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TEXAS WATER LAW OVERVIEW

Douglas G. Caroom
Susan M. Maxwell

Author contact information:
Douglas G. Caroom
Susan M. Maxwell
Bickerstaff Heath Delgado Acosta LLP
Austin, TX
dcaroom@bickerstaff.com
smaxwell@bickerstaff.com
512-472-8021

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A. Introduction

§ 14.1 Introduction

The topic “Water Rights and Water Development” covers a broad area. The purpose of this chapter is to provide the reader with an overview of Texas water law and a basic understanding of the concepts and principles in this area of the law. Interwoven in this discussion are the major revisions to Texas water law brought about by Senate Bill 1 (S.B. 1)¹ and Senate Bill 2 (S.B. 2),² legislation that overhauled Texas’ systems for water resource planning, management, and development.³ The chapter also addresses significant legal developments regarding Texas groundwater ownership, management, and regulation.

This chapter focuses on laws and institutions related to water rights, *i.e.*, the right to store, divert, produce or use water. As a general rule, Texas water is categorized as groundwater or State (surface) water for regulatory purposes; thus, this chapter discusses these types of water rights and regulatory systems in separate sections. Any discussion of such a broad subject must necessarily be in general terms. This chapter does not discuss the shades of grey, and presents only major exceptions or qualifications to general rules.

B. State Water Law

§ 14.2 Groundwater

(a) Definition

Groundwater or underground water is water occurring under the surface of the land. The term “groundwater” can include percolating water⁴ or artesian water, but not the underflow of a surface water river or stream⁵ or the underground flow of water in confined channels. Groundwater is presumed to be percolating, unless proven otherwise.⁶

¹ Act of June 2, 1997, 75th Leg., R.S., ch. 1010, 1997 Tex. Gen. Laws 3610 (codified in scattered sections of the Water Code, Government Code, Agriculture Code, Tax Code, and Health & Safety Code).

² Act of May 27, 2001, 77th Leg., R.S., ch. 966, 2001 Tex. Gen. Laws 1991.

³ See Martin Hubert & Bob Bullock, *Senate Bill 1: The First Big and Bold Step Toward Meeting Texas’ Future Water Needs*, 30 TEXAS TECH L. REV. 53 (1999).

⁴ See TEX. WATER CODE § 36.001(5).

⁵ *Pecos County WCID No. 1 v. Williams*, 271 S.W.2d 503 (Tex. Civ. App.—El Paso 1954, writ ref’d n.r.e.) (holding that groundwater is water occurring under the surface of the land other than underflow of a surface water river or stream).

⁶ *Id.*; see also *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235 (Tex. App.—Austin 1989, writ denied) (citing *Texas Co. v. Burkett*, 296 S.W. 273 (Tex. 1927) (“In the absence of such testimony, the presumption is that the sources of water supply obtained by such excavations are ordinary percolating waters, which are the exclusive property of the owner of the surface of the soil, and subject to barter and sale as any other species of property.”)).

Texas, unlike most other western states, has a statewide regulatory program for surface water only, and not for groundwater. Recent trends in Texas law provide for the creation of local groundwater conservation districts to provide some regulation of groundwater. These local districts control withdrawals and uses of groundwater within their jurisdictions. In Texas, surface water is considered property of the State, while groundwater and the right to capture groundwater is considered the property of the owner of the surface estate and treated much like a mineral or oil and gas, with some differences.⁷

(b) Exceptions

Certain categories of underground water, however, are legally distinct from “groundwater,” in terms of the ownership interest and/or the applicable regulatory jurisdiction. Each of these distinct categories of underground water is summarized below:

(1) Underflow of a Watercourse

“Underflow” is that portion of the flow of a surface watercourse that flows through the sand and gravel deposits beneath the surface of the bed of a stream.⁸ Underflow is hydrologically connected to the surface flow of the stream and moving in the same direction as the surface water.⁹ Underflow is considered to be property of the State, and the principles governing allocation and use of surface water apply.¹⁰

(2) Underground Streams in Defined Channels

The courts make a critical distinction between percolating groundwater and groundwater flowing in defined subterranean channels and streams. The landowner’s rights with respect to groundwater flowing in a well-defined and known subterranean stream are the same as would apply for a surface watercourse. The subsurface watercourse, however, must have all the characteristics of a surface watercourse. These characteristics are beds, banks that form a channel, and a current of water.¹¹ This determination is made on a case by case basis, and to date no subterranean streams have been found in Texas.¹²

⁷ For a brief discussion relating to the nature of a landowner’s property interest, vis-à-vis the regulatory authority of groundwater districts, see §§ 14.2(c) and (d) below.

⁸ *Texas Co. v. Burkett*, 117 Tex. 16, 296 S.W. 273, 276 (1927).

⁹ 30 T.A.C. § 297.1(55).

¹⁰ TEX. WATER CODE § 11.021(a) (definition of “state water”).

¹¹ *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235 (Tex. App.—Austin 1989, writ denied). In *Denis*, downstream landowners sought declarations that upstream landowners did not have any authority to appropriate waters adjacent to Kickapoo Springs for irrigation purposes. The court of appeals held that, absent proof that the subterranean watercourse possessed all the characteristics of a surface watercourse, the presumption of percolating groundwater is not rebutted. Also, the fact that springflow makes a sufficient addition to streamflow to be of benefit to downstream riparian owners does not make the underground flow qualify as an underground stream.

¹² The (former) Texas Water Commission attempted to apply this principle to the Edwards Aquifer, declaring it a subterranean watercourse by finding that the aquifer had all of the characteristics of a subterranean stream. The District Court of Travis County disagreed, and the Legislature reinforced this conclusion when it declared the

(3) Artesian Water

Artesian water is groundwater confined under pressure by an impermeable geologic layer, capable of flowing “above the first impervious stratum below the surface of the ground” when properly cased in a well.¹³ Texas courts have applied the principles applicable to percolating groundwater to artesian water. The only significant distinction is the existence of statutory provisions prohibiting the waste of artesian water¹⁴ and requiring the approval of the Texas Commission on Environmental Quality (TCEQ) in certain circumstances for withdrawal.¹⁵

(c) The “Rule of Capture” and Common Law Restrictions

In *Houston & Texas Central Railway Co. v. East*,¹⁶ the Texas Supreme Court adopted the English common law rule of *Acton v. Blundell*¹⁷ that the owner of the land might pump unlimited quantities of water from under his land, regardless of the impact that action might have upon his neighbor’s ability to obtain water on his own land. This right is referred to as the “right to capture.” Neither an injunction nor damages will lie to prevent such action.

Only two significant limitations exist at common law on the landowner’s right to capture and use percolating water. First, the landowner cannot capture and use percolating water maliciously with the purpose of injuring a neighbor or in a manner that amounts to wanton and willful waste of the resource.¹⁸ Second, since 1978 an action for damages will lie for the negligent pumping of groundwater that causes subsidence of neighboring land.¹⁹

The *Comanche Springs* case²⁰ applied the principles of the *East* case to groundwater uses even if those uses affect surface water supplies. The plaintiff, a statutory senior appropriator of surface water, complained that the defendant’s well had reduced surface springflow of Comanche Springs to such an extent that insufficient water was available for irrigation. The court ruled that the plaintiff’s right to use the water attached only after the water emerged from the ground. Prior to such emergence, the defendant could use any amount of water, regardless of the impact upon others.²¹

Edwards Aquifer “a unique natural resource . . . but not an underground stream.” See Act of June 11, 1993, 73rd Leg., R.S., ch. 626, § 1.01, 1993 Tex. Gen. Laws 2350.

¹³ TEX. WATER CODE § 11.201.

¹⁴ *Id.* § 11.205.

¹⁵ *Id.* § 11.202. Pursuant to §§ 11.202(d) and (e), permission is required from the TCEQ for wells producing greater than 5,000 gallons per minute from the Edwards Aquifer.

¹⁶ 98 Tex. 146, 81 S.W. 279 (1904).

¹⁷ 12 M. & W. 324, 152 Eng. Rep. 1223 (Ex. 1843).

¹⁸ *City of Corpus Christi v. City of Pleasanton*, 154 Tex. 289, 276 S.W.2d 798, 801 (1955).

¹⁹ *Friendswood Dev. Co. v. Smith-Southwest Indus., Inc.*, 576 S.W.2d 21, 30 (Tex. 1978).

²⁰ *Pecos County WCID No. 1 v. Williams*, 271 S.W.2d 503 (Tex. Civ. App.—El Paso 1954, writ ref’d n.r.e.).

²¹ *Id.* at 505-06.

A surface estate owner need not use groundwater on the premises of the surface estate. At common law, the surface estate owner may sell the groundwater he captures below his surface estate for off-site use by a third party.²² The use of groundwater at a distant location, even though most of the water may be lost in transit, is also permissible. In *City of Corpus Christi v. City of Pleasanton*,²³ the Texas Supreme Court approved Corpus Christi's transportation of artesian well water along 118 miles of surface watercourses to its diversion point, even though at times as much as two-thirds to three-fourths of the original supply was lost in transit due to evaporation, seepage, and transportation.²⁴

In 1999, the Texas Supreme Court in *Sipriano v. Great Spring Waters of America, Inc. a/k/a Ozarka*²⁵ was urged to reconsider the holding of *East* and to change the common law rule of capture to the beneficial use doctrine or a rule of reasonable use. The rule of reasonable use would limit the common law right of a surface owner to take water from a common reservoir by imposing liability on landowners who "unreasonably" use groundwater to their neighbors' detriment. Acknowledging that the efficacy of the groundwater management methods chosen and implemented by the Legislature through Chapter 36 of the Texas Water Code "has been a matter of considerable debate," the court nevertheless declined to change the rule of capture. The court concluded that it was inappropriate at this time to "insert itself into the regulatory mix," given the Legislature's express preference to manage groundwater through local groundwater districts.²⁶

(d) Groundwater Ownership

The legal nature of groundwater ownership in Texas has been recently litigated in various contexts, and also further addressed by the Legislature.

In the context of groundwater rights transactions, the most notable development is the *City of Del Rio* case.²⁷ *City of Del Rio* involved a property conveyance by a private party to a municipality, specifically regarding whether the landowner legally could – and properly did – reserve to itself the corresponding groundwater rights when conveying the surface estate. The landowner Trust had conveyed to the City a 15-acre tract from a ranch that it owned, from which tract the Trust had not previously produced groundwater. In the transaction, the Trust reserved all water rights for that tract, but no express easement rights allowing the Trust to produce groundwater from the tract once it was conveyed to the City. In a challenge following the City's drilling of a high capacity well on the 15-acre tract, the court of appeals affirmed the trial court's declaratory judgment in favor of the Trust: the Trust's reservation of water rights was valid and

²² *Texas Co. v. Burkett*, 117 Tex. 16, 296 S.W. 273 (1927).

²³ 154 Tex. 289, 276 S.W.2d 798 (1955).

²⁴ Limitations on a landowner's ability to alienate and transport groundwater may exist within groundwater conservation districts, as discussed in § 14.2(e)(1)(B) below.

²⁵ 1 S.W.3d 75 (Tex. 1999).

²⁶ *Id.* at 80.

²⁷ See *City of Del Rio v. Clayton Sam Colt Hamilton Trust*, 269 S.W.3d 613 (Tex. App. – San Antonio 2008, pet. denied).

enforceable, and the Trust had the right to sever and convey the groundwater rights beneath the 15-acre tract.²⁸

The issue of “ownership in place” has recently been squarely addressed by the Texas Supreme Court in a case in which landowners brought “takings” claims based on the permitting decisions of the Edwards Aquifer Authority (EAA).²⁹ Affirming the judgment of the court of appeals, the court held that “land ownership includes an interest in groundwater in place that cannot be taken for public use without adequate compensation.”³⁰ The court’s analysis included an extensive review of the major rule of capture cases and legislative treatment of groundwater rights and regulation, and the court concluded that the oil and gas case law precedent of recognizing both the rule of capture and ownership in place is also appropriate for groundwater.³¹ The court affirmed the authority of the EAA and other groundwater conservation districts (GCDs) to regulate groundwater production, but recognized that such regulation can, at least theoretically, result in a compensable takings claim under the Texas Constitution. The takings claims were remanded for further proceedings.³²

Even prior to the *Day* decision, the Legislature had amended Chapter 36 of the Texas Water Code expressly to recognize “that a landowner owns the groundwater below the surface of the landowner’s land as real property,” and that “[n]othing in [the Water Code] shall be construed as granting the authority to deprive or divest a landowner [including lessees, heirs, or assigns] of the groundwater ownership and rights” described in Section 36.002. The amended statute also incorporates the common law exceptions and defenses under the rule of capture reflected in Texas case law, and specifies that the landowner is not entitled to capture a specific amount of groundwater below the surface of his land. GCDs must consider in their rulemaking these ownership rights, the public interest in conservation, protection, recharge, waste prevention and subsidence control, and the goals developed as part of the GCD’s statutorily required management plan.³³ GCDs continue to have authority to impose well spacing or tract size requirements, and to limit groundwater production, as discussed below.³⁴

In light of these recent opinions and statutes, and as more GCDs adopt regulations such as production limits, well spacing rules, export regulation, historic use limitations, and “desired future conditions” developed at the management area level, regulatory takings challenges are likely to compel further clarification of the extent of property owners’ rights to groundwater.³⁵

²⁸ *Id.* at 617.

²⁹ *See Edwards Aquifer Auth. v. Day*, 369 S.W.3d 814 (Tex. 2012).

³⁰ *Id.* at 817.

³¹ *Id.* at 823, 828-32.

³² *Id.* at 843.

³³ TEX. WATER CODE § 36.101(a).

³⁴ *Id.* § 36.002. The amended statute expressly does not affect the regulatory authority of the Edwards Aquifer Authority or the subsidence districts.

³⁵ In one such case recently decided by the Fourth Court of Appeals, the court held that the permitting system of the Edwards Aquifer Authority resulted in a compensable “regulatory taking” of two pecan orchards. *See Edwards*

In addition to these common law and statutory parameters, restrictive covenants or municipal ordinances that prohibit drilling water wells may limit the right of a landowner to use groundwater, subject to the rule of capture.³⁶

(e) Groundwater Conservation Districts and Subsidence Districts

Groundwater, like other species of real property, is subject to reasonable regulation under the police power to protect the public health and welfare. Moreover, like oil and gas property rights, this general authority is supplemented by the mandates of the Conservation Amendment, § 59, Article XVI of the Texas Constitution. Exercise of the State’s regulatory authority to date has been limited to local or regional districts, known as underground water or groundwater conservation districts, usually created on a local option basis. The Legislature has emphasized that groundwater districts are the State’s preferred method of groundwater management.³⁷

Thus, the unrestricted common law rule of capture is becoming increasingly rare in Texas, primarily due to the proliferation of local governmental entities with statutory authority to regulate withdrawal of groundwater: groundwater conservation districts (GCDs) and subsidence districts. As of January 2013, there are two subsidence districts and 99 GCDs throughout Texas. The Texas Water Development Board (TWDB) relates that increasingly more of the land and groundwater resources of Texas are under the jurisdiction of one of these districts. As of this writing, two-thirds of Texas counties (174) are fully or partially within a GCD or a subsidence district, and more than 85 percent of the groundwater produced in Texas is within one of these districts.³⁸ Thus, a starting point in addressing almost any groundwater issue is to determine whether the property is within a GCD or a subsidence district and, if so, what the applicable rules of that district are.³⁹

(1) GCDs Subject to Water Code Chapter 36

(A) Creation

GCDs can be created either by the TCEQ, upon petition pursuant to provisions of Chapter 36 of the Texas Water Code,⁴⁰ or by special act of the Legislature. By far the more common

Aquifer Auth. v. Bragg, No. 04-11-00018-CV, 2013 WL 4535935 at *21 (Tex. App. – San Antonio Aug. 28, 2013).

³⁶ See, e.g., *Dyegard Land P’ship v. Hoover*, 39 S.W.3d 300 (Tex. App.—Fort Worth 2001, no pet.) (upholding restrictive covenants put in place by a subdivision developer).

³⁷ TEX. WATER CODE § 36.0015.

³⁸ See Texas Water Development Board, GCD Facts, available at http://www.twdb.state.tx.us/groundwater/conservation_districts/facts.asp (based on 2008 data on reported groundwater usage); and TWDB Map (rev. Jan. 2013), available at http://www.twdb.state.tx.us/mapping/doc/maps/gcd_only_8x11.pdf.

³⁹ Detailed information and maps of groundwater conservation districts are available on the “Groundwater” page of TWDB’s website: <http://www.twdb.state.tx.us/groundwater/>. Contact information, as well as copies of district rules and management plans for most GCDs, can also be found through this website.

⁴⁰ See TEX. WATER CODE § 36.011 *et seq.*

practice has been legislative action. A third mechanism by which to create a GCD is through the designation of a priority groundwater management area, as discussed in § 14.2(e)(1)(C) below.

In creating a GCD by special legislation, the Legislature may modify the powers, authorities, management, or funding mechanisms provided by general law. In most cases, however, the authority of legislatively created districts tracks the Chapter 36 provisions closely. Typically, districts have the power to incur debt, levy taxes, charge for services, adopt rules for those services, enter contracts, obtain easements, and condemn property.⁴¹

(B) Powers

Chapter 36 of the Texas Water Code provides the current codification of general law applicable to GCDs. The directors of each local district determine the extent to which a GCD's substantial powers are exercised and the manner in which they are exercised.⁴² Each GCD establishes its own rules based on its unique enabling legislation and its application of Chapter 36 provisions; therefore, the rules of every GCD differ from those of the others.

The regulatory authority of a GCD is extremely broad, and a GCD may implement that authority in two ways: rulemaking and permitting. A GCD has general authority to make and enforce rules, “including rules limiting groundwater production based on tract size or the spacing of wells, to provide for conserving, preserving, protecting, and recharging of the groundwater or of a groundwater reservoir or its subdivisions in order to control subsidence, prevent degradation of water quality, or prevent waste of groundwater.”⁴³ Because the statute's “waste” definition includes physical quantities, quality, and protection against degradation from other sources, a GCD's charge to prevent waste, by itself, gives the district far-reaching authority under its rulemaking power.

