

WATER COMMITTEE
JULY 10, 2019
MINUTES

MEMBERS PRESENT:

Pete Frisina, Chairman
Frank Destadio, Vice Chairman
Steve Rapson, County Administrator
Russell Ray, Acting Water System Director
Charles Oddo, Commissioner
Jimmy Preau
Bill Holland

NON-VOTING MEMBERS:

Dennis Davenport, County Attorney
Jason Bodwell, CH2M/Jacobs

The meeting was called to order by Chairman Pete Frisina at 8:00 A.M.

I. APPROVAL OF MINUTES FROM THE MEETING ON JUNE 12, 2019.

Vice Chairman Frank Destadio made the motion and Bill Holland seconded, to approve the minutes from the meeting on June 12, 2019. The motion passed unanimously.

II. WATER SELECTOR UPDATE.

Russell Ray presented graphs from the Water Selector data. Back in May we started seeing higher manganese levels at the plant; IXOM was concerned about this and brought some divers in and found there was a small seal problem at the bottom of the water selector barrier. They took care of this, but it also appeared there might be some issues with the lower gate on the structure itself. This is our lower intake, there are three intakes on the structure; the middle is covered by the water selector. He pointed out the information on his diagram. The committee discussed this information at length, with Mr. Ray pointing out various information as the discussion ensued. The graph was created by IXOM.

Mr. Ray explained we are learning by being able to look at this data; we have never had this kind of data before, it is a big plus to be able to analyze what is in the lake. He explained what IXOM did in order to do these graphs, to collect the data they took the sonde out of their cabinet and with an extension cable dropped it down into the lake and ran it all the way up and down the column. They ran it in the barrier and also inside the wet well. He pointed out on the graph that blue represents the wet well, orange is the reservoir and green is inside the barrier.

Further discussion pertained to the manganese levels. Mr. Ray said in mid-May we had very hot, dry conditions. We were pulling more water from Lake McIntosh. Levels of iron and manganese started rising in the raw water. Based on the water quality in the lake or what is being collected at (in this case) the upper gate, it doesn't correlate well. Why would we be having these high manganese levels? Mr. Ray showed a slide with the manganese levels, part of them going off the scale in the lower levels. He pointed out the elevations and the concentrations in the column.

He showed a slide on dissolved oxygen in the lake, it is high in the upper levels as you would expect, then down five or six feet lower it drops off quickly. Inside the barrier you can see where the gate is pulling the water in. It is uniform down to the level where it is being pulled into the wet well. Then, because it doesn't mix well in the lower areas, it does drop off. You have mixing in part of the barrier.

He then pointed out what is seen inside the wet well itself. He said the question is why would that be happening? He then showed slides on turbidity and chlorophyll.

Mr. Rapson commented it would be helpful to show the manganese range, then how do we treat it, what are we spending money on. Are we buying more carbon or are we buying more phosphate, whatever those are. If it is high, how does that impact operations and what does that do?

Mr. Ray stated this situation and the data we are getting now, is allowing us to see things we have never seen before. He said we will have more data to compare at the next meeting. Vice Chairman Destadio commented chlorophyll is going to be normal at the top gate in the summer. Mr. Ray said if we didn't have the water selector barrier in place we would be getting water that needed to be treated differently. We have not used carbon this year, and we will be looking at the data for three months to compare the numbers and cost involved.

Mr. Ray explained the water in the reservoir is going to be warmer at the top and it is going to drop off, inside the barrier it stays constant until it gets down below the middle gate, it is being mixed throughout. We were pulling the higher manganese water out of the wet well up to the holding pond, we should not see this kind of manganese in the wet well. Another part of the puzzle is it appears we may have a leak in the lower gate, some water coming in from that lower gate at the very bottom of our wet well. We may have to bring in a diver ourselves to go into that wet well and confirm it. When we are not running above 17 MGD pulling from the lake, we can typically treat it okay. The numbers represented are milligrams per liter/parts per million.

