Harbour Pool Operational Analysis & Retrofit Feasibility

DRAFT

November 27th, 2003

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Letter of Submittal

November 27th, 2003

City of Fort Saskatchewan
10005 – 102 Street
Ft. Saskatchewan, AB,
T8L 2C5

Attention: John DeBruijn

RE: HARBOUR POOL OPERATIONAL ANALYSIS AND RETROFIT FEASIBILITY

Dear John;

Please find attached a draft of the Harbour Pool Operational Analysis and Retro-fit Feasibility.

We are confident that we have met the terms of this assignment and, in some cases, gone beyond.

We want to thank you for your cooperation in the development of this report and we look forward to a favorable review.

Sincerely,

R. Conrad

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Executive Summary

Introduction

The Harbour Pool Operational Analysis and Retro-fit Feasibility Study was commissioned by the City of Fort Saskatchewan to explore the costs and benefits of upgrading Harbour Pool.

The need to upgrade this twenty-one year old facility was first identified in the "2000 Fort Saskatchewan Facility Development Plan". A follow-up study, "The Harbour Pool Revitalization Study" was completed in February 2003.

The latter study, which included public, staff and user group consultation, outlined specific needs and presented concept designs and costs for overall revitalization.

Purpose

The purpose of this study is to:

- Provide a benchmark analysis of current operations;
- Prepare a comparative analysis of operations and upgrade successes found in other public aquatic operations across the Province; and,
- Outline the impacts of re-development based upon selected retrofit needs.

Research Methods Used

Randall Conrad & Associates undertook this research between August 2003 and December 2003.

Secondary research involved a detailed review of "The Harbour Pool Revitalization Study"; an in-depth review of the operations of public aquatic centers in similar sized municipalities and reviews of pool leisure product costs.

Primary research included interviews with City staff, Harbour Pool management staff, industry professionals (architects, operators and suppliers).

Care was taken to reveal experiences elsewhere about pool upgrades and leisure aquatic market trends.

Research Findings:

1. The functional design of Harbour Pool, while leading edge at the time of development, no longer meets public needs for:
   - Quality cross generational leisure aquatics for experiences like warm water leisure tanks, spray toys, water slides, hot tubs and enjoyable deck environments.
   - Outlets for aquatic based fitness and wellness that meet all age levels.
   - Required family change and handicapped change facilities.
   - Deck based leisure amenities for adequate viewing, relaxation and quality food and beverage services.
   - New water features that are found in newer pools in the Edmonton metro region.
   - Ambience and thematic design of interior spaces to add to the aquatics experience.
   - Increased deck space to accommodate training programs and to improve upon safety during busy periods.
   - Safety, wherein pool deck walls limit ease of access and limit sight lines.

2. The Harbour Pool staff, while appreciated by the public for their efforts in providing quality programs and services, are limited (by space and design) in endeavoring to provide expanded public programming that reaches all age levels and all interests.

3. Annual swim visits have remained relatively constant over the last ten years, but market population has increased, particularly the number of adult residents.

4. Operational costs of the Harbour Pool are higher than pool operating costs in similar sized communities. This, in part, is due to energy inefficiency (heat loss) at the facility and the need for an increased level of staffing to improve risk management.

5. Operators of municipal pools that have improved levels of leisure aquatic amenities report increased and sustained use.

6. The Harbour Pool requires close to $600,000 in capital upgrades over the next two year period. These expenditures will have greater long term benefit if applied as a component of major leisure upgrades.

7. Where full time spontaneous access to quality and comprehensive leisure aquatics amenities (leisure pools, water slides, spray toys, lazy rivers) exists, the annual number of recreational swim visits surpasses programmed swimming by 2 to 1. At present, programmed swim visits to the Harbour Pool represent approximately 50% of total use. Improved leisure amenities can be expected to generate two times the current leisure swim visitation from approximately 50,000 per annum to 100,000 per annum. This results in annual swim visits (including program lessons) of 150,000 or a 33% increase in utilization.

8. The incremental annual operating costs (not including capital amortization) of recommended improvements will range between ($687,700) and ($580,330) per

year depending upon the degree to which marketing and operational options are pursued (i.e. increased charge rates, user surcharges, levels of visitation, etc…). Given a conservative approach in terms of marketing, user fee increases, and surcharge levels, annual recovery would reach 41%. Given a more aggressive approach, recovery could be improved to 50%. Even under a conservative approach this is a 10% improvement from current levels.

9. The capital cost of recommended upgrade and development (including taxes, fees and expenses) is $3.35M. This includes energy efficient design components, complete upgrade of existing spaces and new spaces to accommodate required public service amenities, a water slide feature, and a new warm water leisure tank.

Key Recommendations

That the City of Fort Saskatchewan:

1. Strongly consider resourcing the necessary capital dollars (estimated at $3.35M) to complete a building code upgrade and leisure expansion of the Harbour Pool.

2. Consider adopting a “pay for play” strategy that sets a differential user charge or surcharge to access major new amenities (such as a water slide) and that such revenue be used to offset the capital cost of amenity development.

3. Consider adopting a pass card strategy, in conjunction with the Dow Centennial Activities Center, that allows residents to access all public leisure facilities (including the Harbour Pool) with a monthly pass card.

4. Insure that design retro-fits of the Harbour Pool result in:
   - ♦ State of the art energy efficient design
   - ♦ Both aquatic and dry surface (deck) amenities that can be spontaneously accessed or programmed for all age groups and all disabilities
   - ♦ Enhanced food services and aquatic tuck shop or kiosk for retailing aquatic items
   - ♦ Separate temperature tanks including, but not limited to:
     - warm water leisure play tank
     - cool water program tank (as exists)
     - hot tubs and whirl pools
   - ♦ Family and handicapped change rooms
   - ♦ A major water play feature such as a major water slide
   - ♦ Increased deck space for related on deck training, programming and relaxation / lounging
   - ♦ Improved sight lines to include elimination of high deck walls

5. Enter a design consultation program that: 1 - ensures that selected designers / architects research, review and expose new leisure pool products that are available globally as opposed to locally and that the ultimate design has placed full consideration to features that are unique and new to the Alberta market; and 2 – that the design process provide ample opportunity for public review and feedback.

1.0 Introduction

The City of Fort Saskatchewan is a growing community of close to 14,000 residents (13,824 as per 2003 Municipal Census). Located along the North Saskatchewan River, just northeast of the City of Edmonton, it is an integral component of a metropolitan region of over one million people. It has a strong employment base, excellent lifestyle amenities and is poised to accept growth with a well planned strategy for continuous improvement of quality leisure facilities and programs.

The "Fort Saskatchewan Facility Development Plan", adopted by City Council in 2000, represented an investment in planning and a committed approach to the development of needed culture and leisure lifestyle facilities to serve City residents as well as a market region of close to 40,000 people.

The implementation of the "2000 Fort Saskatchewan Facility Development Plan", as well as subsequent planning, design and development efforts has resulted in the current construction of the exciting Dow Centennial Activities Centre, as well as ongoing investigation for the desired upgrade and expansion of the Community's aquatic facilities.

The Dow Centennial Activities Centre, scheduled to open in the fall of 2004, will meet present and future needs for quality performing arts, indoor ice sports, gymnasium sports indoor field activities, family fitness and social programming. The Community, led by City Council, is now focused upon needed improvements to Harbour Pool, the Community's major aquatic facility.

In spring of 2003, Hutchinson Architects was commissioned to investigate the needs, concepts and costs associated with upgrade and expansion of Harbour Pool. This present study builds upon this previous work and in doing so, provides a more in-depth analysis of the costs and benefits associated with selected aquatic leisure amenities, operations and energy efficient design.

The importance of this planning work cannot be overstated. Council, Administration and the public recognize that while the Harbour Pool has been a valuable community resource for over 21 years, its service capacity and design no longer meets the needs of today's aquatics market, nor can it continue to operate efficiently in an environment of rising energy costs.

The recommendations contained in this report shall serve as: a foundation in setting design parameters that meet societal needs, a guide for cost efficient upgrades and an accurate capital cost appraisal to provide budget planning for this important community resource.

2.0 Purpose and Methodology

This analysis was undertaken utilizing a number of primary and secondary means of research.

Secondary Research involved a detailed review of past planning documents including:

- The Harbour Pool Revitalization Report by Hutchinson in February 2003
- The 2000 Fort Saskatchewan Facility Development Plan
- Industry publications and research studies from web searches
- Budgets from other public aquatics facilities

Primary Research involved:

- Personal interviews with
  - City Administration
  - Harbour Pool Management staff
  - Industry professionals (architects and suppliers)
  - Managers and operators of public aquatic facilities through Alberta

The compilation of data and the analysis was completed in three phases. The first phase was focused on an analysis of Harbour Pool operations and its comparative stance to other pools in the province. The second phase involved an analysis of leisure aquatic market and amenities outlining their potential cost and benefit as potential inclusions to the Harbour Pool. Finally, the third phase involved architectural review and updated costing of desired operational elements for the pool with suggested impacts to operations.

3.0 Harbour Pool Today – An Analysis

3.1 Overview

Harbour Pool was designed in 1981 (opened in 1982) when the City's population was just under 11,000 residents. Youth 0 – 14 years of age accounted for 34% of the population.

In its day, it was a "leading edge" facility and one of the few in the province that featured a five lane 25 meter program tank as well as a zero depth entry leisure pool attached. It was designed to accommodate a wave machine, contain a hot tub and a separate whirlpool.

Today, Harbour Pool staff have maintained a successful service level for programming but are limited in expanding services and opportunities for aquatics leisure fun experiences because the original leisure design elements no longer meet the needs of today's pool market. The wave feature is not in operation and while necessary capital upgrades and minor leisure improvements have occurred, the ability to attract increased use and quality service levels is challenging without a new and exciting contemporary design.

In spite of an increased local market population of some 3,000 residents since 1982, visitation at the pool has remained constant while operational costs have risen. This may be due in part to the fact that the primary pool market of youth under the age of 14 (lessons market and leisure swim market) has not grown in concert with the overall population (there were 3,665 children / youth under aged 14 in 1981 and there are 2,811 now).

It is timely that the Community consider re-investing their resources to modernize the Harbour Pool to meet current market demands and, as well, explore ways to optimize value of the service relative to the cost of provision.

3.2 Program Analysis

3.2.1 Facility Usage

In 2002 93,614 patrons (slightly below previous annual visitation counts) visited the Harbour Pool. This traffic can be broken down as follows:

Public participants	50%
Community lesson participants	17%
School lesson participants	8%
Swim club rentals	7%
Other	18%

(Pool rentals, meeting room rentals, and school recreational swims)

Over the past six years (1997-2002), overall facility traffic has remained fairly consistent averaging ~98,000 visitors / year in spite of population increase. A major objective of pool staff and administration is to increase visitation.

3.2.2 Program / Service Overview

While there are many constraints to what programs and services can and should be provided to residents, operational staff have done an admirable job in catering to a variety of demographics and age categories such as children, youth, adults, and seniors. Programs / services that are offered are as follows:

- Swimming Lessons (community and school):
  - Red Cross
    - Aquatots
    - Preschool Aquaquest (1-3)
    - Aquaquest (1-12)
    - Water Safety Instructor
    - Aqua Leaders
    - Aqua Adults
    - WSI Recert
  - Lifesaving Society
    - Bronze Cross
    - Bronze Med/Sr Resus.
    - NLS
    - AEC
    - Bronze Star
    - AFLCA-AQ
    - NLS Recertification
    - AEC Recertification
    - Boat Operator Certification
- Harbour Pool Specialty Programs
  - Preschool Plunge and Play
  - Preschool Power
  - Stroke Improvement
  - Aquafit For Arthritis
  - Babysize
- Aquasize
- Parties
- Early-out Loonie Swims
- Meeting Room Rentals

Aside from these programs, the Pool also has a corporate passholder program and various special event days throughout the year. The corporate passholder program currently involves Dow Chemicals, Social Links, and the City of Fort Saskatchewan. All provide reduced corporate package rates for their employees. Special event days (~14) throughout the year include Loonie Swim Days and Theme Days. These events are supported through sponsorship from local business. Pool staff often introduce new programs and sustain them if they are popular to users.

