

MINUTES OF THE SPECIAL INFRASTRUCTURE COMMITTEE MEETING OF THE FLORIN RESOURCE CONSERVATION DISTRICT BOARD OF DIRECTORS

Tuesday, July 26, 2011

Attendance:

Committee Members: Elliot Mulberg – present
Tom Nelson – present

Associate Members: Davies Ononiwu – present

Staff: Mark J. Madison, General Manager

Consultants: Jim Carson, Wood Rodgers
Jeffrey Lodge, Wood Rodgers

Update on Source Capacity Improvement Program

A power point presentation was provided by Mark J. Madison, General Manager on the Source Capacity Improvement Program.

Progress made since the last Infrastructure Committee Meeting held on May 5, 2011:

- 1) District data suggests, the maximum day water demand may be significantly less than 10,626 gpm.
- 2) The District water usage records have been presented to CDPH for their review and consideration.
- 3) The District met obtained commitment from SCWA to reaffirm existing supplies and start negotiations to change the non-firm 1,600 gpm supply to a firm capacity when the Vineyard Water Surface Treatment Plant becomes operational.
- 4) Well 1D has become fully operational.
- 5) Wood Rodgers conducted depth specific water quality sampling at the Well site 12 and has completed action plans to restore Well 6 to service and to increase the capacities of Wells 4D and 11D.
- 6) RBF continues to prepare the final plans and specifications for the fourth filter train installation at the Railroad Avenue WTP.

Plan of action for the near-future:

- **Water System Hydraulic Model**
 - Wood Rodgers is updating the water system model for the EGWD system.
 - All of the applicable components of the new EGWD water system GIS map have now been identified.
 - The model will be used to help locate potential new well sites and pipeline size deficiencies that could be restricting flow for portions of the system.
 - The model is scheduled for completion in September of 2011.
- **Well 4D**
 - Increase the pump motor size from 125 horsepower to 200 horsepower
 - This will increase the nominal capacity to 2,000-2,200 gpm

- Add a variable frequency drive (VFD), hooking the generator to the District SCADA system, and an automatic transfer switch to the on-site generator
 - Adding a VFD and control logic will allow the District to continue using the existing on-site generator
 - Work is scheduled for Fall 2011
- **Well 11D**
 - Increase the pump motor size from 125 horsepower to 200 horsepower and change the pump to water lubricated
 - This will increase the nominal capacity to around 2,000 gpm
 - The program will now include adding a variable frequency drive (VFD), hooking the generator to the District SCADA system, and an automatic transfer to the on-site generator
 - Adding a VFD and control logic will allow the District to continue to use the existing on-site generator
 - Work is scheduled for Fall, 2011
- **Well 6**
 - Well 6 has consistently exceeded the CDPH MCL for arsenic (11 to 17 µg/L) and manganese (130 to 180 µg/L)
 - There is currently no power to the well site
 - A work plan is being prepared to plug back the well to 280 feet to improve the water quality
 - A well liner or a reduced production capacity will likely be needed to control sand production
 - Work is scheduled for Fall 2011
- **Well 9**
 - EGWD sampled Well 9 to test the current water quality
 - The arsenic is acceptable; however, the manganese is over the CDPH MCL
 - Wood Rodgers is preparing a scope of services that includes additional testing at lower capacities
 - Well modification similar to the “plug-back” proposed for Well 6 may be needed to improve the water quality
- **Well 12**
 - Well 12 has a potential to exceed the CDPH MCL for both arsenic and manganese with arsenic concentrations. The average concentrations for both arsenic and manganese are approximately 90 percent of the CDPH MCLs
 - The monitoring well on-site, which was constructed in 1987, was sampled by Wood Rodgers. The aquifers from 320 to 420 feet contain 23 µg/L of arsenic and 370 µg/L of manganese, **while the shallower aquifer above 250 feet contains 3 µg/L of arsenic and <10 µg/L manganese**
 - Plugging back would likely improve the water quality making Well 12 a more dependable water source
 - This will also reduce the production capacity
 - Project is being considered for Fall 2011 or Fall 2012

Potential long-term plan:

New Deep Well

- This project is dependent on need and funding
- Well siting to be driven by system needs (model) and available land
- Well 13 (Hampton) appears to be a candidate location
- Exploration depths should increase to 1,400 feet

- Well 12 data suggests good water quality above 280 feet
- A new 1,549-foot well completed July 2011 in the City of Galt requires no treatment
- Completion time is 18 to 24 months from the start date

Questions, answers, and comments include:

Elliot Mulberg, Vice-Chairman, inquired which wells were used in calculating the maximum day demand. Mr. Madison replied, well # 1D, 3, 4D, 8, 11D, 12, and 14D; all of the active wells are included into the number; however, well # 14D is deducted because it has a nominal capacity output of 1739 gallons per minute.

Mr. Madison stated that well # 9 is a good candidate for modifying it to become an active well.

Tom Nelson, Director, questioned what had happened to well # 2 & 9. Mr. Madison replied that well # 2 had been abandoned and destroyed long ago and well # 9 was previously discussed. Mr. Madison explained that well # 4, 5, 7, 10, and 11 are slated to be destroyed. Mr. Mulberg inquired why they would need to be destroyed. Mr. Madison replied because they have water quality problems and sanding problems.

Mr. Madison commented that well # 12 is being monitored closely and there have been no water quality issues that are reportable to CDPH.

A discussion occurred regarding water connection fees. Mr. Madison stated that the District will need to look closely at the fees over the next year.

Mr. Madison informed the committee that he will be bringing amendments to the Wood Rodgers contract to the full Board for approval for various unforeseen tasks that will bring the Source Capacity Improvement Program to completion.

Future items of discussion with the Infrastructure Committee:

- Meter Retrofit Program
- Development of the Capital Improvement Program

Respectfully submitted,

Stefani Phillips, Secretary