

Welcome

Municipality of Huron Shores Long-Term Waste Management Plan

Public Information Centre

December 6, 2023

4:00 pm to 7:00 pm

What to Do

In-Person Attendees

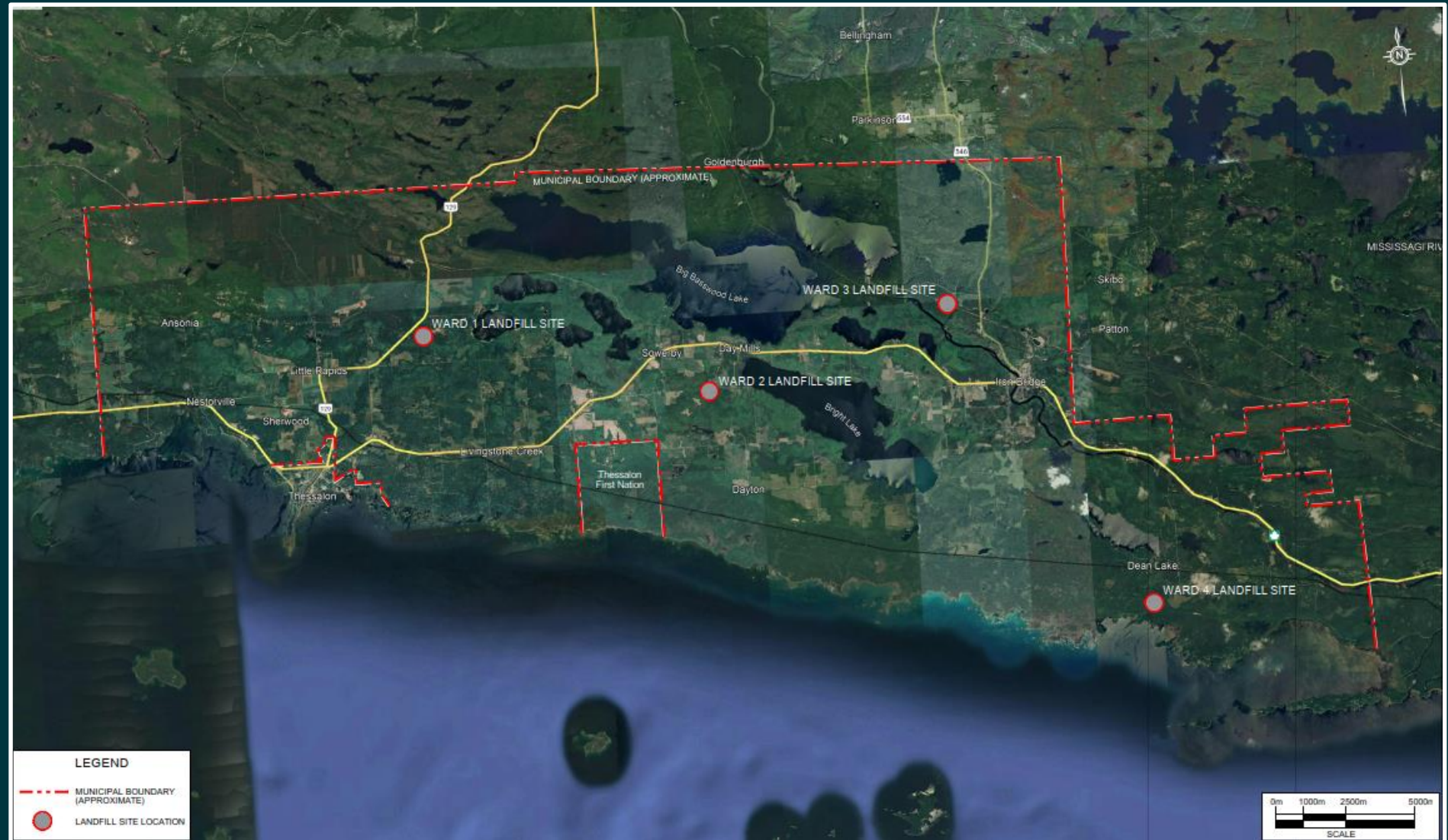
- Please record your name on the sign-in sheet.
- AECOM staff are available to present the project materials and answer questions.
- Complete a Comment Sheet, if desired.