Mr. Holland asked how much over is acceptable. Mr. Ray said you want manganese to be in .01 range. We don't want anything higher, if it is higher we can treat it by using chemicals to bring the numbers down.

Mr. Rapson commented we have a lot of raw data coming through the gates; this enables us to do a lot more trouble shooting than what we were doing before. Our trouble shooting before was literally let's throw this out 10 feet deep and take a sample; go back and hope it is the same when we get back. Mr. Ray said we primarily use chlorine dioxide to treat manganese; we can use sodium permanganate as it comes from the lake into the holding pond. We inject some sodium permanganate; it is slower reacting and works well at the holding pond to do what it needs to do over a longer period of time.

Mr. Ray stated carbon is used mainly for taste and odor issues. When you see chlorophyll going up that is when you have the potential for...Mr. Rapson commented about when we looked at IXOM and the gates trying to see what savings we will have; then looked at the \$160,000.00 worth of savings they are projecting us to have, 80% of that is carbon related; 14% is permanganate, then you have aluminum and lime. What we are attempting to control to a large degree is the chlorophyll content from the algae, which is where the taste and odor come from. We are nowhere near that kind of an issue.

Commissioner Oddo commented the question for him is going to be is the cost of the gate or even if we don't save money, what are we obtaining. Mr. Rapson said in looking at the two month analysis, keep in mind we are trying to justify the annual savings associated with the chemicals, 80% of that is based on the carbon; \$130,000.00 of that \$160,000.00 worth of projected savings is that we are going to lower our carbon. We were using five bags of carbon, and so far we have not used any bags of carbon; just to put it in perspective. He said he thinks financially speaking operationally with the data that we are getting, he thinks we are hitting home runs on both of those fronts at this point.

Vice Chairman Destadio commented as long as you are keeping the carbon down, yes. The carbon is only going to be for the chlorophyll. If you are not having to treat for chlorophyll, then you should be showing savings. Mr. Rapson said he thinks what Russell is saying is we have all these data points now for manganese and when you have all that data going in and it doesn't look like that is what is coming out, obviously there is some issue. We think the issue is a problem with one of the gates, he knows that even on this particular gate we actually had IXOM come and they did some repairs on the lower gate that they had installed. There was some leak around their lower gate. Now we are actually talking about there might be additional leakage.

Commissioner Oddo commented that if you forget the chemicals, the data we are obtaining provides better quality water. Safer water. Is the subjective cost of this gate worth it. Mr. Rapson said he thinks in this particular case, we really don't have to make that judgment because we are seeing both at this point.

Vice Chairman Destadio said if you are finding a leak in the gate, however you are finding it, you are going to get safer water. It appears you have a leak in the lower

gate. Mr. Ray said it was not conclusive, but while the diver was there he went over to our lower gate and pulled debris away from it and it appeared to be going right back. Indications are there are some issue; he said his understanding is these gates are not water tight. Maybe there are some brands that are, but they don't necessarily have to be watertight, but it may not be quite closed and allowing some water to come through. He said he knows Kelly with IXOM is looking at level differences between the lake and the wet well and trying to determine how much water could come through even. Something is going on that we are going to have to look at; and it is good to find out now, because in the future in wanting to run more water production through that water plant, this is a problem that is going to come up even more.

Mr. Rapson commented we obviously want all these fixes fixed before we turn around and we put another one in place, which is what this is all about. It is all about when we hit the trigger to initiate the manufacturing for the next gate, because if they can do something to tweak that manufacturing process they will do that as well.

Mr. Ray added one of the main chemicals we are not using so far this year is the carbon. Vice Chairman Destadio commented that none of this indicates what you purchase is a problem; in fact the problem is in the gate. All this is doing is showing you that, which is good. Mr. Ray explained the state has required us in the permit to check the water quality in the reservoir at three different levels every so often, let us just say weekly. Obviously we were doing that with a different system, this measurement system that they have is very nice, it has been a nice addition.