The extent of a GCD's rulemaking and permitting power has been addressed by the courts. In the *High Plains* case, the Amarillo Court of Appeals refused to recognize the authority of a groundwater district to deny or revoke permits for “disproportionate takings” in relation to tract size.⁴⁴ Reaffirming the rule of capture doctrine, the court rejected the district's actions because the groundwater district lacked any “clear authority” to regulate pumping in this manner, as must be expressly granted by the Legislature.⁴⁵ The court further concluded that the Legislature had not established reasonable standards to guide groundwater districts in exercising their rulemaking powers in this manner.⁴⁶ The Legislature responded to the *High Plains* decision

⁴¹ *See id.* § 36.101 *et seq.*

⁴² GCDs, however, are subject to certain enforcement authority of the TCEQ to ensure a GCD's compliance with Chapter 36 provisions, and are also subject to review by the State Auditor under the direction of the legislative audit committee. *See generally* TEX. WATER CODE, Ch. 36, subch. I.

⁴³ *Id.* § 36.101.

⁴⁴ *South Plains Lamesa R.R. v. High Plains Underground Water Conservation Dist. No. 1*, 52 S.W.3d 770 (Tex. App.—Amarillo 2001, no pet.).

⁴⁵ *Id.* at 779-80.

⁴⁶ *Id.* at 780.

by amending Chapter 36 of the Texas Water Code to explicitly provide that a groundwater district may make and enforce rules limiting groundwater production based on tract size or well spacing,⁴⁷ and limiting production in other ways.⁴⁸

In another case, the Texas Supreme Court ruled that, although GCDs are authorized to “preserve historic or existing use” by their groundwater production rules, consistent with their management plan,⁴⁹ a district’s discretion thus to protect existing wells and production must be tied both to the amount and the purpose of the prior use. The court held invalid a district’s scheme for issuing permits for out-of-district water transfers in a manner that effectively allowed only certain irrigating historic users to obtain such transfer permits, regardless of the fact that the purpose of use would be changed by the transfer.⁵⁰

A GCD’s rulemaking power has also been challenged under the Private Real Property Rights Preservation Act.⁵¹ In *Bragg v. Edwards Aquifer Authority*,⁵² the plaintiff challenged a groundwater district’s rulemaking powers on the grounds that the Act requires a district to perform a takings impact assessment. The Texas Supreme Court held that the EAA’s adoption of well permitting rules was an exercise of its statutory authority to prevent waste and protect the rights of owners of an interest in groundwater. As a result, the statutory requirement for a takings impact assessment did not apply to the Authority in this context.

Thus, GCDs have broad rulemaking power. A GCD has the authority to adopt rules providing for the spacing between water wells and regulation of groundwater production, including by well production limits, limits based on acreage or tract size or defined acreage assigned to a well site, rate of production limits, or by managed depletion.⁵³ Most GCDs have adopted some form of regulation over well spacing, groundwater production, or both.⁵⁴ The Legislature has expressly provided authority for GCDs, based on their determinations of varying conditions, to adopt different rules for each aquifer, aquifer subdivision, geologic strata, or overlying area within their boundaries. A GCD may select its method of regulating groundwater production based on the hydrogeological conditions of the aquifer(s) within the district.⁵⁵

⁴⁷ TEX. WATER CODE §§ 36.002, 36.101, 36.116.

⁴⁸ *Id.* § 36.116.

⁴⁹ *Id.* § 36.116(b).

⁵⁰ *See Guitar Holding Co., L.P. v. Hudspeth County Underground Water Conservation Dist. No. 1*, 263 S.W.3d 910 (Tex. 2008).

⁵¹ TEX. GOV’T CODE § 2007.001 *et seq.*

⁵² 71 S.W.3d 729 (Tex. 2002).

⁵³ TEX. WATER CODE § 36.116.

⁵⁴ *See generally* Texas Alliance of Groundwater Districts, GCD Database (updated March 2013) (summarizing information regarding 81 of the 97 existing confirmed districts), *available at* <http://www.texasgroundwater.org/resources/tagd-gcd-database.html>.

⁵⁵ TEX. WATER CODE §§ 36.116(d)-(e).

With the exception of “exempt wells”⁵⁶ all wells in a GCD must be permitted by the district before withdrawal of groundwater from the well. If a district distinguishes between wells producing water for use inside and those producing water for out-of-district use, it may not impose more restrictive permit conditions on transporters than it imposes on existing in-district users.⁵⁷ Wells existing at the time of district creation are normally “grandfathered” or given historic use permits, and thus exempted from more stringent permit conditions that may apply to wells that are constructed later. A permit may impose limits on spacing and production on the bases discussed above. A GCD may adopt rules requiring the owner or operator of a well (except exempt domestic and livestock wells) to report groundwater withdrawals.⁵⁸ GCDs must, to the extent possible and based on proper applications, issue permits up to the point that the total volume of exempt and permitted groundwater production will achieve an applicable desired future condition (DFC) under Section 36.108 of the Texas Water Code. GCDs must manage total groundwater production on a long-term basis to achieve such applicable DFCs, with identified considerations including the amount of modeled available groundwater determined by TWDB, estimates of production from exempt wells, production authorized under existing permits, estimated actual production from permitted wells, and yearly precipitation and production patterns.⁵⁹

In 1995, the Legislature significantly enhanced the enforcement authority of GCDs. Not only may districts enforce rules and permits through suits for injunctive relief, but Section 36.102 of the Texas Water Code grants GCDs the authority to impose civil penalties and recover attorney’s fees for enforcement litigation.⁶⁰ A GCD may enforce its rules “against any person,” but if the person is a governmental entity that has violated the district’s rules, the limits on the amount of fees, costs, and penalties that a district may impose constitute a limit of liability of the governmental entity for the violation.⁶¹

General law GCDs can be funded through *ad valorem* taxes. The authorized statutory maximum is 50 cents/\$100 assessed valuation and must have voter approval. Additionally,

⁵⁶ Certain wells producing water for domestic and livestock use, oil and gas exploration and production, and mining are statutorily exempt from permitting. TEX. WATER CODE § 36.117(b). Additionally, the legislation creating a GCD may include additional exemptions, and a GCD’s rules may expand the statutory exemptions to other classifications of wells. *Id.* § 36.117(a). However, a previously granted exemption may be cancelled (and permitting and/or production rules imposed) if the use of the groundwater withdrawals from the exempt well changes. *Id.* § 36.117(d).

⁵⁷ TEX. WATER CODE § 36.122.

⁵⁸ *Id.* § 36.111(b).

⁵⁹ *Id.* § 36.1132.

⁶⁰ Landowners or others who have a right to produce groundwater from land that is either adjacent to or within a half-mile radius of a well(s) illegally drilled or operated, or from which groundwater is produced in violation of a district production limitation rule, may also sue the well owner to enforce district rules and permit requirements and to seek monetary damages attributable to those violations. TEX. WATER CODE § 36.119(b)-(c). The aggrieved party must first file a written complaint with the GCD having jurisdiction over the wells, prior to filing suit. *Id.* §§ 36.119(g)-(h).

⁶¹ TEX. WATER CODE § 36.102(e)); *see Rolling Plains Groundwater Conservation Dist. v. City of Aspermont*, 353 S.W.3d 756 (Tex. 2011) (per curiam) (involving a suit by a GCD for a city’s failure to file required monthly reports and to pay groundwater export fees).

following voter authorization, a GCD may issue tax supported bonds.⁶² Funding GCDs through the imposition of water use fees upon pumpers in the district has become increasingly frequent.⁶³ Such production fees may be assessed in lieu of, or in conjunction with, any taxes otherwise levied by the GCD, and may be based on the amount of permitted annual withdrawal from a well, or on the amount actually withdrawn. Unless otherwise provided in a district's special legislation, these annual production fees are statutorily capped at \$1 per acre-foot for water used for agricultural use, and \$10 per acre-foot for water used for any other purpose.⁶⁴

(C) Management of Groundwater Resources

Each groundwater conservation district is required to develop a management plan that addresses various management goals. Those goals include, as applicable, promoting the most efficient use of groundwater, controlling and preventing waste and subsidence, addressing conjunctive surface water management issues, natural resource issues, and drought conditions, addressing conservation, recharge enhancement, rainwater harvesting, precipitation enhancement, and brush control, and addressing the "desired future conditions" adopted by the district.⁶⁵ District management plans are to include specific objectives, performance standards, detailed actions and procedures designed to effectuate the plan; estimates of modeled available groundwater in the district based on the desired future conditions; and estimates of groundwater movement, supply, and demand.⁶⁶

Chapter 36 requires a GCD to develop its plan (or any plan amendments) using the district's best available data (as well as any groundwater availability modeling information provided by the TWDB) and to forward its plan to the regional water planning group, to be used in that group's planning process.⁶⁷ A GCD's plan must be approved, not merely certified, by the TWDB, which has procedures to mediate and resolve conflicts between a GCD's approved management plan and an approved regional water plan or the state water plan.⁶⁸ The district must also adopt rules necessary to implement its management plan, and a district's rulemaking and permitting authority is limited until it has an approved management plan.⁶⁹ A GCD must ensure that its management plan and corresponding rules reflect goals and objectives consistent with achieving the relevant desired future conditions, adopted through the joint planning process described below.⁷⁰

⁶² TEX. WATER CODE § 36.201.

⁶³ *See supra* note 53 (TAGD GCD Database, March 2013) (identifying approximately one-third of GCDs as funded either by production fees, or a combination of production fees and tax revenues).

⁶⁴ TEX. WATER CODE § 36.205(c).

⁶⁵ *Id.* §§ 36.1071(a), 36.108.

⁶⁶ *Id.* § 36.1071(e).

⁶⁷ *Id.* §§ 36.1071(b), (h). For a further discussion on regional water planning, *see* § 14.10(b) below.

⁶⁸ TEX. WATER CODE § 36.1072.

⁶⁹ *Id.* § 36.1071(f).

⁷⁰ *Id.* §§ 36.1082(b)(5), (6); § 36.1085.

The boundaries of most GCDs do not follow aquifer boundaries; therefore, often more than one GCD has jurisdiction over a single aquifer. Accordingly, the TWDB has designated “groundwater management areas” (GMAs) for major and minor aquifers across the state as a tool for coordination among GCDs.⁷¹ A GMA is an area designated by the TWDB as an area suitable for management of groundwater resources.⁷² To the extent possible, its boundaries coincide with the boundaries of a groundwater reservoir or a subdivision of a groundwater reservoir.⁷³ A GMA is only an identified geographic area; it is not an entity with groundwater management authority.

GCDs within a management area are required to engage in a joint planning process with other districts in the management area that share the same aquifer or portion of an aquifer. At least every five years, the districts must consider groundwater availability models and other data and adopt (by a 2/3 vote of district representatives) new or amend existing “desired future conditions” (DFCs) for the aquifers within the management area.⁷⁴ This DFC process includes detailed requirements for notice of meetings and hearings and for public comment; specified considerations for the GCDs’ proposal and approval of desired future conditions; further hearing and reporting requirements that each GCD must satisfy; adoption (again, by 2/3 vote) by the GCD group; and submission to the TWDB of the adopted conditions along with an “explanatory report” for the management area.⁷⁵

The DFCs adopted by the GCDs are subject to review by the TWDB, on petition by a district, a regional planning group, or a “person with a legally defined interest” in the groundwater in the area.⁷⁶ If challenged by an “affected person,” various aspects of the joint planning process or its results are subject to review by the TCEQ.⁷⁷ The Commission has enhanced enforcement mechanisms for failure of a groundwater district to submit its management plan, to participate in joint planning, or to adopt rules designed to achieve the desired future conditions of GMA groundwater resources. These enforcement mechanisms include issuing orders requiring the district to take certain actions, dissolving the district’s board and calling an election, requesting the Attorney General to place a district into receivership, and dissolving the district.⁷⁸

Another way in which the State addresses groundwater management is through the designation of a priority groundwater management area (PGMA). A PGMA is an area with no GCD, designated by the TCEQ as an area that is experiencing, or is expected to experience

⁷¹ *Id.* § 35.004(a).

⁷² *Id.* § 35.002(11).

⁷³ *Id.* § 35.004(a).

⁷⁴ *Id.* § 36.108. Background materials and further details on this joint planning within each of the sixteen GMAs can be found on the TWDB’s website, at http://www.twdb.state.tx.us/groundwater/management_areas/index.asp.

⁷⁵ TEX. WATER CODE § 36.001(30), §§ 36.1081 through 36.1086, and §§ 36.063, 36.108.

⁷⁶ *Id.* § 36.1083.

⁷⁷ *Id.* §§ 36.1082, 36.3011.

⁷⁸ *Id.* §§ 36.3011, 36.303, 36.3035.

within the next fifty years, critical groundwater problems, including surface water or groundwater shortages, land subsidence resulting from groundwater withdrawal, or contamination of groundwater supplies.⁷⁹ After the initial PGMA designations, the TCEQ and the TWDB shall annually review the need for additional PGMA designations.⁸⁰ Based on a report prepared by TCEQ's executive director,⁸¹ the TCEQ then conducts an evidentiary hearing to consider (a) designation of a PGMA, and (b) whether that PGMA should be added to an existing GCD, or whether one or more GCDs should be created to cover all or a part of the PGMA.⁸² Following TCEQ issuance of an order taking one of these actions, the landowners in the PGMA may either: (a) create one or more Chapter 36 GCDs; (b) have the PGMA annexed to an adjoining GCD; or (c) create one or more GCDs through the legislative process.⁸³

The TCEQ has completed numerous PGMA studies and update studies, and several study areas have been designated as PGMAs, either by Commission order or based on previous statutory provisions. In other cases, the TCEQ has determined that certain PGMA study areas do not meet the criteria for designation and no further evaluation is planned.⁸⁴

(2) Edwards Aquifer Authority

One notable special law GCD is the Edwards Aquifer Authority (EAA).⁸⁵ The EAA was created in response to growing competing demands on this sole source aquifer from municipal users, irrigators, industrial users, recreational users, and endangered species, all of whom rely upon the aquifer or spring flows from the aquifer to satisfy their needs.⁸⁶ In order to sustain and protect this resource and the diverse interests dependent upon it, the Legislature established a permit system based upon an existing user's convincing evidence of beneficial use without waste of groundwater during an historical period, which began on June 1, 1972 and ended May 31, 1993. The EAA Act has survived numerous facial constitutional challenges and has been upheld as constitutional.⁸⁷ However, the EAA's cap on total permitted withdrawals has been modified, as

⁷⁹ *Id.* §§ 35.002(12), 35.007(a).

⁸⁰ *Id.*

⁸¹ *Id.* § 35.007.

⁸² *Id.* § 35.008.

⁸³ *Id.* § 35.012(a).

⁸⁴ More detailed information regarding PGMAs and the evaluation process can be found on the TCEQ's website, <http://www.tceq.texas.gov/groundwater/pgma.html>.

⁸⁵ For a detailed discussion of the Edwards Aquifer Authority, see Darcy Alan Frownfelter, *Edwards Aquifer Authority* (ch. 17), in *ESSENTIALS OF TEXAS WATER RESOURCES* (Mary K. Sahs ed., 2nd ed. 2012).

⁸⁶ The Sierra Club contributed to the impetus for the passage of the EAA Act by bringing numerous challenges under the Endangered Species Act against the pumpers of the Edwards Aquifer for taking or harming the habitat of five endangered species. See *Sierra Club v. Glickman*, 156 F.3d 606 (5th Cir. 1998); *Sierra Club v. City of San Antonio*, 115 F.3d 311 (5th Cir. 1997); *Sierra Club v. City of San Antonio*, 112 F.3d 789 (5th Cir. 1997); *Sierra Club v. Lujan*, 1993 WL 151353 (W.D.Tex. 1993).

⁸⁷ See *Barshop v. Medina County Underground Water Conservation Dist.*, 925 S.W.2d 618 (Tex. 1996). Moreover, a recent decision addressing the EAA's filing deadline for historical use declarations held that the EAA Act became effective on the date of the *Barshop* decision. Cf. *Edwards Aquifer Auth. v. Chemical Lime, Ltd.*, 291 S.W.3d 392 (Tex. 2009).

have its provisions for a “critical period management plan.”⁸⁸ The Texas Attorney General has issued an opinion that the EAA’s statute did not authorize it to reduce the withdrawal rights of irrigation users and “averagers,” or to issue interruptible junior withdrawal rights.⁸⁹

(3) Subsidence Districts

Another important example of a special law district created for groundwater regulation, but which is expressly not governed by the provisions of Chapter 36, is the Harris-Galveston Coastal Subsidence District (Subsidence District).⁹⁰ The Subsidence District was created in response to significant subsidence resulting from the withdrawal of groundwater and contributing to increased flooding. To minimize as far as practicable the drawdown of the water table and the reduction of artesian pressure and to control and prevent subsidence, the Subsidence District is authorized to regulate the spacing of wells and the production of groundwater from those wells.⁹¹ Before a well may be drilled or operated within the boundaries of the Subsidence District, the owner or operator of the well must obtain a permit from the district.⁹² The Subsidence District utilizes a combination of mandatory planning and substantial permit fees to create strong financial incentives for water users to increase their reliance on surface water and decrease groundwater use. The Act creating the Subsidence District has been challenged and upheld as constitutional by the Texas Supreme Court.⁹³ Another such similar district created by special legislation is the Fort Bend Subsidence District.⁹⁴

(f) Water Well Drillers

Under the Water Well Drillers Act,⁹⁵ it is unlawful for anyone to act as or to offer to perform services as a water well driller without a license. A license is not required, however, to construct a water well on one’s own property for personal use, to assist in the construction of a well under the direct supervision of a licensed driller, or to drill or construct a dewatering well in connection with construction of certain types of public infrastructure, such as a highway, road, bridge, drainage, or underground utility project.⁹⁶

For purposes of the Water Well Drillers Act, a “water well” is “any artificial excavation constructed for the purpose of exploring for or producing groundwater.”⁹⁷ The Act expressly

⁸⁸ Act of May 28, 2007, 80th Leg., R.S., ch. 143, §§ 12.02, 12.06, 2007 Tex. Gen. Laws 5901, 5903 (S.B. 3).

