

From: Marisa Carpino
Director, Community Services

Subject: Level of Service
- Review of Winter Activities within Public Works
- File: A-1440-001

Recommendation:

1. That Council receive report CS 31-19 for information in regards to winter activities currently provided by Public Works and recommended service level increases.
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Executive Summary: During the 2019 Current and Capital Budget Executive Committee Meeting of February 14, 2019, Council directed staff to review winter activities performed by Public Works (Roads, Parks & Property, Fleet and Administration). The purpose of the review was to consider current winter activities, confirm existing levels of service and make recommendations to Council on any proposed increase to winter levels of service. To that end, a detailed summary of winter activities and recommended levels of service is attached to this report. Since efficiencies in Public Works operations are best realized by ensuring equipment and staff can be effectively utilized 12 months a year, staff will conduct a subsequent review next year of all spring, summer and fall activities performed by Public Works.

Nonetheless, a review of Public Works winter activities is timely as staff are planning for growth in the City and preparing for its related impact to the operation. For example, new communities in the Seaton and Veraine developments are projected to increase the size of Pickering's population by as much as 150 percent within the next 10 years. In as early as 2020, it is estimated that there will be 18 centre line km more of paved roads (5 percent increase), 19 linear-km of sidewalks and multi-use paths (MUP) (6 percent increase) and 6 more parks (7 percent increase). These newly designed communities will support denser populations; require enhanced winter services on our roads, parks and property; and utilize specialized vehicles and equipment matched to clear narrow roads, laneways, layby and overnight parking areas as well as sidewalks and MUP (multi-use paths) and MUT (multi-use trails). A higher level of winter service is also expected in northern rural areas during winter months as commuter traffic coming into and out of the Innovation Corridor will increase.

Additionally, snow storage in many of the new areas in Seaton, and often in new infill developments, is compromised due to narrow roads and boulevard widths as well as increased on-street parking that requires regular snow removal. Clearly, available greenspace in private dwellings will be reduced due to densification. Therefore, as noted in the Recreation & Parks Master Plan (2017), the City's newly developed parks will be utilized to displace that need and

should include picnic shelters and other park amenities that support passive park use. In fact, new park features such as outdoor fitness equipment, off-leash dog parks and dog playgrounds have started to generate increased use during the winter months and demand for an increase in winter services.

Moreover, the approval of the City Centre development and downtown intensification, along with an anticipated increase in the number of planned and unplanned City and community events, will require Public Works winter service delivery to be scheduled after normal business and during overnight hours and on weekends.

With this in mind, staff have completed their review of winter operations in Public Works. Paramount in the review process was to ensure that Public Works are meeting or exceeding all legislated responsibilities under the following, but not limited to:

- The *Municipal Act, 2001*- Ontario Regulation 239/02 Minimum Maintenance Standards for Municipal Highways (MMS)
- The *Highway Traffic Act* R.S.O. 1990, c H.8 Ontario Regulation 555/06 Hours of Service
- *Employment Standards Act (ESA)* S.O. 2000, c. 41 Hours of Work

In this way, staff are not only ensuring the well-being of residents, business owners and visitors but that the City is protected from liability and claims.

The recommended 2020 service level increases identified in this report will be included in the City's 2020 Budget for Council's consideration.

Financial Implications: In 2020 and 2021, Public Works Capital and Current Budgets will reflect additional costs due to the planned growth in Pickering. To be clear, these increased costs are unavoidable, directly resulting from increased roads, sidewalk and parks infrastructure related to growth and the City's obligations to provide winter maintenance in accordance with legislative requirements.

That said, as a result of this review requested by Council, staff also propose a variety of improvements to our existing winter maintenance program which will have additional financial implications in 2020 and 2021 Capital Budgets and Current Budgets. These enhancements reflect an increased level of service that not only provides better and timelier service to our residents but also safeguards our assets and reduces the City's exposure to liability and risk. A summary of projected additional costs are identified below and are clearly identified as Growth Related (required) or Level of Service (recommended).

Accordingly, the 2020 draft Budget, as presented to Council, will consider several special levy increases such as Public Works (recommended level of service) but also additional staffing resources for By-Law and for Firefighters. The 2020 Budget opportunity, for Council, will be to decide which special levy increases are approved in the context of maintaining an overall levy increase that strikes that balance between service level increases and property tax affordability.