Jason Bodwell clarified that no carbon has been used this year. Mr. Ray said we have not. Mr. Bodwell went on to say from the standpoint of the carbon feed system having trouble that is a good thing. That gives us a chance to fix it, so that if we do have to feed, we can.

Mr. Rapson asked about the time frame on this repair. Mr. Bodwell said Green Compressor is supposed to come out. Mr. Ray said he has asked the question and it appears the Green's Compressor humidity detection device was not working and they were supposed to be replacing that. Mr. Ray said he will have to ask again.

III. WATER PLANT UPDATE.

Mr. Bodwell reported they were going to replenish the filter media and they determined that the valves in each filter needs to be replaced before we replace the filter media. He said he has a spec for that in his inbox, he just needs to get the valve spec to Ted and Natasha, and they will put that out on the street. Once we replace the valves then we can move on to replacing the media, this all can happen pretty quickly, these are not big projects. The filter control replacement is something that Ted and Natasha decided could not be sole sourced. He said has a

spec written for that, he hasn't given it to Ted and Natasha yet, but once he does they will put that out on the street and we will get that project going as well.

Mr. Bodwell went on to say the chlorine dioxide design is on him, they are writing a task order to do the construction management of the construction and they will be putting that out on the street very shortly. Natasha and Ted had some document changes to the document that they wanted us to incorporate and they did. They will probably put that on the street in the next week or two. Probably by the next time we sit down, in a couple of weeks, all three of these projects, the new valves and the filters at South Fayette, new filter controls at South Fayette and chlorine dioxide will probably all be out on the street by that time. Chairman Frisina commented, in case everybody does not know, Natasha and Ted are the Purchasing Department. Mr. Bodwell said all three of these projects are going on at South Fayette. He said they should all be out this month.

Vice Chairman Destadio asked if the bid award will be in August. Mr. Rapson said probably not, these are big projects. Mr. Bodwell said the valves probably, because that is pretty inexpensive, their estimate is about \$60,000.00. Mr. Rapson said the problem is you put it on the street and typically it is on the street 20 to 30 days and then depending on the size of the project there is usually questions and follow up to make, it kicks in another 20 to 30 days. Mr. Bodwell said he thinks the valves will be pretty easy, it could be August. Mr. Rapson said the media is sole sourced. Mr. Bodwell said he is hoping the company that is being sole sourced to replace the media will also be the one that is selected to be do the valves. It will be efficient, it will be less expensive, and we will have one contractor. Chlorine Dioxide is a bigger project estimated at \$1.4 million. That probably won't be in August, because of the questions and review of the proposals that will probably be more September.

Mr. Ray reported that Jacobs is working on our solids handling for both plants, focusing on South Fayette. You will hear more about that as we get further down the line. They have done some preliminary analysis. They have taken some of our solids from the plant and run it through various solids drying systems and we will be making a recommendation eventually on what will be the best way. Right now our sludge comes out of the thickeners and it is placed in the drying beds. We are looking at a mechanical type of drying versus doing the drying bed technique. In this process, we are looking at the whole solids handling train throughout the whole plant, and how we remove the solids from the sed basin. As we expand production at Crosstown, this issue with the sludge thickener is going to be a question to have to be looked also.

Vice Chairman Destadio asked how we handle disposal after it is dry. Mr. Ray responded right now, once it is dried we use a bucket, pick it up and put it in a roll off. It goes to a commercial landfill at this time. There has been discussions, once we put in the solids handling system that we have talked to Vanessa about possibly putting it in the county's facility. Right now, we have a commercial hauler taking it to a commercial landfill.

Vice Chairman Destadio asked if there is any consideration on selling. Mr. Ray said there doesn't appear to be a market for it. Mr. Rapson said he does not think that we have enough of it to be able to sell it.

Vice Chairman Destadio commented for a while Peachtree City had a company come that was drying it, bagging it and selling it. It did not seem to work financially for the company. Mr. Rapson said that was WASA, wastewater is basically fertilizer type stuff. What we have is basically sedimentation.

