

# Glenboro South Cypress Lagoon



**Following the Second World War, there was a surge of infrastructure construction across Canada. This was due to growth, modernization and urbanization. Some of this included roads, bridges, wastewater treatment, buildings, schools and hospitals.**

**Unfortunately, many of these assets have fallen into disrepair. As a result, many are now requiring restoration and/or reconstruction. It is estimated that close to 35% of municipal assets throughout Canada are in need of attention.**

**This presents a variety of challenges. Municipalities receive approximately eight percent of every tax dollar collected in Canada, but are responsible for 60 per cent of infrastructure assets. Municipalities experiencing population growth experience additional tax dollars, but also deal with added strains on infrastructure. Those dealing with population decreases result in less taxation and increased difficulties funding infrastructure. Natural disasters such as flooding and drought add to this problem.**

Keeping up with and/or addressing aging infrastructure for Municipalities is an ongoing concern.

With the goal of being proactive, there is also the challenge of addressing infrastructure that is currently in disrepair. Budgets, reserves, grants, and asset management are all part of the initiative.






**Included within this infrastructure is the Glenboro South Cypress lagoon.**

**The existing lagoon for Glenboro South Cypress was constructed in 1956. It is located north of the race track. Originally, it was operated as a single exfiltration cell.**

**Updates in 1982 included reconstruction and expansion from a one cell to a two-cell lagoon.**



**The existing lagoon system consists of a primary treatment cell and a secondary exfiltration cell that allows effluent to filter through naturally occurring sands onsite into the Assiniboine Delta Aquifer. It is operating under the Clean Environment Commission Order No. 1023VC, which allows exfiltration onsite as long as nitrate and nitrite nitrogen concentrations are below 10 mg/ml.**

**Municipal Public Works employees are diligent with the monitoring of the nitrate and nitrite nitrogen.**



- 
- **However, Manitoba's Environmental Approvals Branch is calling for the wastewater system to be upgraded as *“The lagoon does not meet current environmental standards”***

**Therefore, the Municipality of Glenboro South Cypress has sourced several options available. All of these quotes were in 2019 and are expected to have increased.**

**Following are three choices that were initially presented to the Municipality of Glenboro South Cypress**



# LAGOON CHOICES

## OPTION 1

CONSTRUCTION OF NEW  
LAGOON AT SAME LOCATION

- MODIFY AND RELINE  
EXISTING SECONDARY CELL
- UPGRADE WITH EQUIPMENT  
FOR AERATION
- NUTRIENT REDUCTION &  
DISINFECTION
- COST ESTIMATE IN 2019  
**\$8,844,900**

## OPTION 2

NEW LAGOON

- CONSTRUCTION OF NEW  
LAGOON IN RM OF ARGYLE  
(NO LAND WAS AVAILABLE IN  
GLENBORO SOUTH CYPRESS)
- COST ESTIMATE IN 2019  
**\$9,101,300**

## OPTION 3

EXPANSION AND USE OF THE  
SPRUCEWOODS LAGOON

- UPGRADE LAGOON AT  
SPRUCEWOODS TO  
ACCOMMODATE ADDITIONAL  
USAGE
- 17 KMS FROM EXISTING  
LAGOON
- COST ESTIMATE IN 2019  
**\$8,833,700**

## **A FOURTH OPTION.....PENDING APPROVAL**

**This option has been prepared by Samson Engineering Inc. Brandon, Manitoba.  
Aerating the Current Primary Lagoon Cell and Constructing Two Submerged  
Attached Growth Reactors (SAGR)**

**Some points on this option:**

- **Building up of existing primary cell berms**
- **Moving inlet to southeast corner of the primary cell**
- **Dividing primary cell into two partial mix aerated cells and a settling cell**
- **Constructing two SAGR cells north of the existing primary cell; and**
- **Installing a pre-fabricated building for the blowers and alum mixing**
- **Cost estimate 5.6 million in 2019 (In 2021, an amount of 6.5 million is being utilized as the cost estimate)**



# **SAGR SYSTEMS**

**THIS SYSTEM HAS BEEN USED IN OTHER LOCATIONS SUCH AS:  
MELITA, MANITOBA  
BIENFAIT, SASKATCHEWAN**



# GRANTS/FUNDING



The Municipality of Glenboro South Cypress has applied for funding from the Investing in Canada/Manitoba Infrastructure Program in the amount of \$4,500,000. The estimated balance of \$2,000,000 is to be funded by the municipality by borrowing.

*In the event that the grant funding is not received, the municipality does not intend to proceed with this project.*

Following are estimated projections on anticipated costs and funding. Estimated costs were increased for 2021. Should funding be received, the projected costs may be even higher. As a result, the amount of \$2,000,000 was utilized for the Municipality portion. **Hopefully**, it will be less.

