

Capital Improvement work completed or going to be completed

Water

➤ Fire Hydrants

- USDA project will be adding or replacing a total of 14 new hydrants

➤ Water System Along George Street

- George St. between Sherwood and 1st St. were replaced with ICE project
- George St. between Main St. and 7th St. will be replaced with USDA project

➤ Water System Water Loss

- USDA project will be replacing all water meters, this alone will reduce our water loss by nearly 50%, the remaining water loss will be reduced by the replacement of approximately 4000' of new water main. We have also implemented a way of tracking water loss from flushing hydrants and from fire department this has helped with tracking water loss.

➤ Water System along Main Street

- Nearly all of Main St. needs water mains replaced, USDA project is going to be replacing water main from Sheley St. to end of Village water system leaving the section from Lake St. to Ballanger St. to still need to be replaced in the future

➤ Water System Meters

- USDA project will be updating all water meters along with the billing system

➤ **Water System Along 5th Street**

- The water mains along 5th St. from Lake St. to George St. will be replaced with USDA project, also from State St. to end of Village water system at Wyckoff this will leave 5th St. with all new water main

➤ **Water System Along Sheley St.**

- USDA project will be replacing all water mains along Sheley St.

This is a list of several areas that were pointed out in the CIP needing to be addressed by 2023. As you can see there is still several items on the CIP that are going to need addressed in the future. Although there are things needing addressed in the CIP we have determined that there were a few additional item needing addressed. These items will be addressed with the USDA project. The list of those are as follows:

- Well's 3 and 4 need to be cleaned and rehabbed USDA project is going to complete that
- Well 2 needs to be replaced due to age, USDA project is replacing that
- USDA project is adding SCADA to entire water system including required Well house entry notification
- USDA project is providing new water main along Lake St. from 4th St. to 5th St.
- USDA project is completing a loop in the water system that is needed along Division St. EGLE ask that you have as limited dead ends in your system as possible
- USDA is installing eye wash station at each Well house, this is required by EGLE whenever you are introducing chemical feeds within the system
- USDA project is redesigning Well house 3 due to not having legal entry along with new security fencing

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Sewer

- **Wastewater Collection and Treatment Improvements**
 - ICE project completed some of these
 - USDA will be completing the rest that have been recommended

- **Wastewater Fecal Coliform Issues**
 - When we had to renew our EGLE permit we requested that the sample location for Fecal Coliform be changed EGLE approved this, and we have had no issues since

- **Force main cleaning and ARV work**
 - ICE project covered some of this work
 - USDA will cover the remaining recommended work

- **Wastewater Treatment Plant Effluent Meter**
 - ICE project had one added

- **Collection system manhole rehab work**
 - USDA project will cover some of the worst ones
 - DPW will be addressing the remaining in the coming years

- **Wastewater Transfer Structure (Main Lift)**
 - USDA project will have structure cleaned, install new check valves, install new pumps and controls, and new SCADA system

- **Wastewater Treatment Plant Headworks and Screen**
 - ICE project had influent structure cleaned and coated, and new valves installed
 - USDA project is adding a screen and a screen room

- **SAW Collection System Improvements**
 - USDA project will have entire system cleaned and camera, and will be fixing all recommended critical issues

This is just a list of things that were put into the CIP to address by 2023. Along with all these items USDA project will be addressing several other items. The list of the additional item it will be addressing is as follows:

- All new aeration
- All lagoons will have the biosolids removed
- All new pumps at the 3 oldest lift stations
- All new controls at all 7 of the lift stations
- New SCADA system at all lift stations

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Equipment

➤ Pickup Trucks

- In 2018 we replaced two pickups
- In the next 2 years we are going to need to replace the last pickup

➤ Plow Trucks

- Within the next 1 to 2 years, we are going to need to either replace or put several thousand into the dump truck

➤ Vac Truck

- In 2019 we purchased a used Vac truck
- In 2020 we had some of the repairs made that were needed
- In 2021 we plan on doing the last of the needed repairs
- Once these needed repairs are done, we will be putting the old Vac truck up for sale

Over the last couple of years, we have been adding several smaller tools to our department, we will continue to do this as needed. In the coming years we are going to need to add a few larger pieces of equipment, the list is as follows:

- Sidewalk snowblower with several attachments
- New riding lawn mower
- Update the Backhoe
- New Bypass Pump
- Curb side trash bins

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Sidewalks

➤ Sidewalk repairs and replacement

- In 2019 we did several hundred feet of replacement and repairs, in 2020 we decided not to do any with the upcoming USDA project as well as COVID
- In 2021 we do have some areas in the plan to replace but again with the USDA project we are going to hold off on a lot. We will be adding sidewalks and replacing several in 2022

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Storm Sewer

- **George Street and Main Street Culvert**
 - I have had the culverts inspected, they need replaced and I have been seeking grant funds to do this work because it is estimated at \$500,000 to be replaced

- **6th Street Culvert Cleaning**
 - Completed in 2018 with street improvement project

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Streets

➤ Local Streets Improvements

- Everything from State St. to N. St. Helen St. have been completed, with the upcoming USDA project we have held off on doing any other street improvements in 2020 and 2021. We will be picking back up with the rest in 2022 construction season

