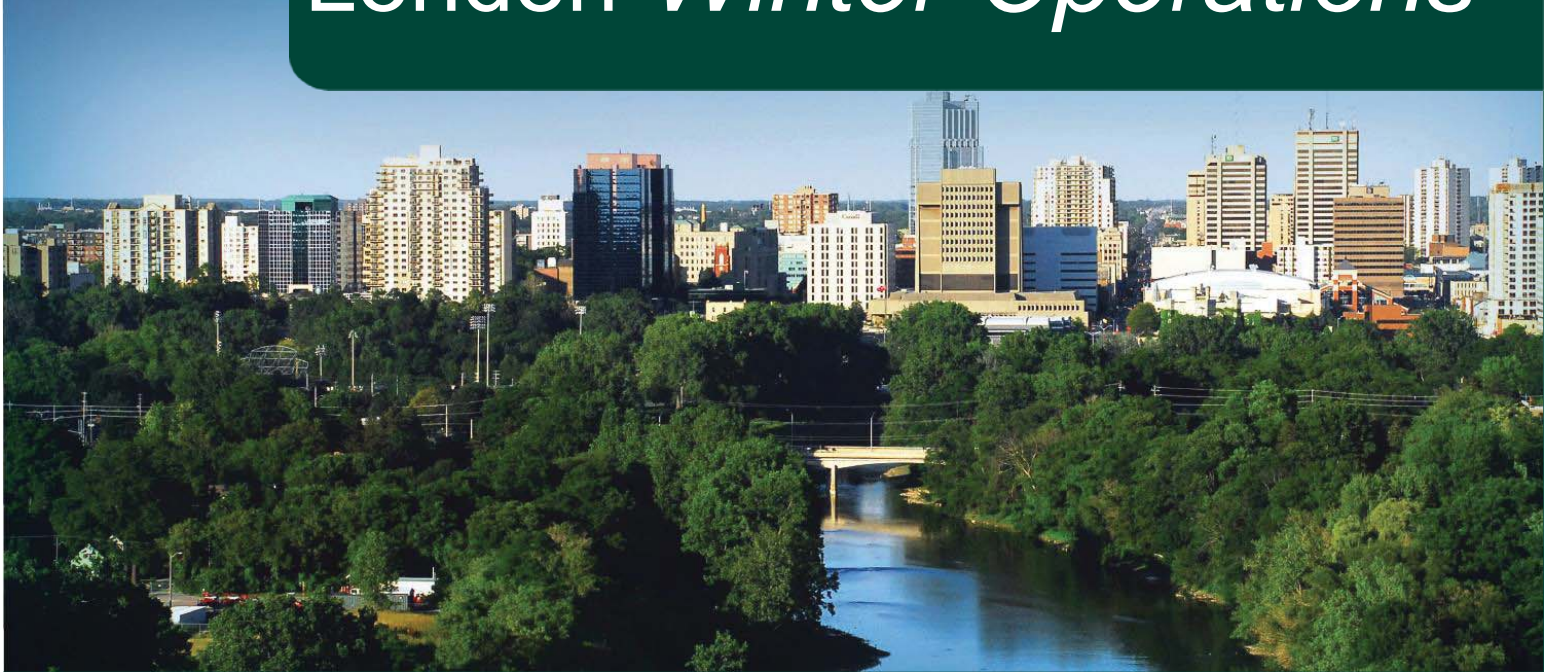




London *Winter Operations*



Winter Maintenance Program Support
Civic Works Committee July 23, 2019

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London By The Numbers

When the snow arrives our team manages

3,713 kms of roadway

1,536 kms of sidewalk

750 cul-de-sacs

2,150 bus stops.



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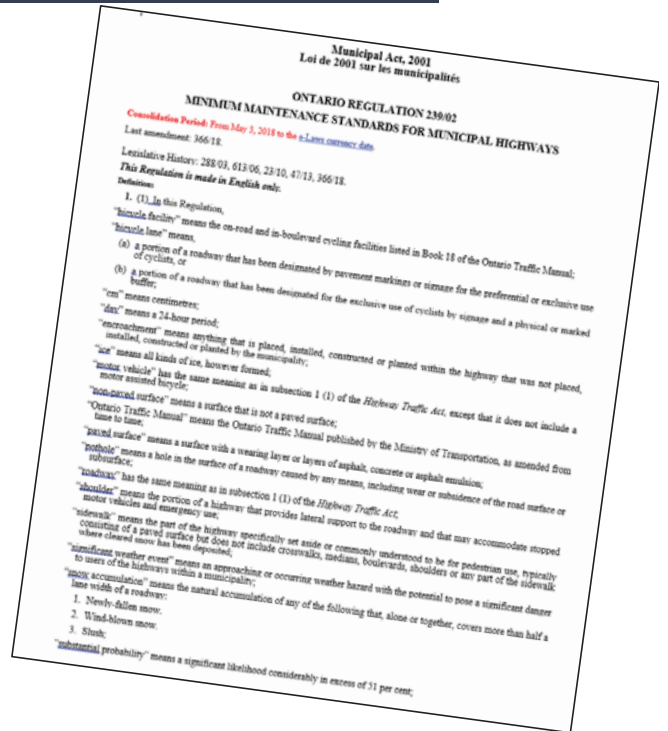
Yearly Summary of Snowfall Events @ London Airport

