Ice Rink Utilization and

Population Projection Study

Northeast Avalon Region

June 2015

Executive Summary: While the addition of four new ice surfaces in the St. John's Census Metropolitan Area (CMA) over the past two years has served to increase the supply of ice time to all user groups, this increase in supply appears to have been almost completely offset by an increase in demand (or at least the alleviation of the long-standing shortage in ice rink supply within the region). This statement is supported by the finding that almost all of the existing ice rental facilities in the region report business as usual with respect to the demand for ice time (relative to existing capacity). During the consultation process for this study, only one of the rink owners interviewed suggested that because of the increase in the supply of ice rental hours their facility had moved from a state of profitability to one where their operation was 'marginal'. In that case the operator indicated that they had lost 5 rental hours weekly to the new facility in Paradise and as a result were scrambling a little to replace the hours. This facility was the most geographically remote facility i9n the study region and was also located relatively close to the new two-surface facility in Paradise and would likely have been considered from the outset as being the most susceptible to ice rental losses.

While the supply of ice surfaces in the St. John's CMA has increased dramatically in recent years, this increase in supply has been offset by a rather significant increase in demand. In recent years, rate of population growth in the region (notably in those areas that are on the periphery of the St. John's CMA, such as the area north of St. John's), is projected to be significantly above the regional and provincial averages. Since the last census (2011), the rate of increase in the populations of the towns of the Northeast Avalon: Logy Bay-Middle Cove-Outer Cove; Torbay, Flatrock; Pouch Cove and Bauline has increased by between 3 and 14% - a figure that is significantly higher than the provincial average . As a further example of the increased demand being placed on public facilities in this area, one needs look no further than the rate of increase in Kindergarten registrations. Kindergarten registrations for the coming year in this area are expected to increase by 35 percent across the region. In time, this increased growth in the number of residents aged 4-5 will be felt in increased demand for all of the public services which this age group will require as it gets older – including minor hockey, figure skating and other recreational activities. F0or example, it is projected that, given the current participation rate in minor hockey in this area and the present rate of population growth, the northeast minor hockey association may have as many as 900 participants by the year 2018.

In addition to the increase in the number of younger children in the area, there has also been a fairly significant increase in new home construction, with approximately 175 new units having been constructed over the past 3 years.

This region also has by far the highest level of participation in minor hockey in Newfoundland and Labrador, with more than 20 percent of the children in the area presently registered in minor hockey – compared to 13 percent in the CMA and 10 percent across the province. The long and storied hockey history of the region appears to be alive and well and poised for further growth.

This combination of population growth, increased housing development, higher than average participation levels in minor hockey (and all forms of recreation) and the continued high demand for ice time in the northeast region, in particular, suggests that there will be a need for second ice surface in this area by the year 2020.

1.0 Introduction: Regional Demographic Profiles – North-Northeast Avalon

The study area for this socio-economic and demographic study of the most north easterly portion of the Avalon Peninsula includes the following towns: Logy Bay-Middle Cove-Outer Cove, Torbay, Flatrock, Pouch Cove-Shoe Cove, Bauline and Portugal Cove-St. Philips. While the majority of these towns are presently part of the Jack Byrne Arena Association, the towns of Bauline and Portugal-Cove St. Philips have been added for long-term market analysis purposes.

As a starting point, a socio-economic and demographic profile of each town will be developed. These profiles will then be used to inform subsequent decisions related to the current and potential service offerings at the Jack Byrne Arena in Torbay.

1.1 Regional Overview: The population base for the towns that are presently members of the Jack Byrne Arena Association stood at 12,815 as of the 2011 census, while the population of those towns in the region that are interested in joining this user group stood at 7,760; the total population of both the user and non-user groups as of the 2011 census stood at 20,575.

Since 2011 there has been a significant increase in housing development in virtually all of the currently affiliated towns, as well as in the non-affiliated towns. While accurate population data is difficult to establish in the four years that have passed since the last census, there is significant anecdotal evidence (and school registration data) to suggest that in each of these areas the population aged 0-4 is on the rise.

Table # 1: Population by Town 2011 & 2015 (estimated).

North-north East Towns	2011 Census Data	2015 Population Estimate
Torbay	7,395	7,700
Flatrock	1,465	1,550
Logy Bay-Middle Cove-Outer Cove	2,100	2,250
Pouch Cove-Shoe Cove	1,865	1,930
Bauline	395	410
Sub-total	**13,220**	**13,750**
Portugal Cove-St. Philips	7,365	7,700
Total Population	**20,585**	**21,450**

As can be seen in Table # 1 above, the combination of the incremental population growth rate in the region and the addition of Portugal Cove St. Philips to the user group, has the effect of increasing the user group population base by 62% based on the population distribution for the four-year period 2011-2015. (21,450 – 13,200= 8,250; 8,250/13,220 = 62.5%).

The following table illustrates the Kindergarten registration levels for the 2015-16 year for all of the primary schools located in both the current and proposed catchment area. Given that this registration data is reasonably accurate, it would appear that the overall population of the area is on a continued growth trajectory with an estimated increase in Kindergarten registrations of 35 percent. (See Table # 2 below).

Table # 2: School age Kindergarten Registrations (2011-2016)

School	2015-16 Registration Profile	Five Year Age Group Population Estimate (2011-16)	2011 Population Levels (aged (0-4)	% Change in Population Aged 0-4
Holy Trinity Primary (Torbay)	140	575	320	+80%
St. Francis of Assisi (LB-MC-OC)	40	200	100	+100%
Cape St. Francis Elementary (Pouch Cove-Shoe Cove-Flatrock-Bauline)	35	175	225	-22%
Sub-total	210	925	645	+44%
Beachy Cove Primary Portugal Cove-St. Philips	125	625	510	+23%
Regional Catchment Area Average	325	1,550	1,155	+35%

On a regional basis there appears to have been a significant increase in the number of children aged 0-4 in this area (+35%). This suggests that even without the addition of Portugal Cove-St. Philips to the mix, there will come a time (relatively soon) when the demand for certain programs at the Jack Byrne Arena will out strip the supply of available hours (most notably minor hockey demand). With a current registration base of just under 700 and a market penetration rate of 13% for minor hockey in the St. John's CMA, one would expect an additional 70 registrants annually without the addition of Portugal Cove to the user group and an additional 80 new registrants – plus those that would transfer to the region from St. John's (estimated to be 190 additional registrants). Altogether, the total estimated increased demand for minor hockey alone as a result of population increases and the addition of two new partner towns is estimated to be 340 participants – or a 50% increase in demand for minor hockey hours at the Jack Byrne Arena. Given that this area has just one ice surface it has (by far) the highest ratio of children aged 5-19 to rinks of any area in the province of NL – see Section 5.0 of this report for additional information.

> **Note:** At the present time the North-north east Avalon region has a 23% penetration rate for minor hockey registrations – as compared to the province of Newfoundland and Labrador which has an effective penetration rate of approximately 10%.
>
> With 30 percent more children already playing minor hockey in the CMA area and 130 percent more in the North-north east area, these higher than average penetration rates and the higher

than average population growth predicted for the area, suggests that there will be a significant increase in the demand for spaces in minor hockey (and for ice time) in the north-north east region of the St. John's Census Metropolitan Area.

1.1.1 Housing Starts: The other related demographic factor that can serve to increase demand for any service within a given area is the rate of new housing construction (typically measured as housing starts over a given period of time).

