TORONTO STAFF REPORT

October 25, 2005

To: Works Committee

From: Gary Welsh, General Manager, Transportation Services

Subject: Snow Disposal Challenge: Replacing Lost Capacity

Purpose:

To respond to previous requests and provide an update on the status of the City's snow disposal capacity and challenges to replace lost capacity.

Financial Implications and Impact Statement:

In order to quantitatively test new and innovative technologies, it will be necessary to assess the effectiveness of prototype mobile and smaller portable snow melters that may be used for removal operations under our local conditions. It is estimated that the cost to lease various types of snow melters from various suppliers for the 2005-2006 winter season is approximately $150,000.00 and funds are included in the Transportation Services Division's 2006 Capital Budget request.

There are no immediate financial implications arising from the commencement of negotiations in respect of the acquisition of Premises No. 207 New Toronto Street. The Executive Director of Facilities and Real Estate will identify any financial implications of the acquisition in his report on the outcome of his negotiations.

Recommendations:

It is recommended that:

(1) a moratorium be placed on the redevelopment and/or disposal of the remaining nine Primary and six Emergency Snow Disposal sites as shown in Appendix 1 to this report entitled "City of Toronto Snow Disposal Sites", until such time as viable and secure alternative replacement capacity is obtained;

(2) consideration be given to closing the Pottery Road Site by the 2006-2007 winter season provided that equivalent alternative snow disposal capacity is found that meets the City's operational and environmental requirements;

(3) the strategy to maintain snow disposal capacity utilizing alternative locations and methodologies as may be feasible and appropriate, as described in this report, be endorsed;

(4) the Executive Director of Facilities and Real Estate be directed to proceed with negotiations with the owners of Premises No. 207 New Toronto Street in respect of its acquisition for municipal purposes; and

(5) the appropriate City officials be authorized and directed to take the necessary action to give effect thereto, including introduction in Council of any Bills that may be required.

Background:

City Council, at its meeting of May 11 and 12, 1999, in considering Clause 1 of Report No. 6 of the Urban Environment and Development Committee entitled, "Snow Management Plan", among other things, acknowledged that strategically placed, City controlled snow disposal sites with a combined capacity of at least 150,000 loads are critical for the provision of a large scale snow removal operation to meet approved levels of service and community expectations. Staff were directed to report back with terms of reference for a consultant study to identify and secure the necessary snow disposal sites and appropriate methodologies.

Subsequently, the Works Committee, at its meeting of May 9, 2001, in considering the report (April 23, 2001) from the Commissioner of Works and Emergency Services entitled, "Road Salt Management Plan", among other things, requested a further report on the feasibility of relocating the four or five snow dumping sites located near rivers, in order for the relocation to take place before the winter season.

City Council, at its meeting of February 4, 5 and 6, 2003, in considering Clause 28 of Report No. 1 of the Policy and Finance Committee, entitled "Snow Disposal Feasibility Study", adopted the following recommendations:

(1) Snow disposal be recognized as an essential activity and, therefore, a critical and important land use for the existing disposal sites;

(2) The snow disposal sites located in the valley lands continue to be used, while the effectiveness of the portable melters and mitigation measures for valley land sites are assessed;

(3) The City acquire a new 275 tonne portable melter at an estimated cost of $800,000.00 and its operation and performance be evaluated prior to investing in additional units;

(4) Short-term minor mitigation measures as outlined in this report be undertaken at each of the primary sites and a number of emergency sites;

(5) Major mitigation measures as outlined in this report be implemented as soon as possible at one of the valley land sites and the effectiveness of these measures be evaluated. The valley land sites will be selected following additional site evaluation;

(6) The snow disposal operation be implemented based upon the City's Snow Removal Plan dated December 4, 1999, that includes snow disposal co-ordination, site management, staff training and logistics;

(7) Environmental monitoring, modelling and reporting be performed by Works and Emergency Services, Technical Services staff, Water and Wastewater Services staff, and the Toronto and Region Conservation Authority for periods before and after the implementation of mitigation measures; and

(8) The appropriate City officials be authorized and directed to take the necessary action to give effect thereto.

A follow-up report to the Works Committee was requested on the progress being made towards the goal of finding alternative capacity to replace the valley land sites, once staff have had an opportunity to assess the effectiveness of portable melters.