3.2.3 Program Constraints

Although the Harbour Pool does have an extensive program offering, there are a number of typical public aquatics programs that it cannot offer due to facility related constraints. The configuration of the main tank limits aquatics activity uses such as water polo, some forms of competition swimming, and major diving activities (as the board is not regulation height). There were, however, provisions for these kinds of activities in the original construction of the pool. For example, the pool has an underwater sound system for synchronized swimming, and a net for water polo, but the physical dimensions of the pool do not meet respective program standards.

Other programs that the Harbour Pool cannot offer include:

Program	Constraint
Diving Lessons / Programming	Board height and pool depth do not meet program standards
Simultaneous Lap Swimming and Lessons	Both activities cannot occur at the same time as there is only one tank.
Lessons w/o Personal Floatation Devices (PFD's)	The existing deck height requires some lesson participants to wear personal flotation devices (PFD's). Lower deck heights would enable lesson participants to learn without PFD's. Lower deck height would also increase visibility for the viewing area.
Fitness (Dry-Land)	Currently there are no facility spaces for dry-land fitness / training for facility users.
Lessons For Small Children (Aquatots)	The currently facility (one tank) does not allow for extensive tot lessons as those participants who are not toilet trained compromise the entire pool schedule (as fecal accidents shut down major portions of facility amenities)

3.2.4 Budget Analysis

The budget analysis provides a financial snapshot of the Harbour Pool operations including detailed breakdowns of revenues and expenditures, revenue sources, as well as Recovery Rate Analysis. It serves as a benchmark to measure the costs and impacts of potential improvements.

Budget Overview

The operational budget summary for the Harbour Pool for the 2003 fiscal year is as follows:

Revenue Breakdown	
Passes	$ 38,700
Drop-ins	$ 77,100
Programs	$ 112,400
Vending	$ 3,100
Room Rentals	$ 20,300
Community Donations	$ 2,700
Provincial Wage Grants	$ 1,800
Miscellaneous Revenue	$ 3,900
Marketing Revenue	$ 2,700
Total	**$ 262,700**

Expense Breakdown	
Staffing - Operations	$ 322,700
Staffing - Program	$ 266,200
Marketing / Advertising	$ 12,500
Utilities	$ 185,800
Supplies and Maintenance	$ 47,400
Contracted Services[1]	$ 35,400
F&E	$ 27,300
Other Admin. Costs	$ 13,600
Total	**$ 910,900**

Net Operations	**$ (648,200)**
Recovery	**28.8%**

It should be noted that during the fiscal year 2003, a cost of $214,000 for equipment replacement and structural upgrading was also incurred (not included in the above budget summary). The inclusion of this information in the determination of net income and recovery is irrelevant as it was a one time cost. Therefore, Net Operations (revenues less expenses) of ($648,200) was incurred. Accounting for revenues at $262,700 and expenses at ($910,900), the recovery for the Harbour pool in the 2003 operating year was 28.8%. This is deemed to be below averages in the Province for municipal pool operations where we find recovery rates for direct operations (not including capital replacement costs) ranging from 40%-60%[2].

[1] External Contracted Services
[2] Numbers come from section 5) Comparative Analysis

Budget Breakdowns

Municipal Aquatics facilities generate revenues from a variety of different sources. These revenue sources vary based on the types and quantities of different facility components and features and the public demand for such. The Harbour Pool offers leisure aquatics, lane swimming, a warm pool, a hot tub, dry sauna, and a shallow wading area. It also has a diving board, two swing ropes, and a small waterslide. These features provide for a variety of spontaneous activities for public users, user groups, and schools as well as the ability to program lessons. Spectator areas in the lobby and on-deck bleachers make the facility conducive, to a limited extent, to public viewing. The removal of spectator viewing would restrict opportunities for event spectating. The facility also has administrative offices, men's and ladies change rooms, and a multi-purpose room that can be used for programming, staff in-service training, classroom functions, parties, and rentals.

Revenue Breakdown

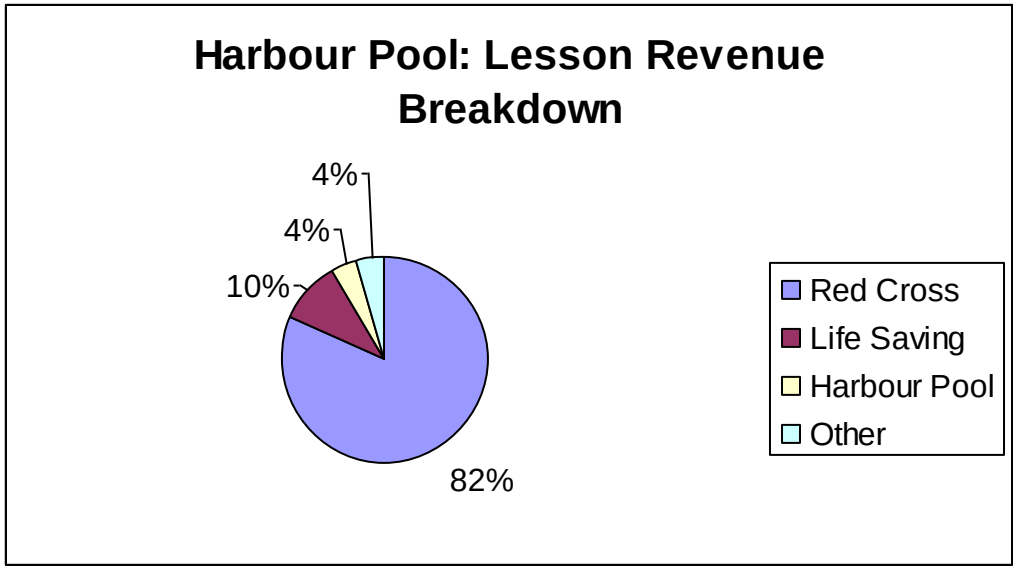
Sources of revenue for the facility and its operation come from passes, drop-ins, programs, vending machines, and room rentals. The following chart provides the relative proportion of each to overall revenues.

Revenue Component	% of Total	Dollar Amount
Programs	43%	$112,400
Drop-ins	29%	$77,100
Passes	15%	$38,700
Room Rentals	8%	$20,300
Vending (machines)	1%	$3,100
Miscellaneous Revenues	1%	$3,900
Marketing Revenues (e.g. sponsorships)	1%	$2,700
Community Donations	1%	$2,700
Provincial Wage Grants	1%	$1,800
Total	100%	$262,700

Rate structuring, as in all aquatic facilities, provides different rates for different age groups. The rates charged at Harbour Pool are, approximately 10 to 15 percent less than rates in municipalities similar to the size of Fort Saskatchewan. This indicates that there may be some legitimacy to increasing rates when improved development occurs.

Drop-In Rates	**Average[3]**	**Harbour Pool**
Child	$ 2.50	$2.25
Youth	$ 3.50	$2.80
Adult	$ 4.35	$3.95
Senior	$ 3.50	$2.80
Family	$ 9.70	$8.50

Lesson revenue can also be broken down further as the Pool offers three major types of lessons. As can be determined, Red Cross lessons make up the largest portion of lesson revenue (82%) generating almost $92,000. They include Public Red Cross Lessons as well as School Red Cross Lessons (~1/3 of total Lesson Revenue comes from school programs).



[3] Average of five Alberta Municipalities Surveyed (Refer to Comparative Analysis section)

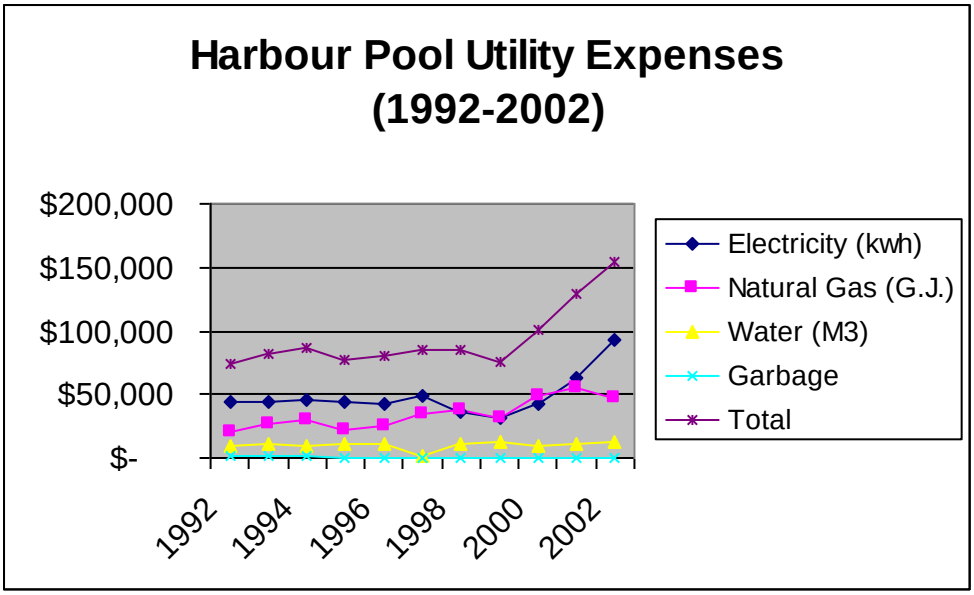
Expense Breakdown

Expenses for municipal aquatics facilities are based upon facility operational costs including utilities, staffing, administrative functions such as marketing and scheduling, and supplies and maintenance. Typically, a stand-alone municipal aquatics operation can expect an average of close to 60% (as identified in the following Comparative Analysis section) of its total operating expenses to be attributed to staff. Staff includes: administration, lifeguards (mostly part time), customer service, and janitorial / maintenance. In the case of the Harbour Pool, there are approximately 30 staff members (on average) including 4 full-time staff (including an Aquatics Superintendent and two staff for administering programs and operations), 6 part-time cashiers / receptionists, and 20 part-time life guards / program staff. Harbour Pool staff, with the exception of two administrative positions, all fall under the municipal employee union.

The staffing costs (for both operations and programming) equate to 66% of total expense ($588,900). Utilities, the other major expense, accounts for 20% of total expenses ($185,800), while supplies and maintenance (5%), contracted services (4%), furniture and equipment (3%), marketing / advertising (1%), and other administration costs (1%) account for the remaining operation expenses.

Comparative Pool Staffing	Staffing as % of Total Budget	Actual $
Lloydminster	48.8%	$ 421,500
Camrose	62.0%	$ 407,900
Wetaskiwin	54.0%	$ 262,650
Leduc	53.0%	$ 331,868
Cold Lake	75.0%	n/a
Average	58.6%	$ 355,980
Harbour Pool	64.7%	$ 598,000

A major source of uncertainty for municipal aquatics operations, as well as all major public facilities in Alberta stems from rising energy costs, especially natural gas and electricity. For example, the following charts explain the varying levels of utility costs for the Harbour Pool since 1992.



Capital Budgeting

The following[4] table outlines capital items that have been plannedd for capital improvement up to 2006 should overall building retro-fits not be undertaken between now and 2006. These items are related to structure only, and do not include equipment upgrade / replacement items.

It is important to note that the items identified reflect the need of administration to address and plan for capital lifecycle costing and improvement as part of an ongoing budget review process. However, they have not been reflected in the 2004 budget in anticipation for inclusion in an overall facility retrofit. In particular, the items presented for 2004.