2020 Capital Budget Implications:

Public Works staff recommend adding the following vehicle and equipment expenditures totaling \$75,000 in the 2020 Capital Budget to increase **Level of Service**:

| Item | Approx. Cost | Year | Rationale | Level of Service Increase by Work Section |
|------------------------|--------------|------|---|---|
| Front Plow Attachment | \$30,000 | 2020 | For existing loader to clear Pickering Soccer Club parking lot and other infrastructure | Roads |
| One ½ Ton Pickup Truck | \$45,000 | 2020 | New Lead Hand, Parks & Property to conduct winter control inspections, deploy and support staff | Parks & Property |
| Total | \$75,000 | | | |

Public Works staff will add the following vehicle and equipment expenditures totaling \$405,000 in the 2020 Capital Budget to accommodate **Growth**:

| Item | Approx. Cost | Year | Rationale | Growth Related Increase by Work Section |
|-------------------------------|--------------|------|--|---|
| 2 One Ton Salter with Plows | \$140,000 | 2020 | For all narrow roads and laneways included in Seaton (new 14 th snowplow route) | Roads |
| Front Plow & Wing Attachment | \$20,000 | 2020 | To install on existing One Ton Salter for new laneways in Seaton | Roads |
| Sidewalk Plow with Attachment | \$175,000 | 2020 | Increase in sidewalk and MUP inventory (new 8 th sidewalk plow route) | Parks & Property |
| One Ton Truck | \$70,000 | 2020 | For 2 nd crew on manual clearing of walkways and steps north of Taunton Road as 1 st crew completes same, south of Taunton creating a significant time lag | Parks & Property |
| Total | \$405,000 | | | |

2021 Capital Budget Implications:

Public Works staff are proposing to submit the following vehicle and equipment expenditures totaling \$45,000 in the 2021 Capital Budget to increase **Level of Service**:

| Item | Approx. Cost | Year | Rationale | Level of Service Increase by Work Section |
|------------------------|--------------|------|--|---|
| Half Ton Pick Up Truck | \$45,000 | 2021 | Utility Cut Inspector (also performing winter patrols) | Roads |
| Total | \$45,000 | | | |

Public Works staff are proposing to submit the following vehicle and equipment expenditures totaling \$860,000 in the 2021 Capital Budget to accommodate **Growth**:

| Item | Approx. Cost | Year | Rationale | Growth Related Increase by Work Section |
|--------------------------------------|--------------|------|---|---|
| Five Ton Dump Truck with Plow & Wing | \$300,000 | 2021 | For 18 centre line-km of new roads in Seaton (new 15 th snow plow route) | Roads |
| 2 Brine Four or Five Ton Trucks | \$560,000 | 2021 | For anti-icing and can also be used as spare salters/plows | Roads |
| Total | \$860,000 | | | |

2020 Current Budget Implications:

Public Works staff are proposing to submit the following labour, material and contract requests totaling \$510,820 in the 2020 Current Budget to increase **Level of Service**:

| Item | Approx. Cost | Year | Rationale | Level of Service Increase by Work Section |
|---|------------------|-----------------|--|---|
| On Call Staff | \$26,500 | 2020 (November) | For standby during the winter months including Loader Operator for Pickering Soccer Club parking lot | Roads |
| 1 New Supervisor, Public Works Operations | \$139,496 | 2020 (Jan.) | To coordinate winter communications, weather forecast, Road Weather Information Systems, Public Facing Winter Portal and GPS/AVL monitoring and exception/stop reporting | Roads |
| 1 New Lead Hand, Parks & Property | \$111,187 | 2020 (Jan.) | To provide proper oversight of staff during winter events | Parks |
| On Call Staff | \$8,500 | 2020 (November) | Increase the number of existing staff to be on call in order to provide winter control during winter events exceeding 13 hours in duration | Parks |
| On Call Staff | \$7,000 | 2020 | Increase the number of existing staff to be on call in order to provide winter control during winter events exceeding 13 hrs. in duration | Property |
| 1 New Lead Hand, Municipal Garage | \$111,187 | 2020 (Jan.) | To introduce an afternoon shift that ensures service vehicles are on the road. Position will schedule staff, assign/oversee work and assist with repairs. | Fleet |
| 1 New Mechanic, Municipal Garage | \$106,950 | 2020 (Jan.) | To introduce an afternoon shift that ensures service vehicles are on the road. Staff will perform non-scheduled repairs and prepare vehicles to on the road asap. | Fleet |
| Total | \$510,820 | | | |

