UCSWD Meeting, December 22, 2015

Present:

Pete Cameron - Chair

Duke Emerson - Treasurer

Laurel Schaafsma - Secretary

William Schretzmann - prospective board member

The meeting opened with a description of an improved, though expensive, septic system from Mr. Pete Cameron. The systems we all use in Florida today are well below 40% effective in eliminating nitrogen and researchers have come up with a system that is effective in the 90% range.

It consists of the regular septic tank plus two adjacent tanks. The effluent goes from the top of the regular septic tank into a second tank that has expanded clay and sand in it. This process is intended to nitrify nitrogen compounds to NO3 (nitrification). The effluent percolates through the medium, producing NO3. The final tank contains a wood chip and sulfur medium. Once the effluent passes through this last tank, the process of turning fecal matter to nitrogen gas is completed.

Next, Pete Cameron continued reading excerpts from the DEP's "Report on Expansion of Beneficial Use of Reclaimed Water, Storm water, and Excess Surface Water."

As an opener for the topic of storm water, Mr. Pete noted that wells were dug in downtown Orlando starting in 1900 to prevent flooding by siphoning off storm water into wells and down into the aquifer. Today, this method of flood prevention and/or "aquifer recharge" would not be allowed until the water has gone through treatment and meets a qualified standard before entering the aquifer.

<u>Tail water recovery</u>

Tail water recovery systems are best where groundwater levels are close to the ground surface. However, for the tail water recovery systems to store enough water for problem seasons, much of potential crop lands are needed. This is good re-use and storage method, but bad for maximizing the farmer's total use of crop acreage.

The SRWMD, as of January 15, 2015 has approved ONE tail water project. It's projected to conserve 45 million gallons of aquifer water a year. This particular project involves installing drainage tiles over a 240 acre track. Storm water is collected, and then piped to a downstream pond for future irrigation use.

The SJRWMD, the county and farmers (St. Johns County and local farmers in the Deep Creek Basin) are joining together to create a project within a 272 acre parcel. It is being called the "Masters Tract Regional Storm water Treatment facility". This parcel will collect excess storm water runoff from upstream potato farms. Once collected, the water will go through numerous BMPs cleaning processes (including a wet pond) to meet required water standards before it is distributed for irrigation purposes on sod farms.

Storm water

One example of a large scale storm water project implemented is as follows: DOT has partnered with local governments to develop alternative water supplies. This one in particular, consists of the City of Altamonte Springs, SJRWMD, along with DEP, and Apopka.

This project reevaluated I-4's retention ponds and determined the importance of it's' water re-use on large areas of the county's lands. DOT is funding a system to capture, treat, and redirect storm water runoff into Altamonte's wastewater system. It is used for irrigating. Excess water is sent to its neighbor Apopka, which is experiencing water shortages. Most of the project is being funded by DOT through their savings after eliminating the need to build retention ponds on I-4.

Surface Water

Most Florida residents are supplied with drinking water that comes from the aquifer (92%). The remainder of the population in Florida (8%), generally in the south portions of the state, use fresh surface water for their source of drinking water.

In the SRWMD, agriculture's use of water has increased. Much of the water for agriculture is being obtained from the aquifer. This portion of the Study Report, implies that agriculture industries could help decrease the groundwater use by increasing fresh surface water use.

SRWMD has named 4 major rivers to use excess runoff waters for potential future water suppliers. The Suwannee River was named as one of the four. Storage of water would be the primary focus. The time frame for collecting these excess waters would be limited to the wet months (January - May).

A Case Study in surface water, in Tampa Bay, is taking advantage of annual rainfall. As water becomes available, it is skimmed from Alafia, Hillsborough Rivers, and the Tampa Bypass Canal for treatment. Treated water is ready for consumption.

Mr. Pete Cameron and Mrs. Laurel Schaafsma then gave a synopsis of Union County's water treatment facility. Union's facility is not opened to the public and uses a slow treatment method (24 hour retention time). Waste water is aerated and chlorinated before being dispersed on county owned grass fields (leased to a cattle grazer). The remaining solid waste is dispersed on a separate field as fertilizer, which is intended for growing hay. Restrictions for feeding this hay to animals for 30 days is imposed as a precaution.

Mrs. Laurel Schaafsma added information, given to her by Sarah Owens in City Hall, that potentially could help with Union's wastewater treatment facility's future. There has been a grant approved to repair old waste water lines (Federal point grant, $650K). The county has also contributed funds to help with this project ($25K).

Another grant is being applied for. It stems from the SRWMD. This grant is strictly a feasibility study. The study will determine whether or not more "natural" methods of treating wastewater can be a viable option to coincide with Union's wastewater facility.

Mr. William Schretzmann mentioned climate change and its effects in Union County.

Mr. William Schretzmann mentioned a method of planting called, no till, that may help reduce erosion on sloped fields.

Mr. William informed the board that because of the UCSWD, a hazardous waste burning facility was denied access to build within Union County.

Mr. William Schretzmann indicated that he would like to be a board member of the Union County Soil and Water Conservation District.

Mrs. Laurel Schaafsma made a motion to add Mr. William Schretzmann to the board. The vote was unanimous.

The meeting adjourned at 8:06 pm