

MINUTES
PIQUA CITY COMMISSION WORK SESSION
THURSDAY, DECEMBER 9, 2010
10:00 A.M.
ADMINISTRATIVE CONFERENCE ROOM
201 WEST WATER STREET
PIQUA, OHIO 45356

Piqua City Commission met in a Special Work Session in the Administrative Conference Room located on the 2nd Floor of the Municipal Government Complex at 201 W. Water Street. Mayor Fess called the meeting to order at 10:00 A.M. Also present were Commissioners Vogt, Wilson, Martin, and Terry. Absent: None. Also present were Utilities Director Dave Burtner, Water Superintendent Don Freisthler, City Engineer Amy Havenar, Finance Director Cindy Holtzapple, City Manager Fred Enderle, Bob Yoxthimer, Consultant from CDM, and Brent Huntsman of Terran Corporation.

Purpose of the Special Meeting is to discuss Water Exploration – Findings and Options.

Mr. Freisthler stated Seismic Refraction was performed on six different sites, and the Seismic Refraction results were then evaluated. It was determined the presence of a deep but narrow aquifer that runs northwest to south-east across portions of the Johnston Farm property.

There was discussion of various sites that were tested, how the testing was done, water contamination, and recharging of wells was explained.

Utilities Director Dave Burtner stated there are four options to be reviewed and gave a brief recap of the information they have gathered since the April 1, 2010 Commission Work Session. These options include:

Option 1: Continue forward with ground water exploration trying to achieve 100% ground water supply.

Option 2: Focus on achieving a blended supply of water (both ground water and surface water) and move forward with the new water plant design.

Option 3: Move forward with the new water plant design using the existing surface water sources.

Option 4 Pursue the purchase of treated water from the City of Troy.

Options 1,2 & 3 will all require the construction of a new 6-million gallon water treatment plant at an estimated cost of \$20 million - \$22 million (regardless of the water source).

Water Plant Superintendent Don Freisthler went over each of the four options explaining the various steps that would need to be taken, and the recommendations along with the pros and cons of each option.

Option 1

Bob Yoxhimer, Consultant from CDM, explained if Option 1 is chosen they will have to modify the contract to include Task 2A which will allow for the deepening of the two proposed piezometers and the addition of a 3rd piezometer to 300' deep to explore the deep aquifer found on the Johnston Farm site. This will increase the contract cost by \$92,115 with an estimated cost to be a minimum of \$10 million for the development of the new well fields and the associated piping. Mr. Freisthler stated it would require a lot more testing to determine the best area for the wells and the expense would be very costly. There is no guarantee of the quality or quantity of the water in the aquifer, doing test would be very difficult because of the location. Because Johnston Farm is a historical site it took eight weeks just to get permission to conduct the tests, and archeologists would have to monitor any drilling to oversee the finding of any artifacts.

There was discussion of the pros and cons of Option 1. Pros are: It would require less treatment and less cost for operation, the water would be bacteria free, and there would be virtually no turbidity and a greater chance for odor free water. The difference between ground water and surface water was explained, along with the different type of water plants that would be required for each.

Cons are: There would be unknown water quantity and quality, will most likely not find the entire water supply needed, problem with land availability for placement of the wells, a wellhead protection plan would be required, and it would require a substantial capital cost for ground water exploration and development.

Option 2

If Option 2 is chosen we will still have to pursue the exploration of the deep aquifer as in Option 1 and combine this water with the existing surface water sources (Gravel Pit, Great Miami River & Swift Run Lake). And the costs are estimated to be a minimum of \$10 million for the development of the new well fields and piping.

There was discussion of the pros and cons of Option 2. Pros are: Blended water requires less treatment and less cost to operate, and the existing surface water sources can be used.

Cons are: Both wellhead and watershed protection plans are required, there is still the issue with land availability for well placements, would have to meet all ground water and surface water treatment regulations, and would still require substantial capital cost for groundwater exploration and development.

There was discussion on possibly retrofitting the old water plant, but Mr. Burtner explained that the EPA would not allow the city to build a new plant on the old site. The current Water Plant is eighty-five (85) years old now, said Mr. Burtner. Finance Director Cindy Holtzapple stated the city would have a hard time borrowing funds for the project because of the age of the plant.

