**WATER COMMITTEE**
**OCTOBER 13, 2010**
**MINUTES**

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| **MEMBERS PRESENT:** | **Pete Frisina, Chairman** |
| | **James K "Chip" Conner, Vice Chairman** |
| | **Brian Cardoza** |
| | **Jack Krakeel** |
| | **Tony Parrott** |
| **NON-VOTING MEMBERS:** | **David Jaeger** |
| **STAFF PRESENT:** | **Russell Ray** |
| **GUEST:** | **Stephen Hogan, WASA** |

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

**I. APPROVAL OF MINUTES FROM THE MEETING ON SEPTEMBER 22, 2010.**

**Vice Chairman Chip Conner made the motion and Brian Cardoza seconded, to approve the minutes from the meeting on September 22, 2010. There was no opposition.**

**II. LAKE MCINTOSH UPDATE.**

**David Jaeger presented slides of the Lake McIntosh project. A new aerial has been taken of the project site. In the last few weeks, the contractor has been working on the installation of the sixty inch low level pipe. Mr. Jaeger pointed out the sixty inch pipe, the existing pump station, the center line of the dam, Line Creek, and the diversion channel. The contractor is building up the fill pad that is intended to provide a surcharge to the sub grade and will pre-settle any of the sub grade foundation material before they actually build the final dam embankment. The contractor is now placing fill to bring it up to the full dam height. It won't extend all the way from abutment to abutment, just in the area where they did the under cut.**

**Mr. Jaeger went on to show another angle of the site. The way they monitor the settlement in this area is with some settlement plates. There will be half a dozen of them installed along the top of the fill pad and they will measure those as they bring it up. Once the fill level is complete, they will continue to monitor it.**

**Mr. Jaeger showed the final routing of the creek. Once they complete the installation of the sluice gate at the pump station, the creek will be routed to the pipe, then through the pipe and down, and then they can continue the work where they had the creek diverted.**

**Next he showed a photograph of the excavation of the channel that will bring the water to the pump station and the sluice gate. There were additional photos showing the placement of the fill material. He showed a close up of a settlement**

**plate that is being installed on the surcharge pad, and a drawing of the cross section of the dam and the installation of the sixty inch pipe.**

**Mr. Jaeger stated the completion date of the dam is November, 2011. Safe Dams will come do an inspection and once they agree that everything is finished, they will allow us to close the gate. He said Safe Dams is drastically under staffed and they rely on him to send them monthly reports. He sends a detailed daily report, as well as geo-technical reports; they are packaged monthly. They will come to the job site; they just don't have the manpower right now.**

**Mr. Parrott reported that the wetland work has been going good; the weather has been cooperative. We have done another quarter of stream sampling through our contract with Eco South. The wetlands are going good; the Danielly-Wagner site ought to be finished the middle of next month, if the weather continues as it is now.**

## III. TOTAL ORGANIC CARBON UPDATE.

**Mr. Jaeger commented at the last meeting he presented the summary of the results of the pilot study. Yesterday he and Mr. Ray took a field trip to Lincolnton, North Carolina, along with the reps for the Acti Flow Carb system. Lincolnton has a water plant that is rated at 12 MGD, which is slightly higher than what we are expecting South Fayette to be rated at, but is similar in size to the Crosstown Plant. They had an expansion project that took place a few years ago. In order to comply with their State requirements they had to add in the Acti Flow as a pre-treatment, ahead of their conventional settling basins and filters. They do not have a Carb component, there is no carbon introduced in their Acti Flow system. They dose some powder activated carbon downstream of it, but not at the levels that we will be looking at on our system. He showed slides of the Acti Flow process for 12 MGD at Lincolnton. It is an extremely reduced footprint to what you would see from a traditional plant. He described the process they use for their water treatment; he also pointed out the different components of their system.**

**The committee discussed at length turbidity levels on the raw water from the Flint River, the reservoirs, and the holding ponds at the water plants.**

