

MINUTES OF THE BOARD OF PUBLIC WORKS
Tuesday, August 13, 2019

The Regular Meeting of the Board of Public Works was held on Tuesday, August 13, 2019 at 7:30 a.m. in the City Council Chambers located at 405 Jefferson Street, Washington, Missouri. The following were present/absent:

MEMBERS:

Chairman	John Vietmeier	Present
Member	Brad Mitchell	Present
Member	Mike Radetic	Present
Member	Steve Richardson	Present
Ex-officio Member	Steve Strubberg	Present
Ex-officio Member	Vacant	--

OTHERS:

Council Representative	Steve Sullentrup	Absent
Council Representative	Mark Wessels	Present
Mayor	Sandy Lucy	Absent
City Administrator	Daren Lamb	Absent
Water/Wastewater Superintendent	Kevin Quaethem	Present
Water/Wastewater Secretary	Beverly Hoyt	Present
City Engineer	John Nilges	Present
Assistant City Engineer	Andrea Lueken	Absent
Emergency Management Director	Mark Skornia	Absent
Fire Chief	Tim Frankenberg	Absent

Originals and/or copies of agenda items of the meeting, including recorded votes are available on record in the office of the Public Works Department for one year. Video/DVD and audio tapes are kept only until the minutes have been approved for the meeting. DVD copies of this meeting are distributed to Board Members if requested.

Minutes. A motion was made by Mr. Mitchell and seconded by Mr. Richardson to approve the minutes from the regular July 9, 2019 meeting. The motion passed without dissent.

Priority Items – There are no priority items at this time.

Wastewater

BioScru Solid Systems – We are looking at this system because we will always be generating 350 dry tons of bio solids year round while plant is running. The plant has a very effective removal rate of bio solids going through the process. We get a very good discharge out to the Missouri River, in the single digits of BOD's and TSS's which is what EPA and DNR wants everybody to do. With this it generates bio solid sludge. Right now we try to get it spread on farm fields, over at the airport. We do occasionally take this to the landfill for disposal.

We eventually will get to the point that we will run out of places for sludge disposal. So we have been looking into other options. This system we are looking at has a contained drying system, it contains all the sludge, and as it dries it generates dust. This system actually contains the dust and removes it from the system.

The system would generate a granular product which looks like fertilizer you buy at any store, which would be Class "A" sludge. This could be used in yards, gardens and fields. You could even spread with a regular broadcast spreader rather than a tractor spreader. Same as the old dolomite system like malarganite. At the end of the line, is it is something we could do to eliminate the need for disposal? We would still have to dispose of this, however it could be available as fertilizer. It can be bagged and sold by the buckets or truck load.

John is working on a process (ground floor) of doing something out at the recycling compost. We have that this could actually be mixed with and sold as a different product down the road. This opens the door for a whole lot of stuff for us to do but is yet also reducing the amount of sludge or biosolids we would have on hand. This little bottle from a plant they took a sample from and had a 16% dry sludge and this product was taken down to 92% dry sludge. We have 18% dry sludge that we are working with now. Our belt press takes out 18% of the moisture through the process. This process would take it down to 92% it can be adjusted to any level, just takes longer.

Volume change – It can take it down to half the volume, there is a plant in Branson that is already using this system. I plan on going down and visiting. Just like the air scrubber, visit and see how it is working for them.

This is in the budget for this year to try and see if it will go through. The equipment is \$2,400,000.00 and I put \$3,000,000.00 for the installation of a little building to keep it dry.

Mr. Mitchell asked, is our problem, the amount that we have or does it relate back to the cannibal system not working as it should?

We still transfer sludge back and forth through the train. The cannibal system itself the way it is supposed to work does not work. We are pressing one day a week. The way we transfer sludge around it helps us slow down. In the winter we press every day.

Was it ever determined why the cannibal system does not operate the way it should?