A study to develop conceptual designs at each of the designated primary snow disposal sites that would ultimately improve water quality was initiated in the spring of 2004. The study was divided into four parts as follows:

(i) Part A: Snow Melt Water Characteristics and Treatment Technologies;
(ii) Part B: Environmental Measures Conceptual Designs at the Valley Land Site;
(iii) Part C: Environmental Mitigation Measures Conceptual Design at the Six Primary Table Land Sites; and
(iv) Part D: Environmental Mitigation Measures Conceptual Design at the Valley Land Sites at Bloor/Bayview, Unwin Avenue and North Keelesdale.

Conceptual designs have been developed and will be implemented over time and would be subject to funding availability. Their implementation would also be subject to assessing their effectiveness in improving water quality. The study is currently ongoing with completion expected in 2006.

At its meeting of November 9, 2004, the Works Committee considered a communication (October 20, 2004) from the Task Force to Bring Back the Don requesting the Works Committee to direct the Acting Commissioner of Works and Emergency Services to submit a report back to the Works Committee through the Task Force on a phase-out plan for the Pottery Road snow disposal site, such report to include a timeline of this phase-out plan, and, as a result of this plan, requested that no funds be allocated for any mitigation measures at this site. The Works Committee referred the communication to the Acting Commissioner of Works and Emergency

Services for review and report back to the Works Committee (Clause No. 11(k) of Report No. 10 of the Works Committee, received by Council at its meeting of November 30, December 1 and 2, 2004). This report provides a summary of the Division's work to date on the above noted issues and places them within the context of our challenges in maintaining snow disposal capacity.

Comments:

Snow removal involves loading and hauling snow for disposal at dump sites or by melting and is a critical activity in the Transportation Services Division winter services program. This particular activity is only deployed as a last resort, in accordance with Council approved service levels. Ideally, snow windrows are simply left to melt in place, but when large accumulations threaten accessibility of transit and emergency vehicle operations and public safety, this next level of response is triggered.

Snow removal, unlike street and sidewalk salting and ploughing, is not undertaken on a routine basis. When severe winter conditions dictate that this operation be mobilized, it is imperative that proper and adequate snow disposal options are available. Council has previously recognized the critical nature of this operation by its endorsement of the need to maintain existing capacity and its support of principles to enhance, mitigate and explore new options for the operation.

The City has set, as a target, disposal of 150,000 loads (2,550,000 cubic meters) in a two-week period. Based on the storms of January 1999, the recent records of historic snowfall, and the variability of climatic events that appear to be accompanying the global warming phenomenon, this target is deemed to be reasonable and serves as a basis for defining snow disposal needs.

This capacity (at least 150,000 loads) is critical to the provision of large-scale snow removal operation to the approved level of service. However, notwithstanding Council's explicit direction that snow disposal is an essential activity and, therefore, a critical and important land use for the existing sites, over the next ten years the City will face significant pressure to find alternative snow disposal locations and methodologies to replace capacity resulting from the loss of existing designated snow disposal sites. As much as two-thirds of the City's snow disposal capacity may be affected. Pressure to phase-out existing designated sites comes from the redevelopment of snow disposal table land sites for alternative land use and from increased pressure to phase-out existing valley land sites.

The Capacity Gap

An extensive study and consultation process was commenced in 2002 to assess the City's snow disposal requirements. This study confirmed the need for a disposal capacity of at least 150,000 loads of snow. From the thirty sites used in the storm of 1999, ultimately only ten primary sites and six emergency sites were found to meet the necessary criteria to establish a snow disposal site.

These sites, with a capacity of 132,000 loads, were designated by City Council in 2005, leaving a capacity gap of 17,500 loads. A map is attached to this report as "Appendix 1 - City of Toronto Disposal Sites" showing the location of each of these sites.

Since 2003, the capacity gap has grown from 17,500 to 23,500 loads and the loss of an additional 42,500 loads is likely. These capacity changes are summarized in the attached table and in Appendix 2.