**Mr. Jaeger reviewed the slides comparing the different options available. Funding will be needed to achieve our primary objectives, which are: improve removal of Total Organic Carbon, to determine the TOC versus Dissolved Organic Carbon (DOC) component. He said that we have determined that Fayette County's raw water source has a high DOC component, which is part of the reason we have trouble settling it. The third primary objective is to reduce the Disinfection Byproducts (DPBs) to meet the 2012 Federal regulations.**

**Mr. Jaeger based his cost estimates on 9 MGD at the South Fayette Water Treatment Plant, currently it is 6 MGD, but Mr. Parrott will be requesting the State to increase it to 9 MGD. Annual operating costs were estimated based on current**

**flow which is about 4 MGD. The most expensive would be GAC in the filters. He expects it have to be switched out once a year. Mr. Jaeger explained the cost projection over a twenty year period using a 2.5% annual inflation rate which is higher than the current inflation rate. GAC starts out with the lowest initial cost, but it has the highest annual cost. Acti Flow at 15 ppm of carbon is the second cheapest to install and at this point becomes cheaper than the GAC. The MIEX 50% solution is the third most expensive and it has the least operating cost because of the reduction in the resin usage down to 50%. At this point, it becomes the cheapest long range total cost. GAC post filter and the MIEX 100% treatment have the same operating cost. Funding any of these options will mean an initial expenditure based on the technology associated with it. Then long term the annual operating cost projected over twenty years.**

**Mr. Parrott stated that the project including both water plants is going to require us to borrow money. We borrowed money for the reservoir project, and this has limited our options on funding. This is a $9,000,000.00 project.**

**Mr. Jaeger went on to say that his cost projections are based on 13.5 MGD at the Crosstown plant, which is the current capacity that is permitted, and then South Fayette at 9 MGD, which we are anticipating it will be permitted at. He said he expanded the capital cost based on the total capacity of both plants, and did the same with the annual operating cost. Initially, they did not look at a partial treatment scenario. He said Mr. Parrott was not comfortable with this and felt that we should treat to the full capacity of whatever technology we use. As they started to look at the numbers and realized the expenses involved; the performance of the MIEX at 100% was higher than the others. It became clear that if we were comfortable with treating half the flow and achieving essentially the same results as the other technologies, we could save some money. In that regard, instead of having two 4 1/2 MGD trains of MIEX, you would have one; then build the second one at a future date.**

**Mr. Jaeger stated that the MIEX performs very well and with the 50% option, the long term cost appears to be the cheapest. The issue is that they are a proprietary technology. They have a resin that is required. At the last meeting, Vice Chairman Conner asked if they were to go out of business where does that leave us. Mr. Jaeger said he asked them that question. They said currently, there is no other source of the resin other than Orica. They have taken steps to make sure that there is plenty available in the United States. It is manufactured in Australia and they have it stockpiled in three places in the United States so that they could deliver it. If they have any problem with any one of the stockpilers they can deliver from either of the other two. They will also pre sell you more so you can have your own stock pile if you want. They seem to be a financially sound and strong company in a growing industry. However, they are still the only source of this resin. They anticipate that there will be competitors on the market in the future. When, we don't know, it could be a few years, or it could be longer. They are willing to enter into an agreement for purchase of the resin that would extend out four years. The**

**cost increase would be tied to a consumer price index of some type. He said he thinks that they intend to do well by their clients. He does not sense that there is any problem.**

**Mr. Krakeel asked how long they have been in business. Mr. Jaeger said that Orica is owned by a larger company that's primary business is explosives and the bulk of their industry is outside the water treatment realm. He said he would find out.**

**Mr. Jaeger stated that the price issues and the supply issues with the resin and the sole proprietorship issue is something that we would have to be comfortable with to make that decision. There is no problem with performance. Based on current pricing and projections of current pricing, they seem to be competitive long range. It is more expensive going into it.**