Zoom Attendees

- Please provide your name in the chat so we can document your attendance.
- Provide any questions/comments through the chat and please provide your contact information in the event we cannot address your concerns this evening.

Introduction

A Long-Term Waste Management Study was initiated by the Municipality of Huron Shores to guide the Municipality in managing waste in a reliable, efficient, cost-effective and environmentally responsible manner over a planning period of approximately 25 years.



Study Tasks and Activities



The specific tasks and activities undertaken during this study to-date:

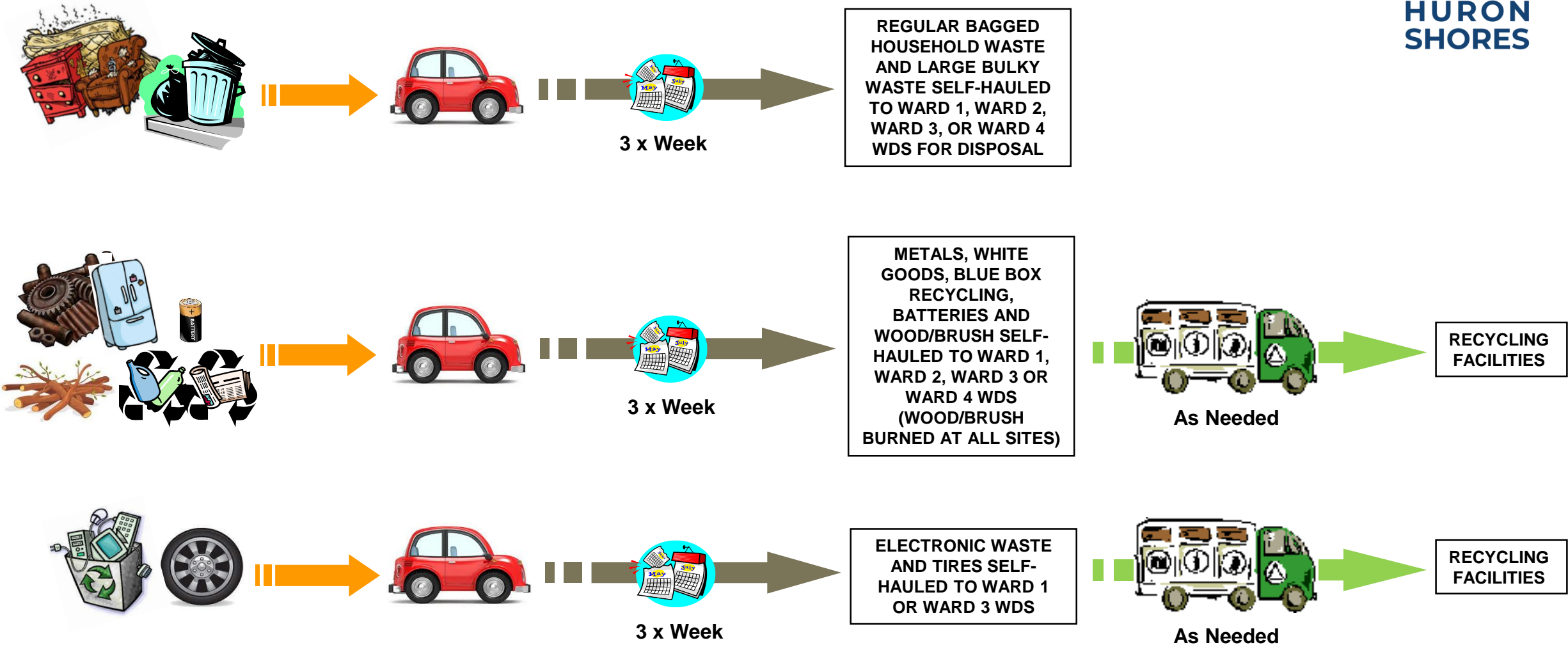
1. Developed a problem/opportunity statement.
2. Provincial waste management legislation and/or policies were reviewed.
3. Existing Municipal waste management programs and services were documented.
4. Current operating costs for each existing landfill site were collected and analysed.
5. Residual capacity at each existing landfill site was estimated.
6. Future Municipal waste management needs were determined including establishing population projections and developing waste quantity estimates.
7. Five waste management options were identified and evaluated based on relevant comparative criteria.
8. Solicit public and First Nations input on the preliminary preferred option through a Public Open House.