Table 1: Summary of Snow Disposal Capacity

Term and Snow Disposal Site	Capacity Gain or Loss in Truck loads of snow per two week period	Remaining Capacity (Loads)	Comments
		150,000 required minimum capacity	
Immediate			
Initial Capacity Gap	-17,500		Initial capacity gap as reported in report dated Dec. 13, 2002 to the Works Committee
Skagway Site	-14,000		Lost to Parks for a facility
Ontario Place Parking Area Site	+8,000		Feb. 2005, Procurement of portable snow melter and signed agreement with Ontario Place for use of their parking Area
TOTAL	-23,500	126,500	
SHORT TERM			
Horner Site	-14,500		Portion of site lost due to interim alternate use. Consultation underway with Facilities and Real Estate to locate a suitable site in South Etobicoke to potentially replace the Horner and Bloor/Kipling Sites capacity.
Bloor/Kipling Site	-14,000		Site subject to redevelopment. Consultation underway with Facilities and Real Estate to locate a suitable site in South Etobicoke to potentially replace the Horner and Bloor/Kipling Sites capacity.
Pottery Road Site	-14,000		Replacement capacity is required prior to giving consideration to closing the Pottery Road Site.
TOTAL	-42,500	84,000	
LONG TERM			
Bloor/Bayview Site	-14,000		Longer term plan is to find alternative snow disposal options that would enable the phasing out of valley land sites
North Keelesdale Site	-14,000		Longer term plan is to find alternative snow disposal options that would enable the phasing out of valley land sites
Unwin Site	-14,000		Unwin Site may be lost to waterfront redevelopment.
TOTAL	-42,000	42,000	

There is an immediate need to find a capacity of 23,500 loads to replace the Skagway Site and the original capacity shortfall identified in the Works Committee report dated December 13, 2002, as noted above. Should the City decommission the Pottery Road Site without replacement capacity in place, the capacity gap will grow by an additional 14,000 loads to 37,500 loads.

In addition, a capacity of 14,500 loads will need to be found to replace the Horner Site and an additional 14,000 loads capacity will need to be found to replace the Bloor/Kipling Site, should it be redeveloped. More specifically, the snow storage capacity on these sites is quite vulnerable in the short to medium term.

By way of background relating to the Horner Site, the Etobicoke York Community Council, in considering a status report on a Site Plan Control application to permit, among other things, a concrete batching plant at Premises No. 207 New Toronto Street, requested the Commissioner of Works and Emergency Services, in consultation with the Councillors for Wards 5 and 6, the Commissioner, Urban Development Services, the Commissioner of Corporate Services, and TEDCO, to explore the feasibility of a plan to consolidate some Works Yard operations, especially snow dumping, in the West District and report back to Council (Clause 53 in Etobicoke York Community Council Report 3, which was considered by City Council on April 12, 13 and 14, 2005).

In the spring of 2005, the temporary interim use of a portion of the Horner Avenue Site was presented as an alternative to the proponent in an effort to mitigate neighbourhood concerns relating to the impacts of the concrete operation. Since that time, the suitability of the site has been confirmed, the interim use commenced, and terms and conditions of the lease negotiated. In reviewing the proposed length of the lease, it has been suggested that the City consider a land exchange or purchase agreement for Premises No. 207 New Toronto Street for municipal purposes, including snow disposal. Given the capacity gap as discussed above, and the potential availability of the New Toronto Site, authority is being sought for the Executive Director of Facilities and Real Estate to proceed with negotiations in respect of the acquisition with the owners and report back on the implications and benefits of same.

The Bloor Kipling Site is located in the southeast quadrant of the Six Points area. As the Works Committee is aware, a Class EA is currently underway to explore options for the reconfiguration of the Six Points interchange, in connection with the medium to long term area redevelopment plans. The acquisition of the New Toronto site may have the added benefit of providing sufficient incremental capacity to offset any possible loss of the Bloor Kipling Site in this regard and consideration should be given to its decommissioning.

It should be noted that the Works Committee, at its November 8, 2005 meeting, is also considering a report from the City Manager recommending that a Yard Consolidation Study for the West District proceed. As Transportation Services Division staff anticipate participating on the working committee, the future use of the Horner and Bloor Kipling Sites could be reassessed in this context.

Looking ahead in the longer term, the Transportation Services Division may need to find further capacity of 42,000 loads to replace the remaining valley land sites (Bloor/Bayview, North Keelesdale and Unwin Avenue). Cumulatively, if all of the noted sites are phased out, capacity of only 42,000 loads would remain available for snow disposal, compared with the 150,000 loads needed to meet current service standards and expectations in emergency situations. This shortfall would place the City's snow disposal program in jeopardy.

