



Appendix B: Detailed Analysis of Ice Pad Requirements

Supply and Distribution

The City of St. Catharines has a municipally owned supply of 10 ice pads at the following 6 arenas:

- Bill Burgoyne Arena (1 ice pad);
- Garden City Complex (2 ice pads);
- Haig Bowl (1 ice pad – *see notes below*);
- Merritton Centennial Arena (1 ice pad – *see notes below*);
- Seymour Hannah Sports and Entertainment Centre (4 ice pads); and
- Meridian Centre (1 ice pad – *see notes below*).

For the purposes of this assessment, the supply:

Includes the Haig Bowl Ice Pad

Despite being decommissioned at the end of the 2013/14 season (and now leased to a private operator for dry floor use), Haig Bowl is included for the purposes of this assessment on the basis that utilization and user group registration data contained herein reflects historical ice bookings occurring at that ice pad. The current 2014/15 season, which is the first winter season without Haig Bowl, is presently ongoing and is not factored into the City's utilization reports.

Counts the Meridian Centre as 0.25 Ice Pads

Recognizes that the Meridian Centre is only partially accessible for general public use due to OHL usage and special event programming. Facility operations are overseen by a private sector management firm that is not subject to the City's Ice Allocation Policy, but whose business model benefits from selling ice time for community use when not booked for special events. Original expectations were that the City and community would receive up to 30 hours per week for rentals at the Meridian Centre, though the majority of these hours would be last minute bookings given the uncertainty surrounding OHL games and practices, as well as special events.

Just four months after opening, the arena operator indicates that it is renting between 15 and 20 hours per week to community users, and expects that number to grow as the operation further establishes itself. Further, community groups will have greater access to

prime time ice at the Garden City Complex due to the relocation of the OHL team to the Meridian Centre. Nonetheless, a conservative estimate is applied to the Meridian Centre whereby it is counted as one-quarter of an ice pad (i.e. 0.25) rather than half an ice pad (i.e. 30 hours per week that represents about half of all weekly prime and shoulder hours).

Counts the Merritton Arena as 0.65 Ice Pads

Once again, a conservative approach is employed whereby the Merritton Arena's ice pad has been discounted by 35% to reflect the fact that the arena is not, and does not employ the City's Ice Allocation Policy making a fair comparison of utilization to other City-owned arena facilities not possible at this time. The lack of City policy requirements for the Merritton Arena results in the City not presently having a strong understanding of this arena's utilization and how it serves the City of St. Catharines' ice users. It is noted that the Merritton Arena is wholly owned and maintained by the City of St. Catharines, who is responsible for financing the ongoing capital maintenance of the facility, and a number of local hockey organizations indicate that they regularly utilize this arena to meet their needs (many of these groups supplied registration data that included players using the Merritton Arena).

The supply recognizes that the City does not allocate the Merritton Arena but instead delegates this responsibility to the Merritton Lions Club who have the flexibility to allocate ice outside of the parameters of the City's Ice Allocation Policy. This arrangement appears to result in a higher than typical level of adult usage during prime times since the Lions Club has autonomy to allocate time to groups at its sole discretion. Nonetheless, the degree of public access is consistent with municipal/quasi-municipal arena operating parameters and when combined with City's funding responsibilities, forms the basis for including this arena in the supply. For the purposes of this assessment, Merritton Arena is counted as providing 0.65 ice pads rather than a full ice pad, noting the City will need to undertake further analysis of the demand and operating profile of the Merritton Arena subsequent to the conclusion of this master planning process.

Excludes the Ridley College Arena

This arena is excluded on the basis that it is privately owned, funded and scheduled. However, the arena is a contributor to the local arena market since it is available to the community with organizations such as GHL Niagara Co-ed and the Players Hockey League reporting regular usage of that rink. The College's NHL size ice pad is operated year-round, and is very well utilized for community prime time rentals throughout the winter season. Ridley College is in the process of undertaking a planning exercise for its campus, which should be monitored by the City as any change to community access to the arena facility could impact existing user groups' usage of this facility.

Accordingly, the City's 'effective' supply is considered to be 8.9 ice pads for the purposes of this assessment. This is deemed to adequately reflect ice pads that the City is responsible for funding for community use, recognizing that this falls in between the 'actual'



supply of 10 ice pads and the 'City-allocated' supply of 7 ice pads (if excluding Merritton Arena, the Meridian Centre, and the now decommissioned Haig Bowl).

Application of a 2.5 kilometre service radius (generally representing a 10 to 15 minute drive, as shown in Map 2) around each City-owned arena generally encompasses most areas of St. Catharines. Noted gaps include the eastern neighbourhoods within Grantham and St. George's wards, and further that the Bill Burgoyne Arena is the only such facility located north of the Q.E.W. However, it must be noted that distance or access to all arena facilities in St. Catharines is considered reasonable as ice sports tend to be considered drive-to facilities due to the need to transport equipment and travel in the winter.

From a regional perspective, there are a number of arenas in area municipalities such as Thorold (2 ice pads), Niagara-On-The-Lake (2), Welland (2), Niagara Falls (5), and Lincoln (2). While these are not necessarily considered to fully service St. Catharines' residents, they do alleviate regional demands and in fact may be attractive to certain organizations such as regional associations and local residents playing in adult leagues.

Consultation

The majority of input regarding arenas was provided by the Arena Partners Committee and through arena users that submitted user group questionnaires. Key themes from these stakeholders included:

- Emphasizing that arenas should be **financially sustainable** and that financial reporting of operating performance should be transparent;
- identifying that with only the Bill Burgoyne Arena available to serve the north end of the City, **equitable distribution** of arenas should be considered;
- considering how St. Catharines' arena service level compares to other communities;
- improving **how ice time is scheduled**;
- recognizing that while a new multi-pad arena is preferred to potentially replace the Garden City Complex, **the City as a whole has financial limitations** due to its existing infrastructure commitments and thus the existing twin pad should not be discounted simply on the basis of its age; and
- a desire for **dry floor arena users** such as lacrosse, roller skaters, ball hockey, soccer, etc. to have representation on the Arena Partners Committee.

