Aquatic Centre Pre-Design Plan

City of Yellowknife

CITY OF YELLOWKNIFE

October 2018

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Executive Summary

After 30+ years of serving the Yellowknife community, the Ruth Inch Memorial Pool (RIMP) is reaching the end of its lifespan. The demands on the facility have increased over the years and there are expectations for the facility that are not currently being met. The City of Yellowknife struck the Aquatic Centre Advisory Committee (ACAC) to lead the development of this study and make a recommendation about a new aquatics centre.

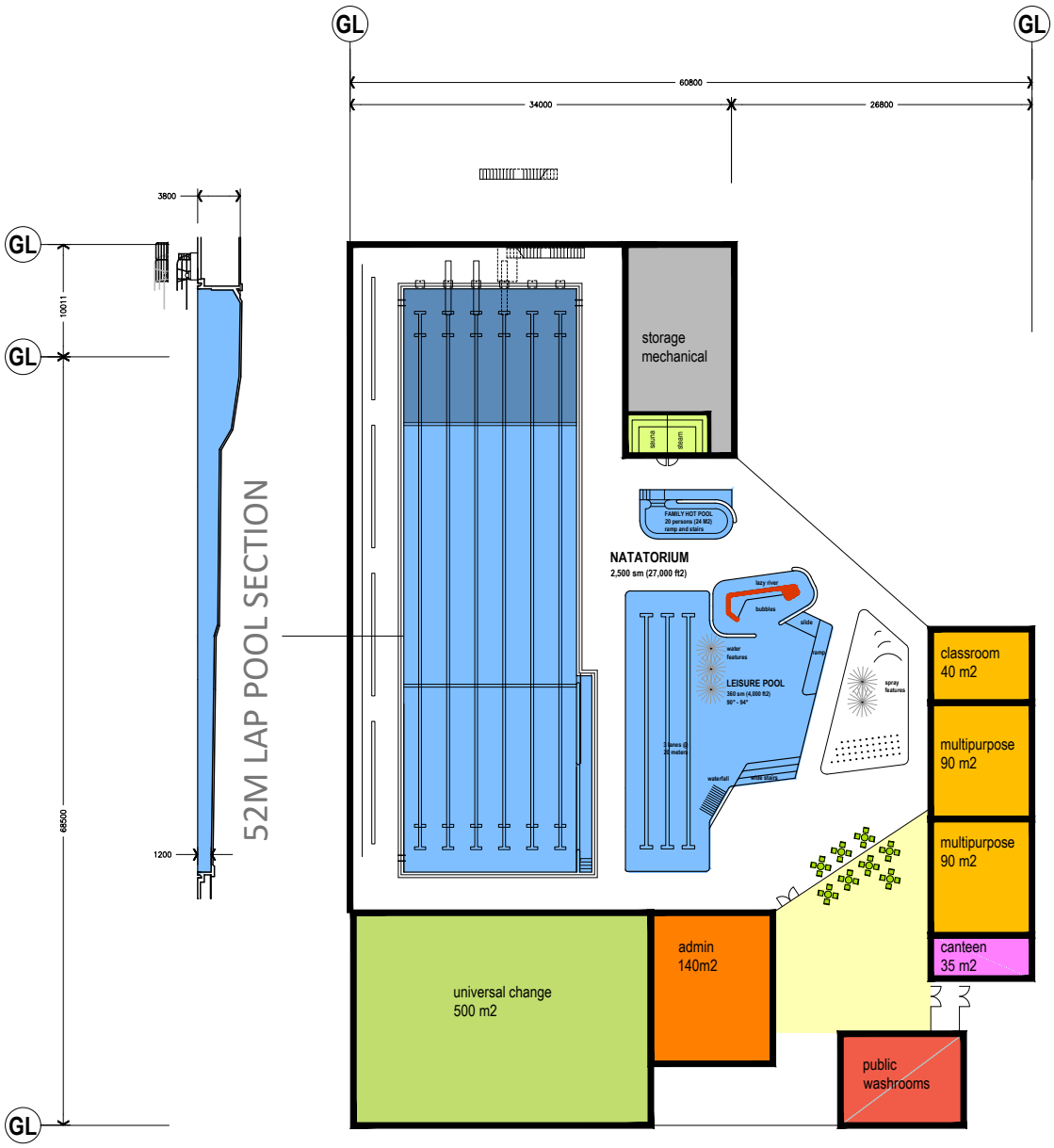
A program of research was implemented to provide some fodder for the development of a concept for a new facility. This research program included a household survey (425 responses) and a survey of community organizations (42 responses). Utilizing the research undertaken the ACAC developed a preliminary facility program that identified the components of a new aquatics centre. Two preliminary concepts were then developed and shared with the public. Upon review of these concepts the public provided comments. Considering this feedback as part of their deliberations the ACAC ultimately recommended a facility program.

Recommended Facility Program

Program Space	Description
Rectangular tank / lap pool	• 52 metre tank with moveable bulk head • 6 lanes • Accommodates lessons, lane swim, competitions, training • Deep end to accommodate SCUBA, synchro, etc
Leisure pool	• Tot pool • Warm water • Zero depth entry • Play and spray features including small slide • Lazy river • 3 lanes of 25 m • Splash deck (enables dry land and guard training; reduces guarding levels)
Lobby	• Building entrance • Access control point • Enables some viewing of leisure pool
Spectator / family viewing	• Viewing to watch swim lessons • Some spectator viewing of 52m pool
Hot tub	• Used by those from lane pool and leisure pool
Steam room	• Therapeutic and recreation purposes
Multipurpose rooms	• Ability to have two rooms or one large room • Accommodates courses, dryland warm-up, birthday parties
Springboards	• 1m and 3m boards
Office space for youth clubs	• Small office space dedicated for the Youth aquatic users
Storage for youth clubs	• Enables regular users of the aquatic centre space to house their equipment
Change Rooms	• Universal design • Men and women • Larger and improved from current
Staff areas	• Administration spaces • Staff room • First aid room • Facility access point
Canteen	• Food service • Limited selection of items

Facility Concept

The Recommended Option



ground floor

3,900 m2 (42,000 f2)

Legend

Lobby and Viewing
Public viewing from a enviremetaly controlled lobby

Administration
Administration space for lifeguards and first aid room are positioned to provide easy of supervision of pool and change rooms

Circulation
Spectator seating for about 200 persons

Multipurpose / Classroom
Multipurpose room with deck access for birthday parties and training

Service and Mechanical
mechanical tower on three levels includes electrical, pool storage, steam and sauna

Change Rooms
Male and female dressing rooms, as well as universal change rooms will provide access to persons of all abilities

Steam / Sauna

Canteen

Lap, Leisure and Hot Pool
6 lane (2.5m each), 52m lap pool with ramp and stair access to accommodate all types of swimming

1m and 3m diving boards with stairs and platforms for enhanced user safety

Family size hot pool with ramp and stair access

The leisure pool includes features enjoyed by young and old including beach entry and sprays

Splash pad, deck level sprays and water features fun for tots and deck activities

Estimated Costs

Capital

New Build Pool	
Cost	Description
$36.1 million	New construction (42,000 sq.ft @ $860 / sq.ft)
$1.4 million	Site development allowance
$37.5 million	**Sub total**
$9.5 million	Soft costs (~25%)
$47.0 million	**Sub total**
$2.8 million	Escalation @ 6% to Q1 2020
$49.8 million	**Capital Cost (estimate)**

Operating Subsidy

The estimated annual operating subsidy for the recommended option is $3.2M.

Site

There are two sites to consider for a new aquatic centre:

- The multiplex / fieldhouse site; and
- The RIMP site.

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1 Introduction

The City of Yellowknife owns and operates the Ruth Inch Memorial Pool (RIMP) which recently celebrated its 30th year of operation. As the only public aquatic centre in Yellowknife, the facility is an integral component to the sport and recreation needs of the community. The centre provides programming for all segments of the community including young children and families, competitive swimmers of all ages, as well as a plethora of community organizations delivering a range of programs.

The facility is reaching the end of its lifespan without some significant attention. A facility assessment was undertaken that suggest the "bones" of the structure does have some life but may require investment. The needs of the community however have changed dramatically over RIMP's tenure. RIMP is experiencing growing demands from the public and community groups. As well the types of amenities and supports demanded in a public aquatic facility are limited in RIMP.

These dynamics have all conspired to motivate this study – an Aquatic Centre Pre-Design Plan. This Plan will ultimately result in a recommended course of action for the development of a new aquatic centre. Led by the Aquatic Centre Advisory Committee (ACAC), the recommendation was based on a program of research including comprehensive community engagement. The ACAC includes representation from a number of different constituencies in Yellowknife including: City Council, Yellowknife Polar Bear Swim Club, youth, seniors, the business sector, Yellowknives Dene First Nation, the education district, NWT Recreation and Parks Association, and the general public.

The research included a broad public survey, an examination of trends in aquatic facility design and provision, as well as public review of preliminary concept designs. The ACAC as well looked at potential siting of a new facility and developed a rubric to adjudicate several sites. Through debate, discussion, and thinking about the community needs, the Committee was able to produce a recommendation. The recommendation needed to balance community demand along with budget realities faced by the City. The work the ACAC was tasked with is not without difficulty trying to balance these dynamics.

It should be noted that the City of Yellowknife was successful in securing $12.9M in funding from the Federal Government's Building Canada Fund to cover part of the development of an aquatic centre.

This report presents the research undertaken, the preliminary concepts that were vetted with the public along with public response, and finally the ACAC's recommendation. The report has been structured to walk the reader through the steps taken in the Pre-Design process. Sections 1 through 5 represent the background and research completed. This led to a preliminary facility program and preliminary concepts (Section 5, 6, and 7) These concepts were vetted with the public and ultimately the recommended facility is presented in Section 11.

2 Ruth Inch Memorial Pool (RIMP)

2.1 About RIMP

Located centrally in Yellowknife, the Ruth Inch Memorial Pool is a bright, warm and welcoming place to exercise, learn, and play. The facility includes a 25 metre tank that accommodates lane swimming and competitions; it also has a beach entry enabling greater accessibility to the water. There is a springboard and climbing wall that overhangs the pool surface as well as a tot slide. The pool also has a wave machine[1].

The facility includes a whirlpool (with chair lift) and a steam room. There is a tot slide as well and the indoor aquatics area is connected to the outdoors through a large outdoor deck with BBQ and picnic tables that overlooks Frame Lake. The integration of outdoor and indoor spaces is furthered with a solarium set up. RIMP has male and female change rooms; there is a large washroom that functions as a family change room.

1 The wave machine has not been operational in some time.

2.2 Utilization

The aquatic centre gets a variety of use from the community. As illustrated in the accompanying table multiple use pass holders have increased approximately 17% between 2013 and 2017.

Scanned Passes	2013	2014	2015	2016	2017
RIMP Multiple Use Pass	23,202	23,453	24,548	28,201	27,240
RIMP Single Admission Pass	56,045	57,081	52,057	49,991	50,104

Attendance in 2017 was the highest it has been in five years. Since 2015 annual attendance has risen by 15%.

RIMP - Pool Attendance	2013	2014	2015	2016	2017
Annual Attendance	79,760	77,986	71,986	72,209	82,859

Over half (58% of the usage of RIMP in 2017 was dedicated to programs and 55% was dedicated to lane and leisure swims. Rentals declined in 2017 by 13% from 2016[2]. See the table.

RIMP - Pool Usage Report	2013	2014	2015	2016	2017
Pool Open (hrs)	6,387	6,387	6,387	6,405	6,205
Rented (hrs)	2,678	2,095	3,545	3,208	2,790
Lane and Leisure Swims (hrs)	3,188	3,500	3,347	3,400	3,392
Program (hrs)	3,369	3,391	3,454	3,603	3,623
Maintenance (hrs)	144	144	144	144	144
Total Pool Usage (hrs)	9,379	9,130	10,490	10,355	9,949
Percentage of Facility Utilized	147%	143%	164%	162%	160%

The Polar Bear Swim Club is the single largest user of RIMP. In 2017 the swim club used 1,114 hours of time which accounted for approximately 11% of pool hours. In 2016 a similar proportion of hours was consumed by the club. Over three-quarters (77%) of households used RIMP in the previous year.

The aquatic centre does serve a variety of uses. Aside from the Polar Bears Swim Club, swim lessons, and simply as a location for recreational swimming and water use, there are many other uses. These include sport training for others beyond swim athletes, paddling, birthday parties and social gatherings, SCUBA training, and rehabilitation and health. RIMP serves a social gathering function as well as a centre for aquatic leisure and training.

2 The hours captured for each use was calculated as a proportion of the hours the pool was open.

3 Population & Demographic Analysis

3.1 Population and Growth

Yellowknife is the capital city of the Northwest Territories (NWT), with a population of 20,834 (2017). Nearly 50% of the NWT population resides in Yellowknife and the city is a critical economic and governmental hub. With the Territory's only international airport, Yellowknife serves as the gateway to the NWT for industry, tourists, and the broader Territorial population. The Yellowknife area is also the traditional territory of the Dene First Nations (Yellowknives and Tłı̨chǫ). The city serves a population base that spans nearly the entire NWT.

Yellowknife's population has remained relatively stable over the past decade, growing at an annual rate of 0.6% between 2007 and 2017, while the NWT population overall grew by 0.3% per year. Between 2011 and 2017, the city's population grew by 4%. Over the same period, the city's population under the age of 15 grew by 0.8% per year (-0.2% Territorially) and its population over the age of 60 grew by 7.4% per year (4.8%). These trends suggest that the city's population is likely to continue to grow steadily in the coming years, even if growth rates more broadly within the Territory slow. It is also important to recognize that the city's over-60 population is increasing quite rapidly, likely affecting the demand for local and regional health care, seniors' support services, and access to recreational amenities. Compared to Canada's other two Territorial capitals, Whitehorse and Iqaluit, Yellowknife's population is much more stable. Between 2011 and 2017, Whitehorse's population grew by 7.8% (2016 population 25,085) and Iqaluit's by 10.3% (2016 population 7,082).

