

Prairielands eLine

Prairielands Groundwater Conservation District
www.prairielandsgcd.org

Monitor Well Program Expanding

Since the creation of the district, a main goal has been to increase the base of knowledge of the groundwater levels in the aquifers in this area. One aspect of this is the development of a comprehensive monitor well program covering all four counties of the Prairielands district. Monitor wells are water wells that are equipped with in situ equipment that measures the distance of the top of the groundwater column in the well to the surface of the land where the well is drilled. A specific goal of the program at this time is to increase the number of aquifers represented in each county.

During this past year, District Field Technician Michael Heath has been constantly on the lookout for possible additions to the program and has made great strides in expanding the monitor well inventory. He has talked to individual well owners in all counties regarding the monitor program and underlying geological layers of their area. Many well owners are unaware of the characteristics of their property or their wells.

In addition to individuals,

Heath has been successful in gaining program support with a couple of major water providers in the district. The Sardis-Lone Elm Water System in Ellis County added two of their wells to the monitor program – one in the Trinity Group and one in the Woodbine aquifer.

Johnson County Special Utility District allowed the district access to 17 of their wells located in both northern and southern Johnson County for the Texas Water Development Board observation well program – nine in the Paluxy formation, one in the Glen Rose, and seven additional Trinity Group installations (mostly Hosston and one multi-screened.)

Heath worked with the district's consulting hydrologist, WSP USA, Inc., for guidance in identifying the areas in the district most in need of information that could be obtained through monitoring.

The district also completed the annual measurement of 64 Texas Water Development Board observation wells in December 2017.



Sardis-Lone Elm Water Supply is one of the recent additions in the district monitor well program.



Monitoring and satellite equipment have been installed at Sardis-Lone Elm locations.

For more information about participating in the monitor well program, contact Michael Heath by email at fieldtech@prairielandsgcd.org or call (817) 556-2299.

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Special points of interest:

- The district well monitor program continues to add new locations.
- Texas' Conservation Amendment turned 100 this past year.
- Check your gardening tools, including water hoses, for the coming season.
- The Water Education Trailer serves as an interactive classroom on wheels for children and adults.

FREE Water Cycle Presentations for Schools



If you're a teacher in a school in one of our four counties (Ellis, Hill, Johnson, or Somervell), you need to be aware of the Water Education Trailer! It is available for your use at your school at no charge.

The Water Education Trailer (or WET) is a classroom on wheels designed and developed by the Prairielands Groundwater

Conservation District to spread awareness of groundwater and water conservation.

Exhibits in the trailer focus on groundwater and its place in the water cycle, aquifers, water conservation in the home, water wells, and rainwater harvesting.

You can schedule a visit for a day at a time or several in a row depending on your needs and the size of your group by calling the Prairielands Groundwater Conservation District Office Education Administrator in Cleburne at (817) 556-2299.

Email questions or inquiries to karensiddall@prairielandsgcd.org.



Discussions about water conservation in the home is a major focus in the WET.

Evolution of Groundwater Law in Texas – Part 2

Continuing our series on how groundwater law has been formed in the state of Texas, this issue presents the Conservation Act of 1917.

Prompted by a flood and two major droughts – one from 1909 – 1912 and the next beginning in 1916, both houses of the 35th session of the Texas Legislature (1917) pursued constitutional amendments regarding resource and water conservation.

Both types of climatic events have major impacts on the state. Drought caused widespread crop failures and the state's residents and economy depended upon agriculture; it was the main economy of the state.

One season of crop failure can be a major setback for the individual farmer but several in a row can be devastating impacting an entire region or state that depends on the products from those crops for food and the taxes from successful crop sales to remain in operation.

Although the State cannot prevent drought or torrential rains, with the proper authority and funding it can

plan for prevention or ameliorative action for some types of damage on a larger scale than individual landowners or smaller local governments can accomplish.

At that time, the constitution lacked the language to allow the state to provide for the protection of our natural resources (water, soil, minerals, oil, coal, gas, air, plants, trees, wildlife) and the means to finance it.

But why would the State of Texas, as an entity, even need to do this? Why wouldn't this be the responsibility of local landowners?

The proposed amendment that eventually made its way to the voters in August, 1917, was Senate Joint Resolution 12, authored by Senator A.R. McConnell of Waco (along with several co-sponsors). Known as the Conservation Act of 1917, it amended the state constitution to make it the right and responsibility of all Texans and the state to preserve and conserve the natural resources of the state (including water.)

In practice, it also authorized conservation districts to issue bonds and levy taxes to preserve, conserve, and develop those resources. Voters approved this change to the

state constitution with 49,116 votes cast "For" and 36,827 "Against."

From that point forward, Texas lawmakers had the authority and the financial wherewithal to act to conserve water and other natural resources throughout the state and could develop and institute statutes to achieve this.

Next issue— *Texas Co. v. Burkett*.



Drought not only impacts crops and the economy but the soil itself.

Get “Hosed” This Spring!

Spring has arrived in the Prairieland Groundwater Conservation District, and one of the tasks many of us are tackling is yard maintenance. Time to give our gardening tools a look to make sure they're as ready for action as we are!

One tool that many overlook is the garden hose. Using the right garden hose in good condition will not only get your watering job done, but will prevent water waste, and save you money on your water bill.

It is estimated that a good garden hose should last from 5 and 10 years. That estimate is affected by use, care, and construction.

