

RECORD OF PROCEEDINGS  
VILLAGE OF FORT RECOVERY COUNCIL

Minutes of

Meeting

BEAR GRAPHICS 800-325-8094 FORM NO. 10148

Held August 22, 20 22

**CALL TO ORDER:** Mayor Dave Kaup called to order the Special Council Meeting on August 22, 2022, at 6:30 pm in the Village of Fort Recovery Council Chambers to hear input from the representatives of Poggemeyer Design Group regarding the Wastewater Treatment Plant Evaluation.

**Roll call** was conducted with the following Council members present: Erik Fiely, Cliff Wendel, Luke Knapke, Greg Schmitz, Scott Pearson and Al Post.

**Also Present:** Randy Diller, Roberta Staugler, Erin Abels, Leslie Gartrel, Bailey Cline, Jared Laux, Ryan Thien, Poggemeyer Design Group Representatives Mike Atherine and Justen Kosmowski, Cooper Representatives Bill Knapke, Jeff Cuttler, Eric & Pat Grieshop and Chuck Kaiser.

The mayor led with the pledge of allegiance.

**Mayor:** Meeting to listen to these gentlemen along with Jeff Cutler and Bill Knapke from Cooper Farms.

**Diller:** We have Mike Atherine & Justen Kosmowski from PDG. Justen has been our main contact. Mike: We are both professional engineers, our company was just purchased out a year ago by Kleinfelder. I will go through the evaluation and point out highlights. If you don't understand please ask. A little history, we were hired by the village because of odor, and we needed to renew the NPDES permit which is issued by OEPA effective for 5 years and is set to expire 11/30 of this year. Every renewal EPA can have new requirements added. The existing system for your village includes three pump stations. You have a two-cell lagoon built in 1971. Aeration was added in 2005 which were floating aerators to help. The system was designed to handle 250,000 gallons per day. Right now, there is a 100,000 gallon per day inflow. With 30,000 of that from residents and 70,000 from Cooper Farms which puts you at 70% of capacity. There were some recent violations; a CBOD violation is a sign the plant is being overloaded biologically for sure. Plant is okay for now hydraulically to treat the current flow, but biologically including phosphorus, ammonia and other things, right now you are being overloaded from both the residents and Coopers. You will be receiving the draft permit in the next couple of weeks. Justin: If I am correct with EPA, there is a 30-day window, and it is important to get comments back to them in that 30-day period. We have learned, there may be new parameters which lagoon systems have a hard time meeting.

EPA is now much more restrictive on phosphorus, nitrogen ammonia and E. coli. Just like with the algae in a lake. EPA is very concerned by the amount of wastewater from farmers and fertilizer. Disinfection of a plant, in years past, was done by adding chlorine, which is harmful to the aquatic system. The new way is to use ultraviolet, no chlorine is added, which is much more cost effective. Looking at it biologically, the existing load is Village 20% Cooper Farm 80%, the concentration is much higher than normal. Normal is 200 mg per liter, the test from Cooper Farms was 500 mg which is 2.5-time normal household wastewater. Biologically exceeding the load and that is what the cause of odors and DO is from. Oxygen cannot keep up. To look at that we need to meet NPDES and new requirements being added by EPA. It is expected to have Ammonia, nitrogen and E. coli. We looked at six alternatives. Upgrading, the blowers which would increase the amount of air. Supplementing what you have or replacing totally. In addition to meet new regulations for E. coli and phosphorus and disinfect the wastewater, you need to improve the aeration and improve the lagoon. We looked at a mechanical plant. The two main options are an Oxidation Ditch or a Sequencing Batch Reactor Plant (SBR) which is more cost effective. Also, if Cooper would pretreat, what would be needed at the wastewater plant.

