



SJRA Water Treatment Plant Draws National Attention for Efficient and Innovative Design

As part of its joint Groundwater Reduction Plan (GRP) program, the San Jacinto River Authority is constructing a 30 million gallon per day (MGD) water treatment plant at the west end of the Lake Conroe dam, and the almost-completed plant is already drawing attention for both the pilot study process used during the plant's design and the innovative combination of treatment technologies that were chosen to deliver a high-quality, cost-effective finished product.

In addition to being featured in a recent national trade journal, SJRA's surface water treatment facility has also been the site of numerous visits by parties seeking to study its engineering design process and treatment technologies. Public works officials from municipalities around the state have visited the site and talked with the plant's designers and contractor to consider elements that can be incorporated into their own local projects. These individuals have also reached out to SJRA project managers to learn more about the procurement process and project management tools that have helped the project remain on schedule and under budget. Engineering consultants and researchers in the field of water treatment technology from around the country have also shown an interest in the project, often visiting the site or contacting the engineering firms responsible for the plant's design.

But the technology and engineering behind the scenes isn't what really matters to the customer, it's the quality of the water once it reaches their home that's important to them. In an effort to provide customers with information about the quality of the treated water that they'll be drinking, SJRA initiated its "Quality at the Tap" campaign. The campaign consists of a Frequently Asked Questions (FAQ) document, informational rack card, advertisements featured in local publications, and a page on SJRA's website to house all of the above. While it is virtually impossible to anticipate absolutely every question that might arise, we have highlighted some of the potential questions below:

Question 1: What kind of water do I have now? How is treated surface water different?

Currently your water supply comes from wells drilled deep into the ground and is referred to as groundwater. In our area, when groundwater is pumped to the surface, it is actually very clean and requires almost no additional treatment. It is simply disinfected and then distributed to consumers. Surface water comes from rivers and lakes and requires considerable treatment and disinfection prior to being distributed to customers. In Montgomery County, the treated surface water being delivered by SJRA to retail water providers will come from Lake Conroe.

Question 2: Is everyone in our area or in Montgomery County going to receive treated surface water?

The following cities and utility districts will receive treated surface water:

- 1) City of Conroe;
- 2) City of Oak Ridge North;
- 3) MidSouth Synergy (Montgomery Trace and Woodforest);
- 4) Rayford Road MUD;
- 5) Southern Montgomery County MUD; and
- 6) The Woodlands.

The key benefit of joining multiple users into a regional GRP is the ability to achieve tremendous cost savings by utilizing a "group

compliance" concept in which some customers are "over-converted" to surface water while other customers continue to use only groundwater. As a group all of the participants meet the regulatory requirements of the Lone Star Groundwater Conservation District (LSGCD).

Question 3: When will we be receiving treated surface water?

LSGCD, created by the state legislature in 2001 at the request of Montgomery County community leaders, has adopted regulations requiring large water supply entities to reduce their use of groundwater and develop alternate water supplies.

Construction of the surface water treatment plant, raw water intake, and associated storage and pumping facilities began in August 2012. These facilities are scheduled to be completed in late summer of 2015. Construction of the water transmission pipelines began in February of 2013 and will also be completed this summer.

Treated surface water is schedule to be distributed beginning in late summer of 2015.

Question 4: What steps has SJRA taken to provide safe drinking water to consumers?

SJRA has established the delivery of high quality, safe drinking water supplies as its top priority in developing its surface water treatment and supply systems. There are simply too many strategies involved in meeting this goal to list them all here, but the following list highlights a few of the significant steps taken:

- The source water in Lake Conroe has been monitored as part of the Clean Rivers Program since the 1970's and more robust sampling and testing has been implemented over the past seven years to determine the optimum treatment technologies.

- As part of the pilot plant testing phase, 14 small scale treatment systems were constructed and operated for six months to select the appropriate treatment technology to meet or exceed drinking water standards.

- A very robust treatment process was selected, which includes granulated activated carbon, micro filtration, air stripping, and disinfection.

- A lake water quality monitoring program will alert plant operators in the event that conditions in Lake Conroe should change.

- A comprehensive sampling and testing program will be implemented in cooperation with retail water providers receiving treated surface water in order to maintain compliance with all State and Federal drinking water regulations.

Question 5: Will the introduction of surface water affect my aquarium, pool, landscape, animals, or the need for a water softener?

- The blended water supplies will not affect any of your water uses, equipment, or routine maintenance procedures.

- The surface water is compatible with existing water supplies and will not affect landscaping.

- The new water source will have no different effect on pets or livestock than your current groundwater supplies.

- Each homeowner should make a value judgment on the need for softeners based on their own situation. Treated surface water will be "softer" than groundwater, but each resident will be receiving a blend of groundwater and surface water and may, therefore, wish to continue using their softener.

SJRA is committed to delivering safe, reliable, and clean surface water that meets or exceeds all State and Federal guidelines.

For more information, please visit www.sjra.net/GRP. ♦