Year	Item	Cost	Explanation
2004	Plumbing Upgrades	$35,000	Two (2) valve kits will be installed and plumbing will be re-routed to place the chlorine injection process in the chlorine room (to meet code). Lifecycle replacement of plumbing components.
2004	Safety Rail (Hand hold)	$35,000	To address safety concerns due to deck height, safety rails will be placed on the East and South walls of the tank.
2004	Spray Toys	$60,000	Replacement of existing spray feature (due to deterioration of structure). If not replaced, plumbing for feature would have to be removed.
2004	Steam Room	$66,000	Development of a steam room as additional facility amenity. As requested by users.
2005	Electrical Upgrade	$35,000	Lifecycle replacement of facility electrical components. May incorporate recommendations from recent energy audit.
2005	Tower Slide	$15,000	Replacement of Tower Slide. Existing slide is missing a rail and has “thin spots” in some areas.
2005	Tile Replacement	$55,000	Tile replacement is completed without matching existing tiles as existing are no longer manufactured. The project includes necessary replacement of damaged tiles and changing tiles to match throughout the facility.
2005	Structural Upgrading	$185,000	Replacing flooring in office / staff area. Repainting interior of facility. Replace HVAC system. Remove concrete pillars from bay. Re-grout floor tiles on deck.
2006	Mechanical Upgrade	$120,000	Replace pool boilers. Replace mixing valves. Repair building exterior (ductwork, stucco, paint)
Total 2004-2006		$606,000	

[4] As provided by Ev Jones, Aquatics Superintendent, Harbour Pool as of October 5th, 2003

3.2.5 Expressions of Need

The Hutchinson Pool Revitalization Study, prepared in February 2003, included public consultation. Through focus group meetings, workshops, and a public forum a number of concerns were expressed from staff, user groups and the public. Of importance to mention is that the general public recognize and applaud the efforts of aquatics staff in providing quality programs and services within the confines of the present facility. Concerns expressed include:

- Lack of convenient deck access to public washrooms
- Inability to site and watch with clear visibility
- Need for "easily seen" sauna / steam room facilities
- Desire more pool leisure amenities like slides, spray toys, etc.
- Desire for handicapped and family change rooms
- Desire for fitness amenities
- Need for additional storage
- Need for new lockers
- Need to improve safety / visibility vis-à-vis high pool walls
- Need to replace worn out pool features
- Need to improve deck space and safety (during peak use and crowded conditions)

3.3 Comparative Analysis

In assessing the Harbour Pool's operations, it is important to understand how it compares to similar facilities throughout the province. Comparative analysis is a tool that allows us to develop industry benchmarks and identify new innovations in public leisure aquatics provision. The following comparative analysis involves all operational aspects of public leisure aquatics facilities. Program data, building information, and financial data have all been collected from five similar sized communities from across the province. Data for the following comparative analysis has been collected from Camrose (Camrose Aquatic Center – population 15,253), Lloydminster (Lloydminster Leisure Center – population 20,961), Wetaskiwin (Aboussafy Center – population 11,154), Leduc (Black Gold Pool – population 15,032), and Cold Lake (J. J. Parr Aquatic and Sport Center – population 11,595). All of the above facilities are publicly owned and operated (J. J. Parr is located on a Military Base). It important to realize that direct comparisons are often misleading in that not all facilities are built alike, there are differences in market demographics and each community records budget data in different ways. As an example, without detailed budget investigation (this requires a great degree of cooperation from operators) expenditure items such as parking lot snow clearing are often missed because they come from public works budgets, annual hours of operation may vary based upon length of annual shut downs and pay grids for pool staff vary. In spite of these limitations, the comparison of averages provides useful information.

3.3.1 Facility Components

An important aspect to comparative analysis is understanding exactly what is being compared. The following statements explain the type of facility components that were found in each facility:

- All facilities had a competition and leisure tank (two have leisure / competition tanks, while the other three have separate tanks for each)
- Four out of five of the facilities have a waterslide
- All the facilities have a hot tub (average capacity: 14 adults)
- Four out of five facilities have a sauna
- Three out of five facilities have a diving board
- One of the facilities has a sun deck
- One of the facilities has an outdoor spray park
- Three of the facilities have a fitness center
- Two of the facilities have an aerobics room
- Only one facilities actually offers fitness programming (land)

Of those that have fitness centers, only one (J. J. Parr) had a full service fitness facility. The other two have an average of five pieces of equipment and thus do not focus on fitness programming.

3.3.2 Aquatics Programming

Programming in public leisure aquatics facilities can take many forms. Swimming lessons act as a stable source of revenue and allow the operation to incorporate school into everyday programming. Aquatics aerobics classes (aquafit, aquasize, etc…) are also very popular with all ages. Lifeguard training enables the facility to constantly train youth to become lifeguards and thus develop a labor pool for future operations. This recruitment is beneficial for the facility as it is a source of revenue (the actual lessons), it ensures high quality lifeguards, and it provides a service to the community in terms of youth / teen programming.

- All of the facilities offered Swimming Lessons for all ages (average $35 / 10 lessons)
- Three of the facilities offered Jr. Lifeguard training
- All of the facilities offered aquatics aerobics programs for all ages (average $47 / ~8 sessions (average), $7.50 / drop-in)
- Four of the facilities rent out their tanks, as well as the program rooms with rates ranging from $40-125/hr for exclusive use of the tanks

3.3.3 Budget Comparisons

The following budget information has been obtained from the facilities surveyed:
(Please note that different jurisdictions may record revenues and expenses in a different format that that of Harbour Pool, thus operation differences should be taken into consideration when viewing the following tables.)

Revenues	**Programs**	**Drop-ins / Passholders**	**Lease Spaces**	**Sponsorship / Advertising**	**Vending / Concessions**	**Fitness**	**Room Rentals / Parties**	**Other**	**Total**
Lloydminster	27.9%	56.0%	0.0%	0.0%	5.8%	0.0%	10.3%	0.0%	100.0%
Camrose	44.0%	46.0%	0.0%	0.0%	1.0%	0.0%	5.0%	4.0%	100.0%
Wetaskiwin	27.0%	29.0%	0.0%	0.0%	0.0%	0.0%	4.0%	40.0%	100.0%
Leduc	40.0%	34.0%	0.0%	0.0%	3.0%	0.0%	11.0%	12.0%	100.0%
Cold Lake	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Average	**59.7%**	**41.3%**	**0.0%**	**0.0%**	**2.5%**	**0.0%**	**7.6%**	**14.0%**	**N/a**
Harbour Pool	42.8%	44.1%	0.0%	0.0%	1.2%	0.0%	7.7%	4.2%	100.0%

Categories with 0% indicate that no revenues or expenses are attained in that respective manner.

Expenses	**Staffing**	**Marketing / Advertising**	**Utilities**	**Maintenance and Repairs**	**Insurance**	**Capital Budgeting**	**Other Administration Costs**	**Total**
Lloydminster	48.8%	0.0%	31.9%	19.3%	0.0%	0.0%	0.0%	100.0%
Camrose	62.0%	0.0%	17.0%	20.0%	0.0%	0.0%	1.0%	100.0%
Wetaskiwin	54.0%	0.5%	21.0%	15.0%	0.5%	0.0%	9.0%	100.0%
Leduc	53.0%	1.0%	22.0%	15.0%	0.0%	8.0%	1.0%	100.0%
Cold Lake	75.0%	0.0%	15.0%	0.0%	0.0%	0.0%	10.0%	100.0%
Average	**58.6%**	**0.3%**	**21.4%**	**13.9%**	**0.1%**	**1.6%**	**4.2%**	**N/a**
Harbour Pool	64.7%	1.4%	20.4%	8.2%	0.0%	0.0%	5.4%	100.0%

As can be seen the Harbour pool is close to the average on most revenue and expenses categories .

The following budget breakdown explains the actual levels of operation in the facilities surveyed as compared to the Harbour Pool. Comparatively speaking, the net recovery of the Harbour Pool (28.8%) is much lower than those compared.

Budget Comparison[5]	Wetaskiwin	Camrose	Leduc	Lloydminster	Harbour Pool
Revenue					
Grants (County / M. D.)	$ 85,000	$ 9,700			$ 1,800
Pool Admissions	$ 67,000	$ 103,500	$ 120,000	$ 218,000	$ 115,800
Waterslide Admissions		$ 35,500	$ 35,000		
Swimming Lessons	$ 35,000	$ 112,500	$ 133,000	$ 89,000	$ 79,777
Lockers	$ 7,000		$ 5,000		
School Lessons	$ 27,000	$ 17,500	$ 20,000	$ 20,000	$ 32,623[6]
Rentals	$ 8,000	$ 12,000	$ 45,000	$ 40,000	$ 20,300
Concessions / Pro Shop / General		$ 2,000	$ 8,000	$ 22,500	$ 3,100
Other					$ 9,300
Total	**$ 229,000**	**$ 290,700**	**$ 366,000**	**$ 367,000**	**$ 262,700**
Expenses - Programs					
Staffing	$ 218,804	$ 150,000		$ 21,500	$ 266,200
Clothing Allowance	$ 4,000				
Telephone / Fax	$ 3,400				
Advertising / Promotions	$ 2,000				
Stationery	$ 1,500				
Program Supplies	$ 7,500				$ 8,700
First Aid Supplies	$ 500				
Sporting Goods	$ 5,500				
Safety Supplies	$ 3,000				
Total	**$ 246,204**	**$ 150,000**	**$ -**	**$ 21,500**	**$ 274,900**
Expenses - Building					
Staffing	$ 43,846	$ 257,900	$ 331,868	$ 400,000	$ 331,800
Electrical	$ 2,800				
Maintenance Contracts	$ 53,000			$ 166,603	$ 35,400
Equipment Rentals / Lease	$ 600	$ 400			$ 6,800
Telephone / Fax					$ 7,800
Advertising and Promotions					$ 11,800
Insurance	$ 1,620				
Protective Services	$ 300				
Supplies (Office, general, cleaning, etc…)	$ 3,100				$ 14,000
Chemical / Salts	$ 8,500	$ 12,000	$ 12,000		$ 7,700
Furniture and Equipment					$ 20,500
Building Materials / R&M	$ 7,900	$ 60,100	$ 75,000		$ 17,000
Hardware / Plumbing / Electrical	$ 3,115				
Utilities	$ 89,700	$ 60,000	$ 128,400	$ 275,000	$ 178,000
Other (interest, advertising, etc…)	$ 22,282		$ 2,223		$ 5,200
Total	**$ 236,763**	**$ 390,400**	**$ 549,491**	**$ 841,603**	**$ 636,000**
Net Operations	**$ (253,967)**	**$ (249,700)**	**$ (183,491)**	**$ (496,103)**	**$ (648,200)**
Recovery	**47.4%**	**53.8%**	**66.6%**	**42.5%**	**28.8%**

[5] Note: The following figures reflect 2003 Budget levels
Different municipalities have different budgeting techniques and account for budget items in different ways. Therefore the following is representative of each respective operation but cannot be directly compared to the Harbour Pool in all cases.

[6] Note: Direct school usage stats are not calculated and the above noted figure is an approximation based upon the opinions of pool administration

3.3.4 Participant Information

The following participant statistics have been obtained from the facilities surveyed.

