

WASTEWATER COLLECTION SYSTEM PROJECT SUMMARY FOR HENDERSON, GEORGE & NEST LAKES

BACKGROUND

In August 2007, Kandiyohi County held informational meeting and public hearings in which the County Board authorized the expansion of the Green Lake Sanitary Sewer and Water District to provide a Wastewater Collection System for Henderson, George & Nest Lakes. On April 15, 2008 Kandiyohi County received bids for the proposed project and on April 19, 2008 held an informational meeting to discuss the results. On April 25 & 26, 2008 Kandiyohi County held public hearings for each lake and then awarded the construction contract to Quam Construction Co. Inc. of Willmar, Minnesota.

PROPOSED SANITARY SEWER SYSTEM COMPONENTS

A low-pressure sanitary sewer system is being installed to collect the wastewater from each home or future home by using underground boring construction techniques. Underground boring is a construction method using a direction-drilling machine to install any type of sewer or water pipe. It is similar to tunneling. It was selected because it minimizes environmental impacts, allows lines to be installed in difficult digging conditions and reduces the amount of restoration required because the ground surface is not disturbed. This makes it less expensive than conventional techniques on a project like this.

The three components of a low-pressure sanitary sewer system include:

- **Individual Service** - Each home would have a small grinder pump station installed adjacent to the existing septic tank. Grinder pump stations are 24 inches in diameter and approximately 11 feet in depth. Each grinder pump station would have a control panel for the grinder pump station and a sub-meter to monitor flow. The control panel is either placed next to the grinder pump. The grinder pump station connects to the low-pressure forcemain by a 1¼-inch service line that would be constructed by directional boring. All existing septic tanks or holding tanks will be abandoned by pumping out all of the waste and then “crush & fill” the tank. In areas where crushing won’t work, the tank will be filled with a slurry mixture (concrete and sand).
- **Common Low-Pressure Line** - A common low-pressure wastewater line will connect to the existing GLSSWD system from individual homes and future homes with an individual service. We are proposing a looped system that divides the lake in half. The south and east side of Henderson Lake will flow in a counter-clockwise direction while the south and west side of Henderson Lake will flow in a clockwise direction. Both common lines will convey to the George Lake Lift Station located on the north end of George Lake. The benefit of a looped system is that in an emergency situation the valve that separates the flow direction can be opened and the flow can be diverted around the problem area.
- **Trunk Wastewater Collection System** – The primary trunk wastewater collection system was completed as part of the Lake Florida project and consists of two lift stations and over six miles of forcemain pipe that connects Lake Florida to the GLSSWD just east of the intersection of County Road 32 and MN Hwy 23. The forcemain and intermediate lift station were designed to allow the sanitary sewer flows from Henderson, George and most of Nest Lake to connect to the system. The north shore of Nest Lake is being connected to a trunk system installed by New London Township in 2001. The county is purchasing this trunk system from the township to as part of this project.

PROJECT COSTS

The project costs are split into three separate areas: individual service costs, low-pressure common forcemain costs and trunk forcemain costs and are shown in Table 1.1. The individual service costs include the grinder pump station, 1-1/4" service line, connection of the sewer line from home to grinder station, all electrical work, connection of the grinder pump to the common low-pressure line and restoration of the residence. The low-pressure common forcemain costs include the common forcemain around Henderson, George & Nest Lakes. The trunk sewer line costs include the forcemain, lift stations and connection to the Green Lake Sanitary Sewer and Water District system.

Table 1.1

TOTAL PROJECT COSTS	
Project Components	Component Costs
Individual Sewer Service	\$2,581,000.00
Common Low-Pressure Line	\$2,166,000.00
Trunk Wastewater Collection System	\$1,608,200.00

PROPOSED ASSESSMENTS

The proposed assessments are broken down into the same three categories. The proposed assessments are based on existing homes and future lots that can connect to the proposed low-pressure system. The proposed assessments do not include the normal GLSSWD \$2,000.00 connection fee. This fee is being waived as an incentive to the property owners around Henderson, George & Nest Lakes to connect to the system as part of the project. Please refer to Table 2.1 for the breakdown of the proposed assessments and the yearly assessment based on a 20-year repayment at a blended interest rate of 4.56% interest.

