

The New Landscape of Rainwater Harvesting and the Impact to Municipalities

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I. Introduction

The Water For Texas 2012 State Water Plan recently adopted by the Texas Water Development Board provides that water demand is projected to increase less than it would otherwise in part due to municipal conservation.¹ There are many components to municipal conservation, and one component that has made a resurgence in the last few years is rainwater harvesting. In fact, several of the Regional Water Planning Groups² across the state recommend funding and education on rainwater harvesting programs in their lists of regulatory, administrative, and legislative recommendations that were created during the regional water planning process.³

In an effort to promote rainwater harvesting as a conservation tool, the Texas Legislature passed laws during the 2011 legislative session that impact the way that municipalities can regulate and provide incentives for rainwater harvesting. These changes impacting municipalities include additional laws encouraging and providing authority for municipalities to offer financial incentives for the use of rainwater harvesting systems. The new laws also prohibit municipalities from placing an outright ban on rainwater harvesting systems through the building permit process, and

require municipalities to permit rainwater harvesting systems that connect to the municipality's public water supply system.

The purpose of the following discussion is to provide the municipal law practitioner with the information necessary to respond to changes made by the Texas Legislature and to implement a rainwater harvesting program that serves a dual purpose of complying with state law and benefitting the municipality and its residents.

II. Brief Background

A. Basics of Rainwater Harvesting

Rainwater harvesting is an ancient conservation technique used to capture and store rainwater for future use. These future uses include landscape irrigation, drinking and domestic use, aquifer recharge, and reduction in stormwater runoff and non-point source pollution. There are both land based rainwater harvesting systems that collect runoff from land surfaces, such as stock ponds, and roof based rainwater harvesting systems that collect runoff from roof surfaces. These roof based systems involve the use of rain barrels and cisterns.

Some of the benefits of rainwater harvesting include the following:

- Rainwater is pH neutral, is sodium free, and has zero hardness, and therefore is preferred for landscape irrigation and indoor uses;

¹ See Texas Water Development Board, Water For Texas 2012 State Water Plan, Page 128, available at <http://www.twdb.state.tx.us/wrpi/swp/swp.asp>.

² A map of the Regional Water Planning Groups is attached to this paper as "Appendix A".

³ Texas Water Development Board, Water For Texas 2012 State Water Plan, Appendix D.

- helps utilities lower peak demand and can assist in delaying significant capacity and infrastructure investments;
- reduces stormwater runoff, or when precipitation flows over the ground and collects wastes, pollutants, chemicals, and debris; and
- reduces non-point source pollution, or water pollution that results from land runoff, precipitation, or drainage, for example.⁴

B. Development of Rainwater Harvesting Laws in Texas

Texas law has recognized rainwater harvesting as a valuable conservation tool for nearly two decades. In 1993, Texas voters passed a constitutional amendment to Article VIII of the Texas Constitution that provided a property tax exemption for commercial and industrial facilities that utilize rainwater harvesting and pollution control measures.⁵ The purpose behind this amendment was to ensure that the expenses associated with complying with environmental laws and regulations did not raise a facility's property taxes. The

⁴ Jorge Arroyo and Linda McCall, Presentation for the Colorado River Watch Network Stewardship Workshop, June 2010, available at: <http://www.twdb.state.tx.us/innovativewater/rainwater/docs.asp#title-03>.

⁵ Sanjeev Kalaswad, Ph.D, P.G and Jorge Arroyo, P.E., Rainwater Harvesting in the State of Texas, in Water Quality Magazine, Volume 13, Number 10 (2008).

exemption was codified for private landowners in Texas Tax Code § 26.045 and for political subdivisions in Texas Tax Code § 11.31.

In 2001, the Texas Legislature passed Senate Bill 2, which amended Texas Tax Code § 11.32 to allow taxing units the option to exempt from taxation all or part of the assessed value of the property where water conservation modifications have been made.⁶ The taxing unit is required to pass an ordinance that lists the eligible water conservation initiatives, which may include rainwater harvesting systems.⁷ Senate Bill 2 also amended Texas Tax Code § 151.355 to exempt rainwater harvesting equipment and supplies from the state sales tax.⁸

Another bill passed in 2003 that prevents homeowners' associations from banning outdoor water conservation measures like rainwater harvesting through restrictive covenants.⁹ In addition, House Bill 4, passed in 2007, introduced several new laws related to rainwater harvesting, including:

- requiring new state buildings with a roof size of at least 10,000 square feet or more to incorporate rainwater harvesting systems into the design of the building;
- encouraging Texas colleges and universities to develop a

⁶ TEX. TAX CODE ANN. § 11.32 (West 2011).