Public Works staff are proposing to submit the following labour, material and contract expenditures totaling \$242,814 in the 2020 Current Budget to accommodate **Growth**:

| Item | Approx. Cost | Year | Rationale | Growth Related Increase by Work Section |
|---|------------------|-----------------|---|---|
| 1 New Maintenance Worker, Roads | \$65,938 | 2020 (April) | For narrow roads in Seaton and others | Roads |
| Brine Program | \$45,000 | 2020 (November) | For the purchase of salt and salt brine for additional road/sidewalk/MUP inventory as noted above | Roads |
| 2 New Maintenance Workers, Parks & Property | \$87,917 | 2020 (July) | For snow clearing in Seaton and manual snow clearing north of Taunton | Parks |
| 1 New Maintenance Worker, Parks & Property | \$43,959 | 2020 (July) | For snow clearing in Seaton and manual snow clearing north of Taunton and, in part, for enhanced winter trail maintenance (as per CS 33-19) | Property |
| Total | \$242,814 | | | |

2021 Current Budget Implications:

Public Works staff are proposing to submit the following labour, material and contract expenditures totaling \$111,000 in the 2021 Current Budget to increase **Level of Service**:

| Item | Approx. Cost | Year | Rationale | Level of Service Increase by Work Section |
|----------------------------------|------------------|--------------|--|---|
| 1 New Utility Cut Inspector | \$66,000 | 2021 (April) | To conduct utility cut inspections, as well as bridge inspection/repairs, sidewalk inspections, and winter patrol duties | Roads |
| 1 New Mechanic, Municipal Garage | \$45,000 | 2021 (July) | To expand an afternoon shift that ensures service vehicles are on the road. Staff will perform non-scheduled repairs and prepare vehicles to get on the road asap | Fleet |
| Total | \$111,000 | | | |

Public Works staff are proposing to submit the following labour, material and contract expenditures totaling \$50,000 in the 2021 Current Budget to accommodate **Growth**:

| Item | Approx. Cost | Year | Rationale | Growth Related Increase by Work Section |
|-------------------------|-----------------|------|---|---|
| Contracted Snow Removal | \$50,000 | 2021 | For additional contracted snow removal on narrow roads in Seaton & others | Roads |
| Total | \$50,000 | | | |

Discussion: Public Works provides winter services annually from November 5 to April 30. The following is a brief overview of existing levels of winter activities for each unit within Public Works and staff’s proposed increases to those levels of service with rationale.

1. Roads

As noted on the City of Pickering website, there are 11 urban (generally south of Taunton Road) and 2 rural routes which will expand to 14 routes (12 urban and 2 rural) in the 2020/21 winter season with Seaton expansion. Urban routes are completed within 18 hours when both salting and plowing is required, rural areas take longer to complete with plowing and sanding within 24 hours as the salt trucks are required to complete salting their urban routes and then switch over to sanding rural areas.

A review of MMS indicates that the City is clearing roads of snow and ice above the minimum standards. However, a review of traffic counts on all main roads with a posted speed of 60 km/hr

should be undertaken to ensure they are below 11,999 Annual Average Daily Traffic and maintaining to a classification of 3, 4 or 5. For this reason, Roads staff are proposing levels of service based on measured snow depths and Commercial Vehicle Operator’s Registration and the *Highway Traffic Act* Hours of Service requirements of driving consecutively for no more than 13 hours with a minimum 8 hour rest period as follows:

a) **Salting, Sanding and Plowing: Proposed Level of Service**

| Measure | Existing Level of Service | Proposed Level of Service |
|-------------------------------|---|--|
| Up to 2” of snow | <ul style="list-style-type: none"> urban roads salted within 6 hours, icy roads salted within 8 hours rural roads sanded within 24 hours after the snow has stopped, if necessary for traction, icy conditions within 12 hours | <ul style="list-style-type: none"> urban roads salted, icy roads salted within 6 hours rural roads sanded within 15 hours after the snow has stopped, if necessary for traction, icy conditions within 12 hours |
| 2” to 4” of snow and stopped | <ul style="list-style-type: none"> urban roads salted and plowed within 13 hours (unless drivers time out and no back-ups are available or there is a lack of mechanics to return trucks onto the road) rural roads plowed and sanded if necessary within 24-30 hours | <ul style="list-style-type: none"> urban roads salted and plowed within 13 hours (due to the introduction of enhanced on call schedule and new afternoon shift for mechanics) rural roads plowed and sanded if necessary within 20 hours |
| 4” to 8” of snow and stopped | <ul style="list-style-type: none"> urban roads salted and plowed within 30 hours rural roads plowed and sanded within 36 hours | <ul style="list-style-type: none"> urban roads salted and plowed within 24 hours rural roads plowed and sanded within 30 hours |
| Beyond 8” of snow and stopped | <ul style="list-style-type: none"> urban roads salted and plowed within 36 hours rural roads plowed and sanded within 36-40 hours | <ul style="list-style-type: none"> urban roads salted and plowed within 30 hours rural roads plowed and sanded within 36 hours |

b) **Direct Liquid Application (DLA):** DLA or anti-icing involves the application of a Magnesium Chloride (MgCl) or salt brine on the road 24 to 48 hours ahead of a snow or icing event on paved roads. City staff launched a pilot project in Pickering during the 2017/18 season on approximately 50 km of main roads using a truck that was to be disposed of. Results from the pilot project were very positive as DLA creates a bond breaker on the pavement surface which provides an approximate one hour buffer before salting is required and improves plowing of the surface when required. **Level of Service Recommendation** – As a result of the success of the pilot project, staff are proposing to purchase two new brine trucks at a cost of \$560,000 in 2021 and increase the amount of main roads to receive DLA to 100 km with a view to be able to complete all main roads in future. A further pilot project is envisioned to DLA all local (residential) roads within one urban route to determine the possibility of not requiring an application of salt with a snow event up to 2 inches.

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- c) **Winter Patrol:** At this time, there are two Forepersons on-call between November 5 and April 30 to check roads and sidewalks/MUP and to inspect when there is a 40 percent probability of precipitation (POP) to meet MMS. If conditions warrant, the Forepersons then contact staff on standby to come into work. As a result of the Forepersons early start time, they time out of their 13 hours on-duty and driving time prior to the end of an event and must leave work not to return for a minimum of 8 hours in order to meet the minimum off-duty time. **Level of Service Recommendation** – Employ one new Utility Cut Inspector (effective April 1, 2021) as noted below who will also provide winter patrol and increased coverage at the start of the 2021 winter season.
- d) **Utility Cuts:** Each of the approximate 2,000 Road Occupancy permits issued annually by the City of Pickering will also be inspected to ensure the integrity of the road allowance is maintained when outside parties undertake excavation and that the pavement degradation fees are collected. A review of other local municipalities including Durham Region indicates that there are patrol staff on a 24/7 basis during winter months to meet MMS obligations and the City should follow this best practice in order to minimize claims and liability. To address this, Public Works will be proposing one new Utility Cut Inspector (effective April 2020) in the 2020 Current Budget which will be offset by permit revenues. **Level of Service Recommendation** – Employ one new Utility Cut Inspector (effective April 1, 2021) as patrol staff who will also undertake numerous activities outside the winter months improving sidewalk patrol, pothole repairs, litter pickup, grass cutting, proposed bridge and culvert cleaning and repair, and oversee/inspect catch basin cleaning. Compliment should increase by an additional four Inspectors over as many years in order to provide 24/7 coverage.
- e) **Pickering Soccer Club Parking Lot:** With the move to the new Operations Centre at 1955 Clements Road, Roads staff will be required to salt and plow the Pickering Soccer Club (PSC) parking lot. **Level of Service Recommendation** – In order to do this, a Loader attachment will be required in 2020 to be on standby to clear the facility well before any vehicles park and use it.

