



Operations Committee Agenda

Monday, June 21, 2021

Tom Davies Square

Councillor McIntosh, Chair

2:00 p.m. Open Session, Council Chamber / Electronic Participation

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1.	Call to Order	
2.	Roll Call	
3.	Declarations of Pecuniary Interest and the General Nature Thereof	
4.	Presentations	
4.1.	Water and Wastewater Facilities Capital Projects Delivery This presentation by Akli Ben-Anteur, Water/Wastewater Project Engineer, provides information regarding the capital work underway for water and wastewater facilities, including the methodology to assess future capital needs.	
4.2.	Wastewater Treatment Energy and Operational Savings This report and presentation by Michael Loken, Acting Director, Water/Wastewater Treatment & Compliance, provides information regarding an annual update on the electricity cost avoidance achieved through participation in the Industrial Conservation Initiative (ICI) and operational improvements made through preventative maintenance programs at Wastewater Treatment facilities.	3
5.	Managers' Reports	
5.1.	Waste Collection - Yellow Bag Program for Licensed Home Child Care Providers This report provides a recommendation regarding the development of a Yellow Bag program with weekly diaper collection for licensed home child care providers who are eligible to participate in Yellow Bag non-residential garbage collection as requested by the Operations Committee on May 17, 2021 (OP2021-08).	14
6.	Members' Motions	
7.	Correspondence for Information Only	
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10.	Question Period	
11.	Adjournment	

Wastewater Treatment Energy and Operational Savings

Presented To:	Operations Committee
Meeting Date:	June 21, 2021
Type:	Presentations
Prepared by:	Michael Loken Water/Wastewater Treatment & Compliance
Recommended by:	General Manager of Growth and Infrastructure

Report Summary

This report and presentation by Michael Loken, Acting Director, Water/Wastewater Treatment & Compliance, provides information regarding an annual update on the electricity cost avoidance achieved through participation in the Industrial Conservation Initiative (ICI) and operational improvements made through preventative maintenance programs at Wastewater Treatment facilities.

Relationship to the Strategic Plan, Health Impact Assessment and Community Energy & Emissions Plan (CEEP)

This report supports initiatives to “Optimize Asset Service Life through the Establishment of Maintenance Plans” (1.1) and “Demonstrate Innovation and Cost-Effective Service Delivery” (1.5) as laid out in the City of Greater Sudbury’s Strategic Plan for 2019-2027.

With respect to the CEEP, this report supports the actions under Goal 5 to “Apply energy-efficient lens for routine equipment maintenance and replacement” and “Develop Best Operating Practices/Best Operating Guidelines (Operational Excellence)”.

Financial Implications

In addition to supporting CEEP goals, the work outlined in this report details:

- \$457,000 in electricity cost avoidance for 2020 at the Sudbury Wastewater Treatment Plant (WWTP) through participation in the Independent Electricity System Operator (IESO) Industrial Conservation Initiative (ICI);
- Continuing investments in preventative maintenance to prolong asset life and reduce the risks associated with unplanned or potentially catastrophic breakdowns at the Levack WWTP, Dowling WWTP and Coniston WWTP, and;
- Measureable improvements in effluent quality and regulatory compliance at the Coniston WWTP through cleaning of the oxidation ditch.

Background

This report is the third annual presentation given to Operations Committee concerning Wastewater Treatment Energy and Operational Savings. Specifically, this update will provide details on the following:

1. Cumulative electricity costs avoided through participation in the Industrial Conservation Initiative (ICI) for the period from 2017 to 2021, and;
2. Continued operational efficiencies and savings resulting from the tank cleaning and preventative maintenance activities started in 2018.

Electricity Cost Avoidance

As detailed in previous annual updates to the Operations Committee, the Sudbury WWTP participates in the Industrial Conservation Initiative (ICI) administered by the Independent Electricity System Operator (IESO). By reducing the electrical consumption at the plant during the 5 peak electrical power demand hours in Ontario during a given year, staff can significantly reduce the amount of Global Adjustment billed to the facility the following year.

The Sudbury WWTP has been participating in the ICI since 2016, resulting in mitigated electrical costs starting in May of 2017. Annual and cumulative cost avoidance achieved to the end of 2020 are shown in Figure 1.