It can reasonably be expected that Yellowknife's population will grow slowly over the next 10, 20, and 30 years. While the NWT Bureau of Statistics estimates a population growth rate of approximately 0.6% per year between 2007 and 2017, Yellowknife's population growth is heavily affected by economic activity levels in the NWT, primarily driven by natural resource extraction projects. As such, it is somewhat difficult to accurately estimate what the city's population may be in the future. However, three scenarios have been prepared based on historic data and population growth that has been observed previously between 2001 and 2006. The moderate growth scenario is based on an average of the low and high annual growth rates. The table below illustrates these three growth scenarios, with Yellowknife's population ranging from just under 25,000 to nearly 45,000 by 2048, depending on annual growth rates.

Yellowknife Growth Scenarios, 2028 - 2048

Scenario	Annual Growth	Based On	2028	2038	2048
Low	0.6%	NWT Bureau of Statistics	22,118	23,481	24,928
Moderate	1.6%	0.6%+2.6% / 2	24,417	28,617	33,539
High	2.6%	2001-2006	26,930	34,810	44,996

3.2 Demographics

Comparison of Age Cohorts as Percentage of Total Population, Yellowknife and Canada

Age Cohort	Yellowknife	Canada	Comparison
0-19	25.9%	22.4%	Higher
20-39	33.9%	26.0%	Higher
40-59	29.5%	28.2%	Higher
60-79	9.9%	19.1%	Much Lower
80+	0.7%	4.3%	Much Lower

Yellowknife's population is, on average, much younger than the Canadian population. The table above illustrates that Yellowknife's 0-19 and 20-39 age cohorts comprise a larger percentage of the population than is observed at a national level. In addition, the percentage of the 60 – 79 and 80+ age cohorts in Yellowknife is significantly lower than national levels. However, as identified by the NWT Bureau of Statistics, the city's population over the age of 60 grew by an average of 7.4% per year between 2007 and 2017. It is likely that the city's senior population will grow significantly, owing to both the high quality of life that Yellowknife offers its residents and the broader national trend of the Canadian population aging rapidly.

Comparison of Economic and Demographic Statistics, Yellowknife and Canada

Characteristic	Yellowknife	Canada	Comparison
Average Household Income*	$159,434	$92,764	Significantly Higher
% of Households Earning on Average <$24,999*	5.3%	14.0%	Significantly Lower
Unemployment Rate	5.9%	7.7%	Lower
Participation Rate	82.5%	65.2%	Significantly Higher
% Walking or Cycling to Work	22.4%	6.9%	Significantly Higher

** based on 2015 total before-tax household income statistics*

The table on the previous page outlines selected economic and demographic statistics for Yellowknife, compared to figures calculated for Canada overall. Due to the low population of the NWT, Statistics Canada supresses some Census data to protect the privacy of households and individuals (e.g. low-income measure stats). Compared to national levels, households in Yellowknife earn nearly $67,000 more per year than Canadian households. Yellowknife also has a lower unemployment rate and higher participation rate in the labour force than the national average.

NWT Bureau of Statistics data indicates that there were 666 monthly recipients of income assistance programs in Yellowknife in 2017. Household incomes in Yellowknife are offset somewhat by a higher cost of living relative to other Canadian cities. In 2013, for example, the cost of living in Yellowknife was approximately 22.5% higher than it was in Edmonton, Alberta. The percentage of Yellowknife households earning less than $25,000 per year is nearly 9 percent lower than the national average. However, research by the Homeless Hub in 2011 suggests that poverty in Yellowknife remains somewhat hidden due to few official statistics being available, with homelessness per capita estimated to be higher than in other Canadian cities.

It should also be noted that just over 22% of Yellowknife residents report utilizing an active form of transportation to commute to work, either walking or cycling. Of those 22%, 90% indicated that they walk to work. This is significantly higher than the national average and suggests that Yellowknife residents make the most of existing active transportation infrastructure. Investments in additional active transportation infrastructure is likely to further support such commuting modes.

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4 Best Practices & Trends in Aquatic Services Delivery

Aquatic provision has changed and will continue to change as user expectation changes and the uses for the facility change. While the items presented below may be reflected to various degrees in a new aquatic centre in Yellowknife they do present a snapshot that reflects both expectations of the public when it comes to these types of facilities as well as aquatic facility planning. It is important to note that the identification of some of these items does not necessarily mean that these ideas and concepts have not been reflected in RIMP; rather this section is intended to identify some of the primary considerations for aquatic facility provision.

Change Room Design

Change rooms have and will continue to change as societal norms change. These changes also reflect fiscal realities. Some efficiencies can be gained through staffing costs as a single gender can monitor all change facilities (if structured that way). Others can be considered a source of revenue generation.

- **Accessibility:** some of this can be captured in response to pertinent construction codes, such as ADA Standards for Accessible Design, the Canadian Standards Association, and the National Building Code of Canada. This can refer to ensuring that people of all abilities are able to fully use the different elements of the change rooms. (*Note: these points relate to overall facility design as well.*)
- **Universal only, gender neutral:** there are a number of ways to build this type of change room. With this concept there are not separate male and female change rooms. Rather there is a single large open room that includes lockers for storage. Often these spaces are visible into the natatorium which has an impact on security of the lockers. For actual changing and bathing there are separate and private areas to accommnodate that. This type of solution reflects the changing nature of gender in our society as well.
- **Hands free:** health concerns abound and hands free design means that there are fewer surfaces that require people to touch them. This can be reflected in entrances and exits (maybe there are no doors) as well as in touchless sinks and faucets and dryers.
- **Spa quality:** this refers to the provision of services that one historically may have seen in a spa. Items like steam rooms and saunas are reflections of this. As well the provision of massage and aesthetic services are becoming more available in aquatic facilities.

Pool Tanks

- **Temperatures:** depending on the types of use for a pool, different temperatures are preferred. For tanks that are used for high activity (think swim clubs etc) a cooler pool is preferable. However those pools that serve a more leisure type of focus, a warmer temperature is preferred. It is not uncommon to have cool, warm, and hot tanks to accommodate the various uses.
- **Accessibility:** this refers to how people access the tanks. In earlier years the tanks were rectangular with entry being a ladder or some vertical stairs. This has changed. Access to a rectangular tank is now not limited to the ladder or vertical steps. Rather there are gradual steps in tanks or ramps that go into tanks. This ensures that a much broader segment of the community can more easily access the tanks including the very young and very old and those with mobility challenges.

Water Features

- **Skill development:** these are often associated with training and clubs. These components can vary but are important in the development of certain skills. Elements can simply be deep water. To facilitate synchronized swimming for example (and other sports) deep water is needed. Starting blocks, underwater sound, timing pads, and so on are elements that hasten skill development.
- **Resistant training (moving water):** water can serve as a very therapeutic mechanism. More specifically using moving water as a means to build strength and endurance is becoming more main stream in public facilities. While these river type of amenities are generally viewed as leisure elements, they can also serve a health and fitness role.
- **Person powered play:** as components of leisure services, these type of components blend the fun and whimsical components of water play and add the person control element. These become more interactive when people are required to power them and / or aim them. These might be water spray elements or other type of splash elements.
- **Diving:** certainly not found in all aquatic centres, including spring boards and / or dive platforms can offer a training element or – depending on the height – a leisure element.
- **Leisure pool components:** while there is significant use in an aquatics centre from sport and exercise groups, main stream use is driven by leisure components. These are not restricted solely to children's use. They include river elements, water slides, spray decks and features, hot tubs, and others.
- **Novelty items:** while not common place, some facilities include more novel items such as flow riders or wave pools. Portable equipment can also provide leisure opportunities – these include inflatables and other toys.

Blurring Outdoor and Indoor Spaces

There is a greater emphasis on getting people to experience the outdoors. While it may seem counter intuitive to look at facility design to address this that is exactly what is happening. The solarium features and deck area of RIMP are great examples of this. The inclusion of windows (done properly) and the ability to access the outdoors (during the right conditions) can help people using the aquatics facility to enjoy and connect with the outdoors.

Complementary Services

It is becoming more commonplace to "bundle" the amenities in aquatic centres so that the facility offers more than simply the tank. These can include spaces that directly support the in-water activities such as classroom space to facilitate the training elements for water based activities. Other services can be dryland training space – the swim club can do some warm-up and cool down for example. Other complementary types of spaces include fitness spaces and even storage for those activities and groups who make significant use of the aquatic facility.

5 Consultation

While it is important to consider trends and leading practices in the provision of aquatics services, to develop a concept for a new aquatics centre in Yellowknife, it is critical to engage the community. For this Pre-Design Plan two main streams of consultation were employed up front. A broad survey was fielded with households in the community. Secondly, community organizations were invited to participate in a survey. The findings from each mechanism are presented below.

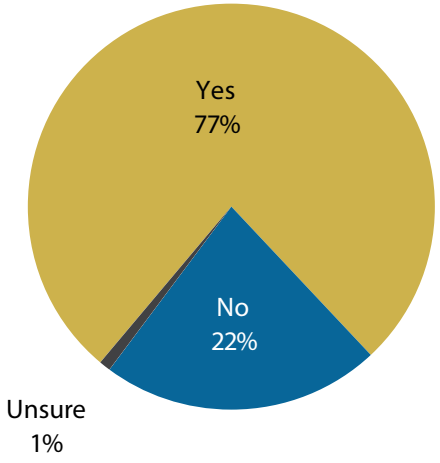
5.1 Household Survey

Households in Yellowknife were invited to participate in an online survey. A postcard was developed and inserted into each post office box in Yellowknife describing the Aquatic Pre-Design Plan; encouraging the household's participation; and providing instructions for completion of the questionnaire. Each postcard included a unique access code necessary to log-in and complete the questionnaire on the City's website. In total 425 responses were gathered. These findings are considered statistically representative of the community with a margin of error of +4.7% 19 times out of 20[3].

Current Assessment

To begin, respondents were asked if anyone in their households used the Ruth Inch Memorial Pool as an active participant in the previous 12 months. As illustrated in the following graph approximately three-quarters (77%) of respondent households had used the pool.

In the past 12 months has anyone in your household used the Ruth Inch Memorial Pool as an active participant?



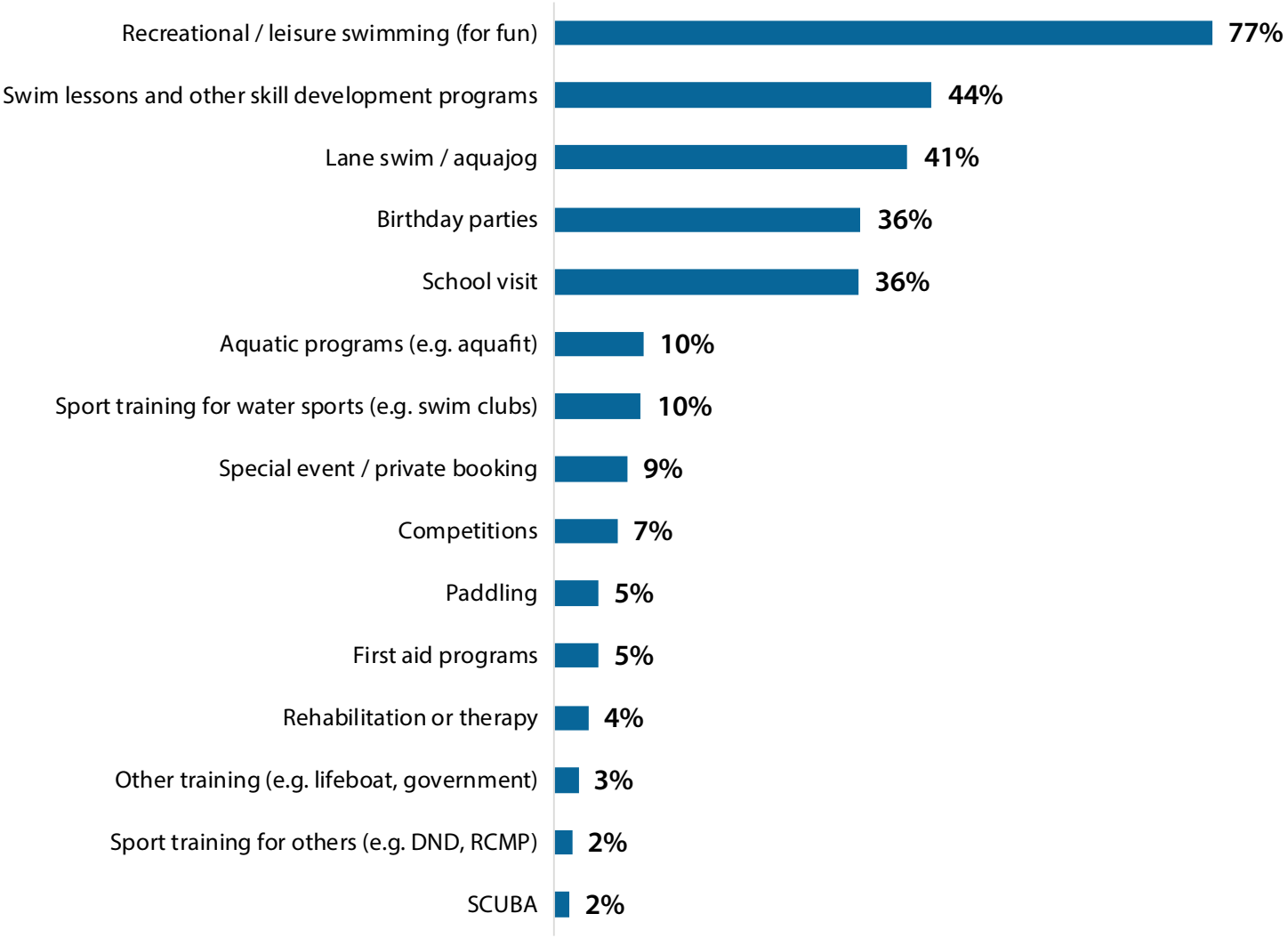
3 If the survey was fielded twenty times, the findings would be within 4.7% of the findings presented in this report .

Of those who had used the pool, they were further asked to indicate their frequency of visitation according to season. As can be seen from the table below, Winter (December to February) experienced the greatest visitation with 42% of households using the pool on 11 or more occasions. Conversely, twenty-eight percent (28%) used the pool 11 or more times during the Summer (June to August).

