



MEMORANDUM

To: Mayor and Council

From: Greg Meszaros, Director, Austin Water

Victoria Li, Director, Watershed Protection Department

Cc: Marc A. Ott, City Manager
Robert D. Goode, Assistant City Manager
Sue Edwards, Assistant City Manager
Greg Guernsey, Director, Planning & Development Review

Date: November 14, 2012

Subject: Permitting Process for Water Wells within Austin Water's Service Area

On August 23, 2012, Council approved a resolution directing city staff to:

1. Develop an ordinance by October 11 requiring registration of water wells drilled on any property served by Austin Water; and
2. Report back by November 1 about a possible permitting process that would:
 - a. Ensure compliance with state and local health and safety codes; and
 - b. Enable staff to collect data and analyze the potential impact of water well drilling in Austin Water's service area.

Staff has fulfilled the first part of that resolution by bringing an ordinance to Council on October 11, which was approved and requires: (1) registration of water well drillers and water well pump installers; (2) advance notice when a new water well is being drilled; and (3) registration after a water well is drilled for both new wells and existing wells. Currently, Austin Water is handling all of these duties.

This memo serves to fulfill the second part of Council's August directive concerning the permitting process. As a home rule city, Austin has the authority to establish a permit process for wells; however, after discussions between Austin Water, Planning and Development Review, Watershed Protection, and the Law Department, city staff does not recommend any changes to existing permitting processes at this time. The new processes established in the recently enacted

water wells registration ordinance will enhance existing permitting processes and should ensure that the Council's goals of ensuring compliance are met. Similarly, staff can begin the process of gathering available data to analyze the potential impacts of water well drilling. It should be noted, however, that a thorough analysis of potential impacts associated with groundwater withdrawals will be a significant challenge given the lack of data and information about the Northern Edwards and Trinity Aquifers, particularly that portion of those aquifers within Austin Water's service area where a significant number of water wells are being drilled.

Ensuring Compliance with Local and State Health and Safety Codes

Because the new notice and registration requirements will enhance existing city processes, staff will be able to ensure compliance with local plumbing and electrical codes and cross-connection regulations, and be able to examine water wells to review compliance with state codes.

The new registration requirements and associated procedures provide the City two additional notices of activity before and after well drilling is complete. This provides new opportunities to steer those drilling water wells into the existing permitting and regulatory process and check for compliance once a property owner notifies the City that a well is complete. Also, when a water well driller or pump installer registers with the City and a property owner provides advance notice of their intent to drill a water well or repair an existing one—both of which are required under the new ordinance—they will receive information about the city's requirements and the state's via the new registration forms and other means. Austin Water staff from the Special Services Division will also continue reviewing the state database to help ensure that those who have drilled wells have obtained the required trade permits (plumbing and electrical permits), installed the required backflow prevention equipment, and complied with other related rules.

As staff inspects wells during the review and field inspection processes, if it appears that state requirements are not being met, Austin Water will alert the customer and notify the Texas Department of Licensing and Regulation since that agency is charged with enforcing the state's water well drilling requirements. Austin Water has been working closely with state staff on this issue and will continue to do so in order to implement the new registration ordinance.

The ordinance approved by Council also dictates provisions for enforcement. These include, for example, fines and suspension or termination of water service when warranted.

Data Collection to Analyze Potential Impacts

Analyzing potential impacts of increased groundwater withdrawals within Austin Water's service area will be a significant challenge. The portions of the Northern Edwards and Trinity Aquifers that are of concern have not been extensively monitored or studied, unlike the Barton Springs Zone (BSZ) and portions of the Edwards Aquifer in the San Antonio region, because they have not been considered a significant source of water for municipal or industrial uses.

The potential impacts of greatest concern are long-term effects on water levels and associated effects on environmental receptors, specifically discharges to springs and streams, and potential impacts to associated aquatic habitat. Unlike the BSZ, from which natural outflows occur primarily at Barton Springs, the Northern Edwards and Trinity Aquifers are believed to have numerous environmental receptors that receive flows from units that may or may not be interconnected. Predicting the impacts of increased pumping on these environmental receptors requires an understanding of aquifer structure, specifically flow paths between areas of groundwater withdrawal and areas of spring and stream discharge. At present, the data and information needed to establish the relationship between areas of groundwater withdrawals and the environmental receptors of concern are not known.

Simultaneously, staff will need to estimate the amount of groundwater being withdrawn. While firm estimates will be very difficult to ascertain, staff can begin developing rough estimates of the level of pumping by analyzing new and past bills on properties with water wells to examine the difference in water usage and analyzing information the City will obtain on pump capacity during the registration process. Monitoring wells can also help determine the impact on groundwater levels.

In general, to address the question of potential impacts of increased groundwater withdrawals, Watershed Protection Department staff recommends a phased approach: (1) initial data collection and preliminary assessment of potential impacts; and (2) a subsequent groundwater modeling phase, if warranted.

In conclusion, staff does not recommend any changes to the permitting process at this time but over the next year staff will evaluate the new ordinance and the city's permitting processes and endeavor to understand any potential impacts on the aquifer to ensure that the Council's goals regarding water wells are met. To ensure compliance, staff estimates that at least a year is necessary to conduct a sound evaluation of the permitting process and will report back on whether additional changes are warranted at that time. Staff will also report back within a year on our progress in evaluating any potential impacts of water well drilling. Recommending changes at that time, however, may be premature given that a preliminary analysis will still be underway and further study will likely be necessary.

If you have any comments or would like any additional information, please contact Daryl Slusher of Austin Water at 972-0218 or Mike Personett of Watershed Protection at 974-2652.