In terms of general community opinion, the statistically representative survey of St. Catharines' households revealed that **nearly half of residents are opposed or strongly opposed to the City spending additional public funds for arenas and curling rinks**. This was the lowest rated level of support (and the highest level of opposition) for funding relative to nineteen other recreation facilities. Requests for additional ice pads were not emphasized through other means of consultation beyond meetings with the Arena Partners Committee. The household survey also revealed that 23% of surveyed households participated in hockey or figure skating over the past year (the ninth most popular activity) which represents a decline from the statistically valid survey conducted in 2006 for the previous Master Plan when 31% of households participated in these winter ice sports (it was the sixth most popular activity at that time).

Utilization

The data in this analysis has been provided by the City of St. Catharines Parks, Recreation and Culture Services Department, **using assumptions generated in collaboration, and agreed upon with the Arena Partners Committee**. This data, which is derived from arena usage over the past three seasons, is highly useful in understanding trends over this time period; however, the data must be interpreted with caution as the way in which the City has recorded usage has evolved over time and may not be fully consistent from year to year or rink to rink. Furthermore, the hours analyzed are not reflective of the prime time hours identified in the City's Ice Allocation Policy, but rather are based on a smaller prime time operating window relative to most other communities to align with the expectations of peak usage periods as determined by the Arena Partners Committee. When examining the data, it is also important to note that the City's supply of municipal ice pads has changed over this time period, with the opening of the Meridian Centre (which has limited availability for community rental relative to the other arenas) and the recent decommissioning of the Haig Bowl at the end of the 2013/14 winter season.

The City's arenas are generally available for booking between 6am and 12am, although there are very few early morning bookings and weekday daytime rentals. Most City arenas are available for ice bookings from September/October to March/April, although this varies from rink to rink and year to year (some arenas open early/late or close early/late, and some are open year-round).



The focus of this analysis is on ice usage during the winter season as this is the time of year when demand for ice sports is greatest. More notably, this analysis provides added focus on the peak months of November and February, as these are months that tend to not be impacted by program start-up, playoffs, or major holidays. The peak usage periods, rather than a broader seasonal perspective, help to form the basis upon which future facility needs are determined.

An examination of schedules and rental data supplied by the Cityⁱ for the past three seasons (during the peak months of November and February) reveals the following:

- Usage of prime time hours (5pm to 10pm Monday to Friday, 8am to 9pm Saturday/Sunday) has been relatively steady over the past four ice seasons with an average of approximately 91%. As these are the hours generating the greatest amount of demand, and as agreed to with the Arena Partners Committee to exclude holidays and ice maintenance periods, arena operations in comparable communities expect a minimum of 95% and often full utilization during these prime times. Over the past three seasons, the City’s prime time usage rate in peak usage months has decreased modestly from 93% to 91% over this time period.
- In the 2013/14 peak months, prime time usage was highest at Bill Burgoyne Arena (98%) and all the Seymour Hannah rinks (ranging from 91% to 96%); prime time usage was lowest at the Rex Stimers rink (76%).
- Across all rinks in 2013/14, prime time usage on weekdays was 93%, while prime time usage on weekends was 88%.
- The number of shoulder hours (4pm to 5pm and 10pm to 11pm Monday to Friday, plus 6am to 8am and 9pm to 12am Saturday/Sunday) used during peak months declined by 7% between the 2010/11 and 2013/14 seasons.

Table B1: Prime Time Ice Usage in Peak Months, 2010 to 2014

Peak Months	Prime Time Utilization Rate	
November 2010	93%	93%
February 2011	92%	
November 2011	92%	90%
February 2012	88%	
November 2012	92%	90%
February 2013	88%	
November 2013	92%	91%
February 2014	89%	

Source: City of St. Catharines rental data, 2014

ⁱ Includes the Haig Bowl, which was operational in February 2014, but does not include the Merritton Arena (data is analyzed separately as it is administered through a third party) or the Meridian Centre (which opened in October 2014).

- Across all rinks in 2013/14, shoulder hour utilization on weekdays was 75% while shoulder hour usage on weekends was 42%. This suggests that groups are able to secure access to convenient/favourable ice times and are not facing any great pressures to book ice during less desirable, but generally acceptable time slots as compared to other communities. For example, there were 90 unbooked hours between 10 and 11pm on weekdays (an average of 11 hours per week system-wide) while there were 113 unbooked hours between 6am and 8am on weekends (a system-wide average of 14 hours per week).

Looking at the **entire 2013/14 season** (i.e. October to February, exclusive of days in which arenas were closed):

- There were a total of 837 unbooked prime time hours. Using the prime hour definition agreed to between the City and the Arena Partners Committee, there are 51 such hours in a week which applied to the 22 weeks that season results in each ice pad providing a total of 1,122 hours. This means that the capacity equivalent of three-quarters of an ice pad (i.e. 75%) was idle during the most desirable time slots. Another way to view this metric is that on average, nearly 5 hours per week per pad were unused in prime time.
- For the entire 2013/14 season, there were also a total of 933 unbooked shoulder hours. This equates to another 5 hours per week per pad, on average, remaining idle during times which would be historically filled during periods of peak demand.
- Collectively, **prime and shoulder availability results in a total of 1,770 hours of unused/unrented time** in arenas that are typically booked (to varying degrees) in most municipalities across Ontario.
- The data indicates that good prime time slots are accessible to adult-focused organizations, providing an indication of surplus capacity as adult rentals tend to be relegated to shoulder periods or to the less desirable 'prime' time window in communities operating under supply pressures.