Aquatics users broken down by proportion in each of the facilities are as follows:

Aquatics Users	Children / Youth	Adult	Senior	Total	Male	Female	Total
Camrose	60%	30%	10%	100%	30%	70%	100%
Wetaskiwin	80%	15%	5%	100%	50%	50%	100%
Cold Lake	80%	15%	5%	100%	65%	35%	100%
Leduc	75%	15%	10%	100%	45%	55%	100%
Lloydminster	60%	30%	10%	100%	50%	50%	100%
Average	**71%**	**21%**	**8%**	**100%**	**48%**	**52%**	**100%**
Harbour Pool	80%	15%	5%	100%	50%	50%	100%

As can be determined, the main users of public aquatics facilities are youth / children. As far as the breakdown of males and females, the distribution is close to 50:50. Also of interest is that the rates of participation by age group at Harbour Pool are relatively consistent with averages across the board. They have slightly more children participating than average but less adults.

When determining traffic, the following counts include average daily and weekly participant counts for public swimming. They do not, however, include programmed lessons such as school programming. When it comes to public swimming, the average annual rates of swims per resident is 6.8. In Fort Saskatchewan this rates is close to the average at 6.7 (population 13,824 / 93,614).

Municipal Pool	Daily Pool Traffic	Weekly Pool Traffic	Annual Pool Traffic
Camrose	225	1,575	81,900
Wetaskiwin	200	1,400	72,800
Cold Lake	286	2,000	104,000
Leduc	250	1,750	91,000
Lloydminster	175	1,225	63,700
Average	**227**	**1,590**	**82,680**[7]
Harbour Pool[8]	**256**	**1,795**	**93,614**

[7] These numbers represent estimated facility traffic levels provided by facility operators.
[8] Not accounting for approximately 5 weeks of shut down.

3.3.5 Building Renovations

Facility operators were asked a series of questions regarding their experience with, and opinions on, the addition of three amenities to a public aquatics facility. These amenities included a leisure tank, a waterslide, and a fitness center. For the purposes of this research, the following definitions explain each amenity:

Leisure Tank:

For the purpose of this research a leisure tank is defined as an aquatics tank that has varying depth (~0 ft to 4 ft), has a higher water temperature than a competition tank, and has leisure components such as spray features, ropes, etc. the current Harbour Pool maintains water temperature throughout.

Waterslide:

For the purpose of this research a waterslide is defined as an intermediate level slide (minimum). The existing slide in the Harbour Pool does not fall under this definition.

Fitness Center:

For the purpose of this study, a fitness center is defined as a dry-land area adjacent to aquatics areas that can be used before or after aquatic experience. A typical fitness center includes cardio equipment (stationary bikes, treadmills, etc.), free weights, and resistance training (selectorized machines).

When asked about the following renovations, facility operators shared their respective opinions (see appendix for actual statements):

Addition of a leisure tank…

The warmer temperature and varying depth of leisure tanks are attractive to all categories of aquatics users, especially children and families. The depth levels are also handicap accessible and increase program opportunities for facility management. The overall impact of a leisure pool addition is considered to have a major impact on pool traffic.

Addition of a waterslide…

A waterslide is the main attraction for those facilities that have one. Initially, they generate increased traffic where installed and indirect and direct revenue (surcharges). Some operators questioned whether or not this increased traffic is sustained. That said, a waterslide requires increased supervision (staffing), increased operating and maintenance costs, and are typically observed to have children comprising ~75% of total use. They are proven to have considerable cost benefit in places like Leduc and Whitecourt.

Addition of a fitness center…

The addition of a fitness center is seen as definitely having a positive impact on facility traffic. However, the majority of operators stated that competitive concerns (with private fitness operators in their respective communities) prohibit them from offering such services to the public. Cost to staff, equip, and operate a fitness center are considered

by operators to be high relative to the benefits that a fitness center offers. Partnerships with the private sector were mentioned as a way around the competitive concerns and high operating costs. Where incorporated, access to fitness equipment and dry land fitness opportunities are highly regarded by adult patrons.

Which addition would be most beneficial for generating facility traffic?

All of the facility operators questioned indicated that increased leisure pool amenities are beneficial to any pool. A waterslide was also considered by many to be a great addition in terms of increased traffic and revenue generation.

3.3.6 Comparative Analysis Summary

The Harbour Pool and its overall operation can be said to be meeting averages for similar sized market populations with respect to annual levels of attendance, balance of services relative to demographic age groups and both services and rates offered.

It is below the average of those surveyed relative to annual operating cost and overall recovery wherein the average annual recovery (annual revenue expressed as a percent of annual operating costs) at Harbour Pool is close to 30%, while the overall average recovery of all facility budgets analyzed (Wetaskiwin, Camrose, Leduc, Lloydminster) was 53%. It is important to note however that both Camrose and Wetaskiwin account for grants from neighboring municipalities in their revenue at much higher levels than Harbour Pool.

Also, expenditures for staff at Harbour Pool are higher than other municipal pools, but this relates to the need for greater supervision of activity caused by lack of visible site lines (caused by design constraint of higher pool walls). Improved design with visible sight lines would improve upon this risk management issue. Of note is that pay scales for pool staff in Fort Saskatchewan were not compared with other municipalities. In the Edmonton Capital Region, there exists a shortage of qualified lifeguards thus the pay scales are set to be competitive.

4.0 Trends Analysis

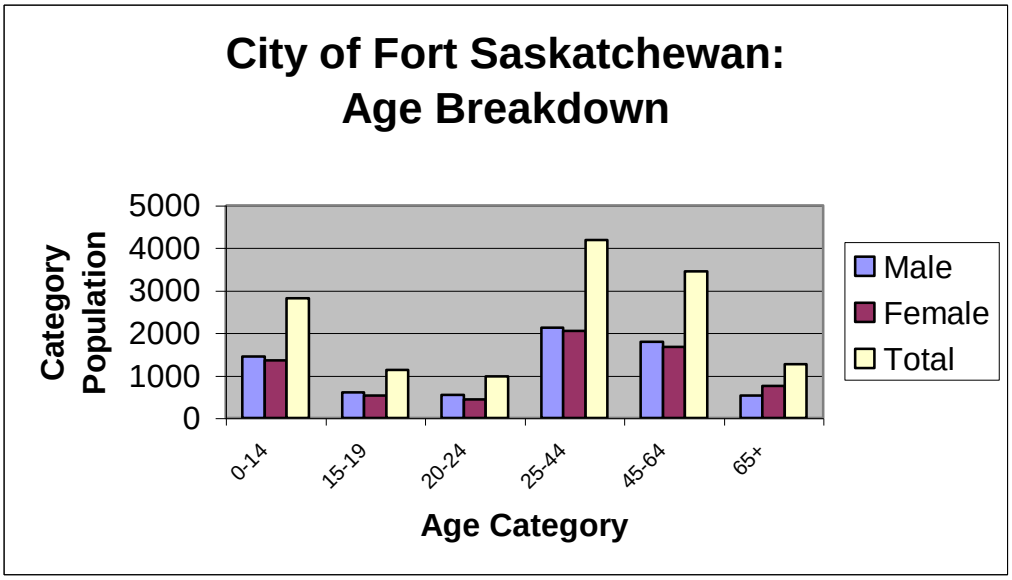
4.1 Population Analysis

The population of Fort Saskatchewan is 13,824[9], with 5,281 households. Considering both primary (39,207) and secondary (10,422) markets, the service area for Fort Saskatchewan includes 49,629 people.

Area	Population
City of Fort Saskatchewan	**13,824**
Primary Market Area	
• Andrew	484
• Bon Accord	1,493
• Bruderheim	1,198
• Chipman	230
• Gibbons	2,748
• Josephburg	144
• Lamont	1,581
• County of Lamont	4,212
• Mundare	578
• Redwater	2,053
• Strathcona County (1/4 of rural total)	5,547
• Sturgeon County (1/3 of total)	5,115
• **Sub-Total Primary Market**	**39,207**
Secondary Market	
• Town of Smoky Lake	1,087
• Smoky Lake County	2,782
• County of Two Hills	2,753
• County of Thorhild	3,077
• Village of Thorhild	486
• Village of Waskatenau	237
• **Sub-Total Secondary Market**	**10,422**
Total Market (Primary and Secondary)	**49,629**

[9] Fort Saskatchewan Municipal Census, 2003

The following explains the current population and subsequent age breakdowns for the City of Fort Saskatchewan:



As can be seen, the largest age demographic category is residents aged 25-44. The next two largest groups are the 45-64 and 0-14 age groups. With an average age of 36.5 and only 9% of the population over the age of 65, the community is relatively young.

Population projections have been completed by the City of Fort Saskatchewan. They estimate the population of the city to surpass 17,000 by the year 2012. Of note is that this projection is based upon conservative growth. The following chart explains:

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Population	13824	14170	14524	14887	15259	15641	16032	16432	16843	17264
Households	5281	5061	5187	5317	5450	5586	5726	5869	6015	6166
Growth		2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%

By 2012, the two major demographic groups will include the 15-19 and 45-54 age groups. These demographic groups will display comparable aquatics needs to what they currently demand.

4.2 Estimated Participation

Estimated swimming participation[10] of Alberta residents is 15% of the total population. The Alberta Recreation Survey (2000) suggests that swimming is the seventh favorite activity of Albertans. Given this participation rate, the estimated aquatics users in Fort Saskatchewan and market area[11] are as follows:

Participation (@15% of the population)	**2003**	**2004**	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**
City of Fort Saskatchewan (assumes 2.5% annual growth)	2074	2125	2179	2233	2289	2346	2405	2465	2526	2590
Primary Market Area (assumes 2.5% annual growth)	3807	3903	4000	4100	4203	4308	4415	4526	4639	4755
Secondary Market Area (assumes 2.5% annual growth)	1563	1602	1642	1684	1726	1769	1813	1858	1905	1952
Total	9447	9634	9826	10023	10224	10431	10642	10859	11081	11309

As can be determined, the Fort Saskatchewan Market area could see up to 11,309 aquatics users by the year 2012.

Note: This participation estimate assumes that participation in aquatics programs and facility visitations will remain constant @ 15% of the population. This can be considered conservative as societal trends dictate an increasing popularity of the activity.

4.3 Public Leisure Facility Trends

Research has shown that the leisure time of Canadians has been constantly increasing in importance over the past decade. Over half of the nations' population view leisure time as equal to, or more important than, work time. This explains that leisure time is becoming increasingly important in the personal development and quality of life for most Canadians. This increasing importance of leisure time has been countered by longer workdays, shift work regimes, and changing work environments. Working Canadians[12] average 7.8 hours per day of work and only 5.8 hours of free time. Of this free time, one hour is dedicated to active leisure. The scarcity of free active leisure time for Canadians equates to a demand for more value-added activities. Value-added can come from the ability to recreate at any time throughout the day (i.e. accommodates shift workers) or the availability to have simultaneous recreation opportunities for the entire family (i.e. incorporating family time with active leisure). These two value-added concepts are achieved by offering a variety of simultaneous, spontaneous recreation opportunities. The main reasons why people participate in recreation activities are determined to be for pleasure, physical health/exercise, relaxation, to spend time with friends, to enjoy nature, and for a challenge.

[10] PMB Datasource
[11] As defined by the City of Fort Saskatchewan
[12] Overview of the time use of Canadians in 1998, Statistics Canada

Leisure participation and activity choices change depending upon age of the participant. As we age, the appreciation for physical well-being increases. The baby boomers (currently aged 36-55) represent a large age demographic in Fort Saskatchewan and have unique recreation needs. The demand for exercise oriented, low-impact activities such as aquatics, fitness classes/weight training, golf, etc… will be prevalent as well as co-ed activities directed at couples and activities that can be enjoyed spontaneously (i.e. without major preparation, coordination, or waiting time).

