Surrey Blueways



Volume 1: Recommendations

Surrey Blueways Master Plan

Report Organization

Documentation of the Surrey Blueways Master Plan is divided into the following documents:

Volume I: Recommendations

Volume I is an illustrated brochure of recommendations, design guidelines and capital budgets that summarizes the proposed Surrey Blueways program.

Volume II: Technical Background Report

Volume II provides technical background in support of the recommendations in Volume I. There are five parts to Volume II:

- Opportunities and Constraints: mapping and notes that identify the study area and context of the Surrey Blueways program.
- Candidate Launch Sites: a review of launch sites considered, including mapping, notes, and an assessment of relative suitability to be included in the program.
- Public Process: a summary of the stakeholder and public involvement process, and copies of all response forms and letters received.
- Surrey Blueways Video Tour: an 11 minute VHS video summarizes the 'view of the paddler' while on the Fraser, Serpentine and Nicomekl Rivers, and introduces some of the issues. Copies of the video can be borrowed from Surrey Parks.
- Surrey Blueways Slide Shows and Digital Versions: a CD includes the Powerpoint slide presentations developed for the Master Plan, as well as well as digital copies of the report and drawings produced, in both PDF and native format. Hard copy of the slide show is also attached.

Plan Process

The Surrey Blueways Plan has been developed through an intensive process of stakeholder involvement:

- Staff trip down Surrey waterways.
- Creation of a film short on the opportunities and issues.
- Steering Committee review #1.
- Agriculture Committee review #1.
- Workshop #1 (Public).
- List of Candidate sites.
- Steering Committee Review #2.
- Executive Field Review to Candidate Sites.
- Short List of Proposed Launch Sites.
- Agriculture Committee Review #3.
- Workshop #2 (Public).
- Steering Committee Review #3.
- Workshop #3 (invited stakeholder).
- Parks, Recreation and Culture Commission Review.

Background

In July 2000, the City of Surrey, Department of Parks, Recreation and Culture, initiated a proposal call for consulting services to create a Surrey Blueways Master Plan. The stated Vision for the Master Plan includes:

"It is envisioned that the City of Surrey's Blue-ways Plan will provide Surrey residents and visitors with opportunities to access and enjoy Surrey's river systems and waterfront areas. The Blue-ways Plan will increase the recreational opportunities for Surrey residents by creating access opportunities to Surrey's river systems.

To achieve this goal, the consultant team will be required to meet the following performance objectives:

- Identify navigable watercourses and potential staging areas.
- Undertake a general analysis of the opportunities and constraints associated with the routing plan.
- Provide a key plan of overland connecting routes by including portage routes if necessary.
- Identify areas already identified for recreational canoeing in GVRD parks.
- A review of the river ecology and impact of how the routing plan will affect the water and shoreline.
- Identify provincial/federal regulations, etc. that may have a bearing on canoeing and kayaking activities on Surrey's rivers.
- Identify landing/staging/launching and parking areas and capabilities (include off-street and roadside parking, waterfront and beach access areas).
- Utilize existing trails and potential trails.
- Provide historical and archival interpretation, if necessary.
- Refer to environmental stewardship and education.
- Private/public partnerships with recreational organizations.
- Organized activities and tours (Blue-ways Management Plan).
- Family-oriented focus.
- Identify safety issues.
- Signage.
- Identify links to existing and proposed parks that abut the watercourses.
- Any other relevant goal that may arise from public consultation.
- Identify various stakeholders."

Lanarc Consultants Ltd. was appointed as the Consultant in August, 2000. Lanarc is assisted by R.U. Kistritz Consultants Ltd., providing aquatic ecology services. During the project, the services of Ken Summers, terrestrial ecologist, were included to provide input on waterfowl issues.

The City appointed a Surrey Blueways Steering Committee to provide advice regarding the project. The Consultants have been working with City staff and the Steering Committee throughout the master plan development.

Input from the Steering Committee has been supplemented with several public workshops, as well as meetings with the Surrey Agricultural Advisory Committee.

Acknowledgements

The City would like to acknowledge and express thanks for the insightful input and assistance from the following individuals and groups:

Surrey Blueways Steering Committee

June Christy, Planner, City of Surrey Parks, Recreation and Culture Jean Lamontagne, Manager, Planning, Research and Design, City of Surrey Parks, Recreation and Culture

Vince Lalonde, Drainage Planning Manager (Acting), Engineering Department, City of Surrey

Stanley VanKeulen, Member of the Agricultural Advisory Committee

Mike Bose, Chairman of the Agricultural Advisory Committee

George Budin, Manager, Parks Operations South, Parks, Recreation and Culture, City of Surrey

Terry Curtis, Owner, Boundary Bay WaterSports

Agency Contacts

Tony Barnard, Ministry of Environment, Lands and Parks Paul Skydt, GVRD Parks

Especially, the consultants wish to thank the volunteers who have taken the time to consider this project in their meetings, attend public workshops, and take part in the executive field tour. Special thanks go out to:

Members of the Agriculture Advisory Committee

Members of the White Rock and Surrey Naturalists

Members of the Agricultural Land Commission

Consultants

Lanarc Consultants Ltd.

David Reid

J. Patrick Harrison

Jessica Gemella

R.U. Kistritz Consultants Ltd.

Ron Kistritz

Ken Summers (subconsultant)

Surrey Blueways Mission:

To manage non-motorized recreational boating on waterways in Surrey to facilitate quiet family enjoyment and public education in a way that supports the fish, wildlife and agricultural communities, and to recognize opportunities for experienced paddlers on the Fraser River.

Recommendations

Program Principles

- 1. Use the Blueways Program to increase public respect for the fish and wildlife values of Surrey waterways, in particular waterfowl use in the Boundary Bay Wildlife Management Area.
- 2. Design a management plan that will avoid public access to private agricultural property including private dykes.
- 3. Encourage responsible recreational paddling on Surrey's waterways, within the carrying capacity of the waterways, both for comfort of people users as well as waterfowl.
- 4. Take an `adaptive management' approach to Surrey Blueways, where the program will be designed to adapt as more detailed information and use experience comes forward.
- 5. Phase in the program slowly, and direct short term attention to realizing existing opportunities and solving existing conflicts, moving to gradual expansion of the program based on initial successes.
- 6. Build a Blueways Program that recognizes the partnerships that will be necessary to create an effective management approach, including:
 - Surrey Parks, Recreation & Culture,
 - Surrey Engineering, Drainage, and Tranportation Divisions,
 - Surrey Agricultural community,
 - Surrey Naturalists community,
 - Local dyking districts,
 - GVRD Parks,
 - Ministry of Environment, Lands and Parks,
 - Canadian Wildlife Service,
 - Port Authorities.
 - Fisheries and Oceans Canada and Coast Guard,
 - Fraser River Estuary Management Program,
 - Ministry of Transportation and Highways, and
 - Heritage Services, Surrey Parks, Recreation & Culture.



The Blueway program supports wildlife conservation.

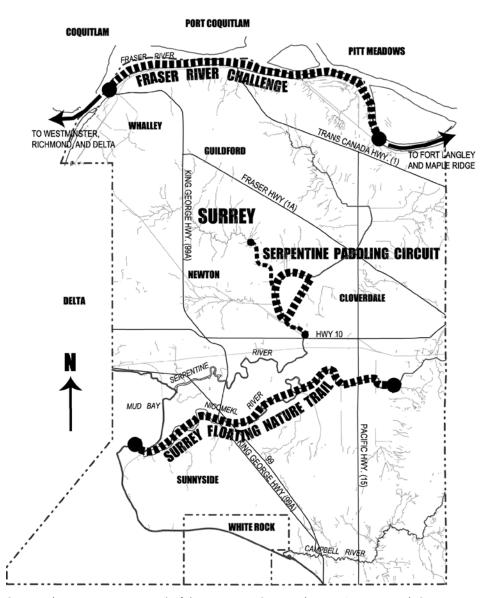


The Blueway Plan emphasizes respect for agriculture and discourages public access to agricultural lands.



Surrey Blueways will provide varied recreation routes, with a focus on entry-level canoe and kayak paddlers.

- Create a recreational experience focused on family and entry-level paddlers in canoes and kayaks. Play a role in discouraging motorized watercraft above the seadams.
- Offer a range of non-motorized watercraft experience, allowing for user choice and variety, as well as the upgrading of user paddling skills over time.
- 9. Enhance the tourism and environmental offerings of the City of Surrey.
- 10. Recognize the limits of jurisdiction of the City of Surrey over navigable water use. The focus of this program will be on design and management of facilities owned and operated by the City and its direct partners. It is recognized that other agencies control navigable waters.



Surrey Blueways is comprised of three routes; Surrey Floating Nature Trail, Serpentine Paddling Circuit, and the Fraser River Challenge.

Designated Blueway Routes

A core of the Surrey Blueway Program will be the designation and active management of three canoe/kayak routes. Each route will have a distinct character and recreational experience:

- 1. Surrey Floating Nature Trail
 providing a interpretationbased and controlled paddling
 experience in the lower
 Nicomekl River, with
 enhancements to separate
 paddlers and other boaters from
 sensitive waterfowl areas and
 seasons.
- Serpentine Paddling Circuit providing a loop circuit for novice and exercise-oriented paddlers in the central Serpentine Valley.
- 3. Fraser River Challenge providing a route for experienced paddlers from Surrey Bend to Brownsville Bar, as a part of a regional blueway paddling system throughout the Fraser River valley.

The City of Surrey will begin actions to manage paddling uses in these three routes. The management of paddling will recognize that in some areas other objectives (e.g. waterfowl conservation) take precedence over recreational access. For example, the Surrey Blueway program will recognize the waterfowl refuge use in the lower Serpentine.

In entering this program, the City of Surrey recognizes that public access to Crown waterways is open year round, subject to the Navigable Waters Protection Act. References to 'closing' kayaking routes or facilities means the closing of the City of Surrey launch facilities, the provision of appropriate signage, and other markers as allowed under the Navigable Waters Protection Act and Coast Guard directives.

It is recognized that some paddlers will ignore these closures, and launch from informal sites. However, this does not negate the management action of increasing public awareness that the river access should be avoided in certain areas at certain times of the year, in support of wildlife management objectives. In effect, it is expected that this management strategy will avoid creating public expectations of 'universal access at all times of year', and thus have the effect of avoiding significant paddling use of the waterways in critical waterfowl periods.

Surrey Blueways provides an opportunity for the City to cooperate with other levels of government and non-government organizations to increase public education about waterfowl ecology, the Pacific Flyway, and human interaction with this critical resource. For example, part of the Blueway Program could include provision of waterfowl inventory forms to paddlers at launch sites. Users of the Blueway would be encouraged to record their waterfowl sightings, and in so doing, to both increase their appreciation for waterfowl, and provide important data to assist in waterfowl and human use management.

Surrey Floating Nature Trail - Nicomekl River



The character of the Nicomeckl River provides and opportunity for a nature interpretation-based paddling experience.

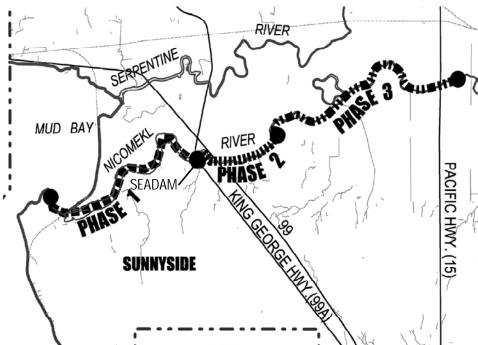
Route Context

The Surrey Floating Nature Trail will provide nature-appreciation paddling opportunities, with careful management to limit the impact of paddling on waterfowl and agriculture. It will start with improved management of paddling in the lower Nicomekl. A second phase will offer limited paddling in the highly scenic area along the Nicomekl between the Seadam and 156 St. & 40th Ave. A final phase will allow paddlers to enter the Nicomekl at 184th St. and proceed downstream between the dykes to exit at either 156 St. & 40th Ave. or Elgin Heritage Park.

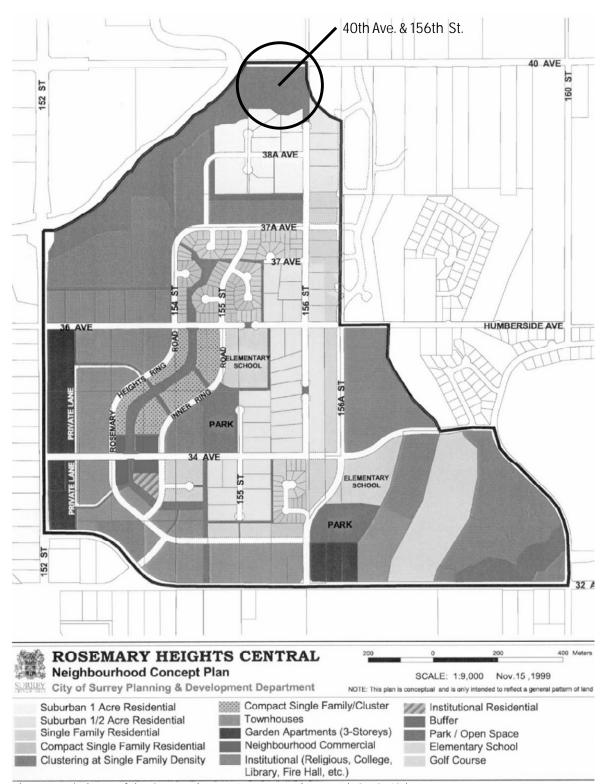
Location & Description:

The Surrey Floating Nature Trail will be phased in slowly:

- The initial phase will access from proposed float improvements at Elgin Heritage Park, and will loop within the area bounded by Blackie Spit and the Seadam on the Nicomekl River Estuary.
- A second phase would extend above the Seadam, with an improved portage, and would provide a small scale launch/exit facility in the vicinity of 40th Ave. and west of 156 St., and the Nicomekl River.
- A third phase would provide a 'micro' scale launch facility at 184th St. and the Nicomekl River.



The implementation of the Nicomekl Floating Nature trail will be phased as illustrated above.



The second phase of the Surrey Floating Nature Trail at 156th St. & 40th Ave.

Objectives:

- 1. To manage recreational boat use in the Nicomekl River, and to minimize impacts on waterfowl and the ecosystem.
- 2. To offer a quiet, family-oriented paddling experience focused on nature interpretation and respect for waterfowl and the agricultural community.

Management Strategy

- Above the Seadam, schedule 'openings' of the floating nature trail to correspond to seasons with low impact on waterfowl, e.g.
 - October 1 to April 30: guided tours only with a qualified nature interpreter
 - May 1 to September 30: self-guided tours, directed by floating interpretive sign stations
- Both above and below the Seadam, provide floating interpretive signage to identify sensitive areas and to educate paddlers about local ecology and waterfowl viewing etiquette. For example, waterfowl viewing etiquette signs would explain why people should stay away from waterfowl feeding and nesting areas during the breeding season. These signs could include photographs of winter waterfowl use of the sensitive areas. The City will encourage that what limited paddling takes place in winter is by guided tour including a nature interpreter.
- Work with the Coast Guard to 'zone' water use in the Lower Nicomekl, and encourage them and RCMP to enforce boating speed limits and routes, including installation of additional navigation markers if necessary, and public education of boat owners mooring in the lower Nicomekl.
- Implement and monitor the 'phase one floating nature trail' (Blackie Spit/ Crescent Beach/ Elgin Park) below the Seadam prior to installing new water access facilities above the Seadam.
- Phase II: gradually expand paddling facilities above the Seadam, including:
 - Safety improvements at the Seadam portage, including trails, signing, speed control on the road, and floating lines to restrict access through the Seadam.
 - Access control (e.g. floating lines) and interpretive signage at points of interest along this part of the route.
 - Limited scale launch development at 40th Ave., after parkland acquisition in this area, in accordance with the Rosemary Heights Central Neighbourhood Concept Plan. Scale of use would be limited by parking area size (less than 10 vehicles dedicated to paddlers). To regulate kayak/canoe launching, an 'interpretive kiosk and gateway' would be installed at the entrance to a float, designed to educate users entering the launch site when it is open, and physically stop access to the launch site when it is closed. As well, the launch facility would discourage access by personal watercraft, but allow disabled persons access.
 - Micro scale launch development at 184th St. and the Nicomekl River. This upper launch site would have parking restricted to about 5 cars. It would include fencing along the existing berm to stop trespass on adjacent farm fields and dykes. A `interpretive kiosk and gateway' would be incorporated into the fence with the same intent as above, but in this case the interpretive theme would include respect for agriculture, as wall as some of the cultural landscape features (farms, barns, crops, agricultural practices, etc.).

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Surrey Floating Nature Trail - Physical Facilities

Crescent Beach (Blackie Spit)



This beach is already used for launching canoes and kayaks. This beach launch is not suitable for in-experienced paddlers because of outgoing tides and wind drift.

Descripion

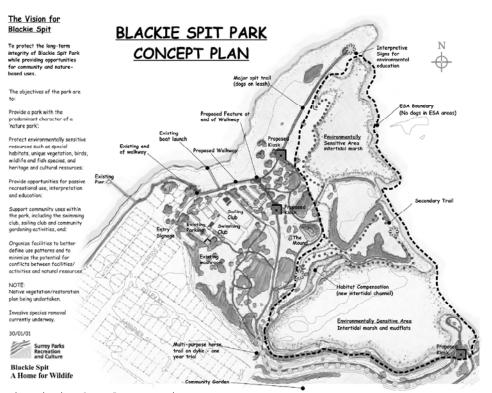
- No new launch facilities are proposed at Crescent Beach.
- Land-based interpretive signage would accent the sensitivity of waterfowl to disturbance, and would map the 'Surrey Floating Nature Trail'.
- Water-based sign floats would mark the edge of paddler access to the sensitive marsh areas northwest of the railway bridge across the Nicomekl.