2. Parks & Property

- a) **Sidewalks/MUP/Fire Halls/Parking Lots/Walkways/Steps:** Parks & Property staff clear all of the above during winter events. Sidewalks/MUP on regional roads, reverse frontages, fronting municipal properties, on walkways, bridges and front and side lot public sidewalks at schools are all mapped and scheduled to be completed. Steps within the road allowance and in parks are cleared, closed or signed that no winter maintenance is provided. They are all plowed and salted whenever 5 cm of snow or more has fallen and substantially stopped or icy conditions prevail especially during spring freeze/thaw cycles overnight. This work takes up to 13 hours after the end of a snow event to clear. Any event that exceeds 5 cm will take multiple rounds not exceeding 13 hours to complete for each additional 5 cm of snow. This level of service is much higher than MMS and adequate as long as Snow By-Law 5597/99 is enforced where sidewalks within the road allowance are the responsibility of the owner or occupant.

However, Parks & Property staff undertook to clear 33 snow events exceeding 5 cm during the 2018/19 winter season where all available staff were used whether they were on standby or not. All other services provided by Parks & Property ceased during this time as well as any “off-duty” time as prescribed. One critical activity that ceases during any winter event is litter can collection in Parks and on Roadsides. Staff levels do not permit collection to resume until 48 hours after the event and winter cleanup has been completed leading to Customer Care calls for overflowing waste bins. **Level of Service Recommendation** – Additional staffing, along with an increase in overtime and emergency call-in as requested, will not only address Seaton growth but to also continue other vital activities performed by Parks & Property staff. A total of \$126,687 for one Lead Hand and an increased number of staff scheduled to be on call will be proposed by staff in 2020 Current Budget.

3. Fleet Services

When reviewing fleet efficiencies, Maintenance Repair Units (MRU) are used to determine when mixed Fleets such as the City of Pickering are being maintained to normal industry standards. For instance, a Five Ton Truck would require much more maintenance than a passenger car and weighted accordingly through this process to calculate the vehicle/equipment to maintenance mechanic ratio. Current industry standards range from 14:1 to 15:1 for Public Works fleets. The City of Pickering’s ratio is 21:1 leaving numerous vehicles and equipment unavailable for long periods of time. The additional staffing requested brings this ratio approaching industry standards. In addition, winter vehicles are considered as emergency vehicles under the *Highway Traffic Act* and should be maintained to the same high degree during non-scheduled repairs similar to the requirements necessitated for Fire vehicles.

An additional request to build up and maintain a proper spare inventory of plow trucks and sidewalk machines when they become surplus but with a delayed disposal has also been made. This request should be at little or no additional increase in Current Budget but offers an alternate method of service delivery when non-scheduled vehicle and equipment breakdowns occur or during emergencies such as the recent ice storm in 2018. **Level of Service Recommendation** – The potential to start an afternoon shift in Fleet Services with the proposed addition of a Lead Hand, Garage and Maintenance Mechanic(s) is now viable with the opening of the New Operations Centre and changes previously made to the Collective Agreement for new hires. As a result, \$218,137 is recommended for one Lead Hand, Municipal Garage and one Mechanic, Municipal Garage (effective January 1, 2020) and \$45,000 is recommended for one additional Mechanic, Municipal Garage to work the afternoon shift (effective July 1, 2021).

4. Administrative Services

The 2019 Approved Current Budget for Public Works is \$15,204,556. Of this amount, \$8,776,102 or 57 percent of the total is made up of Labour salaries and overtime and tracked using paper time sheets filled out by each individual employee. The remaining 43 percent of the Budget including vehicles, equipment, materials and contracted services is not assigned to any individual activity and difficult to identify costing.

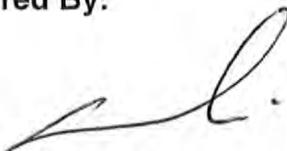
A new Supervisor, Public Works Operations position is being requested to provide overall co-ordination of winter communications to Senior Management, Council, Emergency Services and other key partners. This position will also monitor a more sophisticated winter weather forecast a

minimum of three times daily, review of three Road Weather Information Systems in the City of Pickering and adjoining areas, keep the online Public Facing Winter Portal current by providing up to date communications to residents and GPS/AVL monitoring with exception/stop reporting to ensure quality control. The Supervisor will also ensure a new work order management system is tied into the new financial reporting system, fleet and fuel management so activity costing can be undertaken, measured and reported on accurately. **Level of Service Recommendation** – A new Supervisor, Public Works Operations is recommended to be added to the 2020 Current Budget for \$139,496 (effective January 1, 2020).