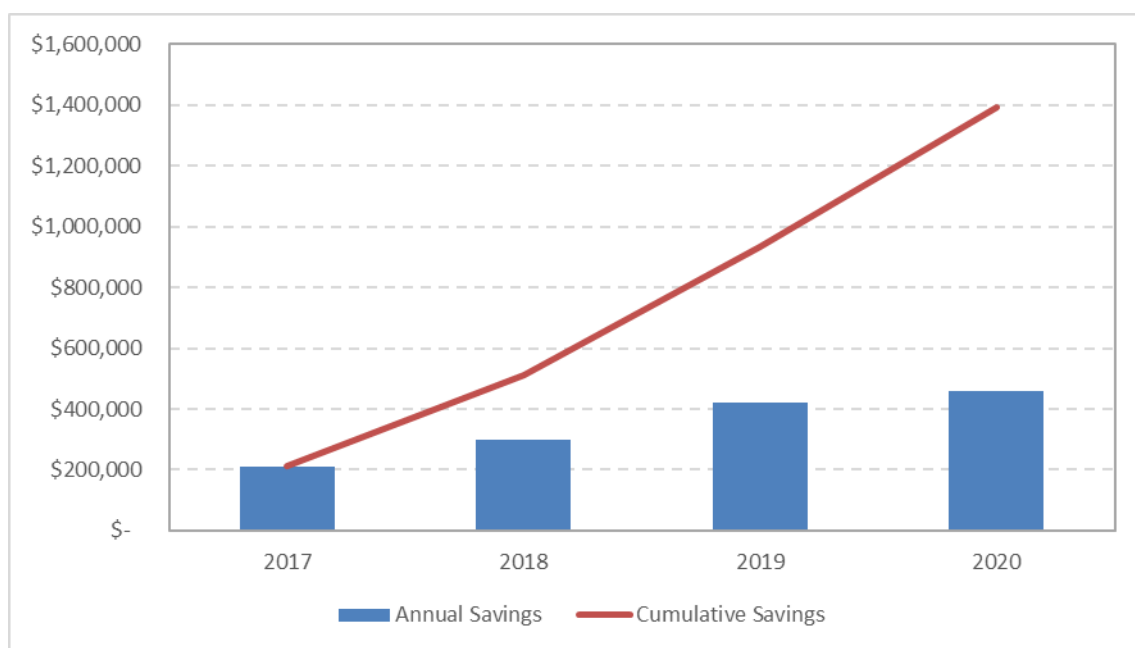


Figure 1: ICI Program Electricity Cost Avoidance

On June 26, 2020, the Ontario Government introduced a mandatory ICI peak hiatus to allow participants to focus on recovering from the impacts of COVID-19. This hiatus allowed the Sudbury WWTP to apply the peak demand factor from the 2019-2020 base period to determine their charges for the period from May 1, 2020 to April 30, 2021.

Operationally, this meant that the Sudbury WWTP did not have to curtail electricity use during 2020 and was able to use the excellent performance achieved in 2019 to avoid an additional \$457,000 in electricity costs. Since 2017, participation in the ICI has allowed Wastewater Treatment to avoid a total of \$1.39 Million in electricity costs.

With the end of the imposed ICI hiatus on May 1st 2021, Wastewater Treatment management and operators are once again focused on responding to peak periods for the 2021-2022 base period.

Operational Savings & Preventative Maintenance

The City of Greater Sudbury currently operates 10 wastewater treatment facilities, 9 of which use an activated sludge process. In this type of treatment bacteria, protozoa, and other microorganisms (the “activated sludge”) feed on organic matter in the wastewater, removing contaminants such as phosphorous and ammonia. In order to promote microbial growth and proper mixing where this process occurs, air is continually injected into the aeration tanks using high capacity blowers.

Over time, even under ideal conditions, the piping and headers used to blow air into the tanks can plug (due to dirt or sludge accumulation) or break as they reach the end of their effective service life. These failures significantly reduce the effectiveness of mixing and oxygen transfer in the treatment process. Ideally, preventative cleaning and maintenance should be performed every 5 to 7 years, however, historically Wastewater Treatment has done these tasks on a much less frequent timeframe.

To address these deficiencies, a pilot project was completed in 2018, and a three year tender issued in 2019 to clean out tanks at all CGS wastewater treatment plants. In 2020, work was completed at the Levack, Dowling and Coniston WWTPs. The aeration tanks at the Levack and Dowling WWTPs were in good condition and the preventative maintenance completed will ensure that these two locations will be able to operate efficiently in the coming years.

The Coniston WWTP presented unique challenges as the facility features a racetrack shaped oxidation ditch, instead of conventional aeration tanks. This design does not allow for part of the ditch to be isolated and drained, and as such, no records could be found to indicate if cleaning had been performed since the construction of the facility in the 1960s. It was presumed that this lack of preventative maintenance was contributing to a number of operational issues observed at the plant, including difficulties dealing with high flows and maintaining effluent quality during shoulder seasons.



Figure 2: Coniston Wastewater Treatment Plant

To overcome these obstacles, the contractor responsible for the tank cleaning, Entec Waste Management, was able to use a small scale dredge, shown in Figure 3, to clean the ditch while the facility was kept online. Using this method, over 50 tonnes of compacted grit and debris was removed from the facility in September 2020. The resulting increased volume in the oxidation ditch has improved treatment by increasing retention time and dissolved oxygen levels. This is shown in Figure 4, where the removal of Total Suspended Solids (TSS) from the influent wastewater was, on average, higher and more consistent when comparing data from September to April for 2018-2021.