This trend suggests that aquatic facilities must be programmed and designed to respond to the needs of this adult majority and at the same time continue to provide for youth. It was also suggested that more physical activity outlets like cardio fitness, weight training and lane swimming will increase in demand as will the need for family coed change areas. This heralds a new approach to delivery and the provision of spaces, which provide for programmed activities most often associated with lessons and programs in combination with spaces that can host a variety of activities for adult groups seeking less structured programs that promote health and socialization. New aquatic facility development more often responds to the need for "attractive" amenities and multi-use spaces, rather than dedicated spaces, for the purposes of increasing use and accommodating a number of different types of users.

The **Leisure Mall** (as designed into the Dow Centennial Activities Center) concept incorporates a variety of different recreation and leisure services and opportunities into a facility. Although this concept primarily deals with larger multiplex facilities, the premise can be applied to aquatics facilities as well. The idea promotes the concept of families recreating together at a common location, provides broader choice for participants, promotes participation in many activities (through exposure to a variety of activities), increases opportunities for socialization and spectator activity and, last but not least, it creates a concentrated market (critical mass) that opens the door for greater profitability in food, beverage, and retail sales. Ideas such as retail lease space, facility sponsorship, and fitness facilities are possibilities in an aquatics center model and, where developed, are proving to reduce the operational costs for such publicly funded facilities.

Another trend, applicable in the programming area of recreation facilities, is the concept of providing **spontaneous recreation** opportunities as opposed to programmed/structured opportunities such as scheduled public swimming lessons, or public swim times. Unstructured recreation opportunities fit into today's busy lifestyles and require little commitment or planning in order to participate. Thus they are becoming more sought after by all recreation participants and are becoming a major feature of today's successful recreation facilities.

4.4 Therapeutic Services Trends

While health services and spending are popular topics of political discussion, the focus on bettering the general health of Canadians has never been so prevalent. Combining the stresses of economic policy with the ageing baby boomer generation, the market for preventative health and therapeutic services is attractive.

	GDP / Capita	Health Spending as a %age of GDP 1997	Life Expectancy 1999 (M/f)
Canada	$16,400	9.3%	76.2 / 81.9
Alberta	$18,745	7.8%	76.8 / 81.8
USA	$18,000	13.6%	73.8 / 79.7
Source: Premier's Advisory Council on Health, 2001			

Leisure Time Spent	% Active	% Moderately Active	% Inactive
Canada	21%	23%	57%
Alberta	26%	24%	50%
Source: Healthy Alberta Baseline Survey. Oct 2002			

There are a number of statistics to support the fact that Alberta is a relatively healthy province. Albertans generally feel that they are in good health, as 66% rate their health as excellent or very good[13]. A larger proportion of Albertans are active or moderately more active than national averages and; more Albertan's realize and / or plan to take action to improve their state of health as compared to national averages.

The therapeutic services market in Alberta includes physiotherapy, chiropractic, and massage services, of which, aquatics environments are playing a larger role than ever before. With both a preventative and treatment focus, the industry has a variety of different participants and customers.

Undertaking Lifestyle Changes to Benefit Health	% Took Action to Improve Health	% Feel Some Action is Needed	% Intend to Take Needed Action
Canada	47%	54%	69%
Alberta	48%	61%	70%
Source: Healthy Alberta Baseline Survey. Oct 2002			

Aquatic environments for fitness and therapeutic use have grown in popularity in recent years, and for good reason. Exercise in water is accessible to all types of people (even those who do not swim) and offers a new environment for traditional types of movement such as jogging, hopping, and twisting. The underwater environment can decrease bodyweight up to 90% while it accommodates high performance training through its resistance characteristics. The attractiveness of water as a medium for exercise has grown so much in popularity that even post-operative care facilitation, physiotherapy, and preventative care programs have been shifting from traditional dry-land to aquatic environments. People with such conditions as arthritis, lower back pain, and breathing disorders have found aquatic based exercise to be effective in treating their conditions. More specifically, aquatics fitness programs such as water running, hydro aerobics, flo-motion, and programming for infants/preschool aged children have been increasing in popularity and add value to any community's recreation provision services.

[13] Premier's Advisory Council on Health, Dec 2001

4.5 Aquatic Facility Trends

While the aforementioned trends for broader centralized facilities and family oriented leisure outlets remains prevalent, there are a number of trends, specific to aquatics that have a major impact on facility development and operation. The changing nature of aquatics facility amenities and the increased popularity of aquatics fitness programs are two emerging trends that pertain to the development and use of aquatics facilities in today's marketplace. Design trends in aquatics development have clearly gone from traditional rectangular program tanks to leisurized aquatics areas. While Red Cross programming, advanced training for life guarding, and competitive swim clubs remain stable, the market today is seeking greater outlets for free time swimming, spontaneous leisure aquatics playscapes, warm water tanks, and hot tubs.

Personal interviews with the managers of both the Trans-Alta Tri-Leisure Center in Spruce Grove and Millennium Place in Sherwood Park reveal that close to half of the spontaneous use visitation at their complexes is attributed to leisure aquatics. Designs which permit a mix of interesting activities for all ages receive higher use than traditional lane service tanks and are typically abound with family groups who stay for long periods of time. It is these attractions that generate the highest amount of user traffic and value added markets that fuel profits in associated cost centers.

Aquatics facility amenities have typically included traditional aquatics play features, waterslides, diving boards, and complimentary facilities such as hot tubs, saunas, and steam rooms. Although these amenities are still very popular, and in some cases considered necessary for development, there are other amenities that have recently been introduced that are having a major impact on the use and operation of public aquatics facilities. Aquatics managers have been attempting to further develop the atmosphere of their facilities through the inclusion of sand, vegetation, and variable lighting controls. These tangible environment additions help create an ambience for aquatics participation similar to that which is achieved by attending an exotic destination or swimming outdoors. These amenities have proven to add value to the public swimming experience and will be seen in future aquatics development across Canada.

4.6 Trends Summary

It is clear that today's market needs for leisure, recreation and more specifically, aquatics are undergoing rapid change. If we are to react to these trends we must:

- Maintain opportunities for lessons and programs, but with more variety and cross generational opportunities that include fitness and therapeutic opportunities.
- Provide far greater levels of access to a mix of leisure activities that can be accessed spontaneously and not programmed.
- Recognize that there is a greater market desire to visit pools for leisure play than for programmed activities.
- Recognize that the market seeks a greater mix of experiences when visiting any public leisure facility thus swimming pools need not only cater to swimming. Relaxation, food services, spectating and access to various temperature water tanks is also important.
- Recognize that facilities, spaces and programs must cater to families of mixed age, like grandparents with grandchildren.

5.0 Amenities Overview

There are a number of leisure aquatics amenities that can be added to a public aquatics facility. These amenities can increase overall facility traffic, increase the social attractiveness of facility atmosphere, target new demographic categories, and, in some cases, generate extra revenue for the facility. In determining cost/benefit to amenities, the following amenity clusters have been developed. These clusters represent different categories of amenities and their respective traffic and revenue generation properties. For a more detailed breakdown of amenities, please refer to the appendix.

Given the current market for public aquatic facilities and programs, the following use / participation clusters have been identified:

1. Competition Tanks and Amenities
2. Leisure Tanks and Amenities
3. Waterslides
4. Family Based Amenities
5. Therapeutic Services Amenities
6. Dry Land Complimentary Amenities

5.1 Competition Tanks and Amenities

Competition Tanks and Amenities cater to a traditional pool user market. Competition tanks accommodate such activities as lane swimming and competitive programs such as synchronized swimming, racing, and diving. As they are constructed to accommodate such activities, there are a number of design issues and requirements that have to be addressed. Amenities include diving boards and starting blocks, and cater to competitive aquatics users such as swim clubs or athletes in training. Programming for these areas is typically structured, and the spaces can be considered dedicated in some senses as development guidelines dictate design.

The users base for these types of amenities is quite small, as swim clubs / athletes in training typically do not equate to more than 200 individual facility users, or 12,800 in annual facility traffic[14], in communities the size of Fort Saskatchewan.

[14] Given that each user visits the facility 4 times/week, 4 months/year

5.2 Leisure Tanks and Family Amenities

Leisure Tanks and Amenities cater to a market group that desires spontaneous leisure outlets and "fun" based recreation in an unstructured atmosphere. Leisure amenities include water spray / play toys, floatables, and climbing walls. These tanks and amenities cater to all age demographics and families but cannot accommodate competitive swim competitions (training can still occur).

The user base for these types of amenities is much larger than that of competitive tanks and thus the revenue and traffic generation properties are much better. Leisure tanks that are offered in facilities with competition tanks see approximately double the use of competition tanks. Also included in this cluster are aesthetic amenities. This refers to amenities such as vegetation, lighting, and music that create an atmospheric ambience that appeals to the leisure aquatics user and differentiates the pool from others in the market area.

5.3 Waterslides

Waterslides could be considered Leisure Tank amenities but because they are considered as high capital cost improvements they deserve to be analyzed separately. Much like Leisure Tank Amenities, they attract all age demographics and have relatively unstructured use (spontaneous). Design considerations include size, length, and indoor/outdoor applications. They also have a variety of safety and efficiency design considerations.

The user base for waterslides is very broad. Since they are used by virtually all age groups, they are used on a spontaneous basis, and use can be contained in a specific area (through the use of a separate landing area). The revenue and traffic generation properties are great.

5.3.1 Waterslide Considerations

Traditional waterslides require a splash pool to exit into. Such a pool needs a minimum 1 to 1.2 meter depth and at least 3 to 4 meter length for the slider to exit into. This has prompted pool operators to incorporate "skim out" or "run out" exits. These are self contained splash pools made out of fiberglass and attached to the end of the slide. They typically have a water depth of 25 cm and the excess water is circulated through a buffer tank or directly into the existing pool. These "skim outs" do not require dedicated lifeguards supervision, are easy for people to exit out of the slide, and allow for a higher ride capacity waterslide.

Indoor / outdoor slides are important considerations for pool retrofits. Some facility operators find they cannot add even a smaller intermediate slide due to limited indoor space. Traditionally, this would mean they would have to develop a building extension, with additional heating and ventilation, etc… and thus increase the costs of retrofit. With today's

technology, slides are being built that start and exit on the inside of the existing building, but the main body of the slide is on the outside of the building. There are energy efficient devices that prevent heat loss even when the slide is not being used. In the winter months, once the water starts flowing through the slide tube, the ambient inside temperature of the slide approaches the same temperature as the rest of the facility so the slider barely notices any difference. The advantage of this approach is capital cost, wherein additional building envelope costs can be avoided. Although there are advantages to this approach, there have been cases where temperature and weather conditions have become a factor in operations. The capital improvements recommended in this report (Section 7.0) call for an interior waterslide. Should there be budget limitations, full exploration of an indoor / outdoor installation should be pursued relative to associated design and operational risks.

5.4 Therapeutic Services Amenities

The aquatics environment is very conducive to therapeutic uses due to its atmosphere and tangible properties (i.e. humidity, weightlessness, etc…). Therefore, most amenities that are added to aquatics facilities have therapeutic properties and appeal to a therapeutic services market. That said, there are certain amenities that include varying degrees of heat and motion that can prove to be very useful in therapeutic treatment and recovery. Perhaps the most popular and traditional of these certain amenities is the hot tub. Hot tubs appeal to all age groups for general use, but can also cater to those requiring therapeutic heat and motion. Other amenities that can be considered to have excess therapeutic properties include lazy rivers, steam rooms, saunas, and additional amenities that have varying temperature and motion properties.

5.5 Dry Land Complimentary Amenities

The increasing popularity of fitness training and healthier lifestyles has dramatically increased demand for fitness facilities. Although municipalities have not traditionally been involved in the provision of such services (due to competitive concerns with the private sector) the facilities target all age groups, and can generate high revenue for the facility.

Publicly operated fitness facilities typically target family fitness users. These users are not the traditional fitness club users, and therefore competitive concerns are minimized.