Attachments:

- 1. Public Works Winter Activities and Levels of Service

Prepared By:



Rob Burlie, P. Eng.
Manager, Public Works



Brian Duffield
Division Head, Operations

Approved/Endorsed By:



Marisa Carpino, M.A.
Director, Community Services



Stan Karwowski, MBA, CPA, CMA
Director, Finance & Treasurer

RB:nw

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|---|----------------------|
| Recommended for the consideration of Pickering City Council | |
|  | <i>Dec. 10, 2019</i> |
| Tony Prevedel, P. Eng. Chief Administrative Officer | |

| Area | Activities | Existing LOS | Proposed LOS | Labour | Growth Related or LOS | Equipment | Growth Related or LOS | Materials | Growth Related or LOS | Contracts | Growth Related or LOS | Proposed Implementation | | | |
|------------|---|--|--|--|-----------------------|--|-----------------------|-----------|-----------------------|-----------|---|-------------------------|--------|--|--|
| Roads | 1. Sanding | 12 hours | See Below under "Salting" | Additional 6 staff "on call" for 21 weeks (2320.1200) = \$26,500 | Level of Service | | | | | | | Nov-20 | | | |
| | | | | New Supervisor, Public Works Operations (2500.1100) = \$139,496 | Level of Service | | | | | | | Jan-20 | | | |
| | | | | New Maintenance Worker (2320.1100) = \$65,938 | Growth Related | | | | | | | Apr-20 | | | |
| | | | | Sub Total Costs | \$231,934 | | | | | | | | | | |
| | 2. Salting | <p>Up to 2" of snow - Urban roads salted within 6 hours, icy roads salted within 8 hours</p> <p>Rural roads sanded within 24 hours after the snow has stopped, if necessary for traction, icy conditions within 12 hours</p> <p>2" to 4" of snow and stopped - Urban roads salted and plowed within 13 hours (unless drivers time out and no back-ups are available or there is a lack of mechanics to return trucks onto the road).</p> <p>Rural roads plowed and sanded if necessary within 24-30 hours</p> <p>4" to 8" of snow and stopped - Urban roads salted and plowed within 30 hours</p> <p>Rural roads plowed and sanded if necessary within 36 hours</p> <p>Beyond 8" of snow and stopped - Urban roads plowed and sanded within 36 hours</p> <p>Rural roads plowed and sanded within 36-40 hours</p> | <p>Up to 2" of snow - Urban roads salted within 6 hours including icy conditions</p> <p>Rural roads sanded within 15 hours after the snow has stopped, if necessary for traction, icy conditions within 12 hours</p> <p>2" to 4" of snow and stopped - Urban roads salted within 13 hours</p> <p>Rural roads plowed and sanded if necessary within 20 hours</p> <p>4" to 8" of snow and stopped - Urban roads salted and plowed within 24 hours</p> <p>Rural roads salted and plowed within 30 hours</p> <p>Beyond 8" of snow and stopped - Urban roads plowed and sanded within 30 hours</p> <p>Rural roads plowed and sanded within 36 hours</p> | | | Maintain 3 additional spare salt trucks as they are being replaced | Growth Related | | | | | On-going | | | |
| | | | | | | New 5 Ton dump truck with plow & wing \$300,000 | Growth Related | | | | | Nov-21 | | | |
| | | | | | | New plow & wing for existing 1 ton truck \$20,000 | Growth Related | | | | | | Nov-20 | | |
| | | | | | | New front plow for existing Loader \$30,000 | Level of Service | | | | | | Nov-20 | | |
| | | | | | | 2 New 1 Ton trucks with salter & plow \$140,000 | Growth Related | | | | | | Nov-20 | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | |
| | | | | | | | | | | | Additional \$40,000 for salt and \$5,000 for brine for 2020/21 winter season (2320.2408.0001) | Growth Related | | | |
| | | | Sub Total Costs | | | | \$490,000 | | \$45,000 | | | | | | |
| 3. Plowing | 12 hours to complete Salting and plowing behind | 8 hours after the snowfall has stopped of 10 cm or less | <p>Southern Pickering:</p> <p>5-10 cm will take 8 hours</p> <p>10-20 cm will take 12 hours</p> <p>20 cm and greater 24 hours</p> <p>Note: Drifting conditions will require continuous plowing (no sanding/salting)</p> | | | | | | | | | | | | |
| | | | | Sub Total Costs | | | | | | | | | | | |