No, we did not. Siemens Waste Water Industry that sold all of this is no longer in operation. The whole cannibal system theory is gone. It does not and has not worked. All the communities that put this in were led to believe it worked and it does not work. There are several law suits being

generated from this, but no one has been successful. There are no places that we know of that this system is working. Jacobs Engineering highly recommended us to not put the cannibal system in, not sure where or who made the final decision to go forward with this, we have found no records. I am sure it was discussed but we have found no records.

There are a couple of places we can visit to see the BioScru system in Branson and Twin Rivers, but there are no other places in Missouri. There are a couple in Illinois and Indiana.

It is recommended that we do diligence on checking these plants out. This was just brought to the Board for discussion only.

When they visited Greencastle, Indiana and one other, both places claimed that it worked wonderful for them. But we have to remember whoever calculated our BOD loading coming into the plant broke it in half.

We are bringing in about 285 BOD loading of around 200 – 285 BOD a day. That is the bio-oxygen demand that it takes to treat the system. When they visited these places whoever did the calculations, calculated our BODs at 165. So we have two trains coming into our plant, North side and South side. Apparently they sampled the South side out of the manhole coming in so that broke it in half. The calculations and everything looked good until we set the plant in motion then we started sampling what was actually coming into the plant and the numbers doubled.

This is all just for discussion right now, we have put it in the budget. Hopefully once Darren is finished with all the budgets I can bring in our budget for you to review. Just did not want you to see it in the budget and think we have not even had a chance to discuss budget.

Will this eliminate expenses or maybe manpower? There are good numbers, it will not eliminate, but it will save us money in the fact that we will not have to buy a tractor, which we will have to do if we keep spreading. We try to take out to the landfill, I am already paying Rigel across the river to spread. In two years I have spent a good amount of money over there (approximately \$10,000.00) We do not have a spreader or a tractor. If we want to continue doing this, we will have to get a tractor and spreader (\$55,000.00 Spreader) Tractor we might be able to lease (\$58,000.00 to buy or \$11,000 to lease).

So all that cost would go away. What you would have here is actually something people can come pick up. Just wanted to have an open discussion. I know it will not make it through budget this year. Maybe next year, within the next couple of years we are going to have to do something.

At the landfill we would use our small tractor and just get a broadcast bucket like Hillerman's has and spread the granular. We would not have to get anything extra to spread at the landfill. This is just one solution to the problem with the sludge. We need to look at all options. This is not the blanket.

The landfill with our lease to Struckhoff, we remove soil, we scrap off the soil and use for daily cover at the landfill. At the end of the lease period (10 to 15 years) we actually have to provide all those areas with top soil back on. Now we have to generate top soil. The one problem we have not figured out yet is how we are going to do that. If we scrap it somewhere else and bring back over is going to be a cost disaster. So one idea is to make top solid we get a commodity which is

the compost center which is a single 3” grinder if it can be ground down small you just generated your top soil. Top soil you have to have some kind of a bio mix to put into it and St Louis Composting “Black Gold” they sell as a commodity. So right now the sludge that we have cannot be injected into that. You cannot use it or touch it. If you go to a Class 1 you can, it changes the dynamic of things. Whether this is us making it with the process or us going out and getting an agricultural type sludge which is a little bit different. We just do not know that yet. It is just there are multiple problems we are trying to solve with using the sludge as a commodity or liability so this is a much bigger discussion than just drying. This kind of crosses boundaries of multiple funds. It is important with the cannibal system that does not work. We need to look into why it does not work. If we have to spend a little money to find out why, it would be beneficial to all.