⁷ *Id.* § 11.32.

⁸ *Id.* § 151.355.

⁹ Sanjeev Kalaswad and Jorge Arroyo, Rainwater Harvesting in the State of Texas.

- curriculum and provide courses on rainwater harvesting;
- exempting those homes that use rainwater harvesting as their sole source of water supply from water quality regulations that apply to public water systems; and
- requiring facilities that use both public water supply and rainwater harvesting to have adequate cross connection safeguards in place and to mandate that rainwater be used only for nonpotable (non-drinking) uses.

In 2009, the Texas Legislature passed legislation that allows municipalities to undertake public improvement projects in designated public improvement districts, and provides that the acquisition, construction, or improvement of a rainwater harvesting system is one of the eligible types of projects.¹⁰

III. Recent Changes to Rainwater Harvesting Laws and the Impact to Municipalities

Last year, the Texas Legislature passed multiple bills during the 2011 legislative session that amended the laws on rainwater harvesting to further encourage, promote, and develop statewide rainwater harvesting policy. House Bill 3391, passed during the 2011 regular session, is the main bill that includes numerous provisions related to

rainwater harvesting. The provisions of House Bill 3391 (2011) became effective on September 1, 2011.¹¹ House Bill 3391 (2011) is similar to House Bill 4 (2007) in that both involved comprehensive changes to the laws related to rainwater harvesting. One of the main differences between the two bills, however, is that House Bill 3391 (2011) includes several provisions directly affecting municipalities.

A. Municipal Regulation of Rainwater Harvesting

Perhaps the most significant changes with regard to municipalities are the amendments to Texas Health and Safety Code § 341.042 that were made by House Bill 3391(2011). First, the bill removed the prohibition that rainwater harvesting can only be used for indoor potable purposes, meaning that rainwater harvesting can now be used for any indoor or outdoor use.¹² The biggest impact to municipalities is that the new law requires a person who intends to connect a rainwater harvesting system to a public water supply for potable purposes to receive consent from the municipality or the owner or operator of the public water system before the connection can be made.¹³ Another change made by House Bill 3391 (2011) prohibits a municipality from denying a building permit based solely on the use of rainwater harvesting equipment in

¹⁰ *Id.*

¹¹ Act of May 23, 2011, 82nd Leg., R.S., ch. 1311, § 10, 2011 Tex. Gen. Laws 3742.

¹² Act of May 23, 2011, 82nd Leg., R.S., ch. 1311, § 3, 2011 Tex. Gen. Laws 3737 (codified at TEX. HEALTH & SAFETY CODE ANN. § 341.042 (West 2011)).

¹³ *Id.*

the design and construction of the building.¹⁴ The municipality can require, however, that the rainwater harvesting system comply with the minimum state standards that exist for the design, installation, and construction of rainwater harvesting systems.¹⁵

1. Practical Effect of New Requirements Impacting Municipalities

The practical effect of these new requirements varies depending on whether the municipality owns the public water system that provides water service to its residents or whether the public water system is owned by another entity, such as an investor-owned utility (“IOU”), water supply corporation (“WSC”), or municipal utility district, for example. If the municipality owns its own water system, then it will always be the entity that provides consent for a person to connect a rainwater harvesting system to the public water supply. However, if the municipality does not own the public water system, then the new law defers to the municipality and the water service provider to determine which entity will provide consent.

The entity that provides consent will likely need to develop or expand its permitting program to include the permitting of rainwater harvesting systems that connect to the public water system. The law does not expressly require a separate permit be

given for rainwater harvesting systems, meaning that each municipality can choose whether to incorporate the review and approval of rainwater harvesting systems that tie into the public water supply into their building permit approval process or to have a separate permit that covers only the rainwater harvesting aspect of the building. Overall, a municipality’s rainwater harvesting program will need to ensure that all permitting criteria related to rainwater harvesting are based on the standards adopted by the Texas Commission on Environmental Quality (“TCEQ”) to avoid any claims that the municipality is denying building permits simply because a rainwater harvesting system is being used.

