Council Agenda Information Regular Council January 08, 2019

Item 9.2



City of Port Moody Report/Recommendation to Council

Date:	December 20, 2018	File No. 11-5240-01/Vol 01
Submitted by:	Environment and Parks Department – Parks	Division
Subject:	Inlet Sports Field – Investing in Canada Infra (Community, Culture, and Recreation) Grant	

Purpose

To request Council approval to apply for funding with the federal Investment in Canadian Infrastructure Program for the Inlet Sports Field.

Recommended Resolutions

THAT staff be directed to apply for grant funding under the Investing in Canada Infrastructure Program (ICIP) for Community, Culture, and Recreation as recommended in the report dated December 20, 2018 from the Environment and Parks Department – Parks Division regarding Inlet Sports Field – Investing in Canada Infrastructure Program (Community, Culture, and Recreation) Grant Application 2019;

AND THAT the capital project for the Inlet Sports Field be approved as a pre-approved 2019 Capital project as part of the 2019 Five-Year Financial Plan for an amount not to exceed \$8.4 million;

AND THAT the funding sources for the 2019 \$8.4 million Inlet Sports Field project be: Federal Grants in the amount of \$6,159,720; the Asset Reserve in the amount of \$1,846,280; and the City's Reserve that is an Offset to Gas Tax Funding in the amount of \$394,000;

AND THAT, should the City not receive ICIP grant funding, staff be directed to report back to Council with alternatives, including impacts to the project timeline and the identification of alternative funding options.

Background

On March 27, 2018 Council considered a report dated March 1, 2018 from the Environment and Parks Department regarding Inlet Field Redevelopment – Recommended Field Alignment Plan (**Attachment 1**) and passed the following resolution:

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RC18/139

THAT design Option A be approved as recommended in the report dated March 1, 2018 from Environment and Parks Department regarding Inlet Field Redevelopment – Recommended Field Alignment Plan;

AND THAT the funding requirements for Option A be referred to the Finance Committee to establish a suitable funding source for the completion of the detailed design for the overall sports field development, including provision of architectural services for the proposed fieldhouse facility, development of a financial investment strategy, and general consulting services to support the future construction of the preferred field alignment.

On April 3, 2018, the Finance Committee approved the following motion to fund the detailed design for the Inlet Sports Field:

FC18/034

THAT the estimated \$240,000 approved for the completion of the detailed design for the overall sports field development be funded from the Inlet Park Field Redevelopment Reserve as recommended in the memo dated March 28, 2018 from Finance and Technology Department – Financial Services Division regarding Funding Source for Inlet Field Redevelopment – Recommended Field Alignment Plan.

The detailed design for Inlet Sports Field is 50% complete and final design is expected to be completed in Q1 2019. As the City moves forward with the project, staff have identified a potential grant funding source through the Investment in Canada Infrastructure Program (ICIP) for Community, Culture, and Recreation (CCR) facilities. The Inlet Sports Field project is eligible for this federal and provincial cost-sharing grant that provides up to 73% of the estimated project cost. If successful, the grant could provide approximately \$6 million for the \$8 million project.

The field design includes one FIFA regulation turf field, three super-8 soccer pitches, improved field lighting designed to mitigate environmental impacts and environmental protection and compensation. The scope of the design for the fieldhouse is currently under development.

Summary of Grant Eligibility and Selection Criteria

The Inlet Field Redevelopment project is an eligible project for the grant because it will improve access to and quality of recreational infrastructure for Canadians. Eligibility criteria states that projects must be authorized or endorsed by Council.

Projects will be evaluated with regard to the degree to which they represent good value for money, contribute to community objectives, support sustainability principles, consider adaptation and mitigation to climate change, and other criteria identified in the Program Guide. The application deadline is January 23, 2019 and successful grants will be announced in the summer of 2019.

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Grant criteria, detailed eligibility requirements and evaluation criteria can be found in the ICIP CCR Program Guide at <u>https://www2.gov.bc.ca/assets/gov/driving-and-transportation/funding-engagement-permits/grants-funding/investing-in-canada/icip-community-culture-and-recreation-program-guide.pdf</u>.

Discussion

On September 12, 2018, the Canadian and British Columbian governments committed up to \$134 million towards an initial intake of grant applications for Community, Culture, and Recreation (CCR) projects through the cost-sharing Investment in Canada Infrastructure Program (ICIP). The Inlet Sports Field Redevelopment Project will achieve both of the grant outcomes by improving the quality of and access to community recreation infrastructure in Port Moody. Detailed design for the field is 50% complete and a feasibility study for the fieldhouse is under way, which will provide grant evaluators with enough information to evaluate the project. The design for the field is expected to be complete in Q1 2019 and the design for the fieldhouse is expected to be complete in Q3 2019.