	Frequency of Use			
Season	1 to 5 Uses	6-10 Uses	11 or more Uses	Did Not Use
Summer (June to Aug)	37%	24%	28%	11%
Autumn (Sept to Nov)	27%	27%	39%	7%
Winter (Dec to Feb)	33%	21%	42%	4%
Spring (March to May)	30%	25%	36%	9%

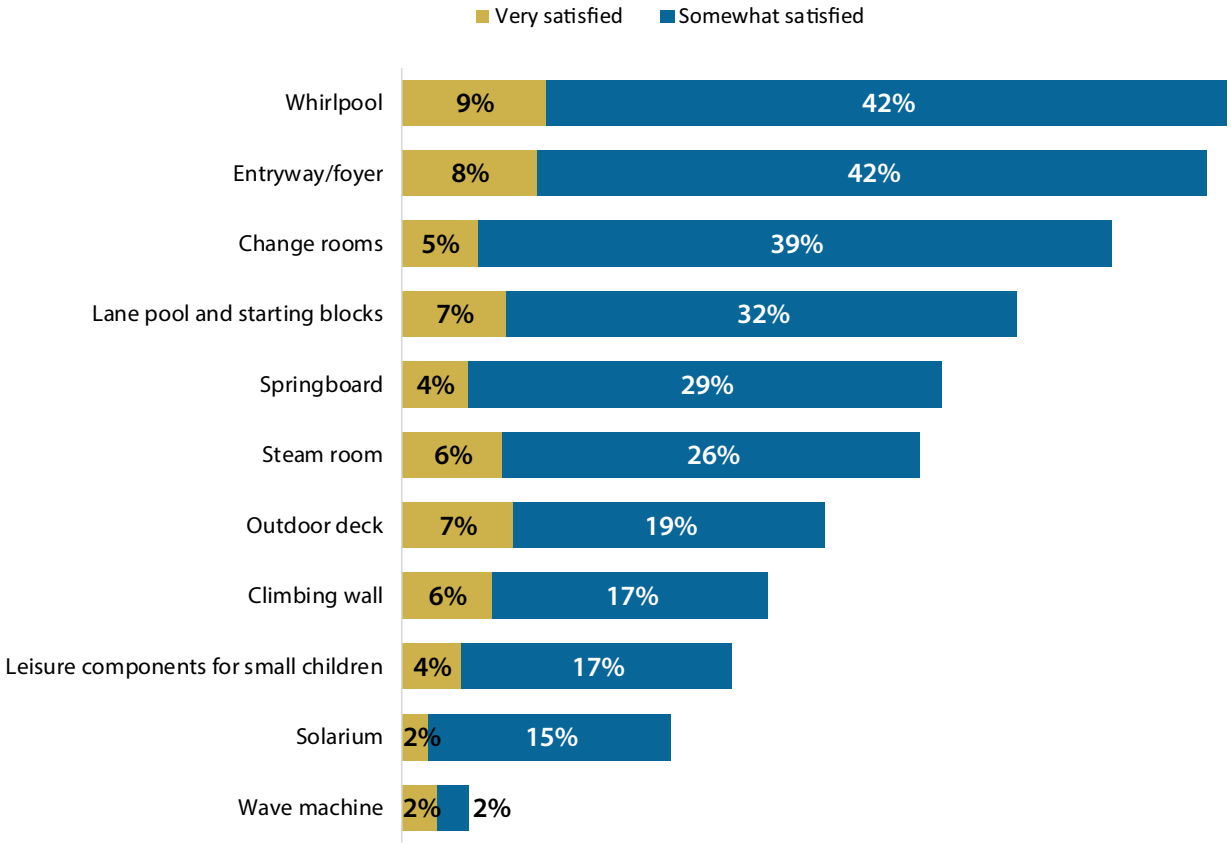
Next the motivations for people to use the pool were identified. The primary motivation – identified by over three-quarters of respondents (77%) – was recreation and leisure. Swim lessons (44%) and lane swim / aquajog (41%) were the next most prevalent reasons to use the pool.

Why did household members use the pool?



At least half of respondents expressed satisfaction (very or somewhat) with the whirlpool (51%) and for the entryway / foyer (50%). The wave machine received the lowest satisfaction ratings. (It should be noted that the wave machine has been non-operational for some time.) Refer to the graph for more information.

Satisfaction with Pool Amenities

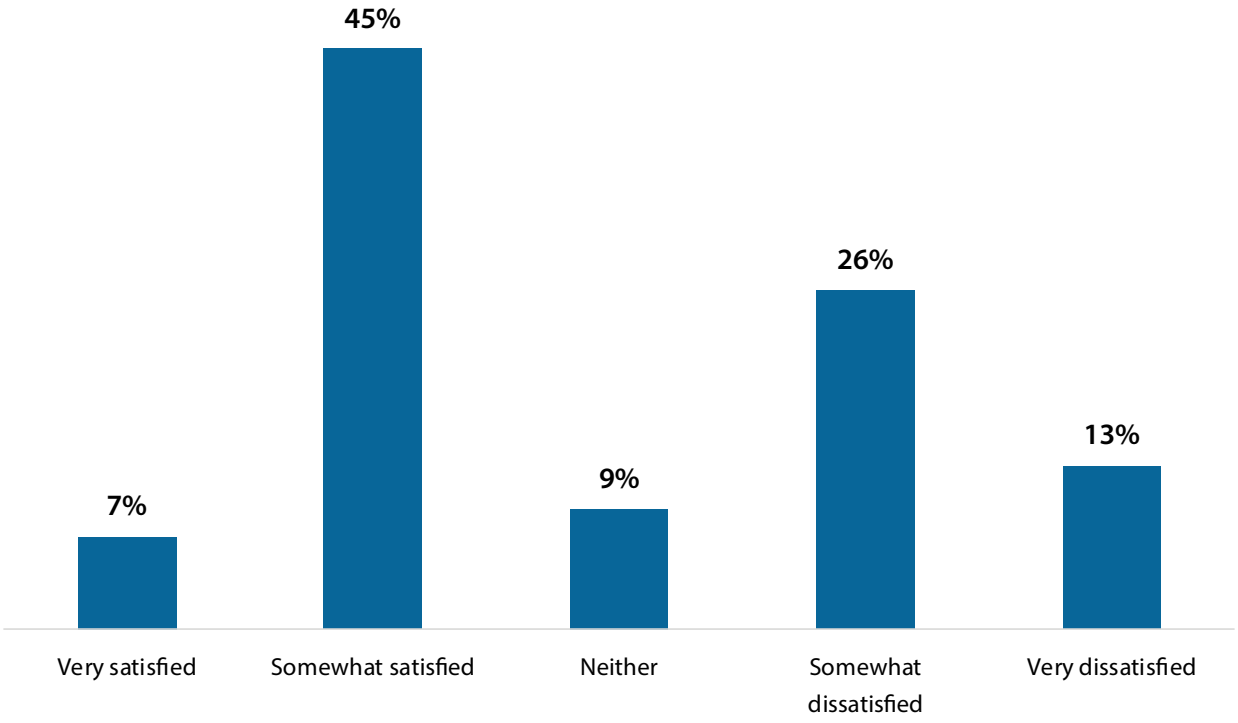


Respondents were able to provide comments related to their satisfaction ratings. Most comments were directed to needed improvements and areas of concern. Comments made by at least twenty respondents are noted below.

- The change rooms are very crowded and more privacy is needed. (64 comments)
- The play structures and leisure components are in need of upgrading. (52)
- The entry way is small and gets congested. (48)
- A modernized family change room is needed. (48)
- The wave machine is not operational. (48)
- The water is very cold, particularly for infants and children. (41)
- There were concerns expressed about the cleanliness of the facility. (32)
- A new pool is needed; the facility is dated. (31)
- The hot tub and steam room are often over crowded. (27)
- The hot tub and steam room are frequently not working. (23)

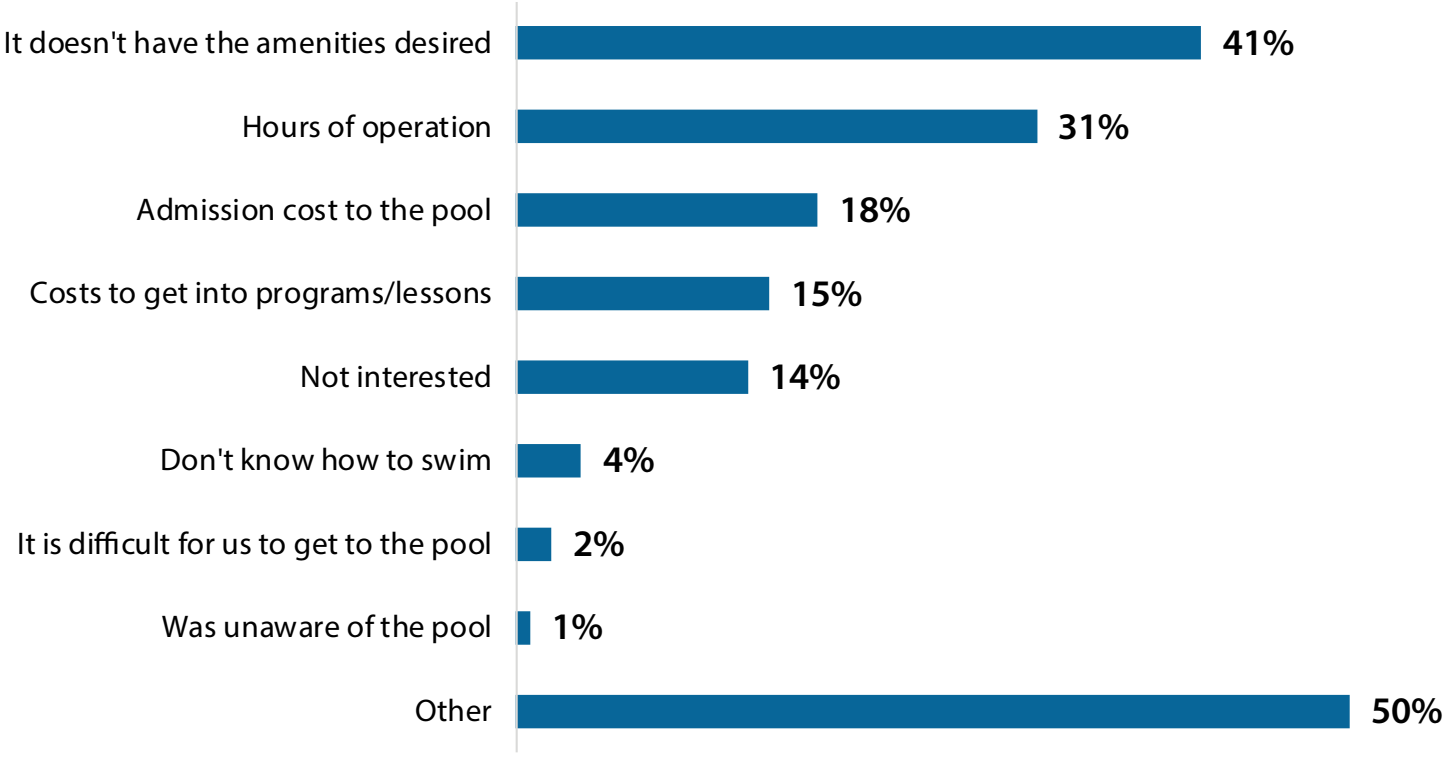
Just over half (52%) of households that used the Ruth Inch Memorial Pool in the previous 12 months expressed overall satisfaction with it. Over one-third (39%) expressed dissatisfaction.

Overall, how satisfied is your household with Ruth Inch Memorial Pool?



All respondents were asked to identify issues that have prevented household members from using the pool more frequently. The single most identified issue is the lack of desired amenities (41%) followed by hours of operation (31%). Half provided a reason beyond those listed.

What, if anything, prevents members of your household from using/ visiting the Ruth Inch Memorial Pool more frequently?



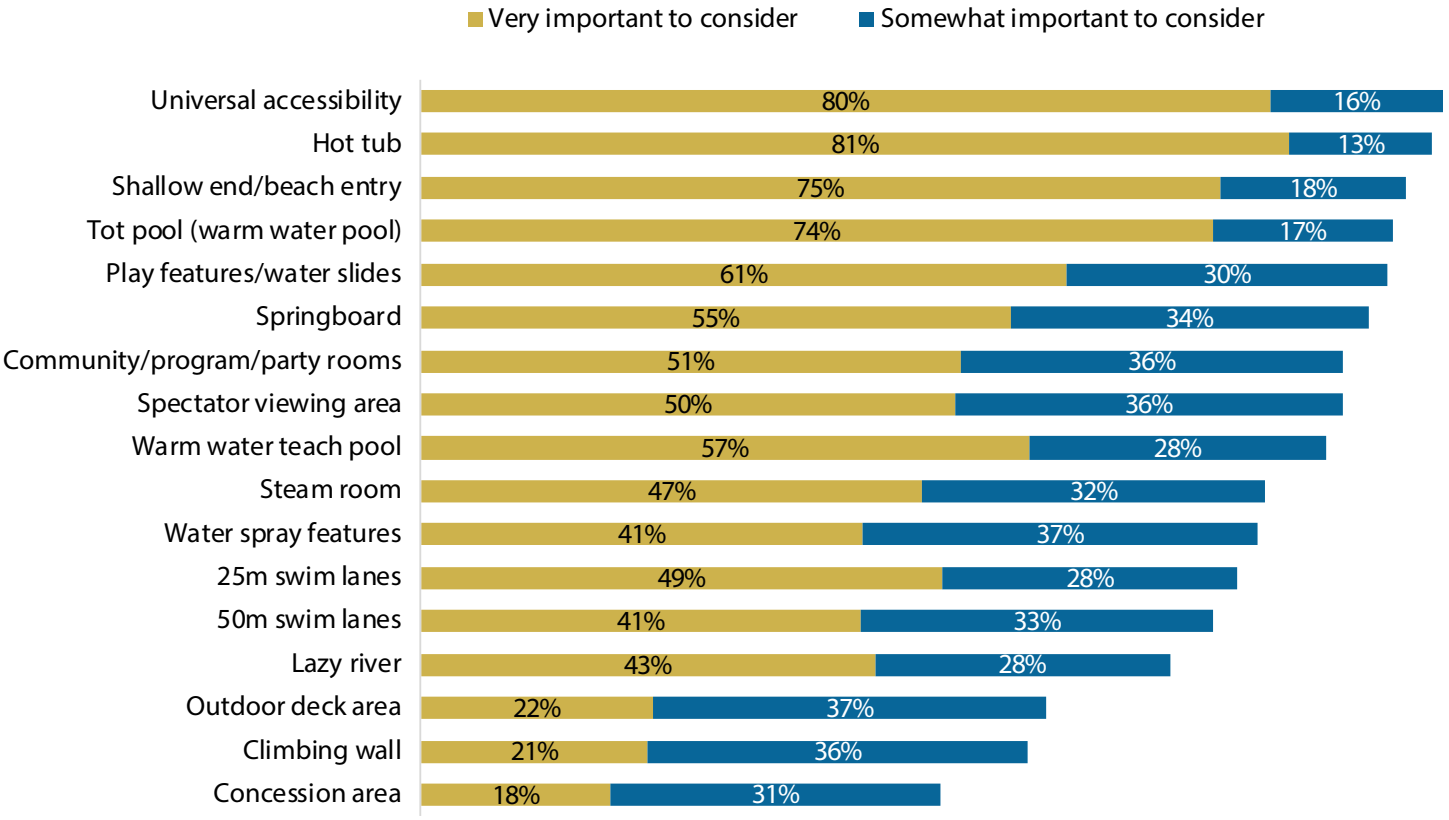
Of the "other" reasons, the most commonly cited included the following.