⁸⁹ Op. Tex. Att’y Gen. No. GA-0498 (2007).

⁹⁰ The district’s enabling legislation is now codified in Chapter 8801 of the Special District Local Laws Code.

⁹¹ TEX. SPEC. DIST. LOCAL LAWS CODE § 8801.119.

⁹² *Id.* §8801.155.

⁹³ *See Beckendorf v. Harris-Galveston Coastal Subsidence Dist.*, 563 S.W.2d 239 (Tex. 1978).

⁹⁴ Act of May 26, 1989, 71st Leg., R.S., ch. 1045, 1989 Tex. Gen. Laws 4251, amended by Act of May 13, 2005, 79th Leg., R.S., ch. 238, 2005 Tex. Gen. Laws 419.

⁹⁵ TEX. OCC. CODE §§ 1901.001-.404.

⁹⁶ *Id.* § 1901.161; 16 T.A.C. § 76.30.

⁹⁷ TEX. OCC. CODE § 1901.001(14).

excludes the following types of excavations from this definition: (1) test or blast holes in quarries or mines; (2) wells or excavations used in the exploration of oil, gas, or other minerals unless the holes are used to produce groundwater; and (3) any injection water source well regulated by the Railroad Commission pursuant to its authority to prevent water pollution.

The water well drillers rules,⁹⁸ promulgated by the Texas Department of Licensing and Regulation (TDLR), contain specific requirements for licensing of water well drillers, reporting of well logs,⁹⁹ reporting of undesirable water (*i.e.*, water that is injurious or that can cause pollution),¹⁰⁰ and procedures for drilling, completing, capping, and plugging wells.¹⁰¹

Violations of the Water Well Drillers Act or rules are subject to administrative penalties or civil suit by the Attorney General if referred by the TDLR.¹⁰² To the extent such data are made public, information from water well drillers' logs is available on the TWDB website.¹⁰³

§ 14.3 Surface Water

(a) State Ownership of Surface Water

(1) General Doctrine

Surface water, generally, is owned by the State and available for use pursuant to the statutory appropriation process. Section 11.021(a) of the Texas Water Code provides:

The water of the ordinary flow, underflow, and tides of every flowing river, natural stream, and lake, and of every bay or arm of the Gulf of Mexico, and the storm water, floodwater, and rainwater of every river, natural stream, canyon, ravine, depression, and watershed in the state is the property of the state.¹⁰⁴

Although § 11.021 appears to assert state ownership over every type of surface water, such a reading is overbroad. Water rights are property rights, capable of alienation by the sovereign. The sovereign's original grant of land in many cases carried a right to use water. The nature and extent of the right depends upon which sovereign (Spain, Mexico, Republic of Texas, or State of Texas) made the grant. To the extent that a prior sovereign has granted rights to water, § 11.021 is incapable of constitutionally withdrawing the grant. The extent of the alienation of the sovereign's water rights and the various grants are discussed in §§ 14.3(b)(1) and (b)(2).

⁹⁸ 16 T.A.C. §§ 76.1-.111.

⁹⁹ *Id.* § 76.70.

¹⁰⁰ *Id.* §§ 76.71, 76.75.

¹⁰¹ *Id.* § 76.72; *see also* TEX. OCC. CODE §§ 1901.252-.255 (setting forth the statutory requirements for marking rigs with identification numbers and completing and plugging wells).

¹⁰² TEX. OCC. CODE §§ 1901.401-.404.

¹⁰³ *See* <http://www.twdb.state.tx.us/groundwater/data/drillersdb.asp>.

¹⁰⁴ TEX. WATER CODE § 11.021(a).

(2) Exceptions

(A) Diffused Surface Water

Diffused surface water is water on the surface of the land that has not yet entered a watercourse. Generally, this water is rainfall runoff, although water left in upland areas after a flood recedes may also qualify. Diffused surface waters are the property of the owner of the soil until they enter a watercourse and become state water or riparian water.¹⁰⁵

Upon entry into a watercourse, diffused surface water is transformed legally from private property to public property. Consequently, the definition of a “watercourse” is significant. A watercourse is a channel, with a well-defined bed and banks, in which water flows as a stream and has a permanent source of supply.¹⁰⁶ It is not necessary that water always be present to satisfy the “permanent source of supply” requirement. Barilla Creek, the watercourse in *Hoefs v. Short*,¹⁰⁷ did not flow year round; the stream flowed when it rained, from one to twenty-two times per year, with seasonal regularity. The determinative question for the existence of a “permanent source of supply” is the utility of the water supply for agriculture and other beneficial purposes. At the same time, a watercourse is more than a low area in a pasture or a typical west Texas draw.¹⁰⁸ The requirement of a well-defined bed and banks is reasonably clear. The channel, however, must be the result of the action of flowing water over an extended period of time.¹⁰⁹

Navigable streams are generally considered watercourses. A Texas statute addressing surveys of land grants, originally adopted in the nineteenth century, provides a statutory definition of “navigable stream.” Any stream retaining an average width of thirty feet from its mouth, measured from cut bank to cut bank, is considered legally navigable.¹¹⁰ The State holds the waters of navigable streams in trust for the public and, therefore, they are subject to appropriation.¹¹¹

The State also owns the lands underlying navigable streams.¹¹² Although the State does not own the lands underlying non-navigable water, it does have the right to transport water

¹⁰⁵ *Turner v. Big Lake Oil Co.*, 128 Tex. 155, 96 S.W.2d 221 (1936); *Motl v. Boyd*, 116 Tex. 82, 286 S.W. 458 (1926). However, the State’s jurisdiction over water for purposes of pollution control is broader than “state water” for water rights purposes. Section 26.121 of the Texas Water Code, enacted as an exercise of the police power, extends to “water in the state,” whether surface or groundwater. TEX. WATER CODE § 26.001(5).

¹⁰⁶ *Hoefs v. Short*, 114 Tex. 501, 273 S.W. 785 (1925).

¹⁰⁷ *Id.*

¹⁰⁸ *Turner v. Big Lake Oil Co.*, 62 S.W.2d 491 (Tex. Civ. App.—El Paso 1933), *aff’d* 128 Tex. 155, 96 S.W.2d 221 (1936).

¹⁰⁹ *International-Great N. R.R. Co. v. Reagan*, 121 Tex. 233, 49 S.W.2d 414 (1932).

¹¹⁰ TEX. NAT. RES. CODE § 21.001(3).

¹¹¹ *In re Adjudication of the Water Rights of the Upper Guadalupe Segment of the Guadalupe River Basin*, 642 S.W.2d 438 (Tex. 1982); *Motl v. Boyd*, 116 Tex. 82, 286 S.W. 458 (1926).

¹¹² *See State v. Bradford*, 121 Tex. 515, 50 S.W.2d 1065 (1932).

through watercourses, including non-navigable streams, for a public purpose without seeking permission from riparian landowners.¹¹³ This right includes a city's right to discharge treated wastewater under a state permit into a watercourse.¹¹⁴

On navigable streams, the question arises regarding the location of the boundary line that separates the river bed from the river bank, because the State owns the bed of the river and the riparian landowner owns its banks.¹¹⁵ A survey marking the boundary line must comport with the gradient boundary methodology, as defined by the United States Supreme Court in *Oklahoma v. Texas*:¹¹⁶ The bank along which to determine the gradient boundary of a navigable stream is “the water-washed and relatively permanent elevation or acclivity at the outer line of the river bed which separates the bed from the adjacent upland . . . and serves to confine the waters within the bed”¹¹⁷

The location of the bed of a body of water that constitutes the boundary of a riparian tract of land may be gradually and imperceptibly changed or shifted by accretion, reliction, or erosion (accretion and reliction refer to the gradual addition to land caused by the action of water upon the land, and erosion refers to the gradual wearing away of the land). The bed of the body of water, as so changed, remains the boundary line of the tract, which is extended and restricted accordingly. Based on doctrines of riparian ownership, such as accretion, reliction, and erosion, the changes brought about or influenced by an artificial structure, such as a dam, must be considered in marking the gradient boundary of a navigable stream, as long as the riparian owner does not cause or contribute to the artificial influence.¹¹⁸

(B) Developed Water and Water Reuse

“Developed water” refers to water augmenting the natural streamflow that has been made available through artificial means, *e.g.*, an imported surface water supply or groundwater pumped to the surface. However, some Texas courts have used the term loosely. For example, in *Harrell v. F.H. Vahlsing, Inc.*,¹¹⁹ the term was applied to irrigation return flow that remained in the canals of a water district.

Generally, water that is legally reduced to possession and still under the control of the owner of an artificial conveyance system is subject to sale or further use by the owner of the system, so long as he maintains control of the water. In *Guelker v. Hidalgo County WCID No. 6*,¹²⁰ the court ruled that the use of such water was not subject to regulation by the State. Once

¹¹³ See *Domel v. City of Georgetown*, 6 S.W.3d 349 (Tex. App.—Austin 1999, pet. denied).

¹¹⁴ *Id.*

¹¹⁵ See *Maufrays v. State*, 142 Tex. 559, 180 S.W.2d 144 (1944); *Diversion Lake Club v. Heath*, 126 Tex. 129, 86 S.W.2d 441 (1935); *Motl v. Boyd*, 116 Tex. 82, 286 S.W. 458 (1926).

¹¹⁶ 260 U.S. 606 (1923).

¹¹⁷ *Id.* at 631-32.

¹¹⁸ *Brainard v. State*, 12 S.W.3d 6 (Tex. 1999); see *Hancock v. Moore*, 135 Tex. 619, 146 S.W.2d 369 (1941).

¹¹⁹ 248 S.W.2d 762 (Tex. Civ. App.—San Antonio 1952, writ ref'd n.r.e.).

¹²⁰ 269 S.W.2d 551 (Tex. Civ. App.—San Antonio 1954, writ ref'd n.r.e.).

the water has escaped the owner's physical control and rejoins a watercourse, his rights to the water terminate, because he never owns the *corpus* of the water, only the right of use.¹²¹

The Legislature addressed reuse of water, including developed water, in S.B. 1. Section § 11.042(b) of the Texas Water Code specifically addresses and authorizes the indirect reuse¹²² of groundwater-based effluent or return flows.¹²³ Indirect reuse of other water, subject to express limitations of the applicable water right permit, is authorized by § 11.042(c), which includes a requirement to protect existing water rights as well as instream environmental flow requirements. Section 11.046 completes the picture by stating that, once water is returned to the watercourse or stream, it is considered surplus water and is subject to further appropriation or reservation for instream uses or beneficial inflows, unless expressly provided otherwise in the base water right.

As Texas' rivers become more completely appropriated, an increasingly large portion of the available water is comprised of return flows from upstream users, *e.g.*, municipal wastewater return flows. Questions regarding rights of indirect reuse — subsequent use of wastewater or surplus water discharged into a state watercourse following initial use — continue to challenge the TCEQ and the courts. Municipalities view indirect reuse as an opportunity to capture an additional water supply without the necessity of obtaining a new appropriation. Instead, they contend for an ownership interest that survives discharge of the effluent into the watercourse. Existing water right holders argue that the municipality's ownership interest is lost when the effluent is discharged into a watercourse, making the return flow available for use by downstream appropriators and to satisfy environmental flow requirements. Among the critical aspects of the indirect reuse question is treatment of "historic" discharges, on which existing water rights and the environment may have relied. Treated as a new appropriation, existing rights and environmental requirements will be protected; this is not necessarily the case if the discharge remains the property of the discharger. Another critical aspect is whether the source of the effluent (*e.g.*, groundwater *v.* surface water, or water imported from another basin) does – or should – make a difference in determining applicable legal requirements.

The issue is not whether return flows will be utilized in the future, but who will get the benefit of them. Some recent authority, including the *City of San Marcos* case,¹²⁴ seems to favor the position of the existing water right holders, by requiring or implying that a municipality's subsequent use of its discharged effluent requires a new appropriation, which will be junior to existing water rights and subject to environmental flow requirements that may be established by

¹²¹ *South Texas Water Co. v. Bieri*, 247 S.W.2d 268 (Tex. Civ. App.—Galveston 1952, writ ref'd n.r.e.); *see also Day*, 369 S.W.3d at 823 (holding that substantial evidence supported the EAA's finding that groundwater from an artesian well had become state water once it entered a state watercourse (the reservoir on the property)).

¹²² "Direct reuse," authorized for water appropriated for municipal use by Texas Water Code § 11.046(c) and TCEQ Rule 30 TAC §297.1(32), is reuse of effluent via a pipeline prior to its discharge into a state watercourse. "Indirect reuse" is use following discharge into a watercourse, by subsequent downstream diversion and use.

¹²³ Reuse of developed surface water, imported from outside the river basin, would presumably be subject to this same standard because its impact on other water rights and environmental flow requirements in the receiving basin is the same as a groundwater source.

¹²⁴ *City of San Marcos v. TCEQ*, 128 S.W.3d 264 (Tex. App.—Austin 2004, pet. denied) (holding that there is no common-law right by which the city could retain ownership over its groundwater-derived wastewater effluent after discharging it into a state watercourse).

the TCEQ. However, recent permitting decisions reflect that TCEQ considers groundwater-based return flows to be the property of the discharger.¹²⁵

(C) Domestic and Livestock Exemption

The use of water for domestic and livestock purposes is generally exempt from state water rights administration. Without obtaining a permit a person may construct on his or her own property a dam or reservoir up to 200 acre-feet in capacity for domestic and livestock purposes.¹²⁶ A person, other than a commercial enterprise, may temporarily store more than 200 acre-feet in such a reservoir without a permit if the person can demonstrate that he or she has not stored in the dam or reservoir more than 200 acre-feet on average in any 12-month period.¹²⁷

The early appropriation statutes carefully preserved riparian rights for domestic use, and domestic and livestock rights are exempted from the water rights adjudication process.¹²⁸ While statutory law expressly exempts storage of water for domestic and livestock uses, but not the use itself, from the state water rights appropriation process, this exemption is the practical impact of both existing law and practice.¹²⁹

(b) History of Texas Surface Water Rights

Texas surface water rights are the product of the laws of prior sovereigns under which land was granted from the sovereign to a private owner.¹³⁰ Although many of the differences have been resolved by the adjudication of water rights, these differences still occasionally are significant.

(1) Riparian Rights

(A) Generally

A riparian water right is a right of water use recognized at common law. It entitles the owner of property adjacent to a watercourse to make reasonable use of water. Riparian rights attach to land that the State patented between January 20, 1840 and July 1, 1895. The former

¹²⁵ See, e.g., TCEQ Water Use Permit No. 5913 (granted Feb. 5, 2010) (City of College Station's bed and banks authorization to transport its current and future groundwater-based return flows, for the City's subsequent diversion and use).

¹²⁶ TEX. WATER CODE § 11.142; 30 T.A.C. § 297.21.

¹²⁷ TEX. WATER CODE § 11.142(a). Under certain circumstances, a person, other than a commercial enterprise, may also construct a reservoir of this size without a permit for fish and wildlife purposes. *Id.* § 11.142(b).

¹²⁸ *Id.* § 11.303(a)(2), § 11.307(a).

¹²⁹ *City of Anson v. Arnett*, 250 S.W.2d 450 (Tex. Civ. App.—Eastland 1952, writ ref'd n.r.e.).

¹³⁰ For a detailed historical review, see Glenn Jarvis, *Historical Development of Texas Surface Water Law: Background of the Appropriation and Permitting System and Management of Surface Water Resources* (ch. 3), in *ESSENTIALS OF TEXAS WATER RESOURCES* (Mary K. Sahs ed., 2nd ed. 2012).

date is when Texas statutorily adopted the common law. The 1913 Irrigation Act established the latter date as the last date upon which the State granted riparian rights with its land patents.

(B) Characteristics of Riparian Rights

The key to a riparian right is “reasonableness.” Riparian rights are not quantified. A riparian property owner may use any amount of water that is reasonably necessary. Although the right holder may use the water for any reasonable purpose, he or she may not unreasonably interfere with the uses of other riparian water users. If necessary and reasonable, a riparian landowner may impound water pursuant to his or her riparian rights.

A riparian landowner may sell the water for use off-site of the riparian property, provided that the off-site use does not prejudice other riparian water users. Riparian rights holders may separate, by express conveyance, their riparian water rights from the riparian land.¹³¹

Riparian rights attach to the normal flow of the stream, as opposed to the storm and flood flow.¹³² Riparian rights are superior to appropriative water rights.¹³³ Unlike appropriative water rights, riparian rights are not lost through nonuse.¹³⁴

(C) Current Significance of Riparian Rights

As discussed in § 14.3(b)(4) regarding water rights adjudication, the State has completed the merging of riparian water rights with the appropriative system. On rivers for which the State has completed the adjudication process, the distinction between riparian rights and appropriative rights has been removed and riparian rights have been converted into appropriative rights for all practical purposes.

(2) Civil Law Water Rights

(A) Background and General Principles

Prior to the Republic of Texas’ adoption of the common law in 1840, grants of land from the sovereign were governed by civil law — either that of Mexico or colonial Spain. Therefore, the laws of Mexico and Spanish colonial law determine the water rights relating to property originally granted under civil law. Like riparian rights, these rights were converted to the prior appropriation system during the adjudication process.

Texas courts initially held that Spanish water law was comparable to common law and recognized a riparian water right of reasonable use.¹³⁵ A 1961 opinion by Justice Pope, then on

¹³¹ *Watkins Land Co. v. Clements*, 98 Tex. 578, 86 S.W. 733 (1905).

¹³² *Motl v. Boyd*, 116 Tex. 82, 286 S.W. 458 (1926); *Cummins v. Travis County Water Control & Improvement Dist. No. 17*, 175 S.W.3d 34 (Tex. App. – Austin 2005, pet. denied).

¹³³ *Matagorda Canal Co. v. Markham Irrigation Co.*, 154 S.W. 1176 (Tex. Civ. App.—Galveston 1913, no writ).

¹³⁴ *Fleming v. Davis*, 37 Tex.173 (1872).

