



MEMORANDUM

TO: Mayor Bonnette and Members of Council

FROM: Kevin Okimi, Director of Parks and Open Space

DATE: June 10, 2022

MEMO NO.: RP-2022-0006

SUBJECT: Outdoor Ice Strategy Update

PURPOSE OF THE MEMORANDUM:

The purpose of this memorandum is to provide Members of Council with information regarding the Outdoor Ice Strategy currently being undertaken by the Recreation and Parks Department.

BACKGROUND:

The 2022 Capital Budget included Project 8500-22-2201 – Outdoor Ice Feasibility Study. The purpose of this study is to conduct a comprehensive review of the Town's existing outdoor ice programs as well as include a review of the feasibility for additional ice facilities (natural, artificial, synthetic, natural water bodies). The study will also include a business case analysis for each type, including considerations for climate change impacts. The intended outcome of the Outdoor Ice Strategy is to ensure a clear understanding of demand, support of user groups, understanding the public perception, and to bring forward clear options for Council to review and consider.

The Outdoor Ice Strategy supports the Recreation and Parks Strategic (2020-2025) plan outcomes to provide for year-round activities.

The Town of Halton Hills currently operates outdoor natural ice facilities at Prospect Park, Acton Community Sports Park, and Georgetown Fairgrounds. The Town also supports volunteers to create additional rinks at various locations in Town. The Town maintained rinks are dependent on weather and the availability of staff and the length of skating season varies from year to year. In winter 2020-2021 and 2021-2022 there was a significant increase in public use of the ice rinks due to COVID-19 and the necessity for outdoor activities during the winter months, particularly during periods of increased restrictions (stay-at-home-orders, closure of recreational facilities).

COMMENTS:

The purpose of this memorandum is to inform Council about the status of the Outdoor Ice Strategy, and the anticipated next steps for the study.

In December 2021, an RFP was issued for a consultant to undertake the Outdoor Ice Strategy, however, no submissions were received. Based on discussions with potential consultants, it was identified that the scope of the project was too broad to be achievable within the allotted budget. As a result, staff determined that the study could be completed in-house by staff, and a project charter was created. This allowed initial consultation to occur during the 2021-2022 winter skating season and a detailed review of existing outdoor ice facilities to be completed, which would not have been possible if the project was reissued for a consultant bid. See Appendix A for the project charter summary.

Major elements of the study include:

- The identification of preferred options to improve outdoor ice recreational opportunities in Halton Hills.
- Review the need for additional outdoor ice facilities/experiences, while integrating with other recreational facilities and recreational programs.
- Advance the objectives of the Recreation and Parks Strategic Action Plan, regarding winter recreational opportunities.
- To identify capital and operating costs for proposed facilities, including a review of overall feasibility and business cases.
- To consider recommendations to improve the existing outdoor rinks and existing community volunteer rink program.
- To engage local community groups and residents to define the Outdoor Ice Strategy.

To date, the following work has been completed:

- Background review and analysis of best practices
- Local and regional scan of outdoor ice facility offerings and operations
- Climate change review
- Fairy Lake feasibility study
- Public Consultation #1 (survey)

Background Information and Site Review/Analysis:

A local and regional review was conducted during January and February to take advantage of the 2021-2022 winter season. Recreation and Parks staff reviewed and analyzed background reports and studies, reviewed surrounding municipalities for best practices and reviewed ice programs from regional municipalities and conservation areas. Key information from this review included:

- The Town currently provides a basic level of natural ice surfaces at various locations in major community parks (i.e. Georgetown Fairgrounds, Prospect Park, and Acton Community Sports Park) and supports volunteers in the creation of additional ice surfaces at other neighbourhood/hamlet park locations. The

current Town led outdoor ice program is supported by a small public works staff complement who also provide winter control services. Priority for winter control may affect the level of outdoor ice service and quality able to be provided at Town operated locations.

