

## Grafton Planning Commission

Regular Monthly Meeting

Tuesday, October 10, 7:00 PM

Grafton Town Hall 2<sup>nd</sup> Floor

<https://us06web.zoom.us/j/81340393010?pwd=TDk5Y3FDaUNYNVBHNmRRVGNwbWRiZz09>

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### MINUTES

1. Approval of Agenda
2. Approval of September Minutes
3. Wastewater Discussion

PC guest speaker Rob Sarmanian, from Oakson the New England distributor of the Perc-right Drip Dispersal system. which is pressure distribution wastewater disposal system that utilizes modified irrigation tubing instead of pvc pipe with holes as the interface into the soil. Works in all 6 New England states, the technology has been in the region since 2005. It has been patented since 1990, so it's not new. They have systems in northern VT, northern Maine, Maine, coastal CT, Nantucket and everywhere in between.

PC: T&B are suggesting a drip system.

Rob: Oakson has worked with them over the years. I started talking with T&B in 2022. I talked with them about a few of the sites that were being vetted. I have talked with them about the Springhill Farm site. I am somewhat familiar with the project. I am working with 7-8 VT communities right now. I have not seen the 60% design plans. I did provide them with some preliminary layouts to meet regulations.

PC: As a Planning committee, we are trying to gather information about alternative solutions. Have you ever done anything with the Living Machine system.

Rob: Only once, it was Fisher's Island in Long Island for a yacht Club, it is an environmentally sensitive area. It wasn't that brand but was similar. They grew vegetation so that the water released into the wetlands would be safer.

PC: is there a site that you've worked on that is somewhat similar to the Grafton situation.

Rob: I'm concluding a project that's 10 times the size of Grafton, in Maine. The type of system that I do is scalable. I can work in your background and a municipality. What changes the tanks and the size of the final discharge pump The closest comparable right now, is the town of Montgomery, VT, whose system has been approved and is now going to bid. A little bit under Grafton's size. There's a range, when we get to 20K- 60K is all similar. We have 15-20 projects in that range.

PC: What is the difference between the Oakson perc right system and the drip dispersal system.

Rob: It is pre-engineered packaged system, it's incorporating equipment that has been approved for discharge primary settled effluent into the ground, according to the Vt rules, with no

treatment. We supply a full suite of requirements: the controls re: on/off to what areas the effluent is being discharged, size of the pumps, the hydraulic unit (inserted after the pump but before dispersal zones final filtrations to allow it to go into the ground without clogging). There are many parts of the system that have already been vetted by the state. It has safeguards and redundancies to prevent clogging the field (the most expensive part of wastewater system is preparing the field so you don't want clogging that will make you have to re-do that expensive work). In addition, when you intro wastewater high in the soil, there is a lot of bacteria that breaks down the soil that breaks down the drip dispersal is only installed no deeper about 12" below the soil; the soil is rejuvenated by natural processes, vs non-aerobic deeper processes.

PC: is the height of the site a problem.

Rob: not a problem, we create pumps to get it there. Not a concern whatsoever.

PC: so there is not a traditional treatment before it goes to the soil?

Rob: our system is approved to work with just septic system quality effluent all the way to membrane bio-reactor type of treatment plants. we have final filtration that we provide. Because there are safeguards in managing the effluent, we make sure that there is not solid slugs that are sent into the ground.

PC: you are working with the upper-level of the soil and you don't have a freezing problem

Rob: whatever is in the pipe drains at the end of the pump cycle so the force mains are installed below frost, they have vertical risers that feed the pipe that are insulated, it does its dosing cycle and when the pump shuts off and everything that's in the pipe drains into the soil and it's empty, ready for the next dose.

PC: How deep are you going for the main line?

Rob: Whatever is determined and recommended by the engineer and site contractor. Typically, minimum of 4 feet, but it could be deeper. The experts in your area determines the frost depth in your area.

PC: how large of an area do we need for ours (42K gallons).

Rob: systems of that size require a soil connectivity analysis, to see what happens to the ground water below, see how quickly the water moves through the soil. They will tell you how much water can go into one square foot of soil and we take that number and apply the VT rules. VT rules also require a 100% duplicate area. We just follow what the code states. We gave T&B the amount of tubing and the contours for that area. We don't look it as acres, we look it as square-foot segments.

PC: Is it hit all at once with the distribution?

Rob: No, multiple zones. It's designed to rotate around the zone over 24 hours. The whole area does not get charged all at once. You do not need a pump to charge the whole area. You rotate through, not in what slug. We get rid of the waste water in smaller doses.

PC: what are the maintenance requirements for a system like this?

Rob: You can hire a VT-based wastewater operator company or we can train your town staff to look at the system. You are not greasing fittings. You are just checking that the flow switches are registering; the pumps are meeting their pressure requirements, that valves are opening and closing. It is checked once every 3 months to kick the tires. In the beginning, you may opt for a little bit more frequent. Oakson comes up for the first few visits to help train the staff. We have additional training as different staff come on board, as needed. It is not hard to get people up to speed. It is a comprehensive approach depending on your community needs. It is a pump and it is a valve that opens and closes, and seeing whether there is or is not water in the tank.