	>=0	>=2.5	>=5	>=7	>=8	>=10	>=15
	cm	cm	cm	cm	cm	cm	cm
2007	89	32	10	7	5	4	2
2008	96	41	26	15	14	11	7
2009	66	16	9	3	2	1	0
2010	62	18	12	9	8	7	5
2011	74	31	14	9	8	7	2
2012	56	18	8	4	2	2	1
2013	93	31	12	8	7	5	2
2014	75	29	13	8	7	4	2
2015	58	20	10	6	5	3	1
2016	65	30	17	14	11	7	1
Average	73	27	13	8	7	5	2



Service Level

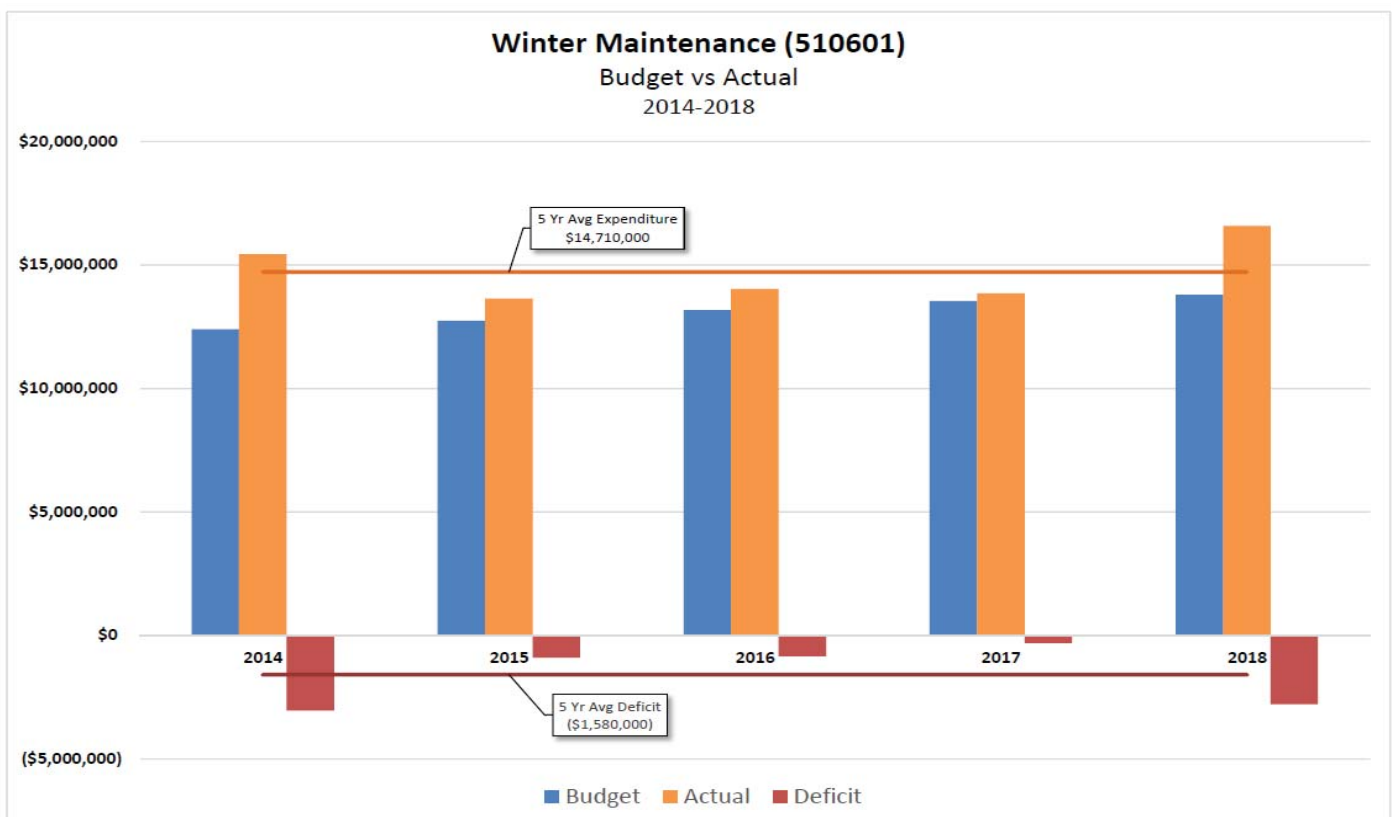
- Council adopted the Ontario Regulation 239/02 Minimum Maintenance Standards for Provincial Highways in 2003
- Updated in May 2018 and reported to Council in August 2018
- Includes. Roadways, Sidewalks and on-road cycling facilities