- The quality of the Town's outdoor program varies depending on the weather each season. 2020-2021 and 2021-2022 were both excellent years for natural outdoor ice rinks (consistently cold temperatures for making and maintaining ice, not overlapping with major winter control events), but past years have had very short seasons due to variable periods of warm weather.
- Most nearby municipalities have refrigerated ice surfaces, in addition to any natural rinks or volunteer rinks (i.e. Brampton, Mississauga, Oakville, Guelph, Puslinch, Burlington, Hamilton, Toronto).
- Some Conservation Areas also offer outdoor ice programs (i.e. Terra Cotta Conservation Area).
- There is no consistent level of service provision for outdoor refrigerated ice facilities. They are implemented based on overall desire to provide enhanced levels of service for outdoor skating over natural skating options. The length of operating seasons varies from municipality to municipality.

Local and Regional Facilities:

Town staff toured a number of outdoor ice facilities in the City of Brampton to observe the amenities offered for skaters, options for boarded ice rinks vs recreational ice rinks, ice skating trail loops and how they are managed and maintained.

Town staff were also able to meet with staff at Terra Cotta Conservation area to review their outdoor ice program on Wolf Lake. Terra Cotta operates a safe and effective ice program, ensuring consistent safe conditions by conducting comprehensive ice testing on the lake. Staff were able to collect information regarding the materials and safety equipment required, policies and procedures, and the general length of season.

Climate Change Review:

The Town has various Council approved Climate Change plans (The Corporate Energy Management Plan [CEMP], Low Carbon Transition Strategy [LCTS]). In order to ensure the principles set out in these plans were considered, a study has been completed by Enerlife Consulting (consultant who completed the LCTS and CEMP) to provide information to inform the Outdoor Ice Strategy. The focus was to provide a brief report summarizing research into outdoor rink operations, model the future local climate based on climate trends and provide conclusions, including a comparison of natural and refrigerated outdoor ice surfaces including potential for low carbon refrigeration options.

The study provided insight on the potential number of skating days based on historic average climate/weather conditions throughout a season. It provided determination on the first and last skating date (first skating day: five consecutive days where the

maximum daily temperature does not surpass 0°C). The study also notes the potential for the number of skating days to decline over the next thirty years and also predicts the average number of skating days over the next 30 years.

The key information from this study included:

- The majority of **non-skateable days are caused by temperature**
- Other factors affecting skateable days include **regular/timely maintenance** and **presence of a shelter/cover** to reduce the impact of precipitation/snow or intense sun
- The study forecasts a **10% reduction in total skating days** from 26.8-40.2 (2022-2030) to 24.38-36.57 (2041-2050), and a corresponding decline in “good” skating days from 13.4 (2022-2030) to 12.19 (2041-2050)
- Mechanically cooled ice surfaces were expected to have a total of 114 skating days from 2022-2050, with the number of **days requiring mechanical cooling increasing by approximately 5-10%** from 73.8-87.2 (2022-2030) to 77.4-98.6 (2041-2050).
- Mechanically cooled ice surfaces were noted to have the benefit of **reliability** due to the variation in temperatures during the winter season but do **require significant energy to construct and operate** (environmental impact).
- Refrigeration systems capital costs would be approximately \$1.3 million for a CO2 refrigeration system (low carbon option) for a full size ice rink, with costs decreasing based on size of outdoor facility. **CO2 systems are approximately 10% more expensive** than traditional ammonia systems, however are more climate friendly and are more energy efficient and better suited for outdoor applications where the level of staffing may not be as high as indoor arena settings.
- Energy usage for a 114 day season is estimated at \$45,000 per year (full size ice pad).
- Other costs associated with refrigerated surfaces are discussed later in this memorandum.