| Area | Activities | Existing LOS | Proposed LOS | Labour | Growth Related or LOS | Equipment | Growth Related or LOS | Materials | Growth Related or LOS | Contracts | Growth Related or LOS | Proposed Implementation |
|--|--------------------------------|--|--|--|-----------------------|---|-----------------------------------|---------------------------|-----------------------|---------------------------|-----------------------|-------------------------|
| | 4. Winter Patrol | Patrol when 40% POP or more by on-call roads Foreperson/Leadhand on overtime and monitor/document weather forecast 3 times a day | One patroller (Utility Cut Inspector or equivalent) for the 2020/21 winter season ramping up to 24/7 for the 2021/22 winter season. Staff will provide conduct utility cut inspections, bridge inspection/repair, sidewalk inspection and winter patrol to MMS and address after hours customer care calls | New Utility Cut Inspector = \$66,000 (2320.1100) | Level of Service | 1 new 1/2 ton pick up truck = \$45,000 (to cover patrols and other 3 seasons activities) | Level of Service | | | | | Apr-21 |
| | | | Sub Total Costs | \$66,000 | | \$45,000 | | | | | | |
| | 5. Anti-Icing | Apply CaCl brine 24 to 48 hours ahead of winter event on select Collector (main) roads and take up to 8-10 hours to complete | Apply CaCl brine at 100 litres/lane-km 8-10 hours ahead of winter event on ALL Collector (main) roads within 24-48 hours ahead of winter event | | | 2 New brine trucks (4 or 5 Ton salt/plow combination trucks) to be purchased as the existing brine vehicle was surplus to the Fleet and was to be disposed of = \$560,000 (these vehicles will also address Seaton growth and act as spares after purchase) | Growth Related & Level of Service | | | | | Nov-21 |
| | | | Sub Total Costs | | | \$560,000 | | | | | | |
| | 6. Yards Ops (Winter Ops Only) | Loader Operator when undertaking winter services or loading domes | Same as existing Second Loader and Operator for additional paved areas in yard and soccer parking lot, designated cul-de-sac snow removal route | Additional Loader Operator on standby and O/T | | | | | | | | Nov-19 |
| | | | Sub Total Costs | | | | | | | | | |
| | 7. Snow Removal | Remove snow in cul-de-sacs, for sight distances at critical intersection, bridges for pedestrian movement and drifting conditions, 1 to 2 times during winter season | Remove snow twice a season on narrow roads in Seaton and infill roads, cul-de-sacs, critical intersections, bridges and drifting conditions | | | | | | | \$50,000 | Growth Related | Dec-21 |
| | | | Sub Total Costs | | | | | | | \$50,000 | | |
| Sub-Total Winter Activities Roads | 7 | | | \$297,934 (Current) | | \$1,095,000 (Capital) | | \$45,000 (Current) | | \$50,000 (Current) | | |

