

WATER POLLUTION CONTROL AUTHORITY
REGULAR MEETING
MARCH 9, 2016

The Regular Meeting of the Water Pollution Control Authority was called to order by Commissioner at 7:00 P.M. in the Shelton City Hall, 54 Hill Street, Shelton, CT. 06484, on March 9, 2016.

The following Commissioners were present to constitute a quorum:

Commissioner Mike DeAngelis
Commissioner Stephen Morse
Commissioner Edwin Hellauer
Commissioner Todd Dowty
Commissioner Joseph Frolish
Commissioner Stephen Chuckta, Jr.

Also in attendance were:

Thomas Sym, Sewer Administrator
Ed Comboni- WPCP
Garritt Ogden- WPCP
Matthew Jermin- Fuss & O'Neill

1. THE PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was recited by all.

2. PUBLIC PARTICIPATION

There were no members of the public wishing to address the Commission.

Add-ons

A motion was made by Commissioner Morse to add-on:

- ***5.C Fiscal Year 14/15 Budget Surplus Transfer***

Seconded by Commissioner Hellauer. A voice vote was taken and the motion passed.

3. APPROVAL OF MINUTES OF REGULAR MEETING OF JANUARY 13, 2016

A motion was made by Commissioner Frolish to approve the following meeting minutes:

- ***Regular Meeting of January 13, 2016***

Seconded by Commissioner Hellauer. A voice vote was taken and motion passed.

4. COMMUNICATIONS

A. ASSISTANT TO WPCA REPORT

Assistant Sewer Administrator not present to report.

B. SUPERINTENDENT'S REPORT

Ed Comboni: The average daily flow was 2.9 MGD; the peak flow for the month of February was 4.2 MGD.

Our effluent total nitrogen was 56 pounds per day; the limit was 106 pounds per day. We pumped out 234,000 gallons of sludge.

We now have had 57 months free from any accidents.

Our safety/training: Understanding MSDS (Material Safety Data Sheets).

Our chemical consumables were approximately the same. In May, we will begin the chlorination process.

The grease removal for Upper Route 8 was 130 pounds, Lower Route 8 was 70 pounds, River Road was 100 pounds, Ladas Place was 70 pounds and Meadowlark was 60 pounds, for the month of February.

Comparing February 2015, the total was 520 pounds, and in February 2016, the total amount of grease was 430 pounds.

We have had 0 complaints this month, making it a total of 42 months free of noise complaints.

We have had 0 odor complaints, which brings us to 33 months of no odor complaints.

The daily maintenance was basically the same. The corrective maintenance included replacing fuel gauge at Beard Saw Mill generator, replaced impeller and coupling at Beard Saw Mill Station, repaired starter for thickened sludge mixer, replaced filters on turbo blowers 3,4, & 5, and repaired faulty switch on old PD blower.

The future work includes potable water line replacement, SCADA upgrade, start rebuilding motive pumps 2 & 4, and rebuilding #1 & #2 pump at Bridgeport Avenue station.

C. BUDGET WORKSHEET

Commissioner Morse: We will be receiving a check from the State of Connecticut, for the nitrogen credit in the amount of \$29,258.

5. OLD BUSINESS A. ELECTION OF OFFICERS

Tom Sym: Anytime they appoint or reappoint they have to have an election; it is part of the City Charter.

A motion was made by Commissioner Hellauer that the slate of officers remain the same.

Seconded by Commissioner Dowty. A voice vote was taken and the motion passed.

B. FUSS & O'NEILL STATUS REPORT

1. Infrastructure to Eliminate Sewage Charges Paid to Stratford

- Capital Cost: \$7.15 million
- Estimated Annual Savings: \$300,000

2. High Efficiency Aeration Diffusers

- Capital Cost: \$2.24 million
- Estimated Annual Savings: \$75,000

3.Rehabilitate Collection System

- Capital Cost: \$2.00 million
- Estimated Annual Savings: \$28,000

Discussion:

1.Referendum Project Items

Matt Jermine: This table is recycled a bit from the last meeting. The capital costs stand about the same. The capital cost for Stratford went from \$7 million to \$7.15 million; these numbers have decent contingency numbers that are built in to them of around 30%. The high efficiency aeration diffusers went up because we added into the cost of the scum removal system to the tanks. The number for rehabilitating the collection system stayed the same.

