

LONE STAR GROUNDWATER CONSERVATION DISTRICT-PART 1

Lone Star Groundwater Conservation District (LSGCD) was created in 2001 by the Texas Legislature with a directive to conserve, protect and enhance groundwater resources of Montgomery County. A confirmation election was held on November 6, 2001 with a 73.85% favorable ballot. Since confirmation, LSGCD has worked diligently to analyze and plan for Montgomery County current and projected water demands and the subsequent impact on ground water resources and determining alternate surface water resources.

In Early 2008, LSGCD mandated a **reduction of 30 percent use of ground water** by all large water suppliers in Montgomery County **by 2015**. MUD 8 is considered a large water supplier, and is obligated to find a way to reduce its ground water usage by 30%, while still providing adequate water to a still growing community. We are currently examining ways to use less ground water and more surface water (or recycled water for irrigation purposes) to meet the 30% ground water reduction. Meeting this mandate may require substantial investment in new plant and equipment and will inevitably add to our operating and capital costs. MUD 8 and MUD 9 directors and engineers are working together to determine the most cost effective solutions to this water usage and cost challenge.

LSGCD has employed Turner Collie & Braden, a consulting firm, to develop a plan for surface water replacement of ground water use. The first phase of this draft plan was presented to the public in June, 2006 followed by a final plan in May 2008. The 2006 first phase projected use of 66,700 Ac-Ft (325,851 gallons per Ac-Ft) of surface water from Lake Conroe, to be treated at a dam site treatment plant, to supply The Woodlands, Magnolia, I-45 corridor and Conroe. The 2008 plan added Northwest Montgomery County to the 2006 plan and projected using an additional 29,600 Ac-Ft of Lake Conroe treated water to replace ground water for a **total use of 96,300 Ac-Ft of Lake Conroe water or approximately 25 % of lake volume annually.**

Creating the surface water treatment plant and distribution networks is expected to be spread over 51 years and require major capital investment. LSGCD and its consultants estimate this project will cost over **\$ 2.328 Billion dollars** in capital construction costs, as highlighted in Table 56 below:

**TABLE 56 Single Plant Operation-Probable Capital Cost in Future Dollars
COPY from Table 56, Page 89, LSGCD May, 2008 Report**

Phase (Year)	I (2015)	II (2025)	III (2035)	IV (2045)
Capital Improvements	Million \$	Million \$	Million \$	Million \$
Total	\$ 542	\$ 185	\$ 637	\$ 964

Sum of Total Row = \$ 2.328 Billion. Total not identified in LSGCD May, 2008 Report.

LSGCD suggest these costs be funded by a surcharge to each large water supplier in Montgomery County starting in 2009. These charges will be allocated to individual households and appear on your individual water bill.

If this project were to proceed as proposed in the May, 2008 LSGCD report, the total projected future dollar fee structure and volumes of surface water and ground water used, over the 51 year project life, are presented in **Table 59 below:**

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CONTINUED

May 2008 LSGCD FINAL REPORT

Table 59, Page 103 (PDF) Single Plant System Rates for Conventional 20 Year Municipal Financing

YEAR	GROUND DEMAND (mgd)	WATER ANTICIPATED RATE (\$/1,000 gal)	SURFACE DEMAND (mgd)	WATER ANTICIPATED RATE (\$/1,000 gal)
2009	59.6	1.62		
2015	49.3	1.77	21	2.17
2020	59.7	2.12	21	2.52
2025	48.6	2.66	41	3.06
2030	58.5	3.76	41	4.16
2035	48.0	5.10	61	5.50
2040	58.6	6.69	61	7.09
2045	46.7	8.18	86	8.58
2050	60.8	9.02	86	9.42
2055	76.1	10.17	86	10.57

Rates are in future dollars at 5% annual inflation rate.

Sum groundwater plus surface water X demand for all periods = \$12,117,336,430. This summary is not in LSGCD May, 2008 report. Calculations done independently of LSGCD work.

San Jacinto River Authority has assumed responsibility for future project development and is in the process of re-evaluating the design basis and cost for converting to surface water in Montgomery County (WRAP Program). These projected cost numbers will probably change and are included only to illustrate that:

- (1) Water is going to get significantly more expensive, and**
- (2) We all need to implement conservation of water in order to use water more efficiently and reduce our cost.**

We will continue our discussion of groundwater conversion to surface water in next month's billing insert.

Data and information included herein has been assembled to the best of MUD 8 ability and is believed to be correct. MUD 8 and Staff assume no responsibility or liability for the use of this information by party or parties outside of the direct supervision of MUD 8 and Staff.