

Village of Fall Creek
Minutes of Committee of the Whole Meeting
September 20, 2021

1. **Call to Order:** 5:33 p.m., Village Hall Meeting Room, 122 E. Lincoln Ave., Fall Creek
2. **Roll Call:** Members Present: Committee of the Whole Acting Chairperson Sheena Kaatz, Village President Tim Raap, Trustees Ben Burch, Karen Herbison, Karen Hurd, Karen Strasburg. Members Arriving Later: Trustee Matt Mattoon. Members Absent: None. Staff Present: Village Administrator/Public Works Director Jared McKee, Public Works Employee Jamie Kaeding, Clerk/Treasurer Renee Roemhild. Also Present: 8 citizens.
3. **Certify Open Meeting Law Requirements Have Been Met:** A notice of the meeting and an agenda was posted at the three public places and local newspapers were notified.
4. **Adopt Agenda:**
 - MOTION (Herbison/Raap) to adopt the agenda. PASSED, without negative vote.Committee of the Whole Acting Chairperson Sheena Kaatz gave a big thank you from all the board members to the presenters who were willing to come and share their expertise and knowledge.
5. **Analysis of Accepting Septage at Wastewater Treatment Plant**
 - A. **Jeremiah Wendt, Wastewater Engineer, SEH Engineering:** Jeremiah Wendt introduced himself by giving his background, stating he has an engineering degree, worked for about 10 years doing wastewater treatment plant (WWTP) design, left the consulting world and served as a Public Works Director for 7 years, and then returned to consulting about a year ago. He stated his presentation will center around the design of the Village's WWTP in terms of what the plant is designed to handle and how septage could be incorporated into that design. (Septage is defined as the waste or sewage in a septic tank; septic tanks are common in rural areas.) Trustee Matt Mattoon arrived at 5:39 p.m. Wendt gave an overview of the process flow of our treatment plant: the wastewater goes through *Screening*, then is pumped over to the treatment plant site where it goes through an *Anaerobic Selector* tank and then into the *Oxidation Ditch*, to the *Final Clarifier*, then disinfection, and then is discharged – the sludge is recycled back to the *Anaerobic Selector* with a certain amount going to *Sludge Storage* that is eventually land applied. The *Screening* and *Clarifier* are physical processes-the screening removes plastics and rags, the clarifier allows the sediment to settle to the bottom; the middle part is the biological process in which living organisms are used to treat the wastewater. In the *Anaerobic Selector*, Wendt said the organisms are stressed to try to get the right “bugs”, then they are put in the *Oxidation Ditch* and given air and all the things they need to live, trying to concentrate many organisms in there in contact with the waste so they can treat it as efficiently as possible. You do not want the “bugs” to die, as they are what is treating the wastewater.

Wendt said the three most critical parameters of concern are:

- 1) Flow – how much flow can the Plant take
 - a. Facility has a maximum design flow of 191,000/day
 - b. In 2020, the average flow was about 72,000/day
 - c. Using approximately 38% of design capacity
- 2) Biochemical Oxygen Demand (BOD) – how much oxygen will it use up
 - a. BOD is a measure of the organic matter that's in the wastewater
 - b. Average municipal concentration – 3,000 mg/L

- c. Septage concentration – 2,000-30,000 mg/L (Much higher because the septage has been concentrating in a tank for a while, so it will require more oxygen & bugs.)
 - d. Facility design loading in pounds – 290 lb/day
 - e. 2020 average – 153/lb day
 - f. Using approximately 53% of design capacity
 - g. Septage (one load of 3,000 gallons) – 75 lb BOD
 - h. Potential for taking one 3,000 gallon load of septage/day
- 3) Total Suspended Solids - how many solids are in the waste
- a. Average municipal concentration – 13,000 mg/L
 - b. Septage concentration – 4,000-100,000 mg/L
 - c. Facility design – 400 lbs
 - d. 2020 average – 150 lbs
 - e. Septage (one load of 3,000 gallons) – 325 lb TSS (Total Suspended Solids)
 - f. Taking one load of 3,000 gallons septage could put the Village over the facility's suspended solid capacity

Wendt said it seems like there is a lot of room to take septage if you just look at the flow, but when you factor in the biological impacts of the BOD and solids, the picture is different. You want to think about the plant as a living organism. If you vary from the schedule, it can throw things off; you have to figure out how many pounds you can take and still keep the correct balance.

