Wastewater Project Update

Summer Village of Poplar Bay
June 25, 2016

Today's Update

- Status of Regional Lines
- Local collection system plans
- Estimated Costs and Funding
- Next Steps and Timing

South Pigeon Lake Regional Wastewater System

- Regional Line Phase I: Lagoon to Village at Pigeon Lake (VPL)
  - Fully commissioned and operational
- Regional Line Phase II: VPL to Poplar Bay
  - Water for Life funding approved for Engineering design at 90% of cost.
  - Estimated cost to Poplar Bay for Phase II line $70 K based on 90% grant funding and 6 municipalities sharing.

Management Structure

- New Regional Wastewater Commission is in process of being approved
  - Six municipalities will own and operate system
  - NEPL will provide lagoon services under contract

Local Collection Line

- Geotechnical data collected
- Detailed Design to begin this summer
- Low-pressure system with an Effluent pump (STEP) in each holding tank
- Directional drilling will be used to reduce disturbance to ground surface and remediation costs
- Initial estimated cost of Poplar Bay local line: $2.3 M

Municipal Infrastructure Costs

Infrastructure Construction	$2.4 M
(Local 2.3 plus remaining Regional 0.1)	
Building Canada Grant	($1.5) M
Reserves and Deferred Revenue	($0.9) M
Cost per lot for main infrastructure	**$ 0**

Based on the information we have at this time, the total cost of the municipal portion of the system will be funded through grants and reserves.

On Lot Costs

Base Costs – all Cases

Pump, Biotube and Electrical (installed)	$4.2 K – $4.8 K
Line and Connection at/to Property line	$0.6 K – $1.7 K
	$4.8 K – $6.5 K

PLUS

Case I Existing good 2 compartment tank

Frost plugs, pump out, inspections, plumbing	$1.3 K – $1.5 K
Contingency	$0.3 K – $0.4 K
Total Case I	**$6.4 K – $8.5 K**

Case II Single compartment new pump vault

Ultra Rib basin, insulation, installation	$1.9 K – $2.3 K
Frost plug, pump out, inspections, plumbing	$1.5 K – $1.6 K
Contingency	$0.4 K – $0.5 K
Existing tank at least 1000 gal **Total Case II**	**$8.6 K – $10.9 K**

**based on contractor pricing for materials, does not include surface costs/ landscaping*

***Higher costs shown allow for longer pipeline distances, longer electrical service lines, obstructions, electrical panel modifications*.

Costs Con't:

On Lot Costs- based on contractor pricing for materials, does not include surface costs/ landscaping

Base Costs – all Cases

Pump, Biotube and Electrical (installed)	$ 4.2 K – $ 4.8 K
Line and Connection at/to Property line	$ 0.6 K – $ 1.7 K
	$ 4.8 K – $ 6.5 K

PLUS

Case III Single Compartment with new concrete tank

New 500 gal tank installed and insulation		$ 3.4 K – $ 4.0 K
Frost plug, pump out, inspections, plumbing		$ 1.3 K – $ 1.4 K
Contingency		$ 0.5 K – $ 0.6 K
Existing tank less than 1000 gal	**Total Case III**	**$10.0 K –$12.5 K**

Case IV New 2 compartment tank

New 1200 gal tank, insulation, installation		$ 6.4 K –$ 7.1 K
Inlet sewer plumbing		$ 0.3 K –$ 0.8 K
Contingency		$ 0.6 K –$ 0.7 K
	Total Case IV	**$12.0 K– $15.5 K**

**based on contractor pricing for materials, does not include surface costs/ landscaping*

***Higher costs shown allow for longer pipeline distances, longer electrical service lines, obstructions, electrical panel modifications.*

Estimated Operating Costs

- Line Maintenance – Owner Invoiced by Utility

  includes NEPL lagoon, power costs, operators, administration, periodic line flushing and valve maintenance. **$250**

- Direct Costs to Owners

  includes power, pump servicing, tank cleanout (5 years) **$170**

- Total Annual Operating Cost: **$420**

  or **$35/month**

NOTE – *this has not changed from last year as no new information has been provided by the engineering firm*.

Contingency Planning – Low Flow Periods

- The engineering study modelled the flows for both high flow periods and low flow periods.
- They considered the volumes and related pipe sizing.
- Lower volumes may mean lower flow velocity.
- The use of an effluent system significantly reduces the potential for sedimentation in the lines.
- Flushing points have been provided for in the design.
- Lines will be installed below the frost line to avoid freezing.

Next Steps

- Finalize design and tender process for local system.
- Form Municipal Utility – set rate structure, bylaws and policies – transparent process governed by MGA
- Form agreement with Grandview for pipeline sharing.
- Construct local system.

When?

- Design Engineering will begin this Fall.
- Tendering and Construction can get underway when the Regional Phase II line is ready to move forward.
- The Phase II Water for Life grant has been approved for the engineering design of Phase II Regional.

Questions?