Capital Budget

Land Based Signage \$7,500 Total Capital Budget \$7,500



Blackie Spit has spectacular views and is well used for walking and birding.



The Blackie Spit Concept Plan.

Elgin Heritage Park

Description

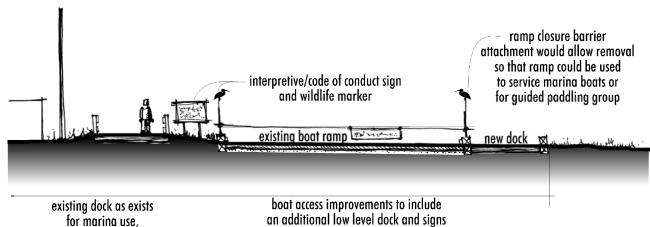
- The existing public boat ramp is to be closed to public use, but left in place for 'maintenance' pullout of boats renting marina space. Markers will be added to the ramp to physically close it to public boat launch, under a separate budget.
- To allow for better access for disabled paddlers, a floating dock that follows the slope of the existing boat ramp is proposed. The seaward end of this dock would float at all tides, whereas the landward end of the dock would rest on the boat ramp surface unless it is lifted by rising tides. This type of facility provides gentle grades for access to the water's edge by disabled (and other) paddlers, and allows a dry entry into the canoe or kayak. The same facility will provide dry exit from other types of boat, e.g. when standing by to load to a trailer for haul-out and maintenance.
- Land-based interpretive signage, similar to that at Crescent Beach, would be provided to accent the sensitivity of waterfowl to disturbance, and would map the 'Surrey Floating Nature Trail'.
- Water-based sign floats would mark the edge of paddler (and other watercraft) access to the sensitive marsh areas north of Elgin Heritage Park across the Nicomekl.

Capital Budget

Paddler Launch Float \$30,000 Land Based Signage \$7,500 Water Based Signage \$see below Total Capital Budget \$37,500



The existing moorage float at Elain Park.

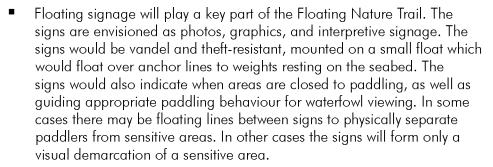


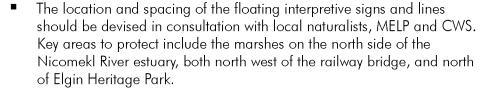
encourage paddlers to use adjacent water access

an additional low level dock and signs

Nicomekl Estuary Floating Nature Trail (floating signage)

Description





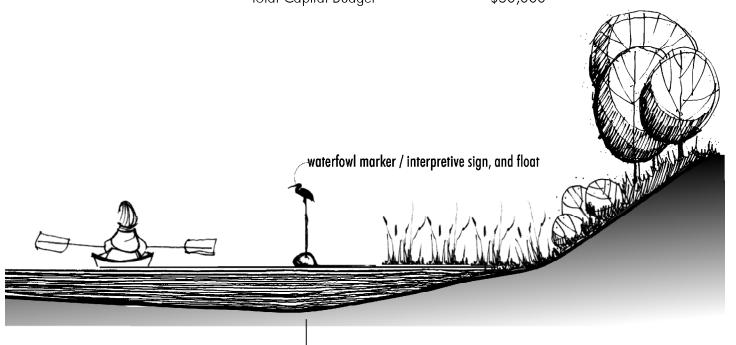
- Other interpretive points of interest may include water-based viewpoints of agriculture, heritage structures, marine and biophysical features, etc.
- Approval for the sign locations from Coast Guard will be required under the Navigable Waters Protection Act.



The lower Nicomekl River.

Capital Budget

Interpretive Program	\$15,000
12 Water Based Signs	\$25,000
Floating lines (allowance)	\$10,000
Total Capital Budget	\$50,000



separate paddlers from sensitive waterfowl areas

sensitive waterfowl area

Seadam Portage - Nicomekl

Description

- The Seadam under Elgin Road, north of Crescent Road, is a barrier for paddlers on the Nicomekl River. Presently, paddlers must portage across the high-speed road to get round the Seadam.
- Trails to the water's edge would be improved on both sides of the Seadam on the Nicomekl River.
- To increase the safety of paddlers crossing the road, and to enforce the existing speed limit, kayak crossing signage and traffic calming measures (eg. sleeping policeman) would be installed at the road crossing.
- An 'entrance gate kiosk' with flanking fencing will be installed on the trailhead east of the Seadam road crossing, to allow the seasonal closing of the launch facility on the east side of the Seadam, and to educate paddlers about the environment they are entering.
- To mitigate the risk of paddlers trying to navigate through the Seadam, floating lines will be installed both above and below the Seadam. Arrangements will need to be made for periodic removal of floating debris collected by these lines.



At the water's edge, adjacent to Elgin Road, above the Seadam.



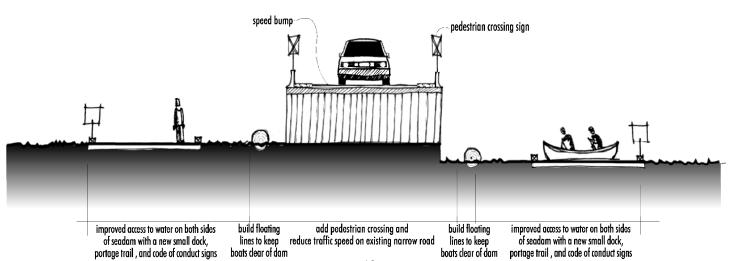
The Seadam under Elgin Road

Capital Budget

Trail Improvements \$10,000
Traffic Signage and Calming \$10,000
Entrance Gate Kiosk/Signage \$18,000
Fencing \$2000

Floating Lines (allowance) \$5,000

Total Capital Budget \$45,000



40th Ave. Launch Site

Description

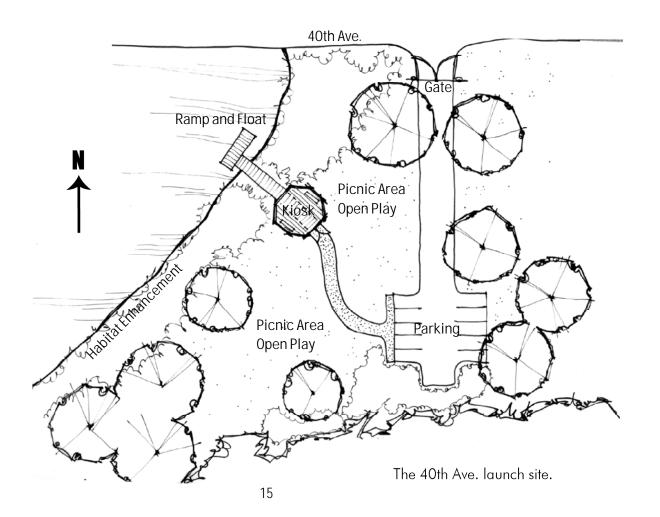
- The Rosemary Heights Central Neighbourhood Concept Plan identifies the south shoreline of the Nicomekl River in this area as future parkland, to be designated at the time of development of the adjacent lands. The creation of the 40th Ave. kayak launch site will be constructed when this land has been acquired, and when Phase I of the Floating Nature Trail below the Seadam has been installed and evaluated for success.
- A dockhead, disabled accessible ramp and float will be provided to offer water access for canoes and kayaks at this site.
- At the dockhead, a widened dock area will support an entrance interpretive kiosk. This small shelter will have several functions:
 - To provide an access barrier to the float at times when the launch is closed. To accomplish this, the outer walls of the kiosk will be of design and materials that don't allow pedestrian passage around the building when the entrance gate to the building is closed.
 - To allow canoes and kayaks to be carried through the kiosk, but to stop access by heavier or larger craft, such as personal water craft or motorboats.
 - To provide canoe route and interpretive signage at the entrance. The main interpretive and 'responsible use' signage would be on the inner walls of the kiosk. This protects the signage from vandalism, and provides shade and weather protection which allows for use of 'inkjet' and other low cost signage materials. The kiosk also provides weather protection for viewers of the information.
 - Signage above the entrance gate would provide visual identity for the Surrey Floating Nature Trail, and would post dates and hours that the facility is open.
 - The kiosk should be designed to be safe from misuse. For example, the floor should be concrete to avoid the facility being burned, and lower walls should be transparent to allow visibility into the kiosk.
- An informal picnic and open play area will be provided on both sides
 of the dockhead, in the existing field area. Habitat enhancements at the
 water's edge should be considered as a part of the facility improvements.
- Parking for up to 10 canoe/kayak cartop vehicles should be provided, setback from the water's edge. The entrance drive to this parking area should have gate and access control so that the area can be closed dusk to dawn. It is recommended that the interpretive kiosk and dock also be closed dusk to dawn. Policies to reserve this parking area for boat launch will need to be developed.



The future parkland on 40th Ave.

Capital Budget

Dockhead, ramp and float \$30,000
Dockhead Entrance Gate Kiosk\$18,000
Paved Parking Area (10 cars) \$20,000
Road Entrance/Gate/Signage \$21,000
Picnic Area Landscape \$23,000
Fencing \$4000
Shoreline habitat (allowance) \$10,000
Total Capital Budget \$141,000



184th St. Launch Site - Nicomekl

Description

- The 184th St. Launch Site is envisioned as a 'micro' scale facility. As the last phase in the Surrey Floating Nature Trail, it would provide an access point for those paddlers that wish a longer paddling experience. Users might put in at 184th and take out at 40th Ave. for a half-day paddle, or they might continue all the way to Crescent Beach for a full day excursion. The scale of the 184th St. facility should be kept small to avoid exceeding the carrying capacity of the Nicomekl River in this area.
- Water access for canoes and kayaks at this site will be provided by a land-based sloping ramp leading to a vertical-walled slip in the area of the existing ditch entering the Nicomekl on the west side of the 184th St. bridge. This ramp and slip will be designed for spring/summer/fall use only, as this access will be closed for the winter migratory bird season. The facility will be designed to withstand flooding during winter high water, but it will not be subject to public access in these periods.
- To control public access to the launch slip, an entrance gate/ interpretive kiosk will be installed at the head of the ramp. This small shelter will be similar in design and function to that proposed at 40th Ave. The interpretive signage inside the kiosk may focus on interpretation of agricultural use along this part of the route, as well as fish and waterfowl information.
- Fencing should be provided on both sides of the entrance gate/kiosk to allow closure of the launch.
- Parking for up to 5 canoe/kayak cartop vehicles should be provided, with a single loaded aisle running parallel to 184th St.. The entrance drive to this parking area would be located as far away from the 184th St. bridge as possible, and should have gate and access control so that the area can be closed dusk to dawn. It is recommended that the interpretive kiosk and dock also be closed dusk to dawn.
- To avoid potential trespass on the farm fields adjacent to the parking area (e.g. by dog walkers), fencing should be provided along the top of the existing dyke that separates this farm field from the parking area. This fence may have to extend the length of the field frontage. A 'farm fence' appearance, but in an unclimbable form, is recommended for aesthetic reasons.
- As an option, an additional 6 floating interpretive signs could be strategically placed to provide interest and learning along the Nicomekl route between 184th St. and 40th Ave.

Capital Budget

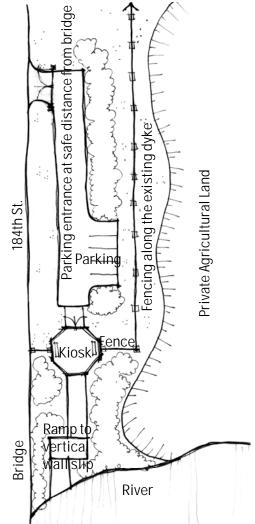
Water access ramp and slip	\$10,000
Entrance Gate Kiosk	\$18,000
Paved Parking Area (5 cars)	\$15,000
Road Entrance/Gate/Signage	\$15,000
Revegetation	\$12,000
Fencing (up to 250m)	\$12,000
Shoreline habitat (allowance)	\$10,000
Additional floating interpretive signs	(6) \$20,000
Total Capital Budget	\$112,000



This is an example of a sloping ramp leading to a water access ramp (slip).



Bridge on 184th Street.



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Serpentine Paddling Circuit - Serpentine River

Route Context

Located in the central Serpentine Valley, the Serpentine Paddling Circuit will provide an alternative for the novice or exercise-oriented paddler to experience a 2-3 hour loop circuit. The configuration of the Serpentine River and associated canal provide a unique opportunity for a loop paddle, where boaters may start and return to the same launch site without retracking their route. This circle route is entirely enclosed between drainage dykes, which places the paddler in a quiet and still-water area, and where the city feels like it is miles away.

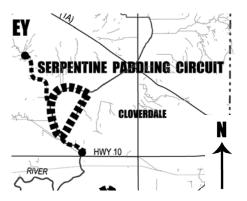
Location & Description:

The Serpentine Paddling Circuit will start by providing canoe/kayak access to the main loop. The loop will connect to public park sites as they develop, ultimately in the Bear Creek area (east of 152nd St. and north of 72nd Ave.) and West Cloverdale South Neighbourhood Concept Plan Area.

- The Phase One paddling circuit includes the 'circle' of the Serpentine River which has the intersection of 64th Ave. and 160th St. at its centre. Adjacent land use is almost entirely agricultural, with a golf course located in the northeast corner of the loop.
- At the time of writing, it is expected that a kayak launch for the first phase might be provided by the private sector, as a commercial venture. The owner of the successful 'corn maze' tourism site (M. Bose family) has expressed an interest in providing a launch facility on the Serpentine adjacent to the corn maze (on 64th Ave. near the east edge of the paddling circuit). The same operator would provide parking, access supervision and potential canoe/kayak rentals. The Master Plan recommendation is that public access sites not be developed, pending this opportunity being realized by a private commercial venture that offers affordable launch facilities that meet the opportunity for public recreation, and that respect the agricultural and natural features along the route. In due course alternate sites in the vicinity (see Volume II Candidate Launch Sites) could be developed as public launch sites.
- Development of Surrey Lake to the east of 152nd St. and north of 72nd Ave., may offer paddling opportunities when it is constructed. As a long range goal, the opportunity for paddlers from the Surrey Lake parking area to travel down Bear Creek to enjoy the Serpentine Paddling Circuit is an attractive concept, worthy of further study.
- To the south of the Serpentine Paddling Circuit, a riverfront park is proposed in the vicinity of Bell Road and 154th St. as part of the West Cloverdale South Neighbourhood Concept Plan area (see illustration on the following page). When this land is acquired, and the park developed, the facility should include a canoe/kayak launch site to allow paddlers public access to the Serpentine Paddling Circuit.



The paddling route in enclosed in drainage dykes.





Objectives:

- 1. To offer a novice and exercise-oriented paddling experience that focuses paddling on the Serpentine in the central Serpentine Valley.
- 2. To relieve paddling pressure on more ecologically sensitive areas of the Serpentine River, e.g. in the Wildlife Management Area below the Seadam.
- 3. To minimize public cost to provide this recreational experience.
- 4. To encourage agro-tourism in Surrey.

Management Strategy

- To respect waterfowl use of this area, it is proposed that the private boat launch schedule 'openings' to correspond to seasons with low impact on waterfowl, e.g.
 - October 1 to April 30: facility closed, or guided tours only with a qualified nature interpreter
 - May 1 to September 30: self-guided use, under the management supervision of the private operator.
- The proposed private launch facility is envisioned as limited in scale, with similar character to the 'micro' facility proposed at 184th St. on the Nicomekl River (see above). Micro-scale launch development at 184th St. and the Nicomekl River.
- If public launch facilities are created in the future, they would be to the scale of the 184th St. micro-launch.
- Interpretive signage and/or facility operator tours could interpret agricultural themes e.g. crops and products of Surrey agriculture, waterfowl use of seasonally flooded farm fields, dyke purpose, urban/ rural interface and trespass issues, etc.
- Floating warning signage should be provided at three locations:
 - At the lower end of the paddling circuit on the Serpentine, to communicate to paddlers that there are Seadam hazards, no public launch or exit facilities from this point westward.
 - At the upper end of the paddling circuit, to also indicate there are not public launch or exit facilities to the north, and to warn paddlers to stay away from the high-volume pump station outfalls in this area.
 - At the pump stations encountered around the circuit, to warn paddlers to stay away from the outfall.

Serpentine Paddling Circuit - Physical Facilities Public/Private Launch Site

- The Serpentine Circuit Launch Site is envisioned as a 'micro' scale facility. Design of the facility, and related approval processes, will be the responsibility of the private operator. As an early concept, water access for canoes and kayaks at this site could be provided by a land-based sloping ramp leading to a vertical-walled launch pad at the water's edge. This ramp and slip will be designed for spring/summer/fall use only, as this access will be closed for the winter migratory bird season. The facility will be designed to withstand flooding during winter high water, but it will not be subject to public access in these periods.
- To control public access to the launch slip, fencing and signage may be necessary if the site is so close to the public road that people are tempted to trespass. Alternatively, a site set well back from the public road creates more of a disincentive to trespass.
- Parking canoe/kayak cartop vehicles should be provided on private land, with access to the launch site coordinated with other farm operations.
- Provision of rental canoe/kayaks would extend the revenue stream and the public service of the facility.

