

The Commission on Environmental Quality (agency or commission) adopts new §331.19, Injection Into or Through the Edwards Aquifer, *without change* to the proposed text as published in the July 26, 2002 issue of the *Texas Register* (27 TexReg 6664), and the rule will not be republished.

BACKGROUND AND SUMMARY OF THE FACTUAL BASIS FOR THE ADOPTED RULE

The purpose of the adopted new rule is to implement certain requirements of Senate Bill 2 (SB 2), 77th Legislature, 2001, specifically Texas Water Code (TWC), §27.051(h). The applicable provisions of SB 2 became effective on September 1, 2001. Concurrent rulemaking is being done in 30 TAC §213.3, Definitions, and §213.8, Prohibited Activities, for related changes needed to implement the legislation.

SB 2, §11.03(a) amends TWC, §27.051, Issuance of Permit, by adding a new subsection (h). The new statutory provision prohibits the commission from authorizing by rule or permit an injection well that transects or terminates in the Edwards Aquifer (EA). An “injection well” is defined in 30 TAC §331.2(45), Definitions, as a well into which fluids are being injected. A “well” is defined in §331.2(97) as “a bored, drilled, or driven shaft whose depth is greater than the largest surface dimension, a dug hole whose depth is greater than the largest surface dimension, an improved sinkhole, or a subsurface fluid distribution system but does not include any surface pit, surface excavation, or natural depression.” Certain exceptions to the prohibition against injection are provided in the legislation. The commission may, by rule, authorize injection of groundwater withdrawn from the EA, including injection into aquifer remediation wells under some circumstances. The commission also adopts an exception to authorize injection of dye tracer for scientific study of hydrologic flowpaths. The commission may also authorize injection of storm water, flood water, or groundwater through

improved sinkholes or caves located in karst topographic areas. New authorizations for injection of all other fluids and wastes through wells that transect or terminate in the EA are prohibited for applications filed on or after September 1, 2001.

There are four classes of injection wells under the jurisdiction of the commission. Class I injection wells are used for the disposal of hazardous or nonhazardous waste into deep geological formations. Currently, Class I injection wells are prohibited by §213.8 over the EA recharge or transition zones, as defined in §213.3. Class III injection wells are used for the extraction of minerals. There are no permitted Class III injection wells over the EA. Class IV injection wells are used to dispose of hazardous or radioactive waste into or above a formation that has an underground source of drinking water within 1/4-mile of the wellbore. Class IV injection wells are generally prohibited across the state except if the well is being used to inject hazardous waste-contaminated groundwater that is of acceptable quality to aid remediation and is reinjected into the same formation from which it was withdrawn. Class V injection wells are those not included in any other class, including, but not limited to, aquifer storage and retrieval wells, motor vehicle waste disposal wells, large capacity septic systems (designed for a flow greater than 5,000 gallons per day), air conditioning return flow wells, cooling water return flow wells, storm water drainage wells, improved sinkholes, closed loop injection wells, subsurface fluid distribution systems, and aquifer remediation wells. Subsurface fluid distribution systems include subsurface drip irrigation utilized for the disposal of treated effluent.

It should be noted that certain types of Class V wells, such as: subsurface fluid distribution systems, as defined in §331.2(87); aquifer remediation wells not reinjecting groundwater from the EA; and other

Class V wells (other than wells injecting groundwater, storm water, or flood water through improved sinkholes or caves in karst topographic areas), that transect or terminate in the EA are also prohibited. Similarly, land application systems that rely on percolation for wastewater disposal are already prohibited over the EA recharge zone as per 30 TAC §213.6(b), Wastewater Treatment and Disposal.

This new prohibition applies to applications for authorizations by permit or rule of injection wells that transect or terminate in the EA, if submitted on or after September 1, 2001. These applications include new authorizations for injection wells or major amendments to existing authorizations. Injection wells authorized by the commission on or before August 31, 2001, are not subject to this prohibition. Also, applications submitted on or before August 31, 2001, are not subject to this prohibition.

For the purposes of this new prohibition, “Edwards Aquifer” means that portion of an arcuate belt of porous, waterbearing limestones trending from west to east to northeast and composed of the Comanche Peak, Edwards, and Georgetown Formations, Salmon Peak Limestone, McKnight Formation, Devil’s River Limestone, Person Formation, West Nueces Formation, Kainer Formation, and Edwards Group in certain counties. These counties are Kinney, Uvalde, Medina, Bexar, Kendall, Comal, Hays, Travis, and Williamson. TWC, §27.051(h) refers to the definition of the EA used in TWC, §26.046. TWC, §26.046 defines the EA as “that portion of an arcuate belt of porous, waterbearing limestones composed of the Comanche Peak, Edwards, and Georgetown Formations trending from west to east to northeast through Kinney, Uvalde, Medina, Bexar, Kendall, Comal, and Hays Counties, respectively, and as defined in the most recent rules of the commission for the protection of the quality of the potable underground water in those counties.” Because this definition includes the definition of the EA in the

commission's rules, the counties and formations listed in the definition of EA in §213.3(8) are also added to the new definition in §331.19(b).