5.6 Experience elsewhere

The following three development projects provide an overview of what can be expected in terms of increased traffic and revenue generation with the introduction of new aquatics amenities in existing public aquatics facilities.

5.6.1 Black Gold Center City of Leduc, Alberta

The Black Gold Center, located in the City of Leduc, was opened in 1980. Fifteen years after its opening (1995), a waterslide and hot tub were added to the facility. The total cost of the additions, completed in 1995, was ~$275,000. The effect that the aforementioned additions had on facility traffic was an approximate average annual increase in traffic of 30,000 swim visits (from 90,000 to 120,000) over the 7 years

between 1995-2002. That equates to an increase in 210,000 swim visits in seven years. Considering that each swim visit generates approximately $2.50 in gross revenue (blended rate for different ages and annual rate changes), this represents an additional $525,000 to the facility. Aside from the additional traffic that the amenities generated, the facility also has a waterslide surcharge, which requires that all waterslide users pay an extra $1.50 for use of the waterslide (which has remained constant since 1995). This surcharge is added to the regular drop-in rate at the pool ($3.75 adult), and generates between $2,000 and $3,000 per month depending on the season. This surcharge has allowed the facility to amortize the capital expenses of the waterslide in just over seven years. Perhaps the most interesting thing about the Black Gold amenities expansion is that the popularity of the waterslide has remained constant over the last seven years and has not decreased.

5.6.2 Camrose Aquatics Center City of Camrose, Alberta

The Camrose Aquatics Center added a waterslide to its operations in 2000. The facility also has a waterslide surcharge, similar to that of Leduc, whereby users of the slides have to pay an additional $2.00. This is in addition to the regular drop-in rates ($1.75 adult). Although the impact on overall facility traffic has not been documented, the revenues from the surcharge averaged between $28,000 and $31,000 in the past three years, or between 14,000 and 15,000 additional users per year.

5.6.3 Whitecourt Aquatics Center Town of Whitecourt, Alberta

The Whitecourt Aquatics Center completed its waterslide addition / retrofit in February, 2003. The slide is 145 ft long and the cost of the slide itself was ~$145,000. The retrofit to the building necessary to house the slide was an additional ~$200,000. As compared to last year, revenues for the facility are up 18%, or ~$20,000 higher for the eight month period starting January 2003. Expenses in the same period of time (January-August 2003) have increased 7%, or ~$18,000. The increase in revenues and expenses are both attributed to the new amenity as it draws more traffic (traffic has increased 23%) but also requires more staff due to the increased traffic (rather than direct supervisions of the “skim off” waterslide).

6.0 Amenities Cost / Benefit

The benefits of adding one amenity versus another are most difficult to quantify. For example, interviews with operators reveal that little statistical information regarding where and how often pool users utilize specific spray features is available. However, general experience reveals that elements such as water slides (if of suitable dimension) remain popular as do hot tubs and shallow warm water play tanks. It is not always the direct expenditure associated with installation as much as it is the convenience of access and the ambience created.

Higher cost installations like water slides will be of great benefit to all users and for the youth market in particular, will attract greater numbers who will stay longer in the pool environment. Features for older markets (adults and seniors) must not be overlooked since they represent the majority of the market, seek warmer water environments like passive hot tubs and on deck relaxation areas and spend the highest amount of time out of the water.

Expenditures associated with splitting tanks (warm water and cooler water environments) also create benefits for markets where we see a majority of leisure based users gravitating to warmer water tanks while the more serious lane swimmers seek lane swimming in cooler temperatures. Designs that permit one or two 25 metre lanes in warmer water tanks will be appealing for senior lane swimmers as well as ideal stations to run mom and tot programs and pre-school activities.

The focus of providing family leisure outlets where all can play must be carried through design of the aquatics environment as well as change facilities. Pools that have incorporated family change rooms and specialized change rooms for the handicapped have experienced greater success for sustaining participation than those that do not.

The following chart identifies some of the aforementioned amenities in the form of market clusters. The table also outlines the market focus and the revenue generation areas affected.

Cluster	Included Amenities	Traffic Generated	Revenue Generation
Competitive Tanks and Amenities	• Competition Lane Tank • Diving Boards • Starting Blocks	Swim Clubs / Athletes in Training Dedicated Use	Program Fees
Leisure Tanks and Family Amenities	• Separate Leisure Tank • Water Spray/Play Toys • Climbing Wall Structures • Atmosphere & Environmental Amenities	Families All Age Groups Spontaneous Use	Drop-in / Passholder Fees Program Fees
Waterslides	• Large Slide, Open Flume • Separate Landing Area	Families All Age Groups Spontaneous Use	Drop-in / Passholder Fees Program Fees User Surcharges
Therapeutic Service Amenities	• Hot tubs • Steam Rooms / Saunas • Lazy Rivers	All ages Post operative / recovery users Users with various health problems	Drop-in / Passholder Fees
Dry Land Complimentary Amenities	• Fitness Facilities Including: ○ Cardio ○ Free Weights ○ Training Assistance	Families All Age Groups Spontaneous Use	Drop-in / Passholder Fees Program Fees User Surcharges

7.0 Where to From Here – Recommended Strategy

7.1 What to retro-fit and expand

There are definitely two aspects to retro-fit that are recommended:

1. Upgrade of existing pool natatorium spaces (humid aquatics environments) including:
   - ♦ Reducing deck height
   - ♦ Replace deck and tile finish
   - ♦ Improve exterior building shell
   - ♦ Re-develop hot tub
   - ♦ Paint ceiling
   - ♦ General pool system upgrades

2. Expand building and spaces to accommodate state of the art public and leisure amenities:
   - ♦ Add new leisure elements to existing spaces
   - ♦ Demolish play tank slab and re-develop / enlarge leisure pool
   - ♦ Install new water features including:
     - major pool slide
     - new water play elements
   - ♦ Develop steam room
   - ♦ Enlarge deck space and dry surface components with new family / staff change rooms, fitness equipment, staff administration space and new concession

Based on our research, we recommend the development of amenities from the Leisure Tank Cluster, Family Amenities Cluster and the Waterslide Cluster. This would maximize spontaneous use outlets in the facility and in turn make the facility more marketable for a passholder strategy. Given the benefits to this strategy, facility recovery will be improved through increased facility usage and revenue generation. More specifically, the following components have been recommended for development:

Cluster	Item	Rationale
N/a	All building code requirements	Legislation requires building code requirements to be met any time the building envelope is retrofitted.
Family Based	Family change rooms	Family change rooms are desired by aquatics users and have become a standard to development since the Harbour Pool was originally constructed. This amenity is vital to the implementation of the other recommended
Leisure	Retrofit Small Leisure Tank (separate from large tank)	Adding more play features to the small leisure tank (tot pool) will allow for spontaneous use throughout the day (even when lessons are occurring), increased pool capacity and will attract families with small children.
Therapeutic Services	Expand Hot Tub	An expanded hot tub would allow for another spontaneous use outlet, and would target all ages including the therapeutic use market. The current hot tub has a capacity of 16 people and we recommend at least doubling that.
Leisure	Water Play / Water Spray Features in Wading Area / on Deck	The inclusion of water spray / play features in the small leisure tank will increase value for family users and will attract spontaneous use throughout the day. Floatables could be introduced to increase rental revenues.
Waterslide	Indoor Waterslide (expansion of building envelope)	A water slide will act as a unique feature for the Harbour Pool in its market region. The development of a waterslide will also enable a pay for play strategy to be introduced (waterslide surcharge).
Leisure	Facility / Atmosphere Theming	Facility theming including vegetation, sound, and lighting will create a unique atmosphere and differentiate the Harbour Pool from other facilities in the market region.
Leisure	Climbing Wall Structure (i.e. Skywalker)	A Climbing Wall will target the youth user market and will further the atmosphere development of the retrofit.
Leisure	Concession Space	A concession space would provide value to facility users and create a source of revenue for the facility to capitalize on traffic generated.

The development of these components would cost $2,951,201 as broken down in the following chart provided by Barr Ryder Architects and Planners:

7.2 Capital Cost of Recommended Development

The following chart indicates a cost breakdown for the five main building components to be renovated at the Harbour Pool (as per Barr Ryder Architects – November 20, 2003).

The main tank renovations consist of removal and replacement of the existing deck with new deck and tile finish. Addition of leisure elements (i.e. underwater spray jets, etc.) and renovations to the existing pool piping systems, as it is anticipated that underground work will be required to adapt the existing pool plumbing.

The leisure tank renovations consist of demolishing the existing play tank slab and redevelopment of a new leisure pool deck and tank complete with tile finish. The leisure pool will also be enhanced with new water features (i.e. spray toys, water umbrellas, etc.). It is also anticipated that new pool system upgrades will be required for the leisure tank.

For the addition of a new waterslide, renovations would consist of the exterior building shell expansion, as well as a new slide and landing flume and associated pool system upgrades such as plumbing, filtration and chlorination, etc.

The chart reviews the therapeutic services area which redevelops the hot tubs, steam room areas and includes the replacement of the deck and tile finish adjacent these services. Again, required pool system upgrades would include for the expansion of the pool system to accommodate a larger hot tub tank and required plumbing upgrades.

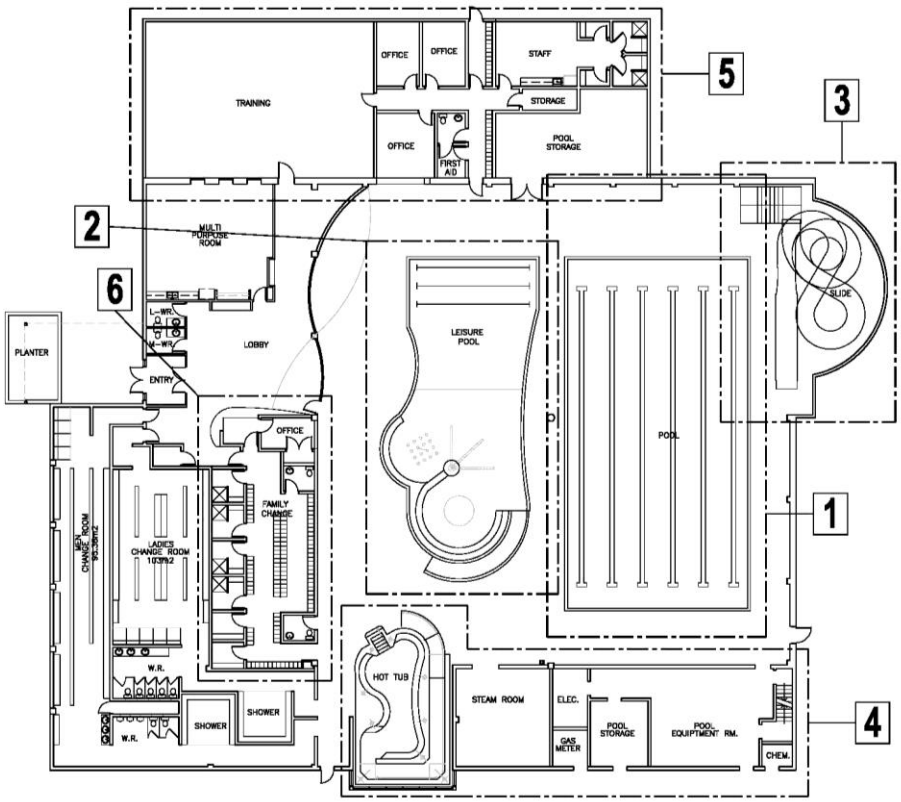
The dry land amenities section includes the relocation of the existing office component as well as the multipurpose area.