Capital Budget

For a private facility, capital budget will be determined by the operator, related to parking and other facilities already in place.

Route Signage

- To recognize the Serpentine Paddling Circuit as a part of the Surrey Blueways program, the City may provide 'branding' and route site signage in cooperation with private operators of the launch, as well as incorporating the Serpentine Paddling Circuit into the City's programs and related literature.
- Floating route and warning signs would be provided where paddlers might leave the circuit, and adjacent to pump station outfalls.
- As an option, dyke-side or floating interpretive signs could be strategically placed to provide interest and learning, and maybe some tasteful humour, along the Serpentine Paddling Circuit. At this time, it is anticipated that such signage, if desirable, would be provided by the private operator.

Surrey Blueways site signage \$5,000
3 Water Based Directional/Warning Signs \$10,000
Total Capital Budget (City portion) \$15,000

Alternative or Future Public Launch Sites & Facilities, Serpentine Paddling Circuit

Each public facility similar to the 184th St. Nicomekl micro-launch would require a capital budget of approximately \$75,000, plus fencing if necessary.

The Fraser River.

Fraser River Challenge

Route Context

The Fraser River Challenge will provide a canoe/kayak route for experienced paddlers, extending along the Fraser River waterfront in Surrey. It must be emphasized that serious hazards due to currents, floods, and marine industrial traffic make this route appropriate only for experienced paddlers. Warning to this danger must be a part of all communication materials regarding this route.

Surrey's portion of the Fraser River route is potentially a part of a much larger blueway's route throughout the GVRD and lower Fraser Valley. Potential waypoints on the Fraser River boating route, as under consideration by GVRD Parks include:

Matsqui Trail Regional Park

Fort Langley and Fort to Fort trail at Derby Reach Regional Park

Kanaka Creek Regional Park

Surrey Bend Regional Park, and Roberts Point at Barnston Island

Douglas Island

Pitt Meadows

Maguabeak Park (City of Coquitlam, at Port Mann bridge)

Brownsville Bar Park (City of Surrey, at Skytrain bridge)

And points to the west

Location & Description:

The Fraser River Challenge in Surrey will provide a kayak/canoe route for experienced paddlers only. The route will extend from Surrey Bend Regional Park to Brownsville Bar Park. In reality, many paddlers may choose to only do local paddling circuits from one or the other of these access points, with only the more experienced paddlers working with the tides to take the longer route between the two launch sites.

- Phase One of the Fraser River Challenge will simply formalize existing canoe/kayak launch capabilities at Brownsville Bar Park.
- Phase Two of the Fraser River Challenge will provide a canoe/kayak launch in an area of Surrey Bend Regional Park that is already disturbed by a sand pre-load. This site is to the north of an abandoned boat ramp at the Barnston Island Ferry landing.
- Park, in the long term, will be developed for a full scale boat launch, aimed at recreational boaters including motorized craft. In 1995, the GVRD in cooperation with the Township of Langley commissioned Northwest Hydraulics to review potential boat ramp sites in this section of the Fraser River. The Surrey Bend site on Parsons Channel was one of two prime candidates, and conceptual plans were drawn. It is recommended that the City of Surrey coordinate with GVRD parks the development of boat launch facilities in this area. It is conceivable that the City may provide a canoe/kayak launch in advance of GVRD Parks building a larger-scale parking area/ramp for trailered motorboats, or the two facilities may be developed at the same time.

Until development of the Surrey Bend Regional Park canoe/kayak launch, the City of Surrey should consider opportunities for private/public partnerships to provide canoe/kayak launch facilities somewhere on Parson's Channel. This might be done by agreement, with program and on-site signage similar to that proposed for the Serpentine Paddling Circuit. We envision that this would be a temporary arrangement until public facilities were developed at Surrey Bend Regional Park.

Objectives:

- To offer a challenging paddling experience for experienced paddlers and groups.
- 2. To provide an alternative for large groups or large numbers of paddlers, so that paddling pressure on more small scale or ecologically sensitive areas of the Serpentine or Nicomekl Rivers is reduced.
- 3. To integrate Surrey's blueways program and the GVRD Parks vision.
- 4. To educate paddlers about the hazards of small craft navigation in the Fraser River.
- 5. To add to the tourism opportunities in the City of Surrey for skilled paddlers.

Management Strategy

- Program advertising and site signage should highlight the dangers in paddling on the Fraser River, such as tides, currents, boat wakes, wind, log movements, lack of shoreline access in emergencies, floating debris, etc. This route is suitable for experienced paddlers, but is a hazard for the inexperienced. Surrey Leisure Services Division could provide paddling training for outdoor enthusiasts who wish to gain the advanced skills required to paddle the Fraser River Challenge.
- No seasonal closure of the paddling route to protect waterfowl is anticipated on the Surrey frontage of the Fraser River Challenge. This route, therefore, provides an outlet for paddlers in the winter season. It would be appropriate, however, to close this route in the spring freshet due to current hazards
- The proposed launch facility at Surrey Bend Regional Park may be scaled to meet demand. The canoe/kayak launch would likely start with parking for about 20 cars. However, as the GVRD car/boat trailer site is developed, this capacity could increase. There should be provisions at this site for small bus and other group facilities.
- On-land interpretive signage and/or guided tours should interpret the ecology and industry of the Fraser River and adjacent shoreline.

Fraser River Challenge - Physical Facilities

Interim Public/Private Launch Site at Parsons Channel

- If a public/private partnership is created for interim access of canoes/ kayaks to Parsons Channel, design of the facility, and related approval processes, will be the responsibility of the private operator, but it will not be subject to public access in these periods.
- For a private operation, parking canoe/kayak cartop vehicles should be provided on private land, with access to the launch site coordinated with other marina operations.
- Provision of rental canoe/kayaks would extend the revenue stream and the public service of the facility.

Capital Budget

For a private facility, capital budget will be determined by the operator, related to parking and other facilities already in place.

Route Signage

- To recognize the Fraser River Challenge as a part of the Surrey Blueways program, the City may provide 'branding' and route site signage in cooperation with private operators of the launch, as well as incorporating the Fraser River Challenge into the City's programs and related literature.
- Land-based route and warning signs would be provided where paddlers enter the route, at Parson's Channel and Brownsville Bar.

Surrey Blueways site signage	\$5,000
3 Water Based Directional/Warning Signs	\$10,000
Total Capital Budget (City portion)	\$15,000

Surrey Bend Regional Park Launch

- City of Surrey investment in canoe/kayak launch facilities at Surrey Bend Regional Park may be delayed until a coordinated development can be financed with GVRD Parks. However, if the City wishes to go ahead in advance of the larger GVRD Parks facility, a facility is envisioned below.
- A dockhead, ramp and float will be provided to offer water access for canoes and kayaks at this site. The location of this would be coordinated with GVRD Parks so as to not impede future boat ramp construction.
- At the dockhead, a widened dock area will support an entrance interpretive kiosk, similar to that proposed on other Surrey Blueway dockheads.
- An informal picnic and open play area will be provided both sides of the dockhead. This would be set back from the foreshore, to leave a habitat area between the picnic area and the river, with local view corridors through. Habitat enhancements at the water's edge should be considered as a part of the facility improvements.
- Parking for up to 20 canoe/kayak cartop vehicles should be provided, setback from the water's edge. The entrance drive to this parking area should have gate and access control so that the area can be closed dusk to dawn. It is recommended that the interpretive kiosk and dock also be closed dusk to dawn.

Another alternative may appear if the Barnston Island Ferry were abandoned. In such a scenario, there may be an opportunity to cooperate with MOTH to adapt the abandoned ferry terminal to a boat launch facility.

Brownsville Bar Park

 the only capital improvement for canoe/kayak launch proposed at Brownsville Bar Park is route, warning and interpretive signage.

Capital Budget

Kiosk/Interpretive Signage

\$18,000

Freestanding signage

\$2,000

Total Capital Budget

\$10,000

Capital Budget

Dockhead, ramp and float \$30,000
Dockhead Entrance Gate Kiosk\$18,000
Paved Parking Area (20 cars) \$35,000
Road Entrance/Gate/Signage \$45,000
Picnic Area Landscape \$23,000
Fencing \$4000
Shoreline habitat (allowance) \$10,000
apital Budget \$165,000

Total Capital Budget \$165,000

Barnston Island Ferry-existing launch

Proposed canoe/kayak.dock

Future boat ramp

Infomal picnic/open play

Service drive

Parking

Parking

Parking

Capital Budget Summary

The capital budgets outlined in the previous pages total \$748,000. With a 20% added allowance for design and contingency, a total recommended capital budget for the Surrey Blueways Program is \$898,000.

The program has been designed to use either existing Surrey property, or sites that are planned as Surrey Parks acquisitions in the future. Thus there are no land costs to the program.

Surrey Floating Nature Trail

Crescent Beach	Signage	\$ 7,500
Elgin Heritage Park	Disabled Launch, Signage	\$ 37,500
Estuary Floating Nature Trail	Signage, Floating Lines	\$ 50,000
Seadam Portage	Trail, Kiosk, Traffic Calming	\$ 45,000
40th Ave. Launch Site	Parking, Launch, Picnic Area, Signs	\$141,000
184th St. Launch Site	Parking, Launch, Fencing, Signs	\$112,000
Subtotal		\$393,000

Serpentine Paddling Circuit

Private Launch Site	Parking, Launch	by private sector
Route Signage	Branding, Warning Signs	\$ 15,000
Allowance for two future pub	lic facilities	\$150,000
Subtotal		\$165,000

Fraser River Challenge

-	
Interim Private Launch Site, Parsons Channel	by private sector
Route Signage (Interim Private Site)	\$ 15,000
Surrey Bend Regional Park Canoe/Kayak Launch	\$165,000
Brownsville Bar Park Signage	\$ 10,000
Subtotal	\$190,000
Total, Capital Budget	\$748,000
Design and Contingency	\$150,000
Total, Recommended Budget	\$898,000

Phasing Summary

Each of the projects listed above are relatively independent of one another. The order of project implementation can thus be flexible over time, and respond to opportunities and constraints as they occur. However, for waterfowl management purposes, there is the recommendation to start the Nicomekl River program on the lower river first, and then to move gradually to the central Nicomekl River launch facilities. A likely phasing scenario is as follows:

Phase I:

Crescent Beach Signage	\$ 7,500
Elgin Heritage Park Disabled Launch, Signage	\$ 37,500
Estuary Floating Nature Trail	\$ 50,000
Serpentine Paddling Circuit	\$ 15,000
Design and Contingency	\$ 22,000
Subtotal, Phase I	\$132,000

Phase II:

Fraser River Challenge, Interim Private Launch Signage	\$ 15,000
Nicomekl Seadam Portage	\$ 45,000
Brownsville Bar Park Signage	\$ 10,000
Design and Contingency	\$ 14,000
Subtotal	\$ 84,000

Phase III:

Surrey Bend Regional Park Canoe/Kayak Launch	\$165,000
Design and Contingency	\$ 33,000
Subtotal	\$198,000

Phase IV:

40th Ave. Launch Site	\$141,000
Design and Contingency	\$ 28,000
Subtotal	\$169,000

Phase V:

184th St. Launch Site	\$112,000
Design and Contingency	\$ 23,000
Subtotal	\$135,000

Total \$718,000

Plus a contingency allowance of 150,000 + 20% (\$180,00) for public facilities on the Serpentine Paddling Circuit.

If the Surrey Blueways Program were to be implemented over a 5 year period, it would be reasonable to budget approximately \$180,000 per year. If this funding were constant in each year, the above Phases could be adjusted to suit by adjustments to the timing of design and individual project components.

Operating and Maintenance Considerations

The Surrey Blueways program has been conceived with a minimum of operating and maintenance implications.

Program components that may have an impact on O&M include:

- 1. Dusk to dawn closing of parking areas and launch kiosk gates will require either remote electronic gates, or staff attendance to close and lock gates. The cost of this overnight closing will be balanced by reduced litter and vandalism on launch facilities, as well as reduced policing and less impact on neighbouring property values. The seasonal closure of the 40th and 184th launch facilities on the Nicomekl River (October through April) will reduce the labour required for nightly closures.
- 2. Litter control at launch facilities will be required on a periodic basis. A policy of 'pack it out' for litter is encouraged, with on-site signage, such that there will be no provision of litter containers at the launch facilities.
- 3. Portable toilets should be provided at the 40th, 184th and Surrey Bend launch sites. These will likely be supplied under a rental agreement including maintenance.
- 4. Landscape planting at the 40th Ave. and Surrey Bend launch sites is envisioned to include picnic and open play areas. Turf maintenance will be required at these sites. The Nicomekl portage and 184th St. sites are envisioned to have "Naturescape" low maintenance landscapes. However, control of invasive weeds, like broom and bramble, will be necessary at these sites until new plantings are established.
- 5. Floats that are open in the winter -at Elgin Heritage Park and Surrey Bend may require deicing of floats in cold weather. Other facilities are closed for the winter, and thus avoid this risk and expense.
- 6. Vandalism of signage is a major potential cost for this type of program. The risk and expense of this has been mitigated by three strategies:
 - a. Floating signage is made accessible only by boat, which reduces its exposure to vandalism. Design of this signage will avoid being attractive to theft.
 - b. The major land-based interpretive signage is enclosed in 'entrance gateway kiosks', behind a gate that is closed at night. This arrangement helps reduce the risk of vandalism, and also allows the use of inexpensive 'ink-jet' and plastic laminated signs that could not be used where they would be exposed to full UV radiation.
 - c. Land-based signage that is open to vandalism is restricted to 'branding' signage to identify the program and its opening/closing dates. This signage should be designed to be vandal-resistant.
- 7. Floating lines installed may collect floating debris. Spring and fall clearing of this debris should be performed.
- 8. Sign floats will need a once/year inspection and maintenance likely in the spring prior to program operation.
- 9. The content of floating signage may change due to seasonal closures e.g. a 'closed to public use guided tours only' signband may be added for the closed season.

- 10. Expansion of the Blueways Program above the Seadam on the Nicomekl River should be preceded by studies of waterfowl use of the River in the planned May 1 to Sept. 30 canoe/kayak season. These studies should continue as the program is implemented to review the relationship of kayak use to waterfowl use. These waterfowl studies could be done by providing waterfowl sighting forms to paddlers, Operations staff, volunteers, and summer students.
- 11. Operating and maintenance costs are estimated as follows:

Phase 1	\$ 6,000
Phase II	\$ 4,000
Phase III	\$ 7,500
Phase IV	\$ 6,000
Phase V	\$ 6,500

Next Steps

Initial steps to 'launch' the Surrey Blueways program are:

- 1. Gain the support of City Council, and incorporate the Blueways Program into the Capital Plan.
- 2. Explore the formation of a Surrey Blueways Focus Group. This group would meet as required (not necessarily monthly) to provide input into the detail design and delivery of the Blueways Program. It should include representatives of:
 - a. City departments
 - b. Agriculture Advisory Committee
 - c. Local Naturalists groups
 - d. GVRD parks
 - e. CWS and MELP
 - f. Local canoe/kayak groups
 - g. Private operators under the Blueways program
- 3. Undertake detail design of Phase I of the program (focused on the Surrey Floating Nature Trail in the Lower Nicomekl River below the Seadam), and related approvals with the environmental agencies and Coast Guard.
- 4. Devise a process and understanding for private launch facilities at Serpentine Paddling Circuit at Parson's Channel sites.
- 5. Proceed to implement Phase I of the Blueways Program, monitor success and failures, and adjust the program as future phases come on-stream.

Surrey Blueways



Volume II: Technical Background Report

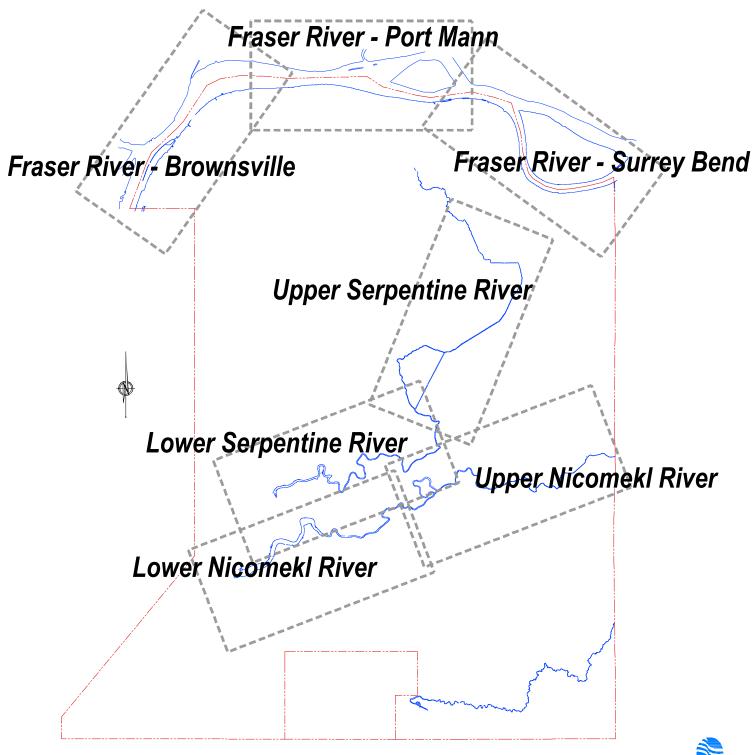
Surrey Blueways Master Plan

Volume II: Technical Background Report

Volume II provides technical background in support of the recommendations in Volume I. There are five parts to Volume II:

- Opportunities and Constraints: mapping and notes that identify the study area and context of the Surrey Blueways program.
- Candidate Launch Sites: a review of launch sites considered, including mapping, notes, and an assessment of relative suitability to be included in the program.
- Public Process: a summary of the stakeholder and public involvement process, and copies of all response forms and letters received.
- Surrey Blueways Video Tour: an 11 minute VHS video summarizes the 'view of the paddler' while on the Fraser, Serpentine and Nicomekl Rivers, and introduces some of the issues. Copies of the video can be borrowed from Surrey Parks.
- Surrey Blueways Slide Shows and Digital Versions: a CD includes the Powerpoint slide presentations developed for the Master Plan, as well as well as digital copies of the report and drawings produced, in both PDF and native format. Hard copy of the slide show is also attached.