Phasing-out Pottery Road as a Snow Disposal Site

The Task Force to Bring Back the Don and Transportation Services Division staff have been working towards finding a way to phase-out the Pottery Road site in the near term. In view of the Task Force's concerns, the Pottery Road Site was not used in the 2004–2005 winter season and Transportation Services Division has placed in abeyance any major mitigation measures at this site. Should a snow removal emergency be declared, it is proposed that Pottery Road only be used on an emergency basis for overflow capacity until such time as a suitable alternative site is secured.

Once a suitable alternative site that meets the replacement capacity and operational needs is secured, consideration could be given to permanently closing the Pottery Road Site. Transportation Services Division, in consultation with the Task Force to Bring Back the Don, will work towards a 2006–2007 winter season target date to secure a replacement site and close the Pottery Road Site permanently.

Evaluating New Snow Disposal Sites and Alternatives:

When assessing new snow disposal sites and their viability consideration is given to such factors as:

(i) Environmental (i.e. proximity to water courses, drainage, soil, noise, natural environment, air quality etc.);
(ii) Stakeholder concerns;
(iii) Capacity, access, overhead restrictions, manoeuvrability, etc.;
(iv) Availability and securing site;
(v) Proximity to the downtown core/expressway network;
(vi) Proximity to residential areas;
(vii) Operating, maintaining, cleanup, ongoing monitoring of site; and
(viii) Cost benefit analysis of snow disposal.

Alternatives Currently Being Considered

Recognizing the challenges associated with securing and deploying facilities for conventional snow dumping operations, staff are assessing a number of alternative approaches, as set out below.

Portable Snow Melter - One option being pursued is the utilization of portable melters to fill the capacity gap. If effective, this technology could be used to phase-out the valley

land sites. As such, authority was given to procure one portable melter to determine its effectiveness. The melter was procured at the end of 2004, and has a capacity to melt 275 tonnes per hour or approximately 8,000 loads of snow for the two-week target period. Locating and securing a site for this portable melter proved challenging, given the space needed for truck queues and melt water discharge. In February 2005, the City entered into a five-year lease agreement with Ontario Place to locate a portable melter northeast of the recreational complex in Parking Lot 2A. The melt water will be discharged into the Western Beaches Storage Tunnel for treatment. Modifications to the Ontario Place parking area are required, with construction to be completed by fall 2005.

Prior to procuring additional portable snow melters, an assessment will need to be undertaken to determine its effectiveness and impact on water and air quality. Given that suitable locations are extremely difficult to find and secure, an assessment should also include securing suitable sites that meet operational requirements.

Ashbridges Bay Treatment Plant – Proposed Ash Lagoon Site - Discussions are ongoing with Toronto Water to determine the feasibility of using the Ash Lagoon Site for the purpose of locating a 275 tonne per hour portable melter that would have a two-week capacity of approximately 8,000 loads. Although Toronto Water is very supportive, they have advised that consultation with stakeholders is essential and that approval from the Ministry of the Environment may be necessary. The local community has been working closely with Toronto Water staff to improve the Ashbridges Bay Treatment Plant lands, and as such, any new initiative such as a snow melting facility will require community consultation and possibly an environmental assessment.

Tow Along Portable Melters - The Transportation Services Division is exploring the use of smaller portable melters with a capacity of 60 to 130 tonnes per hour. These portable melters may be used to melt snow locally rather than transporting snow by truck to snow disposal valley land or table land sites. The operation consists of closing off an area, pushing then piling snow, and transporting it very short distances to a nearby portable melter for disposal. A pilot project is proposed for the 2005-2006 winter season to assess the effectiveness of these melters and operation.

Mobile Melter Technology - In the 2004-2005 winter season, a 150 tonne prototype mobile melter, the “Hot Tub”, was tested with mixed results. The manufacturer of the prototype is in the process of redesigning a new mobile melter prototype for the 2005-2006 winter season, which will include significant improvements and modifications. Arrangements are now underway to have the prototype unit available this winter.

The current Metro Melters have reached the end of their lifecycle and require significant overhaul and/or replacement. In addition to the Mobile Melter used last winter season, Transportation Services Division is exploring other alternative mobile melters that could replace the aging and less efficient Metro Melters.

Stationary Melter - A number of options are being assessed where stationary melt technologies may prove feasible.