Fairy Lake Feasibility Study:

The Outdoor Ice Strategy includes reviewing the potential for outdoor ice facilities on Fairy Lake. Outdoor skating is only permitted in designated areas, however, there are currently no designated areas identified on Fairy Lake. The Town does not currently monitor or test the ice thickness, and signage prohibiting use in winter is posted each season. Despite the signage, the Town is aware that the lake is used for skating and ice fishing. The Town retained Associated Engineering Ltd. who have a division that specializes in outdoor ice safety both for recreational and commercial/industrial applications who are completing an outdoor ice feasibility review for Fairy Lake. Town staff also gained insight into safety protocols, inspection and maintenance of ice on natural water bodies by attending a demonstration with Terra Cotta Conservation Area staff on how they manage their outdoor ice programs on Wolf Lake. The preliminary findings of the Fairy Lake Outdoor Ice Feasibility Review include:

- The climate in Acton would allow for a reasonable outdoor ice skating season at Fairy Lake.

- Fairy Lake characteristics are suitable for outdoor ice facilities.
- The construction of ice facilities would be able to start in early January (average) with light duty equipment and vehicles.
- The ice facilities would be able to operate until early March (average) depending on weather.
- For light duty operations equipment, there would be an outdoor skating season from 36-63 days with an average of 54 days.
- For heavy duty operations equipment, there would be an outdoor skating from 9-51 days with an average of 33 days.
- It is recommended to consider light duty operations equipment to extend the number of skating days should a program be considered.
- If an outdoor ice program on the lake is considered, more detailed policies, procedures and testing protocols would need to be developed, as well as staff training and safety equipment suitable for this type of work.

Public Consultation:

In February and March 2022, a public consultation survey was posted on the Town's Let's Talk Halton Hills website on the Outdoor Ice Strategy Project page. Upon completion of the survey, staff reviewed public comments, detailed opinions and results, regarding the ice facilities in the Town. The survey was completed by over 400 residents, and the complete survey results (personal information redacted) are included as Appendix B.

Survey Results Summary:

The survey was published on February 4, 2022 and closed on March 11, 2022. In 36 days, the page received 1,100 page visits visitors out of which 401 took the survey.

Key survey results included:

- Majority of respondents have skated in Halton Hills at outdoor rinks (87%) and nearly half (45%) skate daily or weekly.
- Most participants enjoy the outdoor experience, like to just drop in to skate or play shinny, and to get physical activity.
- Fairgrounds is the most visited location, followed by private locations (backyard rink etc.). Many people use the volunteer rink locations.
- Residents travel between 20-30 minutes to use facilities in nearby municipalities, the most popular being the Gage Park Skating Trail in Brampton.
- Nearly all respondents thought it was important for the Town to provide outdoor ice (98%), but only 30% thought the Town should provide programming and supervision of outdoor rinks.
- Some respondents (35%) reported having difficulty accessing Town rinks for a variety of reasons, including conflicts with other users (shinny vs. leisure skating), unpredictable quality of surfaces due to weather, no scheduling, or too crowded.
- The most important amenities identified by respondents included: washrooms, parking, lighting, and a place to put on skates, with lower importance to spectator seating. Other amenities such as a unique location, skate rentals, concessions,

indoor/outdoor warming areas and indoor change rooms were not rated as being as important.

- When considering facility types, skating trails (natural or refrigerated) were the highest ranking type of facility, with refrigerated leisure skating surfaces and natural surfaces being the second highest.
- The most popular location suggestions for additional rink locations included Gellert Community Park, Dominion Gardens Park and Cedarvale Park, as well as expanding the facilities at existing locations.
- Not many participants were familiar with synthetic ice, but those who were noted that there are quality of experience limitations with it when compared to natural or refrigerated ice surfaces.
- Nearly two thirds (62%) of respondents would be willing to pay user fees for enhanced levels of service at existing or new outdoor ice facilities
- Over two thirds (71%) of respondents were supportive of the Town operating ice facilities on Fairy Lake with travel distance being the main reason people indicated why they would not use the lake.
- Most respondents supported the concept of ensuring that the outdoor ice facility has multi-season use for other sports/features during the non-ice season.
- Almost two thirds (64%) of respondents felt that it was important for the Town to consider climate change goals and considerations when reviewing outdoor ice options.