The final item includes for the interior renovations required by the redevelopment of the family change facilities in the existing office component of the facility for a total renovation cost of $2,743,958, and a total project cost including fees and expenses of $3,196,710. Energy efficient enhancements are estimated to cost an additional $160,000 for a grand total estimate for development in the order of $3.35M. An assessment is currently underway to investigate the cost / benefit of various energy saving installations and the associated pay back periods. Major increases to the above noted estimates are not however anticipated.

Chart 7.2 Capital Cost of Recommended Development

COMPONENT COSTS					
ELEMENT	**ELEMENT COST**			**ELEMENT AMOUNT**	
BUILDING COSTS	Quantity	Unit Type	Unit Rate	Subtotal	**Total**
1. Main Tank Renovations					$293,900
a. Reduce Deck Height	166.00	m2	$150	$24,900	
b. Replace Deck & Tile Finish	166.00	m2	$1,000	$166,000	
c. Add Leisure Elements	6.00	item	$500	$3,000	
d. Pool System Updates	1.00	sum	$100,000	$100,000	
2. Leisure Tank Renovations					$654,500
a. Demolish Play Tank Slab	90.00	m2	$150	$13,500	
b. Redevelop Leisure Pool	90.00	m2	$2,600	$234,000	
c. Replace Deck & Tile Finish	90.00	m2	$1,800	$162,000	
d. Install New Water Features	5.00	item	$25,000	$125,000	
e. Pool System Upgrades	1.00	sum	$120,000	$120,000	
3. New Waterslide					$380,000
a. Exterior Building Shell	100.00	m2	$1,800	$180,000	
b. New Slide & Landing Flume	1.00	item	$150,000	$150,000	
c. Pool System Updates	1.00	sum	$50,000	$50,000	
4. Therapeutic Services					$260,000
a. Redevelop Hot Tub	40.00	m2	$2,800	$112,000	
b. Develop Steam Room	20.00	m2	$1,200	$24,000	
c. Pool System Upgrades	1.00	sum	$70,000	$70,000	
d. Replace Deck & Tile Finish	30.00	m2	$1,800	$54,000	
4. Dry Land Amenities					$662,650
a. Exterior Building Shell	425.00	m2	$1,000	$425,000	
b. New Flooring	425.00	m2	$100	$42,500	
c. Paint - Ceiling	425.00	m2	$18	$7,650	
d. Mechanical / Electrical	1.00	sum	$150,000	$150,000	
e. Equipment Budget	25.00	item	$1,500	$37,500	
5. Family Change/Concession Facilities					$135,000
a. Interior Renovations/Conc	15.00	m2	$1,000	$15,000	
a. Interior Renovations/Change	120.00	m2	$1,000	$120,000	

5. Net Building Cost					**$2,386,050**
6. Design & Construction Contingency					$357,908
			15.00%	$357,908	
				Total Construction Value:	**$2,743,958**
7.0 PROJECT COSTS					
.1 Fees & Expenses (not inc. client based construction management)				13.00%	$356,714
.2 Applicable GST				3.50%	$96,039
				Subtotal:	**$452,753**
8.0 PROJECT TOTALS					**$3,196,710**
ADDITIONAL BUILDING ENERGY EFFICIENCY ENHANCEMENTS					
1.0 Dessicant Dehumidification					$50,000.00
2.0 Heat Recovery System					$110,000.00



7.3 Energy Efficiency

With regards to energy efficiency, Barr Ryder Architects & Planners have undertaken a number of new pool construction and retrofit situations related to energy efficiency for the pool air handling systems.

Generally speaking, the largest cost savings that can be obtained are through the reduction of heating the air that comes into the facility. Many existing pool facilities are currently not dehumidified and therefore use large volumes of air passing through the facility to remove the humidity from the space.

A desiccant dehumidifier can be added to the pool natatorium (humid aquatics environment) for an approximate cost of $50,000 and has a normal payback 7 years. The energy savings through the dehumidifier are primarily through the reduction of the requirement of air moving through the facility and the associated costs of heating that air to remove the humidity from the space.

Another source of energy efficiency that can be effective in pool spaces is the addition of heat reclaim coils added to the exhaust air of the main pool natatorium space. Heat reclaim off the pool air is often in the order of magnitude of 30% to 40% reclaimed heat and often has a payback period of 7 to 8 years on the initial capital cost. This, again, works by claiming the heat that is normally exhausted through the air system directly to the exterior and re-piping it back into the building to be used again to reheat the air as it enters the facility. The cost of a heat reclaim system is in order of $100,000.

Note: A recent energy audit completed by Supruniuk Consulting (2003) also makes reference to the need for mechanical and electrical upgrades. In their report they suggest that without the recommended leisure upgrades, the existing facility could achieve a 3.3 year payback in energy costs with a capital upgrade of $25,000 and annual savings of $7,500 per year.

Of importance is that the recommended upgrades to the facility (as per Barr Ryder Architects and Planners estimates) will incorporate state of the art energy design. Such design approaches will make the facility project eligible for the Municipal Energy Efficiency Assistance program (Me-first) and the Infrastructure Canada / Alberta Program (ICAP). The ICAP program is a grant program while the MeFirst program provides interest free loans.

7.4 Effects of Phasing

Phasing development will cost more in capital outlays due to not taking advantage of economies of scale. It will however, aid the City in gauging how effective each component is in terms of revenue generation and, as well as working around short-term funding constraints. Due to the situation of having to retrofit the pool, we recommend completing all development items at the same time in order to minimize the effect on operations at the Harbour Pool. It is expected that an eight month close down period would be required at a minimum.

7.5 Operational Strategy

The recommended operational strategy is to incorporate the pay for play and passcard strategies. Pay for play can be implemented with surcharges for the use of new amenities (waterslide and floatables).

The Harbour Pool passcard strategy will have to be introduced in conjunction with the Dow Centennial Center. The purchase of a Fort Saskatchewan Facility pass will give the passholder access to both facilities. This strategy will increase value for the resident and will increase traffic in both facilities. A passholder strategy depends on a mix of spontaneous use activities which can be achieved by bundling the two facilities. Passholder sales stabilize revenues and generate revenue even when the passholder is not at the facility.

7.5.1 Pay for Play Strategy

A "pay for play" strategy suggests that if new amenities are added (such as a waterslide) users will have to pay a differential fee to access the amenities. For example, if the Harbour Pool were to develop a waterslide, participants wishing to use the waterslide would have to pay a waterslide surcharge on top of the regular drop-in fee. This model is in operation in various communities throughout the Province and, with a surcharge of between $1.50-$2.00, can amortize the costs of a waterslide in 7-10 years, or generate between $20,000-$30,000 a year for operations. This system can only be used for major amenities, and requires extra staffing / systems to police the use of the surcharged amenities.

7.5.2 Food and Beverage / Retail Strategy

Although municipalities are not generally in the retail business, there are numerous cases in the Province in which the public leisure aquatics facility operates concessions and / or small aquatics proshops as a service to the participant base. These services, if operated directly by the municipality can generate positive returns to go towards facility operations and, if leased to private operators, still capitalize the occupied space and provide value-added for facility patrons.

7.5.3 Passcard Strategy

Perhaps the biggest factor in improving public aquatics facility recovery is developing a marketing strategy that focuses on monthly passes rather than daily drop-ins. The idea behind this strategy is that the facility is able to generate a constant flow of revenues regardless of participation. Selling passes to a dedicated aquatics facility is not as attractive as selling a pass that encompass a variety of activities. Therefore, the introduction of the Dow Centennial Center (DCC) will provide an opportunity for the City to market both the Harbour Pool and the DCC under the same monthly pass. Although this will cause some revenue sharing between the facilities, it will provide a more constant stream of revenues for the pool and provide value for the passholder. This model is in operation in communities such as the City of Victoria and County of Strathcona, and has proven to be effective in stabilizing revenues for public recreation facilities.

The one prerequisite that this strategy has is that it forces pool programming to incorporate more spontaneous use activities into everyday operations. If the pool sells a pass that only allows the public to use the pool in allotted public swim times (For example, from 8-10pm on weeknights), the value to the passholder is diminished as the spontaneous feature is lost. Therefore, adopting such a strategy could mean changing the operating philosophy of the pool, or using only portions of the facility for programming throughout the day, keeping some spontaneous use activities available at all times.

7.6 Staffing

Staffing levels in public aquatics facilities are regulated through the Province through the public health act for swimming pools. There are also public aquatic facility safety standards that are published by Alberta Red Cross and the Royal Lifesaving Society. The following recommended guidelines as provided by the Alberta Association of Recreation Professionals are in line with the previous two sources. These levels are derived to act as a base level of life guarding service and are utilized throughout the province. Due to past experiences and other circumstances (facility layout, hours of operation, etc…) the following charts explains how the Harbour Pool differs from these prescribed standards.

Ratio of Guards and Swimmers

Alberta Association of Recreation Professionals[15]	Harbour Pool
1 life guard for the first 74 participants	1 life guard for the first 19 participants
"	2 life guards for between 20 and 74 participants
2 life guards for between 75 and 124 participants	3 life guards for between 75 and 124 participants
3 life guards for between 125 and 199 participants	4 life guards for between 125 and 199 participants
…	…

Increased staffing levels at the Harbour Pool reflect a higher standard of safety that has been desired by Council and Administration. The recommended facility retrofit and expansion will eliminate the levels of risk management currently necessary and will result in the opportunity to bring guard / participant ratios in line with acceptable provincial guidelines. A higher compliment of administrative / supervisory level positions is not anticipated however the impact of increased patronage / use will result in increased costs for guarding (an additional 3,000 guard hours per year is anticipated if an additional 50,000 annual swim visits is achieved).

[15] Guidelines for the Operation of Public Aquatics Facilities, Alberta Association of Recreation Personnel, 1998 pg.9

8.0 Budget Implications

The following chart explains the incremental effects of recommended upgrades on the existing Harbour Pool operations. These estimates are presented as a conservative base case approach. The Sensitivity Analysis (Section 8.1) which follows the table outlines the impacts associated with the possibility of improved operational scenarios.

Chart 8.0 Operational Budget Assumptions

	Assumption	Annual Change
Revenues		
Increased revenues through monthly passes and drop-in fees	50,000 annual increase in traffic at blended avg. of $3.00/visit	+$150,000
Waterslide Surcharge	$1.25 surcharge for users, 20,000 users / year	+$25,000
Vending Revenues Increase	Annual increase in traffic (50,000), 15% purchase rate, 30% commission rate, avg. purchase $2.00	+$4,500
Food Services / Concession Revenues	~$10,000 net revenues	+$10,000
Party and Private Function Rentals	Increase of 30% from current	+$10,000
	Total Increased Revenues	**+$199,500**
Expenses		
Increased Staffing[16]	Estimated increase of 3,000 guard hours at $15/hr	($45,000)
Increased Utilities[17]	25% increase	($44,000)
Increased Maintenance / Capital Replacement	5% of Capital Construction Cost ($3M)	($150,000)
	Total Increased Expenses	**($239,000)**
Annual Incremental Operational Cost of New Expanded Facility		**($39,500)**

Current Harbour Pool Revenues	$262,700
Increased Revenues	$199,500
Total Revenues	**$462,200**
Current Harbour Pool Expenses	$910,900
Increased Expenses	$239,000
Total Expenses	**$1,149,900**
Net Operations	**($687,700)**
New Recovery	**40%**

Note this is without rate increases other than the surcharge for the waterslide.

[16] Reconfiguration of the pool provides opportunity to reassess staffing which could reduce annual staffing costs by up to $45,000

[17] Conditional upon energy retrofit opportunities, annual utility costs could be reduced by up to $44,000.

8.1 Sensitivity Analysis

The previous budget analysis reflects a 30% increase in annual attendance at current fee levels. Also, it does not reflect sources of revenue from expanded market approaches.