| Area | Activities | Existing LOS | Proposed LOS | Labour | Growth Related or LOS | Equipment | Growth Related or LOS | Materials | Growth Related or LOS | Contracts | Growth Related or LOS | Proposed Implementation |
|---|---|---|--|---|-----------------------|---|-----------------------|-----------|-----------------------|-----------|-----------------------|-------------------------|
| Parks & Property | 8. Sidewalks /MUP/MUT/Fire halls/ Parking Lots/ Steps/Manual Walkways – salt/plow | Sidewalks/MUP cleared on regional roads and pre-determined designated routes within 13 hours of the end of a snow event exceeding 5 cm or icy conditions prevail. Work also includes clearing fire halls, select parking lots and manual clearing of steps & walkways Note: events exceeding 10 cm may require additional time to complete as multiple passes may be necessary | Additional Lead Hand required to manage staff, monitor activities, conduct road patrols, call in staff as required. | New Lead Hand, Parks & Property = \$111,187 (2718.1100) | Level of Service | 1 1/2 Ton Pickup Truck (new Lead Hand) \$45,000 | Level of Service | | | | | Jan-20 |
| | | | Increased waterfront trail winter maintenance (as per Report CS 33-19) | New Maintenance Worker, Property = \$43,959 (2132.1100) | Growth Related | New sidewalk snow plow with attachments \$175,000 | Growth Related | | | | | Jun-20 |
| | | | To accommodate green space growth (growth) and to enhance staffing levels available for winter control response (level of service) | 2 New Maintenance Workers, Parks = \$87,917 (2718.1101) | Growth Related | One Ton Truck (new Maintenance Workers) \$70,000 | Growth Related | | | | | Jul-20 |
| | | | To ensure plows continue to operate when staff have reached their 13 hour limit. Additional staff can be deployed, as needed. | Additional \$7,000 overtime for winter control and emergency call-in - Property (2132.1200) | Level of Service | | | | | | | Nov-20 |
| | | | To ensure plows continue to operate when staff have reached their 13 hour limit. Additional staff can be deployed, as needed. | Additional \$8,500 overtime for winter control and emergency call-in – Parks (2718.1200) | Level of Service | | | | | | | Nov-20 |
| | Sub Total Costs | \$258,563 | | \$290,000 | | | | | | | | |
| | 9. Winter patrol | Same as Roads | Included with Roads | | | | | | | | | |
| | | Sub Total Costs | | | | | | | | | | |
| 10. Snow Removal | Bridges as needed throughout the winter season as snow storage is limited | Same | | | | | | | | | | |
| | | Sub Total Costs | | | | | | | | | | |
| Sub-Total Winter Activities Parks & Property | 3 | | | \$258,563 (Current) | | \$290,000 (Capital) | | | | | | |

| Area | Activities | Existing LOS | Proposed LOS | Labour | Growth Related or LOS | Equipment | Growth Related or LOS | Materials | Growth Related or LOS | Contracts | Growth Related or LOS | Proposed Implementation | |
|--|---|---|---|--|-----------------------|-----------------------|-----------------------|--------------------|-----------------------|--------------------|-----------------------|-------------------------|--------|
| Fleet | 11. Yard Ops | Clear walkways when snow is greater than 5 cm | Same | | | | | | | | | | |
| | | | Sub Total Costs | | | | | | | | | | |
| | 12. Vehicle repair (non-scheduled repairs such as: tires, no starts, lockout, air brake adjustments, horn, lights) | 5 or more vehicles in dead pile | Less than 5 pieces vehicles in dead pile, MRU reduced to 14:1 per mechanic along with implementation of afternoon shift | 1 additional Mechanic, Municipal Garage to meet industry standard MRU for this along with Equipment Repair non-scheduled = \$106,950 (2315.1100) | Level of Service | | | | | | | | Jan-20 |
| | | | | 1 additional Mechanic, Municipal Garage to meet industry standard MRU for this along with Equipment Repair non-scheduled = \$45,000 (2315.1100) | Level of Service | | | | | | | | Jul-21 |
| | | | | Lead Hand, Municipal Garage = \$111,187 | Level of Service | | | | | | | | |
| | | | Sub Total Costs | \$263,137 | | | | | | | | | |
| | 13. Equipment Repair (non-scheduled repairs such as hydraulic breakdowns, snow plows, welding, fabrication, emissions related) | 5 or more pieces of equipment in dead pile | Non-scheduled repairs: hydraulic breakdowns, snow plows, welding, fabrication | | | | | | | | | | |
| Less than 5 pieces of equipment in dead pile | | | | | | | | | | | | | |
| | | Sub Total Costs | | | | | | | | | | | |
| Sub-Total Fleet Activities | 3 | | | \$263,137 (Current) | | | | | | | | | |
| Total Public Works Winter Activities | 13 | | | \$819,634 (Current) | | \$1,385,000 (Capital) | | \$45,000 (Current) | | \$50,000 (Current) | | | |