Further survey analysis noted the following key points:

- What residents like about the outdoor ice facilities:
 - o Variety of options.
 - o Enjoy being able to meet up with friends outdoors.
 - o Free of charge.
 - o Skating aids and nets for use.
- What residents dislike about facilities:
 - o Outdoor rinks are very busy, not enough of them.
 - o Hockey players take them over and conflicts with other users.
 - o Fairgrounds rinks are too small for community wide use.
- What residents suggested:
 - o Need for more recreational options (Separation between hockey and recreational users)
 - o Addition of a rink at Gellert Community Centre.
 - o Skating trails
 - o More lighting to provide evening use, amenities
 - o Refrigeration system for consistent ice surfaces.
- The vision for outdoor rinks noted by respondents included:
 - o More and bigger outdoor skating spaces (either rinks or trails). People want models like Mount Pleasant and Gage Park in Brampton, Celebration Square in Mississauga, Market Square in Guelph, etc.
 - o There was a clear ask for a distinction between “shinny” pads and recreational use pads, this would help with conflicts between hockey players and recreational skaters.

Municipal Survey:

Staff looked to other municipalities for information to coincide with the public survey. Eight municipalities returned a completed survey. The municipalities included: The Township of Essa, Township of Springwater, Town of Caledon, Town of Milton, Township of Brock, Town of Georgina, Newmarket and Richmond Hill.

The request for information involved capital and operating costs, programs, schedules, monitoring requirements, cost of use, volunteer programs, observed historical operating issues, and climate considerations.

A variety of valuable information was provided by these municipalities who offer a range of ice facilities with no clear distinction between small and large municipalities. The information collected through this survey will be incorporated into the more detailed feasibility review.

Stakeholder Survey:

The Town also issued a survey to community organizations that may be interested in using or partnering with the Town with respect to outdoor ice facilities. To date, three responses have been received, the Georgetown Skating Club, the Acton BIA and Light Up the Hills. The Acton BIA and Light up the Hills are interested in outdoor ice facilities primarily related to their annual events. The Georgetown Skating Club noted the potential to use outdoor ice facilities for outdoor programs and promotions and also for events.

Technical Team:

A cross department staff technical team has met monthly to provide input and expertise related to their fields within the Town. The team includes members of the Recreation and Parks Department (Parks and Open Space, Community Development, Facilities), Transportation and Public Works (Public Works and Park Operations) and Office of the CAO (Climate Change Division). The information in this report has been reviewed with this technical team.

Preliminary Review of Options:

Based on the background information noted above, staff have begun to identify preliminary options for improvements to the outdoor ice programs. Due to the many options and methods for creating outdoor ice facilities, staff have broken down the potential improvements into three general approaches.

- 1) **Fairy Lake Ice program:** Develop and implement a program for ice testing and maintenance of Town operated rinks/skating trails on Fairy Lake. This could also be supported by volunteers where appropriate.
- 2) **Improve and expand existing ice rink program:** Enhancements to existing outdoor rink program (servicing, staffing levels), new locations or facility upgrades to support the creation of natural outdoor skating rinks (non-refrigerated). This approach could also include improvements to the existing volunteer ice rink program. It could include installing multiple rinks at locations to

allow designated leisure pads. Examples: Upgrade water service at Glen Williams Park (volunteer location) to allow a Town operated rink (increased staffing required), formalize second rink at Prospect Park.

- 3) **Artificial ice rink options:** Focus efforts on 1 or 2 potential locations for refrigerated outdoor ice facilities based on community feedback and existing infrastructure. Example: Refrigerated multi-use ice pad at Gellert Community within the expansion lands.

It is important to note that these approaches are not exclusive, and the final strategy may include elements from multiple approaches to meet the overall goals and objectives of the Outdoor Ice Strategy.

Review of Options:

The project team has also begun to review possible locations for additional outdoor ice, through a Site Suitability Review. Suitability criteria was created with the responses from the public in mind as well as a review of site infrastructure, maintenance requirements, and overall compatibility with goals of the ice strategy. The analysis evaluates which sites would be most feasible for different types of ice facilities (natural, refrigerated or skating trail). The review of key options will be provided for Council in the future for approval as part of the study's recommendations.