The following Table illustrates the number of housing starts in the communities located in the current and potential catchment area for the Jack Byrne Arena. As can be seen from the records of recent and planned sub-divisions, the pace of residential development in this area is strong and is expected to continue at its current pace for the next 3-5 years.

Table 3: Recent and Proposed Housing Developments - North-North East Avalon Region

Region	Existing Housing Projects (Total Units 2011)	# of new housing units since 2011 Census (2012-2014)	Approved & Planned Housing Projects (Total Units 2014)	Additional Comments
Torbay	2,590	157	49	Steady over the past 2-3 years
Flatrock	525	91	29	Steady and above average
Pouch Cove	645	61	8	Relatively low
Bauline	110	10	5	Very low; little impact
LB-MC-OC	725	56	20	Steady and increasing
Portugal Cove-St. Philips	2,695	209	63	Highest in the region
Total	7,290	584 (8%)	174 (2.4%)	2.66% average increase in 2012-2014
Source: Canada Mortgage & Housing - Interview May 2015.				

1.1.2 Income Distribution in the Northeast Avalon Region:

Another factor that often serves to limit or influence demand for a particular facility and its offerings is earned income and the related measure of community self-reliance – a measure of the proportion of income in a given region that is earned from market sources – as opposed to transfer payments (such as pension income) that come the region as transfer payments. In a sense it is an indicator of a community to sustain itself.

The North-north east Avalon is one of the wealthiest areas in the province of NL and features a number of communities where both the earned income index and the self-reliance index are well above the provincial average. This suggests an above average ability to purchase goods and services that are available at higher than average price levels and an above average ability to participate in health and wellness programs of all types.

The following table presents summary population income and self-reliance data for all of the communities that are presently in the catchment area of the north east Avalon.

Table # 4 Summary Socio-Economic & Demographic Data - Towns of the North East Avalon

Towns	**2011 Population**	**2015 Population Projected**	**Rate of Population Growth (%)**	**Family Income Index vs. Province**	**Self-Reliance Index vs. Province**
Torbay	7,395	7,700	4%	133	112
Flatrock	1,465	1,550	7%	122	111
Logy Bay-Middle Cove-Outer Cove	2,100	2,250	7%	157	114
Pouch Cove (Shoe Cove)	1,865	1,930	4%	100	103
Bauline	395	410	4%	n/a	n/a
Sub-total Existing Catchment Area	**13,220**	**13,750**			
Portugal Cove - St. Philips	7,365	7,700	5%	150	112
Grand Total Extended Catchment Area	**20,585**	**21,430**	Provincial Average (1.8%)	Provincial Baseline = 100	Provincial Baseline =100

As can be seen in this table, three of the towns that are currently supporting the operation of the Jack Byrne Arena have significantly higher than average. In fact, the population growth rate in the Towns of Flatrock and LB-MC-OC is 4 times the provincial average. These towns also report significantly higher than average individual and family earning power and a much higher than average self-reliance ratio – the later trend suggesting that these trends are likely to continue for some time.

2.0 The Towns of the Northeast Avalon (Participating and Non-Participating): The section of the report presents demographic and income data on a town by town basis. This serves to allow the reader to consider the impact of the demand trends among those towns that presently participate in the operation of the Jack Byrne Arena (JBA), while also allowing for a separate consideration of the impact of adding one or more of the towns of Portugal Cove-St. Philips and Bauline to the current user/funding group.

2.1 The Town of Torbay: With the largest population in the region, and located in close proximity to the Jack Byrne Arena, residents of Torbay are likely the biggest single JBA user group. The town population (as of the 2011 census) was 7,395 or 57 percent of the current catchment area for the Jack Byrne Arena. It has experienced a 50 percent increase in its population base over the past 15 years and all indications (School registrations and housing starts suggest that this trend will continue, if not accelerate). The average number of children aged 0-4 has increased by 80% since the 2011 census. The number of children registered for kindergarten this year (2015-16) in Torbay is expected to exceed 140, suggesting that here will likely be 700+ children aged 0-4 in Torbay by the time the next census results are available (in 2017). With an average market penetration rate for minor hockey of `13% on the northeast Avalon, it is expected that an additional 100 children will be entering minor hockey (from Torbay alone) in 5 years' time.

Torbay has experienced a dramatic increase in the number of residential dwellings in its catchment area + 17% over the five year period 2006 to 2011, with an additional 157 new homes having been built since the last census.

Torbay also has a younger than average population base with its biggest five year population peak sitting at 35-39, as compared to the province as a whole with a peak at 55-59. This also suggests a younger more active population with more diverse recreation and fitness needs.

The average income in Torbay is also 20 percent above the provincial average suggesting a above ability and willingness to pay for recreational services such as minor hockey – generally considered to be one of the most expensive participation sports for children. (Note: The participation rate in minor hockey on the northeast Avalon is the highest in NL at 13% - a full 30% higher than the NL or Canadian average). Average family income is Torbay is also significantly above the NL average (40 percent). The final measure of economic stability and purchasing power is reflected in the self-reliance ratio for the Town of Torbay – at 91 percent it is a full 10 points higher or 12 percent higher than the provincial index. Conversely, less than 3 percent of children aged 0-17 received income support – suggesting a higher than average proportion of families that can afford to place their children in minor sports such as hockey.

2.2 The Town of Logy Bay-Middle Cove-Outer Cove: While it has a smaller than average population base for the region (with approximately 2,250 residents) the Logy Bay – Middle Cove –Outer Cove region is one of the fastest growing towns in the region. It also has the highest per capita income in the region, together with the highest self-reliance ratio and the lowest unemployment levels.

Given the relative close proximity of the Town of Logy Bay – Middle Cove – Outer Cove to the Jack Byrne Arena, it is also reasonable to assume that residents of this area will also be higher than average users of the facility – not just for activities such as minor hockey, but also for walking and various entertainment events.

Over the last 2-3 years there have been a number of housing developments launched in this area, with more than 100 building lots having been approved for development. To date, approximately 1/3 of these lots have been developed and the homes are occupied. Recent discussions with Town Manager Adele Carruthers confirmed that during the period 2014-18, 165 lots will be approved and developed, suggesting that more than 400 individuals will be added to the town's population via in-migration. This fact, coupled with the birth rate (approximately 20) suggests that the population of the town of LB-MC-OC will likely exceed 2,750 by 2018.

LB-MC-OC has also experienced a dramatic increase in the number of new residential dwellings in its catchment area in recent years. For example, during the period 2004-2008 there were 65 new homes built, while in 2009-2014 there were 178 new homes built and as noted above this pace of residential development is expected to continue for the next 5 years. LB-MC-OC also has a (slightly) younger than average population base, with its biggest five year population peak sitting at 50-54, as compared to the province as a whole with a peak at 55-59. This, coupled with the residential development profile outlined above, suggests that the LB-MC-OC area is likely to get younger and have more school aged (minor hockey playing) kids in the years to come.

The average income in LB-MC-OC is significantly higher than the NL average (+60 percent). Indicating an above ability and willingness to pay for recreational services such as minor hockey – generally considered to be one of the most expensive participation sports for children. (Note: The participation rate in minor hockey on the northeast Avalon is the highest in NL at 13% - a full 30% higher than the NL or Canadian average).