Figure 3: Entec Waste Management Dredge

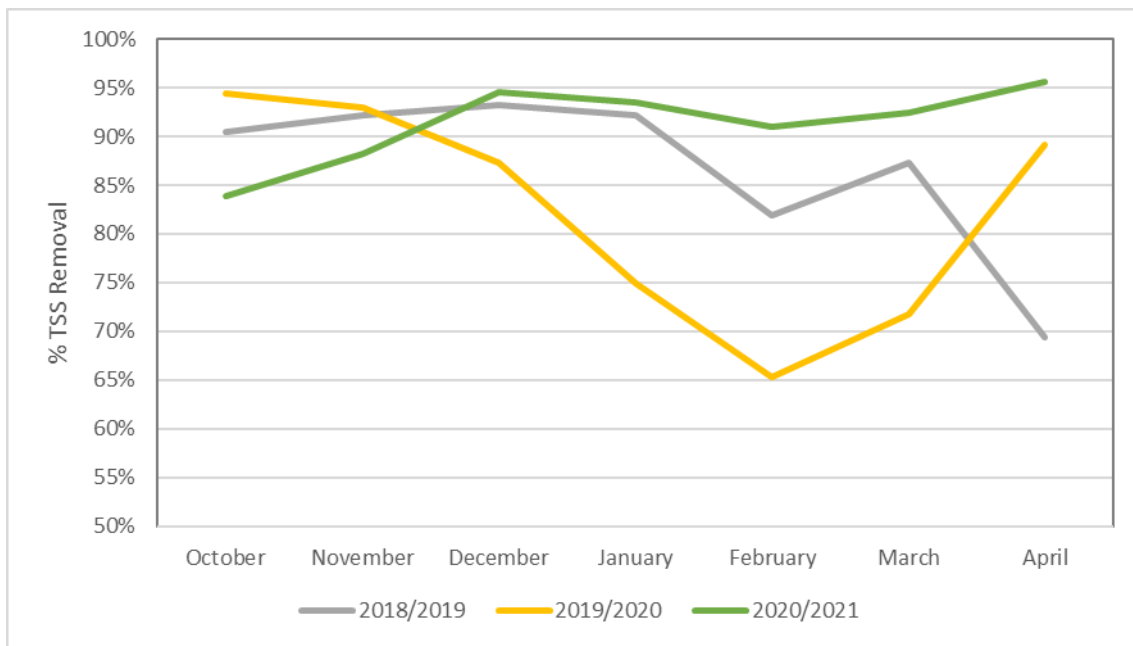


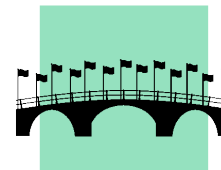
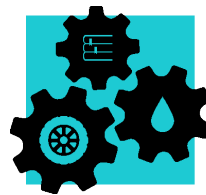
Figure 4: Coniston WWTP Total Suspended Solids (TSS) Removal

Wastewater Treatment will be continuing with the preventative cleaning program in 2021, with the goal of issuing a new tender to address lagoon dredging in 2022 and onwards. It is hoped that by continuing to perform proactive cleaning and maintenance we can effectively extend asset life, while also improving treatment facility performance.

