact Statement assessment for this proposed rulemaking. The proposed rulemaking does not create or eliminate a government program and would not require an increase or decrease in future legislative appropriations to the agency. The proposed rule does not require the creation of new employee positions, eliminate current employee positions, nor require an increase or decrease in fees paid to the agency. The proposed rulemaking does expand an existing regulation by allowing the commission to authorize the underground injection as authorized by state law and would increase the number of
individuals subject to its applicability. During the first five years, the proposed rule should not significantly impact positively or negatively the state's economy.

**Draft Regulatory Impact Analysis Determination**

The commission reviewed the proposed rulemaking action in light of the regulatory analysis requirements of Texas Government Code, §2001.0225, and determined that the 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 the statute. "Major environmental rule" means 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. The proposed action implements SB 483 and SB 520 which revise requirements for certain types of injection in the Edwards Aquifer. The proposal does not meet the definition of "Major environmental rule" because the rulemaking does not affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, or public health and safety of the state or a sector of the state. The new requirements for injection wells apply only to a specific geographic area within state, and no injection well authorized by the commission may allow the movement of fluid that would result in the pollution of an underground source of drinking water.
Furthermore, the proposed rule does not meet any of the four applicability requirements listed in Texas Government Code, §2001.0225(a). The proposed rule does not exceed a standard set by federal law, because there is no comparable federal law regarding injection wells in the Edwards Aquifer. The proposed rule does not exceed an express requirement of state law because it is consistent with the requirements of SB 483 and SB 520 and TWC, §27.051(i) and §27.0516. The proposed rule does not exceed requirements set out in the commission's Underground Injection Control program authorized for the state of Texas under the federal Safe Drinking Water Act. The rulemaking is not proposed under the general powers of the agency and is proposed under the express requirements of TWC, §27.019 and §27.0516(h).

Written comments on the Draft Regulatory Impact Analysis may be submitted to the contact person at the address listed under the Submittal of Comments section of this preamble.

**Takings Impact Assessment**

The commission evaluated this rulemaking action and performed a preliminary assessment of whether Texas Government Code, Chapter 2007 is applicable. The proposed action implements legislative requirements in SB 483 and SB 520, which authorizes certain types of injection wells and establishes requirements for injection wells within the Edwards Aquifer.
The proposed rule would be neither a statutory nor a constitutional taking of private real property. The proposed rule would allow certain injection wells in the Edwards Aquifer as provided under SB 483 and SB 520. The proposed rule does not affect a landowner's rights in private real property because this rulemaking action does not burden (constitutionally), nor restrict or limit, the owner's right to real property and reduce its value by 25% or more beyond which would otherwise exist in the absence of the regulations.

**Consistency with the Coastal Management Program**

The commission reviewed the proposed rule and found it is neither identified in Coastal Coordination Act implementation rules, 31 TAC §505.11(b)(2) or (4), nor would it affect any action/authorization identified in Coastal Coordination Act implementation rules, 31 TAC §505.11(a)(6). Therefore, the proposed rule is not subject to the Texas Coastal Management Program.

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

**Announcement of Hearing**

The commission will hold a public hearing on this proposal in Austin on January 14, 2020, at 10:00 a.m. in Building E, Room 201S, at the commission’s central office.
located at 12100 Park 35 Circle. The hearing is structured for the receipt of oral or written comments by interested persons. Individuals may present oral statements when called upon in order of registration. Open discussion will not be permitted during the hearing; however, commission staff members will be available to discuss the proposal 30 minutes prior to the hearing.

Persons who have special communication or other accommodation needs who are planning to attend the hearing should contact Ms. Sandy Wong, Office of Legal Services at (512) 239-1802 or 1-800-RELAY-TX (TDD). Requests should be made as far in advance as possible.

**Submittal of Comments**

Written comments may be submitted to Ms. Kris Hogan, MC 205, Office of Legal Services, Texas Commission on Environmental Quality, P.O. Box 13087, Austin, Texas 78711-3087, or faxed to (512) 239-4808. Electronic comments may be submitted at: https://www6.tceq.texas.gov/rules/ecomments/. File size restrictions may apply to comments being submitted via the eComments system. All comments should reference Rule Project Number 2019-117-331-WS. The comment period closes on January 21, 2020. Copies of the proposed rulemaking can be obtained from the commission’s website at https://www.tceq.texas.gov/rules/propose_adopt.html. For further information, please contact Carol Dye, Underground Injection Control Permits Section, at (512) 239-1504.
SUBCHAPTER A: GENERAL PROVISIONS

§331.19

Statutory Authority

The amended section is proposed under the Texas Water Code (TWC), §5.103, which provides the commission the authority to adopt any rules necessary to carry out its powers and duties under the TWC and other laws of this state; TWC, §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; TWC, §5.120, which authorizes the commission to administer the law so as to promote the judicious use and maximum conservation and protection of the environment and natural resources of the state; TWC, §27.019, which requires the commission to adopt rules reasonably required for the regulation of injection wells; and TWC, §27.0516(h), which authorizes the commission to adopt rules regarding injection wells in the Edwards Aquifer.