The definition of EA used in §331.19(b) applies to the Underground Injection Control program only and is different than the definition of EA found in 30 TAC Chapter 213, Edwards Aquifer. Chapter 213 provides a specific definition of EA that closely mirrors TWC, §26.046(a) in all aspects except that Travis and Williamson Counties and certain geologic formations are added and Kendall County is not included in the definition in Chapter 213. Although only a small tip of the historic EA recharge zone enters the southern portion of Kendall County at the border of Bexar and Comal Counties, consistent with the plain language of the statute, that portion cannot be excluded from the definition of the EA for underground injection control purposes because its inclusion is required by statute. Thus, any portions of an arcuate belt of porous, waterbearing limestones composed of the Comanche Peak, Edwards, and Georgetown Formations that exist in Kendall County are included in the definition of EA.

SECTION DISCUSSION

New §331.19 is adopted to implement the statutory prohibition of certain injection wells that transect or terminate in the EA.

Adopted §331.19(a) clarifies the statutory prohibition in TWC, §27.051(h) by describing the injection wells that transect or terminate in the EA that may be authorized by permit or rule only under certain conditions. Adopted §331.19(a)(1)(A) provides that wells that inject groundwater withdrawn from the EA may be authorized if the groundwater is unaltered. Closed loop systems which use only unaltered

groundwater withdrawn from the EA in the closed loop may be authorized under this exception.

Adopted §331.19(a)(1)(B) provides that wells that inject groundwater withdrawn from the EA may be authorized if the groundwater is treated in connection with approved remediation and does not exceed the maximum contaminant levels for drinking water.

Adopted §331.19(a)(2) provides that wells which inject non-toxic tracer dyes into the EA for the purpose of conducting scientific studies to determine hydrologic flowpaths may be authorized if the well is owned or operated by a specified governmental entity. The purpose of the prohibition is to protect the quality of drinking water in the EA from injection well projects that may involve direct injection of fluids into the aquifer that degrade the quality of the groundwater. These types of dye injections are usually one-time occurrences used for scientific purposes only by specified governmental entities and do not affect the quality of EA groundwater.

Adopted §331.19(a)(3) allows the agency to authorize injection of storm water, flood water, or groundwater into improved sinkholes or caves. Improved sinkholes are regulated under TWC as injection wells; however, caves are not typically classified as injection wells. If an artificial excavation or opening is made in the ground in order that a cave may be used as an injection zone, then the excavation or opening is considered an injection well under TWC, Chapter 27 and this chapter.

Adopted §331.19(b) defines the area regulated as the EA for the purpose of this new section.

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 is not subject to §2001.0225 because it does not meet the definition of a “major environmental rule” as defined in that statute. The adopted rulemaking implements the prohibition of new authorizations for certain injection wells that transect or terminate in the EA in TWC, §27.051(h). Although the intent of the new rule is to protect the environment or reduce risks to human health from environmental exposure, it is not a major environmental rule because it does not adversely 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. This, in turn, is because the adopted new rule implements an existing statutory prohibition of new authorizations for injection wells that transect or terminate in the EA in TWC, §27.051(h).

Furthermore, the adopted new rule does not meet any of the four applicability requirements listed in §2001.0225(a). The adopted new rule does not exceed a standard set by federal law, because there is no comparable federal law regarding the EA. The adopted new rule does not exceed an express requirement of state law because it is consistent with the express requirements of TWC, §27.051(h). The adopted new rule does not exceed requirements set out in the Underground Injection Control program authorization for Texas. The rulemaking is not adopted under the general powers of the agency and is adopted under the express requirements of SB 2 and TWC, §27.019(a), which provides that the commission shall adopt rules and procedures reasonably required for the performance of its powers, duties, and functions under TWC, Chapter 27.

No comments were received on the regulatory impact analysis determination.

TAKINGS IMPACT ASSESSMENT

The commission evaluated the adopted new rule and performed a final assessment of whether Texas Government Code, Chapter 2007 is applicable.