We evaluated the cost, which is \$7.8 mil to \$8.2 million if you totally replace the aeration plus add UV disinfection. Keeping it as a lagoon system. Also, Oxidation Ditch or SBR range from \$10.3 and \$11.6 million. If Cooper farm would provide pretreatment, you would need \$7, million. In addition to construction and operation cost, we come up with Equivalent Annual cost of \$600,000 per year. If you totally replace it would be \$680,000 per year.

RECORD OF PROCEEDINGS  
VILLAGE OF FORT RECOVERY COUNCIL

Minutes of

Meeting

BEAR GRAPHICS 800-325-8094 FORM NO 10148

Held August 22, 2022

A mechanical plant would be \$730,000 per year, a SBR \$630,000. If Cooper pretreats, it would be \$450,000 per year. Equipment replacement would be budgeted at: equipment \$10,000 per year, pump \$15,000 per year, and building \$30,000 per year.

Diller: One note on the numbers, they all include a little over a million for sludge removal, which is not a part of the construction of a plant. Mike: The sludge depth is average of 2' which takes away 25% of the effectiveness, it should reasonably be cleaned out every 20-30 years. If the village goes to a mechanical plant, it could be waived. Diller: Also, the cost of an administrative building with a lab, garage for trucks and maintenance is one million. The time frame for design is 6-8 months. EPA would have 4-6 month to review, permit to install must then be approved. Construction bid time is 2 months. Construction would take 2-3 years because of equipment delivery problems. Many constructions are all having equipment delivery issues. Knapke: Can you elaborate on a mechanical plant?

Justen: For a typical plant, I brought this sample from the Village of Covington who is in the process of constructing. They opted for a larger building. The current lagoon area is 12-13 acres, 4 acres of which is lagoons. They will pay to unload a 40 yd dumpster once a week, which is what we could use the current lagoons as storage. The sludge coming off is stabilized with no odor. When the lagoon is in an anaerobic condition, you have septic wastewater. A mechanical plant is automatic, it will monitor dissolved oxygen in the tank. Wendel: With sludge discharge, is it factored into the equation? Justen: One thing we should address, a Class 1 certification requires 3.5 hours a week. A mechanical plant would require Class 2 a minimum of 20 hours a week vs 3 hours, which has been factored into the operation cost. Mike: The old lagoon cannot handle it and will be imposed on the new permit. Justen: It is limited, but with ammonia and phosphorus being required to be removed and have a disinfection limit you will need upgrades. Wendel: With a Mechanical Plant, Oxidation Ditch or SBR, can a community put restriction on any industrial users in town. Mike: Yes. Wendel: Limitations even if oversizing should be paying for that. When you do a plant like this, do you calculate how much loading, then see how much they use, then charge surcharge for those costs? Mike: Residential, Industrial should reflect in the surcharge. It should be 2X surcharge 2X what residential is paying. Wendel: When considering oxidation, would SBR be more cost effective? Why did you see 8-12 oxidation plants built in last 15 year? Mike: It's a newer technology. Main difference is, Oxidation Ditch, same treatment, more tanks more equipment. SBR is one single tank, more time to treat and cycle. Oxidation, to settle out the solids, need a final clarifier where the aerated system would go to, then discharge clear water. Here you treat, aerate, then settle. Justen: Both treatments are applicable to small communities. SBR is a little more cost effective. Wendel: Do you have a small community that has made this investment? Justen: Bloomdale, but it was their preference. Eric: You can't go by people if 80% of it is industrial. Mike: We do a lot with older communities with older lagoons. Back in the day it worked with new systems. EPA is putting on new requirements and to move into future it will be more restrictive requirements. With phosphorus currently at 1 mg/l ratcheting down to .5 per mg/l. Moving forward a mechanical plant is the likely choice as you must look ahead to the future. Kaup: How long have these been out, how long will they last? Mike: Mechanical Plants 50-60 years, pumps 15 years, mechanics 15-20 year. This has been factored into cost. Laux: What about future industries? Mike: We factored 80-150,000 per day, still left about 30,000 per day, if still bigger industry could expand the plant. We looked at a 20-year growth. Kaup: The village does not have that funding. Does EPA have grants? Mike: They have funding with principal forgiveness and low interest loans. Nutrient removal 0% loan up to 40 years. Ways EPA look at how community build things. Grant would be 30-40% of project cost and finance rest over 40 years. Currently USDA is about 3.5%. Going thru EPA standard rate of 1.8%. A special discount on projects aimed to reduce ammonia and phosphorus and provide a higher quality of water. This could treat 250,000 per day, which is now at 100,000; 70,000 from Cooper 30,000 from the rest of the village. B Knapke: Is that realistic? With limited info, it will depend on what Coopers financial commitment and remain at a level of competitiveness. The real question is can we grow together economically?

