La Société des

Gens de Baignade

pour l'accès et l'usage public des plans d'eau

An Urban Beach in Old Québec:
Preliminary Technical Specifications

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By Jimmy Royer

Background

In recent years, the *Société des Gens de Baignade* (www.gensdebaignade.org), a non-profit organization, has been advocating for the building of a public urban beach right downtown Quebec City, using part of a former maritime basin that has not seen any significant port operations since more than a generation. Blessed with an ideal location, midway through the regional cycling path along the St. Lawrence River, within the city's historical district with its millions of tourists and visitors, adjacent to the Old Port Market, there is every reason for an urban public beach to be a resounding success. This project has an immense potential, economically, socially and finally as far as regional public health is concerned.

The basic concept is simple: clear the area around the present-day basin, make the water itself accessible to the people by shaping gradual slopes, entirely remodel the bottom of the basin, create wholly separate sections for public and marina uses, bring in sand for the beach, do some landscaping and open the new urban beach for all to enjoy the many pleasures of water. The River would provide the water intake to be filtered on site, naturally and by mechanical means. The site would have all the looks of a natural beach but would in fact function like a swimming pool…without the chlorine however.

Aerial view of proposed Jacques-Amyot Park and Beach

In the heart of the Old City, a year-round park offering both a wide beach and numerous water activities, in an attractive green setting, would be a unique attraction. Just consider how popular is the *Base de plein air* at Sainte-Foy, in spite of its comparatively much more remote location. In the future, to enjoy the Louise Basin one would need only a bathing suit and not a much costlier pleasure craft or boat.

Preliminary Technical Specifications of the Urban Beach

The general concept is above all a park with a reasonably sized body of open water, where park users could take a refreshing dip and enjoy family-oriented water activities.

At the engineering level, the reconfiguration of that man-made body of water presents no problem. Let's mention here that such a development dividing the present-day marina into two distinct bodies of water was solemnly promised by the Federal Government of Canada as far back as 1981 and officially endorsed by the City of Quebec itself in 1982 (http://www.gensdebaignade.org/Plansurbains_1982.pdf). An underground spillway leading to the estuary of the Saint-Charles River is already in place. The higher water level in the upper end of the Louise Basin would help maintain water quality, with fresh water being piped from the river and then filtered according to the best standards. In any case, in an urban setting and with respect to safety, a beach with a gentle slope is less risky than the current vertical wharves, which are not a concern to anyone anyway.

The total area of the park and beach would amount to a surface of approximately 100,000 square metres (excluding both the marina and the Market with its parking). The body of water would represent a area of approximately 23,000 square metres, a volume of some 35,000 cubic metres and an average depth of 1.5 metres. A sizeable segment of the basin would present a very gentle slope and a maximum depth of one meter at most, so even small children and young families could use it safely. The rest would be much deeper, to allow for more athletic water activities such as diving, swimming, canoeing and kayaking (during the fall), pedal boating, underwater diving etc.

The beach itself would stretch 10 metres wide on average and 400 metres long, extending into an "L" shape mainly on the north and east of the basin. Large steps about 300 metres long on the Market side would allow for public access to the water from all around. The sandy beach and the stairs would amount to a total area of 7,000 square metres. A parking lot in a ring shape around the site (with a surface of approximately 18,000 square metres) would accommodate more or less 150 cars, without interfering with traffic flow to and from the beach or with port activities.

The park itself would cover a surface area of 52,000 square metres with trees to provide shade, along with picnic tables, like at Victoria Park. Around the park and primarily on the east side, there would be fast-food outlets and shops selling beach items to site users.

A boathouse & skating chalet in winter

A large boathouse would be erected right on the water for park maintenance staff. Such a building would also include a storage area for canoes, kayaks and the like, plus everyday materials and tools. In winter, the boathouse would serve as a heated chalet while a large skating area would be open for the public right in front of it, with a superb view of the city.

The Louise Basin today: a private club.

The Louise Basin tomorrow: an urban beach and park open to all.

Before and after. Same place, different priorities.

Yachts are welcome !

People are welcomed !

A well conceived boathouse is central to the planning of a working interface between public users and the water.