With respect to the definition how 'prime' hours were analyzed, it is important to note presently the weekday and weekend 10pm to 11pm time slot is not included, nor is the weekend 7am to 8am slot despite the inclusion of these as prime in the Ice Allocation Policy. While the City categorizes these as shoulders in its operating performance report, many municipalities across the province have historically considered these to be prime times (the weekend mornings for minor use and the late evening for adult use). Integration of these shoulder slots into the prime time definition of operating performance reporting would lower the prime utilization rate as just 75% of weekday 10pm slots were booked while only 25% of weekend 6am to 8am slots were used (data regarding only the 7am slot was not available).

Data received from the Merritton Arena was useful in confirming that the arena is well-utilized in both prime and non-prime (shoulder hours). In fact, 54.5 prime time hours are sold weekly and 46 non-prime or shoulder hours are sold weekly. Participant numbers are very



high for the facility at 2,255 which includes significant numbers of adult users in teams and pick-up play (although all 2,255 players are not exclusive to the Merritton with a portion of these users also booking time at City-allocated arenas as well).

Participation

In addition to hours rented, another indicator of demand is the number of participants registered in ice sports for the past three seasons as noted in Table B2. Note these number are only reflective of groups that rent ice from City operated facilities and include groups that also use Ridley College, Merritton Arena or the Meridian Centre. However, user groups that only use Ridley College, Merritton Arena and/or the Meridian Centre are not included (unless otherwise noted) as the City does not currently have the ability to track their registration or usage.

Table B2: Registration in Organized Ice Activities – 2010/11 to 2014/15

Age Group	2011/12	2012/13	2013/14
Youth / Core Registration			
Garden City Kiwanis Hockey League	560	520	536
Garden City Minor Hockey Association	421	470	495
Kiwanis Select Hockey	96	96	96
Niagara Bauer Hockey Challenge & Niagara Hockey Summer League (NHSL)	40	50	50
Sara Bauer Academy	0	50	100
St Catharines CYO Minor Hockey Association	950*	938	997
St. Catharines MD Hurricanes	153*	153*	153
St Catharines Minor Hockey School	114	89	82
St. Catharines Female Hockey Association	416	430	402
St. Catharines Recreational Skate – Children**	351	351	352
St. Catharines Ringette Association	140*	140*	140
Team Winter Club of St. Catharines	75	75	75
Sub-Total - Youth	3,316	3,362	3,478
Adult / Other Registration			
Adult Hockey League*	500*	500*	500

Age Group	2011/12	2012/13	2013/14
Brock Badgers Ringette Club	24	21	18
Brock University Men's and Women's Hockey	51*	51*	51
GHL Niagara Beginners Coed Hockey	169	169	169
Niagara North AAA Hockey	153*	153*	153
Players Hockey League	195	225	240
St. Catharines Jr B Falcons	14	14	14
St. Catharines Recreational Skate - Adults**	88	88	88
Pick-Up Leagues and Bookings*	265	265	265
Sub-Total – Adult / Other	1,459	1,486	1,498
TOTAL REPORTED REGISTRATION	4,775	4,848	4,976

* Estimate as data was not provided. ** Group registrations discounted by 33% to reflect their bookings during non-prime time.

Source: User Groups and City of St. Catharines, adjusted to reflect St. Catharines residents only and include waiting lists, where applicable.

Based upon data provided by user groups, 5% growth (162 registrants) in youth-focused organizations is remarkable in light of national and provincial declines, modest population growth, and the ongoing aging of the population in the City over the past three years. With about 22,500 residents between the ages of 4 and 18 in St. Catharines (2015 estimate), this means 15% of children and youth participate in organized ice sports; this is on the lower end of the common range observed in similar Greater Golden Horseshoe communities (typically between 15% and 25%), although higher than the national average which is closer to 9%. Projections prepared by the Region of Niagara estimate that the number of residents in St. Catharines' 9 to 18 cohort will increase to 23,800 (1,300 persons) by 2026 after which it is expected to plateau until 2031 due to a projected drop in the 0 to 8 year old population which needs to be considered as part of a long-term arena strategy.

While children and youth constitute the primary users of ice time in St. Catharines, the adult market must not be overlooked. Adults and non-core users represent 30% of all reported registrants and registration levels have been fairly stable over the past three seasons (although showing a 4% growth). Adults, however, constitute a lesser share of the overall arena market compared to ten years ago when they were estimated to form about 40% of all arena users. It is important to note that many adult groups are quite mobile and are willing/able to rent time at other arenas in the area based on ice availability and rates. In fact, many groups responding to the stakeholder survey reported using facilities such as Ridley College, the Gale Centre in Niagara Falls, the Jordan Arena, and the Centennial Arena in Virgil.



It is also noteworthy that provincial norms suggest that about 5% of adults ages 20 to 49 are involved in ice sports. Based upon the reported participation, it is estimated that about 2.5% of St. Catharines adults in that age range are active users of the City's arenas, suggesting that **the local adult ice sport participation may be lower than the norm** or that non-City operated arenas are capturing a considerable share of adult players who are not affiliated with groups that book time at City of St. Catharines rinks. It is predicted that adult participation will fluctuate at a rate similar for population changes in this age cohort (i.e. any percentage change in the size of the 20-49 age cohort will result in a similar rate of change for arena participation), all other factors being equal.