Energy & Operational Savings

Wastewater Treatment

Annual Update to Operations Committee



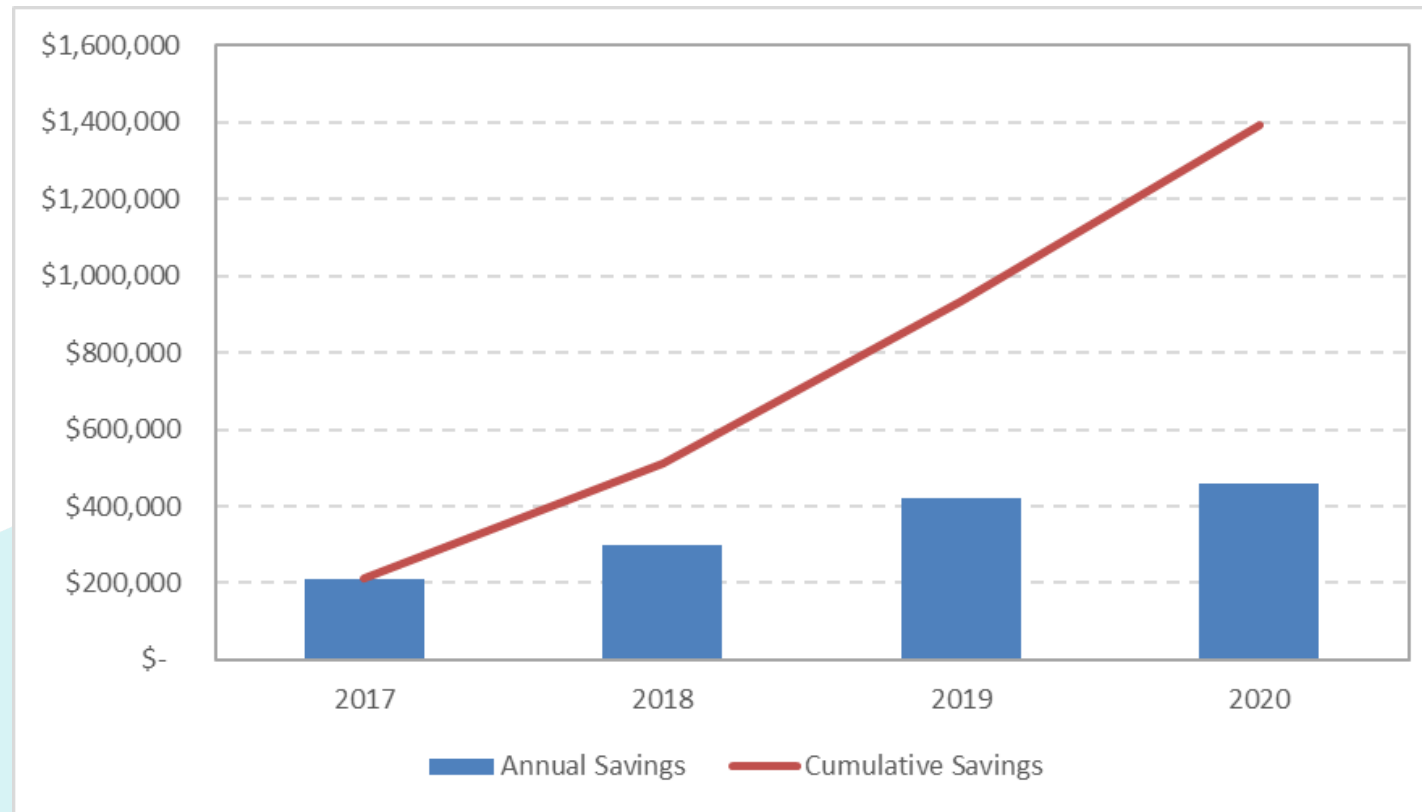
Sudbury Wastewater Treatment Plant

Electricity Billing – Cost Avoidance

- Global adjustment (GA) is the portion of electricity costs that contribute to building infrastructure, maintaining resources and funding conservation programs.
 - The factor used to calculate GA can be reduced through participation in the Industrial Conservation Initiative (ICI)
- A mandatory ICI peak hiatus was introduced by the Ontario Government on June 26, 2020
 - Customers were allowed to use their data from 2019-2020 period for 2020-2021
 - Electricity use was curtailed for all 5 peaks in 2019
 - Reducing electrical costs allows for re-investment in facilities to complete necessary upgrade and repairs while also stabilizing rates.



Sudbury Wastewater Treatment Plant Electricity Billing – Cost Avoidance



Preventative Maintenance Tank Cleaning

- Aeration tanks cleaned as part of 3 year tender to address all critical process vessels in wastewater treatment plants (WWTP)
 - 2019: Sudbury and Walden WWTPs
 - 2020: Dowling, Levack & Coniston WWTPs
- Coniston WWTP presented a unique challenge as it uses an oxidation ditch instead of conventional aeration tanks



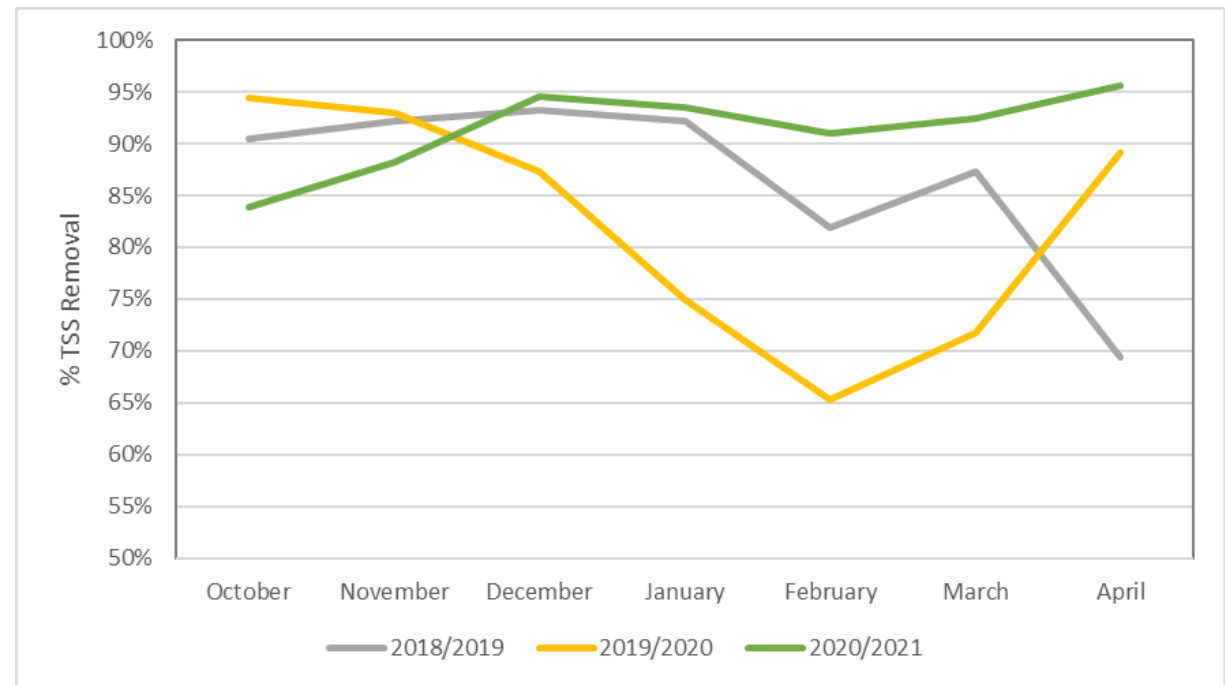
Preventative Maintenance Tank Cleaning

- Contractor (Entec Waste Management) used small scale dredge to clean ditch with facility online
- Over 50 tonnes of compacted grit and debris removed from the facility



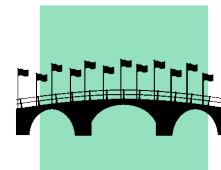
Preventative Maintenance Tank Cleaning

- Removal of grit and debris improved retention time and dissolved oxygen levels
- Facility performance improved during shoulder season more consistent and higher average Total Suspended Solids (TSS) removal



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Waste Collection - Yellow Bag Program for Licensed Home Child Care Providers

Presented To:	Operations Committee
Meeting Date:	June 21, 2021
Type:	Managers' Reports
Prepared by:	Nataly Wissell Environmental Services
Recommended by:	General Manager of Growth and Infrastructure

Report Summary

This report provides a recommendation regarding the development of a Yellow Bag program with weekly diaper collection for licensed home child care providers who are eligible to participate in Yellow Bag non-residential garbage collection as requested by the Operations Committee on May 17, 2021 (OP2021-08).