Problem/Opportunity Statement

The Municipality of Huron Shores is developing a Long-Term Waste Management Plan to determine the preferred way to address the future waste management needs for the existing service area over a 25-year planning period. The Municipality is in a unique position where it owns and operates four separate waste disposal sites to accommodate a relatively small population base (i.e., approximately 1,860 persons) disbursed over a large geographic area (i.e., approximately 452 km²). This translates to a population density of just 4.1 persons/km². It has been challenging for the Municipality to effectively operate and maintain four landfill sites having limited financial, labour and equipment resources available.

In general, it may be inefficient and cost prohibitive for a single Municipality of this population to own and operate four separate waste disposal sites. This study focuses on how to effectively and efficiently address the Municipality of Huron Shores' future waste management needs.

Existing Municipal Waste Management Programs and Services



Population Projections and Waste Disposal Quantity Estimates

Future population projections were developed in order to assist with determining future waste quantities to be managed by the Municipality. The Municipality should plan to provide waste disposal services to accommodate an estimated 1,022 tonnes of waste each year based on an average annual equivalent permanent population of 2,272 residents.

25-Year Population Projections

Year	Estimated Population		Estimated Average Permanent Population	Estimated Average Seasonal Population	Estimated Equivalent Permanent Annual Average ³
	Permanent	Seasonal ²			
2023¹	1,879	1,021	2,001	1,088	2,272
2028	1,926	1,047			
2033	1,975	1,073			
2038	2,025	1,100			
2043	2,076	1,128			
2048	2,128	1,157			

Notes:

1. Base year population data taken from 2021 Statistics Canada Census with a 0.5% annual growth rate.
2. Seasonal population reflects estimated total summer population based on 3 persons per seasonal household.
3. Average seasonal population is converted to an equivalent permanent population assuming an average full-time occupancy of 3 months.

Waste Quantity Estimates

Landfill Site	Estimated Average Annual Equivalent Permanent Service Population	Estimated Average Annual Disposal Quantities (Tonnes) at 450 kg/per/yr
Ward 1	893	402
Ward 2	481	216
Ward 3	668	301
Ward 4	230	104
Total:	2,272	1,022

Waste Management Options



Several waste management options were identified for consideration:

- Option 1 – Do Nothing – 4 operating waste disposal sites
- Option 2 – 2 operating waste disposal sites and 2 waste transfer stations
- Option 3 – 2 operating waste disposal sites and no waste transfer stations
- Option 4 – 1 operating waste disposal site and 2 waste transfer stations
- Option 5 – 1 operating waste disposal site and no waste transfer stations

Each option includes self-haul of waste by users to either an active landfill site or a waste transfer station. Transfer stations include public drop-off of regular bagged household waste only into waste bins for transfer by a waste contractor to an active landfill site. Large bulky waste (i.e., furniture, mattresses, etc.) and segregated material (i.e., metal and white goods, e-waste, tires, batteries, clean wood and brush) would be required to be taken to an active landfill site for disposal and/or recycling.