RECORD OF PROCEEDINGS  
VILLAGE OF FORT RECOVERY COUNCIL

Minutes of

Meeting

BEAR GRAPHICS 800-325-8094 FORM NO. 10148

Held August 22, 20 22

Schmitz: If Cooper were to do pretreatment? Laux: Where would this be located? Mike: Alongside the lagoon, but they would not be used. Village owns 15 acres. Ponds would be used for sludge storage. ODNR might look at these as wetlands. Eric: It is 50 years old and has not been dredged. But whatever can be done so we don't have smell. Pat: It comes into town too. Diller: I think what we have not discussed is it taking 2-3 years. What is the best thing we can do right now? First, I believe is to clean out the pond which is a separate project. Which is built into the cost and is the first step. What do we need to do? Kaiser: What is in it that makes it difficult to land apply? Justen: It must go through 5/8" screen when pumped to wastewater, with a minimal level of trash removal. You have to do special testing per acre. Worst is heavy metals, and if so, it has to go to a special landfill. Diller: Our testing has not shown any metals. Mike: You would have to take one cell out, but it's hard to deal with. Justen: It was not built with today's standards; you must have 3 lagoons now. Minimum of 10' to 15' deep. It is vastly undersized. Currently only 5' deep.

Kaup: If we build a 3<sup>rd</sup> lagoon 15' deep, and then pump, would that not be satisfactory? Justen: Lagoons are not very good to treat, phosphorus and ammonia. Ammonia is removed by aeration. Need to remove CBOD to a low level before ammonia can be removed. Disinfection is a process you don't have. Kaup: So, every little village is going to have to go through this? What is percentage? Mike: Depends on what water shed you are in. Total maximum daily load (TMDL) analysis and how much each discharger should be allocated. It is an economic burden on a small community. Kaiser: What would we need to do to dredge if only residential, say 2 weeks and Cooper didn't dump? Justen: Yes, you can, floating dredge, suction dredge removes 70-75%. Build a 3' berm, pump it into Geotech. The water coming out will run back into the lagoon. Kaiser: Could you dig it deeper? Justen: You could drain and dig, and install a clay liner. It can be done but you might not get EPA approval. Might say you have to bring in a portable plant. Kaiser: We have guys building ponds in 2 days. Mike: There are more regulations you would need to follow. Is it worth going to all that expense and then get rid of it?

Justen: Possibly dealing with phosphorus and E. coli limits. We learned today EPA may impose ammonia limits as well. Eric: It sounds like Cooper is looking at expanding. Jeff: We are always, but must live within our means. Yes, future expansions as long as it can be managed.

Kaup: No other options? Justen: Our recommendation is to build a mechanical plant; we don't want you to take out a loan and figure out in 15 years it is not a long-term solution. Mike: If Cooper wants to expand or there is new industry it won't be for you.