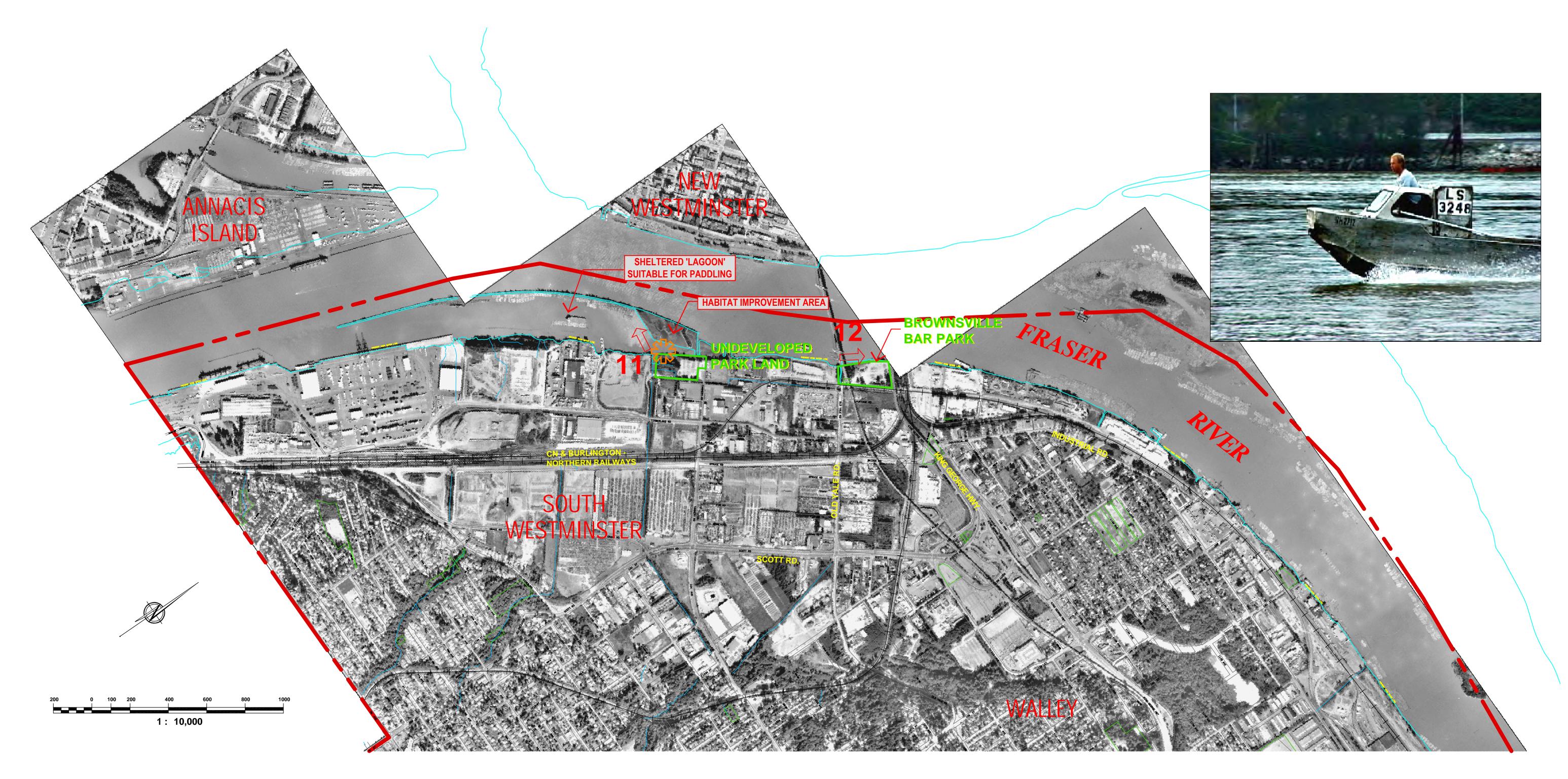


CITY OF SURREY • BLUEWAYS MASTER PLAN

OPPORTUNITIES & CONSTRAINTS - KEY PLAN



OCTOBER 2, 2000



LEGEND



PHOTO LOCATION & DIRECTION

NARROW CHANNEL WIDTH (3-12m), SOMETIMES SHALLOW, GROUNDING POSSIBLE. SUBJECT TO MEDIUM CURRENTS & HIGHER WATER DURING STORM EVENTS.

MEDIUM CHANNEL WIDTH (12-30m) - SANDBARS INFREQUENTLY @ INSIDE CURVES AND STREAM ENTRANCES. GENERALLY SLOW TO VERY SLOW CURRENT.

WIDE CHANNEL WIDTH (30-200+m) - SUBJECT TO SIGNIFICANT TIDAL INFLUENCE UP TO 2m TIDAL VARIATION, MUD FLATS, TIGHT BRIDGE CLEARANCES.
VIEW CONFINED TO CHANNEL, GENERALLY BY STEEP DIKES OFTEN PHYSICAL BARRIER TO LAND BEYOND BY INPENETRABLE BRAMBLES

EXISTING PARKLAND WITH EXISTING OR POTENTIAL BLUEWAY FACILITIES

CANDIDATE SITE FOR POTENTIAL BLUEWAY FACILITIES

MINOR EXISTING OR POTENTIAL STAGING/LAUNCH SITE LIMITED PARKING, LOWER USE INTENSITY ANTICIPATED

PRIMARY EXISTING OR POTENTIAL STAGING/LAUNCH SITE MIGHT INCLUDE PARKING, LAUNCH FACILITY, DOCK & RESTROOMS

PHOTO 11 - VIEW TO FROM _____ PARK TO NEW WESTMINSTER

LAGOON IN FOREGROUND IS SHELTERED FROM CURRENT OF THE RIVER. WOULD BE SUITABLE FOR NON-MOTORIZED WATERCRAFT. THE VIEW SUGGESTS THAT URBAN DEVELOPMENT ALONG THIS PORTION OF THE RIVER MIGHT SOMEDAY ECLIPSE SOME INDUSTRIAL USES.



PHOTO 12 - BROWNSVILLE BAR PARK

USES SHOULD CONTINUE TO BE FOCUSSED ON SHORE-BASED ACTIVITIES SUCH AS FISHING AND PICNICING DUE TO THE CURRENTS AND LARGE VESSEL TRAFFIC ALONG THE FRASER.





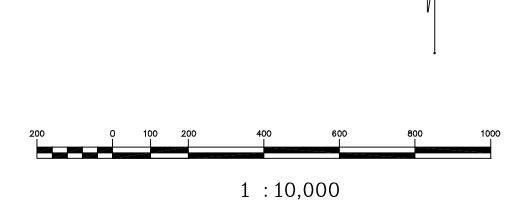
CITY OF SURREY + BLUEWAYS MASTER PLAN

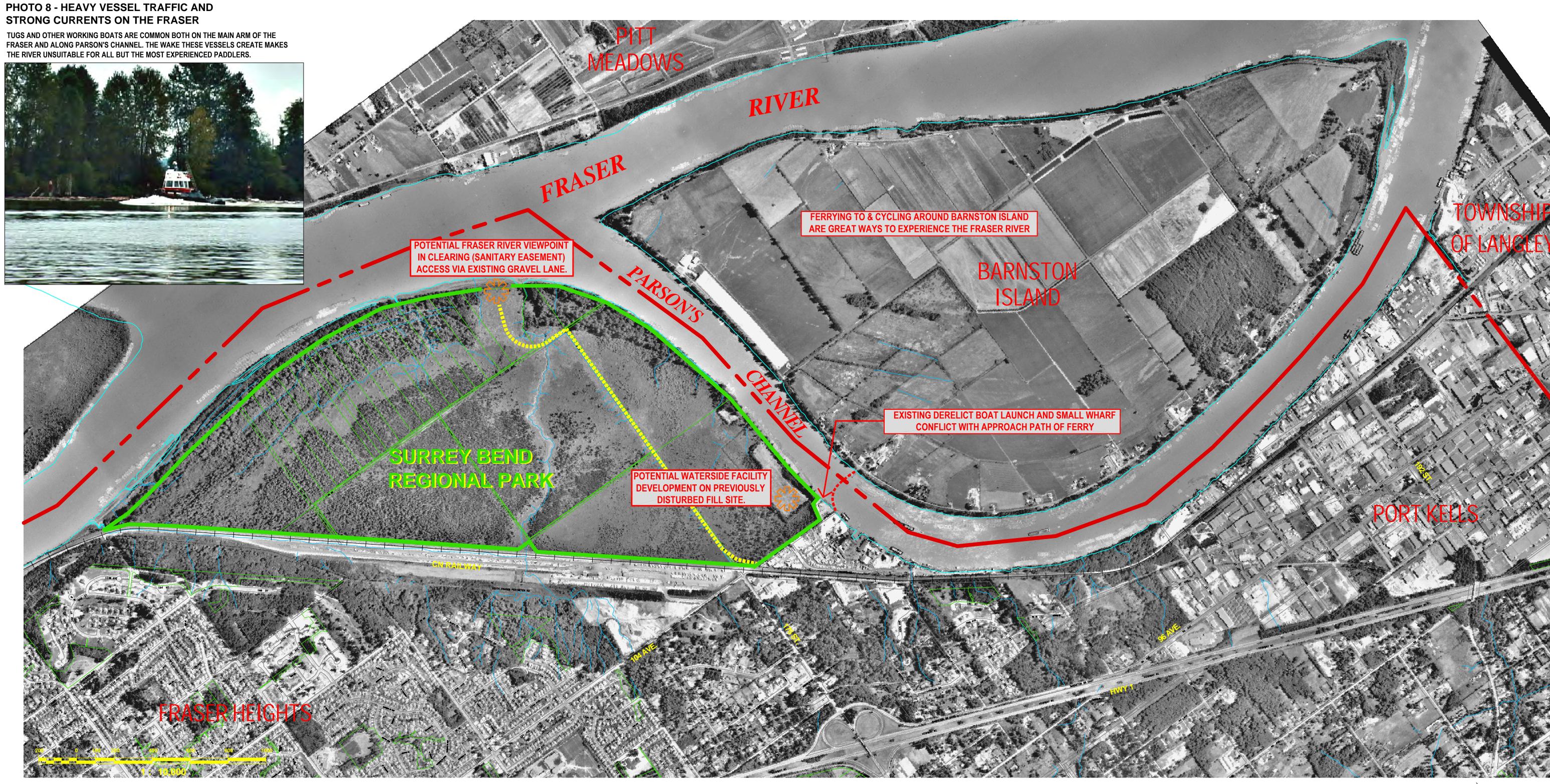
OPPORTUNITIES & CONSTRAINTS - FRASER RIVER - BROWNSVILLE





Fraser River - Port Mann





21

PHOTO LOCATION & DIRECTION

NARROW CHANNEL WIDTH (3-12m), SOMETIMES SHALLOW, GROUNDING POSSIBLE. SUBJECT TO MEDIUM CURRENTS & HIGHER WATER DURING STORM EVENTS.

MEDIUM CHANNEL WIDTH (12-30m) - SANDBARS INFREQUENTLY @ INSIDE CURVES AND STREAM ENTRANCES. GENERALLY SLOW TO VERY SLOW CURRENT.

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EXISTING PARKLAND WITH EXISTING OR POTENTIAL BLUEWAY FACILITIES

MINOR EXISTING OR POTENTIAL STAGING/LAUNCH SITE LIMITED PARKING, LOWER USE INTENSITY ANTICIPATED

CANDIDATE SITE FOR POTENTIAL BLUEWAY FACILITIES

PRIMARY EXISTING OR POTENTIAL STAGING/LAUNCH SITE MIGHT INCLUDE PARKING, LAUNCH FACILITY, DOCK & RESTROOMS



ACTIVE BOOMS ARE LOCATED ALMOST CONTINUOUSLY ALONG THE SHORLINE OF SURREY BEND PARK.



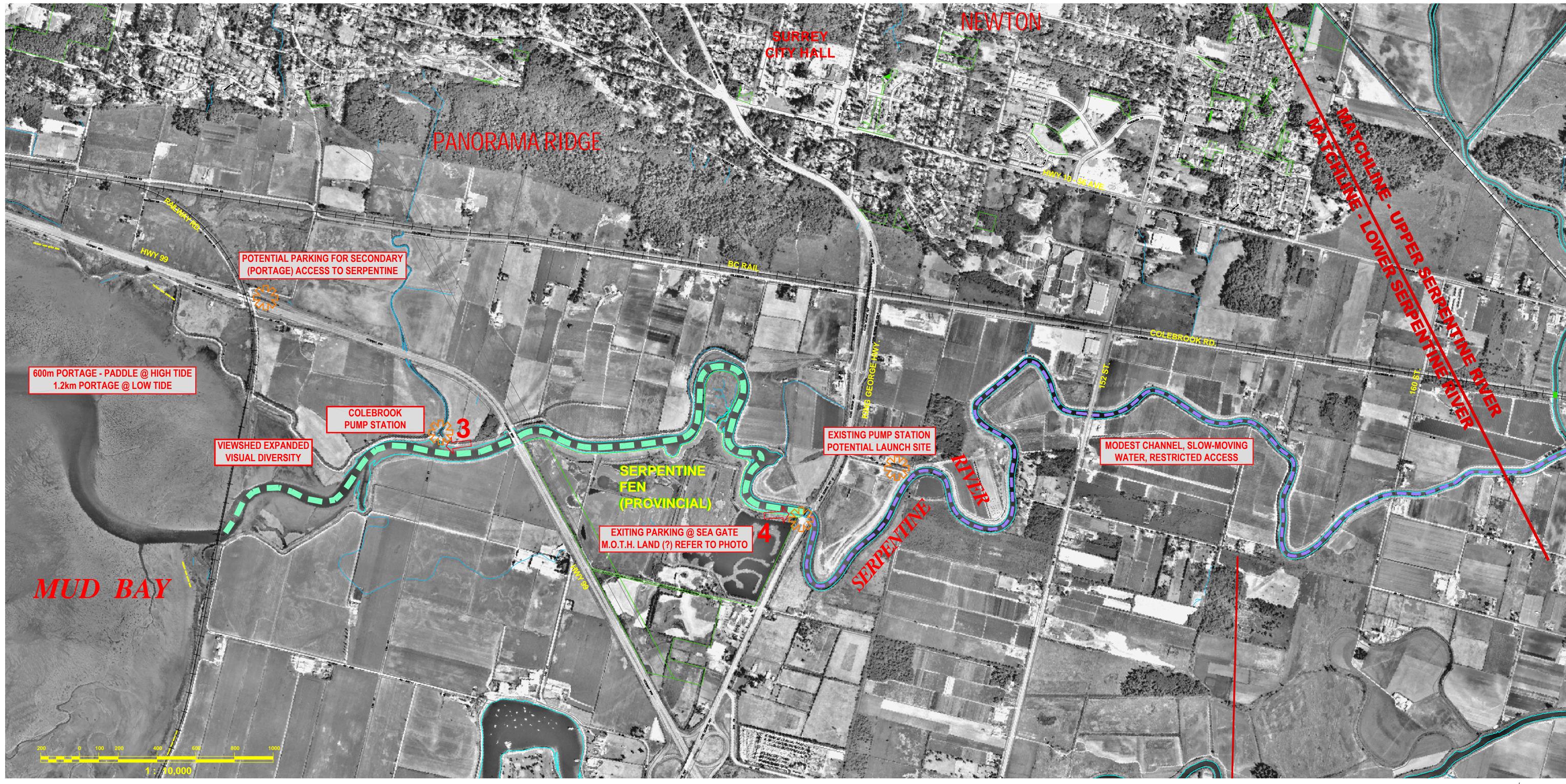
PHOTO 10 - BARNSTON ISLAND FERRY SITE

THERE ARE A COLLAPSED BOAT LAUNCH AND A SMALL DOCK ADJACENT TO THE BARNSTON ISLAND FERRY PARKING LOT (GRAVEL) - POSTED "NO TRESSPASSING". THE FACILITIES APPEAR TO BE ON M.O.T.H. PROPERTY. LAUNCHING AT THAT LOCATION ALSO CONFLICTS WITH THE DOCKING OPERATIONS OF THE FERRY. ANY ANTICIPATED FACILITIES WOULD BE BETTER LOCATED AT AN EXISTING 'PRE-LOADED' DISTURBED AREA WITHIN THE PARK JUST DOWNSTREAM OF THE FERRY SLIP.





CITY OF SURREY * BLUEWAYS MASTER PLAN OPPORTUNITIES & CONSTRAINTS - FRASER RIVER - SURREY BEND



21

PHOTO LOCATION & DIRECTION

NARROW CHANNEL WIDTH (3-12m), SOMETIMES SHALLOW, GROUNDING POSSIBLE. SUBJECT TO MEDIUM CURRENTS & HIGHER WATER DURING STORM EVENTS.