Steam Melter at 130 Harbour Street - The City is currently assessing the feasibility of using steam to melt snow using an in-ground melter with a capacity of 6,000 to 8,000 loads to be located in the parking lot at Premises No. 130 Harbour Street. The City is in discussions with Toronto Parking Authority (TPA) and Enwave to develop the concept. As the Works Committee is aware, Enwave is partly owned by the City and income earned is paid to the City as a shareholder. The utilization of currently available steam to melt snow significantly mitigates the environmental impacts of snow melting operations, as noted below:

1. Energy Consumption - The generation of the heat by Enwave steam plants is far more energy efficient than that generated by portable snow melters.

2. Air Quality - Portable snow melters consume diesel fuel; Enwave uses cleaner natural gas with less emissions.

3. Noise - An Enwave steam melter would generate considerably less noise than a diesel powered snow melter.

4. Water quality - Snow melt run-off would be directed away from sensitive areas such as watercourses, parks and valley lands and likely be treated.

5. Transportation/hauling – Given that a large portion of a typical snow removal operation is downtown, a centrally located Enwave steam melter would result in shorter trips by snow disposal trucks, thereby, considerably decreasing energy consumption, emissions, time and cost.

Should a steam melting site prove to be feasible at this location, an assessment will need to be undertaken that considers the impact on nearby neighbourhoods.

Land Disposal - Tyrell Snow Disposal Site (Former Landfill): This site is located on Sheppard Avenue, west of Meadowvale Road in the Scarborough District and was transferred to Transportation Services Division from Solid Waste Division in September 2002. An environmental assessment is required to determine the sites suitability as a snow disposal site. This site is approximately 8.7 hectares and has the capacity of approximately 14,000 loads.

Other Sites: A number of opportunities are emerging to study the suitability of new sites for snow disposal purposes, particularly in the Etobicoke York District. A report dated October 14, 2005 being considered by the Works Committee from the City Manager, entitled “Works and Emergency Services Yard Consolidation Pilot Project – Status of Project and Proposed Changes to the Terms of Reference and Methodology” recommends a number of go-forward activities in terms of assessment of best uses and long term plans for City properties and, in this context, the Transportation Services Division will continue to work closely with staff of the Facilities and Real Estate Division to consider new, consolidated or expanded site uses.

Radiant Heat Technology - Radiant heat technology is primarily used to melt snow on private walks and driveways. However, its use has been expanded to include larger more complex uses such as melting snow on GO transit platforms. Transportation Services Division will explore the feasibility of this technology and how it may be used to melt large snow piles. A possible site for this technology may be at the Ashbridges Bay boat launch parking area.

Interim Measures to Maintain Capacity

The following strategies should be considered on a going-forward basis, to maintain the City's snow disposal capacity:

1. Excluding the Skagway Site, a freeze should be affirmed by City Council to maintain all designated Primary and Emergency Snow Disposal sites as previously approved by City Council and shown in Appendix 1;

2. For the 2005–2006 winter season, undertake an assessment of the Ontario Place Portable Melter including water and air quality;

3. Explore the feasibility of locating a 275 tonne per hour portable snow melter near the Ashbridges Bay Treatment Plant – Ash Lagoon Site;

4. For the 2005-2006 winter season, lease two 60 – 130 tonne Mobile Melter Units at a cost of $100,000 and assess their effectiveness in melting snow in areas where snow must be removed after a snow event where ploughing is required;

5. Complete the evaluation of the Mobile Snow Melter prototype in 2005. The cost to lease this melter for the next winter season is approximately $50,000.00;

6. Explore and assess other mobile melter technologies that could replace outdated Metro Melters;

7. Consider and explore using steam to melt snow – ideal locations to be determined for assessment;

8. Assess the feasibility of locating a radiant heat melter at the Ashbridges Bay boat launch parking area;

9. Given the environmental, economic and social implications of fewer places to dispose of snow, where possible, expand the use of portable melters, develop joint use facilities that may be suitable for a portable melter (i.e. use of parkland areas with large hard surface areas to store and/or melt snow); and

10. In consultation with Facilities and Real Estate staff, try and find suitable alternative sites that may be used for the disposal of snow either by land disposal and or melter technology.