¹³⁵ *Motl v. Boyd*, 116 Tex. 82, 286 S.W. 458 (1926).

the San Antonio Court of Appeals, thoroughly re-analyzed the civil law applicable to water rights and concluded that a Spanish riparian right, at least to irrigate, did not exist.¹³⁶ Some civil law grants expressly include a grant of water with the land; in such cases a water right does exist. Otherwise, it is presumed that the sovereign retained the water rights when it made the grant of the property, and thus those water rights ultimately passed to the State of Texas.

(B) Pueblo Water Rights

The pueblo water right is a form of municipal water right that several other states having a civil law heritage recognize. Some civil law states have held that a pueblo colonized by Spanish settlers had the crown's implied authorization to use as much water as was necessary for municipal purposes. The priority of the right dates back to the founding of the pueblo, and the quantity of water authorized may expand as the municipality's need for water increases. At least in California and New Mexico, the right extends to groundwater as well as surface water. Texas courts, however, considered and rejected this pueblo water right doctrine as inconsistent with Texas' construction of Spanish colonial law.¹³⁷

(C) Current Significance of Civil Law Water Rights

Like riparian rights, civil law water rights are subject to the water rights adjudication process. Thus, to the extent such rights existed, the State has quantified and merged them with appropriative rights in this adjudication process.

(3) Appropriative Water Rights

(A) Generally

The appropriation doctrine is the prevalent system of water rights in the western United States. Like riparian rights, the appropriative right is usufructuary, *i.e.*, a right to use the water, not ownership of the corpus. Unlike the riparian system with its vague criteria of "reasonableness," the appropriative system provides for precisely defined water rights. The State authorizes the use of water in a specific amount, by diversion from a watercourse at a definite location, for a particular purpose, and for use on a particular tract of land. It is unlawful to willfully take, divert, or appropriate any state water for any purpose without first complying with all applicable requirements of Chapter 11 of the Texas Water Code. Violators are also subject to civil and administrative penalties.¹³⁸ The civil and administrative penalty statutes for such violations apply regardless of whether a watermaster has been appointed for that particular water division, river basin, or segment.¹³⁹

¹³⁶ *State v. Valmont Plantations*, 346 S.W.2d 853 (Tex. Civ. App.—San Antonio 1961), opinion adopted 163 Tex. 381, 355 S.W.2d 502 (1962).

¹³⁷ *In re Contests of City of Laredo*, 675 S.W.2d 257 (Tex. App.—Austin 1984, writ ref'd n.r.e.).

¹³⁸ TEX. WATER CODE §§ 11.081, 11.082, 11.0841-.0843.

¹³⁹ *Id.* § 11.082(b), § 11.0842(a). See discussion of watermaster appointments at § 14.3(c) below.

Under the doctrine of *seniority* or “first in time, first in right,” each water right is assigned a specific priority date. During times of shortage, this system determines the allocation of water between appropriators based on their relative priority dates.¹⁴⁰ A senior right holder is entitled to fully exercise his or her right before junior rights receive any water.

Beneficial use is another key concept in the appropriation doctrine. The permit authorizing use of water under the appropriative system is a license. To the extent the appropriator actually puts the water to beneficial use, the appropriation is perfected and becomes a vested property right.¹⁴¹ Even a vested appropriative right, however, may be lost through nonuse over an extended period of time, as discussed in § 14.3(d).¹⁴²

(B) Historic Development of Appropriation Doctrine

In Texas, the appropriation doctrine is the product of legislation. Prior to the legislative adoption of appropriation statutes, Texas court decisions aimed at implementing the riparian system. Thus, the development of the appropriation doctrine in Texas focuses upon legislation.

The Irrigation Act of 1889¹⁴³ declared that unappropriated waters of all rivers and natural streams, “within the arid portions of the state,” were the property of the State of Texas, and made them available for appropriation. A person secured an appropriative right by filing a sworn statement with the county clerk that described the diversion facilities and the contemplated use of the water. Uses authorized by the 1889 Act were “irrigation, domestic, and other beneficial uses.”

The Irrigation Act of 1895¹⁴⁴ followed the basic pattern of the 1889 legislation. The Legislature expanded the scope of the state water dedication from “arid portions of the state” to portions of the state in which, by reason of insufficient rainfall, irrigation was beneficial for agricultural purposes. The type of information required in the sworn statement was significantly expanded to include the following: a more complete description of the project, the amount of storage capacity, and the amount and identification of acreage irrigated.

The Irrigation Act of 1913¹⁴⁵ significantly modified the existing law, adopting the precursor statutes to many of the provisions found in Chapter 11 of the Texas Water Code. These major modifications were the following:

¹⁴⁰ *Id.* § 11.027.

¹⁴¹ *Id.* §§ 11.025-.026.

¹⁴² *See id.* §§ 11.171-.177.

¹⁴³ Act of 1889, 21st Leg., R.S., ch. 88, 1889 Tex. Gen. Laws 100.

¹⁴⁴ Act of 1895, 24th Leg., R.S., ch. 21, 1895 Tex. Gen. Laws 21.

¹⁴⁵ Act of 1913, 33rd Leg., R.S., ch. 171, 1913 Tex. Gen. Laws 358.

(i) Statewide Applicability

The 1913 Irrigation Act declared all unappropriated waters in the state, not simply those in the arid portions, to be property of the State of Texas and available for appropriation pursuant to statutory procedures. While the Act, like its predecessors, expressly preserved preexisting riparian water rights, it implied that the 1895 Irrigation Act operated to preclude the passage of riparian rights to the owner of lands, the title to which passed from the State of Texas after July 1, 1895.

(ii) State Agency and Permitting Requirement

Prior to the 1913 legislation, there was no review of the claims for water rights or administration of those rights. After filing with the county clerk, disputes among water right claimants were left to the courts for resolution.

The 1913 Irrigation Act created the State Board of Water Engineers and replaced the sworn statement filing process with a permit system administered by the Board. The 1913 Act established the fundamentals of Texas' existing water rights permit process: notice and hearing of permit applications, and authorization of a permit only if: (1) unappropriated water was available in the proposed source of supply, (2) the proposed use did not conflict with existing water rights, and (3) the proposed use was not detrimental to the public welfare. These fundamentals are discussed in more detail in § 14.4.

(iii) Filing Requirement for Prior Appropriations

The 1913 Irrigation Act attempted to integrate preexisting appropriative water rights under the 1889 and 1895 legislation with the new permit system. Within the year following the 1913 Act's passage, all holders of preexisting water rights were required to file with the county clerk an additional sworn statement describing the work completed and the facilities established under their water rights. The requirement that an applicant file a certified copy of that sworn statement with the Board of Water Engineers gave rise to the term "certified filing," which is still used to characterize water rights claimed under the 1889 and 1895 legislation.

The Legislature later repealed the 1913 Irrigation Act and replaced it with the Irrigation Act of 1917.¹⁴⁶ The 1917 Act accomplished very little modification of the 1913 Act. The primary purpose of the 1917 Irrigation Act was the adoption of a water rights adjudication procedure to provide for the quantification of previously unquantified certified filings and riparian rights. This portion of the 1917 Act, however, was declared unconstitutional in *Board of Water Engineers v. McKnight*.¹⁴⁷ In that case, the Texas Supreme Court ruled that the adjudication of property rights was a judicial function and that the attempted delegation of such authority to a state agency violated the separation of powers doctrine.

¹⁴⁶ Act of 1917, 35th Leg., R.S., ch. 88, 1917 Tex. Gen. Laws 211.

¹⁴⁷ 111 Tex. 82, 229 S.W. 301 (1921).

With the adoption of the 1917 Irrigation Act, the essential elements of Texas' current appropriation statutes were in place. Over the years, the Wagstaff Act, the cancellation statutes, and the Water Rights Adjudication Act have significantly modified the framework provided by the early appropriation statutes.

(C) The Wagstaff Act

Passed in 1931, the Wagstaff Act¹⁴⁸ grew out of a disputed permit application for the Brownwood Reservoir on Pecan Bayou, a major tributary of the Colorado River. The need for upstream municipal and agricultural water supplies was threatened by major downstream senior appropriations for hydroelectric and irrigation purposes. Although the Board of Water Engineers ultimately resolved the disputed application, the upstream interests determined that a legislative solution to the broader problem was needed. The Wagstaff Act was the result.¹⁴⁹

The Wagstaff Act significantly modified the appropriative system in place at the time. As a result, the ranking of preferred water uses, as the public policy of the State, was to be utilized in permit issuance. These rankings remain today for issuing permits: domestic and municipal, agricultural and industrial, mining, hydroelectric power, navigation, recreation, and "other beneficial uses."¹⁵⁰

The Wagstaff Act's most significant provisions, codified in §§ 11.028 and 11.033 of the Texas Water Code, appeared to provide a mechanism to make water available for municipal use on a watercourse that is otherwise fully appropriated. Section 11.028 established that all appropriations for any purpose other than municipal and domestic uses were subject to subsequent "further appropriation" for municipal or domestic uses without condemnation or compensation. Section 11.033 established that municipalities and other governmental agencies can exercise the power of eminent domain to acquire water or property devoted to uses other than municipal and domestic purposes.

The impact of these provisions in practice, however, has been minimal. The TCEQ and its predecessors have utilized these provisions in only a small number of applications, and in a very tentative fashion. No Texas court ever addressed § 11.028 authoritatively,¹⁵¹ and the Legislature repealed this provision in S.B. 1.¹⁵² As a means of dealing with the municipal shortage problem that the Wagstaff Act had addressed, S.B. 1 amended the emergency authorizations provisions of Texas Water Code § 11.139. Under that statute, TCEQ may grant

¹⁴⁸ Act of 1931, 42nd Leg., R.S., ch. 128, 1931 Tex. Gen. Laws 217.

¹⁴⁹ See Felix McDonald, *The Wagstaff Act After 50 Years* (1981). This paper, presented at the 1981 seminar of the Environmental and Natural Resources Law Section, provides a good discussion of the Act's background and some of the uncertainty surrounding its implementation.

¹⁵⁰ TEX. WATER CODE §11.024.

¹⁵¹ Although raised as an alternative basis for the Austin Court of Appeals' affirmation of the Stacy Dam decision, the Texas Supreme Court reversed the decision without mention or express consideration of the alternative holding based upon the Wagstaff Act. *Lower Colo. River Auth. v. Texas Dep't of Water Resources*, 638 S.W.2d 557 (Tex. App.—Austin 1982), *rev'd*, 689 S.W.2d 873 (Tex. 1984).

¹⁵² Act of June 2, 1997, 75th Leg., R.S., ch. 1010, § 9.01, 1997 Tex. Gen. Laws 3610.

an emergency permit or amend an existing water right for a limited period of time, if it finds an imminent threat to public health and safety for which there are “no feasible practicable alternatives” to the emergency authorization.¹⁵³ Such an emergency authorization can include the temporary transfer and use of all or part of an existing water right for other than domestic and municipal use to a retail or wholesale water supplier for public health and safety purposes; the transferee, however, is liable to those water right holder(s) for the fair market value of the water transferred, and for any damages caused by the transfer.¹⁵⁴ The Legislature has not repealed or amended the eminent domain provision of the Wagstaff Act.

(4) Water Rights Adjudication

In 1967, the Legislature adopted the Water Rights Adjudication Act, codified as subchapter G of Chapter 11 of the Texas Water Code.¹⁵⁵ The adjudication process provides a necessary vehicle for the State to quantify and reconcile the various sorts of water rights that have been previously discussed in this chapter, *i.e.*, civil law water rights, riparian water rights, certified filings, and permits. The process may be summarized as follows:

1. The TCEQ, either on its own motion or upon petition by water users, requires all persons claiming a right to use water in a given river segment to file their claims with the Commission and prove the nature and extent of their previous use.
2. Following evidentiary hearings and an opportunity to dispute the Commission’s preliminary conclusions, the Commission enters an administrative order defining all water rights in the segment. For each right that the Commission recognizes, the order states the nature of the use authorized, quantity of water, priority of use, authorized diversion point, diversion rate, and other conditions of the water right.
3. Following an opportunity for all parties dissatisfied with the Commission’s ruling to litigate the issues, the Commission then automatically files its administrative determination with a district court for final action by the judiciary.
4. Once the final judgment and decree is issued by the court, the Commission memorializes its findings by issuing a certificate of adjudication to each water right holder subject to the decree.

The last of the general stream adjudications for Texas, for the Upper Rio Grande stream segment, was completed in 2007. That case involved an interesting overlay of interstate and federal-state adjudication issues. The United States and two Texas water districts were recognized in the adjudication as having joint ownership of water rights in the Rio Grande relating to a Bureau of Reclamation project in New Mexico and Texas. Following a federal

¹⁵³ TEX. WATER CODE §§ 11.139(a), 11.139(f).

¹⁵⁴ *Id.* §§ 11.139(h), 11.139(i), 11.139(j).

¹⁵⁵ *Id.* §§ 11.301-.341.

court ruling acknowledging simultaneous proceedings in both states,¹⁵⁶ a similar stream adjudication of an upstream segment of the Rio Grande is ongoing in New Mexico's state courts.

The Texas Supreme Court upheld the constitutionality of the 1967 Water Rights Adjudication Act in *In re Adjudication of the Water Rights of the Upper Guadalupe Segment of the Guadalupe River Basin*.¹⁵⁷ In 1988, the Texas Supreme Court determined that the Legislature, in passing the Water Rights Adjudication Act, provided the exclusive means by which water rights may be recognized.¹⁵⁸ The court held that § 11.303(k) of the Texas Water Code barred the equitable creation of water rights for cases filed after August 28, 1967. As a result, courts cannot recognize equitable water rights based on good faith prior use.

(c) **Watermasters**

The TCEQ may on its own initiative divide the state into water divisions for the purpose of administering adjudicated water rights. The Commission's executive director then appoints and supervises a watermaster and advisory committee for each division.¹⁵⁹ Additionally, upon petition by 25 water right holders or on its own motion, the Commission must conduct a hearing to determine whether a watermaster should be established for an identified river basin or segment thereof.¹⁶⁰ Currently, there are watermaster programs for South Texas, the Rio Grande (below Amistad), and the Concho River.¹⁶¹ Under the watermaster appointment statute, the TCEQ executive director is now required to periodically evaluate, and make recommendations regarding, the need to appoint a watermaster for any basin that does not have one, based on criteria or risk factors to be determined by the Commission.¹⁶² Generally speaking, a watermaster divides the water of the streams (or other sources of supply) within the watermaster area, based on the adjudicated water rights, and regulates controlling works and diversion works in times of shortage in order to protect existing water rights and to prevent waste and any diversion, storage, or use in excess of adjudicated rights.¹⁶³

(d) **Water Rights Cancellation**

Texas Water Code, Chapter 11, subchapter E sets out the State's water rights cancellation process. These statutes provide for total or partial cancellation of appropriative water rights (permits or certificates of adjudication) based upon ten years of total nonuse.¹⁶⁴ The original

¹⁵⁶ See *United States v. City of Las Cruces*, 289 F.3d 1170 (10th Cir. 2002).

¹⁵⁷ 642 S.W.2d 438 (Tex. 1982).

¹⁵⁸ *In re Adjudication of Water Rights of the Brazos III Segment*, 746 S.W.2d 207 (Tex. 1988).

¹⁵⁹ TEX. WATER CODE §§ 11.325-.3261.

¹⁶⁰ *Id.* §§ 11.451-.453.

¹⁶¹ Further details regarding the specific functions and operation of each of the watermaster programs can be found on the TCEQ's website, http://www.tceq.texas.gov/permitting/water_rights/wmaster/wmaster.html.

¹⁶² TEX. WATER CODE §§ 11.326(g), (h).

¹⁶³ *Id.* § 11.327, § 11.454; see also *id.* § 11.3271 (outlining powers and duties particular to the Rio Grande Watermaster).

¹⁶⁴ *Id.* § 11.172.

statute enacted in 1957 was held constitutional by the Texas Supreme Court in *Texas Water Rights Commission v. Wright*.¹⁶⁵ Even though a perfected water right is considered a vested property right, the court ruled that the statutory cancellation scheme was constitutional on the theory that an implied condition subsequent of continued beneficial use exists in that property right. The court characterized the failure to use the water as a violation of the condition subsequent, thus making constitutional divestiture of an appropriative right possible.

After satisfaction of notice and hearing requirements, the TCEQ may cancel in whole or in part a water right that its holder has not put to beneficial use at any time for a ten-year period immediately prior to the cancellation proceeding.¹⁶⁶ The statute expressly exempts from cancellation water rights dedicated to certain conservation programs, and water use consistent with long-term water planning. To the extent nonuse results from implementation of water conservation measures under the water right holder's submitted water conservation plan, from some restriction on use of the water under an order issued by TCEQ's executive director, or from an inability to obtain water authorized due to drought conditions, it is not subject to cancellation.¹⁶⁷ Under Texas Water Code § 11.183, the TCEQ may allow a water right holder with reservoir storage to retain the impoundment to the extent of the reservoir's conservation storage capacity for certain purposes. Section 11.184 prohibits the cancellation of certified filings authorizing the use of water for municipal purposes if water has been put to use for such purpose at any time during the relevant ten-year period.

Two exceptions exist to the mandatory requirement of a hearing prior to cancellation. The first exception applies when the right to a hearing is expressly waived by the affected water right holder. The second exception relates to water rights granted for a term. Because these "term permits" do not vest any water rights in the permit holder for longer than the stated term, they automatically expire and are canceled in accordance with their terms without further need for notice or hearing.¹⁶⁸ In making its required findings regarding "reasonable diligence" and "justified nonuse," the Commission must consider, among other factors, certain conservation measures by the permit holder and whether the water right is being made available for private marketing or reserved for environmental use.¹⁶⁹

Although available since 1957 as a potential mechanism to address the problem of over appropriated watercourses, the TCEQ and its predecessors have not extensively used the cancellation statutes.

(e) Environmental Flows

The traditional appropriation doctrine considers water left to preserve instream flows, or for the benefit of bays and estuaries, to be wasted. The doctrine encourages utilization and

¹⁶⁵ 464 S.W.2d 642 (Tex. 1971).

¹⁶⁶ TEX. WATER CODE § 11.173(a).

¹⁶⁷ *Id.* § 11.173(b).