Resolution

THAT the City of Greater Sudbury approves the Yellow Bag Program for Licensed Home Child Care Providers as outlined in the report entitled "Waste Collection - Yellow Bag Program for Licensed Home Child Care Providers", from the General Manager of Growth and Infrastructure, presented at the Operations Committee meeting on June 21, 2021.

Relationship to the Strategic Plan, Health Impact Assessment and Community Energy & Emissions Plan (CEEP)

This report refers to operational matters.

Financial Implications

If approved, the Yellow Bag Program for Licensed Home Child Care is anticipated to cost \$15,147 annually (2021) to deliver services to twenty-five (25) licensed home child care providers. The cost to deliver the program will be recovered through provincial grants received and managed by Children's Services and provided to the licensed home child care agency managing these providers.

Background

In October 2016, a special support program for children's disposable diapers was created to assist families with children under 4 years of age to meet the garbage bag limit when it was reduced from three (3) to two (2) bags and then from two (2) to one (1) bag in October 2019.

In February 2021, roadside garbage and leaf & yard collection changed from weekly to every other week collection. At the same time, the support program for children's disposable diapers was enhanced to provide

the option of a weekly diaper collection. As of April 30, 2021, 431 families have registered for the weekly diaper collection program. Home child care establishments are businesses and do not qualify for the children's disposable diaper support program.

Licensed home child care providers offer a valuable service to the community. Parents with children enrolled in these services can attend work and school while their children benefit from receiving regulated quality child care in a small group setting. The Province of Ontario, through the Ministry of Education, provides funding to municipalities to support licensed home child care providers. This funding is not available to unlicensed home child care providers. Funding provided to Jubilee Heritage Family Resources (which is the licensed home child care agency in the City) creates an incentive for home child care providers to become licensed and work under a set of defined regulations that ensure the quality and well being children within their care. It also provides them with resources supporting professional development and quality programs, according to established provincial guidelines.

Unlicensed (independent) home child care providers also provide a valuable service to the community albeit, not in a regulated setting and therefore, they are not eligible for access to provincial funding.

Most home child care providers are located in low density residential homes that receive residential roadside waste collection services and would be eligible for the fee based Yellow Bag non-residential roadside garbage collection program every other week. The Yellow Bag program is a convenient, low cost waste management option for non-residential establishments that generate no more than six (6) bags of garbage every other week. Registered participants are required to pay a \$100 refundable deposit at the time of registration and purchase the required yellow bags displaying the City logo at a cost of \$31 per package of 10 bags. The Yellow Bag program does not provide an option for weekly collection.

Home child care providers currently have the following options for the management of diaper waste generated from their business:

- Store the diapers over 2 weeks.
- Deliver them directly to the landfill.
- Hire a private waste collection service.
- Return the used diapers home with the child's parents at pick-up.

Analysis

Many Ontario municipalities have already made the change to every other week garbage collection. As shown in Appendix 'A', a review of thirty-six (36) of these municipalities reveals that only one (1) provides a special diaper collection program to home child care providers. There are however eight (8) municipalities that accept diapers in their green cart organics collection program. The acceptance of diapers in a green cart organics program is typically done when the waste is processed in an anaerobic digester system which is capable of shredding and skimming the non-compostable components of diapers. Greater Sudbury's organics processing is done in an open (i.e. aerobic) windrow system that is not capable of accepting diapers.

Disposable diapers are considered odourous and may cause storage concerns especially in the summer months. Most concerns can be addressed by ensuring the bag(s) of diapers are tightly closed and stored safely. However, if a home child care provider is unable to store the diaper waste, a Yellow Bag program with weekly collection for licensed home child care providers could be developed by Environmental Services and funded by Children's Services.

Children's Services receives its funding through the Province of Ontario (Ministry of Education) and a municipal tax levy. Through its provincial service agreement, Children's Services has the flexibility, through operating grants, to support licensed home child care agencies who contract with individual licensed home child care providers. These operating grants can be used to offset the cost of operating licensed home child care programs, thereby reducing parent fees. The Province of Ontario has committed to supporting licensed home

child care as an option for parents to access quality child care. As of April 2021, Children's Services has a purchase of service agreement with Jubilee Heritage Family Resources (Jubilee) for licensed home child care. Jubilee contracts with a maximum of 25 licensed home child care providers, based on their current license from the Ministry of Education. That number could expand to 50 licensed home child care providers based on available funding provided through Children's Services within their child care expansion plans. Operating grants would be extended to support any new licensed home child care providers should Children's Services agree to an expansion of an additional 25 providers.

Unlicensed home child care providers are not supported by provincial operating grants however, consideration may also be given the development of a Yellow Bag program for unlicensed home child care providers that includes a weekly collection for diapers.