- The water is too cold. (46 comments)
- It is very difficult to register child for swim lessons. (28)
- The pool is crowded. (23)
- Concerns about cleanliness and maintenance. (16)
- Chlorine / chemicals are too strong. (10)

Future Considerations

Respondents were provided with a list of potential amenities on the questionnaire. They were asked to indicate how important it is to consider each for inclusion in a new aquatic centre. As illustrated in the following graph, the top five amenities to consider are: universal accessibility (96% think it is important); hot tub (94%); shallow end / beach entry (93%); tot pool (91%); and play features / water slides (91%).

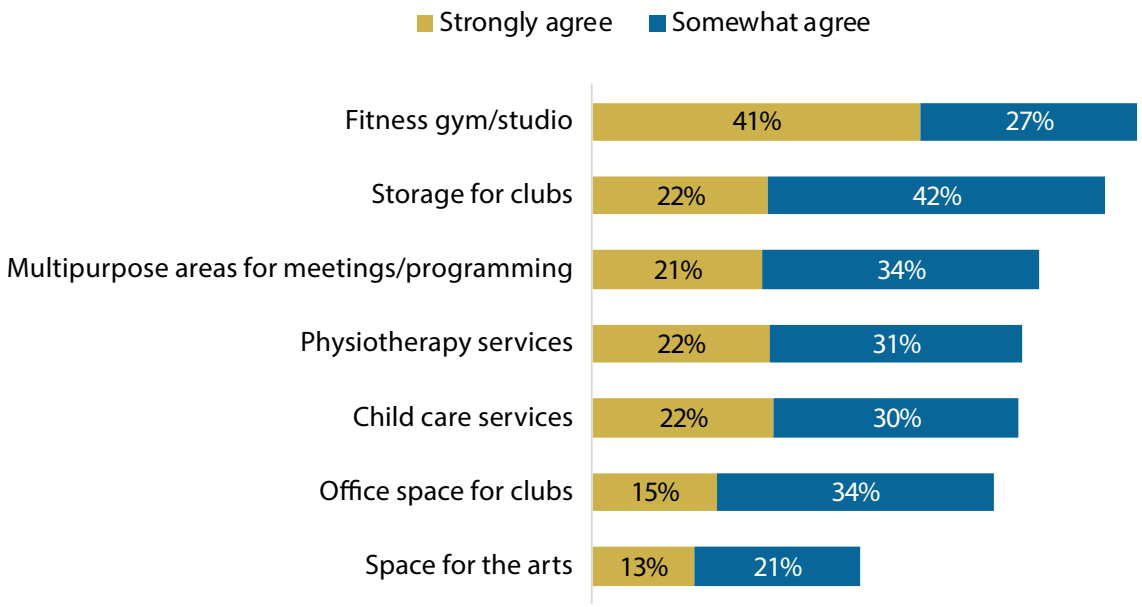
Potential Components of a New Aquatic Centre



Respondents were also provided with a list of non-aquatic services and asked to indicate their level of agreement that each should be included in a future aquatic centre. The top two services were fitness gym / studio (68% agreed it should be included in a future aquatic centre) and storage for clubs (64%).

Non-Aquatic Components to be Considered

(level of agreement)



Respondents were able to suggest other non-aquatic services that should be considered in a new aquatic facility. Those suggestions most frequently identified are noted.

- Meeting rooms / multipurpose program rooms. (16 comments)
- Library. (15)
- Gym / fitness area. (12)
- Café / concession. (9)
- Indoor playground structure. (8)
- Pro shop / rental spot. (7)
- Walking track. (5)

Respondents were able to provide other comments related to a new aquatic centre in Yellowknife. Some took the opportunity to reiterate comments previously made while others offered new thoughts. Those comments most frequently cited are noted below.

- Ensure there are leisure elements included like a splash pad/ water park, waterslide, etc. (27)
- Particularly for young children but for all, the pool water needs to be warmer. (26)
- The new aquatic centre is needed in the city. (25)
- There needs to be separate areas and tanks for lane swimming versus leisure swimming. Maybe a separate area for toddlers as well is needed. (24)
- The preferred location is near the multiplex. (18)
- Combine the new aquatic centre with other facilities and amenities. (17)
- The hours of the facility and of different activities (e.g. lane swim, family swim) need to be extended. (16)
- The new facility should include a 50m tank. (15)
- Family change rooms are needed (16) and there needs to be a greater level of privacy in the change rooms. (9)
- Include a system that does not use chlorine; it is very strong. (9)
- Do not get too grandiose and limit it to aquatic components only. (8)

Respondent Profile

How long have you lived in the Yellowknife community?	
Less than 5 years	17%
6 to 10 years	15%
11 to 15 years	12%
More than 15 years	56%
Household Composition	
5 years and younger	14%
6 to 12 years	14% (26%)
13 to 19 years	9%
20 to 29 years	8% (16%)
30 to 39 years	19% (18%)
40 to 49 years	17% (15%)
50 to 59 years	12% (15%)
60 to 69 years	6% (8%)
70 years and older	2% (3%)

**Note: figures in blue are the proportions from Statistics Canada.*

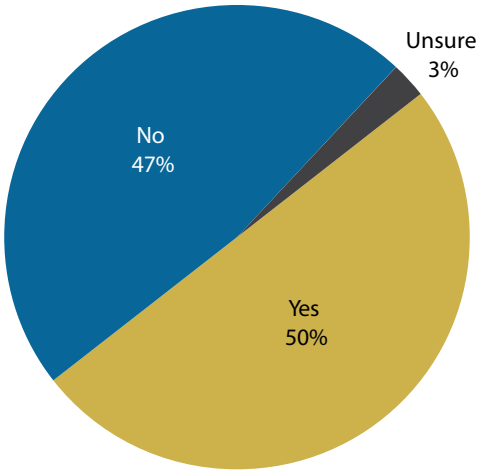
5.2 Community Group Survey

Community organizations were invited to participate in a survey to provide insight into their utilization of RIMP and to identify elements they would like to see in an aquatic centre. In total forty-two organizations provided some response; they represented recreation, sport and leisure groups, social organizations, community associations, and school boards. For a complete listing please refer to the Appendix. The findings are noted below[4].

Current Assessment

Half of the groups had used RIMP in the past year as illustrated in the accompanying graph.

In the past 12 months has your group used RIMP?



There was a range of uses these groups had for RIMP. The most commonly cited reason was simply for recreational or leisure purposes. Other main purposes included special event / private booking, sport training for water sports, swim lessons and other skill development, and competitions. School trips, birthday parties, rehabilitation, and team building were other uses mentioned by more than one group.

Groups commented on their levels of satisfaction with a number of the elements of RIMP. The greatest level of satisfaction was for the whirlpool – 70% were very or somewhat satisfied with it. The highest level of dissatisfaction was for the entryway / foyer with 40% somewhat or very dissatisfied. See the table for more information.

4 Not all organizations provided a response to each question. The findings presented represent the answers from those who responded to each particular question.

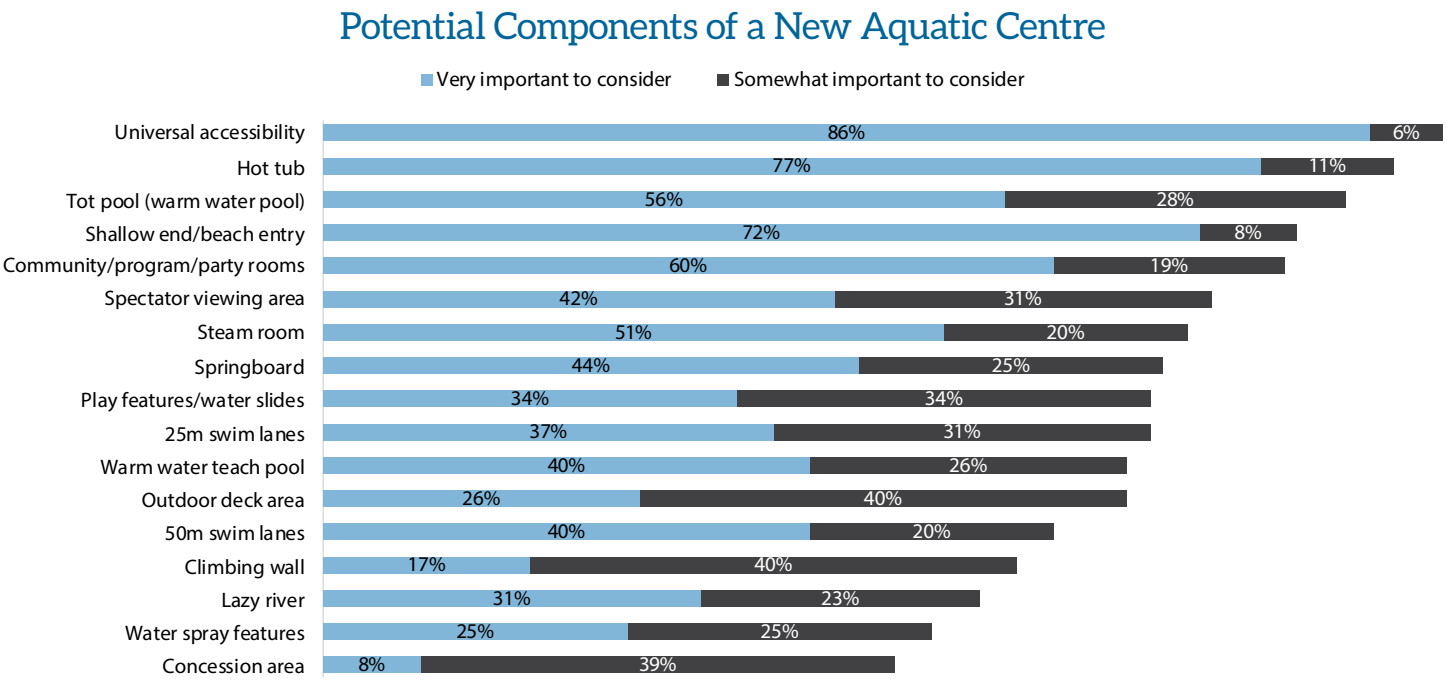
Overall Satisfaction with RIMP Components

	Very Satisfied	Somewhat Satisfied	Neither	Somewhat Dissatisfied	Very Dissatisfied	Unsure/ Not Applicable
Solarium	0%	5%	20%	5%	5%	65%
Wave machine	10%	0%	20%	5%	0%	65%
Leisure components for small children	0%	11%	5%	21%	11%	53%
Outdoor deck	0%	15%	30%	0%	0%	55%
Springboard	0%	20%	15%	10%	0%	55%
Steam room	5%	20%	5%	20%	5%	45%
Lane pool and starting blocks	0%	25%	15%	15%	5%	40%
Climbing wall	5%	25%	10%	5%	5%	50%
Entryway/foyer	**5%**	**35%**	**15%**	**35%**	**5%**	**5%**
Change rooms	**11%**	**37%**	**11%**	**32%**	**5%**	**5%**
Whirlpool	**5%**	**65%**	**0%**	**15%**	**5%**	**10%**

Some comments were provided related to the satisfaction ratings. The most prevalent themes related to the facility being small, crowded, and outdated. There were some comments as well about elements of the facility that were at times not operational: climbing wall, wave machine, whirlpool, springboards.