¹⁶⁸ *Id.* § 11.176(b)-(c).

¹⁶⁹ *Id.* § 11.177(b).

consumption of such flows in spite of their environmental, aesthetic, or economic value. As discussed below, protection of environmental flows has generally been handled on a permit-by-permit basis. However, Texas lawmakers and water agencies have now addressed instream flows issues in a more systemic manner, resulting in new requirements for the science- and policy-based study and protection of adequate levels of instream flows and freshwater inflows on a basin-by-basin basis.

Under S.B. 3, an “environmental flows advisory group” was appointed and will continue until TCEQ has adopted environmental flow standards for each of the defined river basin/bay systems in the state.¹⁷⁰ Following the work of the stakeholder committee and the expert science team appointed for each river basin/bay system, the TCEQ has adopted the S.B. 3 environmental flow standards for the Sabine/Neches and Trinity/San Jacinto systems.¹⁷¹ As discussed in § 14.4(i) below, these new environmental flow requirements will also affect water rights permitting.

In another emerging area regarding environmental flows, the federal Endangered Species Act is being tested as a vehicle by which to require certain levels of environmental flows for the protection of species or their habitat. The resolution of such challenges potentially affects water rights holders in numerous basins and TCEQ’s water rights administration system as a whole.¹⁷²

(f) Liability for Surface Water Overflow

No person may divert or impound the natural flow of surface waters in the state in a manner that damages property of another by the overflow of the diverted or impounded water.¹⁷³ If property is injured by such an unlawful diversion or impoundment, the injured property owner may recover damages from the liable party.¹⁷⁴ Furthermore, the recovery of damages is not limited to adjacent property owners.¹⁷⁵ Although generally an upper estate owner is not liable for drainage flowing to lower land, there are exceptions where the upper owner has significantly altered the property from its natural condition.¹⁷⁶ However, whether the water is surface water (diffused over the ground from rain or snow) or floodwater (“back water effect” from a

¹⁷⁰ *Id.* § 11.0236; *cf.* TEX. WATER CODE § 11.1471.

¹⁷¹ For more detailed and updated information regarding the process to adopt environmental flow standards for specific basins, see the TCEQ’s webpage regarding environmental flows assessment, at http://www.tceq.texas.gov/permitting/water_rights/eflows.

¹⁷² *See, e.g., The Aransas Project v. Shaw*, Case No. 13-40317 (5th Cir. filed Mar. 19, 2013) (suit against TCEQ, alleging that the Commission’s regulation of water uses and flows has resulted in a lack of sufficient freshwater flowing to the San Antonio Aransas Bay system, thus resulting in harm to the endangered whooping crane).

¹⁷³ Governmental entities are immune from suit under Water Code § 11.086 because the term “person,” as used in § 11.086, does not clearly and unambiguously express legislative intent to waive governmental entities’ immunity from suit. *See City of Midlothian v. Black*, 271 S.W.3d 791, 796 (Tex. App. – Waco 2008, no pet.).

¹⁷⁴ TEX. WATER CODE § 11.086.

¹⁷⁵ *See, e.g., Fairfield Estates L.P. v. Griffin*, 986 S.W.2d 719 (Tex. App.—Eastland 1999, no pet.); *Boatman v. Lites*, 970 S.W.2d 41 (Tex. App.—Tyler 1998, no pet.).

¹⁷⁶ *See Vaughn v. Drennon*, No. 12-07-00222-CV, 2008 WL 4757016, at * 3 (Tex. App. – Tyler Oct. 31, 2008, pet. denied) (mem. op.).

watercourse or channel), for which the property owner is not liable under § 11.086, is a fact issue.¹⁷⁷

§ 14.4 Obtaining a Water Right Under Current Statutory Procedures

(a) General Requirements

Once a stream segment or basin has been adjudicated, a person desiring to appropriate water must obtain a permit¹⁷⁸ from the TCEQ, by filing an application, paying the required fees, complying with notice and hearing requirements, and making the required showings.¹⁷⁹ An applicant must show that: (1) unappropriated water is available in the source of supply; (2) the proposed appropriation: is intended for a beneficial use, does not impair existing water rights or vested riparian rights, is not detrimental to the public welfare, considers various environmental and water quality assessments required by statute, and addresses a water supply need in a manner consistent with the state water plan and the relevant approved regional plan(s); and (3) reasonable diligence will be used to avoid waste and achieve water conservation.¹⁸⁰

The TCEQ must give notice of water right applications, including most types of permit and certificate of adjudication (COA) amendments, to persons who may be affected by the application. Notice is mailed after the TCEQ staff have completed their technical review of the application and prepared a draft permit.¹⁸¹ Generally, the notice must be published by the applicant, and also mailed to water right claimants and water right holders of record from the same source of supply.¹⁸² The Commission will hold a public hearing on the application on the motion of a commissioner or on the request of the executive director or any affected person.¹⁸³ If the 30-day notice period passes without receipt of a timely hearing request, the TCEQ may act on the application without holding a hearing.¹⁸⁴ While some applications may thus be delegated to the Commission's executive director for action, this provision has been construed quite narrowly.¹⁸⁵

¹⁷⁷ See *Texas Woman's Univ. v. Methodist Hosp.*, 221 S.W.3d 267 (Tex. App. – Houston 1st Dist. 2006, no pet.).

¹⁷⁸ Following each adjudication, all appropriative rights were evidenced by certificates of adjudication. All new appropriative water rights issued after the adjudication are evidenced by a permit. Both types of documents can be amended as discussed in §14.4(j) below.

¹⁷⁹ TEX. WATER CODE § 11.121.

¹⁸⁰ TEX. WATER CODE § 11.134(b); 30 T.A.C. §§ 297.41-.50, 297.53-.56.

¹⁸¹ 30 T.A.C. § 295.151(a).

¹⁸² TEX. WATER CODE § 11.132; 30 T.A.C. §§ 295.151-.153, 295.158. The applicable notice requirements depend on the specific type of permit applied for.

¹⁸³ TEX. WATER CODE §§ 11.132(a), 11.133; 30 T.A.C. §§ 295.171, 295.173.

¹⁸⁴ TEX. WATER CODE § 11.132(d); see *Chocolate Bayou Water Co. v. TNRCC*, 124 S.W.3d 844 (Tex. App.—Austin 2003, pet. denied).

¹⁸⁵ TEX. WATER CODE § 5.122; see *City of Marshall v. City of Uncertain*, 206 S.W.3d 97 (Tex. 2006).

(b) Availability of Unappropriated Water

The “availability of unappropriated water” requirement under § 11.134(b)(2) of the Texas Water Code is a frequent source of controversy in contested permit applications. One aspect of the controversy centers around the legal definition of “unappropriated water,” *i.e.*, what is the standard used to measure it.

The Texas Supreme Court addressed the question of what constitutes unappropriated water in the Stacy Dam decision.¹⁸⁶ The lower courts held that the Texas Water Commission could find unappropriated water based on the anticipated amount of water available, even though the water rights authorizations showed the water to be fully appropriated. The Supreme Court reversed and expressly held that unappropriated water means the amount of water remaining after taking into account complete satisfaction of all existing water rights valued at their recorded levels.¹⁸⁷

Given this legal definition of unappropriated water, factual questions of whether it is available, and how frequently it is available, still remain. One aspect of this mixed fact and law determination is noteworthy. On virtually any river in the state, flows of unappropriated water are periodically available. Even though the normal flow of the river may be fully appropriated, water may still be available during times of abundance or flood.

Pursuant to S.B. 1, the TCEQ has developed Water Availability Models (WAMs) for each river basin in the state. Relying upon a simulated historic period, the WAM can determine how much water is available at a specific location, under specified diversion or storage requirements, after allowing water for the satisfaction of existing rights.¹⁸⁸ The TCEQ has also adopted regulatory criteria to determine how frequently water must be available to support a finding that unappropriated water is available for appropriation. For approval of an application for direct diversion from a stream, without sufficient on- or off-channel water storage facilities for irrigation use, approximately 75% of the water requested must be available approximately 75% of the time when distributed on a monthly basis and based upon the available historic streamflow record.¹⁸⁹ Under this standard, for example, if the anticipated monthly demand of a 91,000 acre-foot permit application could be satisfied in only 25% of the months simulated by a hydrologist’s study, sufficient unappropriated water would not be available to support the application. If the applicant can demonstrate that a long-term, reliable, alternative source of water of sufficient quantity and quality is economically available to the applicant to make the

¹⁸⁶ *Lower Colo. River Auth. v. Texas Dep’t of Water Res.*, 689 S.W.2d 873 (Tex. 1984).

¹⁸⁷ The Texas Water Commission had issued permits to allow the Colorado River Municipal Utility District to impound water at the Stacy Dam site. A staff study concluded that very little water would be available for appropriation at the proposed reservoir site, given full exercise of all senior rights, and that downstream lakes (Lakes Travis and Buchanan) would be adversely affected. The Commission rejected the staff conclusion by assuming, based on historic use data, that the maximum amount claimed under senior rights had never in fact been used. The Texas Supreme Court held that the staff study utilized the appropriate analysis.

¹⁸⁸ Detailed information regarding the nature of, and the Commission’s use of, water availability modeling can be found on the TCEQ’s website. *See also* Kathy Alexander Martin & Todd Chenoweth, *Determining Surface Water Availability* (ch. 12), in *ESSENTIALS OF TEXAS WATER RESOURCES* (Mary K. Sahs ed., 2nd ed. 2012).

¹⁸⁹ 30 T.A.C. § 297.42(c).

proposed project viable and ensure the beneficial use of state water without waste, lower availability percentages may be acceptable.¹⁹⁰

The construction of reservoirs to store water during times of abundance is a means of making water available for appropriation that otherwise might not be available with sufficient regularity to support a new appropriation. The Commission by rule generally limits the volume of authorized use from an on-channel reservoir authorized for domestic or municipal use to its “firm yield.”¹⁹¹ Firm yield is the amount of water, based upon a simulation utilizing historic streamflow records, that the reservoir could have produced annually during the worst drought reflected by the streamflow records. In performing these simulations, the Commission’s hydrologists assume full exercise of upstream senior water rights and allow for the passage of sufficient water to satisfy all downstream senior water rights. “The purpose of this limitation is to ensure a secure and dependable source of water supply for uses necessary to protect the public health, safety, and welfare. . .”¹⁹² Diversion rights from the reservoir may be authorized in excess of its firm yield – a practice called “overdrafting” – when the implementation of a drought management plan or alternative sources of water supply such as groundwater, other reservoir systems, or other means are available to satisfy water needs during drought periods.¹⁹³

Older reservoir permits issued by the TCEQ’s predecessors frequently authorized an annual use equivalent to the storage capacity of the reservoir. This practice amounts to overdrafting on a major scale. Depending upon the reservoir’s drainage area and the abundance of rainfall, a storage capacity may be many times the volume of its annual firm yield. In many instances, the use authorized under these old reservoir permits was reduced to the reservoir’s firm yield through the water rights adjudication process.

(c) **Beneficial Use**

Section 11.023 of the Texas Water Code recognizes various purposes for which state water may be appropriated, stored, or diverted: domestic and municipal, agricultural and industrial, mining, hydroelectric power, navigation, recreation, public parks, game preserves, and “any other beneficial use.”¹⁹⁴ The TCEQ shall grant a water right application only if the proposed appropriation “is intended for a beneficial use.”¹⁹⁵ An irrigator, industry, or municipality having definite plans to put the water to use normally qualifies. The only real inquiry in such instances is whether the volume of water requested is excessive in light of the use intended. Inclusion among the projected water needs and water supply strategies approved through the regional and state water planning process, discussed in § 14.10 below, is another way of demonstrating intent for beneficial use.

¹⁹⁰ *Id.*

¹⁹¹ *Id.* § 297.42(e); § 297.1(20) (definition of “firm yield”).

¹⁹² *Id.*

¹⁹³ *Id.*; see also *City of Frisco v. Texas Water Rights Comm’n*, 579 S.W.2d 66 (Tex. Civ. App.—Austin 1979, writ ref’d n.r.e.).

¹⁹⁴ TEX. WATER CODE §§ 11.023(a)-(b); see also *id.* § 11.024 (public policy on appropriation preferences).

¹⁹⁵ *Id.* § 11.134(b)(3)(A).

In the case of reservoir projects, particularly those reservoirs constructed in advance of current need, the issue is somewhat more complex. Commitments from future water supply customers can typically satisfy the beneficial use requirement. Otherwise, the applicant may introduce projections of municipal and industrial growth in the reservoir's service area that show a projected water need capable of using the water supply.¹⁹⁶ There is very little case law construing the beneficial use requirement. In most instances it will be a fact issue, with the Commission's determination reviewed under the substantial evidence rule.

(d) Non-Impairment of Existing Water Rights

The TCEQ shall grant a water right application only if the proposed appropriation does not impair existing water rights or vested riparian rights.¹⁹⁷ As part of its hydrologic analysis, the Commission's staff examines the impact of the proposed appropriation on existing downstream water rights. To the extent the proposed appropriation would impair water availability for such existing rights,¹⁹⁸ the Commission may include restrictions on the diversion and use of water in the new water right. A typical provision of this nature would restrict diversions under the new appropriation when the flow of the stream at the diversion point is less than a specified number of cubic feet per second, thus ensuring that a known amount of water will pass to downstream users. If the TCEQ's concern is protection of a particular downstream water right, the Commission may key the streamflow restriction to a location immediately upstream of the downstream user's diversion point. The TCEQ may also require other forms of "special condition" as part of the permit or amendment—for example, in the form of accounting or return flow requirements.¹⁹⁹ In the case of a river that feeds a reservoir, the Commission will sometimes impose requirements for the release of the river's normal flow, or other release requirements, as conditions of a new water right. Unless specifically stated in the water right, however, such a release requirement does not apply to waters that have been previously impounded, but only to current inflows.

(e) Public Welfare

The Commission shall grant a water right only if it finds that it would not be "detrimental to the public welfare."²⁰⁰ Protection of the public welfare may include consideration of environmental, social and economic impacts of the proposed appropriation. Although extremely broad, the public welfare issue normally is not the basis for denial of an application.

¹⁹⁶ See *Texas Rivers Prot. Ass'n v. TNRCC*, 910 S.W.2d 147, 155-56 (Tex. App.—Austin 1995, writ denied) (even without existing supply contracts with other entities, evidence supported Commission finding that water appropriated for third parties would be used beneficially).

¹⁹⁷ TEX. WATER CODE § 11.134(b)(3)(B).

¹⁹⁸ In protecting the water supply for downstream users, the TCEQ staff focuses upon protection of the total quantity of water that the downstream user needs, but does not necessarily ensure the availability of that water at the downstream user's authorized diversion rate.

¹⁹⁹ See generally 30 T.A.C. §§ 297.45(e), 297.59(a).

²⁰⁰ TEX. WATER CODE § 11.134(b)(3)(C); 30 T.A.C. § 297.46.

Nonetheless, water rights applicants must take care to satisfy this criterion and be aware that it has implications for determining whether notice of the application is required.²⁰¹

(f) Conservation and Drought Contingency Requirements

(1) Conservation

In conjunction with a constitutional amendment approved by the voters on November 5, 1985,²⁰² several conservation oriented amendments were added to Chapter 11 of the Texas Water Code the same year. The Legislature strengthened and expanded these conservation measures through S.B. 1.

As defined in the Texas Water Code, “conservation” means the development of water resources, and those practices, techniques, and technologies that reduce consumption, reduce loss or waste, improve efficiency in use, increase recycling and reuse, or prevent pollution of water, so that supplies are available for future or alternative uses.²⁰³ The TCEQ may grant a water right application only if the applicant has provided evidence that reasonable diligence will be used to avoid waste and achieve water conservation under the latter part of that definition.²⁰⁴ An applicant for appropriation of new or additional state water has the burden of showing that the proposed appropriation is necessary and reasonable for the proposed use, and must include information that supports the proposed use and evaluates conservation and other feasible alternatives to new water development.²⁰⁵

All applicants for new or amended water rights must develop and submit a water conservation plan and adopt reasonable conservation measures.²⁰⁶ An application submitted without a conservation plan is administratively incomplete, and the TCEQ is prohibited from considering the application until the plan is submitted.²⁰⁷ Only the following types of applications are exempt from the conservation plan requirement: (1) applications to impound water solely for in-place use; (2) applications for emergency use; and (3) applications for temporary use.²⁰⁸

Depending on the specified type of use and volume of water appropriated, holders of existing appropriative rights also must develop, submit, and implement a water conservation plan that is consistent with the appropriate approved regional water plan and that adopts reasonable

²⁰¹ *City of Marshall v. City of Uncertain*, 206 S.W.3d 97, 107 (Tex. 2006).

²⁰² Tex. H.R.J. Res. 6, 69th Leg., 1985 Tex. Gen. Laws 3365 (amendment to TEX. CONST. art. III, § 49–d).

²⁰³ TEX. WATER CODE § 11.002(8); 30 T.A.C. §§ 295.9, 297.1.

²⁰⁴ TEX. WATER CODE § 11.134(b)(4); *see also* 30 T.A.C. § 297.48 (waste prevention), § 297.50 (water conservation plan requirement).

²⁰⁵ 30 T.A.C. § 297.50(b).

²⁰⁶ TEX. WATER CODE § 11.1271; 30 T.A.C. § 295.9.

²⁰⁷ 30 T.A.C. § 295.9.

²⁰⁸ *Id.* § 295.9(5).

water conservation measures. This requirement for a water conservation plan does not result in the need for amendment to existing water rights.²⁰⁹

The TCEQ has adopted rules establishing criteria and deadlines for submission of water conservation plans, which vary somewhat depending on the water use.²¹⁰ All water conservation plans required under the statute must include specific, quantified 5-year and 10-year targets for water savings.²¹¹ Based upon its review of the conservation plan, the Commission may prescribe the implementation of reasonable water conservation measures.²¹² Entities required to submit water conservation plans to the TCEQ must also submit copies to the TWDB, and must report annually to the TWDB on their progress in implementing the plan. TWDB must review the plans and reports for compliance, and may notify the TCEQ of any determination of violation of the statute or rules.²¹³

All water right holders, even those exempt from submitting a water conservation plan, must exercise reasonable diligence to avoid waste and achieve water conservation. Additionally, the Commission provides incentives to encourage water rights holders to adopt conservation measures. For example, a water right holder has a right to use the appropriated water that they conserve,²¹⁴ and this right is not subject to cancellation or forfeiture, so long as a satisfactory water management plan is submitted to the Commission.

