

SUGGESTIONS ON HOW YOU MAY SAVE YOURSELF MONEY AND REDUCE WATER FOR IRRIGATION-INTRODUCTION-PART 1

During 2006, MUD8 pumped 455,000,000 gallons of ground water through our two wells. We treated, distributed, and sold 428,000,000 gallons to metered users in the district. We pumped 27,000,000 more gallons than we sold, representing about 6% of the total pumpage that was “lost” due to leaks, security, or measurement problems. MUD8 is working diligently to identify these problems and reduce this water loss to acceptable standards.

Of the 428,000,000 gallons that were sold to households within the district, only 128,000,000 gallons were returned via sanitary sewers to the water reclamation plant. This means that 300,000,000 gallons of potable water were used to water lawns and landscaping. This number represents 70% of all potable water sold by the District during 2006. We have a clear opportunity to reduce water usage and save money by being smart about how we use water for irrigation purposes.

MUD 8 customers use a lot of water, as does the rest of Montgomery County. Eventually, county wide use of ground water will exceed the aquifer recharge rate and deplete, or at least impair, water supply. Recognizing county wide consumption versus availability of ground water, Lone Star Groundwater Conservation District (LSGCD) has been working on a project to substitute surface water for some ground water use.

In April, 2008, LSGCD publically reviewed the current draft version of the surface water conversion project. If completed substantially as proposed, this LSGCD project will use treated Lake Conroe water to replace ground water use initially in The Woodlands, then Magnolia and along I-45 into the Conroe area by 2040, with later expansion into lake area subdivisions and City of Montgomery.

This conversion to surface water is a huge municipal project with substantial cost. It would not be unexpected to see the water portion of our bills to double by 2015, triple by 2030 and quadruple by 2045 from the present 2008 cost.

Early in 2008, LSGCD issued a rule requiring all large water suppliers in Montgomery County to reduce ground water consumption by 30% effective January 1, 2015. This LSGCD ordered 30% cutback in ground water use by 2015, coupled with high projected cost of water, provides incentive for each of us to reduce our discretionary use of water for irrigation. Failure to meet the 30% reduction by 2015 would most likely result in large fee penalties assessed by LSGCD.

This series of articles is designed to provide you with information on how you may reduce your water use without substantial reduction in green space enjoyment. These six articles include proven ways to irrigate and save water from today’s typical irrigation methods.

We hope you seriously consider using one or more of these methods to reduce your irrigation water consumption, along with other suggestions for reducing all water consumption.

Please recognize, we all must reduce our water consumption. The ground water aquifer is not an unlimited supply of water. We believe we can all work together to accomplish this goal and minimize our inconvenience and cost.

Tables 1 and 2 summarize the potential for saving water and cost by implementing one or more of these suggestions.

It's up to you, the customer to help MUD 8 save water. The more we save, the less inconvenience and cost we will incur. Montgomery County needs to save ground water and we can help by using water for irrigation more wisely.

TABLE 1

SUMMARY OF ESTIMATED WATER SAVINGS AND COST OF MODIFICATIONS

2006 DATA-SINGLE METER

UNIT	PERCENT WATER SAVED, %	INSTALLED UNIT COST \$	ESTIMATED 2015 SAVINGS, \$	ESTIMATED METERED WATER SAVED, GALLONS	ESTIMATED GROUND WATER SAVED GALLONS
CUSTOMER	@ 30	0	107	34,600	37,000
RAIN SENSOR	@ 10	50	36	11,600	12,000
RAIN SENSOR	@ 20	50	71	23,000	25,000
SOAKER HOSE VS SPRAY HEAD	@ 80	225	43	14,000	15,000

TABLE 2

IMPLEMENTATION IN 2015 WITH PROJECTED 4,500 METERS

(ALL METERS PARTICIPATING)

UNIT	PERCENT WATER SAVED, %	INSTALLED UNIT COST \$	ESTIMATED 2015 SAVINGS, \$	ESTIMATED METERED WATER SAVED, GALLONS	ESTIMATED GROUND WATER SAVED GALLONS
CUSTOMER	@ 30	0	479,000	156,000,000	166,000,000
RAIN SENSOR	@ 10	50	160,000	52,000,000	55,000,000
RAIN SENSOR	@ 20	50	320,000	104,000,000	110,000,000
SOAKER HOSE VS SPRAY HEAD	@ 80	225	194,000	63,000,000	67,000,000

Two other methods of saving water are presented in the articles; however, these savings and cost are not included in above tables because they are specialty installations and it's unlikely a large percentage of customers will use these systems.

Unfortunately, the above savings are not cumulative. For example, if the customer chooses to diligently reduce watering; rain sensor and soaker hose savings will be less than estimated because above estimates are based upon 2006 average use. In other words, before a determined effort to reduce irrigation has been implemented.

What is a reasonable expectation of ground water savings?

Assuming customers aggressively reduce irrigation and implement rain sensor and soaker hose steps, savings of **175 to 225 million gallons per year of ground water should be saved by 2015.**

What savings in ground water usage must be attained by 2015 to meet the 30 % cutback mandate?

Assuming average consumption in 2006 and extrapolating to 4,500 meters projected for 2015 yields a volume, without conservation, of $455,000,000 \times 4,500/2,600 = 788,000,000$ gallons ground water consumption in 2015.

Lone Star Ground Water Conservation District mandate of 30 % = **788,000,000 X .3**
= approximately **236,000,000** gallons must be reduced by 2015.

The conservation steps outlined above can attain this goal by changing our irrigation habits, changing irrigation systems, a little tweaking to optimize and some additional irrigation by reuse of recycled water.

Thanks for your interest and consideration.

MUD 8 Directors and Operating Staff.

Data provided in this series of articles is believed to be accurate; however, MUD 8 assume no responsibility for guaranteeing savings or cost projected herein. It is the responsibility of the customer to implement changes to save water and associated cost.