Assessment of Alternatives and Recommended Strategy

The feasibility of the various alternatives to maintain and/or replace existing capacity and the viability of the above measures to maintain capacity requires a thorough review and assessment. The main tasks that would be required to properly assess these requirements would include:

(a) Carry out flow and water quality monitoring of snowmelt for new technology such as mobile snow melters and the usage of steam to melt snow;

(b) Conduct analysis of data collected to establish effectiveness of the new technology versus other environmental concerns such as air pollution and energy usage;

(c) Identify other technologies for snow melting and assess their applicability to the Toronto area;

(d) Undertake a Phase I Environmental Site Assessment (ESA) of each new site through the review of all information relating to the site history and operations;

(e) Assess the effectiveness of the new site as a snow disposal facility;

(f) Consider environmental impacts associated with the new site and the need for public / stakeholders and agencies consultation;

(g) Establish remediation requirements for the new site and associated costs;

(h) Assist Facilities and Real Estate staff in securing the required sites; and

(i) Update the Feasibility Report with the new information and formulate a plan for the City to maintain the required snow disposal capacity.

Additional information on the expected scope of work for each alternative identified above is included in Appendix 3 - Assessment and Viability of Alternatives and Methodologies. From the information presented above and in Appendix 3, it is evident that the development of alternative snow disposal capacity will take time, resources and commitment, and recognition that snow disposal is an essential emergency service. While melting technologies are seen as a possible solution to disposing of snow, the impact on air quality and fuel consumption should be assessed further. It should be noted that the City experienced its first winter smog alert during the 2004-2005 season. Given the changes to our climate, winter smog alerts could become more common over time. Additional portable melters may impact on our air quality. These issues will need to be addressed when assessing the alternatives, in addition to the addressing the availability of suitable locations for these portable melters to operate.

Failing to develop a viable long term strategy to provide secure and adequate snow disposal may precipitate significant changes in the Winter Services Policy respecting road ploughing and sidewalk clearing. Changes could include a “white top” policy on local streets, whereby local

streets would only be salted not ploughed. However, this approach would be contrary to the City's Salt Management Plan, as it will result in a significant increase in use of road salt to maintain roads in a safe and passable condition for emergency vehicles. Clearly, during significant snowfall events and/or periods of very cold temperatures, salt is not effective and, as such, access to local roads would be impaired to all vehicles including emergency vehicles. Such a shift in policy would have very serious implications.

Conclusions:

Snow disposal is an important emergency activity that, under heavy snowfall conditions and continuous sub-zero temperatures, is required to ensure that streets are safe and passable for all road users, and particularly transit and emergency vehicles. In certain locations, this can only be achieved by the removal of snow. Given that it is becoming exceedingly difficult to replace lost capacity, further options need to be explored and advanced, including new melting technology.
If additional snow disposal capacity can be found by the 2006–2007 winter season, then consideration will be given to permanently close the Pottery Road Site. In addition, as new technologies become available, consideration should be given to decommissioning and/or closing existing snow dumps on a site specific basis.