Wendt said by doing possible facility upgrades, you could mitigate the impacts:

- 1) Flow Equalization and Holding Tank Size – for metering the septage into the plant at a steady rate.
- 2) Grit Removal – to get the inert solids out of the stream so they aren't settling in the clarifier.
- 3) Clarifier Capacity – would need to be sized accordingly because you would be increasing the amount of solids the facility is seeing.
- 4) Sludge Storage – would need to be sized accordingly because of increasing the amount of solids

B. Tom Jakubowicz & Travis Simet, Septage Haulers: Tom Jakubowicz & Travis Simet addressed the committee saying they are professional haulers; this is their livelihood, they want to maintain a good relationship with the treatment facility so they are careful about what they bring in. The volume of their trucks is 4,000-5,000 gallons. A load may be a mix of septic and holding tank waste so it may not be as concentrated as 100% septic. They haul probably 4-5 truckloads a day. They work their way from one treatment plant to another one, looking to fill up the truck and end in a location where they can empty the truck. Time is a big factor for them so if they can save a half hour drive time by dumping in Fall Creek, rather than driving to Chippewa Falls, it would make a big difference to them. They questioned the size of the Village's current holding tank. In finding out it was only 2,500 gallons, that was a concern because they felt they needed to unload a full truckload. Current price they pay the WWTP for dumping their waste is \$14/thousand gallons for holding tank waste and \$90/thousand for septic tank waste. Their primary hauling season lasts 8 months of the year, as they only haul on an emergency basis in the winter months.

C. George Hobbs, WWTP Operator, Chippewa Falls: George Hobbs addressed the committee. He is the Wastewater Supervisor for Chippewa Falls; he has run the treatment plant for about 25 years. Chippewa Falls started taking septage in 2014. Hobbs stated he runs his plant in the summer months at about 120% of its design. The DNR

does not like that, but they don't do anything because he doesn't have violations. He stated the DNR does not want him to operate over 90%. His philosophy was that he had the capacity that the citizens paid for, so he decided to use it. He has 6 employees in his wastewater department, 7 in the water department, and 3 office staff. They are at a size where they have to do a lot of testing anyway. He estimated they take about 15-20 loads of septage per day, which is a very small percentage for them, about 5% of their daily flow. Hobbs said regarding taking septage, the main thing operationally is to deal with the BOD and the solids; stating you have to haul more out, you have to have more land available because of the increase in solids that have to land applied. Hobbs stated it's tough to coordinate with farmers to get on the land at the right time.

D. Chris Groh, Executive Director, Wisconsin Rural Water: Chris Groh introduced himself as the Executive Director of Wisconsin Rural Water, saying he makes the plant run that the engineer built. Groh stated the two septic haulers that presented tonight are exceptional; Groh said that is not what they typically see. He also stated the plant at Chippewa is exceptional for handling septage, due to its volume and being better set up to receive septage. Fall Creek doesn't have that situation. Groh reviewed the probable need for capital improvements and their estimated cost: Equalization Tank - \$500,000; Sludge Storage Tank - \$1 million; Centrifuge (sludge separating equipment) - \$2.5 million; a second selector, grit removal, screening. Groh stated the plant would operate a whole lot differently, you'd probably need another employee or at least a half-time employee. Groh said the plant was designed for the customers in the Village, it wasn't designed to be overtaxed, the plant is an expensive investment that you want to take care of. When asked how many loads the plant could take as it is now, Groh responded "*as many loads as what gets you to your organic loading limit, which I think we calculated at maybe two, but but you guys thinking its maybe not quite that high, maybe four.*" He further clarified that the amount the plant could take would depend on if it was septage or holding tank water.

E. Kay Curtin, Wastewater Technician/Trainer, Wisconsin Rural Water: Kay Curtin introduced herself as the Wastewater Technician/Trainer, stating she is the person that gets called when things go wrong. She gave several examples of situations that have happened, stating even if you have haulers that you really like, you can have problems. Curtin handed out a worksheet summarizing the pros & cons of receiving non-municipal waste, feeling it important to weigh the risks when considering taking septage.

From Curtin's worksheet:

Pros: income to the WWTP, providing a service to local haulers.

Cons: very high levels of hydrogen sulfide (toxicity issue in plant); may contain toxic substances that will harm the microbiological portion of WWTP; may contain toxic substances or materials that could endanger health of employees (benzene, pesticides, meth lab waste); may contain heavy metals or other substances that are prohibited for land-spreading biosolids; may contain large amounts of FOG (fats, oils, greases); may contain large amounts of inorganics (sand, gravel, grit); extra energy costs; extra labor costs for receiving, sampling, and monitoring; extra solids removal; higher costs for phosphorus removal chemicals/or upgrades to bio removal; may require plant upgrade for receiving station, solids removal, additional treatment and storage.

Curtin cautioned if you get a bad load, the plant would be upset for a couple weeks. The DNR would become involved. If there were violations, the DNR could put a ban on new houses in the Village. Curtin said the Village could try a little bit, but to keep good records, look at the data and see what it's doing to the plant.

McKee stated this has been very informative and thanked everyone for taking the time to talk to us. He suggested getting a high-level engineer to analyze what would be needed and the possible revenue stream. Kaatz stated this was a valuable meeting, with gaining a lot of information. She thanked Hurd and Herbison for bringing up the topic. She asked availability for setting up a meeting to consider the information presented. A meeting was set for Wednesday, October 6th at 5:00 p.m.

6. Adjourn at 7:55 p.m.

Renee Roemhild, Clerk-Treasurer