The projected number of ice participants is calculated by applying participation rates to the forecasted population of the identified age groups. In doing so, the needs assessment model makes a number of assumptions relating to participation and population growth. First of all, it is assumed that the City will grow at the rates identified in the Master Plan. Changes in the population forecasts could impact the estimated ice demand for St. Catharines; therefore, it is recommended that the population projections and their impact on the arena assessment be closely monitored over the coming years. In addition, except where otherwise noted, this analysis assumes that participation rates in hockey, figure skating, and their related disciplines will grow in proportion to population growth over the course of the planning period. With national trends (and trends across many communities in Ontario) indicating a decrease in the participation rate in hockey (see below) over the past number of years, this assumption will need to be monitored closely by the City in the coming years.

Over the past several decades, hockey has been a staple of traditional Canadian winter sports. However, recent research suggests that participation in organized hockey has experienced declining participation levels across the Province, since a registration peak in the 2008/09 season. This trend is driven by a number of factors that include the high cost to participate, safety concerns, declining popularity of organized sports, and growing immigration from countries where hockey isn't played. These factors have led to declining arena utilization across Ontario and municipalities have had to undertake a variety of strategies to cope with shifting arena needs and underutilized ice pads.

With this in mind, Table B3 forecasts the youth and adult registration levels for the City of St. Catharines assuming that ice supplies are not unduly constricted.

Table B3: Projection of Registered Ice Sport Participants, City of St. Catharines, 2014-2031

Age Group	2014 (actual)	2016	2021	2026
Youth/Core Registrants (based on a 15% participation rate for residents ages 4 to 18)	3,478	3,362	3,372	3,567
Adult/Other Registrants (based on a 2.5% participation rate for residents ages 19 to 54)	1,498	1,455	1,503	1,515
Total Registrants	4,976	4,816	4,875	5,083

Based upon application of current participation rates over the master planning period, the number of participants may increase largely due to aforementioned projected increased to the 4 to 18 age group. Despite a projected stabilization in adult registration, collectively local arena organizations could increase from 4,976 registrants to 5,083 registrants (107 skaters or 2%). This is not necessarily to say that ice demands will increase by 2%, as the specific ice needs of users may change over time, particularly since aging and modest population growth trends will have significant implications on the number of participants making regular usage of the City's arenas.

It is worth noting that the assumption that current participation rates can be expected to continue into the future should be cautiously applied. As an example, arena registrations in the City's previous Recreation Facility Master Plan were recorded at nearly 5,600 skaters (for the 2005/06 season), meaning that there are about 600 fewer players registered now than compared to nine years ago, while the current participation rate is also lower for arena users as a whole.

Benchmarking

For benchmarking purposes, we have examined municipal ice pad provision in relation to population. While it is recognized that every community has a slightly different socio-demographic composition and different sport participation rates, requests are often made to understand how one community compares to others. In the case of St. Catharines, several comparator communities with similar characteristics (e.g., OHL teams, population size, labour force profile, etc.) and/or regional interest were chosen.



Table B4: Service Level Comparisons in Selected Municipalities

Municipality	Estimated Population	No. of Ice Pads	Pop. Per Ice Pad (Total)	Pop. per Ice Pad (Ages 5-19)*
Niagara Falls	94,000	5	18,800	2,871
Pickering	94,400	5	18,880	3,675
Milton	95,879	6	15,980	2,793
Ajax	119,800	5	23,960 (low)	4,857 (low)
Whitby	131,600	10	13,160 (high)	2,727
St. Catharines	140,660	8.9	15,805	2,450 (high)
Barrie	142,000	7.5	18,935	3,776
Oshawa	158,400	9.5	16,675	2,812
Burlington	175,779	11	15,980	2,879
Hamilton	519,949	23	22,605	4,108
Benchmark Avg.	167,247	9	17,960	3,205

Notes: Population of 5 to 19 year olds derived from 2011 Census. Quarter or half unit pads reflect event rinks where community access is limited. St. Catharines 2015 population estimate as noted in Section 2.2 of the Master Plan.

In terms of total population per ice pad, there is currently one municipal rink per 15,805 residents in St. Catharines. This rate is greater than all but one of the comparator communities, a higher level of service than the benchmark average which stands at one ice pad per 17,960 population. It is noted that a number of benchmarked communities have younger age profiles and/or are experiencing more significant population growth which has influenced their service levels, but still provide fewer ice pads per population than St. Catharines where the population is aging and is in a lower growth scenario. That being said, the population-based indicator is within a range found among many Greater Golden Horseshoe communities (usually falling between one pad per 12,000 to 20,000 population). Non-municipal ice pads have not been included in the analysis as many have different markets and operating profiles than municipal rinks (e.g. Barrie, Oshawa and Hamilton all have private sector arena operators in their respective communities).

These population-based standards, however, do not necessarily capture market-based demand considerations (such as changing participation rates, aging and diversity characteristics, geographic inequities, etc.). It is widely accepted that children and youth are the primary user of municipal arenas. Looking only at children and youth (ages 5-19), St. Catharines' provision rate (one municipal ice pad per 2,450 youth) is also higher than any of other communities benchmarked at an average of one per 3,205 youth. Based purely on these per capita measures, **the City of St. Catharines offers an above average level of provision with more ice pads per population of children and youth than each of the comparator communities.**

Of note, the City is achieving a service level of one ice pad per 560 registered arena participants (or one per 630 players if excluding Haig Bowl), based upon the registration data articulated in preceding paragraphs. By this metric, the City once again lies favourably on the upper end of the service spectrum when measured by the number of participants (usually communities target one ice pad per 600 to 700 registered participants in more rural communities and 700 to 800 registered users in urban communities). The 2008 Master Plan for St. Catharines utilized one pad per 700 registered participants (at the higher end of the provision standard).