Mr. Bodwell commented that Clayton County Water Authority actually pelletizes their wastewater into pellets. There is a commercial market for that, but that is expensive and they have a tremendous amount of infrastructure to actually get to the pellet stage.

Vice Chairman Destadio asked if all these projects are part of this fiscal year. Mr. Rapson said these projects are part of the capital projects associated with the Water System. The Water System funds all their projects up front, a lot of the projects we are talking about have been funded in previous years and that funding becomes multi-year in nature. So, basically, it is their version of the capital plan; these are all capital projects.

Vice Chairman Destadio said he thought there was a certain year for capital programs. Mr. Rapson said we have a five year capital program that we fund in the general fund for the entire five years and then for the Water System, they have a five year capital program and they fund each one for one entire year. That is \$2.4 million, all these projects we are talking about are part of that funding. There is actually the Private Water System project that is still ongoing, the Interconnectivity that is on the street, and the meter program. Those are the three projects that aren't really tied to the water treatment plant, but they are tied to our distribution system. Those are ongoing; we are having to delay the Interconnectivity 30 days, and put a new delivery date on it because there were so many questions to answer for the addendum. He said Jacobs decided not to bid on that, and we are going to be asking for their assistance to help us evaluate it.

Mr. Bodwell said to follow up on the solids handling, over the last couple of years either Fayette County or Jacobs has looked at screw press, plate and frame, centrifuge, belt filter press and ceramic filtration systems. There are five different technologies they have reviewed and either fortunately or unfortunately, none of those five technologies, there wasn't one, which jumped out as the best. They all performed pretty similarly, so now it is a function of capital cost, construction cost, operations costs, electrical; so in their analysis, they are taking all of those and looking at the cost of those to determine which is the one that jumps out as the best option. Obviously, you would hope that one of the technologies was head and shoulders above the others and then you would pick that, but unfortunately, that is not what happened.

Mr. Rapson said he thinks they probably are, geographically speaking where your plant is. With us we have fairly decent water quality to start with, it does not look like tea to start with. Mr. Bodwell said all five technologies performed pretty much the same. He went on to say they are finalizing the memo on that, the numbers and crunching the capital cost. Then they will get back with a recommendation on each plant, as to which technology should be implemented given the quality of the water, the flow and the size.

Mr. Ray said some of these technologies are very labor intensive and the equipment can be very expensive, so we are trying to find the best fit for our application. Mr. Rapson commented most of them are geared towards how you are physically treating. If you are a very manganese type organization because of your water quality, that may lead you to a different solids handling solution. He said he knows more about it than he ever cared to know.

Mr. Bodwell commented some require adding a bunch of polymer which costs money and that is labor intensive. Mr. Ray commented when manganese gets to .03 you already have the potential to start having taste and odor problems; .05 is the max, but even .03 can start causing problems. It will build up in your system and then you have an anomaly or something shakes the system (hydraulic situation comes up); somebody opens a fire hydrant, then you can get brown water.

Mr. Bodwell reported Southeastern Tank & Tower reached out; he knows they just finished Highway 92 a couple of months ago, but we are already starting to plan to do the remaining three tanks in the fall. They already reached out to him to talk about scheduling, they have a lot to do this fall and they want to make sure they fit us in. They have estimated that the project will probably take about 2 ½ months, Twin Tank 2 will probably take two to four weeks to renovate. Ellis Road and Crabapple will take about eight weeks each. We are looking at two and a half to three months total if they can stagger it back to back.

Mr. Bodwell said we need to answer two questions, number one –is there an order? Is there one we want to be first, second, third and number two – when do we want to start? He said we talked about October 1 when the demand goes down, if that is still the plan, we will get them on the schedule, we will get them ready to hammer this out, it will probably be October, November and December. It will probably be finished by the end of the year if they can stagger them back to back.