Project Schedule

Estimated dates of major project milestones are shown in the following table.

Project Task	Estimated Date
Completion of sports field 50% detailed design	Q4 2018
Grant application due	January 23, 2019
Completion of sports field detailed design	Q1 2019
Completion of feasibility study for fieldhouse	Q1 2019
Completion of detailed design of fieldhouse	Q3 2019
Grant application decision announcement	Summer 2019
Tendering period for sports field construction	Q4 2019
Site preparation	Q4 2019/Q1 2020
Sports field construction begins (4-month)	Q2 2020
Sports field construction completes (4-month)	Q3 2020
Fieldhouse construction begins	2020
Fieldhouse construction completes	2020
Project close-out	2020

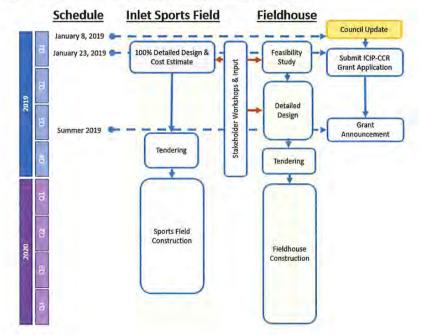
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Project Process

The following schematic shows the project stages and deliverables.



Other Options

THAT the report dated December 20, 2018 from the Environment and Parks Department – Parks Division regarding Inlet Sports Field – Investing in Canada Infrastructure Program (Community, Culture, and Recreation) Grant Application 2019 be received for information.

Financial Implications

The overall project is estimated to be \$8,400,000. The Investment in Canadian Infrastructure Program grant would provide 73.33% of the project funding (\$6,159,720); the City would provide the balance of the funding (\$2,240,280). It is recommended that the City funding come from the Asset Reserve (\$1,846,280) and the City's Reserve that is an Offset to Gas Tax Funding (\$394,000). Council could consider replenishing the recommended funding sources when development revenues negotiated with Onni Group as part of the final phase (Parcel D) of the Suter Brook Village land use contract are received (anticipated mid-2019).

An alternative funding source would be the Heritage Reserve, although this would require an amendment to the Heritage Reserve Fund Bylaw (Bylaw No. 2763) to include a project of this nature. This fund has a current balance of \$1,354,000.

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Staff will also explore the possibility of funding the project from Development Cost Charges (DCC) for Open Spaces. The City is currently in the process of updating the DCC Bylaw, which also requires provincial approval.

The Inlet Field redevelopment is contingent on the City being successful in its grant application at this time. Should the City not receive federal grant funding, the project may be delayed and staff would report back to Council with alternatives including impacts to the project timeline and the identification of alternative funding options.

In addition to the initial capital construction costs, there is an ongoing operating expense associated with the enhanced services at the facility. These are estimated at \$30,000 annually based on similar City facilities and have been incorporated into 2021 of the 2019 Five-Year Financial Plan. This will be funded through taxation in 2021. The life cycle replacement of the various components of the new Inlet Centre Field will be considered as part of the City's Long-Term Strategic Financial Framework and Asset Management Investment Plan. Capital repairs and replacements will be considered from the Asset Reserve – Parks envelope.

Communications / Civic Engagement

Staff have completed stakeholder consultation meetings with the various user groups and representatives from local environmental stewardship members. Stakeholder feedback has been integrated into the design. Staff will continue to keep stakeholders informed on the progress of the project.

Council Strategic Plan Objectives

This project follows Council's Strategic Objectives of Excellence in Service, Parks and Recreation, and Protecting the Environment.

Attachment

1. Report dated 2018 03 01 from Environment and Parks Department regarding Inlet Field Redevelopment – Recommended Field Alignment Plan.

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Lesley Douglas General Manager of Environment and Parks Reviewed for Form and Content / Approve	
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	d for Submission to Council:
	Tim Savoie, MCIP, RPP City Manager
Corporate Review	In
Communications and Engagement	N
Community Services	
Communications and Engagement	1

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City of Port Moody Report/Recommendation to Council

Date:March 1, 2018File No. 11-5240-01/Vol 01Submitted by:Environment and Parks DepartmentSubject:Inlet Field Redevelopment – Recommended Field Alignment Plan

Purpose / Introduction

To obtain Council endorsement of a preferred field alignment and to propose that project funding for the detailed design of Inlet Field Park Redevelopment be referred to the Finance Committee for identification of a funding source.