(2) Drought

In addition to conservation plans, wholesale and retail public water suppliers and irrigation districts applying for or holding an existing water right must develop and submit drought contingency plans consistent with the appropriate approved regional water plan, to be implemented during periods of water shortages and drought.²¹⁵ As with conservation plans, an application submitted without a drought contingency plan is administratively incomplete, and the TCEQ is prohibited from considering the application until the plan is submitted.²¹⁶ The Commission has rules for drought contingency plans for municipal uses by public water suppliers, for irrigation use, and for wholesale water suppliers.²¹⁷ Drought contingency plans must include “specific, quantified targets” for water use reductions during water shortages and drought.²¹⁸

²⁰⁹ TEX. WATER CODE § 11.1271(b).

²¹⁰ The TCEQ’s current rules regarding water conservation plans can be found in subchapter A, Chapter 288, Volume 30, Texas Administrative Code. 30 T.A.C. § 295.9, § 288.1 *et seq.*

²¹¹ TEX. WATER CODE § 11.1271(c).

²¹² *Id.* § 297.50(c).

²¹³ *See* TEX. WATER CODE § 16.402.

²¹⁴ *See id.* § 11.002(9) (definition of “conserved water”).

²¹⁵ *Id.* § 11.1272(a).

²¹⁶ 30 T.A.C. § 295.9.

²¹⁷ The TCEQ’s current rules regarding drought contingency plans can be found in subchapter B, Chapter 288, Volume 30, Texas Administrative Code. 30 T.A.C. §§ 288.20-22.

²¹⁸ TEX. WATER CODE § 11.1272(c).

In the event of a shortage in a water supply covered by a water conservation plan prepared in compliance with agency rules, the person, association, or corporation owning or controlling the water must divide the water to be distributed among all customers pro rata. The division will be according to the amount of water to which each customer may be entitled, but an allocation may be reduced by the amount the customer would have saved if the customer had operated its water system in compliance with the water conservation plan.²¹⁹ This enables water suppliers in a period of drought to take into account the degree to which customers have complied with applicable water conservation and drought contingency plans.

TCEQ's executive director now has authority, pursuant to rule, to order during a period of drought or other emergency shortage of water the temporary suspension of water rights or the temporary adjustment of water diversions by water right holders. Such action must be taken in accordance with the priority system, and in a manner that (among other considerations) maximizes beneficial use, minimizes impact on water rights holders, and conforms, to the greatest extent practicable, to the statutory order of water use preferences set out in Section 11.024.²²⁰ See *TCEQ v. Texas Farm Bureau*, No. 13-13-00415-CV, transferred to and pending in the Thirteenth Court of Appeals.²²¹

(g) Other Requirements

The Legislature's emphasis on more effective water planning is reflected in the statutory requirements for water rights applications. The TCEQ shall grant an application only if the proposed appropriation addresses a water supply need in a manner consistent with the state water plan and the relevant approved regional water plan(s), unless the Commission waives this consistency requirement.²²² The Commission must consider these plans when considering any application to store, take, or divert surface water, or for a water right amendment.²²³ The Commission may not issue a water right for municipal purposes in a region that does not have an approved regional water plan, unless it determines that a waiver is warranted.²²⁴ Statewide and regional water planning requirements are discussed in § 14.10.

Various other provisions of the Texas Water Code require the TCEQ to consider environmental and conservation oriented impacts of any application to store, take, or divert surface water. The Commission must consider the effects, if any, on groundwater or groundwater recharge.²²⁵ It must assess the effects, if any, of the proposed water right on the

²¹⁹ *Id.* § 11.039(b).

²²⁰ *Id.* § 11.053.

²²¹ See *TCEQ v. Texas Farm Bureau*, No. 13-13-00415-CV, transferred to and pending in the Thirteenth Court of Appeals.

²²² *Id.* § 11.134(b)(3)(E).

²²³ *Id.* § 11.1501.

²²⁴ *Id.* § 11.134(c).

²²⁵ *Id.* § 11.151.

bays and estuaries of Texas.²²⁶ Although only a major appropriation near the coast will generally have a noticeable impact,²²⁷ the statute's scope is universal. As discussed more fully in § 14.4(i) below, TCEQ's rulemaking process is now underway to adopt environmental flow standards for each river basin/bay system in Texas, which will be used in considering future water appropriations. Regarding all applications for permits or water right amendments, the Commission must also include, to the extent practicable in light of all public interests, conditions that it considers necessary to maintain existing instream uses,²²⁸ the water quality of the river or stream to which the water right would apply,²²⁹ and fish and wildlife habitats.²³⁰

The Texas Parks and Wildlife Department (TPWD) also has significant authority relating to certain environmental aspects of water rights applications. The TPWD and the TCEQ have joint responsibility to review bay and estuary data and studies and to determine necessary inflow conditions.²³¹ The TCEQ must send a copy of every application for a permit or water right amendment to store, take, or divert water to the TPWD, which is entitled to participate in hearings on such applications. The TCEQ, in making a final decision on a water right application, must consider all information and evidence that the TPWD may present.²³²

(h) Interbasin Transfers

Section 11.085 of the Texas Water Code requires special TCEQ authorization for permits to take or divert water from one watershed, or river basin, to another. This provision was substantially revised by S.B. 1, in an attempt to balance the interests of the basin of origin and the receiving basin. The applicant must obtain a special permit from the TCEQ prior to any such interbasin transfers.²³³ There are criminal penalties for taking or diverting water in violation of this section.²³⁴

A related provision applicable to the TWDB is found in § 49–d of Article III of the Texas Constitution. It and related statutory provisions impose a limitation on TWDB projects,

²²⁶ *Id.* § 11.147(b).

²²⁷ *See id.* (requiring, to the extent practicable, that permits in coastal areas include conditions necessary to maintain beneficial inflows).

²²⁸ *Id.* § 11.147(d).

²²⁹ *Id.* (conditions to maintain water quality of the river or stream to which the permit would apply); *see also id.* § 11.150 (required assessment of effects on water quality in the state).

²³⁰ *Id.* § 11.147(e). For a proposed water right in excess of 5,000 acre-feet per year, the TCEQ must assess the impact of the permit on fish and wildlife habitats, and may require the applicant to take reasonable actions to mitigate adverse impacts. *Id.* § 11.152.

²³¹ *Id.* § 11.1491.

²³² *Id.* 11.147(g). TPWD continues to have the right to submit comments to TCEQ on water rights permitting applications received after September 2011; however, subsequent legislation provides that a “state agency” will not be allowed to contest a permit or be considered an affected person or named a party in a contested case hearing on such applications. TEX. WATER CODE § 5.115(b).

²³³ TEX. WATER CODE § 11.085(a); 30 T.A.C. §§ 297.18, 295.13.

²³⁴ TEX. WATER CODE §§ 11.085(q)-(r).

prohibiting interbasin transfers of water that is projected to be needed in the basin of origin within the next fifty years. Unlike the TWDB's limitation, § 11.085 does not have specific time constraints to guide the Commission in authorizing non-TWDB interbasin transfers.

In addition to publication notice requirements, notice of an application for interbasin transfer must be mailed to certain types of stakeholders in the basin of origin and to state legislators in both basins.²³⁵ The TCEQ, prior to taking any action on an application for an interbasin transfer, must hold at least one public meeting to receive comments, in both the basin of origin and the recipient basin. If the application is contested in a manner requiring an evidentiary hearing under TCEQ rules, the Commission must give notice and hold such a hearing.²³⁶

In weighing the effects of a proposed transfer, the TCEQ is required to consider several factors, including the fifty-year needs of both basins and guidance from the relevant regional water plan(s) regarding feasible and practicable alternative supplies, amount and purposes of use, water conservation and drought contingency measures, economic impact on both basins, impacts on environmental concerns, compensation/mitigation to the basin of origin, and the information submitted by the applicant.²³⁷ The TCEQ may grant the application, in whole or in part, only to the extent that the detriments to the basin of origin during the proposed transfer period are less than the benefits to the receiving basin during that period, and the applicant has prepared and implemented water conservation and drought contingency plans that will result in the "highest practicable levels" of conservation and efficiency achievable within the applicant's jurisdiction.²³⁸

Newly authorized interbasin transfers become junior in priority to all other water rights granted prior to filing the transfer application.²³⁹ While this provision may not prevent new interbasin transfer projects, it severely limits the feasibility of an interbasin transfer from existing water rights because it will likely render the water supply under the transferred right unreliable during times of drought. This "junior rights" provision has been criticized as preventing interbasin transfers that are necessary to supply the state's future water needs.

Although a permit is still required, the interbasin transfer procedural requirements described in this section do not apply to certain transfers of 3,000 acre-feet or less; emergency transfers; transfers to adjoining coastal basins; transfers from the part of the geographic area of a county, city, or retail public utility's retail service area that is within the basin of origin for use in that part of the county, city, or utility's retail service area not within the basin of origin; and

²³⁵ *Id.* §§ 11.085(f)-(h).

²³⁶ *Id.* §§ 11.085(d)-(e).

²³⁷ *Id.* § 11.085(k); *see also San Antonio v. Texas Water Comm'n*, 407 S.W.2d 752 (Tex. 1966) (requiring the Commission to balance future benefits and detriments of the two competing basins prior to authorizing an interbasin transfer).

²³⁸ TEX. WATER CODE § 11.085(l).

²³⁹ *Id.* § 11.085(s).

transfers of water imported from a source located wholly outside the boundaries of Texas (except from Mexico) for use in Texas, and transported by bed and banks.²⁴⁰

(i) Environmental Flows Requirements

Section 11.0235 of the Texas Water Code sets out the state’s policy regarding environmental flows, in order to maintain the biological soundness of the state’s rivers, lakes, bays and estuaries. For now, although the TCEQ may not issue new permits for instream flows dedicated to environmental needs or bay and estuary inflows, it may approve an application to *amend* an existing water right to change the use or add such a use.²⁴¹ However, the Commission is in the process of developing rules that adopt environmental flow standards (a schedule of flow quantities) for each river basin/bay system in Texas, as the basis for determining the amount of unappropriated water (with an assigned priority date) to satisfy downstream instream flow needs or freshwater inflow needs for affected bays and estuaries (essentially, a ‘floor’ below which water should not be appropriated).²⁴² To date, TCEQ has opted to establish environmental flow standards rather than set asides for environmental flow needs. As standards are adopted for each basin, TCEQ must consider the applicable environmental flow standards in its water rights permitting,²⁴³ and include any necessary protective conditions.²⁴⁴

Prospectively, any new or amended water right that increases the amount of water authorized must include a provision allowing the TCEQ to adjust conditions in the water right to provide for protection of instream flows or freshwater flows in compliance with applicable flow standards.²⁴⁵ State water set aside by TCEQ for freshwater inflows and instream uses may be made available temporarily for “other essential beneficial uses” if the Commission finds that an emergency exists that cannot practically be resolved in another way, and provides the TPWD with notice.²⁴⁶

(j) Water Right Amendments

A water right must be amended to authorize a change in the place of use, purpose of use, point of diversion, rate of diversion, acreage to be irrigated, or any other alteration in the water right.²⁴⁷ The TCEQ executive director also may initiate amendment of water rights to correct

²⁴⁰ *Id.* § 11.085(v).

²⁴¹ *Id.* § 11.0237.

²⁴² *Id.* § 11.1471.

²⁴³ *Id.* § 11.134(b)(3)(D) (adding the applicable environmental flow standards to the other environmental assessments required to be considered); *see also* § 11.023(a) (qualifying the provision on purposes of appropriation of state water).

²⁴⁴ *Id.* § 11.147(b)-(e).

²⁴⁵ *Id.* §§ 11.147(e-1)-(e-3); § 11.1471(d).

²⁴⁶ *Id.* § 5.506(a-1); § 11.0235(c); § 11.148(a-1).

²⁴⁷ *Id.* § 11.122(a).

errors, protect senior water rights, require reporting, or assist with enforcement of the terms and conditions of the water right.²⁴⁸

Unless the application involves a request for an additional appropriation, the analysis focuses on whether the requested changes affect other water right holders or the environment. The TCEQ's standard of review is reflected in the "no injury" rule, which states that amendments to increase the appropriative amount, to change the point of diversion or return flow, to increase the consumptive use of water, to increase the rate of diversion, or to change from direct diversion to on-channel storage will not be authorized unless it is determined that the change has no adverse impact on other appropriators.²⁴⁹ The applicant has the burden of showing that there are no adverse impacts on other water right holders or the environment.²⁵⁰ Just as with an application for a new water right, TCEQ may impose special conditions in order to avoid such adverse impacts.

Examining the application under the "four corners" rule, the amendment shall be authorized if the requested change will not cause adverse impact of greater magnitude than under the existing terms of the water right.²⁵¹ Even after the Texas Supreme Court's decision in a case addressing this issue,²⁵² it remains unclear precisely how the TCEQ will apply the § 11.122(b) requirements to future amendment applications. Generally, the court ruled that the provision does not preclude contested hearings on amendments, but it significantly narrowed the issues that could be raised. Although a hearing might be necessary in some cases, the court stated that the TCEQ might be able to make the necessary determinations from the face of the application, and, in those cases, notice and hearing would not be required.²⁵³

Water rights amendment applications are generally subject to the same notice requirements applicable to applications for new water rights.²⁵⁴ Amendments that, in the judgment of the executive director, have no possibility of harming existing water rights or the public interest, such as a reduction in diversion rate or change in location of use, are processed without providing notice to other water right holders or the public.²⁵⁵ Guided by the *City of Marshall* decision, the executive director evaluates these factors in reference to each amendment application, in order to determine the notice requirements.

²⁴⁸ 30 T.A.C. § 297.61.

²⁴⁹ *Id.* § 297.45(a).

²⁵⁰ *Id.* § 297.45(d).

²⁵¹ TEX. WATER CODE § 11.122(b).

²⁵² *City of Marshall v. City of Uncertain*, 206 S.W.3d 97 (Tex. 2006).

²⁵³ *Id.* at 111.

²⁵⁴ 30 T.A.C. § 295.158(b).

²⁵⁵ *Id.* § 295.158(c).

(k) Additional Types of Water Right Permits

In addition to the regular appropriation permit issued under § 11.121 of the Texas Water Code, the Commission issues several types of more restrictive permits authorized by the Texas Water Code:

1. Section 11.137 authorizes *seasonal permits*, typically for irrigation only to fill an off-channel reservoir during the wet season;²⁵⁶
2. Section 11.138 authorizes *temporary permits*, for duration of three years or less, which are frequently issued without the necessity of a public hearing;²⁵⁷
3. *Contractual amendments* authorize use, pursuant to a contract, by a third party, not expressly authorized under the base permit. The owner of the base permit obtains a “contractual amendment” to his permit, authorizing use by the third party;²⁵⁸
4. *Section 11.143 permits* authorize the conversion of an exempt domestic and livestock reservoir to other beneficial uses;²⁵⁹
5. Section 11.140 authorizes *permits for storage*, not expressly authorizing beneficial use, to achieve optimum development of a reservoir project;
6. Section 11.381 authorizes *term permits*.²⁶⁰ The Commission may issue a permit for a term of years, based on the availability of water that has been appropriated to others but is not yet being utilized. For example, water appropriated to a reservoir that is constructed to meet future water needs might be available for term permits until the future need develops. Term permits automatically expire and are canceled in accordance with their terms without further need for notice or hearing;²⁶¹ and
7. Section 11.139 allows *emergency authorizations* to appropriate or use state water on an emergency basis, if emergency conditions present an imminent threat to public health and safety and there are no feasible, practicable alternatives.²⁶² Under circumstances where the Governor has declared a state of disaster based on drought conditions, he may suspend provisions of TCEQ’s regulatory statutes and rules, if strict compliance with those authorities would prevent or delay necessary action to cope with

²⁵⁶ *Id.* § 297.12.

²⁵⁷ *Id.* § 297.13.

²⁵⁸ *Id.* §§ 297.14, §§ 297.101-.108. Contractual permits mentioned in the regulation are no longer issued.

²⁵⁹ *Id.* § 297.15.

²⁶⁰ *Id.* § 297.19.

²⁶¹ TEX. WATER CODE §§ 11.176(b), (c).

²⁶² 30 T.A.C. § 297.17; *see also* discussion in § 14.3(b)(3)(C) above.

the drought disaster.²⁶³ In limited cases, this provision can be invoked to obtain expedited consideration of a water right authorization.

C. Water Law Institutions

This part of the chapter provides a basic overview of various governmental institutions, as they impact Texas water rights and water development.

§ 14.5 International Water and Institutions

In Texas, the Rio Grande forms the international border between the United States and Mexico. Tributaries in both countries produce its flows, with Mexico contributing the larger portion of the flows entering the river below El Paso. International treaties between the two nations govern the allocation of the Rio Grande's waters between the two countries.²⁶⁴

The Rio Grande Convention of 1906²⁶⁵ was an international agreement to apportion waters in the vicinity of El Paso in connection with the authorization and construction of Elephant Butte Reservoir in New Mexico. In return for the annual delivery of 60,000 acre-feet per year from the Rio Grande Project, Mexico waived all rights to waters in the Rio Grande between El Paso and Fort Quitman, Texas.

The Rio Grande Treaty of 1944²⁶⁶ divided the waters of the Rio Grande from Fort Quitman to the Gulf of Mexico. It established the International Boundary and Water Commission to oversee the distribution of these waters and the construction of reservoir projects on the Rio Grande. Under this agreement, the United States is entitled to a portion of the flow of certain major Mexican tributaries to the Rio Grande. As a result, the United States is entitled to more than one-half of the river's flow even though its tributaries contribute less than this amount. In return, the United States assumed financial responsibility for a major portion of the construction of reservoirs and hydroelectric facilities that are located on the Rio Grande and serve both Mexico and the United States.