IV. PUBLIC COMMENT.

There was no public comment. Vice Chairman Destadio mentioned he was taking his grandkids up around Battery Way in Peachtree City, obviously it is no longer a part of the county water distribution system. Mr. Rapson said he does not think that is true.

Vice Chairman Destadio said they are allowing people swimming in Lake Peachtree. At Battery Way, there were probably fifteen people when he went by. He said he is concerned; he knows that the water was not supposed to be used as a primary source but used as maybe a backup, if we needed it. They have claimed that it has now been relaxed to allow people to do that. Mr. Rapson asked who is they. Vice Chairman Destadio said he heard that from a staff member, he did not hear it from Jon Rorie. He asked Jon, but Jon did not answer his email. Mr. Rapson said there is a reason Jon is not answering, Jon knows the answer.

Vice Chairman Destadio said his point is that Kedron comes obviously down Flat Creek and comes in and we use Kedron as a potential source if we need it because all the pumps we would pump water from Kedron is really in Lake Peachtree. We would pump out of Lake Peachtree any water that we need. That would essentially have both Kedron and Peachtree out of our potential sources. He said he wanted to bring this up, is that true. Did they take Lake Peachtree out of our system to where they can now allow people to swim in the lake?

Mr. Rapson said if you go to the EPD permit, the EPD permit is a Kedron permit. We are licensed to take water out of Lake Kedron for water treatment. The EPD is well aware of the fact that we are not actually discharging our active pump systems that would pull it out of Kedron. We are allowing the water to flow out of Kedron into Lake Peachtree and withdrawing it at the pump house right by the spillway. That is our point of source for water, which means both of those lakes are in essence our water reservoir. EPD considers them both to be water reservoirs.

Mr. Rapson went on to say that he had suggested during the spillway discussion that we could move our pump up to Kedron and get Peachtree City to agree, in the contract when we revised it, to allow, provide us right of way access so that if we ever did want to move that, that we would move the pump up to Kedron and at that point, Lake Peachtree could in essence be whatever they wanted Lake Peachtree to be; a recreational lake because it would not be a part of our water reservoir system. Peachtree City did not want to do that at the time. They have not given him an indication that is what they want to do at the time. When he saw the agenda item pop up with someone wanting to use it for kayaking and water sports he immediately sent Jon an email saying this is part of the water reservoir system, not sure if we can do that or not. We can certainly talk about it, if you go out to Lake McIntosh and look at what we are doing out there we have actually designated in Lake McIntosh in our water management plan a recreational area out there that we have gotten EPD to sanction, this is a recreational area and can be used for these purposes and these are the type of things you can do in that area. You can kayak and there is nothing wrong with kayaking or canoeing and all that kind of stuff. They are all about bodily contact with the water, whenever they have the marathon, we always called EPD and got the exception for them to do that. When they wanted to do the dragon boat races, we gave them an exception because it is hard to get in and out of the boat without touching the water. Every time they do an event out there that impacts Peachtree City's water or there is going to be bodily contact; we

literally, through our water system, contact EPD and give permission to do that. There is no blanket Peachtree City can do whatever they want to do with Lake Peachtree with EPD and the problem is we have EPD folks and we've got water conservation folks and we've got water quality folks and soil erosion folks all that live in Peachtree City and see that kind of stuff and then usually what happens is that is where the question comes from. Hey, why are they doing this activity I did not know about.

Vice Chairman Destadio commented they ask people that are authorized to use boats, water skiing. Mr. Rapson said they are all grandfathered; they have boats and they have docks and they are typically not in the water. They get on the dock and then get in the boat. Vice Chairman Destadio said they are water skiing. Mr. Rapson said with water skiing, some of that has been grandfathered in. EPD is aware of that. He said he thinks what Vice Chairman Destadio is talking about is the 4th of July, let's send 40 people down and have them go swim at the fishing docks at Battery Way. There is nothing that sanctions that. Vice Chairman Destadio said there weren't 40, there was probably 15, and they were small kids in tubes and parents floating around playing with the kids. There have been instances where kids have had eye infections and stuff like that. He said he just wondered, so he asked the question because he thought seriously that we had not allowed that and he hadn't heard.