Diller: How do you expand a SBR? Mike: Add a larger tank. Right now, average daily flow is 400,000 gallons per day, hydraulically and biologically. Sized 50% of capacity. Not concerned. Cutler: On those units is there any odor? Justen: The main source of odor, is in the headwork area, and as soon as it's in the SBR and mixed into, odor is very minimal, an earthy odor that doesn't travel very far. If considering I recommend going to multiple plants to see what they see. Wendel: Using existing lagoons for storage, what about odor - is it stabilized? I talked to Lexington, sludge from their plant puts off no odor. Justen: if treated for 20 days and constantly aerated, you can go look, we will go with you talk to the operator and council. Most of those with systems, have all been very happy. Knapke: Have any of those town had similar industries? Mike: Similar loading, with animal, dog and cat food plant. Don't know exact percentages. In Leipsic, they bring us in to work on funding for the plant expansion. They chose the SBR and have expanded. Leipsic is a good one to talk to. It has been in operation for 10 years with expansion with additional tank.

Justen: When they release a draft NPDES permit, we want to see it so we can make a response. We would say, look they don't have it, can you extend the time period? To see what they would be willing to look at. All you have to do is write a letter. Need to make the request to EPA. Knapke: What are improvements that Cooper can make and how do you follow thru? Mike: Cooper would hire a firm to see what is cost effective. Put a limit on all industry in town. You would sample weekly, monthly. If affecting wastewater, would need an indirect discharge permit on the operating. Wendel: How tall are exterior walls of the

RECORD OF PROCEEDINGS  
VILLAGE OF FORT RECOVERY COUNCIL

Minutes of

Meeting

BEAR GRAPHICS 800-325-8094 FORM NO 10148

Held August 22, 2022

plant? Where we are looking at is in the middle of a flood plain. Diller: Where it is at is not in a flood way and only partially in floodplain. Mike: EPA requirement is to keep it elevated out of the 100-year flood plan. Things we must show EPA, you cannot build in a flood way. Wastewater plant is always in the lowest part of town. Kaup: Next we wait to see what we get from EPA and then look at options for cleaning. Diller: We are looking at way to remove sludge. If we do GEO Tech and haul away, there are no time restraints, if land apply then we are limited. People I have talked to cannot do it this fall. Mike: You would have to bid, then get funding to do it. If they don't put limits put on chemicals. Keep doing E. coli testing, test for ammonia and nitrogen. Thien: It's been running 4-5 in the summer and 1 in the winter.

Mike: You will need ultraviolet treatment, look at the chlorine, with continuous request to disinfect. Don't affect aquatic life in the winter. Keep doing testing, encourage that for Cooper Farms. We have received indirectly from them, sampling done by Village shows what they're discharging.

Diller: I am working with Jack from PDG on developing an agreement for Coopers as required by EPA. Will try to finish this week and sit down with you guys. For everyone, there was a lot of discussion, early on, conceptual cost don't know what we will need. Will look at the numbers, it could be way less or higher. Mike: Over the last 6-12 months construction cost has been seen a 30-40% increase, which is a lot of money. Might come down at some point, but now its high. Cutler: I would be more than glad to talk about current state and future plans for Coopers. Kaup: I think you need to get together and figure out what is best. The biggest issue is the smell. We don't want to pollute the river, it is bad, it's terrible. No one wished it on us, but now we need to deal with it. We need to put the brains together, I don't know how, but the people that do need to figure it out. Diller: I understand you are going through a study? Bill Knapke: When completed, we finish up sampling this month, we will figure out a proposal. Diller: Every community is not being treated the same with new discharge limits, depends on where we are discharging. Mike: I will get an EPA representative to explain how they come up with the limits. They are 20 years behind on the study of streams in Ohio. They implement the three new permit requirements because they did a stream study. Kaup: They are 20 years behind and give us 4 years to comply. They are not still manning their office due to COVID.