The new law also makes clear that a municipality or the owner/operator of a public water supply system is not liable for any adverse health effects caused by the consumption of water collected by a rainwater harvesting system that is connected to the public water supply and used for potable purposes, as long as the municipality or the public water system is in compliance with state drinking water standards.¹⁶

2. Required Training for Municipal Permitting Staff

House Bill 3391(2011) also requires the Texas Water Development Board to provide rainwater harvesting training to municipal permitting staff members.¹⁷ If a

¹⁴ Act of May 23, 2011, 82nd Leg., R.S., ch. 1311, § 4, 2011 Tex. Gen. Laws 3738 (codified at TEX. LOC. GOV’T CODE ANN. § 580.004(c) (West 2011)).

¹⁵ *Id.*

¹⁶ *Id.* § 341.042(b-3).

¹⁷ *Id.* (codified at TEX. LOC. GOV’T CODE § 580.004(b)).

municipality is located in a Priority Groundwater Management Area (“PGMA”) designated by the TCEQ or if the municipality has a population of more than 100,000, the new law requires all staff whose work relates directly to permits involving rainwater harvesting to complete the training offered by the Texas Water Development Board at least once every five years.¹⁸ Municipalities located within the following counties are located within a PGMA and must therefore adhere to the training requirements for rainwater harvesting: Bandera, Blanco, Bosque, Collin, Cooke, Coryell, Dallas, Denton, Ellis, Fannin, Gillespie, Grayson, Hill, Hood, Johnson, Kendall, Kerr, McLennan, Montague, Parker, Somervell, Swisher, Tarrant, and Wise Counties.¹⁹ The following counties are partially located in a PGMA, meaning that municipalities located in these counties should determine whether they are located in a PGMA and required to adhere to the mandatory staff training requirements: Briscoe, Comal, Dallam, El Paso, Hale, Hays, Midland, Reagan, Travis, and Upton Counties.²⁰

Those municipalities not located in a PGMA or that have a population of 100,000 or less with permitting staff whose work relates directly to permits involving

rainwater harvesting are encouraged, but are not required, to receive the training.²¹

3. Rulemaking by the Texas Commission on Environmental Quality

The TCEQ is required to implement the new laws on rainwater harvesting by developing rules that regulate the installation and maintenance of rainwater harvesting systems to be used for indoor potable purposes.²² To date, the TCEQ has held stakeholder meetings to receive input on the new rules, and is currently in the process of developing these rules. The TCEQ currently plans to hold a formal public rulemaking hearing and comment period in August 2012, with final adoption of the rules anticipated to be in January 2013. Once the new rules are adopted by the TCEQ, they will need to be incorporated into a municipality’s review and approval process for rainwater harvesting systems.

B. Financial Incentives Offered by Municipalities

Texas has historically led the nation in financial incentives for rainwater harvesting systems and continued this tradition by passing laws during the 2011 legislative session that provide additional financial incentives for rainwater harvesting. The changes made by House Bill 3391 to Texas Government Code § 580.004 “encourage”

¹⁸ Act of May 23, 2011, 82nd Leg., R.S., ch. 1311, § 4, 2011 Tex. Gen. Laws 3738) (codified at TEX. LOC. GOV’T CODE § 580.004(b)).

¹⁹ See Texas Commission on Environmental Quality, Priority Groundwater Management Areas (PGMA) Map, April 2011, available at: http://www.tceq.texas.gov/permitting/water_supply/groundwater/pgma.html. (Attached to this paper as “Appendix B”).

²⁰ *Id.*

²¹ Act of May 23, 2011, 82nd Leg., R.S., ch. 1311, § 4, 2011 Tex. Gen. Laws 3738) (codified at TEX. LOC. GOV’T CODE § 580.004(b)).

²² *Id.* (codified at TEX. LOC. GOV’T CODE § 341.042(b-1)).

each municipality to promote rainwater harvesting at residential, commercial, and industrial facilities through incentives such as providing discounts on rain barrels or rebates for water storage facilities.²³

Examples of municipal utilities that provide financial incentives for rainwater harvesting include the City of Austin and San Antonio Water System (“SAWS”). The City of Austin’s program involves the city selling 75-gallon rain barrels to its customers below cost and providing a \$30 rebate for those customers that buy their own rain barrels.²⁴ The City of Austin also offers a rebate of up to \$500 for customers that install approved rainwater harvesting systems and offers significant monetary rebates for commercial and industrial sites that install rainwater harvesting systems.²⁵ SAWS’ Large-Scale Retrofit Rebate Program offers commercial, industrial, and institutional customers the opportunity to receive up to a 50 percent rebate on the cost of the rainwater harvesting equipment purchased and installed. The rebates are calculated by multiplying the number of acre-feet of water conserved by \$200/acre-foot and the equipment must remain in service for a minimum of 10 years.²⁶