Biological process, the theory was we were going to take our sludge that came in, it has a biological process in itself, it is going over to the cannibal system which is basically anaerobic digestion, it was going to come over here and generate another anaerobic material that was then going to be reintroduced into the plant over here and these guys were going to eat these guys which in turn would reduce sludge over here because you would not have the bio solids going over here. What they found out was these guys over here were not strong enough to overtake the guys here and these were just becoming dead bodies. So what happens was we would take the sludge from here that was being pumped back over here that was introducing more dead bodies and was generating more bio solid sludge because it was taking out the little minuet, but when you add them up they build big sludge. This is why it does not work. The concept did not work, which is the bottom line. This has been put in the budget, not sure if it will make it through this time but this is what we need to do to start.

We do not want to wait 5 years down the road and find out that we cannot mix our sludge with what we are trying to do out there because it is Class “B” and we do not have Class “A” rating, we cannot use it for that, so we are sitting here with 350 dry tons.

If it makes it through the budget the dollar amount makes it through not the actual company. This is just one system, we had to get a number to start out.

So essentially this becomes the Cadillac, the higher end item. If there is a cost effective way to lower that we will look into that as well. We have to look at what the safest process to use so there is processes out there that in the long run they found out that it is taken more, they have to do more to make it safe. This dust can become very explosive if you are not careful.

So it is kind of like working at a sugar factory. They talk about sugar dust, very explosive, the same with this it can become very explosive. We do look forward to the continued evaluation of this process.

Water

Water is doing very good. We have had a few water breaks. There are a few water lines that are in need of replacing, but other than that its normal operations.

We do have lines that need replacing with regard to our street paving projects, if we see a couple of patches in the street, that is a water line that broke a couple of times and been patched. If we

are paving streets we need to say hey let's go ahead and replace this line. Oak St. took a while to get done but that was them coming in ahead of us. This should reduce the risk of a break if we replace the line. It will not eliminate but will reduce the amount of breaks.

We do not have the funds to keep up with all that. We have been talking about the water rates. Staff is really looking into at least coming up with a strategy. We know what our 2018 revenue was, so using those same usages we are developing several scenarios of what would water rates potentially look like? Is it a blanket percent increase, 5%? We do not know what it will be.

Right now, we have a four tier structure, do we condense that to a three tier to try and generate revenue? It is like taxes a little backwards. Do we do a combination of a percent increase? So you have to look at your different users as well the highest percentage of users. In the middle of that range 12 to 20 thousand and then the industrial users.

We are putting together those concepts to come up with three or four options to see what kind of revenue we need. Right now it looks like we need to catch up over ten years. We need over \$160,000.00 more in revenue. Which is about 5% of what we need to do. This only catches us back up it does not improve the system. Right now communities our size just 10 to 20 thousand we are like the lowest three of community's our size on water rates.

We are working on this to be a winter project and we are very close to at least intelligently have a conversation with the Board and at least present as a proposal. Within the next month or two we will have a work shop to discuss. No promise on what we will propose, but we are going to talk about it. In the next three to five years we are operating in the red so we have to figure this out.

Well 9 is all back together and we are just waiting for the SCADA system guy to come out and get it all hooked up.

I assume this goes in old business when we start talking rate increases, placement of lines and the possibility of a new water storage tank. Capital Improvement sales tax has \$50,000 allocated for a storage tank that is 40% of what it actually needs to be. Need to make sure the funds can fund itself, because again, Capital sales is voted every eight years and cannot be used as a guaranteed funding source, so we cannot rely on that. If \$160,000 gets us out of the red in 10 years, then it is safe to say \$250,000 will get us operating the way we should.

Enduro Water Tower

Looks like this will become a fall project. This will still be painted and completed in the fall.

Next Scheduled Meeting Date

The next scheduled meeting date is September 10, 2019.

Adjourn

There being no further business the meeting adjourned on a motion by Mr. Richardson and seconded by Mr. Mitchell. All in favor aye, those oppose. We are adjourned.

Prepared by: Beverly Hoyt
Beverly Hoyt
Water/Wastewater Secretary

Adopted and Approved by the Board of Public Works:

Date: Sept 10, 2019 Signature: M. E. W. D. S.
Secretary