Kaup: Is there any way we could have predicted this? Mike: They are coming up with new requirements all the time. Kaup: The smell, and with the numbers you would have thought based on past communities they could have predicted it. Mike: I don't think, not if the load changes. Diller: We have had an indirect discharge permit for CLEP. We ask for a limit and they (EPA) approve it. Cooper is going thru their indirect permit now; numbers are what they include in their permit. Knapke: Can you all but guarantee the sulfur smell would be gone. Mike: We can show you on past experience. Justen: We have been out there in anerobic conditions, the sludge is sitting on the bottom an odor is in there. When sewer becomes septic, it destroys concrete, manholes, metals. Grieshop: Is it harmful? Can it be measured? Justen: It is receiving a lot more air. Mike: When you want to see a SBR tank, it smells like moist compost, its brown not black. Grieshop: Where would you put it? Diller on our own land just south, other options looking at in the area. Everything pumps and is discharged to that area. Diller: We will continue to work toward sludge removal. Need to know what we need to accommodate for EPA. Then need to basically fine tune, keep Coopers in the process. I want to have all the correct information before we make a decision. Kaiser: It costs \$400-\$600,000 to operate. Does that include putting money back for replacement? Mike: Yes. Covington is looking at an October/November bid and start in January. The existing plant is from 1940. Thought it would be a good visual. We appreciate everyone letting us come along. We are happy to answer your questions.

Thien; The Water Plant was designed to run 350,000 gallons of water per day at a rate of 250 gallons per minute; we have been running at about 260 gallons per minute anywhere from 8-14 hours per day. Diller: The plant is 40 years old, and uses old technology. New treatments are available, may need to use new technology, get rid of caustic which is expensive now.

RECORD OF PROCEEDINGS  
VILLAGE OF FORT RECOVERY COUNCIL

Minutes of

Meeting

BEAR GRAPHICS 800-325-8094 FORM NO. 10148

Held August 22, 2022

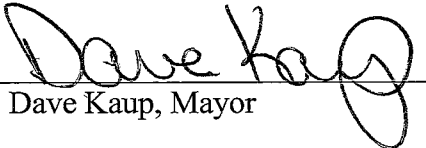
Thien: If you want to see SBR, there are videos on YouTube, it explains it in a simplified manner. You can pull up on YouTube and watch. Knapke: I was watching one today. Looks like a nightmare. Thien: The oxidation plant would be easier to add on to. If you need to grow you build another channel. You can add on to SBR, oxidation would be easier to add onto. Wendel: Is your knowledge favorable? Thien: I would look at SBR. Diller: One tank not 3 or 4. O&M cost is also lower. Wendel: At 10 million is Covington bigger? Diller: Take out a million for sludge, and a million for the building. We are not going to build a million-dollar building. There are a lot of things in the \$850 & \$750,000 estimates that doesn't make total sense. Wendel: Would it be advantageous for Coopers to not pretreat and what effect would it have? It would save a lot of money that could be given to the village Diller: There will always be a surcharge based on the loading percentages.


Knapke: What is our approach? Diller: We have to sit down with everyone involved, they are going to make a business decision. We should be in the business of wanting to keep them but we also need to be able to operate. Knapke: Do we look at an upfront charge or surcharge? Diller: If we need to inject and stay at \$450,000 maybe they inject that. What do we throw at them for operating?

Fiely: Should we put a committee together? Diller: Yes, we will need to look at that when we get to the next stage. We can assume they are going to implement.

Fiely: What if we dredge? Thien: I think it would help but I think it will sneak back up. Pearson: I thought we could get it done this fall. Diller: Before they get involved, we must put out for bid. Pearson: If you dredge and put in tubes, do you leave it sit there. Diller: There are options out there. Knapke: Its expensive, but still something. We are already going to Jay County landfill. Diller We are not over those limits. I asked if they had any problems, not as long as no metals. Key is to dewater as much as we can.

Fiely made a motion to adjourn the meeting, seconded by Schmitz. Meeting adjourned at 8:38pm.

  
Dave Kaup, Mayor

  
Roberta Staugler

RECORD OF PROCEEDINGS

Minutes of

Meeting

BEAR GRAPHICS 800-325-8094 FORM NO 10148

Held \_\_\_\_\_ 20\_\_\_\_