Mr. Rapson said he thinks his original position on that is probably correct, but he will reach out to Jon and talk to him about it.

Mr. Bodwell asked about EPD allowing motorized water skiing, but not people swimming. Mr. Rapson explained there are grandfathered rights you have with the lake. You have to live in one of the six houses and those are grandfathered. If you go to Lake McIntosh, you can't build docks on Lake McIntosh, but there are some docks at Lake McIntosh and Lake Kedron and those docks were grandfathered before the reservoirs were built. He clarified there is some grandfathering status. If a new homeowner bought and said, hey my neighbor has a dock and I want to build a dock, you are going to find out you can't build your dock.

Mr. Bodwell commented that usually water treatment reservoirs have no motorized boats at all. You can have paddle boats and canoes, but not a motor. Mr. Rapson said he thinks EPD, just like we do, realizes some of that activity is going to happen. There is a difference between some of those things happen and having authorization to do it. What he is saying is, to his knowledge there is not authorization to do it.

Vice Chairman Destadio commented Battery Way and Spyglass Island all generate a lot of interest for people at the lake. They put in all kinds of playground equipment; he does not know if the Battery Way dock has been there, but it is a ramp. Mr. Rapson said there has always been a boat ramp at Battery Way. There is one at Kedron, too.

Vice Chairman Destadio commented that he has kayaked at Kedron. Mr. Rapson said he thinks Spyglass is a little different, Spyglass is more of a new thing that they have done within the last year. Vice Chairman Destadio commented that it was crowded.

Mr. Rapson said the new bridge they put in that goes to Spyglass is probably one of the best places to observe the 4th of July fireworks. You are right across from them.

Mr. Ray commented when this question came up recently with the paddle boats, he looked up the drinking water rules on this. Used to be, under the source of water supply it would talk about prohibitions, what is prohibited. Assuming it was one of those items. They have changed that wording now and it says for water supply reservoirs a Reservoir Management Plan shall be developed in accordance with Rule 391-3-16-01; then you go over to that and basically what we are saying here is permissible if you put it in your plan and the plan is approved. He said that is the way he interprets it.

So Lake Peachtree does not have, to his knowledge, does not have a Water Reservoir Management Plan exception. Lake McIntosh does because we did it. He said he is not saying he is opposed to it, he thinks he was the one at the negotiation table that told the Mayor that we should move the pump and we will take care of all this at one time; and you can do whatever you want with Lake Peachtree, you don't even have to call ask us for permission to do things anymore. That didn't happen.

Mr. Rapson commented the short answer is there is no authorization for that activity on Lake Peachtree.

Mr. Rapson announced that July 17, there are eight candidates being interviewed for the Water System Director position. It is an all-day event, one hour at a time. Hopefully, they will have a candidate that comes out of that.

Vice Chairman Destadio ask who is interviewing. Mr. Rapson said he is interviewing, Lewis, Brant Keller who is a leading expert in water, and Jason Bodwell. He said that Russell Ray has decided not to elect to interview for the Water Director position, so he has asked him to be part of that selection committee as well.

Mr. Rapson said that Mr. Ray has done a good job holding the train on the tracks, he thinks he wants to give somebody else the conductor's job. Mr. Ray commented that we have a lot of projects coming up, he feels like it is going to be good for all of us if somebody is still focused on the projects and somebody else is here to focus on the day to day Director's activity.

V. ADJOURNMENT.

Vice Chairman Destadio made a motion to adjourn the Water Committee July 10, 2019 meeting. Jimmy Preau seconded. The motion pass unanimously.

There being no further business, Chairman Pete Frisina adjourned the meeting at 8:45 A.M.

Peter A. Frisina

The foregoing minutes were approved at the regular Water Committee meeting on the 24th day of July, 2019.

Lisa Speegle

Next Scheduled Meeting Date: July 24, 2019