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## Pilot Project Provides Real-Time Monitoring of Cow Creek Wells

### For More Information

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KENDALL COUNTY - After months of planning, a real-time monitoring system has been implemented for the Cow Creek Groundwater Conservation District through a pilot project with the Texas Commission on Environmental Quality (TCEQ).

Six well sites have been equipped with monitors for water depth, conductivity and temperature. The sites, selected primarily because of their proximity to the pumping centers in the Cow Creek GCD service area, provide data that will allow Cow Creek GCD to determine what, if any, measures need to be taken to address the influence of surface water on groundwater quality and if non-point source pollution is occurring. This data set will help them make management decisions related to desired future conditions of the aquifer, drought management issues, and groundwater availability issues.

The TCEQ got involved in the continuous water quality monitoring to address local water quality issues, which might include managing water resources, assessing water quality, and tracking implementation of Total Maximum Daily Loads (TMDLs) and watershed protection plans," Richard Garcia, TCEQ's Region 13 director, said.

"The data will help the District implement more accurate drought triggers and also determine water quality and quantity changes during rainfall events," explained Micah Voulgaris, Cow Creek GCD general manager. "The program," he added, "should also provide data that can be used to calibrate some of the existing models of the aquifer. The more data the District can collect on what is actually happening in the aquifer, the more informed decisions it will be able to make about the management of the groundwater resources."

TCEQ staff members Garcia and Chuck Dvorsky, continuous water quality monitoring network (CWQMN) coordinator, worked with the staffs of Cow Creek GCD, the Guadalupe-Blanco River Authority (GBRA), and the Texas Water Development Board (TWDB) to identify the data needs and the ways to collect the data for Cow Creek GCD to manage its underground water.

"It was important to initiate this kind of project because of the significance of the Trinity Aquifer, and this type of monitoring system is needed for aquifers throughout the state," said Bill West, GBRA general manager, who led the push for Cow Creek GCD to obtain the new monitoring system. "With the exception of the Edwards Aquifer, there are not many aquifers that have electronic monitoring."

Cow Creek staff wrote and submitted a proposal to TCEQ, which prompted TCEQ to request a project plan from Cow Creek. Upon approval, TCEQ purchased and installed the instrumentation at six wells at a total cost of about \$45,000. TWDB monitored the installation and checked the system. The system became operational by the end of March, and all six Cow Creek GCD CWQMN well monitors are now online and reporting data to the LEADS database. The CAM sites may be viewed directly at the following links:

[http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water\\_site\\_photo.pl?cams=775](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water_site_photo.pl?cams=775)

[http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water\\_site\\_photo.pl?cams=776](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water_site_photo.pl?cams=776)

[http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water\\_site\\_photo.pl?cams=777](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water_site_photo.pl?cams=777)

[http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water\\_site\\_photo.pl?cams=778](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water_site_photo.pl?cams=778)

[http://www.tceq.state.tx.us/cgi-](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water_site_photo.pl?cams=779)

[bin/compliance/monops/water\\_site\\_photo.pl?cams=780](http://www.tceq.state.tx.us/cgi-bin/compliance/monops/water_site_photo.pl?cams=780)

Prior to the implementation of this electronic monitoring system, Cow Creek conducted manual monitoring.

Tommy Hill, GBRA's chief engineer, explained, "Every district needs monitoring for an accurate assessment of water availability, so the electronic monitoring can provide data in its most current form."

One of the goals of this system is to monitor water quality, West said, adding, "This project is important for GBRA in that it provides a real-time look at potential impacts on the river level and how it might affect some of GBRA's customer's within Kendall County."

As an indication of just how committed GBRA is to this project and its success, GBRA's Water Quality Department is providing the water data quality control component of the project, West said.

The Cow Creek Groundwater Conservation District was created for the purpose of conserving, preserving, recharging, protecting and preventing waste of groundwater from the aquifers within Kendall County.

The TCEQ strives to protect the state's human and natural resources consistent with sustainable economic development. Its goal is clean air, clean water, and the safe management of waste.

The GBRA was established by the Texas Legislature in 1933 as a water conservation and reclamation district. GBRA provides stewardship for the water resources in its 10-county statutory district, which begins near the headwaters of the Guadalupe and Blanco rivers, ends at San Antonio Bay, and includes Kendall, Comal, Hays, Caldwell, Guadalupe, Gonzales, DeWitt, Victoria, Calhoun, and Refugio counties.