City of Columbia City
Water Resources Committee Meeting
July 20, 2010 - 6:00 p.m.
City Hall, 1840 Second Street
Meeting Minutes

Attendees:
Bill Guy (by telephone)
John Burdett
Finos Lunsford
Robert Campbell
Micah Rogers, Public Works Superintendent
Leahnette Rivers, City Administrator/Recorder
Also in attendance: Eric Collins of GSI Water Solutions, Inc.

1. Continued Ground Water Well Pumping Capacity Review and Discussion: Leahnette explained that Micah Rogers has been working with Eric Collins of GSI Water Solutions, Inc., who is conducting an investigation about the loss in pumping capacity at Public Works Well 2. She said water samples were taken and sent back east to a company that specializes in these issues, and Eric has evaluated the test results and developed findings and recommendations for the Committee.

Leahnette explained that during FY 2009-10, we purchased a total of 727,295 CF of wholesale water, and we supplied 7,271,884 CF from our groundwater well. She said an increase of 50 gpm capacity could reduce our wholesale water costs by up to $7,132 per month. She noted that using FY 2009-10 actual usage and the current wholesale rate, an increase of 50 gpm would save us up to $17,382 in water purchase costs per year. Finally, she said if we exclusively used wholesale water, using FY 2009-10 usage and the current wholesale rate, we would pay $191,180 for water purchases per year.

Eric Collins delivered his Columbia City Water Supply Well Assessment and Rehabilitation Options report to Committee Members. He said they assessed the following three possible causes for the decrease in well yield: 1) Aquifer pore-space reduction from cement grout injected into old well; 2) Aquifer mineralization from cement grout injected into old well; and 3) Bio-fouling in the new well and degree of penetration into the formation. He said they have concluded that the decrease in yield is attributable to bio-fouling. They arrived at this conclusion based upon the results of the recent water samples, which revealed excessive Sulfate Reducing Bacteria (SRB) in the casing and aquifer. He said SRB is not pathogenic. He said they also conducted an evaluation of the amount of cement that was used to abandon Public Works Well 1. He said the amount of cement used would have traveled in a 5' radius,

and the likelihood that it had much of an impact on Public Works Well 2 as much as 20 to 50 feet away is slim.

Eric said the City can choose to 1) Do nothing; 2) Rehabilitate the new well and conduct routine preventative maintenance; or 3) Construct a new well. He said if the City chooses to do nothing, the pumping capacity of Public Works Well 2 will continue to decline. He recommended the City consider rehabilitation consisting of mechanical and chemical treatment, followed by routine preventative maintenance. He said mechanical treatment should consist of brushing and surging, along with hydropuls, and chemical treatment should consist of a special chemical mixture (biocide and dispersant) into the formation to eliminate the bio-fouling. He warned that mechanical treatment without chemical treatment could improve yields, but those regained yields would likely be short-term due to the continued bio-fouling. He said this aggressive approach to rehabilitation would cost approximately $25,000, and routine preventative maintenance would consist of bi-annual water testing for bio-fouling ($400 each), using the well (shutting it down and allowing it to sit promotes SRB growth), and conducting appropriate periodic mechanical or chemical treatments as needed. The cost estimate includes GSI's oversight of the rehabilitation work, which is estimated to take one week.

It was the consensus of the Committee that we recommend the City Council move forward with aggressive rehabilitation measures as soon as possible as recommended by Eric Collins. Eric will develop a scope of work to submit to three contractors for price quotes during the next week.

2. Adjourn: Meeting adjourned at 7:18 p.m.