



## GROUNDWATER TRANSFERS IN TEXAS

### GCD Regulation of Water Transfers

Chapter 36 of the Texas Water Code, along with certain recent and historic court cases, provide the structure for the ownership, governance, and regulation of groundwater resources in Texas. Section 36.002 provides that landowners own the groundwater beneath their property, subject to regulation by a groundwater conservation district (GCD or district), but are not guaranteed the right to produce any specific amount of groundwater. Chapter 36 also declares GCDs to be the State's preferred method for the management of these resources through rules promulgated consistent with Chapter 36 using the best available data and science, and consistent with neighboring GCDs in Groundwater Management Areas. Management of groundwater resources by a GCD inherently focuses on production of the resource and must be fair and impartial to all property owners, as long as the use is beneficial regardless of the type or location of use.

Section 36.122 of the Texas Water Code sets forth a GCD's authority to regulate the transfer of groundwater outside its boundaries. A district may not adopt rules expressly prohibiting the export of groundwater and Section 36.122(c) prohibits a GCD from imposing more restrictive permit conditions on transporters than existing in-district users, except as provided in Section 36.113(e) (which sets forth criteria for imposition of more restrictive permit conditions). As detailed in Section 36.122(f) and (g), a GCD may limit an export permit if the following conditions warrant limitation, and subject to criteria of Section 36.113(e) being met:

1. the availability of water in the GCD and in the proposed receiving area during the period for which the water supply is requested;
2. the projected effect of the proposed transfer on aquifer conditions, depletion, subsidence, or effects on existing permit holders or other groundwater users within the GCD; and
3. the approved regional water plan and GCD's approved management plan.

In addition, when reviewing all permit applications (whether for export or in-district use), Section 36.113(d)(2) provides that a district shall consider whether the proposed use unreasonably affects existing groundwater and surface water resources or existing permit holders, along with other enumerated factors. GCDs may collect export fees under Section 36.122(e), which are in addition to fees collected on in-district users. These export fees have not changed since 2001 and when adopted, were intended to fund operations needed to monitor impacts of the withdrawal on the resource.

### Aquifer Resources

Aquifer characteristics can vary greatly across the state. With 9 major aquifers and 22 minor aquifers, the differences in the geologic makeup of an aquifer can significantly affect water availability. Despite these variations in aquifer characteristics, water wells located in the vicinity of large production well

fields will be impacted due to the production. The extent of that impact will vary based on production volumes and rate over time, as well as the existing wells' actual proximity to the new project and aquifer characteristics. Designing, constructing and developing a well field are expensive and time-consuming tasks performed to meet water a supplier's need and demands. Typically, transport projects are designed to move large amounts of water to an end user.

## **Production Impacts**

Transport project applications, just like all permit applications, are processed pursuant to the requirements set forth in Chapter 36 and district rules, which provide for a notice and hearing process. When reviewing any permit application, a GCD will receive information from the applicant regarding the project. This will typically include well locations, production rates, and annual volumes, and may also include construction standards, conservation plans and drought plans. Transfer project applications will include the applicant's information on projected impacts and water availability. Groundwater Availability Model runs, pump tests and other technical processes of review are some of the science that a district will consider. The application and associated information are reviewed by the district in accordance with their rules and Chapter 36.

GCDs provide notice of applications that are subject to a hearing in conformance with Chapter 36 and district rules, which allows the public the opportunity to review those proposed applications. Notices include a deadline by which an affected party must submit comments and protest the application to the district. If uncontested, the application proceeds to the district board for consideration of approval. If the application is contested, the application undergoes a hearing process held in conformance with the requirements of Chapter 36. Despite the efforts of the GCD to communicate the actions being proposed by a large-scale water transfer project, there will be some well owners who were not aware of the application permitting process or the projected impacts being proposed. Adjacent landowners may not all chose to participate in a large-scale transfer project by selling or leasing their water rights to the project proponent. Throughout this process, GCDs must balance the property rights of both the applicant and other landowners.

