

## You're never too young to learn about water...

Recently, NHCRWA District 5 board member Kelly Fessler and his nine year old daughter, Given -- or "Bug," as her dad calls her -- visited Harris County MUD 82's water plant facilities to learn more about how drinking water is provided to our neighborhoods.

"We all tend to take our water supplies for granted," Fessler said, "and don't give much thought about what has to happen to make sure that when we turn on the faucet, there's a nice clean stream of water ready for us to use. I asked Gary Sundstrom, president of the MUD's board of directors, if he could take us on a lay person's guided tour of their facilities."

Gary also included other members of the MUD board and representatives from their Operating company, TNG, to help add insight and information about the plant's operations.

### It all starts with a well...

Traditionally, most of our subdivisions are supplied by groundwater wells that may have been drilled as long as 30 years ago. These wells vary in depth. Some go into the top or most shallow aquifer -- the Chicot -- but some of the other more recent wells go deeper into the Jasper level.

At MUD 82's Plant #1, the well was drilled in 1973. It is 1100 feet deep and draws water from the Evangeline aquifer. It delivers 570 gallons of groundwater per minute. (MUD 82's other plant also has an 1100 ft. deep well, drilled in 1983, that delivers 1527 gallons of water per minute.)

Before the water is stored in the plant's 500,000 gallon storage tank, it is pumped from the well by a 125 horsepower motor through the disinfectant or chlorination pro-



Water plant visit...(left to right) Mike Moreno, TNG; Gary Sundstrom, HCMUD 82; Kelly and Given Fessler; David Wright, TNG; Don Hays, HCMUD 82; Denis Wright, TNG.

cess. This is the only treatment necessary to bring the water to drinking standards for the 2300 homes supplied by this utility district.

From the storage tank, booster pumps move the water through a hydro-pneumatic tank -- which maintains system pressure -- and then on into the distribution system. In addition to the many families it serves, MUD 82 also provides water to two schools, two churches and five businesses.

After the water is used by the community, it is collected in another system of pipes and delivered to the MUD's sewage treatment plant. This facility is capable of treating 1.2 million gallons of wastewater a day, and currently operates at about the .6 m/g/d level. Because this plant processes more than a million gallons a day, it is necessary for the treatment plant to remove all the chlorine previously added to disinfect the water before releasing it

back into Texas waterways that ultimately flow into the Gulf of Mexico. There are lots of tests that are performed to make sure that the discharged water is clean and will do no harm to the environment.



Given and Kelly learn how the water is pumped from the well and treated with chlorine before being pumped into the storage tank.

The treatment process removes any large debris, and aerates microorganisms to break down organic matter. The clarification process allows the organic matter to settle after aeration, and the leftover sludge is hauled away to a licensed disposal area.

Each year, before July, the U.S. Environmental Protection Agency (EPA) requires MUDs to publish a *Consumer Confidence Report* to confirm that they are receiving quality drinking water that meets federal standards. This report is mailed to residents and is also posted on the MUD's website.

A lot of the technical talk may have been a little too sophisticated for Given, but she was happy to learn about everything the MUD did to make sure that folks had access to good clean quality drinking water.

She also learned that in just six years, we will have to begin converting to surface water to allow the aquifers a chance to replenish. In fact, the North Harris County Regional Water Authority is now putting waterlines in the ground that will help deliver this new source of water in the years ahead.

In 2030 -- when Given will be approaching her 40th birthday -- north Harris County residents will be receiving 80 percent of its drinking water from surface water (Lake Houston and other man-made reservoirs) and only 20 percent will come from groundwater wells. 💧



1. Denis Wright, District Operator for TNG Utility Corp., tells Given how the pump room controls work.
2. Given and her dad, Kelly, get a basic overview about the water plant operations from HCMUD 82 president Gary Sundstrom.
3. The group talks about how the water comes from the well and goes out to homes.



## Water conservation tip...

**Adjust your sprinklers** before you turn them on. The street, driveway and sidewalks don't need water -- **no one ever grew a garden in concrete!** Unnecessary watering is the number one residential water-waster.

Visit us online to learn more ways you can save water and money...  
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