Future Considerations

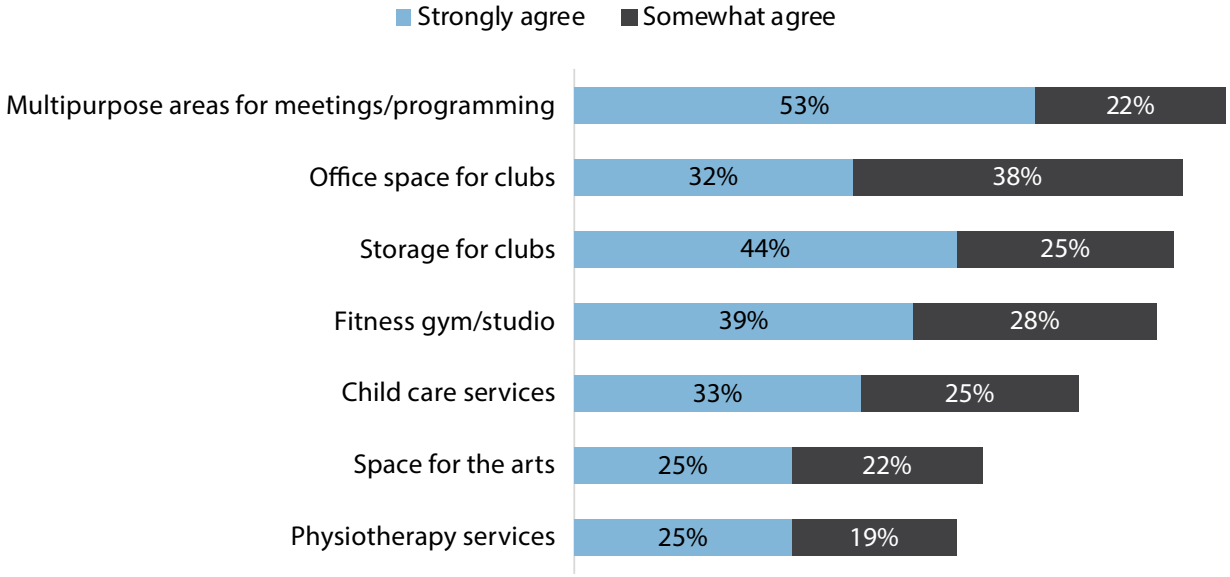
Respondents were provided with a list of amenities and components and asked to indicate their importance in the design of a future pool. Universal accessibility was deemed important by 92% of respondents – 86% in fact identified it as very important. A hot tub was the second most important element to consider. Rounding out the top five were a tot pool, shallow end / beach entry, and community / program / party rooms. See the graph.



Three-quarters (75%) of respondents agreed that multipurpose areas for meetings / programming should be included in a future aquatic centre. Approximately two-thirds agreed that office space for clubs (70%) and storage for clubs (69%) should be included. See the accompanying graph.

Non-Aquatic Components to be Considered

(level of agreement)



There were multiple comments that suggested a new facility should be able to host competitive events. Some specifics were identified including start blocks, touch pads, and score boards.

Finally respondents were able to provide other comments. Those mentioned more than once referred to the ability to have greater and better access to pool time and use. As well there were calls for greater indoor storage.

6 Preliminary Facility Program

A preliminary facility program was developed by the Aquatic Centre Advisory Committee (ACAC). Through a workshop the ACAC reviewed the information presented in the preceding sections and engaged in a fulsome discussion leading to a preliminary facility program. The facility program identifies the spaces to include in a new or redeveloped aquatic centre.

Program Space	Description
Rectangular tank/lap pool (25m or 52m)	• Swim lanes (6 or 8) • Lessons, lane swim, etc. • Deep end to accommodate scuba, synchro, etc
Lobby	• Building entrance • Access to control point • Enables some viewing of leisure pool
Leisure pool	• Zero depth entry • Play and spray features • Lazy river • 3 lanes of 25m • Splash deck (enables dry land and guard training; reduces guarding levels)
Family viewing	• Viewing to watch swim lessons • Some spectator viewing of 25m or 52m tank
Hot Tub	• Used by those from lane pool and leisure pool
Sauna and/or steam room	• Therapeutic and recreation purposes
Multipurpose rooms	• Ability to have two rooms or one large room • Accommodates courses, dryland warm-up, birthday parties
Staff areas	• Administration spaces • Staff room • First aid room • Facility access point
Change rooms	• Universal design[5] • Larger than current and improved
Storage	• Pool equipment • Aquatic club equipment storage

This facility program was then used to develop the facility concepts.

5 A universal locker-room is designed to accommodate all genders. The design is similar to a large family locker-room - it is an open concept. The washrooms and showers remain segregated for males and females, and there are private changing stalls. It allows parents to bring children of both sexes into the common room and still have a private cubicle. It is also intended for people with disabilities who have an attendant of the opposite gender.

7 Preliminary Facility Concepts

Based on the preliminary facility program two potential concepts were developed. One concept presented is a new build while the second concept is a renovation of the Ruth Inch Memorial Pool.

7.1 New Build

ground floor

3,000 m2 (32,500 f2)

Legend

Change Rooms
Male and female dressing rooms, as well as universal change rooms will provide access to persons of all abilities

Lobby and Viewing
Public viewing from a envirometaly controled lobby

Steam / Sauna
Steam and Suana in a spa like area with views out

Administration
Administration space for lifeguards and first aid room are positioned to provide easy supervision of pool and change rooms

Lap, Leisure and Hot Pool
6 lanes (2.5m each), 25m lap pool with ramp and stair access to accommodate all types of swimming
spectator seating for competitive events
Large family style hot pool with ramp and stairs
Generous leisure pool includes features enjoyed by young and old including beach entry and sprays

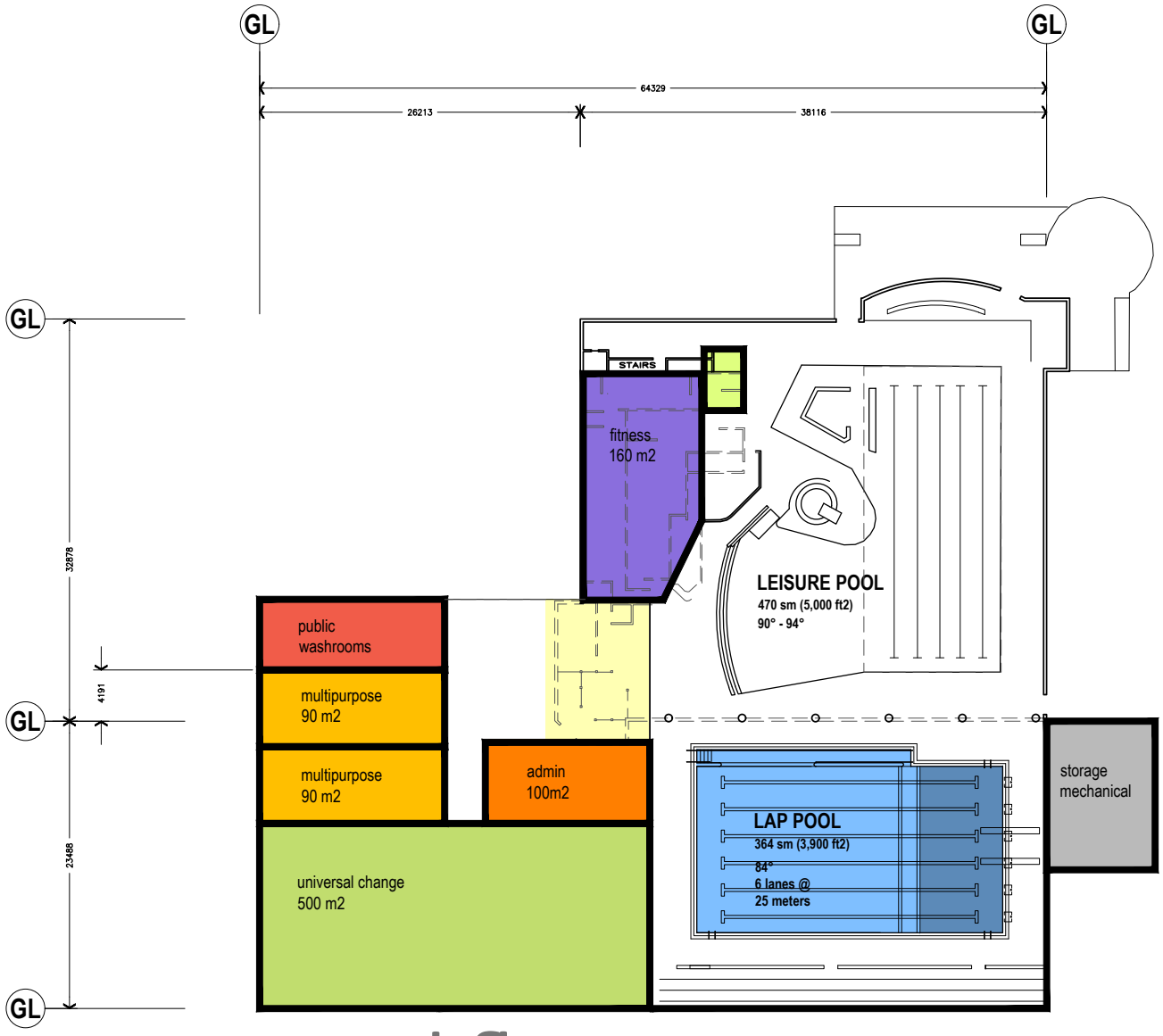
Multipurpose
Mulituprose room with pool deck access for birthday parties and training

Service and Mechanical
mechanical on three levels plus electrical and pool storage

Circulation

Public Washroom

7.2 Renovated Ruth Inch Memorial Pool



ground floor

3,128 m2 (34,000 f2)

Legend

Change Rooms
Male and female dressing rooms, as well as universal change rooms will provide access to persons of all abilities

Lobby and Viewing
Public viewing from a new expanded cool lobby

Fitness
Remove and renovate existing change into fitness or multipurpose space with views and possible connections to the deck

Steam / Sauna
Renovate and upgrade steam room

Lap, Leisure and Hot Pool
Significant renovation of the existing tank with more spa and play features including lazy river, upgraded mechanical and warmer water

6 lanes (2.2m), 25m lap pool with ramp and stair access to accommodate all types of swimming

Spectator Seating
for about 200 persons

Administration
Circulation
Service and Mechanical
Multipurpose
Public Washroom

7.3 Capital Estimates

The Class D capital estimates are presented in the following table[6]. The Renovated option has an estimated capital cost of $41M for a 25 metre lap tank option. Changing the concept to include a 52 metre tank instead of a 25 metre tank would result in a capital estimate of $48.7M.

The New Build option's estimated capital cost is $47M including a 25 metre lap tank. This would increase to $54.7M if the 25 metre tank were replaced by a 52 metre tank.

Renovated Ruth Inch Memorial Pool	
Cost	Description
$7.5 million	Renovation (15,000 sq. ft @ $500 / sq. ft)
$20.0 million	New construction (20,000 sq. ft. @ $1,000 / sq. ft)
$1.0 million	Site development allowance
$28.5 million	**Sub total**
$8.5 million	Soft costs (30%)
$37.0 million	**Sub total**
$3.0 million	Escalation @ 8% for one year (2019)
$41.0 million	**Capital Cost (estimate)**
$7.7 million	To change from 25m to 52m lane tank
$48.7 million	Capital Cost (estimate)

New Build Pool	
Cost	Description
$32.5 million	New construction (32,500 sq.ft @ $1,000 / sq.ft)
$1.0 million	Site development allowance
$33.5 million	**Sub total**
$10.0 million	Soft costs (30%)
$43.5 million	**Sub total**
$3.5 million	Escalation @ 8% for one year (2019)
$47.0 million	**Capital Cost (estimate)**
$7.7 million	To change from 25m to 52m lane tank
$54.7 million	Capital Cost (estimate)

6 These estimates are "order of magnitude" and are primarily for cost comparison between alternative selections. These estimates are arrived upon by utilizing unit rates ($ per sq. ft). As more refinement is made with the concept, the cost estimates become more precise.

7.4 Operating Subsidy

Aquatic facilities generally require subsidy to operate and the Ruth Inch Memorial Pool is no exception. Between 2013 and 2017 the annual recovery rate varied between 29% and 33% which necessitated a subsidy from the City of Yellowknife of approximately $1M per year. To determine an annual subsidy for the two proposed concepts the existing dynamic at RIMP was applied.

Utilizing the annual subsidy from each year from 2013 through to and including 2017, a per square foot unit rate was determined[7]. This rate was then applied to the square footage of the two proposed concepts. While a new aquatic centre would see an increase in utilization, the costs would also increase. Each concept is larger than RIMP meaning that staffing costs can reasonably be assumed to increase. As well utility costs will increase.

Based on the information in the following table, the annual subsidy per square foot is $76.08 for RIMP[8].

	2013	2014	2015	2016	2017
Revenues	$446,265	$482,159	$475,955	$527,225	$516,490
Expenses	$1,515,537	$1,555,835	$1,578,159	$1,576,460	$1,624,075
Subsidy	-$1,069,272	-$1,073,676	-$1,102,204	-$1,049,235	-$1,107,585
Recovery	29.4%	31.0%	30.2%	33.4%	31.8%
Subsidy/sq ft	$75.30	$75.61	$77.62	$73.89	$78.00

Annual Subsidies

The **stand alone concept** has an area of 32,500 sq. ft. which results in an estimated **annual subsidy** of **$2.47M.**

The **renovated Ruth Inch Memorial Pool** has an areas of 35,000 sq.ft which means the estimated **annual subsidy** is **$2.66M.**

7 The subsidy from each year was divided by the area of RIMP. This provided an annual amount of subsidy from the City to operate the aquatics centre on a square foot basis. This annual subsidy amount was then averaged out.

8 This is based on RIMP's area of 14,200 square feet.

8 Site Selection

The Aquatic Centre Advisory Committee (ACAC) considered seven potential sites for a new aquatic centre.

1. Pitch & Putt (beside Ruth Inch Memorial Pool)
2. Multiplex/ Field House
3. Taylor Road site (across the road from William Macdonald / Ecole Allain St Cyr Complex)
4. Old Akaitcho Hall Site (adjacent to Sir John Franklin High School)
5. Frame Lake West Park
6. Junction of Franklin Ave & School Draw
7. Shore South-West of Somba K'e Park

In order to select the "best" site as the recommended one, the ACAC developed a rubric. This rubric provided a structured approach to this difficult decision. Fourteen criteria were identified across which each of the sites were scored. The criteria are noted below.

Servicing all of Yellowknife
(sites that serve all of the city are better)

Proximity to other recreational, social, and cultural amenities
(sites that are close to other amenities are better)

Co-locations of activities
(being near other activities is better)

Highly accessible especially for seniors
(we want it to be highly accessible)

Highly accessible especially for kids
(we want it to be highly accessible)

Proximity to public transit
(being on an existing route is ideal)

Pedestrian and bike connections
(being on the trail network is ideal)

Parking and traffic impacts
(minimal impact on parking and traffic is the best case scenario)

Re-use or sharing of existing facilities
(connecting or using existing buildings is positive)

Land use and density
(is a pool one of the best uses for the site?)

Site servicing and conditions
(is the site serviced already? do its existing conditions make it easy to build there?)