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List of Attachments:
Appendix 1 – City of Toronto Disposal Sites
(p:\2005\wes\tra\top\wc05134south.top–Appendix1)
Appendix 2 – Summary of Snow Disposal Site Capacity
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Appendix 3 – Assessment and Viability of Alternatives and Methodologies
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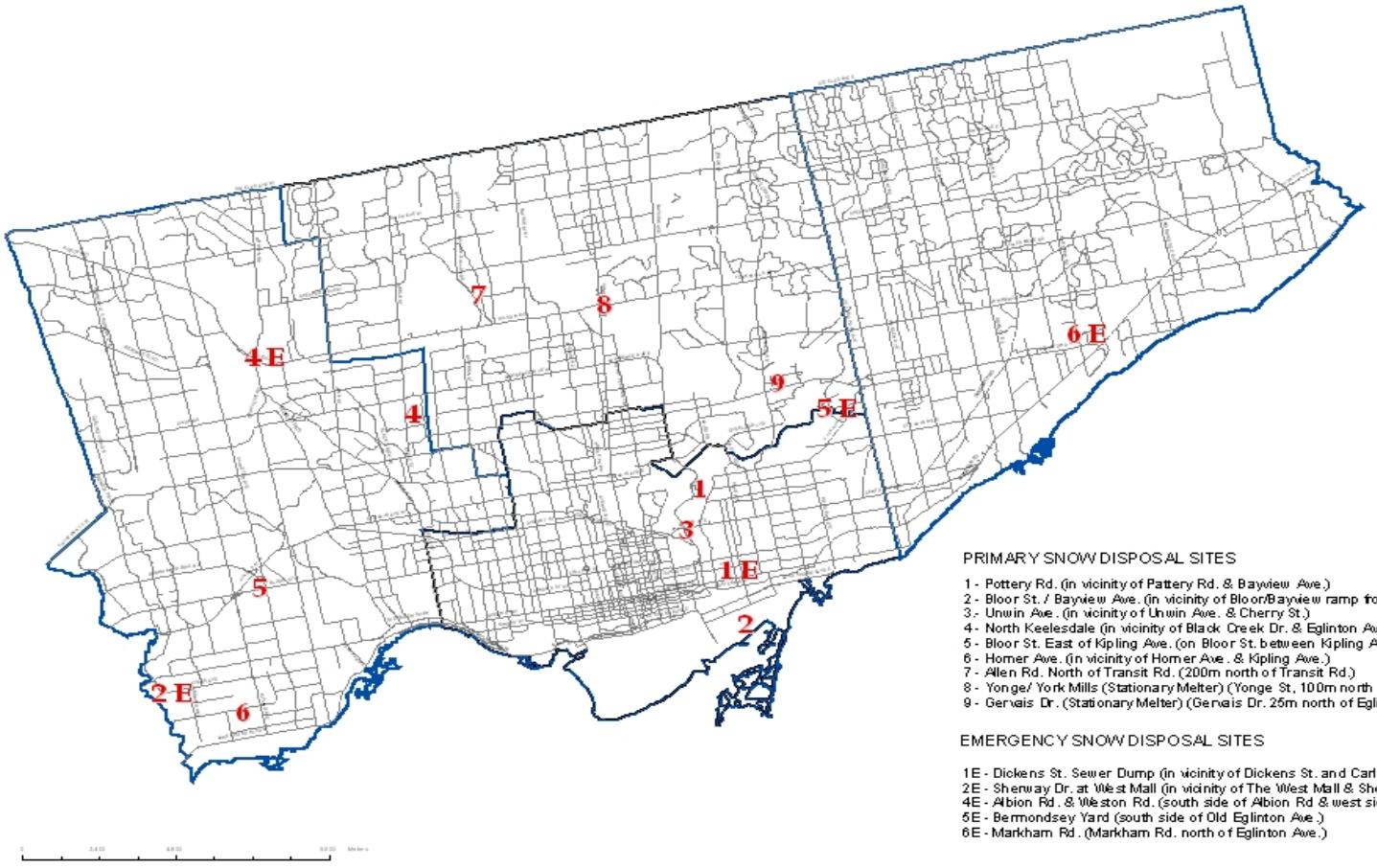
APPENDIX 1

TORONTO

FIGURE 1: CITY OF TORONTO SNOW DISPOSAL SITES



PRIMARY SNOW DISPOSAL SITES

1 - Pottery Rd. (in vicinity of Pattery Rd. & Bayview Ave.)
2 - Bloor St. / Bayview Ave. (in vicinity of Bloor/Bayview ramp from DVP)
3 - Unwin Ave. (in vicinity of Unwin Ave. & Cherry St.)
4 - North Keelesdale (in vicinity of Black Creek Dr. & Eglinton Ave.)
5 - Bloor St. East of Kipling Ave. (on Bloor St. between Kipling Ave. & Islington Ave.)
6 - Horner Ave. (in vicinity of Horner Ave. & Kipling Ave.)
7 - Allen Rd. North of Transit Rd. (200m north of Transit Rd.)
8 - Yonge/ York Mills (Stationary Melter) (Yonge St, 100m north of York Mills Rd.)
9 - Gervais Dr. (Stationary Melter) (Gervais Dr. 25m north of Eglinton Ave.)

EMERGENCY SNOW DISPOSAL SITES

1E - Dickens St. Sewer Dump (in vicinity of Dickens St. and Carlaw Ave.)
2E - Shenway Dr. at West Mall (in vicinity of The West Mall & Shenway Dr.)
4E - Albion Rd. & Weston Rd. (south side of Albion Rd & west side of Weston Rd.)
5E - Bermondsey Yard (south side of Old Eglinton Ave.)
6E - Markham Rd. (Markham Rd. north of Eglinton Ave.)