The amended section implements Senate Bill (SB) 483 and SB 520, 86th Texas Legislature, 2019, and TWC, §27.051 and §27.0516, which establish requirements for certain injection wells in the Edwards Aquifer.

§331.19. Injection Into or Through the Edwards Aquifer.
(a) Except as authorized in subsection (c) of this section, for applications submitted on or after September 1, 2001, injection wells that transect or terminate in the Edwards Aquifer may be authorized by rule under §331.9 of this title (relating to Injection Authorized by Rule) or by permit only as follows:

(1) wells that inject groundwater withdrawn from the Edwards Aquifer may be authorized only if:

(A) the groundwater is unaltered physically, chemically, or biologically; or

(B) the groundwater is treated in connection with remediation that is approved by state or federal order, authorization, or agreement and does not exceed the maximum contaminant levels for drinking water contained in §290.104 of this title (relating to Summary of Maximum Contaminant Levels, Maximum Residual Disinfectant Levels, Treatment Techniques, and Action Levels);

(2) wells that inject non-toxic tracer dyes into the Edwards Aquifer for the purpose of conducting scientific studies to determine hydrologic flowpaths may be authorized if the owner or operator is a federal or state agency, county, municipality, river authority, or groundwater district; [or]
(3) improved sinkholes or caves located in karst topographic areas that inject storm water, flood water, or groundwater may be authorized; and [.] 

(4) wells that terminate in a portion of the Edwards Aquifer that contains groundwater with a total dissolved solids (TDS) concentration of more than 5,000 milligrams per liter, and:

(A) the water is injected by a utility owned by the City of New Braunfels;

(B) the injected water has a TDS of less than 1,500 milligrams per liter and is not domestic wastewater, municipal wastewater, or reclaimed water as defined by Chapter 210 of this title (relating to Use of Reclaimed Water);

(C) if the injected water is state water, the utility has a water right or contract for use of the water that does not prohibit use of the water in an aquifer storage and recovery project; and

(D) the injection of the water complies with the requirements of Subchapter K of this chapter (relating to Additional Requirements for Class V Injection Wells Associated With Aquifer Storage and Recovery Projects).
(b) For the purposes of subsection (a) of this section, Edwards Aquifer means that portion of an arcuate belt of porous, water-bearing limestones composed of the Edwards Formation, Georgetown Formation, Comanche Peak Formation, Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, and Edwards Group trending from west to east to northeast through Kinney, Uvalde, Medina, Bexar, Kendall, Comal, Hays, Travis, and Williamson Counties. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.

(c) This subsection applies only to the portion of the Edwards Aquifer that is within the geographic area circumscribed by the external boundaries of the Barton Springs-Edwards Aquifer Conservation District [(BSEACD)] but is not in the jurisdiction [that district's territory or the territory] of the Edwards Aquifer Authority. [The jurisdictional boundaries of the BSEACD are delineated in orders of the commission dated November 19, 1986 and April 18, 1988; in two subsequent orders of the BSEACD dated August 13, 1987; three orders of the BSEACD dated January 24, 2002; an order of the BSEACD canvassing the returns and declaring the results of a special election, dated November 12, 2002; and in a resolution of the BSEACD adopted June 23, 2011. A general depiction of the geographic area affected by this subsection is shown in the figure in this subsection. Unless authorized by rule as provided in paragraph (2) of this]
subsection or authorized by a general permit issued by the commission as provided in paragraph (3) of this subsection, all injection wells within the geographic area described in this subsection are prohibited.

[Figure: 30 TAC §331.19(c)]
(1) Unless authorized by rule as provided in paragraph (4) of this subsection or authorized by rule, individual permit, or general permit issued by the commission as provided in paragraph (5) of this subsection, all injection wells within the geographic area described in this subsection are prohibited.

(2) This subsection does not apply to a wastewater facility permitted under Texas Water Code (TWC), Chapter 26 or a subsurface area drip dispersal system permitted under TWC, Chapter 32.

(3) [(1)] Definitions. For the purposes of this subsection:

(A) Edwards Aquifer--That portion of an arcuate belt of porous, water-bearing limestones composed of the Edwards Formation, Georgetown Formation, Comanche Peak Formation, Salmon Peak Limestone, McKnight Formation, West Nueces Formation, Devil's River Limestone, Person Formation, Kainer Formation, and Edwards Group, together with the Upper Glen Rose Formation where scientific studies have documented a hydrological connection to the overlying Edwards Group trending from west to east to northeast through Kinney, Uvalde, Medina, Bexar, Kendall, Comal, Hays, Travis, and Williamson Counties. The permeable aquifer units generally overlie the less-permeable Glen Rose Formation to the south, overlie the less-permeable Comanche Peak and Walnut Formations north of the Colorado River, and underlie the less-permeable Del Rio Clay regionally.
(B) [(A)] Engineered aquifer storage and recovery facility--A facility with one or more wells that is located, designed, constructed, and operated for the purpose of injecting fresh water into a subsurface permeable stratum and storing the water for subsequent withdrawal and use for a beneficial purpose.