Operating Performance

Actual arena operating revenues and costs have been scrutinized for the 2009 to 2014 years, based upon data provided by the City of St. Catharines. Table B5 articulates that over this time, the annual subsidy borne by the City has increased by over \$640,000 (67%) to reach \$1.6 million in 2014. The City's has also recovered a lower portion of its operating costs through revenue. Unfortunately, revenues received have been trending downwards (possibly related to the number of unbooked prime hours) with the City collecting approximately \$229,000 less revenue in 2014 compared to 2009.

Meetings with arena users interested in the arena budgeting and reporting process indicate there is confusion and lack of clarity into how budget items are presented. A cursory review of the operating budgets suggests there is merit in exploring whether the City's accounting of these facilities conforms to generally accepted municipal reporting standards and best practices in a manner that can be understood by both finance experts and the general public. For example, a review of the Garden City Complex budget references allocations (for both revenue and cost items) from other arenas that is not easily understood. It is noted that there is a fairly low utilization rate of 76% at the Rex Stimers Rink which would also impact revenue significantly at this facility. In addition, the revenue numbers (and therefore the operating deficit) are also affected by the lack of historic revenue from the Ice Dogs OHL Team and the Falcons Junior B team at the Garden City Complex. Clarity and transparency regarding the arena budgets should be pursued.



Table B5: Annual Reported Subsidy by Arena, 2009-2014

	2014	2013	2012	2011	2010	2009
Seymour Hannah S.E.C.	156,554	(39,896)	161,456	102,069	(95,744)	(365,566)
Merritton Arena	44,333	49,037	38,976	86,412	34,892	69,481
Haig Bowl	118,601	132,152	104,890	110,026	123,173	136,211
Bill Burgoyne Arena	201,272	105,253	97,970	105,345	167,526	130,646
Garden City Complex	1,092,299	1,103,081	995,736	1,125,921	898,670	996,074
Municipal Subsidy	\$1,613,059	\$1,349,627	\$1,399,028	\$1,529,773	\$1,128,517	\$966,846
% of Operating Costs Recovered Through Revenue	65%	69%	68%	66%	73%	77%

Source: City of St. Catharines financial reports, 2014

A cursory review of arena rental rates was also undertaken. In 2014, the City of St. Catharines levies a charge of \$148 per hour for youth and \$155 per hour for adult in prime time (exclusive of H.S.T.). A \$10 plus H.S.T. per hour surcharge is also applied to the noted rates. Compared to other major urban centres in Ontario, the City's rates are quite competitive as youth rates are anywhere in the range of \$145 to \$175 per hour while adult rates often fall between \$175 and \$200 per hour. Within Niagara Region, the City's youth and adult prime time rates are more affordable than Welland (\$181 per hour), Thorold (\$174 to \$181 per hour), and Fort Erie (\$165 to \$186 per hour), all of whose rates are standard for youth and adults. In comparison to Niagara Falls, St. Catharines is once again more affordable for adults (\$159 to \$194 per hour) and is competitive with their youth rate (\$149). On this basis, it can be inferred that arena pricing is not a major contributor to the number of unbooked prime and shoulder hours.

Arena Needs

The projection of arena needs is based upon a market-driven level of service, consistent with assessment methodologies utilized across the province. A market-driven standard is able to consider the impact of participation trends, population growth, and demographic factors. It can also be set at a level that is consistent with local circumstances and public expectations, making it responsive to the specific needs of

the City of St. Catharines. In addition, this approach is then compared to actual utilization data (as discussed above) to rationalize the outcome of these results.

As mentioned, the current estimated level of provision in the City of St. Catharines is approximately 1 ice pad per 560 participants (based on 4,976 players for 8.9 ice pads), which by experience is a very high level of service considerably higher than the 700 to 800 participants typically achieved in other urbanized communities (even if excluding Haig Bowl, the service level of one ice pad per 630 registrants is on the high end). Looking just at youth, the City is currently providing one rink per 390 youth registrants (or one per 440 if excluding Haig Bowl) at the present time. From our experience, this level of service for youth participants per ice pad is fairly high; depending on the nature of the programming (most notably rep/travel hockey, which requires more ice time), we normally see a range of 400 to 500 youth participants in more rural communities and 500 to 600 youth participants per pad in urban communities.

The 2008 Recreation Facility Master Plan applied a provision standard of one ice pad per 700 registered arena participants. Despite the City continuing to exhibit higher than average aging trends, considerable erosion in shoulder hour rentals and the availability of prime time ice, and the fact that youth registration rates have somewhat stabilized and rebounded in the past three years (although not to the levels reached ten years ago) provides a basis to carry forward the 1:700 standard for the current assessment of arena needs, rather than decrease the targeted level of service. There is no merit in increasing this level of service particularly with the amount of prime time and shoulder hour ice being available in St. Catharines.

Based upon Table B6, our assessment indicates that the City has available capacity equivalent to approximately 1.8 ice pads based upon the number of St. Catharines residents involved in winter ice sports, and is supported by 837 unbooked prime hours plus another 937 unused shoulder hours (using definitions agreed to by the City and the Arena Partners Committee). This reinforces the City's decision to decommission Haig Bowl as of the current 2014/15 season.

It is recognized that local arenas address a degree of regional demand as there are various user groups whose affiliations span multiple municipalities throughout Niagara Region. In the case of these regional groups, however, the arenas in those various area municipalities address a portion of their demands as those group's memberships are likely to use rinks closer to their homes more often. Further, the current availability of the Ridley College arena for community use provides additional opportunity for user groups (the use of which is likely contributing to the unused prime and shoulder hours at St. Catharines' ice pads as groups seek more desirable prime time hours). In addition, the Meridian Centre and Merritton Arena provide ice availability that is not fully accounted for in the operating hour analyses due to a lack of utilization data.