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EXISTING PARKLAND WITH EXISTING OR POTENTIAL BLUEWAY FACILITIES

CANDIDATE SITE FOR POTENTIAL BLUEWAY FACILITIES

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PRIMARY EXISTING OR POTENTIAL STAGING/LAUNCH SITE MIGHT INCLUDE PARKING, LAUNCH FACILITY, DOCK & RESTROOMS

PHOTO 3 - SERPENTINE RIVER ESTUARY

EXPANDED VIEWS, 2m TIDAL FLUCTUATIONS AND GOOD BIRDING OPPORTUNITIES.
LAUNCHING OPPORTUNITIES LIMITED DUE TO FREEWAY. POSSIBLE 0.6km PORTAGE FROM RAILWAY UNDERPASS @ HWY. 99 IF TIDE IS HIGH - OTHERWISE 1.2km WALK ALONG DIKE TO RIVER MOUTH. .



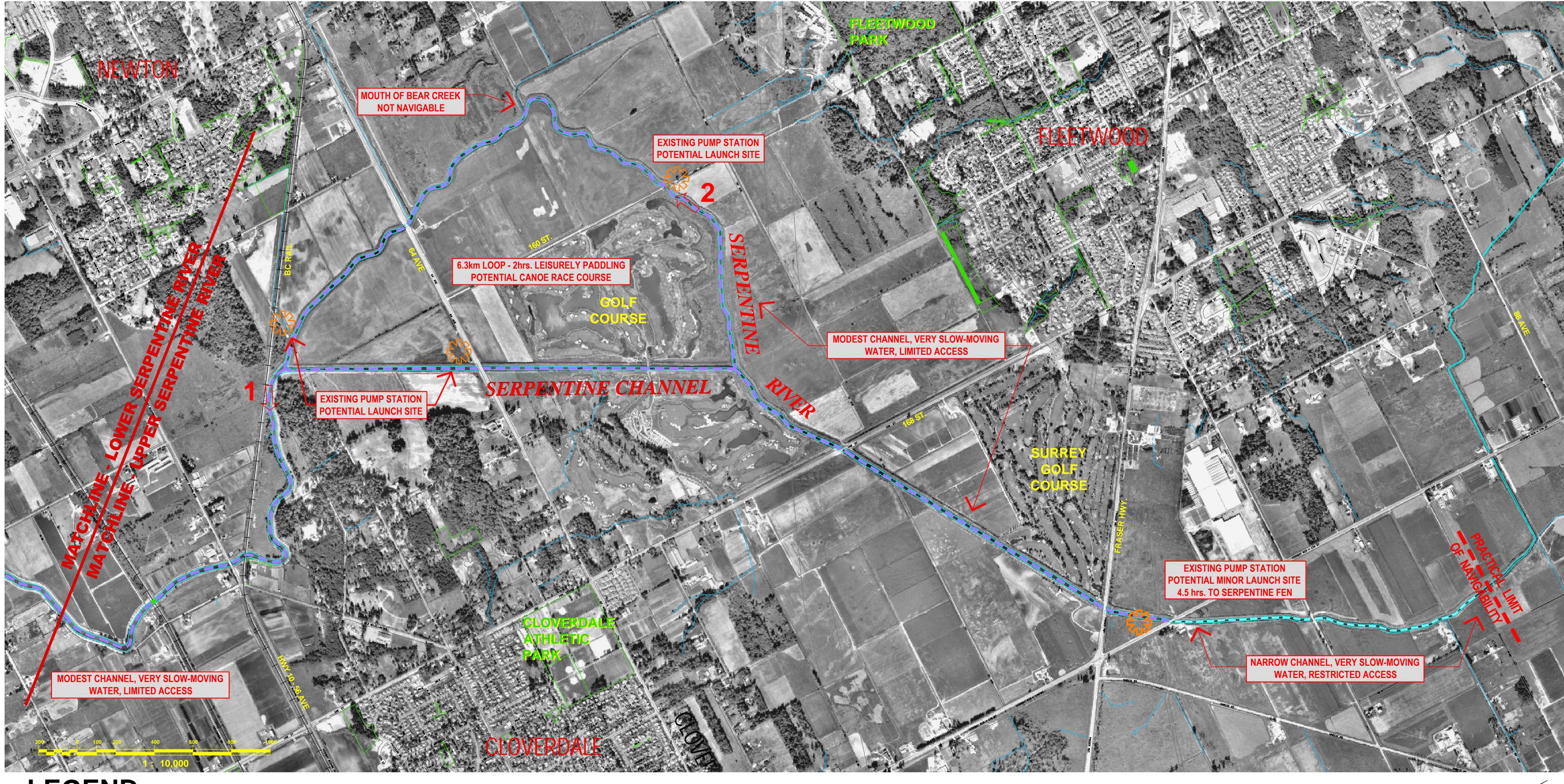
PHOTO 4 - SERPENTINE SEA-GATE @ SERPENTINE FEN.

EXISTING GRAVEL PARKING AREA ADJACENT KING GEORGE HWY BRIDGE, SEA GATE AND SERPENTINE FEN. AREA BETWEEN HWY.
BRIDGE AND SEA DAM COULD BE ADAPTED FOR CANOE/KAYAK LAUNCHING. INTERMODAL CONNECTION WITH DIKE WALK (BIRDWATCHING). 4.4km (LEISURELY 3 hr. ROUND TRIP) PADDLE TO RAILWAY TRESTLE AT MUD BAY.





CITY OF SURREY * BLUEWAYS MASTER PLAN OPPORTUNITIES & CONSTRAINTS - LOWER SERPENTINE RIVER



2Î

PHOTO LOCATION & DIRECTION

NARROW CHANNEL WIDTH (3-12m), SOMETIMES SHALLOW, GROUNDING POSSIBLE. SUBJECT TO MEDIUM CURRENTS & HIGHER WATER DURING STORM EVENTS.

MEDIUM CHANNEL WIDTH (12-30m) - SANDBARS INFREQUENTLY @ INSIDE CURVES AND STREAM ENTRANCES. GENERALLY SLOW TO VERY SLOW CURRENT.

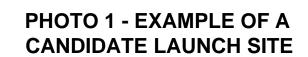
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PRIMARY EXISTING OR POTENTIAL STAGING/LAUNCH SITE MIGHT INCLUDE PARKING, LAUNCH FACILITY, DOCK & RESTROOMS



UNDIKED, IDEALLY LOCATED TO ALLOW STAGING FOR A 2 hr LOOP OR ONE-WAY TRIP TO THE NEXT LAUNCH SITE.

BANK IS NOT STEEP, WOODED AREA PROVIDES WELCOME VARIETY TO OTHERWISE VISUALLY UNIFORM STRETCH OF RIVER; PROVIDES OPPORTUNITY TO NON-BOATING RIVERSIDE ACTIVITIES SUCH AS PICNICKING.

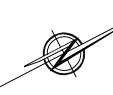


PHOTO 2 - TYPICAL UPPER SERPENTINE RIVER CHANNEL

PLACID WATER, SHELTERED FROM TRAFFIC NOISE, GREEN.
EXCEPT @ A FEW INSIDE CURVES AND STREAM ENTRANCES,

NOT TOO SHALLOW FOR PADDLING.
UPPER PORTIONS OF DIKE USUALLY VEGETATED
WITH DENSE BRAMBLE PREVENTING TRESSPASS
TO FARMLANDS BEYOND.
VERY LIMITED SHORE-BASED RECREATIONAL
OPPORTUNITIES
& NOT PARTICULARLY VISUALLY VARIED.







CITY OF SURREY + BLUEWAYS MASTER PLAN

OPPORTUNITIES & CONSTRAINTS - UPPER SERPENTINE RIVER

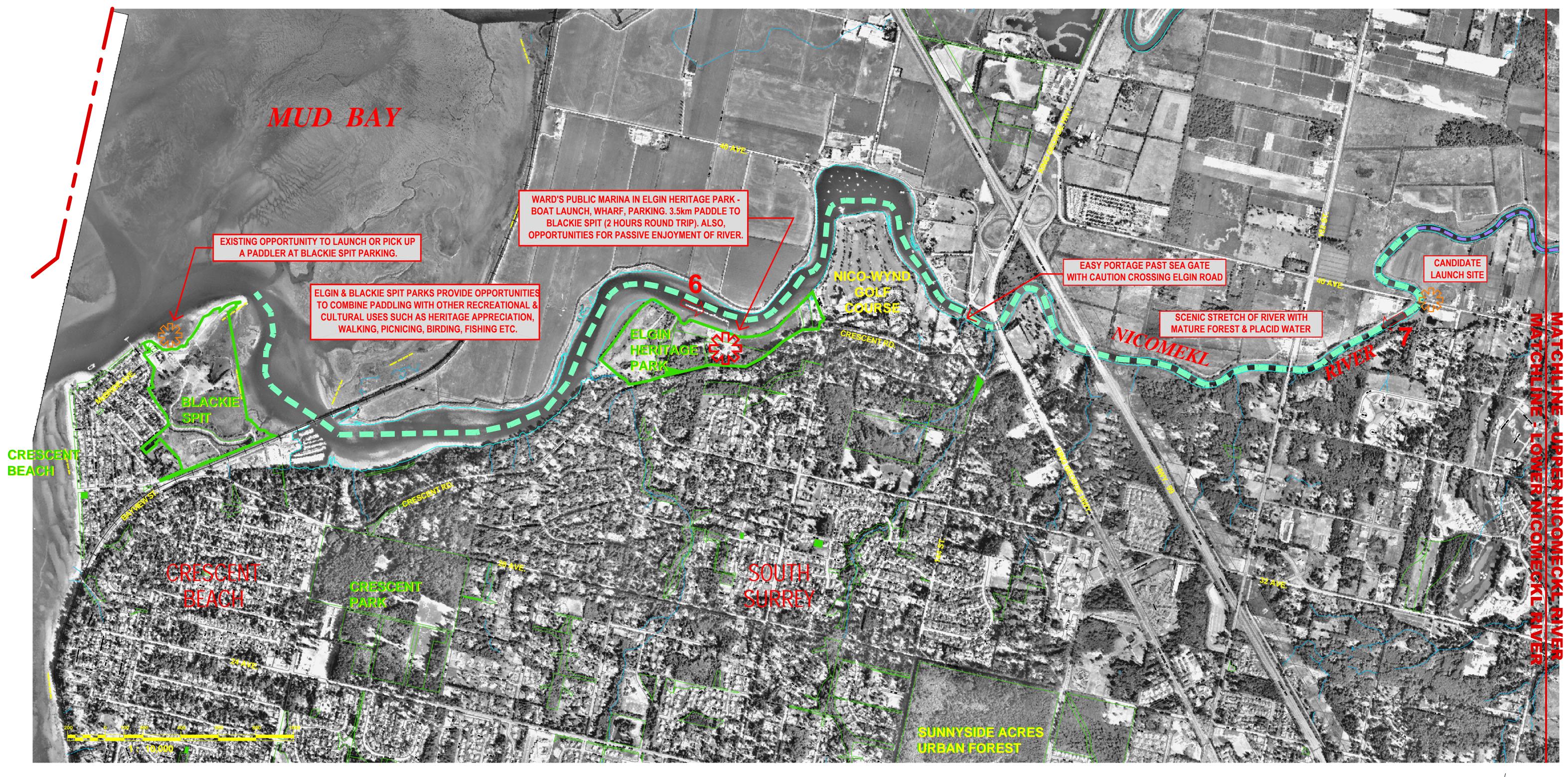


PHOTO LOCATION & DIRECTION

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WIDE CHANNEL WIDTH (30-200+m) - SUBJECT TO SIGNIFICANT TIDAL INFLUENCE UP TO 2m TIDAL VARIATION, MUD FLATS, TIGHT BRIDGE CLEARANCES. VIEW CONFINED TO CHANNEL, GENERALLY BY STEEP DIKES
OFTEN PHYSICAL BARRIER TO LAND BEYOND BY INPENETRABLE BRAMBLES

EXISTING PARKLAND WITH EXISTING OR POTENTIAL BLUEWAY FACILITIES

MINOR EXISTING OR POTENTIAL STAGING/LAUNCH SITE LIMITED PARKING, LOWER USE INTENSITY ANTICIPATED

CANDIDATE SITE FOR POTENTIAL BLUEWAY FACILITIES

PRIMARY EXISTING OR POTENTIAL STAGING/LAUNCH SITE MIGHT INCLUDE PARKING, LAUNCH FACILITY, DOCK & RESTROOMS

PHOTO 6 - MARINA ON NICOMEKL RIVER **@ CRESCENT BEACH**

BELOW THE SEA GATE THE NICOMEKL RIVER AVERAGES 200m OR MORE IN WIDTH. VISTAS ARE WIDE AND VARIED WITH A PICTURESQUE MIX OF TREED AND OPEN PARKLAND, PRIVATE RESIDENCES PERCHED ABOVE THE RIVER AND MARINAS. THE RIVER IS USED BY A WIDE RANGE OF PLEASURE CRAFT, ADDING BOTH INTEREST AND AN ELEMENT OF POTENTIAL HAZARD TO SMALL UNPOWERED CRAFT SUCH AS CANOES AND KAYAKS. ALL VESSELS USING THIS AREA NEED TO BE APRISED OF THE BASIC RULES OF NAVIGATION.



PHOTO 7 - NICOMEKL RIVER ABOVE THE SEA GATE

PADDLING IS QUITE SCENIC FOR 2.8km ABOVE SEA GATE TO APPROXIMATELY 40TH AVE NEAR 152 ST - MATURE FORESTS OF VETERAN SPRUCE, FIR AND MAPLES, AND RIVER OTTERS. EASY ACCESS TO THE RIVER AT EITHER SIDE OF THE SEA GATE STRUCTURE HOWEVER THE (ONE WAY) TRAFFIC IS HEAVY ON ELGIN ROAD WHICH MUST BE CROSSED TO COMPLETE THE PORTAGE. THERE IS NOWHERE TO SAFETLY PARK NEAR THE SEA GATE. THERE IS NO EASY ACCESS TO THE RIVER UPSTREAM IN THE ALR LANDS - ALTHOUGH PUMP STATIONS AT 48TH AVE SHOULD BE INVESTIGATED AS A POSSIBLE MINOR LAUNCH SITES. FROM THAT LOCATION IT IS A 2.5 hr PADDLE (9km) TO WARD'S MARINA.







CITY OF SURREY + BLUEWAYS MASTER PLAN OPPORTUNITIES & CONSTRAINTS - LOWER NICOMEKL RIVER

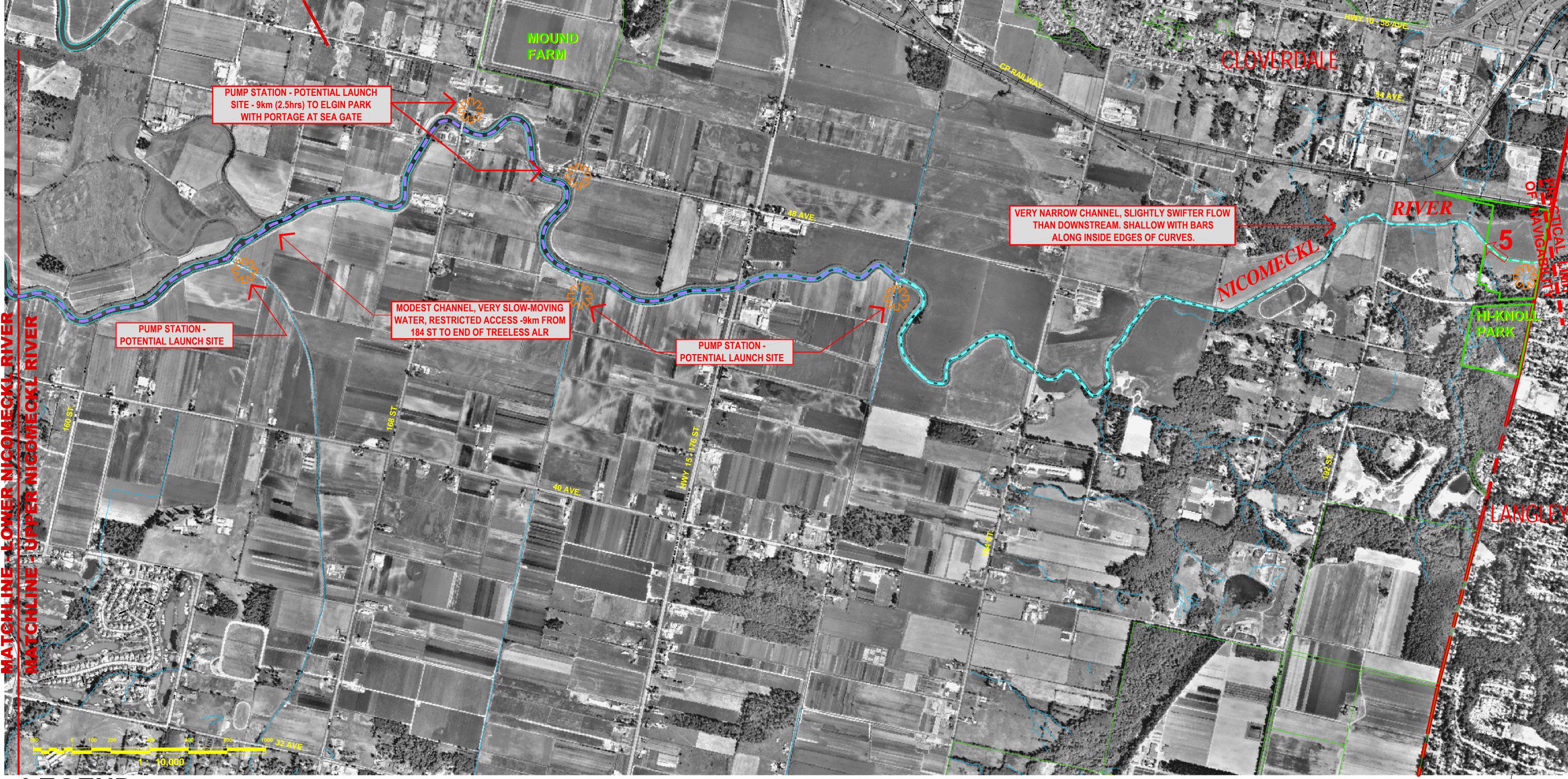




PHOTO LOCATION & DIRECTION

NARROW CHANNEL WIDTH (3-12m), SOMETIMES SHALLOW, GROUNDING POSSIBLE. SUBJECT TO MEDIUM CURRENTS & HIGHER WATER DURING STORM EVENTS.

