

VILLAGE OF FOOTVILLE WASTEWATER FACILITIES PLAN FACT SHEET October 3, 2019

A. WHAT IS THE VILLAGE WORKING ON?

On behalf of the Village, MSA Professional Services, Inc. to develop a Wastewater Facilities Plan. The plan evaluates the condition of the facilities and recommends long-term improvements to accommodate growth, replace aging equipment, and maintain current and future permit requirements. The purpose of the facilities plan is to recommend the option that has the lowest life cycle cost and that meets all of these criteria.

B. WHY IS THE PROJECT NEEDED?

The Village is facing future stringent limits for phosphorus and the DNR required that the Village identify a preferred compliance strategy this year. In addition, the existing treatment facility is nearly 20 years old. Through the diligent operation and maintenance of staff, the facility has operated successfully despite age and condition concerns. However, even with diligent operations, equipment and structures eventually require repair and/or replacement. In addition, portions of the collection system are original to the Village and likely in need of repair to help reduce the amount of unnecessary clearwater entering the system.

C. WHAT ALTERNATIVES WERE CONSIDERED?

Several alternatives were evaluated in the Facilities Plan. Many of these alternatives were eliminated from further analysis due to their inability to meet the proposed effluent limits or cost effectiveness. The alternative evaluation focused on upgrading the existing facility to meet future ammonia and phosphorus regulations. The alternatives considered included:

No Action

- Legally, the “no action” alternative would eventually lead the Village to be in violation with its WPDES permit. The continue failure to meet the requirements of the WPDES permit could subject the Village to legal action by the Wisconsin Department of Justice, and subsequent fines and other penalties. Failure to comply with the requirements and standards set forth in the WPDES permit is also grounds for the WDNR to refuse to allow new sanitary sewer extensions. Without sewer extensions, the community’s ability to continue to grow is lost. The power of local government to shape the future character of the Village would be lost if the “no action” alternative were chosen.

Regional Treatment

- This alternative assumes a new pump station and forcemain, (and possibility an odor control system) would be constructed from the main lift station to a neighboring WWTF such as Orfordville or Janesville. The cost of the forcemain, lift station, building, odor control stations, chemical feed equipment, and additional fees to the regional treatment facility was unaffordable. In addition, Orfordville just completed a major facility upgrade and was not interested in having the Village as a customer. As a result, this alternative was not considered for further evaluation.

Treatment Alternatives

Three alternatives were evaluated for compliance with future phosphorus limits as well as address age and condition concerns of the facility.

- **RSF Upgrades + Tertiary Treatment**
Address deficiencies with the influent pump station, septic/dosing tank, replace samplers, upgrade electrical/controls, and installation of an advanced ballasted clarification process for phosphorus compliance.
- **RSF Upgrades + Spray Irrigation**
The RSF items listed in the alternative above plus installation of a lagoon and spray irrigation system

to comply with phosphorus limits.

- Mechanical Treatment (activated sludge)
Demolition of the RSF system and construction of a mechanical treatment facility that utilizes activated sludge biological treatment.

Sewer Rehabilitation

- Approximately 10,000 LF and 70 MHs are original and/or need to be inspected for defects that lead to infiltration and inflow. For the purposes of the report, it was assumed at approximately 60%, or 6,000 LF, and all 70 MHs are in need of some level of rehabilitation. Further investigation is necessary to identify the extent of rehabilitation; however, budgetary numbers were included in the study based upon MSA's experience with communities with similar age, condition, and size of collection systems.

D. WHAT IS BEING RECOMMENDED AND HOW MUCH DOES IT COST?

A detailed cost estimate for each alternative is included in the facilities plan. The costs are summarized below.

#	Alternative	Capital Cost	Annual Cost	Present Value	Rates/REU (% of MHI)
1	Sewer Rehabilitation + Activated Sludge	\$4,894,000	\$116,500	\$6,370,000	3.24
2	Sewer Rehabilitation + RSF Upgrades + Spray Irrigation	\$6,197,000	\$70,600	\$7,020,000	3.43
3	Sewer Rehabilitation + RSF Upgrades + Tertiary Treatment	\$6,704,000	\$135,500	\$8,560,000	3.97

Each alternative includes a column that identifies the resulting sewer rate as a percentage of Median Household Income (MHI). The DNR and EPA generally consider sewer rates <2% of the MHI as affordable. Due to the alternatives all being above this criteria, the Village is likely eligible to receive an Individual Phosphorus Variance (IPV) for the 5-year period of the next permit term.

When receiving a phosphorus variance, the Village must implement a Pollutant Minimization Plan (PMP) to minimize the discharge of phosphorus to the extent feasible and/or affordable. The PMP developed as part of this plan, and the IPV application, consists of further investigation of other alternatives that may provide a more cost effective means of compliance in the future, in addition to further investigation on the extent of sewer rehabilitation needed. Those potential future alternatives include chemical treatment and/or Water Quality Trading. A cost estimate for both options is included below.

#	Alternative	Capital Cost	Annual Cost	Present Value	Rates/REU (% of MHI)
4	Sewer Rehabilitation + RSF Upgrades + IPV + Chemical Feed	\$2,764,000	\$63,500	\$3,289,000	2.05
5	Sewer Rehabilitation + RSF Upgrades + IPV + WQT	\$3,316,000	\$56,500	\$3,621,000	2.18

As discussed, additional investigation is necessary to evaluate the feasibility and better define the costs for Alternatives #4-5. However, based upon the preliminary costs identified in the table, and the resulting user rate, it is possible that the Village will be eligible again for an IPV in the following 5-year permit term. The additional evaluation conducted as part of the PMP will provide further clarity.

As part of either alternative, it is recommended the Village implement the RSF upgrades to provide continued treatment and performance of the existing facility.

E. HOW MUCH AM I GOING TO PAY FOR SEWER SERVICES AS A RESULT OF THE PROJECT?

In 2020, the Village will be retiring the debt on the existing facility that was built in 2000. This will free up significant debt capacity within the existing rates to finance the RSF upgrades, sewer rehabilitation, and the additional investigation recommended. Therefore, it is likely that no rate increase will be necessary during the five-year term of the variance. However, a more detailed financial analysis will be necessary, as projects become a reality year-to-year.

The Village may wish to utilize the DNR's revolving loan fund to implement the recommendations as one single project or multiple projects over the five-year period.

F. WHAT IS THE PROPOSED SCHEDULE?

The Village hopes to receive approval of its variance application within the next three months, and then begin implementing the RSF upgrades and PMP thereafter over the next five years.