Table B6: Projection of Ice Pad Needs, City of St. Catharines

	2014	2016	2021	2026
Forecasted Number of Registrants	4,976	4,816	4,875	5,083
Number of Ice Pads Required (based a provision target of 1 ice pad per 700 registrants)	7.1	6.9	7.0	7.3
Available Ice Pads (based on a current supply of 8.9 ice pads*)	1.8	2.0	1.9	1.6

* Supply has been discounted by 1.1 ice pads to account for limitations in community rental opportunities for the Meridian Centre and third party administration of the Merritton Arena.

In addition to the above analysis (which was consistent with the 2008 Master Plan approach) is an alternative evaluation scenario presented with a focus placed squarely on youth users (who constitute the majority of prime time usage). Differentiation between youth and adults is useful since these two groups utilize ice very differently. For example, adult demand is more elastic (i.e. an ability to use non-prime hours or to discontinue play for seasons at a time) and there is greater mobility (i.e. they can use arenas outside the municipality), whereas youth are the dominant user of local prime time ice, which is in limited supply. As previously mentioned, the City is currently providing one rink per 390 youth registrants at the present time.

Based on the aforementioned factors, a provision target of 1 ice pad per 500 youth registrants (ages 5 to 19) is deemed appropriate and applied as a secondary measure for assessing City-wide ice pad needs. This target, which is a slightly more conservative version of one that has been successfully applied in several other communities, assumes the following:

- that youth will continue to use a significant amount of prime time hours;
- that the City will attempt to accommodate the majority of adult ice groups in shoulder or non-prime times, recognizing that certain prime hours not conducive to youth may continue to be used for adult rentals;
- that the intent is to accommodate the needs of all local groups within City (i.e., not regularly renting time outside of the municipality); and
- that groups will be willing and able to pay for the entirety of their ice needs.

Table B7 illustrates application of the preferred provision target, assuming the existing rate of participation is maintained (i.e., at 16%) and that the youth market segment (age 5 to 19) changes at the forecasted rate.

Table B7: Projection of Ice Pad Needs by Youth Users, City of St. Catharines

	2014	2016	2021	2026
Forecasted Number of Youth Registrants	3,478	3,362	3,372	3,567
Number of Ice Pads Required (based a provision target of 1 ice pad per 500 youth registrants)	7.0	6.7	6.7	7.1
Available Ice Pads (based on a current supply of 8.9 ice pads*)	1.9	2.2	2.2	1.8

* Supply has been discounted by 1.1 ice pads to account for limitations in community rental opportunities for the Meridian Centre and lack of operating data for the Merritton Arena.

As with the projection using total number of registrants, the youth user projection also yields a ten year availability of two ice pads over and above what would be needed and again justifies the decision to decommission Haig Bowl for ice usage. Forecasted growth in the 5 to 19 age group results in modest growth in the projected number of youth players, due to the assumption that the penetration rate will remain constant (but recognizing that provincial and national trends are showing a decreasing participation rate). Therefore, ice pad demand is forecasted to slightly increase but again to a level where supply continues to exceed demand.

The higher than required supply of ice pads that are noted in the total registrant and youth registrant calculations are reinforced by the 1,770 unbooked prime time (837 hours or 47% of all unused time) and shoulder hours (933 hours or 53% of unused time). Averaged across the 22 week season, this equates to 80 surplus hours per week, and assuming a 64 hour prime and shoulder operating week per pad, equates to 1.25 surplus ice pads. On the basis of unused time and pad per participant metrics, the Master Plan's assessment indicates that the City of St. Catharines is providing 1.5 to 2.0 more ice pads than needed, a level which is expected to carry through until the end of this master planning period assuming no net changes to the ice pad supply and penetration rates in winter ice sports. On the basis that Haig Bowl permanently remains decommissioned for ice usage over the next ten years, the City would be providing 0.5 to 1.0 more ice pads than required.

Future Directions

Barring any unforeseen developments, a supply of 7 municipal ice pads (including Merritton Arena but excluding the Meridian Centre) is anticipated to be adequate for meeting the needs of City of St. Catharines residents for the next ten years and likely for some time beyond this period. By comparison, the 2008 Recreation Facility Master Plan also projected that the City would require 7 ice pads by the year 2026 when applying the 1:700 total registrant standard. With a current supply of 8.9 ice pad equivalents, **no net additions to the supply of ice pads are recommended during the ten year time frame of the Recreation Facility and Programming Master Plan.** The decision to not provide additional ice pads is based on the following summary of notable factors articulated in this assessment:

- Analysis revealing that 1,770 unused optimal prime and shoulder operating hours equates to 1.25 ice pads being available over the course of the season (noting that data provided for the Merritton Arena suggests that the facility is well-utilized but does not employ the City's Ice Allocation Policy). The amount of available hours reinforces the fact that the City was justified in reducing its ice supply by one ice pad (i.e. decommissioning the Haig Bowl) and leasing it for dry floor uses.
- Analysis of total registration and youth registrations in relation to market-driven provision standards yields availability of the equivalent of nearly two ice pads, reinforcing the operating hour assessment.
- The City currently provides more ice pads per children and youth than any of the nine other benchmarked municipalities, and the second highest level of service overall.
- The statistically valid poll of St. Catharines' households revealing that participation has decreased from 31% to 23% in hockey and figure skating between 2006 and 2014 (and lowering from the sixth to ninth most popular activity during that time). Accurate to within $\pm 5\%$, the current poll suggests arena investments receive the lowest level of public support for arena investments among all recreation facility types except curling (45% are opposed to additional arena investments)
- The City's annual arena operating budget has averaged approximately \$1.35 million in tax subsidy over the past three years, plus the ongoing capital investments required with maintaining an aging supply of arenas. It is reasonable to expect operating costs to escalate in a status quo scenario due to capital maintenance requirements, increases in utility and/or staffing costs, and if further declines occur in the number of hours rented.
- The City's ability to finance a new multi-million dollar arena is constrained by its existing debt commitments (e.g. the Meridian Centre, Performing Arts Centre, St. Catharines Kiwanis Aquatics Centre/Dr. Huq Family Library Branch, etc.), infrastructure deficit for all municipal assets beyond just recreation, and the fact that the City no longer collects development charges thereby increasing the reliance of the tax base and debentures to fund new facility construction.