Recommended Resolutions

THAT design Option A be approved as recommended in the report dated March 1, 2018 from Environment and Parks Department regarding Inlet Field Redevelopment – Recommended Field Alignment Plan;

AND THAT the funding requirements for Option A be referred to the Finance Committee to establish a suitable funding source for the completion of the detailed design for the overall sports field development, including provision of architectural services for the proposed fieldhouse facility, development of a financial investment strategy, and general consulting services to support the future construction of the preferred field alignment.

Executive Summary

As improvements to Inlet Field were identified as a Council priority in the 2016 Financial Plan, staff initiated a design evaluation process to determine a field concept that would best meet service needs.

Building on feedback received from Council and through stakeholder engagement, a preferred field alignment plan is now being brought forward for Council approval. Staff have identified approaches to accelerate some elements of the project construction to more efficiently manage available time, as well as risk mitigation strategies for specific environmental and financial impacts related to the preferred option.

In conclusion, this report provides the framework for Council to select a preferred field alignment that best addresses long-term sports field needs, and to set the direction for future related project processes (financial strategies/construction timeframes).

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Report/Řecommendation to Council Inlet Field Redevelopment – Recommended Field Alignment Plan March 1, 2018

Background

At the March 22, 2016 meeting of Council, the following resolution was established to move this project forward:

CW16/067

THAT staff proceed with a preliminary investigation and conceptual design to evaluate an alternative alignment and configuration for a new artificial turf field for Inlet Field as recommended in the report dated March 7, 2016 from Engineering and Parks Services Department regarding Inlet Field – Alternative Alignment and Layout;

AND THAT the \$135,000 cost for the preliminary investigation and conceptual design be pre-approved from the Inlet Park Field Redevelopment Capital Reserve;

AND THAT staff apply for grants from senior levels of government as grant funding opportunities become available.

Based on the direction provided in <u>CW16/067</u>, staff have worked with consultants to further assess and evaluate the concept and possible field alignments. Several design options were subsequently developed and refined (through input from stakeholders and Council). Through that engagement process for design options, two final alignment options were developed, which are now being brought forward for consideration by Council.

Discussion

Given the importance of this major recreational asset, staff have worked closely with affected user groups (Port Moody Minor Soccer Association and Coquitlam Moody Softball Association) and local environmental groups (Port Moody Ecological Society and Burrard Inlet Marine Enhancement Society) to develop the proposed design concepts. Three stakeholder workshops were held with these groups; input/comments received were incorporated into the refinement of the design options.

Based on feedback received through the consultation process and input from Council, the following project requirements were established to guide development of the field alignment options presented in this report. These included the provision of the following key design components:

- three Super-8 soccer pitches (for younger players between the ages of 4-12);
- one FIFA regulation field suitable for adult matches;
- two softball fields, suitable for regulation play;
- ancillary items (batting cages, players benches, bleachers for spectators, nets/goals, etc.);
- parking for approximately 100 vehicles;
- dedicated space for a future fieldhouse facility; and
- a playground space for younger site patrons (pre-school age).

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Inlet Field Redevelopment – Recommended Field Alignment Plan March 1, 2018

With these design principles established, various field alignments were prepared, ultimately leading to the development of two primary options that best address the project requirements.

These options were vetted further through stakeholder engagement, where each option was carefully evaluated and discussed in detail. Through these discussions, some key design considerations were further explored, which has influenced selection of a preferred alignment option by stakeholders. These are discussed further below.

Stakeholder Engagement

As noted, stakeholder engagement has helped to shape the form and function of the various field options under consideration. Through this process, several key design considerations were discussed and explored, as follows.

• Form and Function of Sports Fields

The soccer association has indicated that they anticipate a higher usage of the new field for younger players (ages 4-12). To address this anticipated need, each respective field option includes lining/layout for three Super 8 fields. Through refinement of the options, a need for a more efficient layout of these smaller soccer pitches was identified. In particular, the sports associations requested wider sidelines and end zone areas to better accommodate the type of play anticipated. These wider sidelines and end zones are incorporated into Option A (Attachment 1). This improved layout provides space for setup of shelters/enclosures to protect players from the elements, while also allowing improved playability while multiple games are underway (i.e. less player conflict/improved safety).

• Environmental Considerations

As any field expansion would have an environmental impact, staff retained an environmental consultant (ENKON Environmental Ltd.) to evaluate the various options under consideration. This assessment has established the extent of environmental impact anticipated, as well as quantified the number of trees impacted by each option. The consultant's report outlining these findings is included with this report as **Attachment 3**. In general, any expansion of the field beyond its current location will have impacts to forested lands to the north and east of the gravel field area. There are also two watercourse features that will be impacted by the necessary field expansion. Environmental impacts for each option are further outlined in this report.

