

Heartbeat of *The Hickory*



Summer 2010

Staff

David G. Huie.....*Manager*
Caroline Runge.....*Consulting Manager*
Angelina Deans.....*Assistant Manager*
Ronnie Moore.....*Lab/Field Tech*

Directors

W. Owen Parks.....*President*
Bill Sloan.....*Vice-President*
Bert Striegler.....*Secretary*
Larry Lehmborg.....*Director*
Wendell Moody.....*Director*

Water Camp Not Washed Up

Once again the District had the privilege of sponsoring local students to attend the State Youth Water Camp. Attending camp this year from McCulloch County were Sierra Murray and Kara Nelson. Both are sophomores at Rochelle High. Sierra is the daughter of J.P. and Lorette Murray. Kara is the daughter of Glenn and Rhonda Nelson.

The State Youth Water Camp is held every year at the George and Opal Bentley 4-H Center in Monahans. The five day educational camp features hands-on experiences, guest speakers and field trips. The students learn the importance of water stewardship and how our water resources are being used by industry, agriculture and municipalities.

The campers are assigned group projects. Topics include Watershed Management, Lawn 2-3, Riparian Area Management, and Drip Irrigation. Sierra Murray was in the Drip Irrigation group while Kara Nelson participated in the Lawn 2-3 group.

Over the past few years participation in this valuable summer camp has been dwindling. Normally the minimum number of students for which the camp would be held is fifteen but this year only thirteen attended. Because so few students had signed up, the fate of the 2010 camp was precarious.

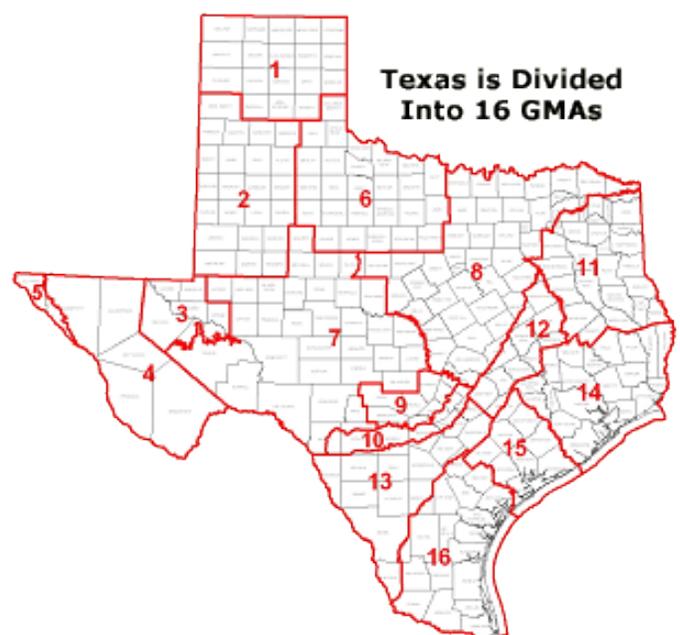
Sierra and Kara both returned from camp ready to change the world. They have both contacted the District office and will be sharing the Power Point presentations they created for camp with the Hickory Board of Directors at the August board meeting.



Kara Nelson and Sierra Murray

District Determines DFC – Waiting for Next Step

At the May 13 Board Meeting, the Board decided to set the Desired Future Condition for the Hickory Aquifer for a total net drawdown of 7 feet over the next 50 years. Groundwater conservation districts within each Groundwater Management Area (GMA) are required to define DFC's for the groundwater resources within the GMA. A DFC is a quantifiable future groundwater condition. Legislation which passed in 2005 (House Bill 1763) established the framework for regional collaboration among local groundwater managers on shared aquifers. Groundwater conservation districts must now coordinate with neighboring districts within their Groundwater Management Area (GMA) on issues such as management goals and groundwater availability determinations. Our District falls within GMA 7. A resolution presenting the DFC will be submitted to the GMA at their July meeting. After the GMA passes a DFC, the DFC is submitted to the State. Texas Statute requires that GMAs submit their desired future conditions to the TWDB by September 1, 2010.



Hickory UWCD No. 1

P.O. Box 1214
111 East Main Street
Brady, TX 76825

Phone: 325-597-2785

Fax: 325-597-0133

Email: hickoryuwcd@yahoo.com

Website: <http://www.hickoryuwcd.org>

Bulk Rate
U.S. POSTAGE PAID
PERMIT NO. 09
BRADY, TX 76825

Be praised, My Lord,
through Sister Water; she
is very useful, and humble,
and precious, and pure.-

Francis of Assisi (1181-1226)

Canticle of the Sun circa 1225

TEN EASY WATER CONSERVATION TIPS

- 1** Collect rainwater for outdoor use during the peak summer months, and you can save up to 1,300 gallons of water.
- 2** Watering your lawn in the morning saves water from being evaporated by the midday heat and reduces your water bill, too!
- 3** When needed, water your lawn one inch, once a week. Place a 6-ounce tuna can on your lawn and stop watering when it's full.
- 4** If every household fixed just one leaky faucet, we could reduce water use in Texas by more than 13 billion gallons a year!
- 5** Installing a water-efficient showerhead can reduce water consumption by 25% to 60% and save energy.
- 6** Check your toilet by using a leak-detection dye tablet; otherwise, you could be wasting about 200 gallons of water a day.
- 7** Turn off the water faucet while you brush your teeth and save up to 4 gallons of water per minute.
- 8** Replacing older toilets with water-efficient toilets can save 9,000 gallons of water a year.
- 9** Washing only full loads of laundry can save an average household more than 3,400 gallons of water each year.
- 10** An Energy Star dishwasher is about 25% more efficient than a conventional one, and will save about 800 gallons of water per year.

Tips courtesy of Take Care of Texas.



A Leg Up on GAM's

The world of water is full of acronyms. If you've read the newsletter, you've already learned that DFC's are Desired Future Conditions and GMA's are Groundwater Management Areas.

Now we'll learn another one. GAM stands for Groundwater Availability Model. GAM's include comprehensive information on each aquifer, including: recharge; geology and structure; rivers, lakes, and springs; water levels; aquifer properties; and, pumping.

The process which is the responsibility of the Texas Water Development Board is a long complicated one. For the District it becomes even more difficult. Because of the complexity of the Hickory Aquifer including the blocking and faulting characteristics, a satisfactory model has not yet been created.

For this reason, the Board and Staff of the District have been in contact with consultants to conduct studies to aid in the process. Numerous studies will be necessary.

Understanding Our Aquifer Part 3

When a permit is submitted to the District, one of the first things we do is create a draw-down chart. This process is used to *try* to determine what effect pumpage will have on surrounding wells. Of course, no computer program can accurately predict draw-down 100% of the time. A multitude of factors come into play in the real world.

Transmissivity: The rate at which water is transmitted through a unit width of an aquifer under a unit hydraulic gradient.

Storage Coefficient: the capacity of an aquifer to release groundwater from storage in response to a decline in hydraulic head.

Hydraulic Head The pressure exerted by the weight of water above a given point.

Cone of Depression occurs in an aquifer when groundwater is pumped from a well. In an unconfined (water table) aquifer, this is an actual depression of the water levels. In confined (artesian) aquifers, the cone of depression is a reduction in the pressure head surrounding the pumped well.

If you're interested in learning more about Hydrogeology, visit:

http://www.ncwater.org/Education_and_Technical_Assistance/Ground_Water/Hydrogeology/

<http://www.purdue.edu/envirosoft/groundwater/src/geo.htm>

<http://www.ats-intl.com/training/notes/hydrogeology.pdf>