The commission's final assessment indicates that Texas Government Code, Chapter 2007 does not apply to the adopted new rule because this is an action that is taken in response to a real and substantial threat to public health and safety; that is designed to significantly advance the health and safety purpose; and that does not impose a greater burden than is necessary to achieve the health and safety purpose. Thus, this action is exempt under Texas Government Code, §2007.003(b)(13). The specific purpose of the adopted new rule is to implement a new statutory prohibition of certain injection wells that transect or terminate in the EA in TWC, §27.051(h), providing increased environmental protection of the EA from contamination. The adopted new rule will substantially advance this purpose by prohibiting certain injection wells that transect or terminate in the EA, an important source of drinking water in Texas. Exceptions to the prohibition are provided: the commission may authorize injection of groundwater withdrawn from the EA including injection into aquifer remediation wells under certain conditions, the injection of dye tracer for scientific study of hydrologic flowpaths, and injections of storm water, flood water, or groundwater through improved sinkholes or caves located in karst topographic areas. The benefits to society from the adopted rulemaking are the protection of water quality, health, welfare, and the environment. Because this adopted rulemaking implements a statutory

prohibition of certain injection wells that transect or terminate in the EA, there is no alternative action that could accomplish this statutory mandate.

CONSISTENCY WITH THE COASTAL MANAGEMENT PROGRAM

The commission determined that the adopted rulemaking does not relate to an action or actions subject to the Texas Coastal Management Program (CMP) in accordance with the Coastal Coordination Management Act of 1991, as amended (Texas Natural Resources Code, §§33.201 *et seq.*) and the commission's rules in 30 TAC Chapter 281, Subchapter B, concerning Consistency with the Texas Coastal Management Program. The area affected by the prohibition is not proximate to the coastal areas of the state and Chapter 331 is not a chapter that is listed in Chapter 281, Subchapter B, as being subject to the CMP. Therefore, this adopted rulemaking is not subject to the CMP.

PUBLIC COMMENT

Public hearings on this proposal were held in Austin on August 19, 2002, and in San Antonio on August 22, 2002, but no oral comments were received. The public comment period ended at 5:00 p.m. on August 26, 2002. Written comments were submitted by Edwards Aquifer Authority (EAA) and the Water Well Driller/Pump Installer Program of the Texas Department of Licensing and Regulation (TDLR). The EAA indicated that it supported the rule. TDLR did not indicate whether it is for or against the adoption of the rules, but provided specific comments on the rule. No commenter opposed the adoption of the rules.

RESPONSE TO COMMENTS

EAA commented that it supported the proposed revisions to 30 TAC Chapters 213 and 331 and that the proposed amendments are consistent with rules proposed by the EAA regarding aquifer recharge, storage, and recovery projects.

The commission appreciates the comment.

TDLR commented that the term “potable water” should be substituted for “unaltered groundwater withdrawn from the Edwards Aquifer” in §331.19(a)(1)(A) due to the current practice of using treated municipal water and treated water provided by water purveyors in the closed loop systems. TDLR stated that potable water with no additives is a more efficient heat conductor, because the thermal conductivity is much higher using potable water in the closed loop system.

The commission disagrees with this comment. Section 331.19(a)(1)(A) provides that wells which inject groundwater withdrawn from the EA may be authorized only if the groundwater is unaltered physically, chemically, or biologically. SB 2, §11.03(a), as codified in TWC, §27.051(h), authorizes injection of groundwater withdrawn from the EA, but does not make any specific allowance for injection of water from any other sources, including treated municipal water. Therefore, the substitution requested would not reflect the statutory requirements being implemented by this rulemaking. The commission has made no change in response to this comment.

TDLR also commented that geothermal heat exchange wells (closed loops) should be exempt from the injection well ban specified in the proposed rules.

The commission disagrees with this comment. The statutory language provided in SB 2 covers injection wells which include geothermal heat exchange wells. Also, TWC, §32.001(8)(H) defines closed loop geothermal wells as a type of injection well subject to regulation under the TDLR Water Well Driller/Pump Installer Program. The commission has made no change in response to this comment.

SUBCHAPTER A: GENERAL PROVISIONS

§331.19

STATUTORY AUTHORITY

The new section is adopted under the TWC, §5.103, which provides the commission the authority to adopt any rules necessary to carry out its powers and duties under this code and other laws of this state; §5.105, which authorizes the commission to establish and approve all general policy of the commission by rule; §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; §27.019, which requires the commission to adopt rules reasonably required for the regulation of injection wells; and §27.051(h), which prohibits the authorization of certain injection wells that transect or terminate in the EA.

§331.19. Injection Into or Through the Edwards Aquifer.

(a) 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.

(b) For the purposes of this section, *Edwards Aquifer* means that portion of an arcuate belt of porous, waterbearing 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.