Activities

In the summer, the Jacques-Amyot Park and Beach would offer people the opportunity, right downtown Québec, to enjoy water pleasures, to soak up sun and history on the beach or shop at the Market. One could also rest under a shady tree alongside a large body of water while enjoying a new and unrestricted view of the Old City, a UNESCO Historic Site.

During the winter, the same site would offer a large skating area within walking distance to the warm *cafés* of Old Québec, in front of one of the most outstanding urban perspectives in North America, not to mention that it would be an ideal spot for ice fishing…downtown. In the fall and the spring, people could rent pedal boats, rowboats, canoes and kayaks, allowing crowds of people to enjoy the view of Old Québec. The site would become so popular, in both summer and winter, that it would become a key public attraction in Quebec's new economy. As for the Port marina, a beach open free of charge to the public would be a powerful drawing card: all boaters could also enjoy the premises. After moving a few of the floating docks (without losing any docking space), the marina would simply extend further into the other part of the basin, closer to the lock leading into the river.

Offering the public an urban beach in summer and a large skating rink in winter, this development would mean a new opportunity for people from all walks of life to mix and mingle. It would give city residents and millions of visitors and tourists a year-round visual access to one of the loveliest cities in North America.

Jacques-Amyot Park and Beach: the Proposal

- A park with a vast expanse of water and a beach
- No charge for using the water in any way
- Commercial area in the periphery
- Open year-round
- Consistent with UNESCO's World Heritage Site Guidelines
- A new attraction for the tourism industry

Advantages of that specific area for an Urban Beach

- Outstanding urban environment
- This open body of water is by far the closest to city residents
- Within easy reach for millions of tourists
- Accessible by public transit, by cycling path or by foot
- Adjacent to the Market and other urban attractions

Benefits for the City and the Country

- Improvement of the overall quality of urban life
- New international tourist attraction
- International recognition for bold urban innovation *(as Paris-Plage)*
- Significant economic, social and public health benefits

Economic benefits

The superbly central location of this urban lake is by far the strongest feature of this project, economically, socially and with regard to tourism. The site is a short walk from central areas of Québec or a brief trip by public transit. Millions of tourists visit Old Québec and tens of thousands of cyclists transit right along the shoreline of the Bassin Louise. As to the economic benefits, in Québec, there have been virtually no studies of the economic impact of developing public amenities such as beaches, boat launch ramps, recreational fishing structures or public water activities. Such studies have however been conducted elsewhere. Let's have a look at them.

According to the *United States Corps of Engineers*, for every public dollar invested in the operation and maintenance of recreational facilities (campgrounds, picnic sites, boat launches and nature trails), users spend an average of $64, which means a job is created for every $312 the government invests. Americans spend $250 million (US) on average annually on the development and maintenance of public beaches within the United States. A few years ago, the city of Virginia Beach alone spent $103 million to renovate its boardwalk and beach.

In Europe, beaches figure among the key economic assets of every coastal city. According to France's Secretary of State for Tourism, each tourist spends 23.5 euros per day on the country's beaches, for a total of 19 million euros in economic activity directly related to the nation's beaches.

Comparison with the beach at Parc Jean-Drapeau in Montréal

In Montréal, residents of the City and environs have had a beach park since 1991, which was developed in large part due to the wide ranging vision of former Mayor Jean Doré. This beach is commonly known as Plage Doré. *(Doré's Beach)*

This is not a dream: the sun, warm sand and swimming are just a few steps away from a subway station.

The extraordinary success of this urban beach, located three kilometres from downtown, on Notre Dame Island, makes it a haven for countless thousands of residents, many of modest resources. Sometimes the beach is full just two hours after it opens. The facility has been self-sufficient since its second year of operation. The residents of Montréal have taken to *Mayor Doré's Beach* as though it had always been there. For thousands of Montrealers surrounded by concrete, this is the countryside, with clean water and green space.