Average family income is LB-MC-OC is also significantly above (67 percent). The final measure of economic stability and purchasing power is reflected in the self-reliance ratio for the Town of LB-MC-OC – at 92 percent it is 11 points or 13 percent higher than the provincial index. Conversely, less than 1 percent of children aged 0-17 received income support – suggesting a higher than average proportion of families that can afford to place their children in expensive participation sports such as minor hockey.

2.3 The Town of Flatrock: While it has a smaller than average population base for the region (with approximately 1,500 residents) the Flatrock area has recently benefited from the completion of the Torbay By Pass Road – which effectively made the drive to St. John's a little faster and perhaps psychologically making this area seem less distant from the City of St. John's. This coupled with recent retail developments in northern most area of St. John's has served to make the area somewhat more urban in its orientation. As a result, demand for housing in this area is expected to increase in the coming years. In time this will also bring additional residents, thereby increasing demand for services such as minor hockey and ice rentals in general. Average income for males in this area is 30 percent higher than the NL average – as was the case for the married couples in the Flatrock area. The self-reliance ratio in Flatrock is 8 percentage points or 10 percent higher than the provincial average, suggesting that residents of this area also have a higher than average earning and spending ability for programs such as minor hockey (that are more expensive than most children's recreational programs.

Given the reasonably close proximity of the Town of Flatrock to the Jack Byrne Arena, it is reasonable to assume that residents of this area will be average users of the facility – as noted above the completion of the Torbay bypass road puts the rink within a 5-10 minute drive for most Flatrock area residents.

In the last 2 years there have been a number of housing developments launched in this area, with more than 30 units having been developed and occupied each year since 2012. This would put the town of Flatrock on a development pace with that of Logy Bay-Middle Cove-Outer Cove - a town that is 25 percent larger in population presently. There has been a 30 percent increase in the number of dwellings in Flatrock between the last census and the previous census.

As a result, it is not unreasonable to expect that the Town of Flatrock will have 2,000 residents by 2020 – if not before. Flatrock has a younger than average population, with its peak population being aged 40-44 as compared to the NL average (55-59), suggesting a higher than average proportion of individuals aged 5-19 as well. In fact Flatrock has more children aged 5-14 than Logy Bay-Middle Cove-Outer Cove – a neighbouring town with 500 more residents. This, together with the residential development and economic profiles outlined above, suggests that the Flatrock area is likely to continue to get 'younger' and have more school aged (minor hockey playing) kids in the years to come.

(Note: The participation rate in minor hockey on the Northeast Avalon is the highest in NL at 13% - a full 30% higher than the NL or Canadian average).

The final measure of economic stability and purchasing power is reflected in the self-reliance ratio for the Town of Flatrock - at 89 percent it is 8 points or 10 percent higher than the provincial index. On a positive note and also reflective of a strong local economy, only 5 children in the Flatrock area were from families that were receiving income support.

2.4 The Town of Portugal Cove-St. Philips: With an estimated current population of approximately 7,500, the Town of Portugal Cove-St. Philips is the second largest town within the North-north east Avalon region and has a mere 20 fewer residents than the largest town in the region (Torbay). While this town is not presently affiliated with the towns which currently provide financial support to the Jack Byrne Arena, there have been preliminary discussions between the Board of Directors of the Jack Byrne Arena and the Town Council of Portugal Cove-St. Philips with respect to Portugal Cove-St. Philips joining this group. Given the overall population of the town of Portugal Cove-St. Philips, any move to add this community to the user group would effectively increase demand for ice time, in particular, by more than 50% over present levels – assuming a complete integration of players from the Portugal Cove-St. Philips area. However, it should be noted that the travel distance from the Town of Portugal Cove-St. Philips to the Jack Byrne Arena is between 16 and 20 kilometers depending on the route chosen. Given that the travel distance to St. John's is similar, it is not a certainty that all of the children currently living in the Portugal Cove-St. Philips area who are playing minor hockey in St. John's or elsewhere, would decide (along with their parents) to switch to the North East Avalon Minor Hockey Association.

The town population (as of the 2011 census) was 7,365 or approximately 55 percent of the current catchment area for the Jack Byrne Arena. It has experienced a 20 percent increase in its population base over the past 9 years and all indications (school registrations and housing starts suggest that this trend will continue, if not accelerate). The average number of children aged 0-4 has increased by 25% since the 2011 census. The number of children registered for kindergarten this year (2015-16) in Portugal Cove-St. Philips is expected to exceed 125, suggesting that here will likely be 625+ children aged 0-4 in the Portugal Cove-St. Philips area by the time the next census results are available (in 2017). With an average market penetration rate for minor hockey of 13% on the northeast Avalon, it is expected that an additional 80 children will be entering minor hockey from Portugal Cove-St. Philips (alone) in 5 years' time.

The Town of Portugal Cove-St. Philips is also a younger than average town, with its population peak being aged 35-39; 20 years younger than the NL average of 55-59. In addition, live births in this town over the past 5 years are higher than they have been for more than 25 years.

Portugal Cove-St. Philips has also experienced a dramatic increase in the number of residential dwellings in its catchment area – 16% over the five year period 2006 to 2011, with an additional 210 new homes having been built since the last census. Given an average household size of 3.0, this serves to have added an additional 630 residents to the area via new home construction alone. Given these new home construction results, it Is not surprising that residual net migration in this area (over the past 5 years) was double that of the province of NL - 1.02% versus 0.50% overall, suggesting that the new housing starts in the area and the current birth rate among residents will serve to sustain the population of the area for the next 15-20 years at current or higher levels.

Consistent with a pattern that has been observed across the region (in Flatrock, Logy-Bay-Middle Cove-Outer Cove, in particular) the average income for males in the Portugal Cove-St. Philips area is 32 percent higher than the NL average, while total family income in this area is 30 percent above the NL average. In addition, the self-reliance ratio in this area is almost 10 percentage points (or 12 percent) higher than the NL average. Finally, the number of children in families receiving income support in this area (70), is somewhat lower than for similarly sized towns in Newfoundland and Labrador.

The average family income in Portugal Cove-St. Philips is also 20 percent above the provincial average suggesting an above average ability and willingness to pay for recreational services such as minor hockey – generally considered to be one of the most expensive participation sports for children. (Note: The participation rate in minor hockey on the northeast Avalon is the highest in NL at 13% - a full 30% higher than the NL or Canadian average). Average family income is Torbay is also significantly above the NL average (40 percent). The final measure of economic stability and purchasing power is reflected in the self-reliance ratio for the Town of Portugal Cove-St. Philips – at 91 percent it is a full 10 points higher or 12 percent higher than the provincial index. Conversely, less than 3 percent of children aged 0-17 received income support – suggesting a higher than average proportion of families that can afford to place their children in minor sports such as hockey.

Overall, the Portugal Cove-St. Philips area stands out as being significantly larger than many of the towns that currently support the operation of the Jack Byrne Arena. In fact, the addition of this town to the funding group should likely only be considered once the decision to fund and develop a second ice surface at the site of the existing facility has been made. With approximately 675 children presently enrolled in minor hockey in the area, adding another 200 (0.13 regional penetration rate X 1,455 kids aged 5-19 in PC-SP) via the inclusion of Portugal Cove-St. Philips would most certainly suggest the need for another rice surface – at least from the perspective of those involved in Minor Hockey.