Infrastructure to Eliminate Sewage Charges Paid to Stratford

Matt Jermine: The first alternative is about putting a pump system and the sewer, shed that goes into Stratford, and then putting it into a 2 force main along River Road which is a state road. Then, it would be connecting it into the existing 10-inch force main at the River Road pump station. Short term, it would be easier to hook up in to the 10-inch force main and put a valve chamber with check valves and control schemes. This cost still has a good contingency that is built into it. One number that is very high is the rock excavation: \$619,000. We assumed that it was 1-foot-deep for the entire 2 miles, and the force main would be 4.5 feet deep. That is, because there is a lot of rock out there so it is very conservative number. During preliminary design you would do a subsurface exploration to try to map that rock a little better, and knock that number down to get some more savings. The State Road Pavement Repair is also a gigantic number: \$1,851,000. They are going to want temporary pavement repair, permanent payment repair for the trench, and then come back to do some milling over the whole travel lane. That gets expensive, plus traffic control from the police officers. I just listed my assumptions that I had: 4 per day, for 4 months.

The pump system that would be located at the transfer station would a typical submersible pumps; around 800 to 900 gallons per minute. The sewer shed is around 300,000 gallons per day. That station would also have an emergency generator, new electrical service; those would always be expensive.

Odor control would be a big issue here, so that is something we need to look at.

Commissioner DeAngelis: On the existing River Road pump station, there are no upgrades to the existing pump station?

Matt Jermine: There is going to be a similar type of cost, whether you try to build a structure on the force main itself so then you could put a “Y” into the force main; put in some check valves upon that “Y” and valves and bypassing so then both stations could pump into the force main. That is a considerable cost, as opposed to looking at the River Road pump station, probably having to replace the wet well to make it bigger, or to somehow expand it out and put bigger pumps in there. If we just kept the existing line straight into the force main and River Road shared the force main with, then basically the two stations would take turns. This new station would have a larger wet well to have a longer detention time while the other one is finishing up. That is the way that we priced it out.

Commissioner DeAngelis: Did you take into consideration doing it as economical as possible, and designing a truly good system?

Matt Jermine: We designed this to try to be economical.

Commisioner DeAngelis: What is the pay back? What is it going to cost us in five or

ten years if we are not doing it right now? There were things that were cut out of the treatment plant because of money, we changed the design of the plant to bring the cost down. Now we are paying for it now, ten years later.

Matt Jermine: The economical approach would be to build a new station, and using a control scheme to share a force main. The right thing would be to build that new station, the pumps to River Road and then you would have to upgrade River Road. You probably need a bigger generator; you would definitely need bigger pumps and would run that on larger VFDs. You would have one pump that is always on a VFD that throttles up and down.

Commissioner DeAngelis: Let's assume that this goes on the referendum, passes and then we go on to the design and bidding. Would we consider doing a base bid with an add alternate? The base bid being the most economical one, and the add alternate on what we think it is going to cost us to upgrade?

Matt Jermine: That seems like a good approach so you know what you are getting into.

Commissioner DeAngelis: Or do you price it going 110% into it, and then do a deduct alternate? Which is the better way to think about it when you are going out to bid?

Commissioner Morse: If you go the economical way, there is a chance that some of the suggested equipment would be at the low end, as far as reliability.

Commissioner DeAngelis: That is why I am looking at it in two ways. It is going to go out to bid, and it is going to go out low or high, and the Mayor is going to look at the number and not wanting to spend another \$200,000 to \$300,000, but we would be getting the same place we were ten years ago when we did the upgrade. You wanted a cheap plant, so we have a cheap plant and we are spending the money upgrading. What is the right way to do it?

Matt Jermine: The problem is when you try to do it the economical way and then you have to make cuts on the economical way, that is when you really get hurt.