**He went on to say that the Acti Flow Carb system really does not have much to it that is proprietary; you can buy Powder Activated Carbon from multiple sources and multiple types of PAC. The equipment, the mixers, the pumps, those types of things are fairly generic. The operating cost is higher because of the Powder Activated Carbon usage. Buying in larger quantities could possibly make it cheaper. There is a sand cost, PAC cost and polymer usage. It reduces alum dosage, so there is some savings there. There is also reduction in lime.**

**Mr. Parrot commented that regulations keep changing. MIEX gives you the ability to meet future regulations. If they keep lowering the THMs and HAAs with the Acti Flow Carb that is the level you have. Mr. Jaeger stated they talked about this yesterday; there is a study that shows resins are less effective on endocrine blockers and other contaminants that may be regulated in the future; pesticides potentially. GAC is carbon based and carbon seems to absorb many of these contaminants. It would most likely require high dosages of PAC.**

**Mr. Ray commented that PAC will absorb some other compounds better than a resin. MIEX will treat TOC at a higher level, that is clear from the data, if we did need to treat TOC and DOC we could get higher treatment with the resin. With PAC you might cover a broader range of issues that come up without having to add another treatment train downstream of the filters. To do that, cost would go up by using more carbon (PAC).**

**Mr. Jaeger explained that the MIEX system is based on a negatively charged resin ion so that it attracts anything that is attracted to the negative charge. When contaminants are attracted to that, you cannot treat them as well.**

**Mr. Jaeger said that yesterday's visit was the last of the field work and he expects to have any remaining data for the carbon cost within a week. If there is a reason to delay implementing the final technology, GAC in the filters could be used as a stop gap measure at any time. It would not require anything special, just the cost of somebody coming out, removing the anthracite, and put the GAC in. It is a high**

**cost, but that would assure that the water plants are in compliance on the short term. April 2012 is when the averaging for each individual sample location begins.**

**Mr. Jaeger stated that we need to have a meeting with the State up front. Tell them we are prepared to move forward with this technology to meet these future regulations and get some preliminary buy in from them, so that we don't have a problem down the road with the newer technology. There are Acti Flow installations in Georgia, but not Acti Flow Carb. There are MIEX installations in Georgia, also, but they are not of the scope or exact configuration of what we are doing. He does want a surprise from the State after we have already made a commitment and done a lot of design.**

## IV. WATER BILL INSERT FOR PEACHTREE CITY WATER AND SEWERAGE AUTHORITY.

**Stephen Hogan discussed the resolution for the new sewer rates approved by the Peachtree City Water and Sewerage Authority Monday night. He asked to be able to put a bill insert into the water bills notifying the customers of the new cost effective December 1. The insert will need to be mailed to the customers when the November bills are mailed. This will be a one page insert and will not increase the postage for the Water System mailing out the bills.**

**Tony Parrott made a motion to recommend to the Board of Commissioners to place an insert in the water bills for Peachtree City Water and Sewerage Authority about their sewer rate increase. Vice Chairman Chip Conner seconded and there was no opposition.**

## V. ECO SOUTH CONTRACT FOR HELMER ROAD.

**Mr. Parrott explained that the fourth mitigation site is on Camp Creek and Helmer Road; it was Dr. Busey's place. The contract is the same as the other three mitigation sites; the cost is $454,798.00 with a breakdown on page 3 of their mobilization, channel restoration/enhancement and the planting of material. He stated that he has been extremely pleased with the work so far. They have worked with adjoining property owners, and we have had no complaints from any neighboring jurisdictions about us being there. It has worked very well.**

**Jack Krakeel made a motion to recommend to the Board of Commissioners to approve the contract with Eco-South for wetland work at the Camp Creek (Busey) site located on Helmer Road at a cost of $454,798.00. Vice Chairman Chip Conner seconded and there was no opposition.**

**There being no further business, Chairman Pete Frisina adjourned the meeting at 9:05 A.M.**

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**Peter A. Frisina**

**The foregoing minutes were approved at the regular Water Committee meeting on the 10th day of November, 2010.**

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**Lisa Quick**