Greenfield / brownfield*
(is the site already serviced and been developed or is it undeveloped completely?)

Property ownership/cost*
(is the property owned by the City?)

Zoning*
(does the current zoning allow for an aquatic facility?)

**Note: these three criteria are factual and not opinion based. These fields were completed for each potential site prior to asking ACAC members to score the sites. Any brownfield sites received a score of 3 while a greenfield site was scored 1. City owned sites were scored a 3 and if the site was zoned for recreational use it received a score of 3.*

A higher score in each of the criteria meant that the potential site scored more positively than a lower score. Each critera could be scored with a 1, 2, or 3 where:

3 = site scores ""very good"" for this criteria

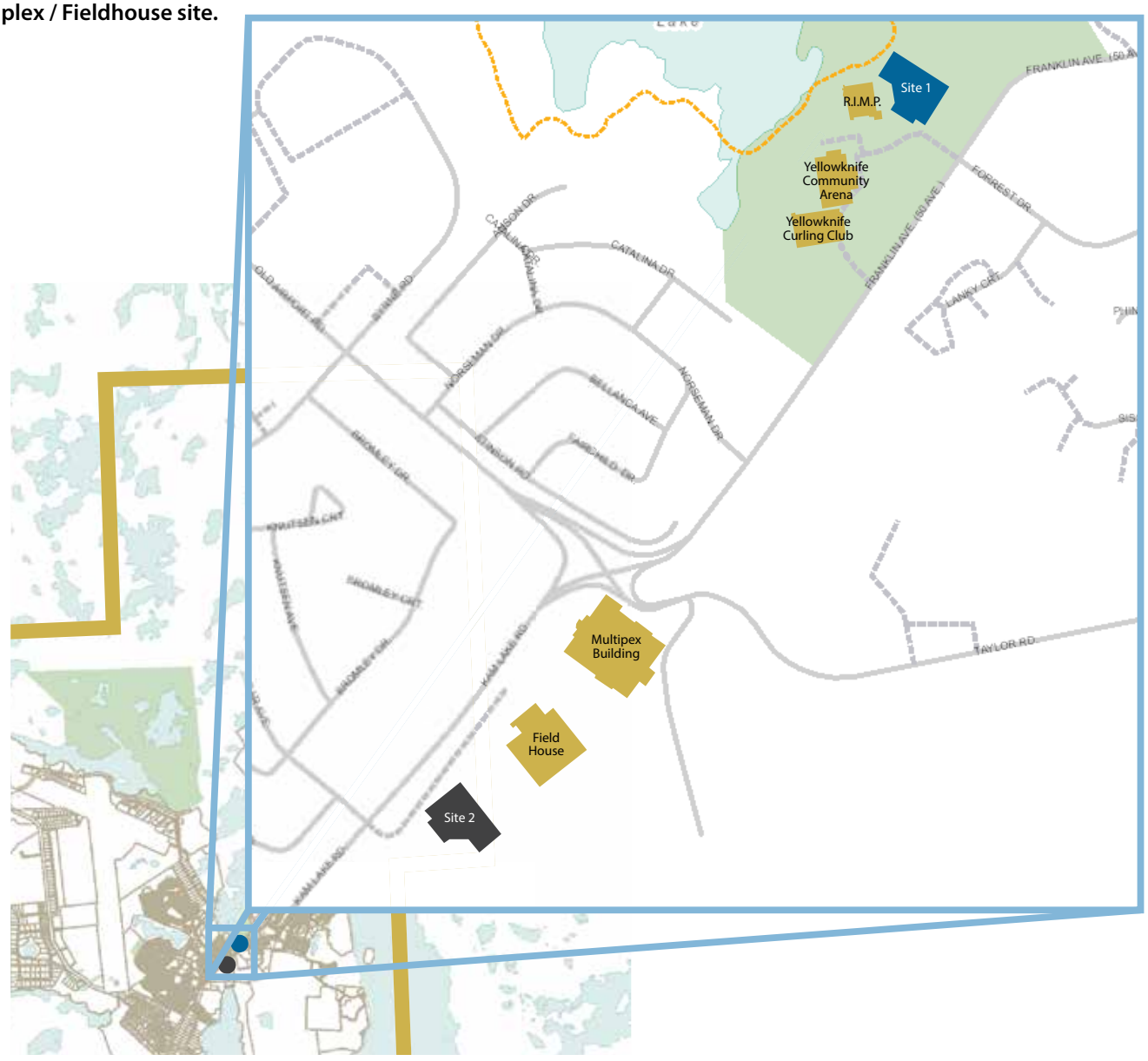
2 = site scores ""okay"" for this criteria

1 = site scores ""fair to poor"" for this criteria"

Each ACAC member was asked to complete the rubric scoring each of the sites. Once completed all completed scores were combined. The highest score then represented the preferred site.

Upon conclusion of the scoring, two sites were obviously much preferred over the others. These two however were very close in score. The two sites were:

1. **The Ruth Inch Memorial Pool site (this site could accommodate a new build)**
2. **Multiplex / Fieldhouse site.**



9 Funding Sources & Potential Partners

Regardless of the final concept recommended by the ACAC, the costs of building and operating an aquatic centre are high. With $12.9 M coming from the Federal Grants Building Canada Fund a sizeable proportion of the capital cost is covered. However the majority of the capital cost still needs to be secured. While sponsorship is commonly viewed as the panacea when sourcing capital funds, the reality is very different.

Determining the amount that could be secured through sponsorship can be a complicated task. There needs to be an inventory of available sponsorship opportunities (e.g. facility naming, room naming). Accompanying this is the "price" of each item in the inventory. These prices are set through knowledge of the community and prices set elsewhere for similar spaces. There are often very few direct comparisons; this is particularly true in Yellowknife. Typically as well this inventory is not solidified until further into the design process. Greater clarity is needed as to the facility program, layout of the facility, and its appearance. A sponsorship prospectus is then developed and used as a marketing tool when meeting with prospective sponsors. The amounts secured through sponsorship and community fundraising are often a very small proportion of total costs.

Including the Building Canada Grant, this would still leave a significant shortfall of capital dollars that needs to be found. Other sources become the Territorial government and the City of Yellowknife itself. Considering municipal sources the City can look to a number of areas for funds including municipal reserve. Many municipalities finance construction through a debenture which may be serviced through a reallocation of taxation funds, government operating grants, or new taxation.

Partnerships are another avenue that can be used to offset capital costs. One of the common partnerships is between a municipality and a school jurisdiction (Yellowknife Catholic Schools, Yellowknife Education District No. 1) or a post-secondary institution (Aurora College). In these circumstances agreements are put in place related to development, maintenance, and utilization[9].

To some degree partnerships may help offset operational costs as well. Municipalities do have some other mechanisms to address operating costs besides entrance fees and taxation. The delivery of programs can bring people into the facility and can deliver needed revenue as they are net positive initiatives. (Program fees cover the marginal costs associated with the program such as instructor costs.) The rental of facilities or spaces within facilities (e.g. multipurpose rooms) can also bring in needed revenue. Many municipalities lease spaces to private enterprise; it is not uncommon for food and retail franchises / businesses to operate out of recreational facilities; health and wellness services also often lease facility space. Some municipalities may directly deliver a retail experience through a "pro shop" or concession using facility staff.

9 It is important to note that no discussions related to a new aquatic centre were held between the City of Yellowknife and the school jurisdictions or Aurora College as part of this project.

10 Repurposing Ruth Inch Memorial Pool

Should a new aquatic centre be developed there is a question of what would occur with RIMP. Repurposing an aquatic centre does provide some options for the community and there are a number of considerations that are part of that decision. These include any limitations imposed due to the existing facility consideration as well as community need for recreation space.

Making a determination about this potential repurposing takes a similar approach to the development of a new facility in a community. In other words an examination of community needs should be undertaken or referenced if one has occurred. It is important to ensure that appropriate and necessary program spaces are developed to meet community need. Depending upon this community need, the size of the needed amenity, available partnerships, and costs a decision can be made. It is recommended that a feasibility study be undertaken to assist in making this decision.

There are examples in other communities of repurposing aquatic centres. A brief overview of four repurposing projects are presented below. These occurred in Canmore, Whitecourt, and Grande Prairie, all of which are in Alberta. Edinburg Scotland also presents an example. The City of Fort Saskatchewan Alberta did some preliminary planning to transform an aquatic centre. Its concept is included below.

10.1 Canmore, Alberta

In 2013 the Town of Canmore, Alberta decommissioned an old swimming pool located in its Community Recreation Centre and converted the space into a 12,000 square foot gymnastics centre leased to the Canmore Illusions Gymnastics Club. The facility includes a spring floor and an in-ground trampoline into foam pit. The space also includes an indoor walking lane that is often utilized by the Town's seniors. The pool decommissioning was part of a long-term capital plan to address deficiencies in the Recreation Centre. The approximate total cost for the entire rehabilitation of the facility was $12 million.

Canmore Recreation Centre Pool Retrofit into Gymnastics Studio

Image Credit: https://canmoregymnastics.com/location/

Links: https://canmoregymnastics.com/location/
http://maxmilbrandt.typepad.com/blog/2012/12/old-pool-proposal-multi-purpose-gym-engagecanmoreca.html
https://www.rmoutlook.com/article/rec-centre-project-sticks-to-original-scope-20170706

10.2 Grande Prairie, Alberta

In 2011, the City of Grande Prairie, Alberta, decommissioned a pool located within the City's 40 year old Leisure Centre. The facility also includes a fitness area, soccer pitch, and reception area. The City initially planned to renovate the pool at a cost of approximately $11 million, but funds were diverted to another project when it was determined there was significant remediation work required. It has recently been announced that $200,000 in renovations has been approved to upgrade some areas of the facility. However, Grande Prairie Council has yet to decide the future use for the pool area of the building.

Grande Prairie Leisure Centre Pool

Image Credit: https://www.mygrandeprairienow.com/26143/leisure-centre-receive-upgrades/

Links: https://www.mygrandeprairienow.com/35737/leisure-centre-revitalization-talks-revived-city-hall/

10.3 Whitecourt, Alberta

Whitecourt, Alberta converted an old pool facility into a fully-featured community centre at a cost of approximately $3.5 million. Today, the facility is called the Carlan Services Community Resource Centre and it is home to the Whitecourt Food Bank, Boys and Girls Club, the Whitecourt Early Learning and Childcare Centre, and the Whitecourt Gymnastics Club. A skatepark is also adjacently located.

Carlan Community Resource Centre

Image Credit: https://www.mytowntoday.ca/2018/08/22/scott-safety-centre-and-carlan-centre-to-get-new-roofs/

Links: https://www.newsoptimist.ca/news/local-news/kinsmen-aquatic-centre-recommended-for-demolition-1.1559292

https://portal.clubrunner.ca/489/stories/carlan-services-community-resource-centre-tour

https://www.whitecourtstar.com/2013/08/01/skate-park-and-teen-centre-roll-smoothly-together/wcm/421c791a-efa2-ba46-abc5-929717c63ada

10.4 Edinburgh, Scotland

In 2008, a historic Victorian bath in Edinburgh was converted into an art studio space at a cost of £8 million (appx. $13.5 million CAD). The space now houses art installations, a gallery, exhibition and event spaces, and a café.

Retrofitted Tapestry Gallery out of Old Pool

Image Credit:https://www.urbanghostsmedia.com/2013/05/adaptive-reuse-edinburgh-swimming-pool-infirmary-street-baths-dovecot-studios/

10.5 Fort Saskatchewan, Alberta

In 2017, the City of Fort Saskatchewan, Alberta, explored repurposing an existing municipally owned pool facility to accommodate the use of a local gymnastics club. The estimated capital cost for the project was approximately $5.7 million and would provide the local club with over 23,000 square feet of usable space. The figure below illustrates the floor plan that was explored. As of October 2018, this plan has not been developed further.

Fort Saskatchewan Harbour Pool Retrofit Exploratory Study

Image Credit: City of Fort Saskatchewan & RC Strategies + PERC

11 Conclusion

11.1 Public Review

The Aquatic Centre Advisory Committee (ACAC) was in attendance at the Community Showcase on Wednesday, September 12th and hosted an open house on Thursday, September 20th. At both events ACAC members presented the two preliminary aquatic centre concepts along with their deliberations on the potential aquatic centre. They solicited responses from the public through a feedback form. The information panels utilized at the open house were posted on the City's website along with an electronic version of the feedback form to gather feedback from those unable to attend the open house.

The ACAC gathered feedback from the public through to Wednesday September 26th. This feedback was then reviewed as part of the Committee's deliberations. This feedback ultimately was utilized by the ACAC as it developed its recommendations. The major findings from the open house feedback are presented below. (Note: there were 116 responses.)

- A 52 / 50 metre pool is needed. (50 comments)
- Build a new facility not renovate RIMP. (32)
- Facility needs to have a splash / spray area for children. (19)
- A waterslide is needed. (19)
- The tank should be at least 8 lanes. (17)
- The aquatic centre should be built on the multiplex site. (15)
- Like the universal / family change rooms (13) but there does need to be separate shower facilities (8) and private stalls. (6)
- There should be a lazy river. (11)
- Like the idea of a warmer pool. (10)
- Ensure facility is completely accessible for handicapped people. (8)
- Include diving boards / tower. (6)
- Multipurpose / program rooms are needed. (6)
- Sauna / steam room areas should be included. (6)
- Group / activity storage should be included. (5)
- Build on / by RIMP site. (5)

11.2 Facility Concept Recommendations

The Aquatic Centre Advisory Committee (ACAC) met following the review open house to discuss the information collected as well to revisit the draft facility program, concepts, and potential site. Ultimately the ACAC formulated its recommendation as noted below.

11.2.1 Facility Program

Based in part on the feedback provided throughout the public review, the committee arrived at the recommended facility program presented below. The significant change from the preliminary program include a 52m tank, spring board, and office and storage space for youth clubs. See the Appendices for a more detailed program.