2.5 The Town of Pouch Cove (including Shoe Cove): With an estimated current population of approximately 1,865, the Town of Pouch Cove is, in many respects, similar in size and municipal infrastructure requirements to the communities of Flatrock and LB-MC-OC on the Northeast Avalon and, like its neighbouring community (Flatrock), has benefited greatly from the completion of the Torbay bypass road. While the drive to St. John's from Pouch Cove has been reduced by approximately 25 percent and has served to make Pouch Cove more accessible in general terms, the drive from Pouch Cove to the Jack Byrne Arena has been reduced significantly and has generally made access to the Arena from the Pouch Cove-Shoe Cove area much easier.

The population of Pouch Cove (as of the 2011 census) was 1,865. The rate of new home construction and the projected Kindergarten enrollment in the area suggests that the population of this area will exceed 2,000 as of the 2016 census.

The Town of Pouch Cove is also a younger than average town, with its population peak being aged 35-39 and 40-44; or 15- 20 years younger than the NL average of 55-59. In addition, live births in this town over the past 5 years are 10 percent higher than they have been for more than 20 years.

Pouch Cove has also experienced an increase in the number of residential dwellings in its catchment area – 12% over the five year period 2006 to 2011, with an additional 60 houses having been built in the three years since the last census, Pouch Cove is on pace for a 14 percent increase in new home construction during the 2011-16 census period. Given an average household size of 3.0, this serves to have added an additional 300 residents to the area via new home construction alone. Revised population estimates suggest that a total are a population of 2,150 by the end of the current census period would not be unwarranted.

The average income for males in the Pouch Cove area is only marginally higher than the NL average – at 5 percent – compared to other towns in the region that are in some cases significantly more than 10 percent higher than the NL average.

The average family income in Pouch Cove is also marginally above (5 percent) the NL average, suggesting that while local area residents may be somewhat more challenged to pay for relatively expensive sports like minor hockey, their current income levels should be able to support such expenditures.

The Local Service District of Bauline: With an estimated current population of approximately 400, the Town of Bauline is by far the smallest town (Local Service District) within the outer boundary or catchment area of the Jack Byrne Arena. While the addition (or subtraction) of the residents of Bauline will not significantly influence the current or projected usage levels at the Jack Byrne Arena, they should be considered as a part of the overall demand analysis.

From a population dynamics perspective, the Bauline area closely mirrors the broader NL community profile. The peak resident age is 50-54, with the median age in the community being 40 – as compared 55-59 and 44, respectively for the province of Newfoundland and Labrador as a whole.

There were approximately 110 single family dwellings in Bauline as of the 2011 census, with 2, 3, and 5 dwellings having been completed and occupied in the three years since the last census. Employment income in this region appears to be higher than average, although the type of income noted in the Bauline report is not directly comparable to other community income data in the Government of Newfoundland Community Accounts, so caution should be exercised when interpreting this particular piece of information. That said, the Bauline area also reports significantly above average employment levels (92% versus 78% provincially). This serves to add some validity to the income data noted above.

While the total numbers are relatively small, the number of births in the Bauline area has increased by 25% over the last two reporting periods. At the present time there are approximately 75 individuals aged 5-19 in the Bauline area. With 13% typically playing minor hockey, this equates to approximately 10 participants – as such this level of participation would not appear to influence an expansion decision one way or the other. The relative distance between the jack Byrne arena and Bauline is such that area residents might also be somewhat less inclined to use the facility as a walking or exercise.

Section 3.0: Current Market Penetration Rate for Minor Hockey in the Northeast Avalon Region

This section of the report combines the current and projected regional population data with provincial data and subsequently compares the age group population data for the ages when children are most likely to be involved in minor hockey, and then compares the market penetration rate for minor hockey in this area to the provincial penetration rate as verified by HNL (Clift 2014, 2015).

As can be seen in Table #5 below, the rate of population increase in this area from the 2006 census to the 2011 census was 16%. And, as was detailed in Table #2 of this report, the projected increase in Kindergarten enrollment in this region is projected to be between 35 and 44 percent – depending on the catchment area (with and without The Town of Portugal Cove-St. Philips).

Table #5: Age Profile (0-19) and Population Projections – Northeast Avalon & Province of Newfoundland and Labrador – (Current Catchment Area(s) Only).

Community	Population 2011	Population 2006	% Increase	2015 Population
Flatrock	1,455	1,195	22%	1,550
Torbay	7,395	6,280	18%	7,700
Logy Bay – MC- OC	2,100	1,820	15%	2,250
Pouch Cove	1,865	1,745	7%	1,930
Sub-total	12,815	11,040	17%	13,430
Bauline	395	335	18%	410
Total Area Population	**13,210**	**11,375**	**16%**	13,840

If we now express the current number of minor hockey players in the region as a percentage of the projected number of children in the region, we see that the current penetration rate in this area is 23%.

Note: The current registration number for 2014-15 is 644. If we then divide this by the projected number of children (2,142 in 2014 X 1.35 = 2,785) we can determine the current (2015) penetration for minor hockey in this region: 644/2,785 = 23%.

Given that minor hockey has a 10% provincial and national penetration rate, we can reasonably conclude that the market penetration rate for minor hockey on the northeast Avalon is significantly higher than the provincial average.

Table # 6 on page 14 presents additional detail in support of this analysis

Table #6: Age Profile (0-19) and population projections - North East Avalon Region and Province of Newfoundland and Labrador

Age Profile (0-19) and projections for Minor Hockey enrollment

Age Group	LB-MC-OC to Pouch Cove			Newfoundland		
	Male	Female	Total	Male	Female	Total
0-4	385	365	700	12,000	12,000	24,000
5-9	450	435	885	12,100	12,200	24,300
10-14	445	365	810	13,000	13,000	26,000
15-19	370	375	330	15,000	14,250	29,250
15-17	222	225	200	9,000	8,550	17,550
5-17	1,117	1025	2,142	34,100	33,750	67,850

Note #1: With 644 children aged 5-17 registered in Minor Hockey in the North-north East Avalon in 2015, this area has a current market penetration rate of 668/2,785 =23% - or 2.3 times the provincial average. In 2011, with 450 children registered and 2,142 kids aged 5-17 the rate was 21 so it is continuing to grow – both on a percentage and numerical basis.

Note # 2: With 644 kids and one ice surface, given the projected rate of increase in the population and the rate of new housing construction and the projected increase in kindergarten enrollments in the region, this data extrapolation exercise confirms the analysis and projections noted earlier in this report.

Section 4.0: Ice Rink Supply & Demand Analysis - Jack Byrne Arena

Introduction: This section of the report deals more specifically with the interrelationship between the demand for ice surface rentals and the supply of ice time (as measured in available hours per week). This analysis takes us outside the boundaries of the towns of the north-north east Avalon, because for many years the demand for ice time on the broader Northeast Avalon has been defined by a number of external factors, some of which relate to the availability (supply) of ice time in the broader Census Metropolitan Area (CMA) of St. John's.

These factors include, but may not be limited to:

1) The number of children playing minor hockey and the goals of each minor hockey association with respect to the provision of ice time;

2) The number of adult hockey players in the many organized leagues that operate throughout the St. John's CMA;

3) The number of groups who play pick-up hockey on a regular (weekly);

4) The growth in women's hockey in the area;

5) The relative size and the demand for ice time associated with various figure skating and learn to skate programs;

6) The growth of various elite hockey programs and hockey schools; and

7) The growth of other sports like sledge hockey and broom ball which all requires ice surfaces for their programs.