The report findings were discussed at the most recent stakeholder meeting (February 28, 2018), with all stakeholders providing input and perspective. Questions were posed with respect to finding opportunities to use selective approaches to tree removals (for example, tree topping/wildlife trees, salvage/relocation of suitable trees, reuse of fallen timber, etc.); use of permeable site materials where possible to retain drainage characteristics; and implementation of interpretive features along the major trail access points. Where direct onsite compensation is not possible, there was general support for using regulatory and policy frameworks to determine financial compensation to be applied to other suitable (offsite) locations.

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Outcome

Through effective dialogue at this most recent stakeholder meeting, a preferred alignment option was established and agreed upon (Option A). Despite its significantly higher environmental impact, there was unanimous support for that option. Option B was not supported by the stakeholder group as it does not provide the overall functionality the sports associations are seeking.

Design Options

With the stakeholder engagement process now completed, two final design alternatives have been established that incorporate feedback from that process. The key design differences between the options relate to varying setback dimensions for the sidelines and end zones, which are articulated further in the options below. While Table 1 (below) outlines the approximate extent of environmental impacts for each option, a detailed Environmental Assessment Report is included for reference (Attachment 3).

Option A

This option (**Attachment 1**) retains the general field layout originally requested by the sports user groups, with additional site features (i.e. fieldhouse space, playground, parking revisions) incorporated from the consultation process. Two softball pitches are incorporated in this design, with provision for three side-by-side Super 8 soccer fields within a FIFA regulation adult soccer field layout.

A total of 88 parking stalls configured along the Murray Street frontage of the site are accommodated in this layout. An additional 14 stalls could potentially be accommodated along Murray Street, which would result in a total of 102 stalls (meeting the minimum recommended number of parking stalls established in the project requirements).

• Option B

This option (**Attachment 2**) is similar to Option A, providing all of the requisite amenities and site features of that option. The key difference in this concept is the reduction in sideline and end zone space. Effectively, this results in a more compact field size, thereby reducing the overall site footprint.

A total of 74 parking stalls configured along the Murray Street frontage of the site are accommodated in this layout. An additional 14 stalls could potentially be accommodated along Murray Street, which would result in a total of 88 parking stalls for this option. This would fall short of the minimum recommended number of parking stalls for this type of field use.

	Watercourse Area Impact	Forested Area Impact	Trees Removed
Option A	1,150m ² (12,379ft ²)	3,360m ² (36,167ft ²)	136
Option B	512m ² (5,511ft ²)	657m ² (7,072ft ²)	70

Table 1 – Environmental Impacts

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Inlet Field Redevelopment – Recommended Field Alignment Plan March 1, 2018

Recommended Design Option

Based on feedback from the sports user groups, and the completion of initial environmental assessment work, staff recommend endorsement of Option A. While this alternative allows for the most effective use of the sports field areas, it does result in a significantly higher level of environmental impact, which will require mitigation through a combination of onsite mitigation measures and compensation strategies in accordance with applicable regulations and policies.

Despite the higher level of environmental impact, Option A is preferable as this field is expected to be a critical recreational asset that must effectively serve the long-term needs of current and future residents of Port Moody.

Next Steps

Fieldhouse Facility

As part of future work related to this overall project, staff will need to develop capital plans for the future construction of the fieldhouse referenced in this report. Defining the scope and purpose of this facility will help determine the facility layout, which will help provide more accurate budgetary numbers. To assist with that work, staff are recommending that an architect be retained to complete a functional design for that facility.

Given that this facility would be a key recreational asset serving multiple user groups, staff anticipate that this would be formally submitted as a capital project through future capital planning processes.

The sports associations groups have expressed a strong interest in pursuing grant opportunities and funding partnerships for this facility. To facilitate these funding opportunities, it is important to initiate a design process for this facility early on to establish the form and function of the structure (i.e. bookable community space, daycare operation, etc.).

• Environmental Compensation Strategies

Following endorsement of the preferred field alignment, further detailed environmental work will be undertaken to minimize overall environmental impacts. These may include provision of engineered drainage systems (permeable paving) or other such means to compensate for environmental impacts. Where tree removals are necessary, the provisions of the City's Tree Management Policy on City Property would apply (2:1 replacement provision). The intent of this action would be to create no net loss of environmental habitat. To assist with this important work, staff anticipate working closely with the environmental stewardship groups on developing an appropriate compensation strategy as the detailed design progresses. This is expected to take the form of a budget line item that reflects the extent of compensation measures required for the selected option in subsequent financial planning for this project. This compensation would be incorporated into the overall funding model for the project, with these funds potentially used to enhance other impacted natural areas within the City (i.e. tree plantings/wetland restoration/stream enhancement). The consultants have estimated the compensation value at approximately \$160,000 for the preferred field option. That value will be reviewed and refined through the detailed design process.