With no net increases to the supply of ice pads recommended, focus must initially be placed on maximizing the effectiveness of the existing arena supply. This involves a multi-pronged approach aimed at:

- a) building upon the internal operational efficiency of the Department;
- b) encouraging greater usage during both prime and shoulder hour periods;
- c) aligning Merritton Arena with municipal values; and
- d) providing a greater understanding/visibility of cost accounting and providing more transparency in the financial reporting for the arena system.

By striving to meet these goals (which will be elaborated upon in the following paragraphs), the City will put itself in a stronger position to truly understand and determine how effectively its arena system is addressing local needs. While the assessments contained herein have demonstrated that there is ice available over and above what is needed, part of the unused time may be filled by having a different system in place that maximizes usage of all City-funded arenas. The experience and information that will be gained through implementation of these goals will then provide a foundation upon which the City can make an informed decision regarding the most appropriate number of ice pads required to serve short and long-term needs.

a) Building Operational Efficiency

In the next three years, it is recommended that the City employ a number of measures aimed at improving its operational efficiency and performance measurement, consistent with the Master Plan's service delivery assessments. Specifically for the arena system, the City should continue to monitor local participation and population forecasts, as well as the regional ice arena market as these factors could impact local demand and decisions regarding future facility provision. Longer term with provincial and national trends showing decreasing levels of participation in organized hockey, and with the aging of the St. Catharines' population, the City will need to closely monitor participation levels particularly if participation levels begin to decline.

In this regard, requirements should be in place for affiliated user groups to provide 'actual' participant numbers and addresses of registered players (separately reporting City of St. Catharines' residents versus non-resident participants) to allow for ease in trend analysis and ensuring the provision of ice pads is consistent with demand. To support such efforts, the City's Ice Allocation Policy should be revised to provide local residents with the greatest priority to prime time slots, potentially by differentiating affiliation status of groups by the percentage of local residents in their membership, as well as providing non-profit organizations greater priority than commercial users. The City should also utilize, as a starting point for allocation, the 'actual' amount of ice utilized by groups in the preceding year rather than what was initially allocated (to recognize hours turned back after the allocation process from the previous year).



The use of technology as a performance tool should continue to be explored on a regular basis. As an example, the City's existing system is not conducive to allowing last-minute rentals or 'spot bookings'. If the systems is improved to allow these to take place, and combined with a marketing strategy to effectively communicate if/when ice time is available within a 24 or 48 hour window, the City could potentially generate additional bookings in prime and shoulder hours (this also aligns with another one of the goals stated above). Representatives from the Arena Partners Committee have indicated that such measures would increase their user groups' utilization of available ice time.

b) Encouraging Greater Use in Prime and Shoulder Times

The City should explore a variety of strategies aimed to stimulate greater usage, particularly during shoulder hours. As discussed above, communication processes regarding last minute rental opportunities should be improved so that local users are aware of available ice and could potentially book this time at a discounted rate. In this way, users benefit from lower cost ice time while the City recovers a portion of revenue that would otherwise be lost through 'burnt ice'. Other strategies aimed at increasing bookings could centre upon different scheduling practices that maximizes the number of contiguous blocks of time (e.g. potentially by altering when City programs take place, requiring users to take a slot that is based on scheduling efficiency rather than their historical start time, etc.) and/or by setting a differentiated rate for shoulder rentals thereby providing a financial incentive for groups to book these times.

c) Aligning Merritton Arena with Municipal Values

At present, the Merritton Arena is operated autonomously by the Merritton Lions Club while receiving capital and operating funding support from the City of St. Catharines. While there is no evidence at present to suggest that the Lions Club should not operate the facility, as a City-owned arena it is important that this facility embody the spirit of municipal values. Therefore, the City should renegotiate the current agreement for Merritton Centennial Arena to ensure that City policies, including the Ice Allocation Policy, are required to be applied consistently across all municipally owned arenas/ice pads in St. Catharines. As part of this, the City should take a more proactive role in reviewing which organizations are utilizing the Merritton Arena, the number of participants associated with these groups, and monitoring prime time and shoulder hour utilization rates at this facility. In doing so, the City should become more engaged/aware of how the Merritton Arena is operating on a year-to-year basis and how its provision of ice relates to the overall supply/demand for ice time among St. Catharines' arena users and residents.

d) Understandable, Transparent Financial Reporting

As discussed earlier in this assessment, user groups have noted that it is difficult to understand the financial reporting and budgeting documents prepared for the arenas. Of particular concern is the Garden City Complex and the lack of clarity as to what costs and revenues are (or are not) reported within the budgets. Clarity and transparency regarding the arena budgets, if not already in

accordance with generally accepted standards, should be pursued so that residents, user groups, City Staff and City Council understand the true costs associated with maintaining the arena supply at its present level.

Upon implementation of the above-noted and other appropriate strategies within the next three years, the City should revisit the supply of ice pads. The City's current supply of 7.9 ice pads (exclusive of the currently decommissioned Haig Bowl) would suffice if utilization rates increase as a result of improved efficiencies, policies and procedures. Depending upon how well the Merritton Arena performs in the future after better aligning with municipal values, **it is important to remember that the supply could in fact be considered as the equivalent of up to 8.25 ice pads** (as Merritton Arena has been discounted in the supply due to independent administration that deviates from the Ice Allocation Policy, resulting in the City's lack of ownership of the utilization and registration levels for this facility, and the ability to accurately determine how this facility contributes to meeting City ice user needs.