While the exact number of unlicensed home child care providers is unknown because they are not tracked, a review of social media groups indicates that there is an estimated ninety (90) unlicensed home child care providers within Greater Sudbury, although the actual number is expected to be much higher.

Options

Yellow Bag Program for Licensed Home Child Care Providers

In consultation with current licensed home child care providers, it has been determined that two (2) bags per week, each weighing no more than 40 lbs/18kg, would be sufficient to manage disposable diaper waste generated by their business. Jubilee, the licensed home child care agency, will purchase the Yellow Bags from the City and distribute them to licensed home child care providers who have registered for the Yellow Bag Program for Licensed Home Child Care Providers.

The program will be administered by way of application. The application will be reviewed to confirm that the applicant is currently registered as a licensed home child care provider with Jubilee. To qualify, the establishment must be located on a residential waste collection route and within a property eligible to receive residential roadside waste collection services. Once registered, participants will receive Yellow Bags displaying the City logo from Jubilee.

Registered participant addresses will be entered as a stop in the collection vehicle's onboard automated vehicle locator routing system. Each registered address will receive weekly roadside collection limited to two (2) Yellow Bags of diapers.

Registered participants who cease to be licensed or provide child care services altogether will be removed from the collection routing system and the collection of Yellow Bags will be discontinued. Any unused Yellow Bags should be returned to Jubilee.

The estimated annual cost to provide weekly roadside collection of two (2) Yellow Bags per week to twenty-five (25) licensed home child care providers is approximately \$15,147 annually (2021 pricing). This cost will fluctuate (increase/decrease) based on program registration. If registration rates double, the cost would also double. The cost to provide the service will be funded through Children's Services' operating grants.

Yellow Bag Program for Unlicensed Home Child Care Providers

A Yellow Bag Program for Unlicensed (Independent) Home Child Care Providers could be developed and administered by way of application. Applicants would be required to provide documentation to prove that income is generated through child care. Documentation to support the application could include a statement of business of professional activities from income tax returns or copies of client receipts with personal information redacted. To qualify, the establishment must be located on a residential collection route and within a property eligible to receive residential roadside waste collection services.

Once registered, participants would receive 104 Yellow Bags displaying the City logo. Registered participant addresses will be entered as a stop in the collection vehicle onboard automated vehicle locator routing system.

Each registered address will receive weekly roadside collection limited to two (2) Yellow Bags of diapers. Applicants would be required to reapply on an annual basis in order to receive more Yellow Bags and continue receiving service.

Registered participants who cease to provide child care services will be required to cancel their registration and collection of Yellow Bags will be discontinued. Any unused Yellow Bags should be returned to the City.

The estimated annual cost to provide weekly roadside collection of two (2) Yellow Bags per week for ninety (90) unlicensed home child care providers is approximately \$138,727. This cost would fluctuate (increase/decrease) based on program registration. If registration rates double, the cost would also double. Since there is no funding available for unlicensed home child care providers, any cost to provide services to unlicensed home child care providers would increase the Environmental Services base operating budget.

Conclusion / Next Steps

Families with children depend on child care services in order to contribute to the community when attending work or school. Licensed home child care provides parents with an essential service that allows them to fully contribute to the community with the confidence of knowing that their children are being cared for in a regulated and quality establishment in a small group setting.

Children's Services has the flexibility within its provincial funding to provide operating grants to Jubilee Heritage Family Resources to support licensed home child care providers.

As requested by the Operations Committee on May 17, 2021, Staff have provided an option for the development of a Yellow Bag program with weekly diaper collection for licensed home child care providers and funding provided by Children's Services. Additionally, Staff have provided an option for unlicensed home daycares for the Committee's consideration.

Staff recommend that the Yellow Bag Program for Licensed Home Child Care Providers be approved.

Resources Cited

City of Greater Sudbury, Operations Committee, Resolution OP2012-08, Funding and Program Options for Diaper Collection May 17, 2021

Accessed online: <https://pub-greatersudbury.escribemeetings.com/FileStream.ashx?DocumentId=40033>

APPENDIX 'A'

Municipalities with every other week garbage collection that have a Home Child Care Provider Diaper Collection Program

Municipality	Garbage Collection Frequency	Residential Diaper Collection Program	Home Childcare Provider Diaper Collection Program	Diapers accepted in the Green Cart	Population
Niagara Region	Every other week	Yes	Yes - Weekly	No	447,888
Town of New Market	Every other week	No	No	Yes	2,248
Town of East Gwillimbury	Every other week	No	No	Yes	23,991
Town of Georgina	Every other week	No	No	Yes	45,418
Town of Whitchurch-Stouffville	Every other week	No	No	Yes	45,837
City of Richmond Hill	Every other week	No	No	Yes	208,370
City of Vaughan	Every other week	No	No	Yes	323,281
City of Markam	Every other week	No	No	Yes	342,970
City of Toronto	Every other week	No	No	Yes	2,930,000
Townships of North Dumfries	Every other week	No	No	No	10,215
Township of Wellesley	Every other week	No	No	No	11,260
Township of Brock	Every other week	Yes	No	No	11,642
Town of Aurora	Every other week	No	No	No	13,787
Town of Petawawa	Every other week	No	No	No	17,187
Township of Wilmot	Every other week	No	No	No	20,545
Township of Uxbridge	Every other week	Yes	No	No	21,176
City of Owen Sound	Every other week	No	No	No	21,341
Township of Scugog	Every other week	Yes	No	No	21,617
Township of Woolwich	Every other week	No	No	No	25,066
District of Muskoka	Every other week seasonal during the winter	No	No	No	60,599
Municipality of Clarington	Every other week	Yes	No	No	92,013
City of Pickering	Every other week	Yes	No	No	107,910
City of Waterloo	Every other week	No	No	No	113,520
Town of Ajax	Every other week	Yes	No	No	121,780
Town of Whitby	Every other week	Yes	No	No	128,377
City of Cambridge	Every other week	No	No	No	129,920

