

WALDEN OPTIONS FOR REDUCING GROUNDWATER USAGE

- Walden's water utility districts – MUDS 8 & 9 – are subject to the Lone Star Groundwater Conservation District's (LSGCD) currently mandated 30% reduction in groundwater usage and must adopt a Groundwater Reduction Plan.
- Beginning in 2016, Walden must utilize conservation techniques and or other water sources to meet the LSGCD mandated groundwater reduction target (currently set at 30%, but could be raised to 50%)
- Since 2004, MUDS 8 & 9 have examined a variety of options to help us meet the 30% groundwater reduction target. These are discussed below:
 - Conservation Strategies
 - Almost 70% of the water used by Walden residents is used for irrigation and other outdoor purposes.
 - Encouraging water efficient landscaping, "smart" irrigation systems, and low flow household fixtures and appliances will certainly reduce groundwater usage
 - See Conservation Strategies on the MUD 8 website <http://www.montgomerycountymud8.com>
 - Unfortunately, conservation alone will not meet the 30% target, but it is the least expensive approach, and with your cooperation, we can do it
 - Use of Treated Effluent for High Demand Landscape Irrigation
 - We "own" the treated effluent currently discharged into Lake Conroe, and could distribute it for landscape irrigation purposes within the subdivision.
 - Will require new piping, pumps, storage and disinfectant facilities
 - Cost: \$12 to \$22 million, dependent on project scale
 - Will not achieve the 30% target
 - Build A Conventional Surface Water Treatment Plant
 - A conventional plant to treat surface water from Lake Conroe is feasible and would meet the 30% target.
 - Will need additional land for new plant and equipment
 - Will require firm commitment from SJRA to sell us lake water, but at this time the SJRA has indicated firm water commitments will not be available to non-participants in the proposed SJRA Groundwater Reduction Plan
 - Cost: \$22 million
 - Build A Micro-Filtration Surface Water Treatment Plant
 - Continue to discharge treated effluent into Lake Conroe, but re-capture an equivalent volume of lake water, and buy supplemental water from SJRA for treatment in a micro-filtration facility
 - Plant can be built for less than \$10 million
 - Project will achieve the 30% target for present demands

- Significant savings (\$25-90million) vs. SJRA-GRP participation
 - Requires SJRA support for “Bed and Banks” Permit, though limited cooperation has been received from SJRA for this project
 - Requires SJRA support for a new water intake in Lake Conroe
 - Requires commitment from SJRA to sell us additional water, or we must develop an additional water source

- Source and Treat Potential Underground Brackish Water
 - Sands under the current groundwater aquifer may contain usable volumes of brackish water
 - Brackish water can be treated/blended to potable standards to replace ground water
 - Test well must be drilled to confirm quality and quantity
 - Test well temporarily delayed by LSGCD pending clarification of LSGCD authority over brackish water source and establishment of rules to allow brackish water use as a groundwater substitute

- Join the County-Wide SJRA-GRP
 - Joining the SJRA Groundwater Reduction Plan is the most expensive option for MUDS 8 & 9 and Walden residents
 - Cost studies (prepared by NRS Engineering) show the long term costs of participation will be \$125million from 2010 to 2045
 - MUDs will be charged \$.50 per 1000 gallons of pumped groundwater, beginning in August, 2010, and this rate will increase to \$1.90 in 2015, \$3.79 in 2025, \$6.20 in 2035, and \$8.50 in 2045.
 - These charges will be passed on to consumers and included in monthly water bills. A homeowner using 20,000 gallons per month will see a \$10.00 increase, beginning in August, 2010, if the MUDs join the SJRA Groundwater Reduction Plan
 - Surface water will not be delivered to lake area users until 2035, so we will remain on ground water and operate own water systems
 - By joining the SJRA plan, MUDS will share in county wide achievement of 30% target
 - While joining the county-wide SJRA plan enables the MUDS to comply with all LSGCD rules, we believe that the substantial long term costs and legal obligations are not in the best interests of Walden residents

- As you can tell, there are quite a few initiatives and approaches to meeting our mandated responsibility to meet the 30% groundwater reduction target. And quite a few moving parts, as rules and regulations change to adapt to changing circumstances.

- While there are significant savings to be realized by managing our own groundwater reduction plan, we will require the support of both the SJRA and LSGCD to implement an independent groundwater reduction plan.

- MUD 8 & 9 Directors are actively seeking the optimal groundwater reduction strategies for Walden, and will keep you informed of our progress.