Description of Waste Management Options

Option No.	Description
1	Do Nothing – includes maintaining the status quo and continuing to operate all four Ward 1-4 landfill sites as is. This option provides a reference for comparing all other options. Note: under this option the Ward 4 landfill site would undertake full closure in approximately 2032 when it reaches its approved capacity and only three landfill sites would be active for the remainder of the planning period.
2	2 Operating WDS and 2 TS – under this option there would be two operating waste disposal sites and two waste transfer stations for most of the planning period. This option would require users to self-haul all regular bagged household waste to either one of the two active landfill sites or to a transfer station for disposal. This option involves transporting waste from the transfer stations to the active landfill sites once per week by a waste contractor. Large bulky items and segregated items would NOT be accepted at the transfer stations and would require self-haul by users directly to one of the two active landfill sites for disposal and/or recycling. Operating hours at the landfills and transfer stations are expected to be similar to existing operating hours.
3	2 Operating WDS and No TS – under this option there would be two operating waste disposal sites only for most of the planning period. This option would require users to self-haul all regular bagged household waste, large bulky waste and segregated materials to one of two active landfill sites for disposal and/or recycling. To accommodate an increase in traffic volume at the active landfill sites, operating hours would be increased and/or additional site attendant presence would be required.
4	1 Operating WDS and 2 TS – under this option there would be one operating waste disposal site and two waste transfer stations. This option would require users to self-haul all regular bagged household waste to either the active landfill site or a transfer station for disposal. This option involves transporting waste from the transfer stations to the active landfill site once per week by a waste contractor. Large bulky items and segregated items would NOT be accepted at the transfer stations and would require self-haul by users directly to the active landfill site for disposal and/or recycling. Operating hours at the landfill and transfer stations are expected to be similar to existing operating hours.
5	1 Operating WDS and No TS – under this option there would be one operating waste disposal site where all waste generated within the Municipality would be disposed at one site. This option would require users to self-haul all regular bagged household waste, large bulky waste and segregated materials to one landfill site for disposal and/or recycling. To accommodate an increase in traffic volume at the active landfill site, operating hours would be increased and/or additional site attendant presence would be required.

Waste Management Options Evaluation

To evaluate the different options, a total of seven comparative criteria were established under four broad categories: convenience/acceptability, environmental impact, operations and maintenance resources and costs.

A comparative qualitative approach was undertaken in evaluating each of the options, whereby a score of 1 to 4 was assigned to each option for each criterion (1 being least preferred and 3 being most preferred).

Scoring of the evaluation was conducted as follows:

- Neutral or positive impact and/or relatively low cost – **Score 4**
- Reduced or minor impact and/or relatively medium cost – **Score 3**
- Reduced or moderate impact and/or relatively medium cost – **Score 2**
- Negative or severe impact and/or relatively high cost – **Score 1**

Waste Management Options Evaluation Matrix

Evaluation Description	Evaluation Criteria	Evaluation Results									
		Option 1 – Do Nothing (Four Operating WDS)	Option 1 Score	Option 2 – Two WDS and Two Transfer Stations	Option 2 Score	Option 3 – Two WDS and No Transfer Stations	Option 3 Score	Option 4 – One WDS and Two Transfer Stations	Option 4 Score	Option 5 – One WDS and No Transfer Stations	Option 5 Score
Consideration of the convenience, acceptability and safety for ratepayers in terms of changes in travel distances by site users.	Public Impact (Convenience/Acceptability/Safety)										
	Change in travel distances.	No impact to current travel distances until W4 closure (approx. 2032).	3	Longer travel distances for transfer station users for bulky waste and segregated material disposal.	4	Longer travel distances for users of two inactive sites for disposal of all waste types.	2	Longer travel distances for users of one inactive site for disposal of all waste types and for transfer stations users for bulky waste and segregated material disposal only.	3	Longer travel distances for users of three inactive sites for disposal of all waste types.	1
Consideration of potential impacts to the natural environment in terms of litter sprawl and illegal waste dumping.	Environmental Impact										
	Potential litter impacts to land from litter sprawl.	Potential for litter sprawl to impact land at four/three active WDS.	1	Potential for litter sprawl to impact land at two active WDS.	2	Potential for litter sprawl to impact land at two active WDS.	2	Potential for litter sprawl to impact land at one active WDS.	4	Potential for litter sprawl to impact land at one active WDS.	4
	Potential for illegal waste dumping.	Modest potential for illegal waste dumping following closure of W4 WDS.	3	No or limited additional potential for illegal waste dumping.	4	Potential for illegal waste dumping with no disposal services at two WDS.	2	Potential for illegal waste dumping with no disposal services at one WDS.	3	Potential for illegal waste dumping with no disposal services at three WDS.	1
Consideration of challenges in attracting and retaining labour resources, dividing labour, equipment and cover material resources among waste disposal sites.	Operations and Maintenance Resources										
	Labour resources (i.e., site operators and attendants) – number of staff required, division of labour among WDS and number of person days/week required for operations staff.	Site operator(s) shared among four/three active WDS. Six person days/wk during the summer months and three person days/wk during the winter months (234 person days/yr).	1	Site operator(s) shared among two active WDS and two transfer stations. Four person days/wk during the summer months, two person days/wk winter months and allowance of 3 hr/wk for each transfer station (195 person days/yr).	2	Site operator(s) shared among two active WDS. Four person days/wk during the summer months and two person days/wk during the winter months (156 person days/yr).	3	Site operator(s) utilized at one active WDS and two transfer stations. Two person days/week during the summer months, one person day/wk during the winter months and allowance of 3 hrs/wk for each transfer station (117 person days/yr).	4	Site operator(s) utilized at one active WDS only. Three person days/wk during the summer months and two person days/wk during the winter months (130 person days/yr).	3
		Four/three site attendants required at four/three active WDS.	1	Two site attendants required at two active WDS.	2	Two site attendants required at two active WDS. (note: site operating hours doubled and/or increased staffing with the same hours).	2	One site attendant required at one active WDS.	4	One site attendant required at one active WDS (note: site operating hours tripled and/or increased staffing with the same hours).	3