City of Guelph	Every other week	No	No	No	135,474
City of Barrie	Every other week	Yes	No	No	153,356
City of Greater Sudbury	Every other week	Yes	No	No	164,926
City of Oshawa	Every other week	Yes	No	No	171,071
City of Kitchener	Every other week	No	No	No	242,368
County of Simcoe	Every other week	Yes	No	No	307,050
Halton Region	Every other week	Yes	No	No	548,435
City of Ottawa	Every other week	Yes	No	No	994,837
City of Ottawa	Every other week	Yes	No	No	994,837
Region of Peel	Every other week	No	No	No	1,382,000

Winter Control Operations Update – April 2021

Presented To:	Operations Committee
Meeting Date:	June 21, 2021
Type:	Correspondence for Information Only
Prepared by:	Brittany Hallam Linear Infrastructure Services
Recommended by:	General Manager of Growth and Infrastructure

Report Summary

This report provides information regarding winter maintenance activities for the 2020-2021 season up to and including April 30th, 2021.

Relationship to the Strategic Plan, Health Impact Assessment and Community Energy & Emissions Plan (CEEP)

This report refers to operational matters.

Financial Implications

This report provides the estimated financial results for the period ending April 30th, 2021. The estimated result for the period ending April 30th, 2021 is a surplus of approximately \$4.2 million when compared to the 2021 year-to-date budget. The actual year-to-date results may differ, as certain estimates were necessary to account for outstanding invoices.

Background

This report is intended to provide a summary of winter maintenance activities for the month of April 2021, including financial variances. It is important to note that due to normal lags in receipt of costs related to these activities, final costs for this period may vary from the information reported at this time.

The City of Greater Sudbury's winter maintenance service levels are defined in Council approved winter control service policies as well as guidelines within the Minimum Maintenance Standards (MMS), O.Reg. 239-02.

During the month of April there were no winter events that required the full deployment of City crews and contractors. Favorable weather conditions allowed for Roads Maintenance staff to focus on the spring cleanup program.

The total snow accumulation for April 2021 was, again, significantly lower than the ten-year average (2011-2020) for the same period of time, resulting in less expense than budgeted for this period. The overall expenditures for the 2021 fiscal year are projecting an estimated surplus of approximately \$4.2 million when compared to the 2021 year-to-date budget.

Weather Statistics

As shown on table 1, from January to the end of April there have been two major snow events and no freezing rain events that have required the deployment of all available City and Contractor snow plowing equipment. Furthermore, table 1 highlights the statistical information for the 2021 winter season from Environment Canada including the 10-year average (2011-2020) for snowfall. The total snow accumulation for the 2021 calendar year to date is 0.90 meters or 2.95 feet. The 10-year average for the same January to April period is 2.07 meters or 6.79 feet. This represents a 57% decrease.

Table 1 – Weather Statistics (April 2021)

Month	Snow Accumulation (cm)	10 Year Average (cm) (2011-2020)	Percentage Increase/(Decrease) Compared to 10 Year Average (%)	Snow Events	Rain/Freezing Rain Event
Jan	21.6	79.9	-73.0%	0	0
Feb	48.7	61.3	-20.6%	2	0
Mar	16.6	39.1	-57.5%	0	0
Apr	3.2	27.3	-88.3%	0	0
May					
Jun-Sep					
Oct					
Nov					
Dec					
Totals	90.1	207.6	-56.6%	2	0

Note: All weather data taken from Environment Canada website for weather station Sudbury A.

The total snow accumulation for the 2020-2021 winter season, up to and including April 2021, is 1.7 meters or 5.61 feet compared to the 10-year average of 3.2 meters or 10.39 feet. This represents a 46% decrease.

Winter Control Service Categories

1) Roadway Snow Plowing/Sanding/Salting

Includes work activities such as plowing, sanding, salting, anti-icing roads and winter stockpile management.

Status Update

For the April 2021 reporting period there was minimal snow. This resulted in less snow plowing/sanding/salting activities than the anticipated levels for the month of April.

Challenges

No significant challenges in this reporting period.

2) Snow Removal

Includes work activities such as bus stop clearing, snow removal with loaders, snow dump operation and snow bank removal in the downtown centres.

Status Update

Due to the lower than anticipated snowfall in the 2020/2021 winter season, no snow removal was required in the month of April, 2021.

Challenges

No significant challenges in this reporting period.

3) Winter Sidewalk Maintenance

Includes work activities such as sidewalk plowing and sanding.

Status Update

For the April 2021 reporting period there were no major snow events and minimal snow accumulation. No winter sidewalk maintenance activities were required.