The review will also look at options for ice refrigeration using low-carbon energy solutions, the cost implications to operate and the staffing requirements for any type of facility.

Financial Information:

Options for outdoor ice vary significantly in the order of magnitude for cost depending on which type of facility is considered.

Preliminary capital costs for an artificial ice rink as identified through the Climate Change review would be over \$1 million for refrigeration systems. The order of magnitude capital costs for a complete refrigerated rink could be between \$3-5 million or more and would include concrete ice surface, amenities, a service building, ice resurfacer, and any major utility/infrastructure upgrades. Ice resurfacer capital costs could range from \$90,000 (natural gas) to \$150,000 (electric incl. charging station).

Operating costs, including staffing, energy and maintenance costs have not yet been determined in detail, but are expected to be in the range of \$50,000-\$100,000 or more per season depending on a number of variables. Further details will be provided once a more detailed review is completed.

Outdoor ice programs on natural bodies of water like Fairy Lake, are primarily reliant on staff and equipment time, and can often be implemented for significantly less. Richmond Hill operates two natural bodies of water for outdoor skating and the operating costs are approximately \$100 per operating day. This level of cost would result in operating costs of \$5,000-\$10,000 at Fairy Lake depending on the length of season and staff availability.

as outlined in the Fairy Lake study. Some costs may be able to be offset if a volunteer program was implemented to assist with some of the regular maintenance of the rink.

Improvements to existing systems would largely be focused on upgrades to and construction of new water services (\$15-25,000 per site), upgraded lighting (\$5-10,000 per site) and increased levels of dedicated staffing for the construction and maintenance of additional natural rink locations. Additional equipment could also be added to make operations of the outdoor ice facilities more efficient. Additional funding could also be provided to support neighbourhood volunteer rinks.

Natural rinks (similar to existing) can cost from \$1,500-\$2,500 to construct, and an additional \$100-\$150 per day for flooding. The total cost to operate natural rinks is approximately \$10,000-\$15,000 per location depending on the length of season.

As part of the review of options, staff will be reviewing the potential to incorporate outdoor ice facilities into other capital projects already identified (i.e. Gellert Park Expansion, Vision Georgetown Parks) to maximize construction and cost efficiencies.

Any capital or operating costs associated with outdoor ice facilities as noted above will be subject to future approval by Council, and based on a review of affordability and sustainability in conjunction with the Town's Long Range Financial Plan and the Capital Budget and Forecast for future years.

Timing:

The original project schedule was to complete the Outdoor Ice Strategy by July of 2022. Due to a variety of factors, the overall project timeline has been delayed. The 2023 Capital Forecast included \$3 million for an outdoor ice facility, but this will be deferred to allow the Outdoor Ice Strategy to be completed, and recommendations to be incorporated into other ongoing capital projects (i.e. Gellert Park Expansion design phase).

Staff anticipate the study will be completed later in 2022 and major projects would be incorporated into the 2024-2033 capital budget review which will be undertaken in 2023. Staff will also delay any upgrades to the existing facilities until the recommendations from the Outdoor Ice Strategy are approved by Council. Recommendations from the study will also be reviewed as part of any future updates to the Recreation and Parks Strategic Plan.

Next Steps:

The study team will continue to evaluate options for Council to consider as part of the Outdoor Ice Strategy. This would include the considerations for refrigeration system vs natural ice, review of potential ice facility locations, recommendations for existing rinks, improvements to the volunteer program and other considerations. This would also include the review of the potential for Fairy Lake Ice facilities. Public consultation will also be included to obtain public feedback on some of the key options being considered, to help to identify priorities. The final Outdoor Ice Strategy will include a detailed cost review and operating impact to ensure that the full financial impact of any recommended facility or upgrades are fully considered. The study will also consider if there are

opportunities for public-private partnership (P3) models which would be appropriate for the ongoing operation of enhanced facilities.

The 2023 capital budget will include preliminary forecast items for the 2024-2032 Capital Forecast based on the preliminary findings of the strategy.