Program Space	Description
Rectangular tank / lap pool	• 52 metre tank with moveable bulk head • 6 lanes • Accommodates lessons, lane swim, competitions, training • Deep end to accommodate SCUBA, synchro, etc
Leisure pool	• Tot pool • Warm water • Zero depth entry • Play and spray features including small slide • Lazy river • 3 lanes of 25 m • Splash deck (enables dry land and guard training; reduces guarding levels)
Lobby	• Building entrance • Access control point • Enables some viewing of leisure pool
Spectator / family viewing	• Viewing to watch swim lessons • Some spectator viewing of 52m pool
Hot tub	• Used by those from lane pool and leisure pool
Steam room	• Therapeutic and recreation purposes
Multipurpose rooms	• Ability to have two rooms or one large room • Accommodates courses, dryland warm-up, birthday parties
Springboards	• 1m and 3m boards
Office space for youth clubs	• Small office space dedicated for the Youth aquatic users
Storage for youth clubs	• Enables regular users of the aquatic centre space to house their equipment
Change Rooms	• Universal design[10] • Men and women • Larger and improved from current
Staff areas	• Administration spaces • Staff room • First aid room • Facility access point
Canteen	• Food service • Limited selection of items

10 A universal locker-room is designed to accommodate all genders. The design is similar to a large family locker-room - it is an open concept.

The washrooms and showers remain segregated for males and females, and there are private changing stalls. It allows parents to bring children of both sexes into the common room and still have a private cubicle. It is also intended for people with disabilities who have an attendant of the opposite gender.

11.2.2 Facility Concept

New construction is recommended rather than renovating the existing aquatic centre. Undertaking a renovation would necessitate working with the constraints inherent in the existing facility. A new construction does mean a blank slate which can help ensure the facility is developed exactly as desired to meet community needs. The stand alone concept is presented below.

The Recommended Option

ground floor

3,900 m2 (42,000 f2)

Legend

Lobby and Viewing
Public viewing from a envirometaly controlled lobby

Administration
Administration space for lifeguards and first aid room are positioned to provide easy of supervision of pool and change rooms

Circulation
Spectator seating for about 200 persons

Multipurpose / Classroom
Multipurpose room with deck access for birthday parties and training

Service and Mechanical
mechanical tower on three levels includes electrical, pool storage, steam and sauna

Change Rooms
Male and female dressing rooms, as well as universal change rooms will provide access to persons of all abilities

Steam / Sauna

Canteen

Lap, Leisure and Hot Pool
6 lane (2.5m each), 52m lap pool with ramp and stair access to accommodate all types of swimming

1m and 3m diving boards with stairs and platforms for enhanced user safety

Family size hot pool with ramp and stair access

The leisure pool includes features enjoyed by young and old including beach entry and sprays

Splash pad, deck level sprays and water features fun for tots and deck activities

11.2.3 Estimated Costs

Capital

New Build Pool	
Cost	Description
$36.1 million	New construction (42,000 sq.ft @ $860 / sq.ft)
$1.4 million	Site development allowance
$37.5 million	**Sub total**
$9.5 million	Soft costs (~25%)
$47.0 million	**Sub total**
$2.8 million	Escalation @ 6% to Q1 2020
$49.8 million	**Capital Cost (estimate)**

The costs included in the table are a refinement from the previously presented capital estimates. The unit cost declined from $1000 per sq. ft to $860 per sq. ft, as further investigation occurred. The costs reflect a competitive tendering process. It is important to note that the actual costs may vary.

Operating Subsidy

The annual subsidy (estimate) has been determined by applying a square footage unit rate based on actual costs from the existing facility. Utilizing a subsidy rate of $76.08/sq ft and the area of 42,000 sq ft, the **estimated annual operating subsidy of the recommended option is $3.2M.**

11.3 Site

Two preferred sites were identified previously. These included the multiplex / fieldhouse site as well as the Ruth Inch Memorial Pool site. Through the ACAC's adjudication process of all available sites these two were very closely scored. Subsequent feedback from the public and further discussion revealed proponents for each site. The ACAC determined that additional investigation of the two sites should be undertaken before a final decision is made. The ruberic[11] utilized by the ACAC (see pg 29) could for the basis for Council's discussion and decision about the site. Considering the criteria in the rubric, Council may determine that certain ones are of more importance than others and therefore may weight them differently. This will assist in arriving at a decision.

11.4 Next Steps

The recommendation provided by the ACAC will be presented to City of Yellowknife Council. Ultimately, City Council will make a decision on whether to proceed with the project. In this determination a site will be selected and the facility program finalized. At that point, more detailed planning work would need to be initiated – on the concept and design and on the costing. It is in these subsequent planning stages that the detail related to the leisure components, the set-up and layout of change rooms, and all other elements are determined. The authority rests with City council on the direction of the aquatic centre.

11 There were 14 criteria that included variables such as accessibility, co-location of activities, and site servicing.

Appendices

A: Community Group Survey Respondents

B: Open house panels

C: Detailed Program - Recommended Concept

A Community Group Survey Respondents

1. 825 Air Cadets
2. Aurora Fiddle Society
3. Dayhomes Collective
4. Diamond City Roller Derby
5. Ecology North
6. Girl Guides
7. Goodwin Society
8. Great Slave Snowmobile Association
9. JTFN - Canadian Armed Forces
10. Kids Corner Childcare
11. La Fédération franco-ténoise
12. Moms, Boobs and Babies
13. Movement
14. NARWAL Northern Adventures
15. NWT 55+ Games Association
16. NWT Breast Health/Breast Cancer Action Group
17. NWT Broomball Association
18. NWT DISABILITIES COUNCIL
19. NWT Gymnastics Association
20. NWT Literacy Council
21. NWT SPCA
22. NWT Soccer Association
23. NWT Swimming
24. NWT Wellness Society
25. Old Town Community Association
26. Potential Volleyball Club
27. Rainbow Coalition of Yellowknife
28. Somba K'e Paddling Club
29. Sport North
30. Unlimited Potential Community Services - TTC
31. Wimps Hockey Yellowknife
32. YK ARCC
33. YWCA
34. Yellowknife Association for Community Living
35. Yellowknife Catholic Schools
36. Yellowknife Curling Club
37. Yellowknife Playschool Association
38. Yellowknife Polar Bear Swim Club
39. Yellowknife Skating Club
40. Yellowknife Slopitch Association
41. Yellowknife Ultimate Club
42. Yellowknife Women's Society

B Open House Panels

1 About the Aquatic Centre Pre-Design Plan

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Aquatic Centre Pre-Design Plan

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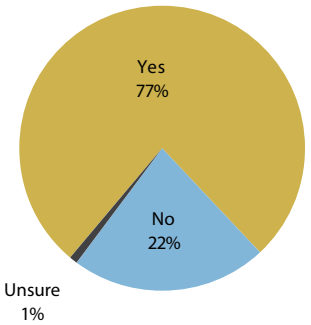
- City of Yellowknife owns and operates the Ruth Inch Memorial Pool (RIMP) which recently celebrated its 30th year of operation.
- RIMP is an important part of the sport and recreation landscape in the community.
  - » The facility is reaching the end of its lifespan. Coupled with the growing demands from the public and community groups plus the changing demands for amenities, the City is undertaking an Aquatic Centre Pre-Design Plan.
- The project is led by the Aquatic Centre Advisory Committee (ACAC).
  - » ACAC includes representation from a number of constituents in Yellowknife including City Council, Yellowknife Polar Bear Swim Club, youth, seniors, the business sector, Yellowknives Dene First Nation, the education district, NWT Recreation and Parks Association, and the general public.
- Utilizing input from the community as well as trends and leading practices in aquatic facility design and provision, a concept for a new aquatic centre in Yellowknife is being developed.
  - » The concept needs to balance community need with the budget realities faced by the City.
- The City has been successful in securing $12.9M in funding for part of the development of an aquatic centre from the Federal Government's Building Canada Fund.

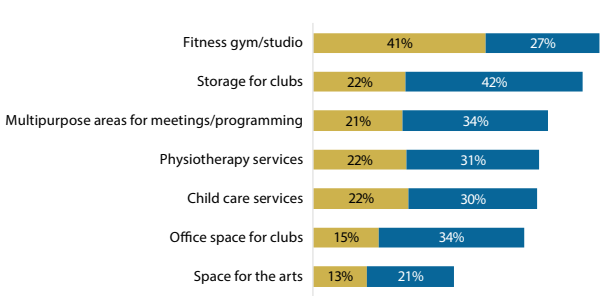
2 Household Survey Findings

- 425 responses (margin of error is +4.7% 19 times out of 20)

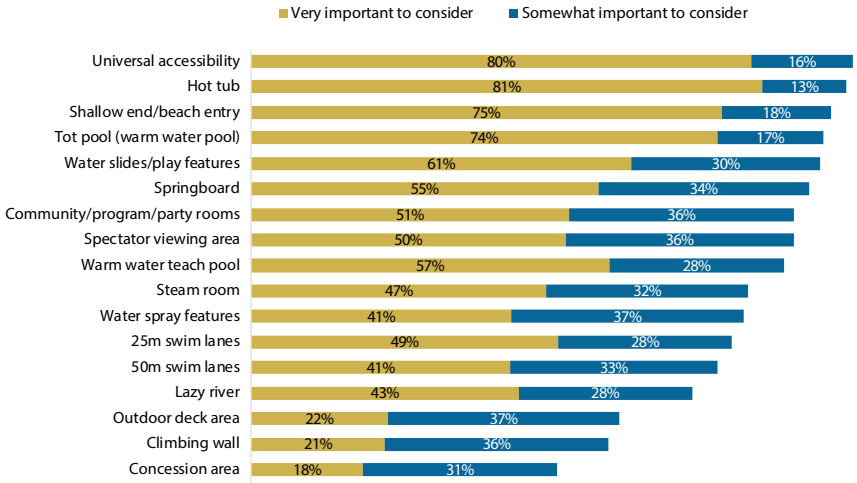
In the past 12 months has anyone in your household used the Ruth Inch Memorial Pool as an active participant?



Non-Aquatic Components to be Considered
(level of agreement)



Potential Components of a New Aquatic Centre



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3 Community Organizations Survey Findings

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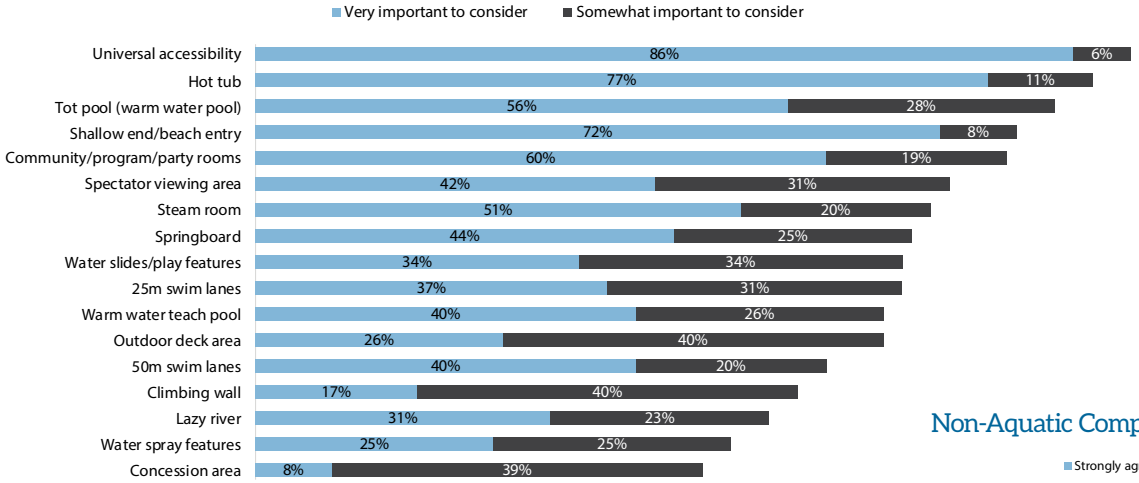
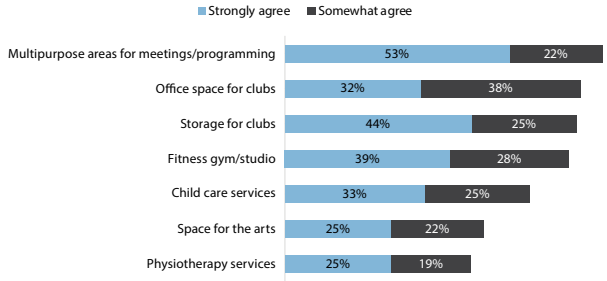
- 42 responses from a variety of organizations (recreation, sport, leisure, social, community associations, school boards)

Potential Components of a New Aquatic Centre



Non-Aquatic Components to be Considered



4 Trends & Leading Practices

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Universal Change Rooms

Water Features

Spa Themes

Family Change Rooms

Blurring Boundaries Between Indoor and Outdoor

5 Facility Program

- The facility program identifies the different spaces to include in the facility concept.
- The facility program was developed by the Aquatic Centre Advisory Committee (ACAC) through an examination of the findings from the community household and group surveys, and a review of trends and leading practices in aquatic facility provision.

Program Space	Description
Rectangular tank/lap pool (25m or 52m)	• Swim lanes (6 or 8) • Lessons, lane swim, etc. • Deep end to accommodate scuba, synchro, etc
Lobby	• Building entrance • Access to control point • Enables some viewing of leisure pool
Leisure pool	• Zero depth entry • Play and spray features • Lazy river • 3 lanes of 25m • Splash deck (enables dry land and guard training; reduces guarding levels)
Family viewing	• Viewing to watch swim lessons • Some spectator viewing of 25m tank

Program Space	Description
Hot tub	• Used by those from lane pool and leisure pool
Sauna and/or steam room	• Therapeutic and recreation purposes
Multipurpose rooms	• Ability to have two rooms or one large room • Accommodates courses, dryland warm-up, birthday parties
Staff areas	• Administration spaces • Staff room • First aid room • Facility access point
Change rooms	• Universal design • Larger than current and improved
Storage	• Pool equipment • Aquatic club equipment storage

6 Potential Sites

- The ACAC used a framework to evaluate sites throughout Yellowknife to identify preferred sites. Any site would be "scored" according to fourteen (14) criteria listed.