4.1: Demand for Ice Time from Minor Hockey

At the present time the long running deficit in the supply of ice time on the north east Avalon (relative to the demand) appears to have eased somewhat relative to previous years. This is primarily a function of two significant developments:

1) There has been a significant increase in the number of available ice surfaces; and

2) There has also been a small (likely temporary) decrease (-3%) in the number of registrations in minor hockey.

However, this latter development requires additional micro-level analysis in order to be fully understood. While demand has declined in the inner city, this decline has been offset by increases in the population density and participation rate for key activities such as minor hockey, in the suburban areas of the St. John's CMA, with areas such as Paradise, CBR and the North-north East Avalon experiencing unprecedented levels of population growth and participation.

Beginning in the fall of 2013 and concluding in the fall of 2015, four new ice surfaces will have opened on the north east Avalon – including 2 in Paradise, 1 in Mt. Pearl and 1 in CBS. This increase in capacity and the associated upgrade in quality will go a long way toward alleviating the shortage of ice time in the St. John's CMA.

However, caution should be exercised when interpreting this latter piece of information. While the total registration numbers are off slightly (down 3%), what is also happening is that the registration profile within the St. John's CMA is shifting – from the urban core to the outer reaches of the CMA. While registrations in the City of St. John's are down by 5 percent, registrations in the other parts of the CMA are either up or stable. In addition, these suburban areas are experiencing increased population growth and a proportionate increase in demand for facilities – including ice time.

Tables 1 and 2 on the next two pages outline these developments in more detail. Table # 3 outlines the (5-17) population distribution in all areas of the St. John's CMA. As can be seen in this table, the number of children in the North-north east Avalon including Portugal Cove St. Philips now exceeds the City of Mt. Pearl – a region that already has 2 ice surfaces.

Table # 7: Detailed Breakout for Economic Zone # 19: St. John's & Northeast Avalon

Col. 1 St. John's CMA Minor Associations	Col. 2 # Registered Per Association 2014/2015	Col. 3 Rinks used in each Association Coverage Area	Col. 4 Total # of Required Hours 2014-15 (actual)	Col. 5 Actual Hours Available to Associations in 2013-14: (Multiple rinks)	Col. 6 Deficit Hours Per Association 2013-14	Col. 7 Hours Required: New Hockey Canada Plan Adopted	Col. 8 Revised Deficit Hours 2014	Col. 9 Available MH hours per rink per week: 2015-16
North East Avalon	672/644	1	50	37	13	68	31	20-24
St. John's Minor	634/597	2	70 (No Avalon Hrs.)	77	0	24	10	70
Avalon Minor	378/380	3	42+	32	12	56	12	28
CBR	975/1,020	3	76+	72	4	102	26 (Zero in 2015-16)	72+
Mt. Pearl	596/557	2	46	40-48	0	70	20	40-48
Goulds Minor	214/194	1	40	40	0	60	10	40+
Totals	**3,464/ 3,392**	**14**	**324**	**298**	**29**	**380**	**80 (max)**	**282**

Note 1: Column 3 total adds to greater than 6 because more than one Minor Hockey Association may rent a given rink.
Note 2: At the present time 11 rinks are available for Minor Hockey. In 2015-16, 12 rinks will be available for minor hockey and other activities that require artificial ice surfaces.

As can be observed in Table # 7 above, as of the end of the 2014-2015 minor hockey season there was a much less significant gap in the number of hours of ice time that would be required to deliver on the desired objective of Hockey Canada and Hockey NL, should HNL decide to go with this option of 1 game and 2 practices per week per child. With the addition of 2 rinks in Paradise and the soon to be completed second rink in CBS, the ice rink shortage in the CBR-Paradise area will have been resolved. Given the small decline in minor hockey registrations in most north east Avalon associations, the overall situation appears much less dire than it was just 2 years ago. That said, in areas such as the North-north East Avalon the situation will have reached a pressure point in a relatively short period of time (2-3 years maximum).

4.1.1 Detailed Observations from Table 7:

1. While there will be 15 rinks operating in the St. John's CMA by fall 2015, only 11 of the 15 rinks are presently being used regularly (i.e. on a consistent basis) by local area Minor Hockey Associations. As the Southern Shore Arena is located in Economic Zone # 20, it has not been included in the analysis that accompanies this table.
2. Among these 15 rinks currently included in the Northeast Avalon (St. John's CMA) cluster that is known as Economic Zone # 19, 1 rink is over 90 years old; 2 rinks are almost 60 years old; and 1 rink operates at perhaps 50 - 60 percent rental capacity because it has a major tenant (The St. John's IceCaps) as well as other entertainment rental priorities during the hockey and entertainment seasons.
3. As per point # 2 (above), at this point we are using a figure of 15 rinks for the purpose of more detailed analysis. It should be noted that while Mile One Centre is not consistently available to Minor Hockey as its schedule varies by week, some Associations do use Mile One centre to meet overflow demand.
4. Once the new ice rink in CBS is complete, this ratio will have to be recalculated as follows:
    a. In 2016-17 there will be 197,500 area residents (in EZ #19) and there will be 15 available rinks, as a result the ratio of people to rinks drops to 13,200:1 – or below the Canadian average of 14,250:1.
    b. However, by that time the St. Bon's Forum (which was recently out of commission), will be almost 100 years old and it Is not clear how long this facility will continue to operate; also by that time two other rinks will have been in operation for almost 70 years. While one of these facilities has been well maintained in recent years, the operational status of the second facility is unknown.
    c. The average useful life of a purpose-built minor hockey rink in Canada is estimated to be between 35 and 40 years.
5. If we divide the projected area population number (197,500) by 12 assuming the old rinks are de-commissioned in the near future, then our adjusted ratio increases to 16,450:1 and we are once again well above the average availability rate in Canada, and we continue to be in a deficit situation; unable to meet existing demand levels and certainly unable to deliver on any revised Hockey Canada mandate in St. John's and the North-north east Avalon in particular.

6. If we divide the projected area population (197,500) by the number of **rinks** that are **actually available** to minor hockey on a consistent basis (12) then our coverage ratio rises to 17,950:1 – or 1.25 times the national average.
7. In 5-10 years at least 3 new rinks would have to be added in the region to bring the area within range of the Canadian ice rink to population coverage ratio (197,500/current national coverage average of 14,250 = 14); (14-11=3).
8. The ice rinks included in this analysis of Economic Zone # 19 include: 1) The Jack Byrne Arena; 2) The St. Bon's Forum; 3) Capital Hyundai Arena; 4) Feildian Gardens; 5) Twin Rinks #1; 6) Twin Rinks #2; 7) Bussey Arena; 8) The Goulds Arena; 9) CBS Arena; 10) Mile One Centre; 11) Mt. Pearl Glacier #1; and 12) Mt. Pearl Glacier #2; Paradise # 1 and Paradise # 2; and in the fall of 2015 CBS #2.

4.1.2 Additional Data that may be used to inform our decision is outlined below:

9. **Current Canadian Ice Rink Availability Ratio: Population to # of Rinks:** 33,400,000 people/2,450 rinks **(**Ratio = **14,250** people per rink)
10. **Current Newfoundland & Labrador Availability Ratio**: 522,000 people/54 Rinks (Ratio = 9,660 people per rink; High is 16,400:1 low is 3,100:1).
11. **Current North East Avalon Availability Ratio:** 188,500 people/14 available rinks (Ratio = 13,464 people per rink).