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Service Level Cost



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Road Snow Clearing

Pre-Snowfall

- Anti-icing - use Brine to treat roads to break bond of snow/ice to road

Light Snowfall

- Deploy salt trucks with plows to main roads/ bus routes - 24/7 shift

Heavy Snowfall

- Deploy road plows as required to clear snow accumulation in this order – Main streets, Bus routes then local streets once 10cm of accumulation occurs.



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Sidewalk Snow Clearing

- Sidewalk service level allows for 8cm of accumulation before plowing starts. Apply sand as required
- Crews have 48 hours after the snowfall ends to clear the sidewalk
- Bare pavement or sidewalk is not a requirement under the regulation.
- Snow packed surfaces are typical in London and in Ontario



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Bus Stop Service Level

- After the sidewalks are cleared, crews begin clearing bus stops. This is a Council approved standard and funded by London Transit Commission
- Bare surface is not a requirement. Apply sand as required
- Snow packed surfaces are typical in London and in Ontario



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Council Resolution

- That Civic Administration BE DIRECTED to investigate and report back, before the next multi-year budget process, on the operational and budget impacts of the following items to snow clearing:
 - lowering the snow clearing of residential streets from 10 cm to 8 cm and 7 cm options;
 - the capital cost for new equipment and options for faster response times during heavy or consecutive snowfall events;
 - lowering the threshold of sidewalk snow clearing from 8 cm to 5 cm;
 - ensuring that school walking routes are cleared of snow as a priority; and,
 - Reviewing of current plowing routes, and available technologies to implement smarter, more flexible and more responsive snow clearing.

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Winter Maintenance Program Support Options

Option	Description	Estimated Additional Annual Operating Budget
1	<p>Residential Road Plowing:</p> <p>The current practice prescribed by the Provincial Standards is to deploy plows on residential streets once snow accumulation reaches 10 cm.</p> <p>Lowering the threshold for road plow deployments from <u>10 cm to 8 cm</u> of snow on residential streets would increase the deployments, on average, <u>(2) two additional times</u> based on historical records.</p>	\$500,000
2	<p>Residential Road Plowing:</p> <p>The current practice prescribed by the Provincial Standards is to deploy plows on residential streets once snow accumulation reaches 10 cm.</p> <p>Lowering the threshold for road plow deployments from <u>10 cm to 7 cm</u> of snow on residential streets would increase the deployments, on average, <u>(3) three additional times</u> based on historical records.</p> <p>The LTC will see increased costs due to additional bus stop clearing to match the more frequent road threshold and address windrows. This cost is estimated at \$23,000.</p>	\$760,000 + LTC \$23,000

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Winter Maintenance Program Support Options

Option	Description	Estimated Additional Annual Operating Budget
3	<p>Sidewalk Plowing:</p> <p>The MMS threshold is 8 cm of snow accumulation before equipment is deployed and it allows for 48 hours after the snowfall ends to clear the sidewalk.</p> <p>Lowering the threshold for sidewalk snow clearing from <u>8 cm to 5 cm</u> would require, on average, <u>six (6) six additional</u> deployments. This option does not include prioritization of school areas in Option 4.</p> <p>The LTC will see increased costs due to additional bus stop clearing to match the more frequent sidewalk threshold and address windrows. This cost is estimated at \$140,000.</p>	\$600,000 + \$140,000
4	<p>Prioritize school area sidewalks (more timely 8 cm response):</p> <p>This option will provide earlier sidewalk clearing to all school <u>main entrances</u> including those on local streets. School route plowing would be done at the same time as main roads and transit routes.</p> <p>The cost assumes additional sidewalk plowing equipment for <u>one access route</u> to the schools main entrance without significantly affecting main route sidewalk plowing completion time. There would be no change to sidewalk clearing leading to rear or side entrances.</p>	\$280,000
5	<p>Prioritize school area sidewalks (more timely 5 cm response): Same comments as Option 4, but with <u>six (6) additional deployments</u></p>	\$520,000

Recommendation: Options BE CONSIDERED as part of 2020-2023 Budget