Commissioner DeAngelis: The base bid is going to be the economical pump station, and the add alternate is going to be better pumps.

Commissioner Dowty: You are saying that he is going to look at that base, economical bid and he is going to say that we could do better.

Commissioner DeAngelis: You can't.

Commissioner Dowty: I know you can't.

Commissioner DeAngelis: I know this is something in the distant future, but it is something that we need to be thinking about. You are going to have to think about it at the referendum. Are you selling it as an economical process? Or are you selling as the top of the line? That I am not sure of. You are saving \$300,000 per year?

Matt Jermine: We came up with that number collectively. You are sending that money to Stratford, so you are subsidizing your users.

Tom Sym: We are charging around \$100, and we are losing \$200,000.

Matt Jermine: We would have a couple of years before this station would be built. Stratford's rates are going to go up because the Greater New Haven WPCA deal fell through.

Tom Sym: The other thing to look at is the connection fees in the future, and which of the properties get developed down there by the river. It looks like everyone is building again.

Commissioner DeAngelis: In some ways it helps us when Stratford raises their rates because it makes it more economical for us to do it.

Commissioner Morse: We should take the existing \$198 and multiply that by how people are down in that area. There are around 600 people in that sewer shed. That is going to give so much cash flow.

Tom Sym: There are 600 users that paid user fees, and those 600 people would go to Stratford. We charge \$198, and Stratford charges us back \$598.

Commissioner DeAngelis: Out of curiosity, the referendum goes out and gets approved in November. What is your timeframe to design this? When do you think you will have drawings, bids and breaking ground type of thing?

Matt Jermine: Generally, that takes around one year. You need to do surveying, exploration designs, approvals. We have to get permission to put the pump station at the pump station.

Tom Sym: You are starting November, so you want to get a good estimate to see how much rock we are dealing with.

Commissioner DeAngelis: Matt to keep these discussions going, what else is important to talk about Stratford?

Matt Jermine: Attached are some diagrams of the proposed pump station layout, and site plan. There is also an agreement that is attached of what Stratford is requiring you to do. I never saw anything in the agreement of the capacity and 300,000; I do not know where that came from. I am not a lawyer, but it did not say anything about sewer connection fees, either. It did mention if you had users connected to the sewer who generate excessive wastewater flow-

Commissioner DeAngelis: I thought this agreement was updated 2 to 3 years ago?
Tom Sym: No.

Commissioner Dowty: This was in 1983.

Tom Sym: There was no amendment made to this. My concern is what kind of leverage do we have? Looking at \$7 million and a 30-year payback; the leverage is that Stratford could say to us that at some point we will be cut off and you cannot send any more flow down there.

More discussion on Stratford can be found on tape.

High Efficiency Air Diffusers

Matt Jermine: Each of the tasks that are listed for the high efficiency aeration diffusers cost a little bit of money for miscellaneous things around the plant that might come up between now and when this project gets released. If we needed to replace some valves, we would be able to do that. We put a line item in for the pipe insulation repairs: \$60,000. It is hard to get someone in here just to do that, but if we lump it into a larger project, they are going to do that with the rest of the work. I think there is going to be more SCADA integration down there, within the next couple of years, so that number is going to be a little heavy: \$45,000. This alternative is to do it right, not economically.

We came up with the final design parameters, which shows the existing plant design that you were left with after the upgrades, versus what the recommended design was per the TR-16 design guideline. What we did was show what needs to change to get you through the design length of the plant, so you can accept the 4 MGD of flow at the BOD loading what you receive in your wastewater. The amount of aeration that you get into a tank is about 1,000 cubic feet per minute of air, but you really need around 2,000 cubic feet per minute of air. Your oxygen requirement

is more than double, and instead of getting 24 jets you would need 48 jets. For your motive pumping, instead of 4,400 gallons per minute, you would need up to 9,000 gallons per minute. This was done back in January 2012, now in May 2012 you had three existing blowers that run between 500-900 CFM depending on the weather. At that time, we ultimately went with two turbo blowers, and we kept the old positive displacement blowers; two of them for backups that feeds your four SBRs. For the sludge aeration, we put one turbo blower in there with a spot in the future.