# 2019 PROJECTED COSTS VS ESTIMATED PROJECTIONS 2021

	<b>Details</b>	<b>2019 Estimate</b>	<b>Plus 15% increase for 2021 costs</b>	<b>Budgeting Amounts</b>
			15%	
1	Lagoon Costs	5,648,659.00	847,298.85	6,495,957.85
2	ICIP ineligible costs (costs incurred prior to project approval)	129,560.00	19,434.00	148,994.00
3	Total Costs Eligible for Funding (1 - 2)	<b>5,519,099.00</b>	<b>827,864.85</b>	<b>6,346,963.85</b>
4	Estimated ICIP grant (73.3%)	4,047,156.00	607,073.40	4,654,229.40
5	Estimated RM Cost	1,471,943.00		1,692,734.45
	<b>Total RM Cost (2 + 5)</b>	<b>1,601,503.00</b>		<b>1,841,728.45</b>

***IF***

**APPROVED**

The Municipality needs to be prepared as to how it will fund the municipal portion.

After much deliberation, the proposal is to fund the municipal portion over the entire municipality with a urban 90% and a rural 10% division of costs.

## RURAL

- 10% of the *Municipal* portion (outside former village of Glenboro)
- Excluding vacant lots, farmland, & parkland (i.e., Sprucewoods)

RURAL 10% (\$200,000) – *Based on borrowing of \$2,000,000*

Per parcel rates:

Cash (pre-pay) option of \$766.28

OR

Finance option of \$99.24 to be levied annually for 10 years

# URBAN

- 90% of the *Municipal* portion, based on 1.8 Million (90% of \$2,000,000)
- Includes all property connected to wastewater utility system
- Excludes un-serviced lots

# URBAN PROPERTY OWNERS... CONTINUED.

There are two separate taxation methods for urban: parcel and assessment:

Per parcel rate 50% - \$900,000

Finance option of \$222.90 levied annually for 20 years

OR

Cash (pre-pay) option of \$2,777.78

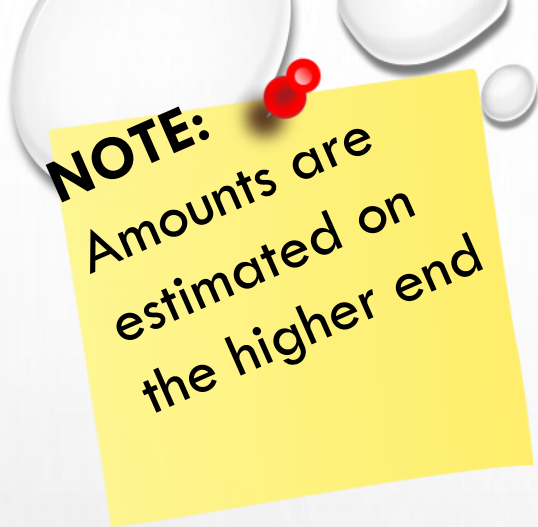
***PLUS***

Assessment (mill) rate 50% - \$900,000

Based on the municipality's 2021 assessment an estimated mill average rate of 3.333 mills would be required.

i.e., Calculated on a residential property valued at \$100,000 (portioned 45,000) an estimated \$149.99 local improvement tax will be levied annually for 20 years.

**The Assessment portion cannot be pre-paid.**



These figures are not exact. The \$2,000,000 and 5% interest are both *estimated* and are anticipated to be lower.

When final costs and interest rates are definite, the payments will be adjusted accordingly.

# Q & A's

***Interesting Facts & Tidbits....***



**QUESTION: I have a vacant lot in town. Do I have to pay?**

**ANSWER: Vacant lots or lots that are not serviced at the time of the lagoon construction are not included in these calculations. If and when, the lot is improved or connected, the lot may be subject to a connection fee.**

**All properties (commercial, institutional, business) that have a wastewater connection will be subject to this taxation process**

**QUESTION: Will my farmland be subject to these taxation costs?**

**ANSWER: No. All Class 30 (farmland) is exempt from these charges. All properties that potentially have wastewater product (sewage) are included in this taxation (ie,: Churches, Halls, Community Centres, Businesses)**

**QUESTION:** In the rural area, if I pre-pay my per parcel charge, will there be other costs on my property tax bill each year?

**ANSWER:** No, not for the purposes set out in this By-Law.

**QUESTION:** I am a rural taxpayer. If I do not prepay, will the amount be on my property tax bill for the next 10 years?

**ANSWER:** Yes. There is only one time-limited opportunity to pre-pay those costs.

**QUESTION:** Why is the Rural portion in place for 10 years, but the Urban portion is in place for 20 years?

**ANSWER:** Based on the scenarios proposed at this time, calculations are 10 years for rural, and 20 years for urban. Given the significant dollar amounts needed for the urban portion, the urban portion is spread over a longer period of time. The Urban portion has a assessment component plus a per parcel component. The Rural portion only has a per parcel component. Only per parcel components can be pre-paid.