MEDIUM CHANNEL WIDTH (12-30m) - SANDBARS INFREQUENTLY @ INSIDE CURVES AND STREAM ENTRANCES. GENERALLY SLOW TO VERY SLOW CURRENT.

WIDE CHANNEL WIDTH (30-200+m) - SUBJECT TO SIGNIFICANT TIDAL INFLUENCE UP TO 2m TIDAL VARIATION, MUD FLATS, TIGHT BRIDGE CLEARANCES.

VIEW CONFINED TO CHANNEL, GENERALLY BY STEEP DIKES OFTEN PHYSICAL BARRIER TO LAND BEYOND BY INPENETRABLE BRAMBLES EXISTING PARKLAND WITH EXISTING OR POTENTIAL BLUEWAY FACILITIES

CANDIDATE SITE FOR POTENTIAL BLUEWAY FACILITIES

MINOR EXISTING OR POTENTIAL STAGING/LAUNCH SITE LIMITED PARKING, LOWER USE INTENSITY ANTICIPATED

PRIMARY EXISTING OR POTENTIAL STAGING/LAUNCH SITE MIGHT INCLUDE PARKING, LAUNCH FACILITY, DOCK & RESTROOMS

PHOTO 5 - NICOMEKL RIVER @ HI-KNOLL PARK

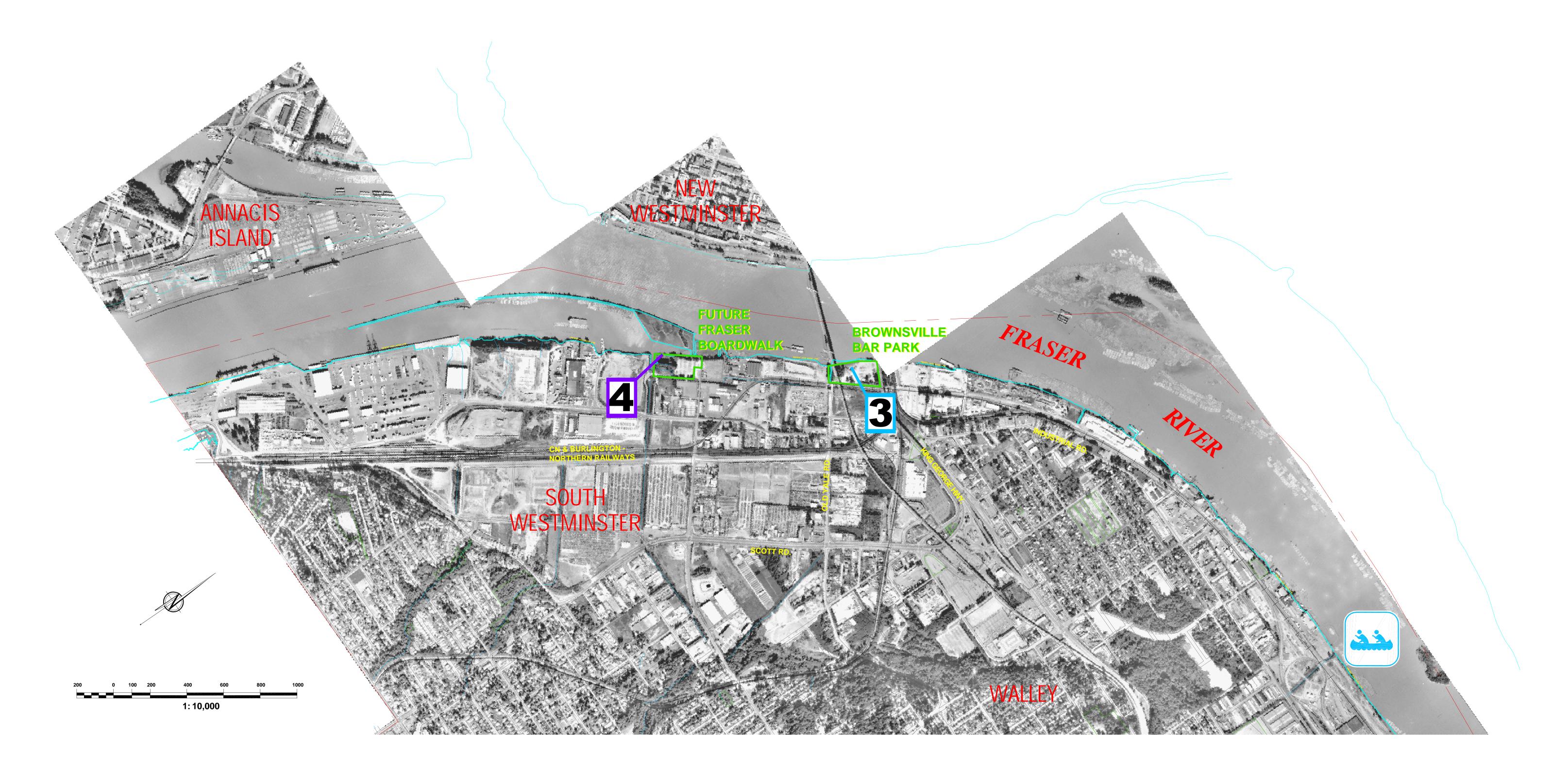
UNDIKED PORTION OF RIVER WITH NARROW CHANNEL, GENTLE CURRENT AND NUMEROUS SHALLOW SAND BARS. SCALE IS INTIMATE AND PLEASANT WITH ONLY ONE VESSEL IN THE WATER - WOULD SEEM CONGETSED WITH MORE THAN A FEW CHANCE ENCOUNTERS WITH OTHER CANOISTS. POTENTIALLY SWIFT AND DEEPER WATER UNDER FLOOD CONDITIONS - POTENTIALLY HAZARDOUS FOR BEGINNERS DUE TO TIGHT CHANNEL CONFIGURATION. SCALE BROADENS AND BECOMES LESS INTERESTING BELOW 184 ST (3.25km or 1 hr FROM PARK FOOTBRIDGE).





CITY OF SURREY * BLUEWAYS MASTER PLAN OPPORTUNITIES & CONSTRAINTS - UPPER NICOMEKL RIVER

Candidate Launch Sites: Facility Location Concept Maps





Existing launch from bar - Brownsville Bar Park



Passive use opportunities from proposed boardwalk park

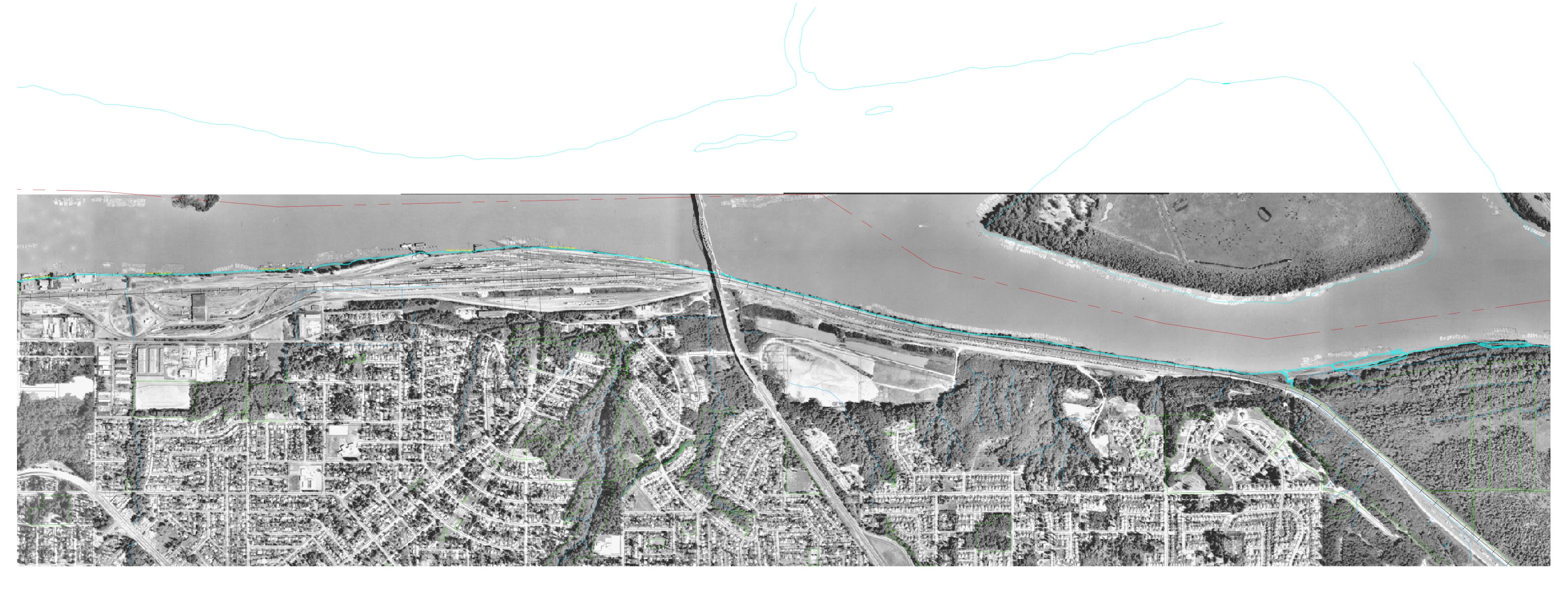


DENOTES 1 HOUR PADDLING TIME (3.5km)
4 HOUR PADDLING (14km) FROM SURREY BEND

CITY OF SURREY • BLUEWAYS MASTER PLAN FACILITY LOCATION CONCEPT - FRASER RIVER - BROWNSVILLE BAR



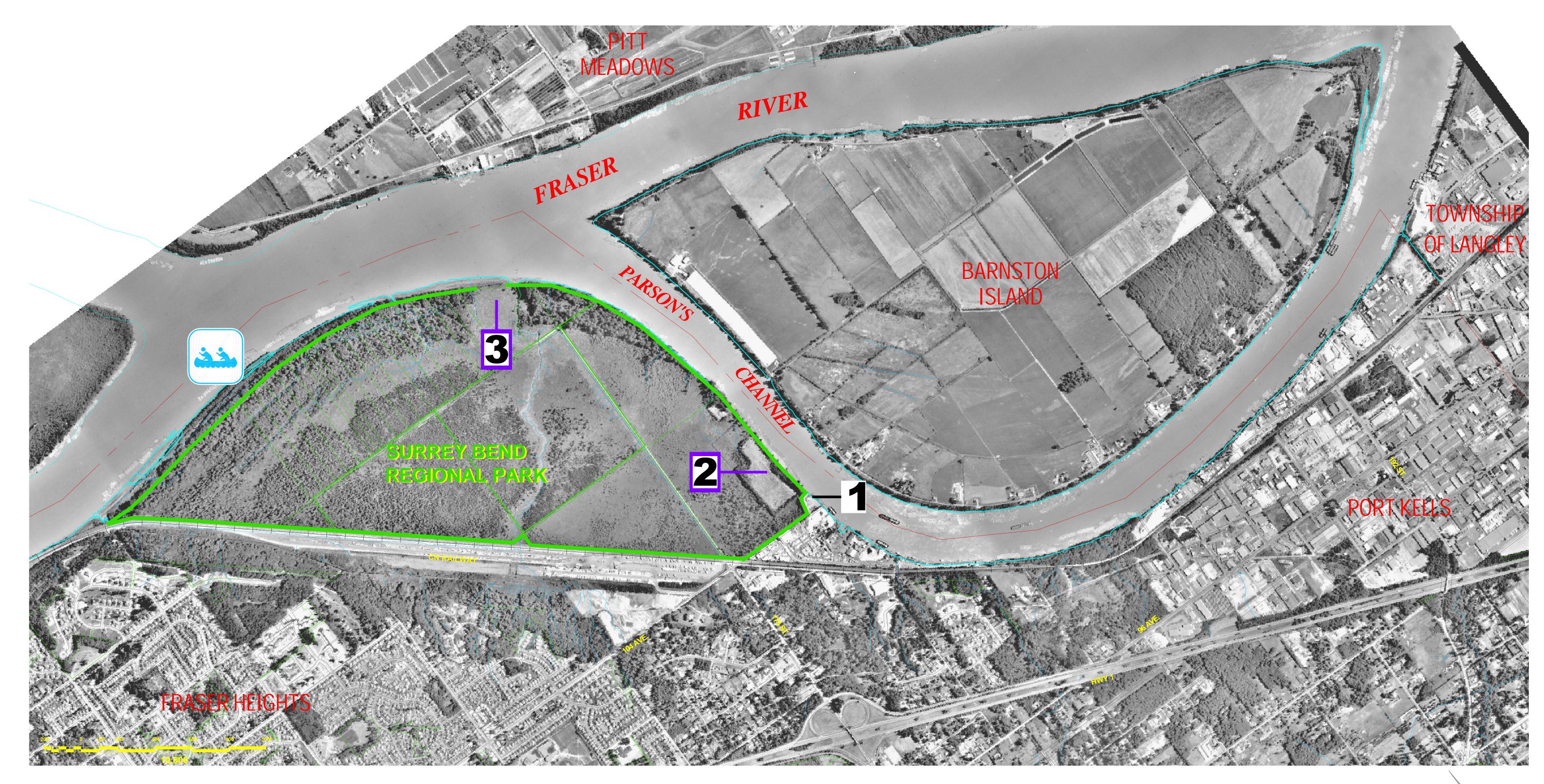






Fraser River - Port Mann







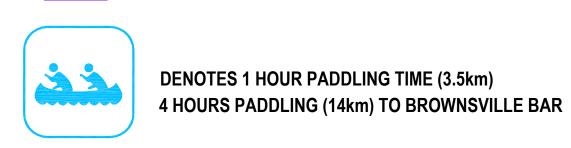
Existing site considered/ rejected for improvements



Preload site in Surrey Bend Park
Proposed boat launch and ancillary facilities.



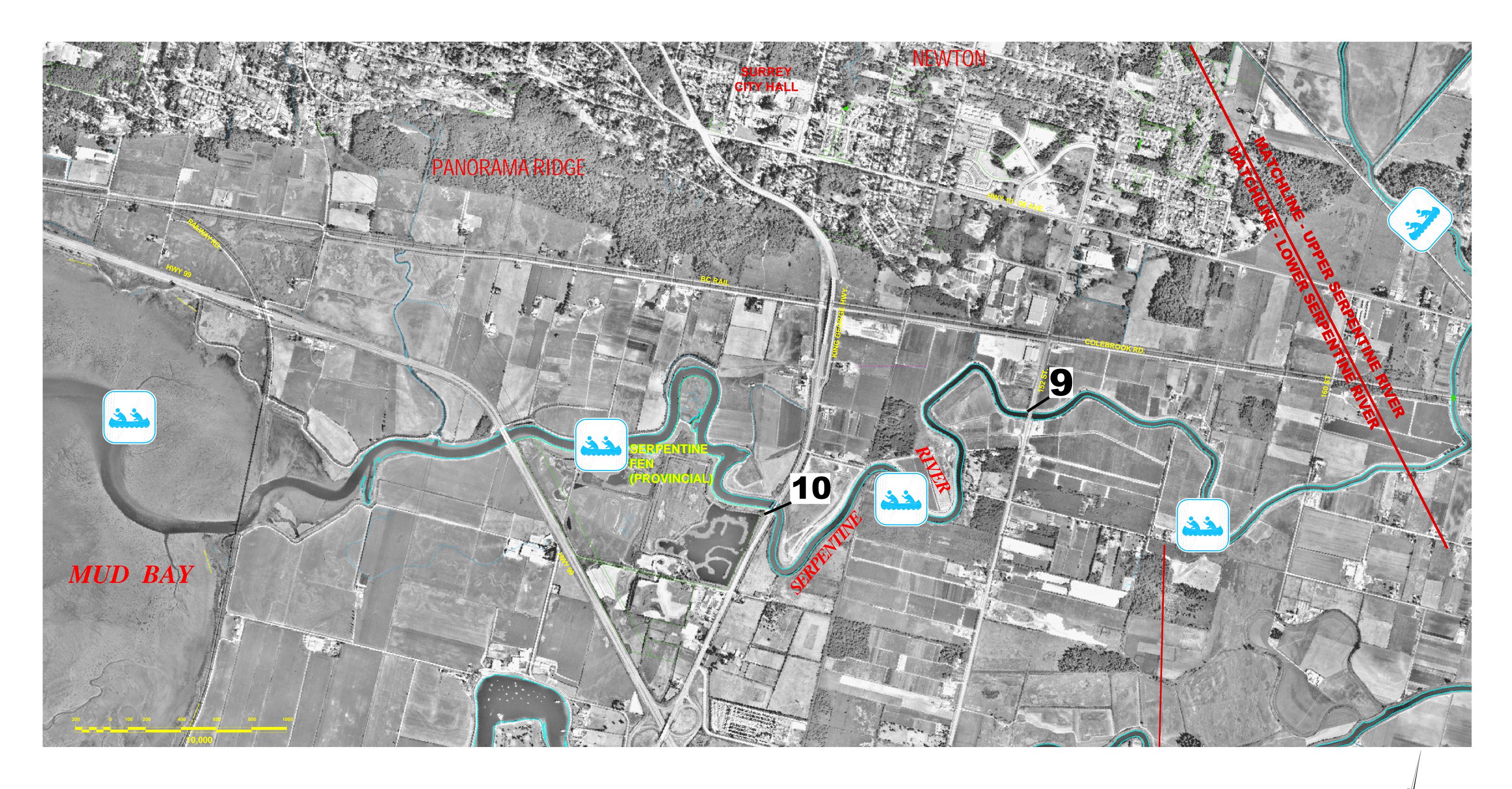
Proposed walk-in viewpoint and nature trail.