Waste Management Options Evaluation Matrix

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		Option 1 – Do Nothing (Four Operating WDS)	Option 1 Score	Option 2 – Two WDS and Two Transfer Stations	Option 2 Score	Option 3 – Two WDS and No Transfer Stations	Option 3 Score	Option 4 – One WDS and Two Transfer Stations	Option 4 Score	Option 5 – One WDS and No Transfer Stations	Option 5 Score
	Equipment resources divided among active WDS (note: operations equipment includes one dump truck and one backhoe).	Operations equipment shared among four/three active WDS.	1	Operations equipment shared among two active WDS and two transfer stations.	2	Operations equipment shared among two active WDS.	3	Operations equipment required at one active WDS and two transfer stations.	3	Operations equipment required at one active WDS only.	4
	Cover material needs.	Cover material required at four/three active WDS.	1	Cover material required at two active WDS.	3	Cover material required at two active WDS.	3	Cover material required at one active WDS only.	4	Cover material required at one active WDS only.	4
Landfill site and transfer station cost considerations including capital costs, environmental monitoring and reporting costs, operations and maintenance costs, landfill interim and final closure costs.	Costs										
	Lifecycle costs	Total estimated lifecycle cost over 25 years - \$8,918,092	1	Total estimated lifecycle cost over 25 years - \$8,460,092	2	Total estimated lifecycle cost over 25 years - \$7,499,870 (note: site attendant costs doubled to reflect increased operating hours and/or increased staffing with the same hours).	3	Total estimated lifecycle cost over 25 years - \$6,363,397	4	Total estimated lifecycle cost over 25 years - \$6,251,860 (note: site attendant costs tripled to reflect increased operating hours and/or increased staffing with the same hours; 50% increase in operator, equipment and third party contractor costs).	4
Scoring Total:		Option 1	12	Option 2	21	Option 3	20	Option 4	29	Option 5	24

Notes:

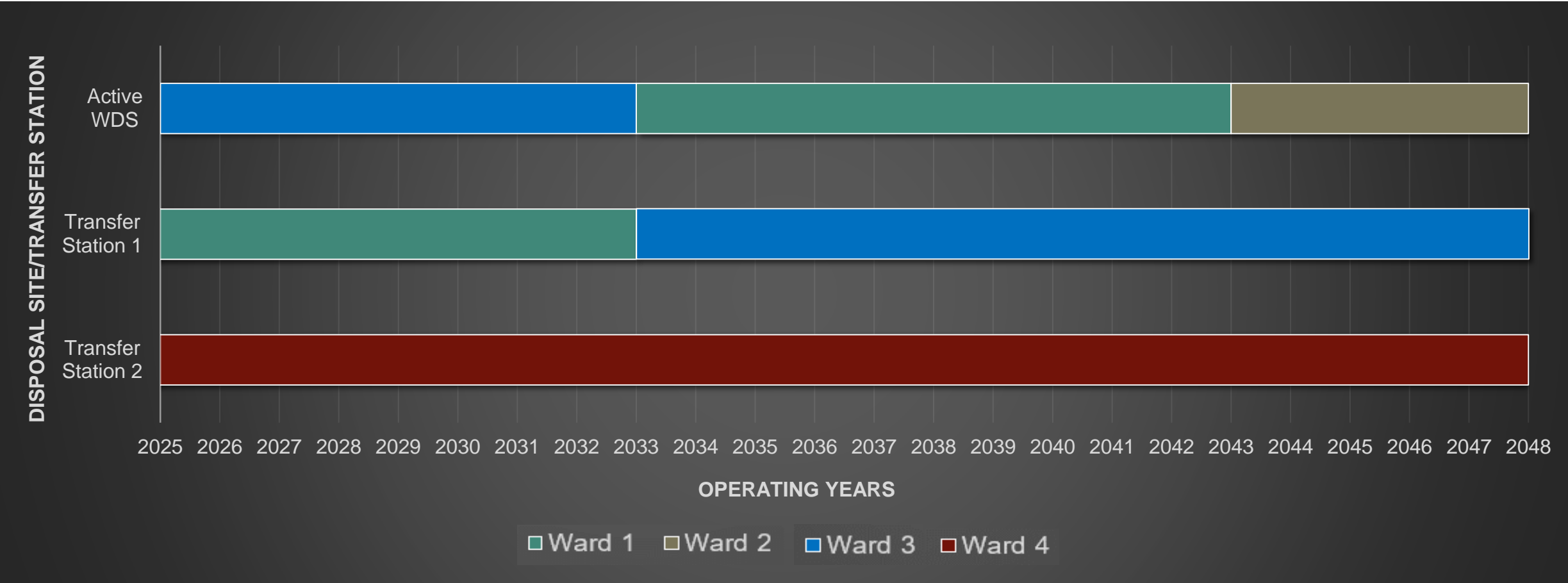
1. W4 = Ward 4 Landfill Site; WDS = Waste Disposal Site(s).
2. Summer months and winter months equate to 6 months for each.
3. Sites may be closed on an interim basis to allow future use of residual capacity.

Preliminary Preferred Waste Management Option

Based on the evaluation criteria scoring, the preliminary preferred waste management option is **Option 4 – One Waste Disposal Site and Two Transfer Stations:**

- More flexibility for users to dispose of weekly regular bagged household waste at three sites (one operating waste disposal site and two transfer stations).
- No impact to travel distances for users of three sites for weekly regular household waste disposal.
- Less impact to the natural environment with active waste disposal activities at one landfill site only.
- Improved overall site maintenance with only one active waste disposal site to manage.
- Improved litter sprawl mitigation and less waste disposal footprint air space consumed with waste collection vehicle compaction of transfer station waste.
- Less cover material required.
- Less need to attract and retain labour resources (i.e. site attendants).
- More labour and equipment resources available to be utilized elsewhere within the Municipality.
- Lower overall lifecycle cost with fewer labour resources.

Option 4 Possible Operating Sequence



- Notes:
1. First year for implementation of the Option is 2025.
 2. Active WDS – Ward 3 until 2033, Ward 1 until 2043, Ward 2 for the remainder of the planning period.
 3. Transfer Station 1 – Ward 1 until 2033, Ward 3 for the remainder of the planning period.
 4. Transfer Station 2 – Ward 4 for the entirety of the planning period.
 5. Timelines estimated based on theoretical waste volumes at each site and transition dates may change.

Next Steps

- Review and document public and First Nation input received from Public Open House – December 2023.
- Incorporate public and First Nation input into the waste management options evaluation – December 2023.
- Update the evaluation and select the final preferred waste management option with Municipal staff – December 2023.
- Document the study process and summarize the study results in a report – January 2024.
- Issue Draft Report for Municipal review – January 2024.
- Incorporate Municipal comments and issue Final Report – January 2024.

Thank you.

Please provide any questions/comments through Zoom or forward directly to tara.abernot@aecom.com and please remember to include your name, address and telephone number.