

MINUTES
CITY COUNCIL MEETING
June 23, 2009

The Wayne City Council met in special session at City Hall on Tuesday, June 23, 2009, at 5:48 o'clock P.M. Mayor Lois Shelton called the meeting to order with the following in attendance: Councilmembers Verdel Lutt, Jon Haase, Doug Sturm, Kathy Berry and Ken Chamberlain; City Attorney Amy Wiebelhaus; City Administrator Lowell Johnson; and City Clerk Betty McGuire. Absent: Councilmembers Brian Frevert, Dale Alexander and Kaki Ley.

Notice of the convening meeting was given in advance by posting in three places on June 19, 2009, and a copy of the meeting notice and agenda were simultaneously given to the Mayor and all members of the City Council. All proceedings hereafter shown were taken while the Council convened in open session.

The purpose of this special meeting was to discuss and make a decision on a proposal for either a new wastewater plant facility or to rehab the existing one.

Roger Protzman of JEO Consulting Group, the engineer on the project, advised the Council that their job was to arrive at a consensus on a final selection of a wastewater treatment alternative.

Mr. Protzman brought the Council up-to-date on what has taken place since 2005 on this matter. In 2005, the City received a new permit. One of the conditions of that permit was that a Facility Plan be completed within the first 12 months. This Facility Plan, four years later, is still trying to achieve and meet the objective that was required by the NDEQ. The purpose was to evaluate the system, come up with recommendations or solutions, and then go through the process of implementing those recommendations or

solutions. One of the things our permit required was the implementation of a disinfection system. That goal was achieved on May 1, 2009.

The Council previously worked with another consultant to evaluate the wastewater treatment facility. When JEO was brought on board, they were asked not only to reevaluate the existing facility, but also look at a couple of new innovative treatment technologies, two of which go by the name of Aquarius and Bio-Shaft. To meet that objective, they brought in two pilot plants to demonstrate the operation of these technologies. To date, the Bio-Shaft technology has been less than ideally successful. They have not been able to fully comply with the permit requirements on an extended term basis, and the data is just not there for them to recommend as an option. So they set the Bio-Shaft option aside, thereby narrowing it down to rehabbing the existing system and looking at the Aquarius system.

One of the advantages and the claim to fame for the Aquarius system was minimal production of sludge or zero production of sludge, depending upon which advertising brochure you look at. In looking how the system operated, it has generally met that intent. They have experienced that the solids which go out the backside of the plant are a low enough concentration that we meet our permit limit, so there is not a long-term accumulation of sludge inside the treatment system. Our data so far indicates that the system meets permit requirements for both ammonia and BOD. The third one is the total suspended solids. We have had tests that have complied with the solids permit requirements, but we have also had tests that have not complied. The average is slightly greater than the permit requirement. For that reason, JEO has said that if the City were to

select this alternative, they would recommend that we add supplemental treatment to this system to protect the City from permit violations.

When JEO looked at the existing system, they found that hydraulically the system is adequate to meet the flows, both today and anticipated design flows into the future; however, when they look at one of the main components in the system, which is the rotating biological contactors, those discs and how they are sized are undersized to remove both the organic and ammonia waste streams. If the City had to strictly meet an organic permit requirement, we would probably comply. That is what our existing data shows. But, if you look at having to remove ammonia and the organic waste stream, you see that the ammonia, which is a little bit more difficult to remove, has generally been in compliance, but is always right on the edge. We are following the permit limits. Basically, Wayne's plant is running at about maximum load right now. What they have said is that if we would look at rehabbing the existing plant, we would not only have to replace some components that have met the design life of over 25 years, but we would also need to add more RBC units to get the ammonia down to a level that we could reliably meet our permit and not be stressing the system.

Mr. Protzman then went into a detail cost comparison looking at construction costs and operational costs. They looked at existing operational costs to make sure their figures were in line with what we were experiencing to date. They did show that the rehab of the existing system would cost less to construct, but they show that operating the new Aquarius system would cost less to operate primarily because there are fewer motors, etc., in operation. There would be a lower electrical demand operating the Aquarius system.

The cost difference between the two amounts to about \$25,000 a year in electrical demand costs. They tried to put all of that into a present work analysis which they have gone over and is summarized in the study, looking at a 20-year design life on these systems.

One of the hard things to quantify is the odor issue, which is something they were asked to address. A lot of the odor emanates from how we treat the sludge today. The sludge is taken from the existing plant to a small lagoon where it is aerated. As more sludge is brought in, the old sludge is displaced into the larger lagoon (approx. 25 acres). There are various reasons why that odor comes off the lagoon. However, one of the main reasons is that when the ice comes off the lagoon or melts in the spring, the water setting underneath is essentially septic because it has not been exposed to the atmosphere or getting oxygen. To quantify that and come up with what would it take to fix that in dollars and cents is somewhat challenging.

The upgrading of the existing plant will not take care of the odor problem. You will still have the same odor issues that you have today.

The Council is tasked with the job of deciding whether the additional cost to construct the Aquarius system is worth the advantage of having a much lower odor issue.