    Note 1: If we divide the new area population number (197,500 by 14 available rinks then our adjusted ratio is 17,950:1 and we are once again in a deficit situation with respect to minor hockey (in particular) in the greater St. John's area. This revised deficit is 3 rinks short – at least. The magnitude of this problem increases as the probability of one of the 3 oldest ice surfaces in the region closing increases.

    Note 2: It is also worthy of note that this analysis does not contemplate the additional demand placed on current facilities by such programs as: specialized or Elite Minor Hockey training; Elite Leagues and Programs; Learn to Skate; and Power Skating programs, which (collectively) account for dozens of hours of weekly demand in the Northeast Avalon region in particular.

Table # 8: Demographic (Registration) Analysis of the Census Metropolitan Area of St. John's – East to Pouch Cove and West to Marysvale: June 1st, 2015

(Note: Not including the Southern Shore) Current Minor Hockey Registration Profiles – St. John's CMA

NE Avalon Minor Hockey	2012-13	2013-14	2014-15	Population	# of Ice Surfaces	Ratio of MH Players to # of Rinks
St. John's Minor	634	653	597			
Avalon Celtics	395	378	400			
Goulds Minor	234	213	194			
Sub-total	**1,263**	**1,244**	**1,191**	**106,000**	**8**	**13,250:1**
Mount Pearl	603	631	557	24,285	2	12,410:1
CBR	936	972	1,020	48,880	4	12,220:1
North East Avalon	668	677	644	13,210	1	13,210:1
Total	**3,470**	**3,524**	**3,412 (-3%)**	**192,915**	**15**	**12,861**

Source: Hockey Newfoundland and Labrador Registration Reports 2013, 2014 and 2015.

Note 1: The following 8 Ice Rinks are located within the city limits of the City of St. John's and have been included in this report for analysis purposes: Feilidian Gardens; Twin Rinks (2); St. Bon's Forum; Capital Hyundai; Bussey Arena; Goulds Sports Arena and Mile One Centre. As Mile One Centre is a multi-purpose facility that has a primary tenant for American Hockey League hockey and is also used for concerts and a wide range of other exhibitions and meetings, for purposes of this report, it is considered to be available on a ½ time basis.

Table # 9 Children aged 5-17 St. John's CMA – Including Paradise and the North-north East Avalon Age Profile (0-19) and projections for Minor Hockey enrollment

Age Group	SJ & Area				CBR			
	NE Avalon	St. John's	Mt. Pearl	North-north East incl. (PC-SP)	Paradise	CBS	CB Head	Total
0-4	700	5,100	1,025	1,200	1,450	1,500	285	10,060
5-9	885	4,900	1,030	1,410	1,250	1,475	300	9,840
10-14	810	4,900	1,350	1,230	1,000	1,550	300	9,910
15-19	330	6,100	1,570	410	875	1,375	330	10,580
15-17	200	3,660	942	120	525	840	200	6,367
5-17	**1,895**	**13,460**	**3,332**	**3,960**	**2,775**	**3,865**	**800**	**26,127**

Note # 1: The total number of children aged 5-`17 in the extended St. John's Census Metropolitan Area region is approximately 26,800. There are 3,412 children playing minor hockey in the same trading area – for a market penetration rate of approximately 12.8% - versus 10% for the province of NL.

Note # 2: Tables 5 & 6 in section 3.0 of this report suggest that the penetration rate in the Northeast Avalon is significantly higher at 23 %.

Note # 3: While the population of children aged 0-4 is slightly lower than the population aged 5-9, this trend is not expected to continue in the areas of the peripheral areas of the St. John's CMA – as noted in earlier sections of this report, the kindergarten registration profile for the peripheral areas of the St. John's CMA is expected to have increased by 35 % as of the 2016 census. All things being equal, one would expect 12.5 % of these 1,155 kindergarten registrants (an additional 140 people) would eventually find their way to minor hockey by 2019-2020.

Table #10: Age Profile (0-19) and projections for Minor Hockey enrollment –

City of St. John's and Province of Newfoundland

Age Group	St. John's			Newfoundland		
	Male	Female	Total	Male	Female	Total
0-4	2,600	2,500	5,100	12,000	12,000	24,000
5-9	2,550	2,350	4,900	12,100	12,200	24,300
10-14	2,600	2,425	4,900	13,000	13,000	26,000
15-19	3,100	3,000	6,100	15,000	14,250	29,250
15-17	1,860	1,800	3,660	9,000	8,550	17,550
Aged 5-17	**7,010**	**6,575**	**13,585**	**34,100**	**33,750**	**67,850**

- Over a 20 year period, we have seen a modest decline of 1,000 persons aged 0-19 in this area. At the current NL market penetration rate of 10% - this results in a 20 year decline of 100 players in the City of SJ.
- On a positive note, there has been no change in the number of children aged 0-4 over the past 10 years.
- Current registration level for Minor Hockey is 3,600 for all levels Midget and younger.
- There are 13,585 children aged 5-17 in the St. John's area.
- This area includes three minor hockey associations: St. John's Minor (653), Avalon Celtics (378) and Goulds (213), with 2014 registrations totalling 1,244.
- 1,244/13,585 = 9.1% market penetration in this area – just below the national average.
- However, the Southlands area children currently play in the MPMHA.

There is a need to look at the broader St. John's CMA to get a more complete picture of the current situation with respect to minor hockey registrations and organization/re-organization.

Section 4.2 Ice Rink Utilization:

At the present time there does not appear to have been an appreciable decline in the utilization levels in most of the ice rinks that currently operational in the St. John's CMA**.** While we did not conduct as extensive a survey that we used in our formative study for the City of St. John's in 2008, anecdotal evidence and a series of telephone and personal interviews suggests that there has been no appreciable decline in the utilization levels of those ice rinks in the CMA that existed prior to the establishment of the four new rinks noted above.

In fact, overall, utilization of the existing and new ice rink facilities in the region appears strong, with most facilities reporting similar levels of utilization and some, such as the Avalon Arena Association (Twin Rinks), reporting a re-orientation towards minor hockey and youth programming, with no appreciable decline in their overall utilization levels. In fact this group also approached the Bussey Arena when it was rumoured that this facility was 'for sale'.

While utilization levels have declined marginally in some rinks there are a number of trends that arena managers have noted in recent years that are worth mentioning when thinking about overall demand for ice time:

1) There is a decreasing demand for late night and early morning time slots, including the 7:00 a.m. and 8:00 a.m. slots and the 11:00 p.m. and later time slots. It appears that in many areas minor hockey parents are no longer willing to 'get up early' on the weekends or during the week to ensure that their children get access to minor hockey;
2) The decline in demand for ice time is most prevalent in the oldest facilities in the region and those that are geographically most remote;
3) There is a trend toward increasing prices among the privately owned facilities and among the newest facilities.

While the small decline in overall demand will not likely serve to cause a facility to close, it is likely that even a 5 hour per week decline in rentals will have a significant impact on facility profitability. When the last full-scale analysis of the demand for ice time in this market was last completed (2008), it was concluded that at least 65 ice rental hours at $150.00+/hour was required to sustain a facility and at the time it was noted that a number of facilities were operating close to that range. The establishment of at least 5 new facilities since that time, coupled with the additional (7 years operation) on existing facilities since that time, should lead one to conclude that in the absence of a major infusion of capital, there are at least 2 rinks in the area that have a relatively short useful life – The St. Bon's Forum and the Capital Hyundai Arena. (Note: in the past 2 years both Feildian Gardens and the Bussey Arena have undertaken significant retrofitting and the Twin Rinks (2) are scheduled for a significant upgrade in the near future (Chaplin 2015, Wadden 2015).

