




## MEMORANDUM

To: Mayor and Council

From: Greg Meszaros, Director, Austin Water 

Date: October 1, 2014

Subject: State Auxiliary Water Use Requirements/Regulatory Barriers to Reclaimed Water Use – Response to Resolutions 20140807-094 and 20140807-095

---

This memo was prepared in response to Council Resolutions 20140807-094 and 20140807-095 (CIURs 1382 and 1395).

### **Proposed legislative amendments regarding state auxiliary water use requirements (Resolution 20140807-094)**

Resolution 20140807-094 directs the City Manager to

- Include in the state legislative agenda support for reduced regulatory barriers to auxiliary water use that are consistent with public health requirements and
- Report on proposed legislative amendments.

In this memo, staff identifies sections of state regulation that are or could potentially be barriers to auxiliary water use and include general recommendations to address these barriers. To ensure that no unintended consequences arise, staff will develop more details after discussion and collaboration with other stakeholders. Also, some of these proposals might not need legislative action but could be adopted by the Texas Commission on Environmental Quality without direction from the Texas State Legislature. Regardless, the City's draft legislative agenda that will be presented to the Council for approval later this year has been amended as directed.

To develop this memo, Austin Water requested feedback from the following City departments: Watershed Protection, Planning and Development Review, and Health and Human Services. We will continue to work with them and other stakeholders to advance the expanded use of auxiliary water as a meaningful water conservation measure to beneficially reuse and maximize our water resources in ways that are consistent with public health requirements and environmental protection.

## Background

Both the State of Texas and all local public water supply systems are charged with safeguarding public drinking water supplies in compliance with the U.S. Safe Drinking Water Act. At the state level, TCEQ is the agency entrusted with that responsibility and the agency enforces any regulations necessary to administer this responsibility through rules adopted by the agency's commissioners. Over the last decade there have been some significant advances in technology related to auxiliary water use and significant cultural shifts in terms of water conservation, but most of TCEQ's rules pertaining to graywater and air conditioning condensate have not been updated for over 10 years.

### Domestic Use of Graywater (from bathroom sinks, tubs, showers, clothes washers and floor drains)

State regulations do not allow gray water to be used domestically for toilet flushing; however, there are new technologies that include chlorination and filtration to protect public health and reduce unsanitary conditions in toilets. Some other western states such as Oregon and California allow, for example, household bathroom sinks to be connected directly to toilets so that the sink water can be used for toilet flushing. Staff would encourage the state to consider allowing the domestic use of gray water for toilet flushing as long as health and safety standards are met.

In addition, TCEQ rules require that all residential graywater be diverted to underground tanks and that these tanks meet certain material specification requirements. These rules do not allow for alternatives that could also be effective and more affordable, which staff will encourage the state to consider.

Lastly, there is a requirement for redundant backwater valves or backwater preventers to prevent sewage backups though a single valve or single preventer could provide the same level of protection and staff will encourage the state to consider this.

### Commercial Use of Air Conditioning Condensate

TCEQ rules include the commercial use of air conditioning condensate in the uses that are subject to "Special Requirements for Use of Industrial Reclaimed Water." This requires commercial entities that want to use air conditioning condensate for toilet flushing to get formal approval from TCEQ and perform weekly water quality testing. This could be an impediment to commercial entities wishing to use air conditioning condensate for toilet flushing but further research is needed.

## Rainwater Harvesting Systems

In the resolution that directed this report, Council noted that there may be a state requirement related to "[reduced pressure zone backflow prevention devices (RPZs)] on rainwater systems not connected to the water system" that may be inhibiting the use of rainwater. Staff has been analyzing this issue and concluded that Austin Water's requirement for an RPZ on such systems, which was imposed as one way to ensure compliance with state regulations, is not the only way to comply with the state's regulations. The state does not have a requirement for an RPZ at the water meter for rainwater systems not connected to the water system as long as an adequate internal cross-connection control program is in effect. When Austin Water brings forward amendments to the City's regulations later this year to facilitate the use of auxiliary water systems, Austin Water staff will propose that the current requirement for an RPZ be maintained on rainwater systems of over 500 gallons in size if those systems have a pump, in order to guard against backflows from systems of this size. For rainwater systems of 500 gallons or less, staff will propose eliminating the current requirement for an RPZ even if there is a pump.

