

Alternative Irrigation Water Sources

Traditional potable supplies have been stretched beyond capacity

In recognition of the current drought conditions, expanded population and stressed water supplies, alternate water sources are currently in use and expansion of these sources is being seriously considered.

Alternate water sources include...

Rain water harvesting - dependent upon rain and large capacity storage.

Refrigeration and heating condensate - requires less storage for equivalent amounts of collected water.

Storm water - collected into wet ponds.

Ground water (wells) - limited based upon currently decreasing water quality and quantity.

(drilled 4 wells last month and 3 were good and 1 was salt water)

Reclaimed wastewater - very high quality and fairly level quantity.

(Steiner Ranch for example uses approx. 2 million gallons daily, on average, to water golf courses, parks and common area blvds)

(over seeding in winter based upon available reclaimed water is an asset)

Desalination - not only sea water but parts of local aquifers in Central and East Texas.

(will only be practical when the price of water supports it)

Reverse osmosis and membrane separation of minerals in water - very expensive and creates massive amounts of waste products.

(currently growing blueberries(requiring low ph water) in Kerrville with reverse osmosis)

Summary

Besides our use of potable water, the best and most economical solutions to irrigation water demand is through conservation, use of storm water and reclaimed water. The City of Austin is already supporting these concepts. There are several developments currently utilizing wet ponds for storm water detention and irrigation. Reclaimed water is being used to water substantial parts of the Mueller development and The University of Texas.

Grey water has not been discussed in this presentation. Grey water is bath water, laundry water and incidental nonfood household use. The reason is that there is research leading to several western states banning it use. It has been proven that massive bacteria pathogens can be generated when untreated grey water is applied outdoors. Also, phosphorus and cleaning materials can create a ground water contamination problem.

Implementation is based upon actual yield analysis and available storage capacity. The cost of development, storage, distribution pumps and piping, when compared to current inexpensive water prices, often does not support a good financial decision.