The treaties were not intended to affect the State of Texas' administration and allocation of the United States' portion of the water.²⁶⁷ They do, however, determine how much of the Rio Grande's flow belongs to the United States.

²⁶³ See TEX. GOV'T CODE §§ 418.004(1), 418.012, 418.016(a).

²⁶⁴ For additional detail on these treaties and on Texas' interstate stream compacts discussed in §14.6 below, see Priscilla M. Hubenak & Tom Bohl, *Multi-Jurisdictional Water Rights* (ch. 14), in *ESSENTIALS OF TEXAS WATER RESOURCES* (Mary K. Sahs ed., 2nd ed. 2012).

²⁶⁵ 34 Stat. 2953.

²⁶⁶ 59 Stat. 1219.

²⁶⁷ *Hidalgo County WCID No. 7 v. Hedrick*, 226 F.2d 1 (5th Cir. 1955), *cert. denied*, 350 U.S. 983 (1956).

§ 14.6 Interstate Water and Institutions

The State of Texas has entered interstate river compacts to allocate the waters of its major interstate rivers. These include:

1. The Rio Grande Compact²⁶⁸ with the States of Colorado and New Mexico;
2. The Pecos River Compact²⁶⁹ with the State of New Mexico;
3. The Canadian River Compact²⁷⁰ with the States of New Mexico and Oklahoma;
4. The Sabine River Compact²⁷¹ with the State of Louisiana; and
5. The Red River Compact²⁷² with the States of Arkansas, Oklahoma and Louisiana.²⁷³

An interstate river compact may take precedence over a state's internal water appropriation statutes.²⁷⁴ Therefore, to the extent that any inconsistency arises, the State of Texas is bound to limit the implementation of its internal water rights system in a manner consistent with the requirements of its interstate compacts.

In the case of the Rio Grande Compact and the Pecos River Compact, Texas is a downstream state, receiving water from the upstream states that is due under the terms of each compact. While the compacts thus have a direct impact on the water available for use in Texas, they have little direct impact on the State's allocation of that water or upon water users in Texas.

The Canadian River Compact, viewed simplistically, is based upon allocation of authorized storage capacity within the respective states. The compact places limitations on the construction of new reservoirs by Texas in the Canadian River Basin. Thus, in issuing any new permits for impoundment and storage of water in the Canadian River Basin, the TCEQ must comply with the compact's provisions.

The Sabine River forms a boundary between Texas and Louisiana. The Sabine River Compact generally apportions the waters of the Sabine River fifty percent to Texas and fifty

²⁶⁸ TEX. WATER CODE §§ 41.001-.009.

²⁶⁹ *Id.* §§ 42.001-.010.

²⁷⁰ *Id.* §§ 43.001-.006.

²⁷¹ *Id.* §§ 44.001-.010.

²⁷² *Id.* §§ 46.001-.013.

²⁷³ Although the States of Louisiana and Texas had each enacted the Caddo Lake Compact (Ch. 47, Texas Water Code), the compact never became effective. Congress refused to consent to the compact, and Louisiana and Texas have each since repealed their respective statutory adoptions of the compact. See Act of May 28, 2003, 78th Leg., R.S., ch. 955, 2003 Tex. Gen. Laws 2831.

²⁷⁴ *Hinderlider v. LaPlata River & Cherry Creek Ditch Co.*, 304 U.S. 92 (1938).

percent to Louisiana, regardless of the origin of the water. Uses in each state are charged against that state's share of the Sabine water.

Texas is an upstream state in the Red River Compact, with its uses subject to the compact's limitations. The compact allots Texas one-half of Lake Texoma's water and all of the water from Texas tributaries above Lake Texoma that directly enter the Red River without going through Oklahoma. In the case of tributaries above Lake Texoma that enter Oklahoma prior to joining the Red River, Texas is obliged to provide a proportionate share of the flow to Oklahoma. For Texas' tributaries below Lake Texoma, Texas may make free and unrestricted use of the water above the "last downstream dam site" on each tributary. These sites are defined in the compact. Below that last downstream dam site on these tributaries, and in the Red River between Lake Texoma and Index, Arkansas, Texas' use of the water is subject to certain restrictions based upon the volume of the Red River's flow at Index, Arkansas. Generally, these restrictions limit use only during terms of drought. Texas' use of waters in East Texas tributaries that pass through Louisiana prior to entering the Red River is also subject to potential restriction under the Red River Compact, but such restrictions should have little or no impact for several decades.

In a recent challenge to Oklahoma's water export statutes, the U.S. Supreme Court addressed whether a would-be Texas appropriator could obtain in Oklahoma a portion of water allocated by the Red River Compact to Texas. The Court unanimously rejected the Texas water district's claim that the compact terms preempted the Oklahoma water statutes and granted "cross-border rights," and also rejected the district's dormant Commerce Clause claim.²⁷⁵

§ 14.7 Federal Waters and Institutions

Although not directly involved as a regulator or administrator, the federal government frequently plays a role in major water development projects in Texas. The two agencies primarily involved are the Army Corps of Engineers and the Bureau of Reclamation of the Department of the Interior.

If Congress authorizes and appropriates funding for a major water project, either the Corps of Engineers or the Bureau of Reclamation may cooperate with a local governmental entity in the project's construction and financing. Typically, in authorizing the project, Congress considers a portion of the project's cost "nonreimbursable," and borne by the federal government; flood control and fish and wildlife enhancement are examples of nonreimbursable costs. The project's local sponsor, according to the terms of a reimbursement contract between the local sponsor and the federal agency, must typically repay the portion of the project that results in local benefits, *e.g.*, increased water supply or the generation of hydroelectric power. Repayment schedules, often extending over fifty years at low interest rates, result in an indirect federal subsidization of project costs.

Federal-state conflicts periodically occur in the interface between these federal agencies and state regulatory supervision of water. The Bureau of Reclamation is subject to a statutory

²⁷⁵ See *Tarrant Regional Water Dist. v. Herrmann*, ___ U.S. ___ (No. 11-889, June 13, 2013).

mandate of compliance with state water laws.²⁷⁶ The Corps of Engineers, not subject to such a mandate, has not always obtained local sponsors for its projects in Texas. In fact, when acting under the Rivers and Harbors Act and the federal jurisdiction over navigable waters, the Corps of Engineers is not required to obtain a permit from the State prior to construction of a dam and reservoir.²⁷⁷

The doctrine of reserved federal water rights has been a cause of federal-state conflict throughout most of the western United States.²⁷⁸ Under this doctrine, the courts assume that the federal government, in dedicating property from the public domain for a specific public purpose (e.g., an Indian reservation, wildlife refuge, national recreation area, etc.) intended to reserve sufficient water rights to accomplish that purpose, even though water is not specifically mentioned in the dedication. With water in short supply and the volumes of water required for such federal purposes increasing, the reserved rights doctrine has been a source of significant controversy in other western states. Texas, however, was not a Territory of the United States before statehood, and retained the rights to its public lands upon becoming a state. As a result, the federal government has never owned Texas' lands and waters, and the reserved rights doctrine has had little applicability in Texas.

§ 14.8 State Government Institutions

The two agencies of statewide jurisdiction principally involved in the implementation of Texas' water laws and policy are the Texas Commission on Environmental Quality (TCEQ) and the Texas Water Development Board (TWDB).

(a) Texas Commission on Environmental Quality (TCEQ)

The TCEQ is the descendant, through several intermediate incarnations, of the Board of Water Engineers established by the Irrigation Act of 1913.²⁷⁹ The governor appoints each of the three commissioners for a six-year term.²⁸⁰ The commissioners must be from different areas of the state²⁸¹ and knowledgeable in the areas of natural resources, the needs of the state concerning water use, storage, and conservation, and the need to maintain environmental quality.²⁸² The Legislature has granted the TCEQ all the administrative authority (whether judicial, executive, or legislative) within its jurisdiction.²⁸³ Thus, the Commission not only sits as the adjudicatory

²⁷⁶ See 32 Stat. 390, 43 U.S.C. § 383 ("Section 8" of the Reclamation Act of 1902).

²⁷⁷ *Anderson v. Seeman*, 252 F.2d 321 (5th Cir.), cert. denied, 358 U.S. 820 (1958); *Neches River Conservation Dist. v. Seeman*, 252 F.2d 327 (5th Cir.), cert. denied, 358 U.S. 820 (1958).

²⁷⁸ See, e.g., *Winters v. United States*, 207 U.S. 564 (1908).

²⁷⁹ Effective September 1, 2002, the Texas Natural Resource Conservation Commission ("TNRCC") was renamed the Texas Commission on Environmental Quality ("TCEQ"). Act of June 15, 2001, 77th Leg., R.S., ch. 965, § 18.01(c), 2001 Tex. Gen. Laws 1985.

²⁸⁰ TEX. WATER CODE §§ 5.052, 5.056.

²⁸¹ *Id.* § 5.052.

²⁸² *Id.* § 5.119.

²⁸³ *Id.* § 5.102.

body ruling on all contested cases, but it also has substantive and procedural rulemaking authority.²⁸⁴ The executive director of the Commission oversees the agency's executive and administrative functions.²⁸⁵ The Commission's present subject matter jurisdiction includes water rights, water pollution and water quality, district formation and supervision, public drinking water systems, municipal and industrial solid and hazardous waste regulation, dam safety, and air pollution control.²⁸⁶

(b) Texas Water Development Board (TWDB)

The Texas Water Development Board is the state agency charged with planning and financial assistance for water development projects. Unlike most state agencies, which are creatures of statute, the TWDB was established by a 1957 constitutional amendment.²⁸⁷ The Governor, with the advice and consent of the Senate, appoints the three members of the Board, who serve on a full-time basis, for staggered six-year terms, and limited to two terms.²⁸⁸ Among the Board members, one each must have experience in the fields of engineering, public or private finance, and law or business, and the members are to reflect the diverse geographic regions and population groups of the state.²⁸⁹ Under its planning function, discussed in § 14.10, the TWDB is responsible for development of the state water plan and related coordination with the regional planning groups. The TWDB's financial assistance programs, discussed in § 14.12, primarily center upon loan and grant programs available to qualifying local governments for water supply development projects and for water quality purposes. The TWDB grants this financial assistance upon the basis of local need, and normally implements the assistance through the purchase of local government bonds. The TWDB is designated as the state agency that must cooperate with the federal government, *i.e.*, the Army Corps of Engineers and the Bureau of Reclamation, in the planning of water resource development projects in Texas,²⁹⁰ and the TWDB may acquire storage rights in, or become an owner of, a reservoir project for the purpose of optimum development of the state's waters.

D. Water Development and State Assistance

§ 14.9 Texas Water Development Board

The Texas Water Development Board is charged with facilitating the development of water resources within the state, and provides three major types of assistance for water-related projects: (1) planning and forecasting expertise; (2) research and technical information; and (3) financing.

²⁸⁴ *Id.* § 5.103.

²⁸⁵ *Id.* § 5.221.

²⁸⁶ *Id.* §§ 5.012-.013.

²⁸⁷ TEX. CONST. art. III, § 49-c.

²⁸⁸ TEX. WATER CODE §§ 6.052, 6.056 (as amended by H.B. 4, 83rd Leg., R.S. (2013)).

²⁸⁹ *Id.* § 6.052 (as amended by H.B. 4, 83rd Leg., R.S. (2013)).

²⁹⁰ *Id.* § 16.091.

§ 14.10 Planning and Forecasting

Through S.B.1 and S.B.2, the Legislature has rewritten the water planning provisions of the Texas Water Code, which provide for planning at the statewide, regional, and local levels.²⁹¹

(a) State Water Planning

The TWDB remains the responsible state agency for developing a comprehensive statewide water plan every five years, designed to provide for the orderly development and management of the state's water resources so as to ensure that sufficient supplies will be available at a reasonable cost in the future.²⁹² The plan is an excellent source of information concerning current use patterns, projected demands, and alternative supplies and management strategies that may be available to meet those demands. The current state water plan, *Water for Texas – 2012*, was adopted by the TWDB Board in December 2011. The entire contents of the state water plan can be found on the TWDB's website, at <http://www.twdb.state.tx.us/waterplanning/swp/index.asp>.

The state water plan, as adopted by the TWDB, continues to be only a guide to state water policy. While the TCEQ must take the plan into consideration in matters before the Commission,²⁹³ it is not bound by the plan, nor under any obligation to implement it. The TCEQ must consider the state water plan (and regional plans) in water rights permitting decisions,²⁹⁴ and the TWDB must consider the plan in providing financial assistance under Chapter 15 of the Texas Water Code.²⁹⁵ The TWDB, in coordination with the TCEQ, the Texas Department of Agriculture, and the TPWD, must adopt by rule guidance principles for the state water plan that reflect the public interest of the entire state, and update these guidance principles at least every five years to coincide with the five-year cycle for adoption of the state water plan.²⁹⁶ The state water plan must also include an evaluation of (a) the state's progress in meeting future water needs, including the impact of water management strategies and projects implemented after adoption of the preceding plan; and (b) the number of projects included in the preceding plan that received financial assistance from TWDB.²⁹⁷

The state water plan must incorporate the regional water plans approved under Texas Water Code § 16.053.²⁹⁸ The purpose of utilizing regional water planning groups as the

²⁹¹ For a more detailed discussion of state and regional water planning, see Louis Rosenberg et al., *State Water Planning* (ch. 20), in *ESSENTIALS OF TEXAS WATER RESOURCES* (Mary K. Sahs ed., 2nd ed. 2012).

²⁹² TEX. WATER CODE §§ 6.012(a)(1), 16.051.

²⁹³ *Id.* § 16.051(b).

²⁹⁴ *Id.* § 11.1501.

²⁹⁵ *See id.* § 15.307 (storage acquisition fund); § 15.995(c)(1) (rural water assistance fund).

²⁹⁶ *Id.* § 16.051(d).

²⁹⁷ *Id.* § 16.051(a-1), (a-2).

²⁹⁸ *Id.* § 16.051(a).

foundation for the statewide plan is to obtain enough local participation to ensure that the needs of local communities are considered with the plan.

(b) Regional Water Planning

The TWDB has designated the areas for which regional water plans are required, and sixteen regional planning groups, whose members range from environmental activists to river authority managers, prepare their respective regional water plans.²⁹⁹ A third cycle of these five-year regional water plans have recently been approved.

The Texas Water Code sets out the various specific requirements and topics that each regional plan must address.³⁰⁰ Among other things, to be approved by the TWDB a regional water plan must include water conservation practices and drought management measures, and be consistent with long-term protection of the state's water, agricultural, and natural resources.³⁰¹

TWDB rules provide the procedures for development and adoption of regional water plans by regional water planning groups.³⁰² S.B. 1 also ensured public participation in the regional planning process. The regional planning groups must hold at least one public meeting at a central location within the regional planning area, and must also provide ongoing opportunity for public input during the preparation of the regional water plan.³⁰³ Regional water planning groups may also contract with political subdivisions for assistance with developing or revising a regional water plan.³⁰⁴

After the plan is prepared, it must be submitted to the TWDB, which determines whether the plan meets the requirements of § 16.053(e) and provides the regional planning group with comments. If there are no interregional conflicts, the planning group considers comments, revises and adopts its final plan, and submits it to the TWDB for inclusion in the state water plan. The TWDB facilitates (and ultimately has the authority to resolve) any interregional conflicts, and may approve a regional water plan only after it has determined that any such conflicts involving that planning area have been resolved.³⁰⁵ In a recent case, the court has construed “interregional conflict” to encompass a situation of “major conflict” where one region had studied the impact on its resources of a proposed major reservoir project intended to supply

²⁹⁹ Each of the 16 regional plans is available online at the TWDB's website: <http://www.twdb.state.tx.us/waterplanning/index.asp>.

³⁰⁰ TEX. WATER CODE § 16.053(e).

³⁰¹ *Id.* §§ 16.053(h)(7)(B)-(C).

³⁰² *See* 31 Tex. Admin. Code ch. 357.

³⁰³ TEX. WATER CODE §§ 16.053(h)(1)-(2).

³⁰⁴ *Id.* § 16.053(l).

³⁰⁵ *Id.* §§ 16.053(h)(4)-(7).

water to another region, and found a substantial conflict.³⁰⁶ A regional planning group may make minor amendments to a plan, if approved by the TWDB.³⁰⁷

The TWDB is required, in coordination with the regional water planning groups and groundwater districts, to obtain or develop groundwater availability models for major and minor aquifers and provide those models to such groups and districts.³⁰⁸ The TWDB also has authority to assist regional water planning groups in paying for the cost of developing or revising regional water plans out of the TWDB's research and planning fund.³⁰⁹

(c) Local Water Planning

Section 16.054 of the Texas Water Code expressly recognizes groundwater districts as the State's preferred method of managing groundwater resources, declares the policy of the State that water resource management, water conservation, and drought planning occur on an ongoing basis, and requires the TWDB, the TCEQ, and the TPWD to make available, where appropriate, technical and financial assistance for local planning.³¹⁰ As discussed above in § 14.2(e)(1)(C), the Water Code mandates local groundwater management area joint planning among GCDs, resulting in desired future conditions for each aquifer. A representative of each groundwater planning group participates directly in the relevant regional water planning.³¹¹

In addition to the required submission of GCDs' management plans, other local plans may also be submitted to the appropriate regional planning group, which must consider such plans when preparing the regional water plan.³¹² The following types of entities may submit a local plan, as set out under the statute: holders of existing surface water rights in the amount of 1,000 acre-feet per year or more; retail and wholesale public water suppliers and irrigation districts; groundwater districts; and special districts.³¹³

(d) Drought Response Planning

The chief of the Texas Division of Emergency Management is responsible for coordinating the State's drought response plan, a component of the state water plan.³¹⁴ The Drought Preparedness Council, principally composed of various state agency representatives, is

³⁰⁶ *Texas Water Dev. Bd. v. Ward Timber*, No. 11-12-00030-CV, 2013 WL 2285246, at *19 (Tex. App. – Eastland, May 23, 2013, no pet. h.).

³⁰⁷ TEX. WATER CODE §§ 16.053(h)(10)-(11).