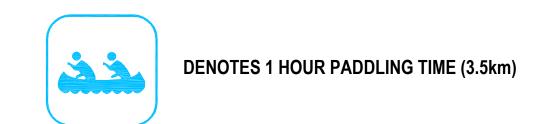
CITY OF SURREY • BLUEWAYS MASTER PLAN FACILITY LOCATION CONCEPT - FRASER RIVER - SURREY BEND

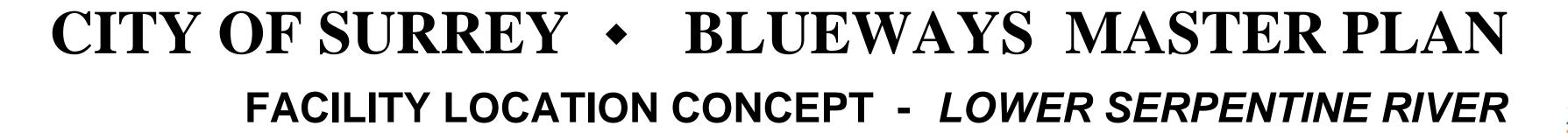






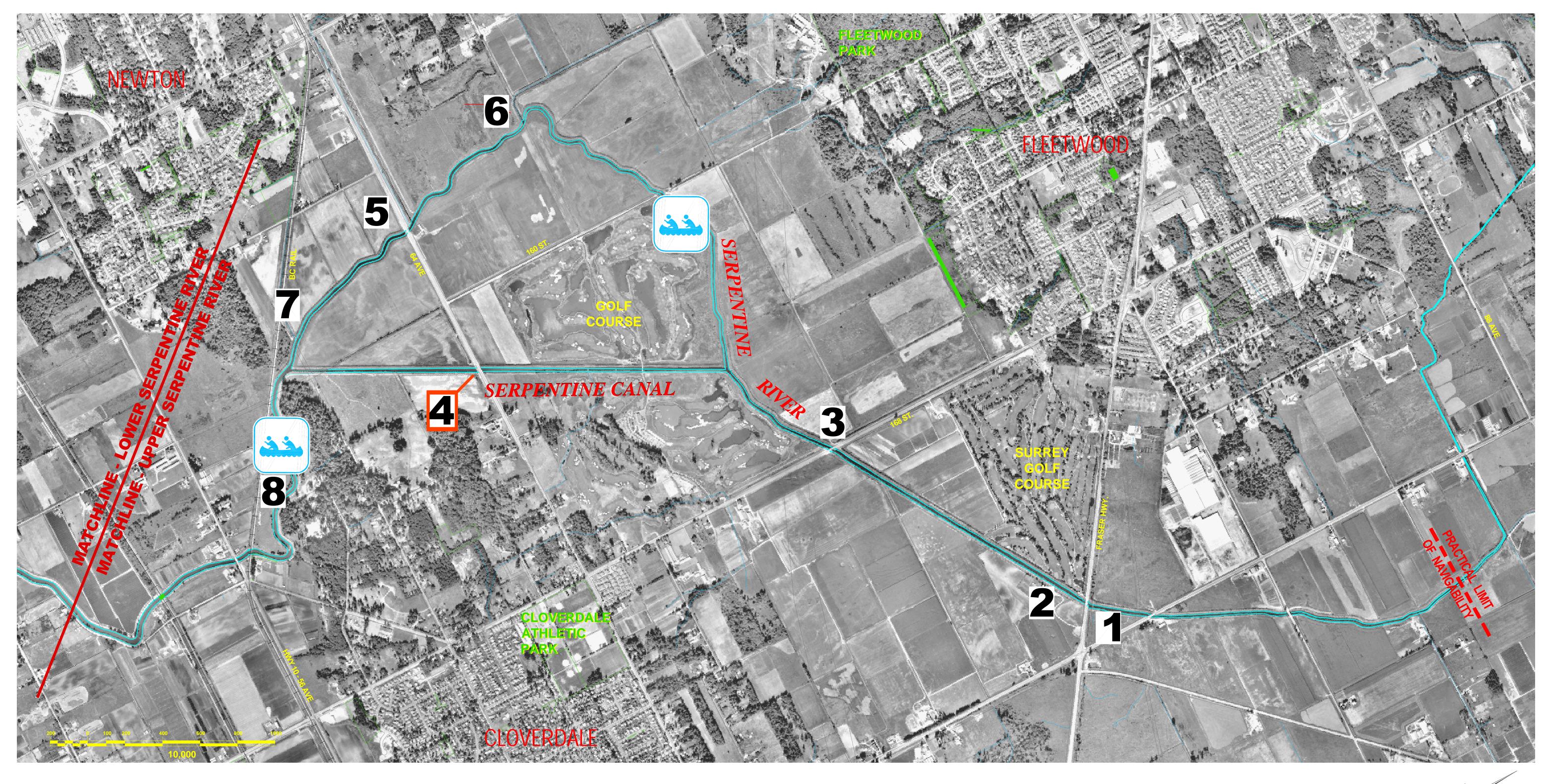
Undeveloped launch sites considere rejected for improvement.











Undeveloped launch sites considered/rejected for development.

Undeveloped launch sites considered rejected for development.

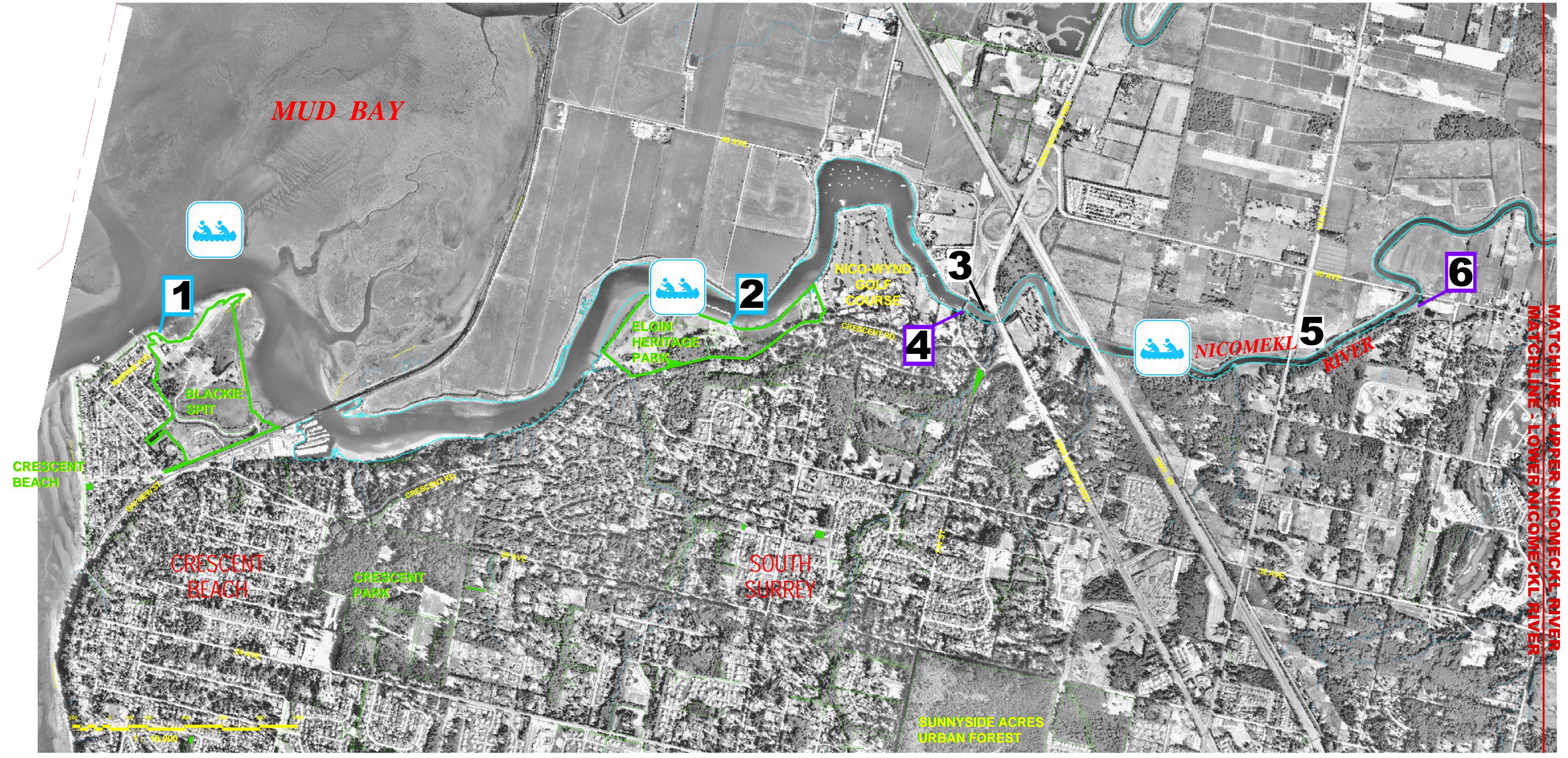














Existing Facilities - Blackie Spit Park



Existing Facilities - Elgin Heritage Park



DENOTES 1 HOUR PADDLING TIME (3.5km)



Portage around Sea Dam At Elgin Road



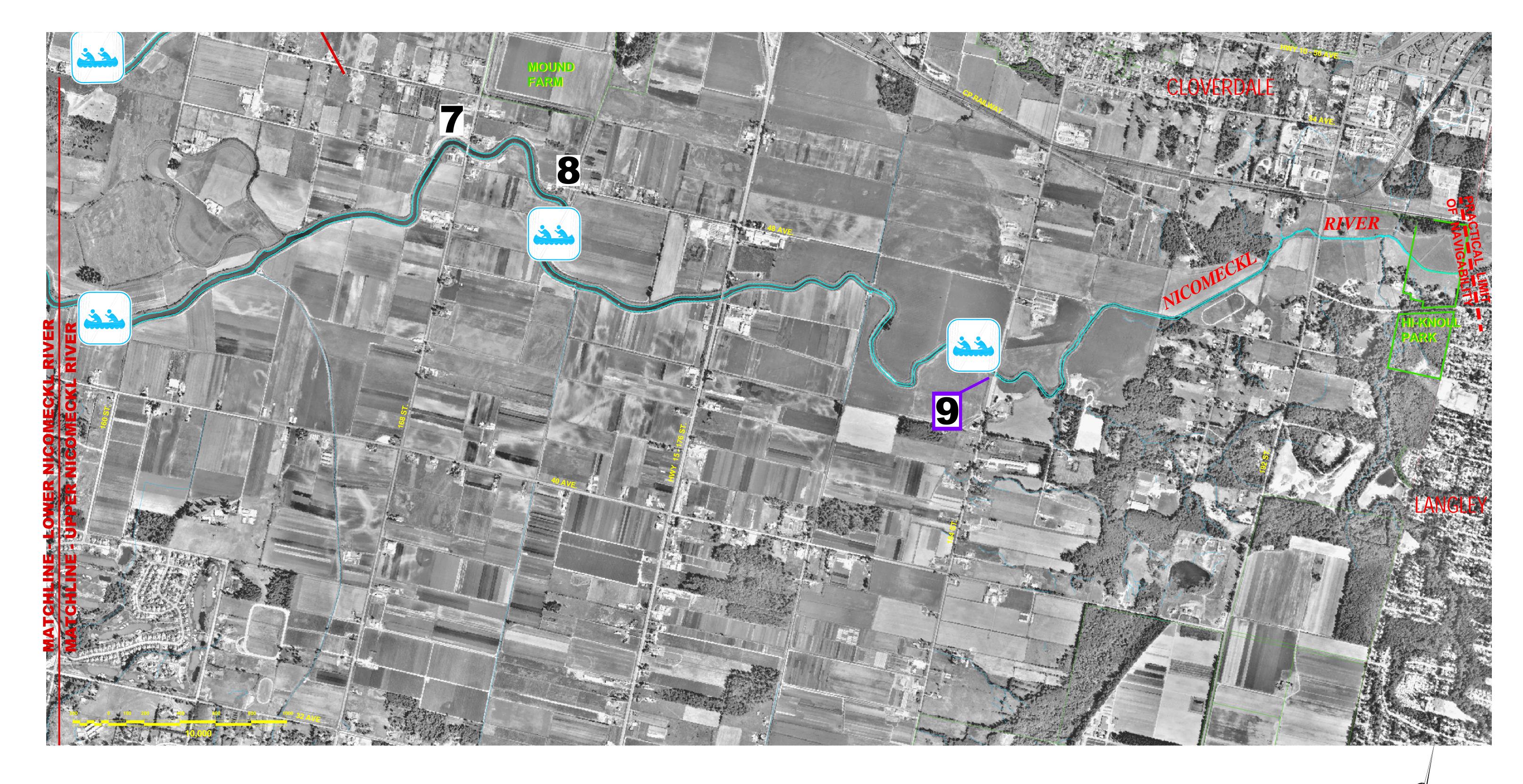
Proposed launch and ancillary facilities Future Rosemary Heights Park Site









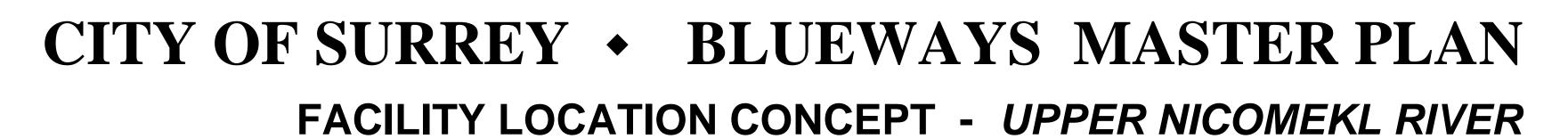




Other undeveloped launch sites considered/rejected for development.



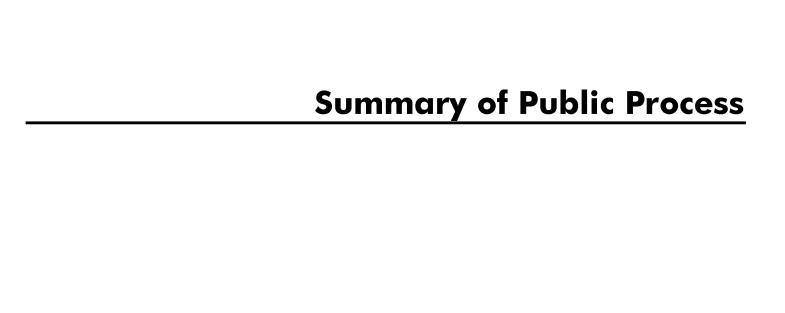
Proposed launch site
SW of bridge











Surrey Blueways Master Plan

Plan Process

The Surrey Blueways Plan has been developed through an intensive process of stakeholder involvement:

- Staff trip down Surrey waterways.
- Creation of a film short on the opportunities and issues.
- Steering Committee review #1.
- Agriculture Committee review #1.
- Workshop #1 (Public).
- List of Candidate sites.
- Steering Committee Review #2.
- Executive Field Review to Candidate Sites.
- Short List of Proposed Launch Sites.
- Agriculture Committee Review #3.
- Workshop #2 (Public).
- Steering Committee Review #3.
- Workshop #3 (invited stakeholder).
- Parks, Recreation and Culture Commission Review.



Surrey Blueways Response Summary

1. What recreation opportunities do you support as a part of the Surrey Blueways Master Plan?

	As much as possible	Some	None	No Answer					
Designated canoe/kayak routes	Designated canoe/kayak routes								
1-2 hour return trip	44%	44%	6%	6%					
2-4 hour return trip	44%	44%	6%	6%					
4-8 hour return trip	37%	50%	13%	0%					
Staging facilities at water access points									
Walk/Ramp to canoe/kayak float	25%	43%	19%	13%					
Washrooms	19%	68%	0%	13%					
Parking	19%	68%	0%	13%					
Transit access	0%	31%	44%	25%					
Interpretive and Safety Signage	37%	50%	0%	13%					
Picnic Area	13%	68%	13%	6%					
Potential commercial facilities at major staging areas									
Canoe/kayak rentals	0%	63%	24%	13%					
Guided canoe/kayak tours	0%	44%	37%	19%					
Seasonal Food concession	0%	6%	88%	6%					

Comments:

Let's not designate any. Let's not make it any easier. Stabilize bank re ramp. Transit access where already in place. Interpretive and Safety Signage at launching areas. Picnic area where already busy with humans. Carefully consider canoe/kayak rentals. We don't need tours and no concessions. Concerned that facilities will have a negative impact on riverbank. Just enough of a walk/ramp to avoid erosion. Transit access where already there. Interpretive and safety signage at launching places. Picnic areas where already there. Marked routes, safety, wildlife and access, ease described. Limited staging facilities. Limited parking. Limit commercial operators for rentals. The guided tours would be best for the environment. Seasonal food concession OK at major points. Have washrooms unisex and handicap accessible. Canoe/kayak rentals OK with mandatory instruction as part of rental agreement. Have rentals off site only.