Option 3

If Option 3 were chosen the City would begin moving forward with the new Water Treatment Plant design. The EPA has stated a surface water plant would be allowable, and would need to replace the Raw Water Pumping Station. A new modern surface water treatment plant can meet the required EPA treatment regulations, and there would still be an overall cost savings for this option of an estimated \$4 million for not having to develop new well fields. The costs are estimated to be \$6 million for the construction of the raw water pump station(s) and the associated raw water piping.

There was discussion of the Pros and Cons of Option 3. Pros are: Work could begin immediately towards the new plant design, there is an adequate supply of source water available, the EPA has already approved the concept of a new surface water plant, and there would be substantial savings in the overall project cost versus having to develop new well fields.

Cons are: A watershed protection plan would be required, and there would be less stable water quality.

There was discussion on the amount of water that was required per day for the City of Piqua, and it was stated six million gallons was required at this time per day, but that amount could increase if a large water user such as a plastics company would come into the city and require large amounts of water daily.

Option 4

Negotiations with the City of Troy would have to be re-opened to purchase their treated water. Costs estimated for this are \$150,000 for the water system study to determine how are current system will react to the reversal of flow through our system. A minimum of \$15 million would be needed for the construction of the new water system infrastructure to extend and connect into the City of Troy's existing water system.

There was discussion of the Pros and Cons of Option 4. Pros are: This would eliminate the need to construct a new full-scale water treatment plant in Piqua.

Cons are: It would leave the City of Piqua totally dependent upon the City of Troy for all of the water supply, would require the City of Piqua to reverse the flow of water through our system, it would reduce our ability to influence customer rates, and we would still be required to construct a limited water treatment plant facility.

There was discussion regarding the City of Troy having complete control over the City of Piqua on water distribution, quantity and rates and fees to our customers. City Manager Enderle stated he doesn't believe this is the best option, the City would still have to build a plant, would still have to rely on someone else for water, would have no say over the rates and Piqua's rates could not be lower than the City of Troy's rates.

Mr. Burtner emphasized the City is at a very important time in this study where we need to make decisions. It is important that the Ohio EPA see that we are making progress and moving forward to correct the situation. This is something that needs to be done sooner than later.

Summary

Being able to obtain 100% of the water needed from ground water would be the ideal scenario as far as treatment, but based on the research to date it is very unlikely to happen. At best, we could possibly achieve only a portion of our water source needs. Having blended water (both surface and ground water) provides a better raw water quality than strictly surface water which makes for less costly treatment. However, we would still have the cost of the new well development. By using an all-surface water source, future regulations could require we increase our raw water storage capacity. If this is required this could be achieved by dredging out the lakes and hydraulic system, which could affect the community in regards to the aesthetics of the bodies of water, but dredging would also improve the quality of the raw water.

Conclusion

By finding the new aquifer on the Johnston Farm Property, it was felt the Commission should be apprised of the findings to determine whether they want to continue the groundwater option any further. This location is probably going to be the best option to find a ground water source, but will most likely not yield the capacity needed for our treatment operations. The proposed treatment plant would be designed as a surface water plant utilizing the existing surface water sources and would still be capable of treating ground water if the City should decide to pursue that in the future.

Commissioners discussed the options and raised various questions concerning each option along with the pros and cons of the options. There was discussion of the possibility of raising the water rates in the future with the last rate increase being a number of years ago.

Mr. Freisthler stated he wanted the City Commissioners to be better informed on the issues with the Water Plant. Mayor Fess stated this was a very informative study session and said she felt she understood the situation much better. Commissioner Wilson stated, "We need to better educate the public on the need for a new Water Plant".

Mayor Fess stated the best option seems to be to build a new water treatment plant for surface water with the possibility of using ground water in the future.

All Commissioners were in agreement to further pursue Option 3 at this time.

Moved by Commissioner Vogt, seconded by Commissioner Martin, to adjourn from the Piqua City Commission Special Meeting at 11:50 A.M. Voice vote, Aye: Wilson, Fess, Vogt, Martin, and Terry. Nay: None. Motion carried unanimously.

LUCINDA L. FESS, MAYOR

PASSED: _____

ATTEST: _____
REBECCA J. COOL
CLERK OF COMMISSION