While we did not conduct an extensive survey to substantiate the following statements, anecdotal evidence and a number of in-depth interviews suggest that there has been no appreciable decline in the utilization levels of those ice rinks in the CMA that existed prior to the establishment of the new rinks noted above. Twin Rinks (2), Mt. Pearl (2), Feildian Gardens, Capital Hyundai, Goulds Arena, Mile One

Centre, the Jack Byrne Arena and the existing rink in CBS all report business as usual with respect to the overall demand for ice time. The St. Bon's Forum and the Bussey Arena have been challenged by planned and unplanned upgrades recently and their overall utilization levels to some degree reflect these developments. Some facilities, including the Jack Byrne Arena, the two Mt. Pearl rinks and the two surfaces at Twin Rinks appear to be heavily utilized. In fact at one point over the past 12 months the Board of Directors of the Avalon Arena Association (Twin Rinks) approached the owners of the Bussey Arena about a potential sale to accommodate the return of the Avalon Arena Association to its original mandate of supplying ice time at lower than average rates for child and youth services including minor hockey, learn to skate and figure skating programs.

It should also be noted that there are a number of facilities within the region that are not fully utilized, these include: The Goulds Arena, the Southern Shore Arena, and Mile One Centre (which is unavailable on a full-time basis because of its commitment to AHL hockey and the broader entertainment business) all report lower than average utilization levels. At the present time, the Goulds Arena has experienced a five hour per week decline in rental contracts. This has served to place this facility in a somewhat marginal financial position. While they are losing money they have experienced a change from being in a position of profitability to one of break-even or small loss – which serves to put maintenance and upkeep projects in peril or in deferral.

In addition, it is worth noting that both Capital Hyundai and Feildian Gardens are operated by private companies, who do not have the same type of community development (community service) mandate and commitment to minor hockey and community programming that one might expect to see at facilities such as the Mt. Pearl Glacier and the Twin Rinks, for example. The majority of the facilities in this group are slightly, to somewhat underutilized, with the Southern Shore Arena standing out as the least utilized and also the most remotely located facility in the region. Note: The owners of Feildian Gardens have invested significantly in their facility in recent years and while the building itself is older than average, the facility is in reasonably good repair and its rental profile appears to support this conclusion.

This fall (2015) presents itself as an interesting time for the re-evaluation of ice rentals in the region. Because a number of facilities were unavailable last fall and the new facility in Paradise did not negotiate rental agreements and make rental bookings until late in the booking season, most groups appear to have renewed their existing (2013-14) agreements for the 2014-15, season as they did not want to see themselves without ice time in 2014-15.

While this summer could see the beginning of a shift in demand from older rinks (located primarily in the city centre) to newer facilities that are located in closer proximity to where an increasing proportion of the population resides, this is unlikely to continue, as the two new ice surfaces in Paradise are fully booked as of June 2015 and are likely to remain fully booked in 2015-16 (Edwards, June 2015).

Further evidence of the move to the suburbs is reflected in the recent rink construction in the CMA by region. In fact it is worth noting that all of the ice rinks that have been built in the past 8 years are located on the periphery of the St. John's CMA (CBS, Paradise (2), Jack Byrne), with the exception being the new rink at the Mt. Pearl Glacier (II).

4.2 Ice Rink Utilization in 2015: Twin Rinks (2), Mt. Pearl (2), Feildian Gardens, Capital Hyundai, Goulds Arena, Mile One Centre, the Jack Byrne Arena and the existing rink in CBS all report business as usual with respect to the overall demand for ice time. The new two-surface facility in Paradise is also completely booked and reports a rental waiting list that exceeds 20 groups.

The St. Bon's Forum and the Bussey Arena have been challenged by planned and unplanned upgrades recently and their overall utilization levels to some degree reflect these developments. Some facilities, including the Jack Byrne Arena, the two Mt. Pearl rinks and the two surfaces at Twin Rinks appear to be heavily utilized. In fact, at one point over the past 12 months the Board of Directors of the Avalon Arena Association (Twin Rinks) approached the owners of the Bussey Arena about a potential sale to accommodate their (AAA) desire to get back to their original mandate of supplying ice time at lower than average rates for child and youth ice services, including minor hockey, learn to skate and figure skating programs.

The following table outlines the current hourly pricing structure for rentals and minor hockey and includes a brief note re current utilization levels.

Table # 11 Current Ice Rinks Operating in the St. John's CMA – Rental Prices & Demand Assessment

Ice Rink – Location	Average Hourly Rental Rate	Minor Hockey Rental Rate	Current Utilization Levels
Twin Rinks (2) Blackler Avenue	$200 adult rental	$125; Schools $80	Fully booked and committed to minor hockey and figure skating
Feildian Gardens	$200 + depending on time slot	No minor hockey or schools in the FG building rental schedule	Privately owned. Focused on the private ice rental market
Capital Hyundai Arena			Privately owned. Focused on the private ice rental market and elite for-profit hockey programs
Mt. Pearl Glacier (I & II)	$198	$130 (no price change in at least 3 years)	Fully booked. Publically owned and committed to minor hockey
CBS (1 & 2)			Heavily booked; awaiting new facility.
Paradise (2)	$200	$150 for minor hockey and figure skating (10hrs/week)	Newly operational and completely booked, with a 20 group waiting list
Bussey Arena	$200+	$200 (no lower price for minor hockey.	Not quite as heavily booked as in the past
St. Bon's Forum	$155	$130	Supplementary facility only for minor hockey
Jack Byrne Arena	$210	$130	Fully booked and pr0ofitable
Mile One Centre	$200+	n/a	½ time availability for minor hockey
Goulds Arena	$200+	$170	Somewhat marginal at the present time. Lost 5 hours weekly in 2014-15.
Average Pricing	$200+	$130-$140	All newer facilities are fairly heavily booked; older facilities have some space available (10%)

4.2 Demand from other Hockey Groups: Overall, there has been very little growth in the number of hockey leagues that operate within the St. John's CMA. In fact, in some cases, while the Leagues continue to exist, the number of teams that operate within these leagues appears to be in slight decline. That being said, the Avalon East senior Hockey League appears to be in a strong position, with good attendance (particularly at playoff time) and with teams that appear committed to ensuring that a league which started in the 1960's, survives for years to come.

While much has been made of the growth of women's hockey in Newfoundland and Labrador over the past ten years or so, a detailed analysis of the year-over-year growth in women's hockey registration numbers (by Hockey NL) suggests that the demand for women's hockey appears to have stabilized and perhaps peaked – at about 17% of total hockey registrations. In fact, female registration numbers have been essentially flat (at 17 percent of the total registration base) for the past 3 years, suggesting that these numbers may have peaked. At the same time, total hockey registrations have only increased by a mere 0.0125% or 125 registrants on a 9,900 registrant base. In 2014-15 NL hockey registration levels hockey in NL reached 10,000 for the first time (10,081 corrected June 2015). In 2014-15 1,683 females were registered in minor hockey. In addition, there are a few hundred women playing hockey in the St. John's area who may not be registered with HNL.

4.3 Demand for Private Elite Private Hockey Programs: At the present time there are a number of (mostly elite) private hockey programs that operate within the St. John's CMA. Many of these operate on a for profit basis and are owned and operated by individuals who either own their own ice rink facility or who have negotiated long term rental agreements with the operators of other facilities.