CONCLUSION:

The Outdoor Ice Strategy project is being undertaken by Town staff. This memorandum is being provided to provide Council with an update on the status of the study and next steps to be undertaken by staff.

Reviewed and approved by,

Paul Damaso, Commissioner of Recreation and Parks

Jon Rehill, Acting Chief Administrative Officer

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Project Charter

Project	<i>Outdoor Ice Strategy & Feasibility Study (Summary)</i>		
Created By	Kevin Okimi	Date	December 9, 2021
Phone	X2274	Email	kevinok@haltonhills.ca

Mission	<p>Create an Outdoor Ice Strategy that reflects Council and residents' vision for outdoor winter recreational opportunities.</p> <p>The Outdoor Ice Strategy will include the Town's current natural rinks, community operated volunteer rinks, Fairy Lake considerations, and potential new artificial/refrigerated/synthetic facilities, including a review of existing facilities and programs, programs and services, and a vision for future facilities including a more detailed feasibility review of future improvements.</p>
Objectives	<p>To identify the preferred opportunities to improve Outdoor Ice Recreational opportunities in Halton Hills to continue to provide residents with non-structured opportunities for active recreation.</p> <p>To review the need for additional outdoor ice facilities/experiences in Halton Hills while integrating with the other Recreational Facilities and Recreational Programs.</p> <p>To advance the objectives of the Strategic Action Plan regarding Winter Recreational opportunities; consider benefits of facility design that create different user experiences (E.g. skating track or pads for shinny),</p> <p>To review the long term feasibility of all types of outdoor ice facilities given climate change considerations and Town net zero objectives.</p> <p>To identify capital and operating costs for proposed facilities, including a review of overall feasibility and business case.</p> <p>To consider the multi-functional use of outdoor ice surfaces during and out of season to maximize cost benefits (E.g. covered or uncovered splashpad/ice, sport court/ice, event space/ice).</p> <p>To consider recommendations to improve the existing outdoor rinks and existing community volunteer rink program.</p> <p>To identify the highest priorities for implementation in the short, mid and long-term.</p> <p>To identify risk management issues associated with all Outdoor Ice Programs being considered.</p> <p>To engage local community groups and residents to define the Outdoor Ice Strategy.</p>

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Deliverables	An Amazing! Outdoor Ice Strategy for Halton Hills 1) Council Approved Strategy 2) Budget Impacts (operating/capital) identified 3) Implementation Strategy
Approving Stakeholders	Council (Council) General Public (including known users of current facilities) Commissioner of Recreation and Parks & Department Leadership Team
Project Team:	Parks & Open Space: Project Lead and Project Work Technical Committee: Community Development, Facilities, Transportation and Public Works, Climate Change & Asset Management Specialty Consultants: Specialty Refrigeration, Outdoor Ice, Architect, Engineers, Cost Consultants as required.
Overall Work Program	Task 1: Background Review Task 2: Local and Regional Scan Task 3: Climate Change Review Task 4: Public Consultation Task 5: Potential Sites / Options & SWOT Analysis Task 6: Public Consultation #2 Task 7: Concept Development & Feasibility/financial/business case review Task 8: Draft Preferred Strategy & Phasing Task 9: Public Consultation #3 Task 10: Final Report and Council Report
Assumptions	Current Capital Forecast includes Outdoor Ice Facility (2023) as well as various capital projects for Major Town parks (i.e. Gellert Ph. 2, Vision Georgetown Community Park, Vision Georgetown Town Square, TSP Future phases, etc.) Future projects are considered to have potential to include outdoor ice facilities, subject to budget approval and outcomes of this strategy. Operations of Outdoor Ice (ie. PW or Facilities) to be Determined based on outcomes of study. Skating on SWM ponds will likely be raised by the public – will defer to Engineering
Communications	Public Consultation via Website, Let's Talk Halton Hills, Online Public Meetings, and Key Stakeholder Meetings, posting at existing outdoor rinks as well as through social media.
Boundaries	Does not include indoor ice facilities Does not include SWM ponds