(C) [(B)] Fresh water--Surface water or groundwater, without regard to whether the water has been physically, chemically, or biologically altered, that:

(i) contains a total dissolved solids concentration of not more than 1,000 milligrams per liter; and

(ii) is otherwise suitable as a source of drinking water supply.

(D) [(C)] Saline portion of the Edwards Aquifer--The portion of the Edwards Aquifer that contains groundwater with a total dissolved solids concentration of more than 1,000 milligrams per liter.

(4) [(2)] Injection wells authorized by rule. Injection wells within the geographic area described within this subsection may be authorized by rule under §331.9 of this title for:
(A) the injection of fresh water withdrawn from the Edwards Aquifer into a well that transects or terminates in the Edwards Aquifer for the purpose of providing additional recharge; or

(B) the injection of rainwater, storm water, flood water, or groundwater into the Edwards Aquifer by means of an improved natural recharge feature such as a sinkhole or cave located in a karst topographic area for the purpose of providing additional recharge.

(5) [(3)] Injection wells authorized by rule, individual permit, or general permit. Injection wells within the geographic area described in this subsection may be authorized under a rule, individual permit, or general permit issued by the commission. A rule, individual permit, or general permit under this paragraph may authorize:

(A) an activity described under paragraph (4) [(2)] of this subsection;

(B) an injection well that transects and isolates the saline portion of the Edwards Aquifer and terminates in a lower aquifer for the purpose of injecting:
(i) concentrate from a desalination facility; or

(ii) fresh water as part of an engineered aquifer storage and recovery facility;

(C) an injection well that terminates in that part of the saline portion of the Edwards Aquifer that has a TDS [total dissolved solids] concentration of more than 10,000 milligrams per liter for the purpose of injecting into the saline portion of the Edwards Aquifer:

(i) concentrate from a desalination facility, provided that the injection well must be at least three miles from the closest outlet of Barton Springs; or

(ii) fresh water as part of an engineered aquifer and storage recovery facility, provided each well used for injection or withdrawal from the facility must be at least three miles from the closest outlet of Barton Springs; [or]

(D) an injection well that transects or terminates in the Edwards Aquifer for:

(i) aquifer remediation;
(ii) the injection of a nontoxic tracer dye as part of a hydrologic study; or

(iii) another beneficial activity that is designed and undertaken for the purpose of increasing protection of an underground source of drinking water from pollution or other deleterious effects; or [.]

(E) an injection well that transects the Edwards Aquifer for the purpose of injecting fresh water provided that:

(i) the well isolates the Edwards Aquifer and meets the construction standards in §331.183 of this title (relating to Construction and Closure Standards);

(ii) the well is part of an engineered aquifer storage and recovery facility;

(iii) the injected water is sourced from a public water system, as defined in §290.38 of this title (relating to Definitions), that is permitted by the commission;

(iv) the injected water meets water quality standards for
public drinking water established in Chapter 290 of this title (relating to Public Drinking Water); and

(v) the injection complies with the provisions of Subchapter K of this chapter that are not in conflict with this section.

(6) [(4)] The commission must hold a public meeting before issuing a general permit under this section.

(7) [(5)] Special requirements for all injection wells subject to this subsection.

(A) Monitoring wells. An injection well subject to this subsection must be monitored by means of:

(i) one or more [a] monitoring wells [well] operated by the injection well owner if the executive director determines that there is an underground source of drinking water in the area of review that is potentially affected by the injection well; or

(ii) if clause (i) of this subparagraph does not apply, one or more [a] monitoring wells [well] operated by a party other than the injection well owner.
owner, provided that all results of monitoring are promptly made available to the injection well owner.

(iii) A monitoring well described under this subparagraph, if properly sited and completed, may also be used for monitoring a saline water production well.

(B) An injection well subject to this subsection:

(i) must not result in the waste or pollution of fresh water;

and

(ii) may be authorized for a term not to exceed ten years, and the authorization for the injection well may be renewed.

(8) An authorization by rule, individual permit, or general permit under paragraph (5)(B), (C), or (E) of this subsection:

(A) must initially be associated with a small-scale research project designed to evaluate the long-term feasibility of the injection of concentrate from a desalination facility; or an aquifer storage and recovery project;
(B) may be continued following completion of the research project if:

(i) the research project information is submitted to the commission in a timely schedule;

(ii) adequate characterization of risks to the fresh water portion of the Edwards Aquifer, the fresh water portion of formations in the Trinity Group or other fresh water demonstrates to the commission's satisfaction that continued operation or continued operations with commission-approved well modifications or operational controls does not pose unreasonable risk to the fresh water portion of the Edwards Aquifer, the fresh water portion of formations in the Trinity Group, or other fresh water; and

(iii) the commission receives a notice of intent to continue operation at least 90 days before initiation of commercial well operations.

(9) Authorization under paragraph (5)(B) or (C) of this subsection must require monitoring reports be filed with the executive director at least every three months.