The following analysis provides the impacts and operational recovery outcomes should a greater marketing approach be employed and should annual visitations go beyond 150,000 visits per year.

1. User Fees

   At the present time, Harbour Pool swim fees are 10% to 15% lower than the average fees in the facilities that were compared. With new pool expansion and retrofit, it is legitimate to increase fees by 15% in all categories.

2. Locker Charges

   Two of the facilities surveyed, Wetaskiwin and Leduc, charge for the use of lockers and gain annual revenues of $7,000 and $5,000 respectively for doing so. This is a service that could be charged legitimately as long as some lockers are provided free of charge. It works on a first come, first served basis.

3. Annual Visitation

   Annual visitation counts will surge in the first two to three years of new operation and then stabilize. Thus the estimated increase in visitation by 30% (50,000 swim visits) may be underestimated for the initial “honeymoon” period of operation and sustained levels for the future are dependent upon a number of factors, the most important of which are creative programs marketing and pool market growth. Should Fort Saskatchewan and Region grow at levels beyond 2.5% per year, visitation levels may be sustained at beyond 150,000 per year.

4. Management

   Through sound management, and with a new design, increased staffing levels for guards at 3,000 hours per annum may not be necessary.

The impact of these possible market approaches and influences are as follows:
(Note that the following Sensitivity Analysis only measures the independent effects of stated Market influences / Approaches)

Market Influence / Approach	Change in Annual Revenue	Change in Annual Expenses	Net Annual Operations (excluding Capital Amortization)	Net Annual Recovery
CURRENT CASE			$648,200	29%
BASE CASE w/ RETROFIT			$687,700	40%
User Fees[18]				
Current + 15%	$39,870[19]	$0	$647,830	44%
Increased Visitation (user fees at current +15%)				
50,000 / year	N/a	N/a	$687,700	40%
60,000 / year	$34,500	$9,000[20]	$662,200	43%
70,000 / year	$69,000	$18,000	$636,700	46%
Locker Charges	$6,000	$0	$681,700	41%
Staff Management (Extra guarding hours[21])				
3,000	N/a	N/a	$687,700	40%
2,800	$0	($3,000)	$684,700	40%
2,500	$0	($7,500)	$682,200	41%

The preceding chart indicates the effects that each Market Influence / Approach could have on Operations and Recovery. The cumulative benefit under the best scenario for each Market Influence / Approach suggests that Net Operations of ($580,330) could be achieved with recovery as high as 50%.

Note: This analysis has been developed independent of gains that could be achieved through energy efficient design. An analysis with respect to such is currently underway.

[18] Defined as Passes and Drop-In Fees

[19] Note this 15% increase in fees is applied to current Drop-in and Pass revenues plus the expected increase in spontaneous use traffic and assumes that program revenues will remain constant

[20] Increased guard hours set at +600hrs per +10,000 visits

[21] Guard hourly rates set at $15/hr

Appendices

Comments…

Addition of a leisure tank…

- It is more attractive to children because of the 0 to 6 ft depth and the warmer temperature.
- Leisure pools are more attractive for families (zero depth entry) and expand the market for aquatics users. They are also handicap accessible.
- Great for families and expanded program opportunities.
- A leisure pool has a phenomenal impact on facility use and traffic.
- Great for families but the temperature transition from leisure to competition pool is too dramatic.

Addition of a waterslide…

- It is our main attraction.
- Waterslides generate a lot of traffic. We expected our traffic to drop-off after six months, but it never did. I would recommend a separate landing area for the slide.
- Depends on demographics, about 75% of users are children (25% adults).
- Not sure of the effects on traffic, but use does die down about six-eight months after the slide is introduced. Make sure the staff is on side as it requires extra work.

Our waterslide is our #1 attraction and is used by all ages. It can be used for competitive training as well.

Addition of a fitness center…

- It would definitely generate traffic for the facility but there are competitive concerns. (2)
- Would be useful, but would require major expense in equipment and staff.
- Fitness in aquatics facilities is a great idea, but there are competitive concerns. Look at partnerships with the private sector.
- It is a great idea and it is great to be able to swim after a workout. Make sure it is not too close to the pool deck though.

Which addition would be most beneficial for generating facility traffic?…

- A leisure pool is the best addition. (3)
- Either a leisure pool or a waterslide. A waterslide will give you more bang for your buck but a leisure pool has a lot more program options.
- A leisure pool is the best option, but a waterslide would be next on the list.

Detailed Amenity Overview

The following cost estimates and market information have been provided by Westwind Leisure Group and from the Harbour Pool Revitalization Study by Hutchinson Architects. The capital costs associated with each amenity do not include necessary modifications to building and / or mechanical systems, or the necessary modification sot building code.

Amenity[22]	Description	Capital Cost	Operating Cost	Target Demographic	Operational Impact
Waterslides	**Kiddy Slides** ▪ custom (fiberglass) ▪ animal slides, etc, ▪ easy installation	$10,000 - $25,000 +	Med	2 – 5 years	High
	Intermediate Slides ▪ Open flume 36, 42 inch wide ▪ Ramp Slides / Multi Slides ▪ Ramp Slides are 8 to 10 feet wide and can have 3 or 4 people sliding down together ▪ A Multi Slide is a slide having 3 or 4 slide lanes all attached together ▪ Smaller versions (intermediate size) are about 12 – 15 high.	$50,000 +	Med	5 – 12, but popular with adults who go down the slide with small kids	High
	Enclosed Slides ▪ Tube Slides range from 32 in diameter up to 56 inch diameter. These are slides that can be used as thrilling speed slides for body sliding or the wider diameter slides can be used with an inner tube for even more thrilling sliding and expanded revenue generation capabilities (tube rentals)	$75,000+	Med	5 and up	High
	For more information on waterslides, see the following Waterslide Considerations section.				

[22] Information provided by Westwind Leisure Group and Hutchinson Architects

Amenity[23]	Description	Capital Cost	Operating Cost	Target Demographic	Operational Impact
Water Play	**Water playground with interactive water features**	$50,000+	Low	5 and up	High
	Toddler Play Pools ▪ Custom fiberglass self-contained play pools with child friendly animal sprayers, etc…	$40,000+	Med	1-5 years	High
	Water Bikes / Water Totters ▪ Simple play features that bolt into a splash pool bottom. ▪ As the child pedals the bike or rocks the tower, water is sprayed out.	$3,500+	Low	3-7 years	Med
	Water Play Table ▪ A one of a king play element that bolts easily into a splash pool for kids. ▪ The kids turn on the Archimedes Screw device that draws water up and into a series of water channels that kids can divert. ▪ It needs no special plumbing.	$25,000	Low	1-5 years	Med
	Floatables ▪ Made from special high-density soft foam and coated with high gloss colors. ▪ They come in a variety of shapes and forms. ▪ The floatable is tethered to the pool bottom and kids can climb and float on it. ▪ The Lily Pad Walk is an example, whereby there are 5-6 floatables with a cargo net above and kids try to walk across without falling into the water ($25,000)	$5,000+	Low	5+	Med

[23] Information provided by Westwind Leisure Group and Hutchinson Architects

Amenity[24]	Description	Capital Cost	Operating Cost	Target Demographic	Operational Impact
Water Spray	▪ Water spray are new elements that can often be mounted on a simple spray deck that has no standing water (less water consumption and easy maintenance). ▪ Used both indoors and outdoors.	$25,000+	Low	3+	Med
Lazy River	▪ A lazy river includes a "river" pattern warm pool, with water flow in a directional manner so as to resemble a river. ▪ The size of these features can differ and can accommodate inner tube floatables and other play features.	$205,000	Med	All ages	Med
Steam Room / Sauna	▪ A steam room and / or sauna are traditionally considered staples to the aquatics environment. ▪ These complimentary facility features have leisure, therapeutic, and preventative uses.	$100,000+	Med	All ages	Med
Climbing Wall	▪ A climbing wall fixed on the side of a leisure pool is a relatively new aquatics feature. ▪ Kids / adults climb on the wall which overhangs the pool, and when they let go they fall into the water. ▪ Although there are some liability issues with the wall, they can be handled with proper training for user and lifeguard supervision.	$30,000+	Low	5+	Med
Fitness Center	▪ A fitness center is a complimentary service for an aquatics facility. With a full range of equipment, it can have competitive training, athletic lifestyle, therapeutic, preventative, recovery, and leisure uses. ▪ An Aquatics focused fitness center would be smaller in scale and would have lower capital, operating costs, and traffic / revenue generating effects.	$500,000+	High	10+	High

[24] Information provided by Westwind Leisure Group and Hutchinson Architects

Detailed Amenity Cost Benefit

Amenity	Capital Cost Item	Capital Cost Building	Operational Impact (Intangible)	Operational Impact (Tangible)			
				Staffing Increase	Operational Costs	Direct Revenue	Indirect Revenue
Waterslide	$50,000+	~$200,000 Depending on… • indoor/outdoor vs. indoor slide • smaller slides can simply be mounted on the pool deck requiring little building retrofit	• Increased Traffic • Ability to generate direct revenue (surcharge) • Targets all demographics	Smaller slides require no staffing increase whereas larger slides do.	Estimated between $1500 to $2500.	Surcharge can be applied.	Traffic increases can lead to higher vending, sponsorship, and lease space revenue depending on facility constraints.
Water Play	$3,500-$50,000+	• Simple bolt in features have no extra costs. • Indoor water playgrounds may have $15,000 – $50,000 in modifications, plumbing hook ups, added water filters, etc.	• Increased parent / child traffic • Targets 1-7 years	A water playground (larger play features) would require at least one extra attendant.	Estimated between $0 - $1,500 depending on price of water and hours of operation.	Surcharge can be applied.	Traffic increases can lead to higher vending, sponsorship, and lease space revenue depending on facility constraints.
Water Spray	$25,000+	• Simple bolt in features that are self-propelled have no extra costs. • Some spray features may have $15,000 – $50,000 in modifications, plumbing hook ups, added water filters, etc.	• Increased parent / child traffic • Targets 3+ years	Extra attendant is not necessary.	Estimated between $0 - $1,500 depending on price of water and hours of operation.	Surcharge can be applied.	Traffic increases can lead to higher vending, sponsorship, lease space revenue depending on facility constraints.
Lazy River	$200,000-$300,000 ($500 - $1000 per foot)	Depends on… • how wide (2m or 3m) swimming lazy river vs. tubing lazy river • gentle flow vs. raging rapids flow • concrete vs. vinyl inlay	• Targets all demographics • Therapeutic uses	If entire water flow path is visible by one attendant, then only one is required (depends on design).	Depend on price of water and hours of operation (pump).	Difficult to apply surcharge but equipment rentals (tubes) can supplement.	Traffic increases can lead to higher vending, sponsorship, lease space revenue depending on facility constraints.
Steam Room / Sauna	$100,000+	• Building construction costs.	• Targets adult demographic • Therapeutic uses	Depending on how large each area is, they can require up to one additional attendee.	Depend on price of power and water.	Surcharge can be applied.	Traffic increases can lead to higher vending, sponsorship, lease space revenue depending on facility constraints.
Climbing Wall	$30,000+	• Depends on existing building structure and structural supports…some walls are self standing and require little building costs	• Targets youth demographic • Participant orientation required	One attendant is required when in use.	Minor	Difficult to apply surcharge.	Traffic increases can lead to higher vending, sponsorship, lease space revenue depending on facility constraints.
Fitness Center	$200,000+	$300,000+	• Targets youth, adult and senior demographic • Therapeutic use	One or more attendants depending on level of programming and size of facility.	Estimated between $3-$4 per square foot per annum.	Surcharge / access fee can be applied.	Traffic increases can lead to higher vending, sponsorship, lease space revenue depending on facility constraints.