APPENDIX 2
SUMMARY OF SNOW DISPOSAL SITE CAPACITY

IMMEDIATE TO SHORT TERM SITUATION:

Skagway Snow Disposal Site (Brimley Road and McCowan Road):

- Skagway is being redeveloped as a park and as such is not available as a snow disposal site after the 2004-2005 Winter Season. This has resulted in a loss of 14,000 loads. Although, this site is designated as a snow disposal site, the interdepartmental steering committee evaluating various snow disposal options in 2002, were not aware of the pending land use change for this site. In October of 2004, the Transportation Services Division was made aware of the rezoning that took place in 1998.

Horner Site (Horner Avenue and Kipling Avenue):

- 75% of the Horner Site has been lost to an alternate land use. A portion of the site is currently being used by a ready mix company for the production of concrete and this has resulted in a capacity loss of 14,500 loads.

Bloor / Kipling Snow Disposal Site:

- Alternative uses for Bloor/Kipling Site are being considered in connections with an ongoing assessment of redevelopment concepts for the Six Points interchange and immediate area. Although this site is still available, Facilities and Real Estate staff have been working with the Transportation Services Division to find a suitable alternative site. Should the Bloor/Kipling Snow Disposal site be lost and no suitable replacement capacity found, a capacity loss of 14,000 loads should be expected.

SHORTER TO LONGER TERM SITUATION:

Pottery Road Site (Pottery Road and Bayview Avenue):

- The Task Force to Bring Back the Don would like to see the Pottery Road Site phased-out as soon as possible. In addition, the Task Force has recommended that no funds be allocated for any major mitigation measures. Given its size (14,000 loads) and strategic location, Pottery Road Site is a critical component of the City's snow disposal plan alternative replacement capacity must be found prior to considering the closure of this site.

Unwin Snow Disposal Site (Unwin Avenue and Cherry Street):

- In the foreseeable future it is possible that the Unwin Site may be lost to waterfront redevelopment. Should this occur this will result in the capacity loss of 14,000 loads.

Bloor / Bayview and North Keelesdale (Black Creek Drive and Eglinton Avenue) Snow Disposal Sites:

- Longer term plan is to find alternative snow disposal options that would enable the phasing out of these two sites which means that the City will need to find an additional capacity of 28,000 loads. The conceptual water quality designs for these two sites propose a joint use facility to treat storm water and snow melt prior to discharging into their respective adjacent rivers. The treatment of stormwater at these sites was the recommendation in the Wet Weather Flow Management Master Plan.

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APPENDIX 3
ASSESSMENT AND VIABILITY OF ALTERNATIVES AND METHODOLOGIES

Item	Snow Disposal Alternative / Methodology	Viability Assessment Requirements
1.	Portable Snow Melter – Ontario Place	Assess operational effectiveness in melting snow in comparison to fuel consumption, air and water quality implications and social impacts (noise, traffic).
2.	130 Harbour Street (convenience address of 10 York St.)	In consultation with the Parking Authority, Toronto Water and Enwave assess the feasibility and viability of developing an in-ground melter. An environmental assessment may be required to address noise, traffic, visibility and environmental impacts.
3.	Ashbridges Bay Treatment Plant - Ash Lagoon Site	Feasibility study is required to assess the viability of locating a portable melter – environmental assessment is likely; Consultation and approval from Ministry of Environment, Toronto Water and Community
4.	Tyrell Snow Disposal Site (Former Landfill)	Environmental assessment is likely required; Site requires major clean up; assess the location to determine its strategic suitability
5.	Mobile Melter Technology	Assess operational effectiveness in melting snow in comparison to fuel consumption, air and water quality implications and social impacts (noise, traffic).
6.	Optimize the use of existing snow disposal sites	Review existing snow disposal sites to assess operational effectiveness with a view to optimize capacity at each site
7.	2005-2006 Winter Season, lease two 60 – 130 tonne Portable Melter Units	Assess operational effectiveness in melting snow in areas where snow must be removed after each snow fall event; assess fuel consumption; water and water quality; social impacts
8.	Radiant Heat	Review the applicability of Radiant Heat from other jurisdictions and explore the feasibility of using such technology with possible pilot testing locations at Ashbridges Bay Park and Boat launch parking area.
9.	Other Mobile Snow Melter Technologies	Explore and assess other mobile melter technologies that could replace outdated Metro Melters;

10.	Joint use Facilities	In consultation with Parks and Facilities and Real Estate, explore and develop joint use facilities that may be suitable for portable melters (i.e. use of Parkland areas during the winter with large hard surface areas to store and or melt snow);

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