Challenges

No significant challenges in this reporting period.

4) Roadway Snow Plowing with Graders/Loaders/4x4s

Includes work activities such as snow plowing with graders, 4x4s and loaders, municipal parking lot maintenance and snow fence maintenance.

Status Update

For the April 2021 reporting period there were no major snow events requiring full deployment of City staff and/or contractors. This resulted in minimal snow plowing with graders/loaders/4x4s activities in April, 2021.

Challenges

No significant challenges in this reporting period.

5) Winter Ditching/Spring Clean Up

Includes work activities such as winter ditch maintenance and spring clean-up with sweepers/flushers on roads and sidewalks.

Status Update

There was significant work within this category during the month of April. The sidewalk and street sweeping programs were in full force with activities being completed by both Contractor and City forces.

Challenges

No significant challenges in this reporting period.

6) Miscellaneous Winter Maintenance

Includes work activities such as property restoration (plow damage), pothole patching, winter road patrol, employee standby, equipment standby, health and safety training (snow school), fringe benefits and tool repairs.

Status Update

Pothole patching is the main activity that has been utilized under this category during this reporting period. Weather was favorable during the month of April which resulted in the requirement for less pothole patching.

As of the end of April, the City placed over 1,007 tonnes of asphalt in 2021 which would equate to 25,175 potholes filled assuming 40 kilograms of asphalt was placed into each hole. In the same period in 2020, the City placed over 1,770 tonnes of asphalt, equating to 44,250 potholes filled based on a 40 kilogram pothole size. Traditionally, the City fills approximately 55,000 potholes annually.

Challenges

No significant challenges in this reporting period.

ACR Statistics

As noted in table 2, the number of resident related issues recorded in the system during the month of April was significantly lower in all categories. Overall, there was a 48% reduction in the number of calls associated with winter control services when comparing April 2021 values to the average April values (2017-2020). The main factor in this reduction in call volume was the favorable weather, which also reduced pothole patching requirements. An early spring caused an increase in calls regarding spring clean-up for April as the sweeping program began earlier and advanced more quickly than an average year.

Table 2 – 311 Statistics

311 Related Roads Requests			
Category	Average April Call Volume (2017 -2020)	April 2021 Call Volume	Comparison to Average
Potholes	399	210	-47%
Roadway - Plowing	34	2	-94%
Roadway – Sanding/Salting	13	0	-100%
Sightlines	3	0	-100%
Cul de Sac - Plowing	17	0	-100%
Spring Clean-up	27	49	81%
Sidewalk/Stair - Plowing	4	0	-100%
Sidewalk/Stair - Sanding/Salting	4	1	-75%
Totals	501	262	-48%

Financials

The estimated financial results for the period ending April 30th, 2021 are summarized below. As depicted in table 3, April 2021 is estimating a surplus of approximately \$4.2 million when compared to the 2021 year-to-date budget. The actual year-to-date results may differ as certain estimates were necessary to account for outstanding invoices.

Table 3 – Financial Results

2021 Winter Summary As at April 30, 2021					
	Annual Budget	2021 YTD			
		Budget	Actual	Variance	% Spent YTD
Snow Plowing/Sanding/Salting	7,601,958	5,001,573	2,950,678	2,050,895	59%
Snow Removal	1,081,503	846,017	484,581	361,436	57%
Winter Sidewalk Maintenance	1,219,250	792,513	522,595	269,918	66%
Snow Plowing - Graders/Loaders/4x4s	1,294,384	929,277	360,483	568,794	39%
Winter Ditching/Spring Clean Up	2,816,050	2,230,933	1,821,255	409,678	82%
Miscellaneous Winter Maintenance	7,731,915	4,602,541	4,106,437	496,105	89%
Totals	21,745,060	14,402,854	10,246,030	4,156,824	71%

Table 4 – Miscellaneous Winter Maintenance Budget Breakdown

2021 Miscellaneous Winter Maintenance	
Expense Type	Annual Budget (millions)
Employee Benefits	1.63
Asphalt Patching	1.40
Internal Recoveries (HR, Finance, IT)	0.78
Standby (Contractor Services)	0.79
Health & Safety	0.20
Other (Roads Patrol, Emergency Response, Tool Repair, Property Restoration, etc.)	0.57
Administration & Supervision	2.35
Total	\$ 7.73

Table 5 portrays a summary of winter maintenance activities for the 2020/2021 winter season which shows an estimated under expenditure of approximately \$5 million.

In summary, favorable weather conditions in the 2020/2021 winter season would suggest that costs attributable to winter maintenance for the 2021 fiscal year are tracking well below budget allocations.

Table 5 – 2020/2021 Winter Season Financial Summary

2020/2021 Winter Season Summary April, 2021			
	Season Budget	Season Actual	Variance
Snow Plowing/Sanding/Salting	7,667,039	5,181,682	2,485,357
Snow Removal	1,025,742	538,328	487,414
Winter Sidewalk Maintenance	1,186,061	840,478	345,583
Snow Plowing - Graders/Loaders/4x4s	1,191,403	611,710	579,693
Winter Ditching/Spring Clean Up	2,264,943	1,914,406	350,537
Miscellaneous Winter Maintenance	6,836,027	6,034,541	801,486
Totals	20,171,215	15,121,145	5,050,070