However, if utilization rates remain at current levels or decreases despite implementation of the noted strategies, an adjustment to the supply should then be considered unless the City of St. Catharines makes a conscious decision to oversupply ice pads, and thus operate under a low usage model and accept the financial costs of doing so. An adjustment to the supply of ice pads should be rationalized through the second phase ice facility strategy (i.e. after measures to improve arena efficiencies, align Merritton Arena with municipal values, etc.) that considers alternatives to meeting the long-term need which could consider a wide range of options guided by geographic location, level of utilization, building condition, financial performance and partnership opportunities at a minimum.

Ultimately, the City must make a decision on how St. Catharines wishes to rationalize its arena supply in relation to its costs and level of utilization. **It is recommended that the City of St. Catharines re-evaluate within a three year time frame the appropriate supply of ice pads once a number of short-term recommendations have been considered. Based on our current assessment, the mid-term target is likely 7 ice pads (plus the Meridian Centre) over the master planning period** unless utilization significantly increases or the City chooses to provide an enhanced level of service by which the City accepts the financial costs of doing so in exchange for its desired level of community benefit in providing excess ice in both prime and shoulder hours.

Recommendations

- #1 The ice needs assessment has indicated that the supply of current ice pads exceeds the current demands required to serve user groups and the community beyond the next ten years. However, prior to considering a further reduction in the supply of arena ice pads, however, it is recommended that the City maintain its current supply (with Haig continuing to be decommissioned and includes the independently operated Merritton Arena and the Meridian Centre). A two phased approach is recommended to confirm ice pad demand with the first phase taking place over the next three years while the City undertakes the following actions:



- a) Develop strategies aimed at increasing prime, shoulder and weekend hour utilizations through differentiated pricing strategies, alternative scheduling and allocation approaches, encouraging 'spot' bookings, etc.
 - b) Future assessments of operating and utilization performance should include prime time hours as defined by the Ice Allocation Policy for its tracking and reporting purposes (i.e. the 10pm and 11pm time slots for weekday and 9pm to 11pm for weekend rentals, as well as the 7am to 8am weekend time slots).
 - c) Renegotiate the Merritton Centennial Arena agreement to require that City policies be fully implemented thereby ensuring a consistent and equitable approach across the City-owned arena supply in St. Catharines, including implementation of the Ice Allocation policy. As part of this, the agreement should provide the City full access to utilization, registration information and relevant financial information to allow for the City to integrate into its performance measurement exercises.
 - d) Revise the existing Ice Allocation Policy to: i) differentiate the priority of ice allocation of residents versus non-resident and commercial versus community; ii) differentiate with a higher priority given to the allocation of ice for community use versus commercial use; and iii) utilize the 'actual' amount of ice utilized by groups in the preceding year as a starting point for allocation rather than what was initially allocated (to recognize hours turned back after the allocation process from the previous year).
 - e) Review the arena budgeting practices to ensure alignment with best practices and optimize understandability to the general public.
 - f) Monitor the planning exercise being undertaken by Ridley College for its campus, to determine potential impacts, if any, on the availability of the existing ice pad on community use.
 - g) Continue to decommission Haig Bowl for ice purposes (noting that dry floor uses would continue as long as sustainable to do so) subject to an arena facility provision strategy based upon the findings of the first phase recommendations.
- #2 That City Staff review ice pad performance within three years, to re-evaluate ice needs following the consideration of the actions associated with the first phase recommendations (Recommendation #1). This will involve an updated assessment of user group registrations, utilization during prime and shoulder periods, program fill rates, capital/operating cost requirements, demographics of the community, etc. to confirm longer-term ice needs. It is expected that this process will determine the City's required supply of ice pads to meet community needs in the long-term.

- a) Should surplus ice be determined at this time resulting in further reductions to the supply of ice pads (i.e. over and above the current number of operational ice pads), it is recommended that the City adjust the arena supply after examining a wide range of options guided by geographic location, level of utilization, building condition, financial performance and partnership opportunities at a minimum.
 - b) Should the City determine an over-supply of ice pad exists but decides to continue to retain 8 ice pads (plus the Meridian Centre), the rationale for doing so would be on the basis that over-supplying arena facilities is a means to further recreational objectives, including:
 - i. provision of surplus rental and programming capacity;
 - ii. maximizing the convenience of playing ice sports by increasing availability of prime times, particularly to adult users;
 - iii. maintaining strong geographic coverage, particularly south of the Q.E.W.;
 - iv. accommodate a portion of regional ice demand;
 - v. the City accepts the ongoing financial costs associated with required capital investments in the aging arena infrastructure, along with annual operating deficit of an over-supply; and
 - vi. winter ice sports are deemed to be a higher community need than other possible activities or facilities that are required, but would be otherwise unfunded or underfunded, given finite budgetary resources in the Parks, Recreation and Culture Services portfolio (e.g. spaces for general purpose activities, youth and/or older adult programming, wellness and active living programs, etc.).
- #3 Regardless of the number of pads the City should choose to retain, initiate potential partnership discussions with an educational institution, area municipality, or other suitable partner to construct a new arena complex to replace aging arena infrastructure in St. Catharines with the number of ice pads determined based upon the three year review noted in Recommendation #2. At a minimum, any such agreement should generally align with partnership principles found in Section 5.5 of this Master Plan, ensure sufficient community access for local residents at a competitive rate, require equitable financial contributions to capital and operating requirements relative to the degree of access obtained, and be strategically located within reasonable access to local residents.