Table 2.1

Breakdown of Proposed Assessment for Henderson, George & Nest Lakes		
Proposed Project Category	Amount per Unit	Yearly Total
Individual Service Assessment (5%)	\$10,400/unit	\$826.00
Common low-pressure line (5%)	\$4,560/unit	\$364.00
Trunk Forcemain (2%)	\$2,460/unit	\$152.00
TOTAL ASSESSMENT (4.56%)=	\$17,420/unit	\$1,342.00

GLSSWD OPERATIONS COSTS

- User Rates - The user sewer rates charged by Green Lake Sanitary Sewer & Water District for 2008 are set at a base rate of \$20.40/month for each home and usage rate of \$3.85/1000 gallons.
- Billing Fee - a \$2.10/month fee is charged by the Kandiyohi Power Cooperative and \$2.45 is charged by the City of Spicer (North & East Shores of Nest Lake) for each sub-meter that is installed for the grinder pump station for metering, mailing and billing.
- Maintenance Fee - a \$60.00 per year maintenance fee covers the operations and maintenance of the trunk lift stations and odor control units. The fee is also used to cover the GLSSWD costs associated with Gopher State One Call locating requests.
- Property owners are responsible for providing electricity for the grinder pump station, approximately \$1.00 to \$4.00 per month, if the residence is being used.

POTENTIAL COST SAVINGS

- Property owners could share a grinder pump station, estimated savings per property owner would be approximately \$1,200 to \$2,000.

HOOK UP INCENTIVE

- As mentioned previously, the Green Lake Sanitary Sewer and Water District Board has provided an incentive to the Henderson, George & Nest Lake property owners in which they will waive the \$2,000 connection fee if the individual property owners hook up to the proposed wastewater collection system. The incentive equates to 98 months of paying a user base fee of \$20.40/mo.

WHAT IS INCLUDED IN THE 5-YEAR WARRANTY

- Part(s) and labor warranty on the complete station and accessories, including, but not limited to control panel and redundant check valve for a period of sixty (60) months after notice of OWNER's (Kandiyohi County) acceptance. Includes basin, control panel, floats and grinder pump.
- Any defects found during the warranty period will be reported to the Manufacture/Supplier by the property owner to the GLSSWD, Kandiyohi County and ENGINEER.
- 24/7 On-call Service Includes
 - Trouble Shooting
 - Provide Septic Hauler if required to provide sewer service
 - All labor, parts, equipment and material to fix the problem

WHAT IF PROBLEM IS CAUSED BY HOMEOWNER'S ACTIONS

- If it is determined by GLSSWD & ENGINEER that the problem/issue was not related to the grinder pump, basin, control panel or floats but rather negligence (intentional or unintentional) on part of the homeowner, all related costs associated with the service call and repairs would be the homeowner's responsibility.

WHAT SHOULD I AVOID FLUSHING IN SYSTEM

- **Any type of metal nails or screws.**
- **Shop rags, especially if they are they heavy duty reinforced type.**
- **Metal Shavings**
- **Any type of metal**
- **Grease from cooking**

WHAT IF I CHOOSE NOT TO BE PART OF THE PROJECT AT THIS TIME

This will depend on where you live. We have broken down the options available to you depending on where you live.

- **RIPARIAN PROPERTY OWNER - Tier 1 - Lakeshore Owners**
 - All riparian property owners with Individual Sewer Treatment Systems (ISTS) installed within the past five years or any system that has a compliance inspection completed for their existing ISTS within the past three years may continue using their systems. No other action is required.
 - All riparian property owners whose Individual Sewer Treatment Systems (ISTS) were installed prior to 2003 should have a compliance inspection completed for their systems. This will tell determine if their systems meet current rules and if it can continue to operate without hook up to the new system. All costs associated with the compliance inspection are the property owner's responsibility. If your ISTS fails a compliance inspection, you will be required to hook up to the municipal wastewater collection system within two years. Hook up during the project will save a \$2,000 hook up fee in the future