PC: what can you grow above these systems?

Rob: You want vegetation. In Maine, a larger site, soccer fields and play areas. You can just let it grow wild. You can have trees and you don't need to clear cut. You can have a lawn. Not vegetables or crops for human consumption. Some sort of vegetative cover. If it is going to grow wild, cut it once per year just for access.

The folks in the IDR at the state know this system and they know that it works. I have had trainings with them over the last 18 months.

PC: what is the projected useful lifecycle of the system?

Rob: the pump and the solenoids that work the valves will wear out. There are systems that were installed in the early 1990 in PA are still active today. The soil absorption part lasts.

PC: does it maintain the efficiency of the treatment over time?

Rob: yes, because there is no clogging of the pipe, the pipe efficiency remains within 3% of original start-up design. You don't get diminished flow over time.

PC: how do you monitor the field?

Rob: you don't monitor the field, you monitor the flow rate for each zone. If it is running too fast, if someone changed the field, you could see it get wet. If a restaurant started in the town and changed the biological composition, you would see the problem in the field. If one zone has a problem, you can divert the flow into the other zones, and you could repair it. It's not a major excavation project.

PC: can you have multiple sites?

Rob: yes, we do it all the time.

PC: Could you have one site on one side of the village and one site on the other side of the village?

Rob: well, the town of Montgomery did build two separate collection systems. It was close to a 50-50 split. But, it wouldn't make sense to split it 95%-5% for two-system split.

PC: We have a cheese factory with waste products.

Rob: Cheese factory would have to have tanks that knock down the material, otherwise it's changing the make-up of your town waste stream. Any non-residential user has to be looked at individually before you send it into the system. Example: breweries. The strength of the

wastewater is high and they have to figure out how to dilute or pump and haul. Otherwise, the chemical make-up would damage the soil. They have to do something local for manufacturing by-products before they enter the waste stream.

Cathy: Do the various grants apply to your system?

Rob: I'm an approved wastewater system so we meet the standards to fulfill the grant requirements.

PC: What are the positives and price differences re: this system vs. other systems.

Rob: I can't speak to price, there are many different systems to compare. Re: the benefit of this system: best effective treatment before waste gets into the groundwater. The aerobic treatment in the top of the soil. Filtration protects anything that could accidentally get from tanks into system so will not get into the field and clog it. Happy to come back to answer questions and we can look at the specifics of the drawings, if you want.

Audience Q: is it still possible to create a sports field in the Village Park?

PC: the problem was what was going downhill, but that was misinformation and T&B also shot it down.

PC: T&B found that it didn't perk. But that was a different, more traditional system, so maybe reconsider, would the soil system work for this other kind of system? What about the existing ballfield? We could use it and improve that ballfield because can be built on top?

PC discussion: Was this kind of system in the T&B report? We don't know.

PC discussion: T&B said \$180K a year for maintenance and Rob was not talking about that kind of money for maintenance. Who is being realistic? Some discussion of the grant, the costs in the T&B report, T&B lack of clarity about costs (no detailed breakdown of costs) and that lack of clarity is making us keep going with this kind of studying. Where is the Selectboard now?

Cathy (on zoom): they want the 90% report but then they need to find out how it could be funded, that would be before a vote. The bridge is going to be \$8-9 million so don't want to do a bond on top of that one. Then, there are the people outside the village who don't want to pay for it and don't see a need.

PC: If we can sweeten up that water before we disperse it, can possibly use less area or different kind of soil. Plus, possibility of a sports field.

PC: very high cost from T&B re: combining wastewater and water supply.

PC: We can't afford to follow all these regulations. We need the state to give more leeway. We cannot afford what they are requiring.

PC: We need to know the approx cost of the Living Machine system.

PC: Cost of all the systems probably the same in bringing the waste to the field. We need to know the difference in cost after it reaches the field. Should we have them re-examine the Village Park or Grafton Ponds, given what Rob said about the different requirements for land for his perk test? Are the constraints on locations for the Living System or for the Oakson different than the possible locations that were already considered by T&B?

PC: Informal incomplete survey beyond the village finds that people don't seem interested in paying for the village wastewater. Some benefit to them for improving the village, but you can't ask them to pay too much.

PC: discussion of problems with payments for construction of federally-funded projects.

PC: motion approved: Come up with specific questions for T&B, Oakson, Dave Whitley (Design-Build), Hannah (Undign? Freshwater Consultants), including ballpark figures.

3. No Unfinished business

4. New Business. Budget request to Selectboard. We have typically asked for \$2,500. Last year we think we only asked for \$1,500. We should use some of the funds for Morgan, who has done work for us. We could potentially use some of our budget to upgrade the sound system so that people can hear who are not in the room; attendance would be higher if people could hear the discussion.

5. No Public Comment

6. Next scheduled meeting Nov 14, 2023 at 7:00pm

7. Meeting adjourned at 8:48