Criteria

Servicing all of Yellowknife
(sites that serve all of the city are better)

Proximity to other recreational, social, and cultural amenities
(sites that are close to other amenities are better)

Co-locations of activities
(being near other activities is better)

Highly accessible especially for seniors
(we want it to be highly accessible)

Highly accessible especially for kids
(we want it to be highly accessible)

Proximity to public transit
(being on an existing route is ideal)

Pedestrian and bike connections
(being on the trail network is ideal)

Parking and traffic impacts
(minimal impact on parking and traffic is the best case scenario)

Re-use or sharing of existing facilities
(connecting or using existing buildings is positive)

Land use and density
(is a pool one of the best uses for the site?)

Site servicing and conditions
(is the site serviced already? do its existing conditions make it easy to build there?)

Greenfield / brownfield*
(is the site already serviced and been developed or is it undeveloped completely?)

Property ownership/cost*
(is the property owned by the City?)

Zoning*
(does the current zoning allow for an aquatic facility?)

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7 Preferred Sites

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Aquatic Centre Pre-Design Plan

- The top two sites were:

1. The Ruth Inch Memorial Pool Site
   - Parking and infrastructure exists
   - Arena and Curling Club on site
2. Multiplex / Fieldhouse Site
   - Parking infrastructure exists
   - Fieldhouse and Multiplex on site

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8 Potential Concepts

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Aquatic Centre Pre-Design Plan

The preferred **stand alone** concept

ground floor

3,000 m2 (32,500 f2)

Legend

- **Change Rooms** — Male and female dressing rooms, as well as universal change rooms will provide access to persons of all abilities
- **Lobby and Viewing** — Public viewing from a envirometaly controled lobby
- **Steam / Sauna** — Steam and Suana in a spa like area with views out
- **Administration** — Administration space for lifeguards and first aid room are positioned to provide easy supervision of pool and change rooms
- **Fitness**
- **Lap, Leisure and Hot Pool** — 6 lanes (2.5m each), 25m lap pool with ramp and stair access to accommodate all types of swimming spectator seating for competitive events. Large family style hot pool with ramp and stairs. Generous leisure pool includes features enjoyed by young and old including beach entry and sprays
- **Multipurpose** — Mulituprose room with pool deck access for birthday parties and training
- **Service and Mechanical** — mechanical on three levels plus electrical and pool storage
- **Circulation**
- **Public Washroom**

$32.5 million	New construction (32,500 ft2 @ $1,000)
$1.0 million	Site Development Allowance
$33.5 million	sub total
$10.0 million	add soft costs at 30%
$43.5 million	sub total
$ 3.5 million	escalation @ 8% for one year (2019)
$47.0 million	ESTIMATED PROJECT COST
+ $ 7.7 million	to change 25m to 52m lane tank

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9 Potential Concepts

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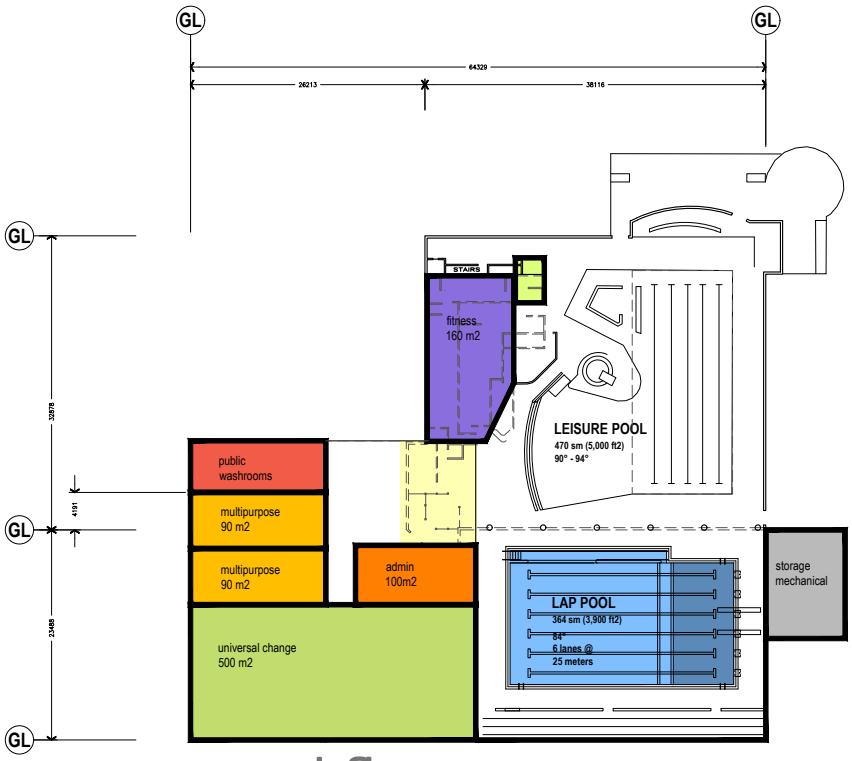
Aquatic Centre Pre-Design Plan

Renovated Ruth Inch Memorial Pool

This renovation reinvents the existing tank into a modern leisure pool with spa features enjoyable by young and old.



ground floor

3,128 m2 (34,000 f2)

Legend

- **Change Rooms** — Male and female dressing rooms, as well as universal change rooms will provide access to persons of all abilities
- **Lobby and Viewing** — Public viewing from a new expanded cool lobby
- **Fitness** — Remove and renovate existing change into fitness or multipurpose space with views and possible connections to the deck
- **Steam / Sauna** — Renovate and upgrade steam room
- **Lap, Leisure and Hot Pool** — Significant renovation of the existing tank with more spa and play features including lazy river, upgraded mechanical and warmer water; 6 lanes (2.2m), 25m lap pool with ramp and stair access to accommodate all types of swimming; Spectator Seating for about 200 persons
- **Administration**
- **Circulation**
- **Service and Mechanical**
- **Multipurpose**
- **Public Washroom**

$ 7.5 million	Renovation (15,000 ft2 @ $500)
$20.0 million	New construction (20,000 ft2 @ $1,000)
$1.0 million	Site Development Allowance
$28.5 million	sub total
$ 8.5 million	add soft costs at 30%
$37.0 million	sub total
$ 3.0 million	escalation @ 8% for one year (2019)
$41.0 million	ESTIMATED PROJECT COST
+ $ 7.7 million	to change 25m to 52m lane tank

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10 Next Steps

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Aquatic Centre Pre-Design Plan

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Public Review

- Community Showcase *Sept. 12*
- Open House *Sept. 20*
- Online *Sept. 20-25* (www.yellowknife.ca)

Aquatic Advisory Committee (ACAC)

- develop a recommended aquatic centre concept *Sept. 26*

Municipal Services Committee

- accept or revise recommended concept *Oct. 22*

City Council

- accept, revise, or reject recommended concept *Oct. 29*

if to proceed...

- 2019 Budget Deliberations
  - funding for design
- 2020 Budget Deliberations
  - funding for construction

C Detailed Program - Recommended Concept

The Preferred Program, revised

This panel provides an overview of the features, functions, and technical requirements of the proposed aquatic centre and has been tailored to suit the community.

AQUATIC FACILITY PROGRAM

Public Spaces **245 m2 (2,600 ft2)**
1. Lobby and Entry
2. Public Washrooms
4. Public Viewing

Activity Spaces **315 m2 (3,400 ft2)**
1. Multipurpose Studio, divisable in two (90 m2 ea)
2. Aquatic Classroom (40 m2)

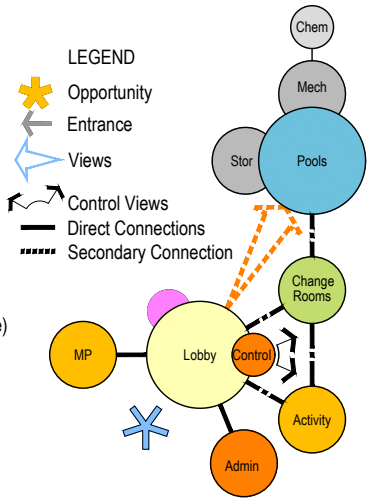
Aquatic Spaces **2,500 m2 (27,000 ft2)**
1. 6 Lane 52m Lap Pool, ramp, stairs, diving
2. Leisure Pool (450 m2)
3. Hot Pool (20 persons)
4. Splash Pad (50m2)
5. Spectator seating, bleachers seating (included above)
6. Steam Room

Change Rooms **540 m2 (5,800 ft2)**
1. Women
2. Men
3. Universal

Administration Space **140 m2 (1,500 ft2)**
1. Reception & control
2. Office(s) Manager/Aquatic Leader
3. Office for Clubs (14 m2)

Service / Support Spaces **160 m2 (1,700 ft2)**
1. Janitorial Office/Closets
2. Pool Storage
3. Club Storage
3. Pool Mechanical (140 m2 on each of 3 levels)
4. Chemical Storage (incl above)
5. Electrical Room (incl above)
6. Canteen

Circulation and Walls **20%**



SAMPLE

BATHER LOAD CALCULATIONS

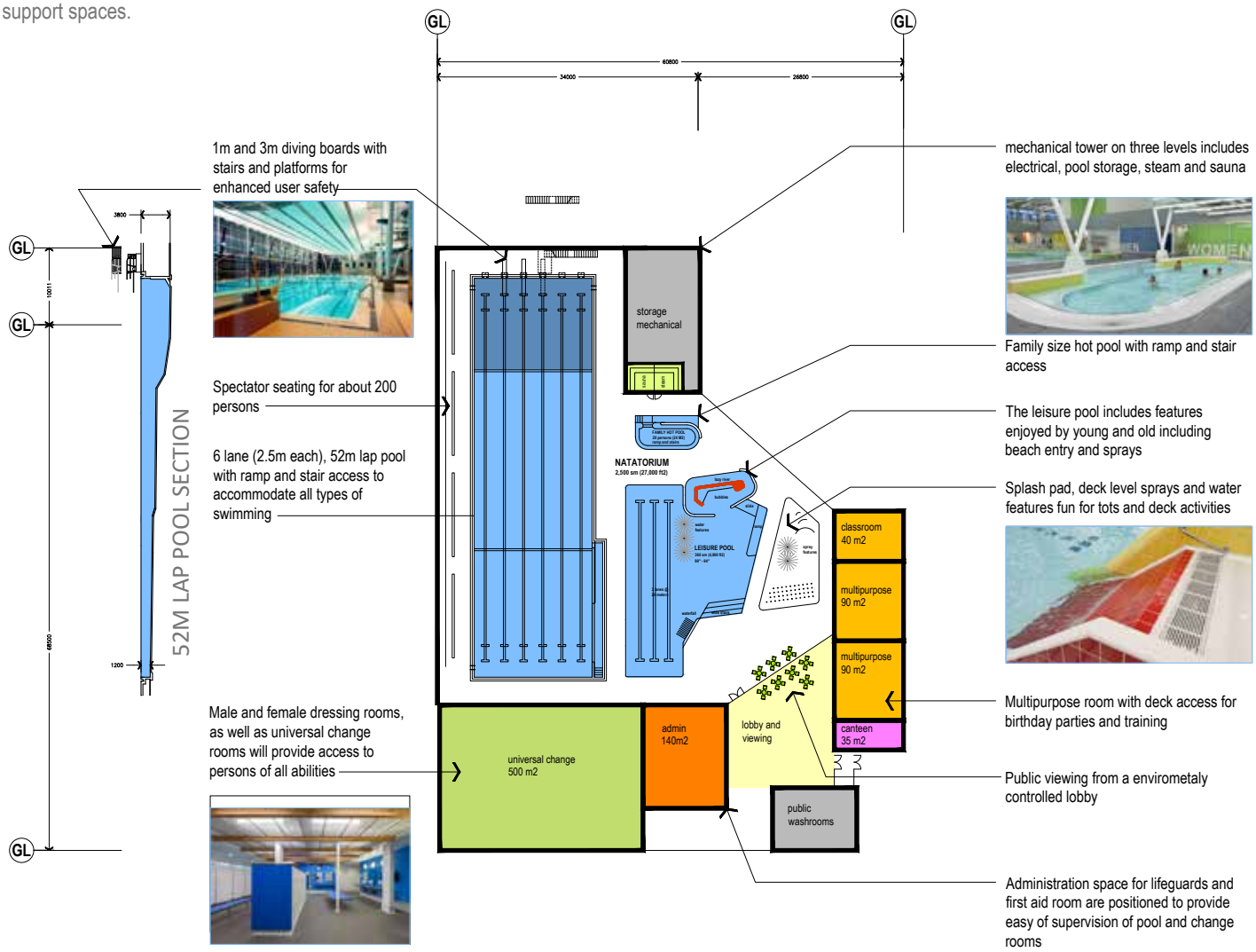
	<2' DEEP	S=2'–5' shallow	D=5'+ DEEP
LAP POOL (8,900 FT2)		6,900 ft2	2,000 ft2
WARM POOL (4,000 FT2)	1000 ft2	3,000 ft2	0 ft2
TOTAL	1,000ft2 (93m2)	9,900ft2(920m2)	2000ft2 (186m2)
HOT POOL	7m / .3m PER PERSON		
BC BATHING LOAD = D/2.5 + S/0.93 + (BENCH/.3 m/PERSON) BC BATHING LOAD = 93m2/2.5 + 920m2/0.93 + 7/.3 = BATHERS BC BATHING LOAD = 38 + 989 + 23 = 1,050 BATHERS			
MEN/WOMEN = 544 BATHERS PER GENDER			**TOTAL BATHERS 1,050**

CHANGE ROOM AREA CALCULATIONS

AREA REQUIRED PER BATHER (.32m2XBATHER LOAD) GROSS UP AT 70%	1050(.32) = 336 m2 .7x336= 235 m2
APPROX. TOTAL REQUIRED CHANGE AREA	6,148 ft2 (571 m2) APPROX.

The Preferred Program, revised

This concept option is stand alone facility and includes a 52m pool with bulkheads, leisure pool, spray pad and support spaces.



ground floor

3,900 m2 (42,000 2)

Legend

- Lobby and Viewing
- Administration
- Circulation
- Service and Mechanical
- Change Rooms
- Lap, Leisure and Hot Pool
- Steam / Sauna
- Canteen
- Multipurpose / Classroom

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