- Hooking up or not, a riparian property owner (Tier 1- lakeshore owner) will be responsible to pay the base assessment (common line and trunk forcemain), the assessment is estimated at \$7,020 if paid in full, or a yearly amortized cost of \$516.
- If your ISTS passes a compliance inspection and you hook up after the project completion date you will be responsible for the following costs:
 - o Current connection fee to the GLSSWD which for 2008 is \$2,000.
 - o All costs associated with the installation of grinder pumps, grinder pump station components and connection to the low-pressure system.
 - o Trunk Fee (\$6.00/month or \$72/year) plus interest.
- **NON-RIPARIAN PROPERTY OWNER- no lakeshore**
 - All non-riparian property owners will need to have a compliance inspection completed for their existing ISTS unless the system is less than 5 years old or has been inspected and been certified in the last 3 years. The cost associated with the compliance inspection is the property owner's responsibility.
 - All non-riparian lots must have room for a Type I or II 7080 ISTS system.
 - Other items that will trigger a compliance inspection:
 - o Building permit
 - o Sale of property
 - o Complaint to Kandiyohi County Environmental Services
 - **Option 1** - a non-riparian property owner (Tier II) who chooses not to hook up at the time of the project should be aware of their future responsibilities when the need arises to connect to the GLSSWD wastewater collection system:
 - o Current connection fee to the GLSSWD which is \$2,000 in 2008.
 - o All costs associated with the installation of same brand of grinder pump station package and connection to low-pressure system.
 - o Base assessment fee of \$7,020 plus accrued finance charges (minimum rate of 5%). This can be financed as an assessment for the remaining amount of time on the assessment schedule, i.e. if you hook-up in 2013 you could finance the amount over 15-years.
 - o Trunk Fee (\$6.00/month or \$72/year) plus interest.
 - o Common line fee of \$60/yr.
 - **Option 2** - a non-riparian property-owner (Tier II) who chooses to participate in the base assessment at the time of the project should be aware of their future responsibilities when connecting to the GLSSWD wastewater collection system:
 - o Current connection fee to the GLSSWD which is \$2,000 in 2008. However, this fee is waived by choosing the option of paying the \$20.40/mo base fee. This is a good option to consider
 - o All costs associated with the installation of same brand of grinder pump station package and connection to low-pressure system.
 - o Trunk Fee (\$6.00/month or \$72/year) plus interest.
 - **Option 3** - a non-riparian property-owner (Tier II) who chooses to participate in the wastewater collection system project would be responsible for the following:
 - o All proposed assessments
 - o GLSSWD Operations Costs
 - o Hook-up incentive

PROJECT SCHEDULE COMPLETED TO DATE

- Fall of '06 public information meetings were held at Kandiyohi County Health and Human Service Building.
- Informational meeting - August 2007
- 1st public hearing to expand the GLSSWD and authorize preparation of final design- August 2007
- Final design complete and authorizes bidding – March 2008
- 2nd public hearing (Improvement Hearing) to award project – April 26, 2008
- Begin construction - May 2008

FUTURE PROJECT SCHEDULE

- Base Assessment Hearing - fall 2008, to be starting in May 2009
- Project completion - June 2009
- Individual Service Assessment Hearing – late summer/fall 2009, starting in May 2010

WEEKLY PROJECT UPDATES AVAILABLE AT

<http://www.bolton-menk.com/clients/KandiyohiCounty.php>

If you have any questions regarding any of the above information, please feel free to contact any of the following:

Dean Helstrom, P.E.
Bolton & Menk, Inc.
Project Engineer
320-231-3956
320-905-1311 (cell)

Brad DeWolf, P.E.
Bolton & Menk, Inc.
Project Manager
320-231-3956
320-905-1740 (cell)

Gary Danielson, P.E.
Kandiyohi County
Public Works Director
320-235-3266

ON-SITE CONTACTS DURING CONSTRUCTION-

Dean Helstrom, P.E.
Bolton & Menk, Inc.
Project Engineer
320-905-1311 (cell)
320-231-3956

Del Vulcan
Bolton & Menk, Inc.
Construction Observer
507-381-9232 (cell)
320-231-3956

Phillip DeSchepper, E.I.T
Bolton & Menk, Inc.
Construction Observer
320-905-2703 (cell)
320-231-3956