➤ Major Streets Improvements

- Everything from 4th St. to Hannah St. has been completed with the upcoming USDA project we held off on street improvements in 2020. In 2021 we will be building Division St. from George St. to Robinson Creek; this project is 80% MDOT funded, and 20% Village funded. This is the only street within the Villages jurisdiction that is eligible for MDOT funds. We will begin working on the rest of the CIP recommended street work in 2022

Advantages of USDA project on the sewer side

In 2013 the Village received a SAW grant. The grant was to camera and investigate the entire sewer system. After that project was completed there was a complete list of compiled areas within the system that were identified as areas of concerns. They were labeled as... no action needed, probable failure, and immediate failure. To date there have been only minor repairs and maintenance done to these areas. It was also determined that the WWTP needed several upgrades. With the USDA project we will be able to address nearly all of the concerns that were identified with the 2013 SAW project. In this handout I will highlight the concerns that will be corrected.

- **Manhole Rehabilitation**

Most of the manholes will either be replaced, lined, repaired or rim elevations adjusted. Doing this it will help with the infiltration of ground water or runoff water getting into our system which is making our sewer pumps run time go up considerably.

- **Sewer Line Rehabilitation**

We will be replacing several thousand feet of sewer lines that are broken and causing water to infiltrate into the system. Areas that don't need complete replacement will be getting cast in place lining helping with the infiltration. We have several service line tie ins that are broken and leaking, these will all be replaced. Also we will be videoing and cleaning the entire system.

- **WWTP Aeration System**

The current aeration system is aging and costing us more in energy, this project will be adding new or replacing the aeration system with a more cost effective system. By doing these aeration improvements it is going to allow us to get the sludge removed from our ponds. Which is very close to needing to be done at this time. The cost to do this is very expensive and typically not covered under any grants as it is considered a maintenance expense.

- **Main Lift and Forcemain**

Our main lift station has aging pumps that are also costly to run. The forcemain is aging as well and is recommended to be clean. This project is going to allow us to get updated more cost efficient pumps and our forcemain cleaned lowering our pump run times.

- **Lift Station SCADA System**

All of our lift stations are monitored by manpower and a land line. With the aging land lines we are always having failures. With this project we will be getting an up to date cellular system that will allow us to monitor the stations and pumps from our cellular devices.

- **WWTP Screening**

Where the forcemain drops into the ponds we currently do not have any kind of screen to remove trash that gets flushed into our system. A few examples of the trash we get are chip bags, zip lock bags and other personal hygiene items. Having these items getting into the ponds makes the breakdown of the sewage difficult, we use man power to go around and pick these items out of the ponds. With this project we will be getting a mechanical screen that will collect them and dispose them straight into a dumpster that will then be picked up and disposed of properly.

These are a few of the most important items being done with this project to help improve the process of the sewer plant in turn saving us money.

Thank you for your consideration of this project

Sincerely,
Lance Cherven
DPW Director

Advantages of USDA project on the water side

Every 3 years EGLE (formerly DEQ) comes in and does a Water System Sanitary Survey. This is where we go over every aspect of the Village's water system. Our last survey was done in 2017, at that time it was recommended by EGLE that we begin planning on doing a number of upgrades. In this handout I have highlighted the highest priorities set by EGLE.

- **Water Meters**

Water meters have a life expectancy of 12-15 years. Our meters are nearing that life expectancy, this means we may not be recording accurate water usage. With the current reading system we have it takes about 20 hours per month to read meters. With this project we will be getting all new up to date meters as well as up to date software which will allow us to do readings in about 30 minutes. We have 85 meters that are located in outdoor pits, these are a high risk for freeze ups and broken meters. With this project all of these will be removed and placed indoors.

- **SCADA System**

We are currently operating with a land line SCADA System. With the aging land lines we have, we are having several issues with phone outages making it difficult to monitor our water system. With this project we would have a cellular SCADA System allowing us to remotely monitor our system for more accuracy in the event of a system failure.

- **Water Wells**

All three of our Wells are reaching an age where they are in need of some major overhauls, including Well 2 needing a complete replacement soon. This will be a major expense for us to take on. With this project Well 3 and 4 will get complete overhauls and Well 2 will get a complete replacement.

- **Water Mains, Services, and Hydrants**

We have several areas that have undersized and outdated mains. Undersized mains are concerns for volumes, pressures, and water quality. Outdated mains are concerns for water quality and main breaks. With this project we will be replacing several thousand feet of undersized mains and some of the oldest mains in our system, giving us improved water quality and performance. We will also be running new services which will help with future mandates for changing out old service lines. Of the 100 fire hydrants we have in our system, 28 of them are aged to the point we cannot service them. Of those 28 we are planning on

replacing over half of them, as well as adding a few to the system to allow us to better flush certain neighborhoods.

These are a few of the concerns EGLE as identified that need to be addressed in the coming future. With this project it is going to help reduce the concerns for major issues along with the major costs to the Village.

Thank you for your consideration of this project

Sincerely,
Lance Cherven
DPW Director