³⁰⁸ *Id.* § 16.012(l). For a more detailed discussion of these models, see Robert E. Mace & Cynthia K. Ridgeway, *Forecasting Underground Rain: Groundwater Availability Modeling* (ch. 19), in *ESSENTIALS OF TEXAS WATER RESOURCES* (Mary K. Sahs ed., 2nd ed. 2012).

³⁰⁹ TEX. WATER CODE §§ 15.4061, 16.056.

³¹⁰ *Id.* § 16.054(a).

³¹¹ *Id.* § 16.053(c).

³¹² *Id.* § 16.054(d).

³¹³ *Id.* § 16.054(b).

³¹⁴ *Id.* § 16.055(a).

responsible for assessment and public reporting of drought monitoring and water supply conditions; advising the governor on significant drought conditions; recommending specific provisions for a defined state response to drought-related disasters for inclusion in the state emergency management plan and the state water plan; advising the regional water planning groups on drought-related issues in the regional water plans; ensuring effective coordination among state, local, and federal agencies in drought response planning; and reporting biennially to the Legislature on significant drought conditions in the state.³¹⁵ In performing its duties, the Council must consider certain factors when determining whether a drought exists, such as: meteorological, hydrological, and water supply conditions and forecasts; water use and demand forecasts; and potential impacts of the water shortage on the public health, safety, and welfare, economic development, and agricultural and natural resources.³¹⁶ In addition to the drought response plan, the Council must also develop, implement, and update a comprehensive state drought preparedness plan, separate from the state water plan, for mitigating the effects of drought.³¹⁷

§ 14.11 Research and Technical Assistance

The TWDB collects and maintains a wealth of water and natural resource data, and cooperates with other agencies who share their data, much of which is available online. Among other examples, the TWDB makes available data on bays and estuaries, drought, groundwater, surface water, population and water demand, water availability, and regional water planning. Using geographic information systems data, the TWDB has created maps of the state's natural resources, including major and minor aquifers, river basins and rivers, and existing and proposed reservoirs. The TWDB also has a complete set of quadrangle maps and aerial photographs of the state.

The TWDB also provides various types of technical assistance. It can assist communities with identifying their water-related needs and can provide continued consultation throughout the planning, design, and construction phases of a water-related project. Among other examples of technical assistance available, certified operators from the TWDB are available to provide on-site wastewater treatment assistance to small communities, and TWDB has made available training on rainwater harvesting for members of permitting staffs of cities and counties.³¹⁸ The TWDB has also developed a non-profit, self-supporting reservoir volumetric survey program that employs the latest technologies to provide quick, accurate, and affordable surveys to determine current reservoir storage capacities. Many reservoirs in Texas have not been resurveyed in the decades since their construction, and the updated information generated by this TWDB program is used by engineers and planners, as well as state and federal agencies.

The TWDB also appoints the Water Conservation Advisory Council, which monitors trends, new technologies, and existing conservation strategies, and is developing and

³¹⁵ *Id.* § 16.055(e).

³¹⁶ *Id.* § 16.055(f).

³¹⁷ *Id.* § 16.0551.

³¹⁸ TEX. LOC. GOV'T CODE § 580.004(b).

implementing a state water management resource library and a public awareness program on water conservation.³¹⁹ For more detailed information regarding the activities of, and best management practices recommended by, the Water Conservation Advisory Council, see its website at <http://www.savetexaswater.org/>.

§ 14.12 Financial Assistance

The TWDB administers various financial assistance funds for financing water-related projects. Generally, an applicant for loans or grants from these funds must be a “political subdivision” of the State, which is broadly defined to include not only cities and counties, but also water authorities and water districts, interstate compact commissions to which Texas is a party, and non-profit water supply corporations.³²⁰ This section provides a general overview of the TWDB’s major loan and grant programs for water-related projects.³²¹

Clearly, finance issues will continue to be a significant part of the water development challenges facing state and local government, and other stakeholders, in Texas. Many Texas officials and organizations are focusing increasingly on finance issues for water supply and infrastructure projects.³²²

(a) Texas Water Development Fund

The Texas Water Development Fund³²³ has several distinct sub-accounts, including the following:

(1) Water Supply Account

The Water Supply Account³²⁴ is available to generally finance water supply projects that are consistent with the state water plan, including acquisitions, improvements or construction of wholesale and retail distribution projects, pumping facilities, transmission lines, storage reservoirs and tanks, and water treatment plants. It also provides financing for the purchase of water rights.

³¹⁹ See TEX. WATER CODE §§ 10.001-10.011; see also *id.* § 16.401.

³²⁰ TEX. WATER CODE § 15.001(5), § 17.001(6). Non-profit water supply corporations are eligible to receive assistance from all funds administered by the TWDB except the State Revolving Fund, discussed in § 14.12(d).

³²¹ For additional discussion of these TWDB programs, as well as other financing programs and the roles of state and local governmental entities, see Jeffrey A. Leuschel, *Financing Water Projects* (ch. 30), in *ESSENTIALS OF TEXAS WATER RESOURCES* (Mary K. Sahs ed., 2nd ed. 2012).

³²² See, e.g., Texas Comptroller of Public Accounts, *Liquid Assets: The State of Texas’ Water Resources*, Pub. #96-1360 (Jan. 2009).

³²³ TEX. WATER CODE § 17.072.

³²⁴ *Id.* §§ 17.072(b)-(c).

(2) Water Quality Enhancement Account

The Water Quality Enhancement Account³²⁵ is available to finance acquisitions, improvements or construction of wastewater facilities such as sewer treatment plants and collection systems, and new municipal solid waste management projects. Non-point source pollution abatement may also be financed.

(3) Flood Control Account

The Flood Control Account³²⁶ is available to finance structural and nonstructural flood protection improvements, such as the enlargement of stream channels, the acquisition of floodplains for public use as open space, the removal of buildings and relocation of residents within floodplains, the development of floodplain management plans, public beach re-nourishment, flood warning systems, control of coastal erosion, the construction of storm water retention ponds, the modification or reconstruction of bridges, and the development of flood management plans.

(b) Texas Water Development “Fund II”

The TWDB uses Fund II to provide low-interest loans for the planning, design and construction of water supply projects, flood control projects, wastewater treatment facilities, and municipal solid waste management facilities. Multiple eligible components (*e.g.*, water supply and wastewater) may be funded in one loan, and the repayment period for these loans generally ranges from twenty to twenty-five years. Fund II has established several distinct accounts, including those to fund the following programs:

(1) State Participation Program

With funds from the State Participation Account,³²⁷ the TWDB can assume a temporary ownership interest in regional water supply and wastewater treatment projects, including reservoirs, when that participation will enable the optimization or “right-sizing” of the project to meet future needs. The TWDB can fund up to eighty percent of a new water supply project, and up to fifty percent of other projects. The cost of the financing is repaid to the TWDB based on purchase payments, on a deferred timetable.³²⁸

(2) Economically Distressed Areas Program

With funds from the Economically Distressed Areas Account,³²⁹ the TWDB administers grant and loan programs designed to facilitate development of adequate water supply and sewer

³²⁵ *Id.* §§ 17.072(d)-(e).

³²⁶ *Id.* §§ 17.072(h)-(i).

³²⁷ *Id.* §§ 17.072(f)-(g).

³²⁸ 31 TEX. ADMIN. CODE §§ 363.1001-.1017. Upon the project’s completion, the State’s portion of the project is intended to be purchased by the local sponsor or another political subdivision.

³²⁹ TEX. WATER CODE §§ 17.072(j)-(k).

services in economically distressed areas.³³⁰ Economically distressed areas are those in which: (1) water supply or sewer services cannot adequately meet the minimal needs of residential users; (2) existing financial resources are inadequate to provide the services that are required; and (3) an established residential subdivision was located on June 1, 2005.³³¹ The program will fund construction, acquisition or improvements to water supply and wastewater collection and treatment works, including the related engineering work, but does not fund ongoing operation and maintenance of the systems. The applicant is responsible for obtaining any necessary permits, licenses, or water rights.³³²

(c) Water Assistance Fund

The Water Assistance Fund,³³³ funded by legislative appropriations, provides financial assistance to political subdivisions on a grant or loan basis under various distinct funds, including the following:

(1) Water Loan Assistance Fund

The Water Loan Assistance Fund is available to fund loans to political subdivisions, federal agencies, or both (acting jointly) for projects involving water supply, water conservation, water treatment, wastewater treatment, flood control, brush control, subsidence control, weather modification, regionalization, desalination, and projects providing regional water quality enhancement services.³³⁴

(2) Storage Acquisition Fund

The Storage Acquisition Fund, like its counterpart in the Water Development Fund, may be used to participate in the development of water storage projects, including the design, acquisition, lease, construction, reconstruction, development, or enlargement of any existing or proposed water storage project.³³⁵

(3) Research and Planning Fund

The Research and Planning Fund is available for grants for research and feasibility studies, within three areas: (a) matching grants to political subdivisions for regional water and wastewater planning, including flood protection; (b) water research grants to individuals or political subdivisions for research that enhances water planning, management, conservation, development, or protection; and (c) matching grants for flood protection planning, available to political subdivisions with flood control authority that are planning flood protection on a

³³⁰ *Id.* §§ 17.921-.936; 31 T.A.C. §§ 363.501-.510.

³³¹ TEX. WATER CODE § 17.921(1).

³³² *Id.* § 17.928.

³³³ *Id.* §§ 15.011-.012.

³³⁴ *Id.* §§ 15.101-.116.

³³⁵ TEX. WATER CODE §§ 15.301-.331; 31 T.A.C. §§ 363.601-.612.

watershed basis, as opposed to local drainage improvement projects.³³⁶ The Research and Planning Fund may also be used for various forms of compensation and contracts supporting the technical work to develop environmental flows standards.³³⁷

(4) Water and Wastewater Loans for Rural Communities

The Disadvantaged Rural Community Water and Wastewater Financial Assistance Fund, developed from a pilot program of S.B. 2, is available for grants or loans for the construction, acquisition, or improvement of water and wastewater projects to provide service to disadvantaged rural communities.³³⁸ The statute defines “disadvantaged rural community” as a rural community with a median household income not greater than 75% of the median state household income, and defines “rural community” as a municipality, county, portion of a political subdivision with service population outside the boundaries or extraterritorial jurisdiction of a municipality, or a predominately residential area located outside a municipality’s corporate boundaries – with a population of less than 5,000.³³⁹

(5) Colonia Self-Help Account

Also as part of S.B. 2, the Legislature created the Colonia Self-Help Program. The TWDB may use this account to reimburse certain eligible nonprofit organizations for expenses incurred in a self-help project that results in provision of adequate water or wastewater services to a “colonia.” For purposes of this program, a colonia is defined as a geographic area that is an economically distressed area located in a county within 50 miles of an international border, and consists of a minimum number of dwellings for which the TWDB determines that a self-help project will be cost-effective and which comprise an area that may be described as a community or neighborhood.³⁴⁰ Reimbursable expenses include those for construction, facility planning, platting, surveying, engineering, and equipment.³⁴¹

(6) Rural Water Assistance Fund

The Rural Water Assistance Fund was created by S.B. 2 to address the need for water financing mechanisms tailored to the character and needs of smaller rural water systems. This fund may be used to provide low-interest loans to small rural utilities for water or water-related capital construction projects and for water quality enhancement projects, including purchase of well fields, purchase or lease of rights to produce groundwater, acquisition of water rights, onsite or wetland wastewater treatment facilities, desalination projects, and interim financing of construction projects. The fund may also be used to enable a rural political subdivision to obtain water or wastewater service supplied by a larger political subdivision, or to finance the

³³⁶ TEX. WATER CODE §§ 15.401-.407; 31 T.A.C. ch. 355.

³³⁷ TEX. WATER CODE § 15.4063.

³³⁸ TEX. WATER CODE §§ 15.901-.920; 31 T.A.C. §§ 363.901-.955.

³³⁹ TEX. WATER CODE § 15.901(3)-(4).

³⁴⁰ *Id.* § 15.951(2).

³⁴¹ TEX. WATER CODE §§ 15.951-.959; 31 T.A.C. §§ 363.521-.524.

consolidation or regionalization of neighboring political subdivisions, or both.³⁴² The fund may be used for zero interest loans, negative interest loans, loan forgiveness, or grants.³⁴³

(d) State Revolving Fund

The Legislature has revised the State Revolving Fund, which was originally developed to assist and implement the Federal Construction Grants program for wastewater treatment facilities. The Clean Water State Revolving Fund (CWSRF), financed with a combination of federal capitalization grants and state funds, offers loans to political subdivisions (not including nonprofit water supply corporations) for planning, design, and construction of projects for sewage treatment, recycling and reuse, collection systems, storm water pollution control and non-point source pollution control. These loans are available at interest rates lower than commercial markets can offer.³⁴⁴ Under this statute, the TWDB has also established the Drinking Water State Revolving Fund (DWSRF), which provides below-market loans to finance projects for public drinking water systems that facilitate compliance with drinking water regulations or otherwise significantly further the health protection objectives of the federal Safe Drinking Water Act. DWSRF loans are available to political subdivisions (including nonprofit water supply corporations), as well as privately owned water systems and state agencies.³⁴⁵ Numerous Texas water and wastewater infrastructure projects have been funded by the American Recovery and Reinvestment Act (federal stimulus), in the form of grants and loans to cities, water districts, and water supply companies, through the CWSRF and the DWSRF.³⁴⁶

(e) Agricultural Water Conservation Fund

The Legislature has consolidated three existing financial assistance programs related to agricultural water conservation — the agricultural soil and water conservation program, grants for equipment purchases, and the pilot program for low-interest loans for agricultural water conservation equipment — into one program, with assets transferred to the Agricultural Water Conservation Fund. With this fund, the TWDB provides agricultural water conservation loans to political subdivisions for their use either for improvements on their own facilities or as loans to individuals. The TWDB may also provide grants to state agencies and political subdivisions for agricultural water conservation programs.³⁴⁷ The program broadly defines “conservation programs” and “conservation projects” eligible for loans or grants.³⁴⁸

³⁴² TEX. WATER CODE §§ 15.991-.995; 31 T.A.C. ch. 384.

³⁴³ TEX. WATER CODE § 15.994.

³⁴⁴ *Id.* §§ 15.601-.618; *see also* § 17.0821 (authorizing transfers from the TWDF water quality enhancement account); 31 T.A.C. ch. 375.

³⁴⁵ 31 T.A.C. ch. 371.

³⁴⁶ *See* TWDB’s website on ARRA, at <http://www.twdb.texas.gov/stimulus/index.htm>.

³⁴⁷ TEX. WATER CODE §§ 17.871-.912; 31 T.A.C. ch. 367.

³⁴⁸ TEX. WATER CODE §§ 17.897-.898.

(f) Water Infrastructure Fund

The Legislature created the Water Infrastructure Fund through S.B. 2, to provide incentives — grants and low- or zero-interest loans — to facilitate the implementation of water projects recommended through the state and regional water planning process. The Water Infrastructure Fund targets funding gaps in existing assistance programs, including the special needs of rural and small community projects, the need for bridge funding for preconstruction activities, and incentives for regionalization of water projects.³⁴⁹

(g) Additional Funding for State Water Plan Priority Projects

The 83rd Legislature enacted a series of measures that together are designed to provide additional funding to implement priority projects recommended through the regional and state water planning process. Subject to voter approval of a constitutional amendment, the State Water Implementation Fund for Texas (SWIFT) and the State Water Implementation Revenue Fund for Texas (SWIRFT) would be created as special funds outside the general revenue fund.³⁵⁰ Under the provisions for SWIFT, the regional water planning groups would prioritize projects from their plans using uniform standards, and the TWDB would utilize a point system to prioritize projects identified in the state water plan.³⁵¹ The TWDB would apply at least 10% of available disbursements to support rural projects and agricultural water conservation, and at least 20% to support projects designed for water conservation or reuse.³⁵² Contingent upon enactment of H.B. 4 and voter approval of the constitutional amendment, the Legislature appropriated \$2 billion from the economic stabilization (Rainy Day) fund for SWIFT.³⁵³

§ 14.13 Water Banking

In 1993, the Legislature took initial steps to establish a voluntary water marketing system under the auspices of the TWDB. Adding subchapter K to Chapter 15 of the Texas Water Code, the Legislature charged the TWDB with adopting rules and managing the Texas Water Bank.³⁵⁴ Under this program, the owner of either surface or groundwater rights may “deposit” a water right in the bank, on a temporary or permanent basis. This deposit serves a dual function: (1) it protects that right against cancellation for a period of up to ten years following deposit and for another ten years following TCEQ approval of any water rights transfer; and (2) it serves as a registry of water rights that are available for sale and water users in need of additional supplies, encouraging the development of a free market system for water rights allocation.³⁵⁵

³⁴⁹ *Id.* §§ 15.971-.981; 31 T.A.C. ch. 382.

³⁵⁰ Act of May 22, 2013, 83rd Leg., R.S.. H.B. 4, § 2.02; Act of May 27, 2013, Tex. S.J.R. 1, 83rd Leg., R.S. (amendment to TEX. CONST. art. III, §§ 49-d-12, 49-d-13).

³⁵¹ TEX. WATER CODE §§ 15.436, 15.437.

³⁵² *Id.* § 15.434(b).

³⁵³ Act of May 27, 2013, 83rd Leg., R.S.. H.B. 1025, § 33.

³⁵⁴ TEX. WATER CODE §§ 15.701-.708; 31 T.A.C. ch. 359.

³⁵⁵ TEX. WATER CODE §§ 15.703, 15.704.

Within the water bank, the Legislature has established the Texas Water Trust to hold water rights dedicated to environmental needs, including instream flows, water quality, fish and wildlife habitat, or bay and estuary inflows. Water rights may be placed in trust for a contractual term or in perpetuity. The dedication of any water rights placed in trust must be reviewed and approved by the TCEQ, in consultation with the TWDB and the TPWD.³⁵⁶

To date, use of both the Texas Water Bank and the Texas Water Trust has been very limited. However, interest in the water trust is growing as a means to address environmental flow requirements, in connection with applications for new appropriations of water or amendment of existing water rights.

³⁵⁶ *Id.* § 15.7031.