As these programs are owned and operated by private businesses, there is little direct information available on their profitability, growth or long term program objectives and needs. Anecdotal evidence suggests that these programs are stable or growing – likely in proportion to the growth of the population within the region.

4.4 Demand for ice by other organizations including figure skating: At the present time, interest in figure skating in the St. John's CMA is strong, as evidenced by the number of individuals registered in the programs of the Price of Wales Figure Skating club – the largest club in newfoundland and Labrador. With more than 1,000 members this club alone has one tenth the registration profile of the HNL province wide.

Following the merger of the two figure skating clubs in St. John's, some renegotiation of ice time rental contracts was required and for a few years the organization was in transition and sometimes short of quality, regularly available ice time. In recent years this situation has improved somewhat and a measure of stability has come to their programming needs. That said the organization continues to grow and still is experiencing some issues with respect to ice time.

At this time, Special Olympics NL does not appear to have any issues associated with the acquisition of ice time in the metro area.

5.0 Demand for Ice Time by Economic Zone (North-north East Highlighted): In order to put the supply and demand for ice time in the North-north Eastern Avalon in perspective, the final table in this report presents the supply and demand for ice time (by Economic Zone) for each of the 20 Economic Zones in the province of Newfoundland and Labrador.

Table # 12 below presents the current number of ice rinks, the distribution of the overall population on a per zone basis and the distribution of the population aged 5-19 for each zone. It also outlines the number of rinks per zone and the number of children registered in Minor Hockey per zone so as to highlight areas that are under, at and over capacity.

At the present time, there are four Economic Zones with a significantly higher than average number of children registered in minor hockey. These include: Clarenville (Zone # 15; 211:1); St. John's CMA (Zone #19; 205:1); Harbour Grace (Zone # 17 209:1); and the North-north East Avalon (within Zone #19; 644:1).

Overall, the situation with respect to the number of ice rink facilities per zone and per 1,000 people has eased in a number of areas of the province of Newfoundland and Labrador in the past 2 years. This improvement has been most notable in the Paradise and CBR areas.

In addition, the recent announcement of a new ice rink facility for the Harbour Grace area will do much to alleviate the situation in that area in about approximately three years when this building is complete.

That leaves the Clarenville (which recently added one new ice rink and that part of Economic Zone #19 that lies to the northeast of the City of St. John's as the two areas that still require additional ice rink capacity.

As can be seen in Table # 12 this area has by far the highest market penetration rate for minor hockey and the largest ice rink supply deficit.

Table # 12: Population Density Analysis – Ice Rink Utilization - Children (5-19) by NL Economic Zone 2014 with North-north East Avalon Highlights

Col. 1 Economic Zones: 1-20	Col. 2 Area Populatio n	Col. 3 Children Aged 5-19	Col. 4 # in Minor Hockey	Col. 5 Penetration Rate for Minor Hockey	Col. 6 Number of Rinks: Zone	Col. 7 Ratio: Total Population to # of Rinks	Col. 8 Ratio: Kids in Minor Hockey to # of rinks
EZ # 1 Hopedale – Nain	3,120	955	54	6 %	2	(3,120/2 = 1,560) 1,560:1 ratio	27:1
EZ # 2 Lab West-Churchill	9,660	1,800	329	18 %	3	(9,660/3 = 3,220) 3,220:1 ratio	110:1
EZ # 3 Goose Bay	9,175	2,250	261	12 %	2	(9,175/2 = 9,175) 9,175:1 ratio	130:1
EZ # 4 Mary's Hr. & South	2,615	565	0	0%	0	2,615/0	0
EZ # 5 South Labrador	1,825	365	0	0	0	1,825/0	0
EZ # 6 St. Anthony – Roddickton	8,845	1,495	149	10 %	3	(8,845/3 = 2,948) 2,948:1 ratio	50:1
EZ # 7 Gros Morne Area	9,060	1,560	327	20 %	2	9,060/2 = 4,530 4,530:1 ratio	163:1
EZ # 8 Corner Brook - Deer Lake	40,970	7,715	541	7 %	3	(40,970/3= 8,195) 13,650:1 ratio	180:1
EZ # 9 Port Au Port Peninsula	21,830	3,880	221	6 %	2	(21,830/2) 10,915:1 ratio	110:1
EZ # 10 Port Aux Basques & Area	9,120	1,405	153	11%	2	9,120/2=4,560 4,560:1 ratio	77:1
EZ # 11 Springdale	14,250	2,475	332	13 %	4	14,250/4=3,560 3,560:1 ratio	83:1
EZ # 12 Grand Falls-Windsor	26,450	4,460	589	13 %	5	26,450/5=5,290 5,290:1 ratio	133:1
EZ # 13 Connaigre Pen. Hr. Breton	7,905	1,415	173	12 %	1	7,905/1= 7,905:1 ratio	97:1
EZ # 14 Gander & Gander Bay	46,850	7,590	887	12 %	7	46,850/7=6,690 6,690:1 ratio	113:1
EZ # 15 Clarenville – Bonavista	28,355	4,350	422	10 %	2	28,355/2= 14,177:1 ratio	211:1
EZ # 16 Burin Peninsula	21,600	3,960	398	10 %	2	21,600/2= 10,800:1 ratio	199:1
EZ # 17 Hr. Grace – Carbonear	39,850	6,625	615	9 %	3	39,850/3= 13,285:1 ratio	205:1
EZ # 18 Trinity Placentia	7,310	1,365	168	12 %	1	7,310/1= 7,310:1 ratio	168:1

EZ # 19 St. John's, Mt. Pearl & North East Avalon	205,000	33,950	2,931	8.6 %	14	205,000/14= 14,640:1 ratio	209:1
North-north East Avalon	13,250	2,342	644	27.5%	1	13,250:1	670:1
EZ # 20 Southern Shore	8,410	1,420	132	9 %	1	8,410/1 = 8,410:1 ratio	132:1
Provincial Totals	N & L	80,570	9,666	12 %	54	522,000/54=9,660:1	172:1

Notes to Accompany Table 12:

Column 1: Details in this column have been based on the Government of Newfoundland, Department of Finance (Community Accounts) Classification Parameters.

Column 2: Data in this column has been derived from the Government of Newfoundland, Department of Finance, (Community Accounts Population by Economic Zone).

Column 3: Data in this column has been derived from the Government of Newfoundland, Department of Finance, (Community Accounts Population by Economic Zone).

Column 4: Data in this column has been derived from the Hockey NL (Provincial Office) Registration Reports 2013-14 and 2014-15.

Column 5: Column 4 (# of individuals registered in Minor Hockey) divided by Column 3 (# of individuals aged 5-19) = Current Market Penetration Rate.

Column 6: The list of ice hockey rinks in NL is available on-line at a number of websites. The validity of this list has been confirmed by Mr. Arnold Kelly, Chair HNL Minor Council, in April 2014 updated in February 2015.

Column 7: Column 2 divided by Column 5 = Results for Column 6.

Column 8: Column 4 (# of individuals registered in Minor Hockey) divided by Column 6 (# of rinks in each Economic Zone) = MH Kids/Zone.

The analysis presented in Table #12 suggests that there are two developing trends that are worthy of further exploration: 1) the dramatic increase in demand versus supply of ice time in the Northeast Avalon region; and 2) the potential problem associated with the sustainability of smaller more remote minor hockey associations throughout Newfoundland and Labrador.