What we were looking at for this fine bubble diffusion system: we used the company, Sanitaire for the sludge aeration process. Basically it is round discs the size of a dinner plate that has a rubber membrane on it, the air pushes through the rubber membrane and you will have bubbles from it. You fill the bottom of the tank with them and it is connected to your blower, so that is the basic principle.

Tom Sym: What is the maintenance?

Matt Jermine: The maintenance on these things are every five years you take the tank down and replace the rubber membrane on it. This is not a proprietary design and these rubber membranes have been around for over 30 years, so there are four or five manufacturers that you could bid at and have someone come in to replace the membrane. We had a client that just had that done, and it was a lot less expensive than you think it would be. You can do one tank per year so you are not hit with this big cost every year. There is also a gauge on there that can detect the pressure loss. If you wanted it more sophisticated you could have the racks lifted out of the water, and then you could work on it on your catwalks but I do not know how that might be applicable to Shelton. The main part of this is getting the air into the tank with the really fine bubbles with the big boils that we have; that does a bunch of things with the efficiency to get better oxygen transfer, when you increase the capacity of the plant for nutrient removal. You probably do not need four tanks anymore because you are running four tanks to treat half of the plant's capacity, so if we get back to where we should be the plant should be running on two tanks. Now you are using less equipment, less wear over time.

Garritt Ogden: They won't let us; you cannot handle hydraulically so many gallons.

Matt Jermine: The state has to let you run the plant with one tank.

Garritt Ogden: Temporarily; we tried that and they made us put it back online.

Matt Jermine: We did argue about this before, and I said let's get this done first then argue with the state to say that we have plenty of capacity, and we do not all four. I know that was what they told you.

Garritt Ogden: We will cross that bridge when we get to it.

Ed Comboni: When we reached 4.2 MGD, we had to notify the DEEP that we went over design by 200,000 gallons. They were satisfied as long as we let them know, but that is part of our permit to notify them when we go over the plan design. The tanks are 4 MGD capacity.

Matt Jermine: Regardless if the DEEP issue, it is still a necessity that we handle the aeration capacity so we can handle the nutrient loading coming in. I am just trying to come up with possible benefits and additional ways to save money.

More discussion on this item can be found on tape.

Commissioner DeAngelis: Tom, if all three of these items go to referendum then they are paid for by the City? Not through the WPCA?

Tom Sym: Right, they are general obligation bonds if they choose to do it.

Commissioner DeAngelis: The \$7.15 million number for Stratford strictly came out

of your office?

Matt Jermine: Yes, they have a 30% contingency built in which is based on recent projects that we have worked on.

Commissioner DeAngelis: What percentage for contingency do you have on the aeration diffuser?

Matt Jermine: Again we put the 30% on there. We would be happy with the 15% if it came to that. There is the potential for the aeration diffusers to get the UI money again. That is an opportunity, but also an uncertainty because that is a couple of years out to apply for that, so we will see what happens to the program then.

What I am trying to do is start with a high number that gets widdled back, instead of having a smaller number to add to it later.

Commissioner DeAngelis: I think we need to go to the Mayor pretty soon and have another discussion with the Mayor.

Matt Jermine: This is really all I have to present on the referendum items.

2. Treatment Plant Booster Pump System Repair

Matt Jermine: We had some great progress on that, having Nutmeg Utility working down there to wrap it up. It has been a bumpy couple of months, but hopefully we will not see them again. We are holding the retainage now, but they did submit their retainage release as well as their final bill minus retainage. I think it would be okay to approve their bill minus the retainage.

I have some pictures of the plant water system. It was all pretty straight forward work, but somehow it took them a very long time to do it and during every step of the way there was some construction issue.

I need a balancing change order; we went over budget with this task a lot: Plant Water Construction Admin. Every month I informed you that we were going to be out there when they were working because we were having problems with Nutmeg Utility. I would like to reconcile that difference; it was hourly but just to balance out our budget on what we spent, versus what the project budget should be. I do not anticipate being down there because they are not there any more unless something breaks again. At that point, we would cover that under the WPCP on call task. I would like to ask for an amendment to make the budget look right. You will see the assignment log sheet for each time we were there. I feel like if we did not do that you would not have a project completed.