**QUESTION: Why does the rural area(s) have to contribute?**

**ANSWER: Everyone who has the potential to utilize the lagoon is contributing.**

**As per regulations under the Wastewater Management Systems (OWMS) Program:**

**Only septage (the sludge that builds up in the sedimentation chamber of a septic tank) can be applied to agricultural land under the control of the owner where it originated from, if done so in compliance with Schedule C of the regulation. Schedule C imposes property size, setback and other requirements. Sewage, including the contents of a holding tank, cannot be land applied.**



**Question:** It seems like you are “double dipping” – as you are also charging the sewer truck to dump in the lagoon.

**Answer:** The fees being presented here are regarding reconstructing/upgrading the lagoon, which is separate.

Many septic trucks have the ability to pump out 2-3 places prior to dumping in the lagoon. The fee charged to septic trucks of \$25 is comparable to the tipping fee charged at the transfer station (waste disposal grounds). This charge from the septic trucks is utilized in the ongoing maintenance of the lagoon.

**QUESTION: What happens if I elect to finance over 20 years and then sell my property in 10 years?**

**ANSWER: The new owner will be responsible for the balance of the annual payments. The payments are attached to the associated roll numbers, and will be in effect until the debenture is paid.**

**QUESTION: If I sell my property in 10 years, will the new property owner have the ability to pre-pay?**

**ANSWER: No. The pre-payment is a one-time offer.**

**QUESTION: Will farmland be subject to these taxation costs?**

**ANSWER: No. All class 30 (farmland) is exempt from these charges. All properties that potentially have wastewater product (sewage) are included in this taxation. (i.e., churches, halls, community centres, businesses, residences)**

**QUESTION: What would the payments in town have been if they were strictly based on a flat rate instead of flat rate and assessment?**

**ANSWER: \$5,555.56 paid upfront**

**Or**

**\$445.79 yearly for all urban taxpayers**

NOTE: ALL PROPERTIES WOULD CONTRIBUTE EQUALLY REGARDLESS OF VALUE/ASSESSMENT OF PROPERTY. PROVINCIAL RECOMMENDATION IS TO FINANCE THE PROJECT WITH BOTH FLAT RATE AND ASSESSMENT COMPONENTS.

**QUESTION:** Can you explain the calculations?

**ANSWER:** A split of 90/10 was determined by Council. This means that urban will be responsible for 90% of the costs, while rural will be responsible for 10%. On the estimated \$2,000,000 to be borrowed, this results in:

**Urban:** \$1,800,000

**Rural:** \$200,000

**For Urban** – There are 2 components: 50% flat rate and 50% assessment.

The yearly debenture payments based on \$1,800,000 at 5% are \$144,436.66.

As this amount is divided into 2 components, this means each (flat rate and assessment) are responsible for \$72,218.33 in payments yearly. •

- **Flat Rate (Urban)**

With the current number of 324 parcels, the flat rate amount is:

$\$72,218.33 / 324 = \$222.90$  yearly for 20 years. ( $\$222.90 \times 20 = \$4,458.00$ )

For those who choose to pre-pay the flat rate, the formula is basic at:

$900,000$  (the amount based on flat rate) /  $324 = \$2,777.78$

(As you see, pre-paying provides a significant savings from the interest costs associated with borrowing. However, individual circumstances will determine the best option for each owner)

- **Assessment (Urban)**

This portion is NOT eligible for pre-payment.

The assessment is based on a mill rate. With the current projections, the estimated mill rate is 3.333. This mill rate is derived from the payments (noted above) of  $\$72,218.33$  divided by the total applicable assessment, which is currently  $\$21,667,210$

## Urban continued.....

Calculated on a residential property valued at \$100,000 (portioned 45,000) an approximate \$149.99 local improvement tax will be levied annually for 20 years. Due to fluctuations on total assessment rolls, this mill rate will have slight changes from year to year.

The total payments on a residential property valued at \$100,000 would then be:

Flat rate:	\$222.90
PLUS	
Assessment Rate	<u>149.99</u>
Total	\$372.89 Yearly for 20 years

**RURAL 10% (\$200,000) – FLAT RATE**

Per parcel rates:

Pre-payment option of \$766.28

OR

Finance option of \$99.24 to be levied annually for 10 years.  
( $\$99.24 \times 10 = \$992.40$ ). Pre-payment saves \$226.12

This open house information presentation is to provide an opportunity to see and hear what is being proposed at this time. Council will, at the Regular Meeting to be held on Tuesday, October 12, 2021, hold a PUBLIC HEARING to allow for further questions and objections to the proposed By-Law to be heard.

Should Council decide to proceed with a reading of this By-law on October 12, 2021, the Municipality will be prepared to start the project in a timely fashion, if (and only ***IF***) the required funding is received from the Federal and Provincial Governments. The Municipality does not intend to undertake this project without adequate Government funding.

Note: Should funding not be received within 2 years, this by-law will become null and void. A new by-law will then have to be created to reflect costs at that time.



**Technical information provided by Samson Engineering Inc.  
Brandon, MB (Phil Dorn)**

**Financial information provided by the Municipal Office**