Check the hose's body for cracks and holes and the couplings at either end. Depending on what you find and your skills and interests, you may not need to replace the whole hose. There are instructions and videos galore on the internet for making your own repairs. Repair kits are even available at your local hardware store.

However, if you need a new hose, there are a couple of considerations before you buy.

◆ What are you going to use it for? – The most common uses that come to mind are for watering a lawn, irrigating a flower bed or vegetable garden, or for keeping the ground around a home foundation watered during the high heat of the summer when the ground is really dry.

Your uses or needs should determine the type or style of garden hose you select. Hooking up to a movable sprinkler? You're going to need a traditional hose with a round profile. Irrigating a garden or flower bed, you may want to consider a soaker hose. A soaker hose is a hose that allows water to slowly leak through its walls giving the ground around it time to fully soak up the moisture. Soaker hoses are recommended, too,

because they can reduce water waste. Because the water drops are not being hurled into the air to reach their target, less is subject to evaporation or being blown away.

You will also encounter, or are familiar with, flat hoses. However, these seem to have fallen out of favor with many gardeners for a couple of reasons. One, to use the thing, you've got to roll out the whole hose whether you've got that large of an area to water or not. They can be heavy and cumbersome, and there is some water waste as drops are thrown into the air where they evaporate.

◆ Length – Hose lengths typically come in multiples of 25 feet. Rather than paying for more hose that you need (or will want to move around), measure before you go to the store. If you need a hose to use in multiple areas of your yard, determine the distance to the farthest place in the yard where it will be used. Select a hose just over that length.

◆ Diameter – Who knew? Hoses come in three common diameters on the inside: 3/4-inch, 5/8-inch, and 1/2-inch. (A quick research trip to the local hardware store revealed the majority to be of 5/8-inch variety.)

The larger the diameter, the more water will come out at one time. If the weight of the hose could be an issue for you – say you're using your hose to hand water plants and hanging baskets on your patio, the smaller 1/2-inch hose may be your best bet.

◆ Material – The big question here is rubber vs. vinyl. Rubber is said to be more durable but is heavier and pricier. Vinyl hoses are cheaper and much lighter, but they kink easier.

Another important material to consider is that of the couplings or fittings at either end. Many are made of brass or are chrome-plated, but there are plastic ones available as well. General consensus is to

avoid the plastic; they break. As for the rest, check for durability of the metal. If you accidentally step on the hose coupling, is it going to bend and become misshapen? Even if it stays attached to whatever it was connected to, a misshapen coupling will allow for water leakage and water waste. Couplings can freeze up sometimes so consider getting a hose with octagonal-shaped couplings, so you can use a wrench to loosen things up if the need arises.

Your yard should be a place of peace and enjoyment, and proper preparation may very well be the key to attaining that. Taking a little time now, in advance of the lawn maintenance season, will cut down on frustration and wasted time when the weather is beautiful, and you'd rather be out enjoying your yard and not sweating over it.

For more information about low maintenance home landscaping and water conservation, visit the Prairielands Groundwater Conservation District website at www.prairielandsgcd.org.



There is a wide variety and choice of hoses on the shelves at local stores. Consider such things as your needs, intended uses, yard size, and hose construction when making your selection.



**PRAIRIELANDS GROUNDWATER
CONSERVATION DISTRICT**
ELLIS HILL JOHNSON SOMERVELL

Conserving, protecting, and enhancing
groundwater resources in Ellis, Hill,
Johnson, and Somervell counties

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In 2008 & 2009, the Texas Commission on Environmental Quality designated large areas over the Trinity Aquifer from the Red River to Central Texas as Priority Groundwater Management Areas (PGMA) due to critical groundwater declines facing the area.

The Prairielands Groundwater Conservation District was created in 2009 by the 81st Texas Legislature with a directive to conserve, protect and enhance the groundwater resources of Ellis, Johnson, Hill and Somervell Counties in Texas.

Coleman Hosts Prairielands Water Education Trailer and Texas AgriLife Stream Table

On March 19, Prairielands Groundwater Conservation District staff and agents from the Johnson County office of Texas AgriLife visited with fourth-graders at Coleman Elementary School to discuss water issues.

Prairieland's Water Education Trailer was on campus to demonstrate how aquifers, groundwater, and water wells work while the county agents unveiled their brand-new Stream Table which demonstrates erosion and how streams can change course. The two agencies were on hand that day by the arrangement of Coleman science teacher Meagan Dupre.

"The Water Education trailer is basically an interactive museum on wheels and helps students better

understand the water cycle and visualize the groundwater and aquifers in the geologic formations beneath our feet in our county," said Karen Siddall, public relations and education administrator for the district. "In addition, once students understand where their water comes from we discuss the ways we use water in daily life and why and how to conserve it."

Prairielands staff participating in the visit were Karen Siddall and David Miller, trailer wrangler. Texas AgriLife county extension agents present for the event included Kristen Clark and Justin Hale, who built the Stream Table.

The Water Education Trailer is available for school and community

organization presentations and public events in Johnson, Ellis, Hill, and Somervell counties at no charge.

To check availability, contact Prairielands Groundwater Conservation District at (817) 556-2299 or email karensiddall@prairielandsgcd.org.



Public educator, Karen Siddall, talks to students at Coleman Elementary School about water conservation.