The Texas Water Development Board provides detailed information for a municipal utility to use in determining

whether to offer financial incentives for rainwater harvesting. The factors to consider include evaluating the dollars per acre-foot saved when a rainwater harvesting project is implemented, the expected number of participants in the program, and the cost of building or acquiring a new water supply project.²⁷

IV. Other Rainwater Harvesting Laws that Impact Non-Municipal Entities

There are a number of other changes made by the Texas Legislature during the 2011 regular session that do not directly impact municipalities, but do impact the residents, businesses, and other governmental entities within the municipality’s boundaries. In particular, new government buildings that have a roof size of at least 50,000 square feet and that will be located in an area of the state that receives at least 20 inches of average annual rainfall per year are required to incorporate rainwater harvesting systems for water supply for both indoor and outdoor use.²⁸ School districts are also encouraged to utilize rainwater harvesting systems at district facilities.²⁹ In addition, the laws that require municipal utilities to incorporate the review and approval of rainwater harvesting into its permitting process for buildings and that require the permitting staff members of municipalities that are in a PGMA or that

²³ *Id.* (codified at TEX. LOC. GOV’T CODE § 580.004(a)).

²⁴ Texas Water Development Board, *The Texas Manual on Rainwater Harvesting*, 3rd Edition (2005).

²⁵ *Id.*

²⁶ *Id.*; *See also* San Antonio Water Systems Large-Scale Retrofit Rebate Program, available at: <http://www.saws.org/conservation/commercial/retrofit.shtml>.

²⁷ Texas Water Development Board, *The Texas Manual on Rainwater Harvesting*.

²⁸ TEX. GOV’T CODE ANN. § 447.004(c-1)(2) (West 2011).

²⁹ TEX. LOC. GOV’T CODE § 580.004(d).

have a population of more than 100,000 also apply to counties.³⁰

Property Owners' Associations ("POAs") are also limited in how they can regulate rainwater harvesting.³¹ POAs cannot outright prohibit the use of rainwater harvesting systems, but POAs can regulate the size, type, and appearance of rainwater harvesting systems that are visible from a street, another lot, or from a common area.³²

Other changes include the encouragement of financial institutions to consider loaning money for developments where rainwater harvesting will be the sole source of water supply and requiring sellers' disclosure notices to include information about whether the property being sold has a rainwater harvesting system that is connected to a public water supply for indoor potable use.³³

Lastly, the Texas Legislature also incorporated rainwater harvesting into the public policy statement at the beginning of the Texas Water Code by providing that:

"It is the public policy of the state to provide for the conservation and development of the state's natural resources, including...

(8) the promotion of rainwater harvesting for potable and nonpotable purposes at public and private

facilities in this state, including residential, commercial, and industrial buildings."³⁴

V. Conclusion

While Texas law already provided some regulation of rainwater harvesting prior to the 2011 legislative session, the new laws passed in 2011 further water conservation efforts and provide a wider range of uses, incentives, and regulation of this popular conservation tool. Several of the laws regulating rainwater harvesting directly impact municipalities, and require some municipalities to expand or implement their permitting systems to include review and approval of rainwater harvesting systems.

The TCEQ is currently scheduled to publish its proposed rules implementing the statutes passed in 2011 that involve rainwater harvesting in August 2012, and has final adoption currently scheduled for January 2013. Based on all the changes to the laws affecting municipal regulation of rainwater harvesting, it is important to determine whether some or all of the new requirements apply and then move forward with implementing or modifying programs related to rainwater harvesting as necessary to comply with the new laws and TCEQ regulations.

³⁰ Act of May 23, 2011, 82nd Leg., R.S., ch. 1311, § 4, 2011 Tex. Gen. Laws 3738) (codified at TEX. LOC. GOV'T CODE § 580.004(b)).

³¹ TEX. PROP. CODE ANN. § 202.007 (West 2011).

³² *Id.*

³³ TEX. FIN. CODE ANN. § 59.012 (West 2011) and TEX. PROP. CODE § 5.008(b).

³⁴ TEX. WATER CODE ANN. § 1.003 (West 2011).