Frequently Asked Questions (V 03/08/24)

Is a wastewater treatment system really necessary?

Yes. Scientific research on the capacity of on-site systems has documented the effectiveness and limitations of these systems in proper treatment of wastewater. In areas of higher density and environmental conditions on-site systems do not protect groundwater and surface waters.

Over the past 50 years, starting in 1969, nearly 20 water quality and sewer feasibility studies have been conducted for the Higgins Lake area all recommending a lake wide sewer system. These studies have demonstrated decreasing water quality in Higgins Lake and in our drinking water and have identified existing septic systems as the major contributor.

The health, safety and welfare of the citizens of Higgins Lake is being compromised. The Central Michigan District Health Department (CMDHD) estimates that up to "68 percent of the more than 3700 parcels in the proposed service area would not meet one or more requirements of the current sanitary code. In addition the CMDHD records show all of the 122 wells recently tested, tested positive for Nitrates from septic effluent around Higgins Lake. Ten percent (10%) where over the safe threshold for drinking (10PPM) with the average of 4PPM. Nitrates in water are a clear indicator of failing septic systems. Without the establishment of proper sewer collection and treatment system around Higgins Lake, the area will continue to experience declining water quality in the lake and drinking water wells leading to decreased property values and recreation opportunities.

On-site private septic systems lack the capacity to effectively treat sewage from residential and commercial users around the lake due to the excessively drained sandy soils, density of parcels and high groundwater table. Scientific experts in wastewater treatment and lake aging have strongly recommended the need for a sanitary sewers.

Is the sand around Higgins Lake the best filtration available for sewage?

Sand does act to filter the wastewater and remove solids. However it does **NOT** remove all contaminants. Contaminants that are soluble in the water such as nutrients, bacteria, viruses etc. are not filtered out as the wastewater passes thru the soils. Our course sand also has limited binding properties for contaminants. Studies have confirmed the presence of nitrogen, phosphorus, viruses and pharmaceuticals in our lake and drinking wells from septic system sources contaminating our ground water.

What kind of sewer system is proposed?

Septic Tank Effluent Pump (STEP) collections systems are an economical, low-impact, long term solution to collecting and delivering wastewater to a treatment facility. Pumping the effluent without solids increases system efficiency and reduces the costs for system cleaning and pump failure. Other systems i.e., gravity and low pressure grinder pumps, were evaluated and found to be less cost effective

How does a STEP system work?

Septic Tank Effluent Pumping (STEP) Sewer system uses a water tight septic tank to separate solids from the effluent, but instead of the effluent draining out of the tank to the septic field and ground water, it will be pumped through small pipes to a wastewater treatment plant (WWTP). There the wastewater will be treated to remove nutrients and discharged to the ground meeting permitted EPA standards.

What are some advantages of a STEP sewer system?

- Watertight collection insuring only effluent is treated, with no need for manhole covers or expensive lift stations
- Shallowly buried, small-diameter sewer pipes, quickly installed with light equipment contributing to reduced environmental impact
- On-site primary treatment of solids reduces final treatment costs
- Reduced size, complexity, and costs of the wastewater treatment system
- Low operation and maintenance costs
- Lower upfront capital costs

Is the system designed for a combination of year-round and part-time homes?

Yes, the combination of full and part time occupancy was one of the reasons the STEP collection system was selected. This type of system minimizes solids in the effluent that is pumped, reducing the chance of the waste water collection system plugging during periods of low flow and preventative damage to the pumps.

What happens to the solids?

The solids are pumped from the septic tank on a schedule of approximately every 5 to 7 years, this allows the solids to be pre-treated naturally on each parcel. Pumping of the tanks is usually done under contract with local septic service providers. The on-site pre-treated solids are then hauled to the wastewater treatment plant for further processing. Pre-treated solids lowers expenses of final treatment at the WWTP.

Where is the proposed land for the Waste Treatment Plant?

In working with the MDNR a suitable site was identified which was acceptable to the MDNR. The location of the proposed Wastewater Treatment Plant is east of US 127 on the northwest corner of County Rd 104 and N Harrison Rd (Old 27). Finalization of this site is dependent upon completion of site testing.

How will the STEP sewer project be funded?

Funding can be via various grants, State and Federal Earmarks and long term loans with repayment assessed to the property being served. In an effort to make the project as affordable as possible, the Gerrish Lyon Utility Authority (GLUA) is pursuing all known options. Loans/funding through USDA Rural Development loans and grants, Clean Water State Revolving Funds is being sought and requests are being made directly from our legislatures for Federal and State direct funding. State and Federal Agencies which make grants and funds available have been contacted. Additional funding is being pursued from Foundations and local contributions. As GLUA becomes informed, we are seeking these loans and funds. The creation of a Special Assessment District (SAD) via Public Act 188 has been initiated for funding of the local share of the project. Payments will be over a 20 year or more time period.

How was the area of STEP service determined?

The Service Area was determined by analyzing depth to groundwater, soil types, parcel density, parcel size, and proximity to Higgins Lake.

Is my property included in the STEP sewer service area?

An interactive map of the proposed Sewer Assessment District (SAD) can be found here:

https://fveng.maps.arcgis.com/apps/webappviewer/index.html?id=f98e9b84e0c24bc3bc80373167914686

You can also contact the Lyon or Gerrish Township office if you have questions regarding your specific parcel.

What will be the cost to the property owner?

Capital costs to each property owner will be determined as part of the Special Assessment process. Operations and maintenance costs will be billed to each homeowner quarterly. The measure of anticipated average wastewater from a single family residence is referred to as a Residential Equivalent Unit (REU). This unit is one factor utilized in determining the cost allocation.

How will non-single-family parcels be assessed?

Non-single-family parcels will be assessed based on lot specific equipment needs and amount of waste produced compared to single family parcels. For example, a restaurant might need a larger tank, a grease trap and multiple REUs of waste, than a single family REU.

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What does GLUA provide the homeowner?

- New Septic Tank
- Septic tank pumping
- Pump in tank
- Control panel
- Force Collection Main
- Wastewater Treatment Facility
- All maintenance of above

What is the homeowner's responsibility?

- Service line from home to septic tank
- Electrical service to STEP System control panel
- Coordinate installation with approved vendors on your lot
- Quarterly maintenance fee

Will there be financing assistance available for the homeowner?

Yes. Government assistance programs may be available to qualifying households. Additional information will be posted on township websites. In addition there will be financial assistance available through a special GLUA fund to qualifying households in the SAD for individual initial hook up costs.

Is a current septic tank replacement available that will be compatible with the STEP System?

Yes. Detailed specifications for septic tank replacements that are compatible with the STEP system are available on the township websites to any homeowner that needs to replace their existing septic tank prior to the construction of the sewer system. These tanks will be tested to verify integrity of these install installations and will require adaption for use in the step tank.

Will my existing septic tank be removed?

Yes. Existing septic tanks will be removed or cleaned out and demolished in place depending on site specific contraints.

Do I have to hook up to the sewer?

Yes. State regulations require connection to a public sanitary sewer when it is available (ACT 368 of 1978). A sewer use ordinance will be adopted to require homeowners within the service area to connect to the sewer system.

What happens if someone, who is not in the current sewer assessment district, wants to connect to the STEP system in the future?

For parcel owners outside the sewer assessment district who wish to connect, the Authority would need to be contacted in writing and agree to allow connection to the system based on many factors including, number of parcels wanting to connect, distance to the current collection system and capacity. The applicant would likely be assessed a capital cost buy-in fee.