## Next Steps

Austin Water will work to develop more specific legislative language and determine what potential changes are within the administrative powers of TCEQ. Austin Water will also continue working with the City Government Relations Office on legislative strategy.

## **Recommendations to Reduce Regulatory Barriers to Reclaimed Water Use (Resolution 20140807-095)**

Resolution Number 20140807-095 directs the City Manager to make recommendations on reducing regulatory barriers to reclaimed water use that are consistent with public health requirements, including but not limited to the purple pipe requirement, double-check valves where chemicals are not added, and irrigating with reclaimed water in the 100-year floodplain and the critical water quality protection zone.

Austin Water staff has been working to develop recommendations to facilitate the use of reclaimed water (and other auxiliary waters such as rainwater and graywater) primarily through our 'Auxiliary Water Codes Coordination Project,' which involved assistance from an outside consultant. Staff has briefed five boards and commissions on the recommendations and staff is working to try and complete all actions necessary to present the ordinance to Council in late October. The boards and commissions are the Water and Wastewater Commission, Environmental Board, Resource Management Commission, Parks and Recreation Board, and the Mechanical, Plumbing and Solar Board (MPSB). Austin Water will return to MPSB for their recommendations before

coming to Council because they are the advisory board charged with making recommendations on the Plumbing Code.

Staff's recommendations to facilitate the use of reclaimed water are as follows.

- Eliminate the requirement to replace all existing (white) irrigation pipe and related components below grade to purple-colored pipe or components when switching from the potable water supply to the reclaimed water supply (or any auxiliary water supply) for irrigation. Instead, only require that signage be installed indicating the use of reclaimed water and that any piping and related appurtenances above grade (such as sprinkler heads and valve boxes) be purple.
- Limit the requirement for double-check valves on reclaimed water service lines by requiring double-check valves on reclaimed water service lines only if chemicals are injected into the system, such as in irrigation systems where fertilizer is added (which is referred to as fertigation) or in cooling towers. If chemicals are not injected staff recommends that no backflow prevention device be required on the reclaimed water service line. Properties utilizing reclaimed water are already required to have a reduced-pressure zone backflow prevention device (RPZ) at the meter to protect the potable water supply and a double-check valve on the fire line.
- Eliminate the requirement for additional and redundant RPZs on hose bibs within a property served by reclaimed water (or any other auxiliary water supply) if an RPZ is already installed at the meter for that property to protect the public water supply. (This requirement is in the City's Utility Criteria Manual (the UCM), which per City Code, contains rules used to administer or enforce the City Code, an ordinance, or another law for which City utilities are responsible. The UCM is developed and amended through an administrative rulemaking process and this change will be advanced through that process, which includes public notice and the opportunity for public input.)

In terms of irrigating with reclaimed water in the 100-year floodplain and the critical water quality protection zone, Austin Water and the Watershed Protection Department (WPD) have been discussing the issue and WPD will conduct targeted monitoring to assess if there are any adverse water quality impacts from existing reclaimed water irrigation customers. Since the issue is complex, staff would request that more time be provided to fully analyze the issue and determine the best course of action that not only protects the quality of Austin's water resources, but also contributes to protecting Austin's water supply.

Cc: Marc A. Ott, City Manager  
Robert D. Goode, Assistant City Manager  
Rey Arellano, Assistant City Manager  
Sue Edwards, Assistant City Manager  
Bert Lumbreras, Assistant City Manager  
John Hrcir, Government Relations Officer  
Clark Cornwell, City Attorney  
Victoria Li, Director, Watershed Protection Department  
Carlos Rivera, Director, Health and Human Services Department  
Greg Guernsey, Director, Planning and Development Review Department  
Sara Hensley, Director, Parks Department