Here is our change order for the estimated total, which raises the contracted \$21,340, with no additional effort anticipated under this task.

Commissioner DeAngelis: From how much?

Matt Jermine: It used to be \$4,200. The original price was \$4,200 because we were going to have a couple of inspections that everything looked good.

Commissioner Dowty: Did we ever pull the owner of the company down?

Matt Jermine: Yes, we had one of his employee's drug tested. He was down there trying to fix things but it got way over his head, and did not know what to do.

A motion was made by Commissioner Morse to accept the change order of \$21,340, for Fuss & O'Neill administrative support for the plant water system.

Seconded by Commissioner Frolish. A voice vote was taken and the motion passed.

C. 2014-15 BUDGET SURPLUS TRANSFER

Commissioner Morse: It is a transfer of \$497,780, which is a surplus in last year's effort. We would like Paul Hiller to transfer that to the Capital Sinking Fund.

A motion was made by Commissioner Morse to transfer the 2014-15 budget surplus in the amount of \$497,780 to the Capital Sinking Fund.

Seconded by Commissioner Hellauer. A voice vote was taken and the motion passed.

6. NEW BUSINESS

A. BILLS RENDERED

1. NATIONAL WATER MAIN CLEANING CO. \$25,270.00

A motion was made by Commissioner Frolish to pay National Water Main Cleaning Co. \$25,270.00

Seconded by Commissioner Chuckta. A voice vote was taken and the motion passed.

2. SHELTON POLICE \$10,446.38

A motion was made by Commissioner Chuckta to pay Shelton Police \$10,446.38

Seconded by Commissioner Frolish. A voice vote was taken and the motion passed.

3. FUSS & O'NEILL \$14,219.19

A motion was made by Commissioner Hellauer to pay Fuss & O'Neill \$14,219.19.

Seconded by Commissioner Dowty. A voice vote was taken and the motion passed.

4.FUSS & O'NEILL \$8,071.04

A motion was made by Commissioner Dowty to pay Fuss & O'Neill \$8,071.04.

Seconded by Commissioner Chuckta. A voice vote was taken and the motion passed.

5.KOVACS CONSTRUCTION CORP. \$3,775.00

A motion was made by Commissioner Morse to pay Kovacs Construction Corp. \$3,775.00.

Seconded by Commissioner Chuckta. A voice vote was taken and the motion passed.

6.NUTMEG UTILITY PRODUCTS, INC. \$6,650.00

A motion was made by Commissioner Morse to pay Nutmeg Utility Products, Inc. \$6,650.00.

Seconded by Commissioner Dowty. A voice vote was taken and the motion passed.

B. SEWER ADMINISTRATOR'S REPORT

Tom Sym: The guys are possibly looking for a pick up truck for the upcoming year. We are going to start putting together the specs for it.

Commissioner DeAngelis: Yesterday's budget meeting, are we going to hold the same \$2.7 million?

Commissioner Morse: We increased one of the budget line items to \$5,000 for the diesel fuel. The rest of the items are in the handout sheet; Ed, Garritt and Lori did a nice job on it.

Tom Sym: We are going to be increasing the number of units that are going to go online very shortly, with The Mark apartments going behind Bertucci's. There will be around 80 apartments. We will be able to cover the expenses at the same rate.

Commissioner Morse: Do we want to set up for a summary discussion with the Mayor?

Commissioner DeAngelis: Do you want me to call and schedule a meeting with the Mayor? I call and make the appointment within the next couple of weeks.

8. ADJOURNMENT

A motion was made by Commissioner Hellauer to adjourn the March 9, 2016 Regular WPCA meeting at 8:30 P.M.

Seconded by Commissioner Dowty. All were in favor and motion passed.

Respectfully submitted,

Brittany Gannon

Brittany Gannon, WPCA Clerk