After a GCD issues a transport permit, the district will monitor compliance with the terms and conditions of the permit; the district's rules; the Desired Future Conditions (DFCs) and the management plan; and if applicable, the drought plan and conservation plan of the district. Production will be reported by the permittee monthly, quarterly or annually. Water level measurements inform the district of aquifer responses to production. Communications with well owners may provide resource information on monitoring, best management practices, triggers, and thresholds on achievement of DFCs and unreasonable impacts that may occur, as well as how the district will respond.

## **Issues and Challenges**

Groundwater is a finite resource, and aquifer recharge can be slow. Therefore, finding a proper balance between production and conservation is essential to the long-term management of the groundwater resource. With the growing demands for water in Texas, groundwater transport projects will likely be proposed to meet future needs. Typically, these transport projects produce groundwater from rural

areas. Groundwater is often preferred to surface water for transport projects due to several factors: 1) the difficulty in maintaining water rights seniority in transferring surface water from one river basin to another; 2) the difference in cost to achieve acceptable water quality; and 3) the ability to acquire water rights from private landowners.

Not all property owners want to produce their groundwater. Some prefer to keep their water in place for future use. However, GCDs cannot regulate away the characteristics of an aquifer from groundwater production. GCDs may only utilize the regulatory tools provided to them to achieve balance between production and conservation of a shared resource. Spacing rules, production limits, DFCs, Management Plans, drought plans, permitting and procedure rules and notices all contribute to the protection and development of groundwater provided by the regulation a GCD. Even with these tools, there are external factors that can affect future availability of water for well owners, such as increased groundwater production outside of a district.

Predicting how an aquifer will react under new development can be difficult. Whether it is the depressurization of a confined aquifer, or the removal of water from storage from an unconfined aquifer, some impacts are going to occur. The science needed to make accurate assumptions about these impacts, is expensive and requires time that the permitting process does not always allow. Section 36.114 mandates action by the GCD within 60 days after an application is determined administratively complete. If a hearing is required then the GCD must act within 60 days after the completion of the hearing. Applications must be processed, and permits issued according to the rules in place at the time the application was received. Districts may include special permit conditions to address agreements reached during a contested case or to regulate production allowances over time which can lead to acceptable aquifer conditions. Ensuring sources of funding for development of science and continued monitoring of impacts allows GCDs to develop and implement management strategies that achieve an appropriate balance among the conflicting goals and objectives set forth in Chapter 36 while avoiding unreasonable impacts to existing producers.

### Existing Well Owner Assistance

There are current active groundwater transfers in the state where assistance is available to landowners who have been affected by reductions in water levels from those transfers. For example:

1. Gonzales County UWCD - A mitigation program funded from fees negotiated and collected by the district from groundwater transfer permit holders who are authorized to transfer or who produce more than 3,000 acre feet of water per year. The governing document of the program can be viewed at: <https://tinyurl.com/gcuwcd>
2. Post Oak Savannah GCD - A well assistance program, funded by fees collected by the district on all non-exempt producers to add additional monitor wells to the district's monitoring well network for addressing situations of depressurization of aquifers due to regional production which has caused lower water levels. The governing document of the district can be viewed at: <https://posgcd.org/groundwater-well-assistance/>

Often times, when contracts are executed for the sale of groundwater rights, the terms and conditions of those contracts will contain remediation guidelines. One example of this is the Canadian River Municipal Water Authority's Ogallala Aquifer project.

### Considerations

There are several considerations related to large scale groundwater transfers:

1. What role should mitigation of impacts to neighboring wells from large-scale water transfers have in recognizing the investments of all well owners, and could Chapter 36 better incorporate this concept as a permitting tool?
2. Could updating the export fee structure contained Section 36.122(e), which has not been amended since 2001, help provide additional funding for continued monitoring and the development of science for assessing and addressing impacts from large-scale water transfers?