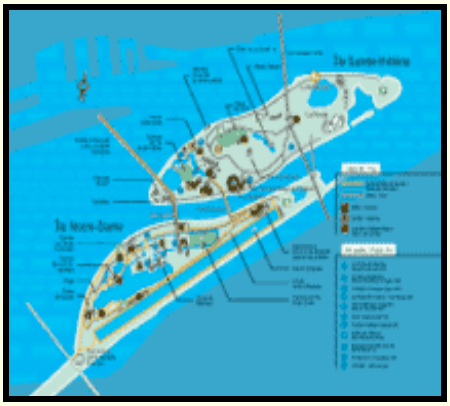
Comparison of Parc Jean-Drapeau and Jacques-Amyot Park and Beach

Technical features	Parc Jean-Drapeau	Jacques-Amyot Park and Beach
Length of beach (Linear metres)	570 metres	400 metres + 300 metres (steps)
Water area (swimming)	20,000 metres^2	23,000 metres^2
Water area (navigable)	75,000 metres^2	50,000 metres^2 (marina)
Depth (swimming)	0 to 2 metres maximum	0 to 1 metres (children) 3 metres deep section & diving area
Filtration	Marsh	Decantation (rock and sand)
Distance from downtown	3 km (car or metro)	0 km (walk- bike-car-bus)
Cost of project	$8 million (1990)	$20 million (2007)

In Montréal: water for the people.

The public beach on Île-Notre-Dame in Montréal is a popular beach in the real sense of the word.

It was planned and developed *for the people*.



In Québec : no public access.

The Louise Basin – which belongs to all Canadians as a Federal public property – is still closed shut to the general public.

Only the privilegied few have access rights.

Yet the Louise Basin is not that different from *Mayor Doré's Beach.*

The Louise Basin, Beauport and Sillery river projects are complementary

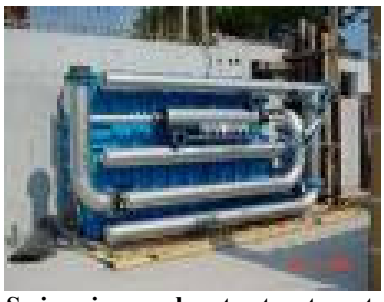
Everybody is pleased, and justifiably so, for the public facilities – including a beach – now being put in place at the tip of the Beauport Peninsula. This stretch of land, however, expanding far away into the River, is naturally subject to strong and frequent winds. If this is ideal for water sports such as windsurfing and outdoor activities of a similar nature, it may at times not be as suitable for family swimming and picnics. Also, the tip of the peninsula could soon be divided between recreational tourism and heavy port activities, as the Port of Québec is planning to build two large wharves for the transhipment of dry bulk cargo. Those wharves could well mean the gradual silting up of the present-day beach: nobody really knows. All this to say that the Louise Basin project and the Beauport recreational development are by no means mutually exclusive. They are in fact complementary, aiming at very different clienteles. (Julie Lemieux, Editorial, "Une plage en ville," *Le Soleil*, June 29, 2004).

Closer to the Old Québec Bridge, facing the borough of Sillery, the National Capital Commission is busy constructing a major walkway along the river – *The Samuel-de-Champlain Walkway* – in preparation for the 400th anniversary of the foundation of Québec. This walkway will allow people to better view and appreciate the St. Lawrence River but there will be no swimming and minimal water access, since no appropriate facilities have been planned for that. Moreover, any beach on the River itself has to contend with strong currents (especially the ebb tide), the tidal amplitude, the often uncertain sediments and, at times, poor water quality after heavy rains.

Water quality at Jacques-Amyot Park and Urban Beach

The volume of water at the site will amount to approximately 35,000 cubic metres, or roughly 15 Olympic pools. This water will be constantly replenished – piped from the River – and will first be treated naturally with sand to remove contaminants. It will then be treated with ozone or any other appropriate method to eliminate organic matter. The water treatment system will be located under the large isthmus which will separate the beach from the marina. There is already a spillway at the head of Louise Basin linking the latter to the Saint Charles River estuary. This spillway will be used to remove excess water from the catchment.

Sand filtration is one of the oldest water treatment methods. Large quantities of water can be treated, yielding a high quality of water. Often used for pool water, sand filters consist of layers of sand of appropriate quality and granulometry, through which the water is circulated fairly slowly. The filter consists of many layers of sand, each with its own characteristics (components, granule size).



Swimming pool water treatment

Ozone is an effective alternative to chlorine and is often used for the disinfection and oxidation of pool water. Ozone filtration produces water of a higher quality, reducing water consumption and eliminating the need to use chlorine. The latest innovation in the ozone disinfection process is using an ozone treatment reactor (or column) right into the sand filters. This commercial process thoroughly purifies the water for swimming at a lower cost than filtering or chlorine treatment.