2. What areas do you believe should be the primary focus of canoe/kayaking routes in Surrey?

	As much s possible	Some	None	No Answer
Fraser River				
Parson's Channel	13%	75%	6%	6%
Brownsville Bar	13%	81%	0%	6%
Other Fraser River	25%	69%	0%	6%
Serpentine River				
Above Sea Dam	31%	44%	25%	0%
Below Sea Dam	19%	68%	13%	0%
Nicomekl River				
High Knoll Park to 40th Ave./156 St.	25%	56%	19%	0%
40th Ave./156 St. to Sea Dam	31%	44%	19%	6%
Below Sea Dam	31%	69%	0%	0%
Mud Bay	19%	81%	0%	0%
Campbell River/Boundary Bay	19%	50%	19%	12%

Comments:

Don't promote these areas. Use with sensitivity subject to environmental assessment. I have difficulty with more access to Surrey Bend since access from landside is limited and therefore limits supervision or stewarding of the bend area. Below sea dam must have considerations for wildlife. Minimal development. All areas of the Serpentine and Nicomekl Rivers are highly sensitive. They should be subject to further review of environmental impact re: Herron. Do not promote above sea dams. Re 40th Ave. Must be impact study. Mud Bay OK for some focus with further work. Campbell River is too sensitive. Good access to Rivers, but minimal development. Minimal to modest focus OK on Fraser River, not for rest of areas. Limit access during nesting. Leave some Herron breeding area closed to public access.

3. What 'good neighbor' facilities do you support for canoe/kayak staging areas?

	Support as proposed	Don't Support	Support with Refinements			
	FF0/	100/	400/	400/		
Site away from barns/houses	55%	19%	13%	13%		
Site away from intensive agriculture	56%	19%	6%	19%		
Information/regulation signage	75%	6%	6%	13%		
Litter containers / regular pickup	56%	6%	32%	6%		
Weed control / landscape maintenance	13%	55%	19%	13%		
Fencing/barriers to restrict access						
along top of dykes	13%	37%	19%	31%		
Privacy fencing or hedging where requi	red 31%	25%	38%	6%		
Vehicle Gate / Barriers (choose one from below)						
-closed daily at dusk	56%	32%	6%	6%		
-closed for winter season	13%	74%	0%	13%		
Facility attendant during peak use times	s 24%	50%	13%	13%		

Comments:

Use naturescape principles – no pesticides, no herbicides. Let landowners do the fencing. Close gate for nesting season. Rather than litter containers have signage stating "pack in and pack out". Fencing to restrict access along top of dykes – where necessary ... is this to restrict access to dyke or farmland etc. behind the dykes? No privacy fencing. Sites as per farmers wishes. Good signage re litter and also adopt a stream. Please don't lock the gate at night. No privacy fencing. Instead of privacy fending use hedging. Litter containers limited to access areas – carry in – bring out. Privacy fending near launch sites. Facility attendant only if a need is demonstrated.

4. What management regulations do you support for canoeing/kayaking facilities in Surrey?

	Support as proposed	Don't Support	Support wit Refinement	h s No Answer			
No motorized craft (except designated areas e.g. where							
these are now used)	88%	6%	0%	6%			
No watercraft access to waterways							
except at designated points	43%	38%	6%	13%			
Fines for littering	75%	6%	0%	19%			
All pets on leash	75%	6%	6%	13%			
No hunting	75%	6%	0%	19%			
Do not disturb or feed wildlife	88%	6%	0%	6%			
No parking dusk/dawn	56%	38%	0%	6%			
No public access to dykes/drainage o	utfalls32%	56%	6%	6%			

Comments:

Electric motorized craft okay. Pet owners must conform to city bylaw. Do not disturb or feed wildlife must be compulsory. No pets in canoes – disturb wildlife. Pets on leash except where designated. Should seriously consider electric motors as they are environmentally sensitive. How do we control watercraft access, littering, pets?

5. Additional Comments regarding canoe/kayak facilities in Surrey Blueways:

Environmental Assessments necessary. This plan is well worth working on, and meeting consensus means balancing all interest groups. Concerned that improvements will end up making user pay drop in water fees which I do Not want.

I have concern over sensitive wildlife areas and hopefully there will be time to gather information from those familiar with Surrey's wildlife to contribute. Designated Bon Fire Pits. At parking – route info – "You are here – your options are ..."

Find designated area for a few bonfire pits. Waterfowl management – is it an issue! Mo mgmt – will still yield some use but not controlled. Balance of access + uses = wildlife + nature enhancement.

Handicap Access. Heritage Promotion. Fire pits. Keep it simple.

Surrey Blueways Response Summary

1. What canoe/kayak access points do you support as a part of the Surrey Blueways Master Plan?

	Support	Don't	Support	No Answer
	as proposed	support	with refinements	
Nicomekl River (numbers are shown	on mans)			
Blackie Spit (existing)	100%	0%	0%	0%
Elgin Park (existing, floats improve		0%	0%	0%
4. Portage at Nicomekl Seadam	5d) 10070	070	070	070
New water access trails	33%	50%	0%	17%
Boom to keep boats away from g		83%	0%	0%
Portage signage on road	50%	50%	0%	0%
Traffic calming (speed bumps)	17%	83%	0%	0%
Other improvement (specify)	1770	0070	070	070
6. Rosemary Heights at 40 th Ave.				
Handicapped accessible float	17%	66%	17%	0%
Parking (about 10 cars)	17%	66%	17%	0%
Riverside picnic area	0%	83%	17%	0%
Washrooms	0%	100%	0%	0%
Trees for shade	50%	17%	33%	0%
Other improvement (specify)				
9. 184 th St.				
Ramp to water	33%	33%	17%	17%
Parking (about 5 cars)	33%	33%	17%	17%
Fence along dyke to protect field		50%	0%	17%
Washrooms	0%	67%	0%	33%
Trees for shade	49%	17%	17%	17%
Other improvement (specify)				
Fraser River (numbers are shown on	maps)			
2. New Launch on Surrey Bend pre				
Boat ramp (including motorized of		17%	0%	0%
Parking (about 20 cars plus traile		17%	0%	0%
Riverside picnic area	66%	17%	0%	17%
Washrooms	66%	17%	0%	17%
Trees for shade	100%	0%	0%	0%
Other improvement (specify)				
3. Surrey Bend river view point / natu	ıre walk			
Boat landing site	66%	17%	0%	17%
Walk in only (no cars)	66%	0%	17%	17%
Riverside picnic area	17%	17%	17%	50%
Washrooms	33%	17%	0%	49%
Trees for shade	67%	0%	0%	33%
Other improvement (specify)				
3 (sic) Brownsville Bar Park (existing) 50%	17%	0%	33%
Other improvement (specify)				

2. What should be the role of the Serpentine River for kayaking/canoeing?

	Support as proposed	Don't support	Support with refinements	No Answer	
Private Sector Launch site near 64th	33%	50%	0%	17%	
Private Sector Launch site near Hwy 9	99 0%	83%	0%	17%	
Other Private Sector Launch Site (spe	ecify)				
Potential Public Sector sites (choose of		•	0 1		ovide)
#3 168 th St. at Bridge	50%	0%	17%	33%	
#5 64th Ave. parallel to dyke.	33%	17%	17%	33%	
#6 Bear Creek connection to Surrey	У				
Lake	33%	33%	0%	34%	
Lunc					

3. What 'people management' strategies do you support to protect waterfowl?

	Support	Don't	Support with	
a	is proposed	Support	Refinements	No Answer
Serpentine vacant for nesting season	83%	17%	0%	0%
Limit access points on Nicomekl	83%	17%	0%	0%
Limit size of parking areas at launches	83%	0%	0%	17%
Provide information / regulation signage	83%	17%	0%	0%
Provide interpretive leaflets with guideline	es			
to not disturb waterfowl.	83%	17%	0%	0%
Minimize promotion of boating on Nicom	ekl100%	0%	0%	0%
Monitor impacts of boaters on waterfowl	100%	0%	0%	0%
Vehicle Gate / Barriers				
-closed daily at dusk	33%	50%	0%	17%
-closed for March 1 to May 1	50%	33%	0%	17%
Other measures for waterfowl (specify)				

4. Additional Comments regarding canoe/kayak facilities in Surrey Blueways:

Re 184th St, 168th St, and 64th Ave: Minimal. Impact Study is required regarding canoe/kayak facilities. Must establish "carrying capacity" E.I. impact should be left until effects of development of Rosemany Hights gauged. I do support ramp at 184th St if it does not effect Rosemary Hights Area.

Full Environmental impact study required for both Nicomekl and Serpentine before process proceeds. More than waterfowl need to be considered.

Begin with least sensitive areas based on an E.A. that allows practical comparison. Having proper access to the rivers will provide some control of the use of the rivers.

Generally speaking I am reluctant to endorse the promotion of canoeing/kayaking. There is a fair amount of boat traffic already so limited control is justified, but promotion is not justified.

Lower Serpentine should always be vacant. Canoeing/Kayaking should be prohibited downriver from the K.G. highway. Re Rosemary Heights at 40th Ave: boat traffic of any kind should not be promoted in anyway

Slide Shows

Meeting Agenda

• 7:00 to 7:15 View the Maps

• 7:15 to 7:50 Presentation

• 7:50 to 9:00 Workshop

• 9:00 to 9:30 Reporting of Results



Surrey Blueways

- Use by kayak and canoe of Surrey's watercourses is growing.
- How do we plan for and manage this use?

...nature doesn't need management ... people do.



Plan Process

- Events from September to present:
 - staff trip down Surrey waterways.
 - Creation of a film short on the opportunities and issues.
 - Steering Committee review #1
 - Agriculture Committee review #1
 - List of Candidate sites
 - Steering Committee Review #2
 - Executive Field Review to Candidate Sites
 - Short List of Proposed Launch Sites
 - Agriculture Committee review #2
 - Public Workshop #2



Major Findings

- Avoid over-promoting use of these waterways.
- · Nicomekl River young family focus
- Fraser River experienced paddler / large group focus
- Serpentine River limited use (localized private sector?)
- · Campbell River informal use as exists
- Issues to manage:
 - minimize waterfowl disturbance during March to May season.
 - Locate/design staging areas to avoid people trespassing in agricultural lands.

Nicomekl River

- 2 existing launch sites remain
- Improved portage at Seadam
- 2 new (small) launch sites upstream.



Nicomekl River

• Blackie Spit (#1)





Nicomekl River

• Elgin Heritage Park (#2)





Nicomekl River

• Seadam Portage (#4)





Nicomekl River

• Rosemary Heights at 40th Ave. (#6)





Nicomekl River

• 184th St. Bridge (#9) - 2.5 hr. paddle to #6





Fraser River

- Proposed launch site on preload in Surrey Bend Park (#2)
- Proposed river view point / nature walk in Surrey Bend Park (#3)
- Brownsville Bar Park (#4)
- Future Fraser River Boardwalk Park (passive uses only)



Serpentine River

- Canoe / Kayak use limited.
- Potential for one or two private launch sites:
 - 64th Ave. (corn maze)
 - in Hwy. 99 facility (no known site)
- If private launch sites do not materialize, future consideration could be given to one or two public launch sites in the central loop area (e.g. #3, #5, #6, or #8)



Next Steps

- Input from Agriculture Committee and Public Workshop
- Steering Committee review of comments and recommendations
- Draft Report on Recommendations
- Public Event #3 (optional)
- Presentation to Parks, Recreation and Culture Committee
- Final Recommendations



Meeting Agenda

- 1. Purpose of the Meeting
- 2. Introductions
- 3. Presentation of the Draft Recommendations
- 4. Comments on the Draft Recommendations
- 5. Other Business



Surrey Blueways Mission

 To manage non-motorized recreational boating on waterways in Surrey to facilitate quiet family enjoyment and public education in a way that supports the fish, wildlife and agricultural communities, and to recognize opportunities for experienced paddlers on the Fraser River.



Program Principles

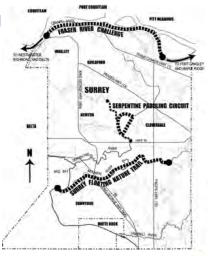
- Recognize fish and wildlife values.
- · Avoid public access to private agricultural property.
- Encourage responsible recreational paddling.
- Use an adaptive management approach.
- Phase in the program slowly.
- · Build partnerships in the program.
- · Focus on family and entry-level paddlers.
- Offer a range of paddling / learning experiences.
- Enhance Surrey's environmental and tourism offerings.





Designated Blueway Routes

- Surrey Floating Nature Trail
- Serpentine Paddling Circuit
- Fraser River Challenge



Surrey Floating Nature Trail Nicomekl River

• nature-appreciation paddling opportunities





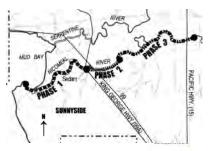
Surrey Floating Nature Trail Nicomekl River

- Phase 1
 - improvements at Elgin Heritage Park, floating nature trail Phase 1, monitoring.
- Phase 2
 - improved portage at the Seadam, plus small launch at 40th Ave. / 156 St.
- Phase 3
 - 'micro' scale launch at 184th St.



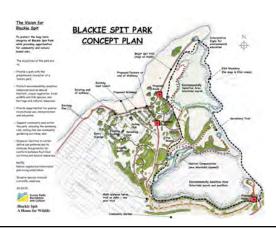
Surrey Floating Nature Trail Nicomekl River

- Scheduled 'openings' of the Floating Nature Trail above the Seadam:
 - October 1 to April 30: guided tours only
 - May 1 to September 30: self guided tours with interpretive sign stations.



Surrey Floating Nature Trail Nicomekl River

• Blackie Spit canoe/kayak launch



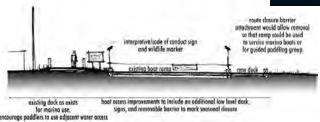




Surrey Floating Nature Trail Nicomekl River

• Elgin Heritage Park disabled access



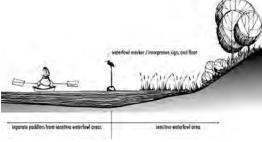




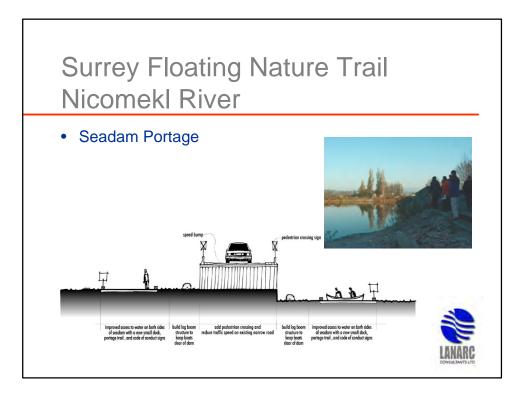
Surrey Floating Nature Trail Nicomekl River

 Nicomekl Estuary Floating Nature Trail (floating signage)



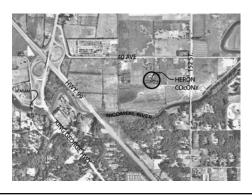






Surrey Floating Nature Trail Nicomekl River

• Heronry Floating Nature Trail

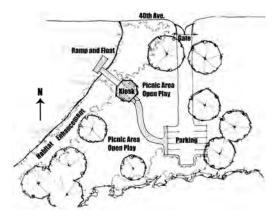






Surrey Floating Nature Trail - Nicomekl River

• 40th Ave. Launch Site





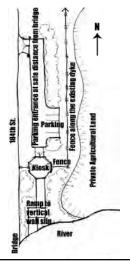


Surrey Floating Nature Trail Nicomekl River

• 184th St. Launch Site



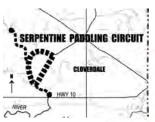




Serpentine Paddling Circuit Serpentine River

- for novice or exercise-oriented paddler, 2-3 hour loop circuit
 - first phase might be provided by the private sector
 - future phases include a connection to Surrey Lake, and south to a riverfront park





Serpentine Paddling Circuit Serpentine River

public access from proposed riverfont park

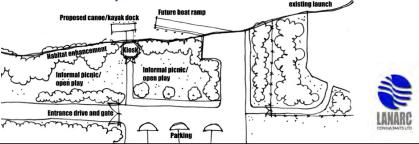




Fraser River Challenge Fraser River

- Canoe/kayak route along the Faser River waterfront in Surrey for experienced paddlers
 - Phase One will be to formalize existing canoe/kayak capabilities at Parsons Channel and Brownsville Bar.
 - Phase Two will be to provide a canoe/kayak launch in the area of Surrey Bend Park

 Barnston Island Ferry-



Capital Budget Summary

Surrey Floating Nature Trail \$398,000
Serpentine paddling Circuit \$15,000
Fraser River Challenge \$190,000
Total Capital Budget \$598,000
Design and Contingency \$120,000
Total \$718,000

Recommended budget: \$145,000/yr. for five years



Next Steps

- Refine plan based on today's input
- Gain support of Parks, Recreation and Culture Commission
- Explore formation of a Surrey Blueways Focus Group
- Undertake detail design of Phase One
- Devise process for private launch facilities
- Implement Phase One and Monitor