Councilmember Lutt asked Mr. Protzman if the City builds the Aquarius system and we don't add too much more sludge to our lagoon, but our lagoon still freezes over every year, will we get that smell coming off the existing lagoon from the old sludge. Mr. Protzman responded that he thought we would still get the odor in the spring, at least for the first few years. Staff has indicated that the odor doesn't just occur in the spring. That's been the primary cause, but the odor is year round. Staff indicated that the odor

was kind of strong this past weekend because of some operational changes made at the plant. Things like that will probably be minimized or even go away. But the spring and fall turnover will continue to occur for some time.

Councilmember Lutt asked Mr. Protzman if we would reduce the size of the lagoon, is there any way to drain the water safely into the creek and just have a dry manure bed. Mr. Protzman responded that there is a part of that that could happen, but he didn't know if it could happen completely the way he is thinking. We could drain some of the water off. The State has regulations for abandoning a lagoon. If you have six inches or less of sludge, we would need to cover it up with dirt. If you have more than six inches of sludge, we would have to haul it out and dispose of it.

There are two communities in Indiana and one in Wisconsin that are seriously considering the Aquarius system. Wisconsin is in the process of finishing their design. They have activated sludge plants today. They have two packaged plants sitting side by side. Because their tanks are deep enough, they can retrofit some of the Aquarius system into those tanks. This is going to work great for them because all of the wastewater that comes out of the system goes into a seepage tank and then into the groundwater. Their permit only has limits on bod and nitrogen. There is no limit on solids, so even if the Aquarius system had some ice like we have seen, it's no big deal. They expect to have their plant in production shortly. He talked to the design engineer and state regulator who have reviewed the facility plan. Everybody seems positive there.

A Facility Plan was done in Westville, Indiana. Aquarius was chosen as the selected technology. However, due to the economic downturn, they said they were not going to expand their wastewater plant right now, so the study has been put on the shelf.

The other community, North Vernon, which is a joint utility company (a number of communities working together called Jennings North Regional Utilities) have recently submitted their plans and specifications to the Indiana Dept. of Environmental Management. Mr. Protzman visited with a staff member who stated they have looked at the pilot plants and at the preliminary design summary and cannot see any reason why they would not approve this system. Their facility is about half the design size of the Wayne facility.

Mr. Protzman noted he received the standard warranty that Aquarius offers. The evaluation of the system takes place 60 to 120 days after the system is up and operating. In his opinion, 60 to 120 days was not enough of a warranty period. JEO requires all of their general contractors to provide at least a one-year performance bond on their work. The Aquarius staff seemed to indicate that those terms were negotiable. His recommendation to the Council was to ask for a two-year warranty (minimum).

We have a preliminary quote from Aquarius. A concern has been that if they are the only suppliers of this equipment, will their bid be high. Aquarius would prefer providing the bulk of the equipment if we want the guarantee.

Mayor Shelton stated one of the other concerns that came up was how much of the equipment that we are going to be purchasing here is made here and how much is foreign made. Mr. Protzman didn't know if he could answer all of that, but a lot of the equipment they saw in Israel was equipment they were buying here in the U.S. They posed the question what if Aquarius goes out of business, what happens then? They said if it came down to it, they would provide us with the recipe for the textile and then we could have it custom made for our application.

Mr. Protzman stated the sludge holding tank was put in the design not knowing whether or not we were going to need it. In discussions with staff and the wastewater committee, one of the things talked about was that maybe the City doesn't need to build that sludge holding tank. Maybe we can just continue to deal with sludge the way we do today. This would reduce the cost of the project. But for the time being, they have left it in to be conservative.

Councilmember Lutt stated one of the first questions the public will ask is where are we going to get \$7 million dollars. Is there any way of knowing a ballpark estimate about what we could receive from grants, etc.

Mr. Protzman advised the Council he could not answer that question this evening. There is a process in the way the State does this. We will submit the Facility Plan with an application to a committee that is called "Water/Wastewater Advisory Committee" and that committee is made up of representatives from the United States Department of Agriculture, Nebraska Department of Economic Development, and DEQ. Each of them has their hands on the pool of money. They will look at Wayne and the economic conditions of Wayne and the cost of these systems and then try to put together a financial package to address paying for such improvements. They do expect that the customer will need to pay a reasonable amount of this expense. They don't just hand you a grant so you have a low user cost. They want you to pay a reasonable amount. What reasonable is varies from each of those three agencies. But in general, the dollar value ranges from \$25 to \$35 a month depending upon which one you are talking to. Then what they try to do is give you a loan amount to force your rates to that dollar threshold. Then they will

give you grants beyond that to try to hold your rates so that they don't go past that dollar amount.

Councilmember Lutt thought that was only fair. If the government is basically the one that is forcing us to make this change, they should also pitch in to help build it.

There being no further discussion on the matter, Councilmember Lutt made a motion, which was then seconded by Councilmember Chamberlain to select the Aquarius system as the new wastewater treatment plant and to require them to provide a one-year warranty period. Mayor Shelton stated the motion, and the result of roll call being all Yeas, the Mayor declared the motion carried.

Councilmember Sturm made a motion and seconded by Councilmember Chamberlain to adjourn the meeting. Mayor Shelton stated the motion, and the result of roll call being all Yeas, the Mayor declared the motion carried and the meeting adjourned at 6:13 p.m.