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• Pre-Loading/Future Planning

In developing the preferred field alignment and reviewing early construction considerations, it became evident that the expansion to accommodate the proposed field layout will require placement of fill material (preload). For purposes of clarity, "preload" is the process of adding an amount of granular material onto the existing field surface, including any undeveloped areas (currently forested). This is required to ensure that the ground is compacted to an appropriate level to meet the project requirements.

Staff anticipate developing a preload plan as part of the detailed design stage. That plan will determine the amount of material necessary and the period of time that it must be in place to achieve the required compaction levels. Related to this, it may be advantageous to accelerate the time frame for placement of preload material (preloading usually requires three to nine months for proper compaction). This approach could potentially accelerate the construction time frame should Council wish to consider advancing that work. Costs for placement of preload is anticipated to be approximately \$250,000, with some additional costs for land clearing and environmental requirements to be established based on final design.

Advantages to this approach are:

- potential acceleration of construction time frames if preload is placed earlier (i.e. remaining design work and financial planning could be advanced in parallel); and
- potential to leave smaller volumes of fill material for a longer period of time (i.e. more than nine months) to achieve the required level of compaction (less overall cost).

Disadvantages to this approach are:

- dedicated funding to allow this work to proceed may have an impact on reserve balances;
- the existing field would become unusable for other activities once preload is placed; and
- there may be a financial risk related to establishing longer-term funding for the project.

Should Council wish to consider this approach at this time, the recommended resolution could be amended by replacing the second clause with the following:

AND THAT the funding requirements outlined in this report be referred to the Finance Committee to establish a suitable funding source for the completion of the detailed design for the overall sports field development, including provision of architectural services for the proposed fieldhouse facility, development of a geotechnical plan to facilitate the early placement of preload material on the subject site, development of a financial investment strategy, and consulting services related to advancing the project to a tender-ready stage to support future construction of the preferred field alignment.

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Other Options

Council could direct staff to proceed with Option B as presented in this report. While this option does reduce the overall site footprint (thereby reducing the overall environmental impacts), it does not provide the overall functionality the sports associations are seeking.

Financial Implications

With Council endorsement of a preferred field alignment, the initial approved phase of this project would be essentially complete. Based on expenditures and work progress to date, this phase of work will be completed within the original budget allocated (\$135,000).

At present, there is sufficient funding in the Inlet Field Capital Reserve to accommodate continuation of further design work (reserve balance is \$ 240,000); however, that would deplete the reserve balance for 2018. Due to the impacts to the reserve, staff are recommending that this matter be referred to the Finance Committee for further consideration.

The following table outlines the overall projected costs for completion of the project.

Table 2 - Estimated Project Costs

Detailed Design	
Civil/Landscape design	 75,000
Geotechnical services	 35,000
Architectural services	
Environmental assessment (detailed)	 25,000
Archaeological assessment/First Nations approvals	
Contingency @ ~10%	 20,000
Total Estimated Cost	 \$240,000

Communications / Civic Engagement

Staff have completed three stakeholder consultation meetings with the various user groups and representatives from local environmental associations. Stakeholder feedback has been integrated into this report.

Staff will continue to keep stakeholders informed on the progress of the project.

Council Strategic Plan Objectives

This project follows Council's Strategic Objectives of Excellence in Service, Parks and Recreation, and Protecting the Environment.

Attachments:

- 1. Field Alignment Option A.
- 2. Field Alignment Option B.
- 3. Environmental Assessment Report.
- 4. Original Concept Plan.

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Inlet Field Redevelopment – Recommended Field Alignment Plan March 1, 2018

Prepared by:	Reviewed by:
<i>Iz MOH</i> George MacDuff Senior Project Engineer	Lesley Douglas, B.Sc., R.P.Bio General Manager of Parks and Environment
Reviewed for Form and Content / App	roved for Submission to Council:
City Manager's Comments	For Tim Savoie, MCIP, RPP City Manager
Corporate Review	Initials
Communications and Engagement	InRapa .
Engineering and Operations	
Finance and Technology (Financial Servic	es, Information Services)
Planning and Development (Building, Byla	ws, and Licensing, Planning)

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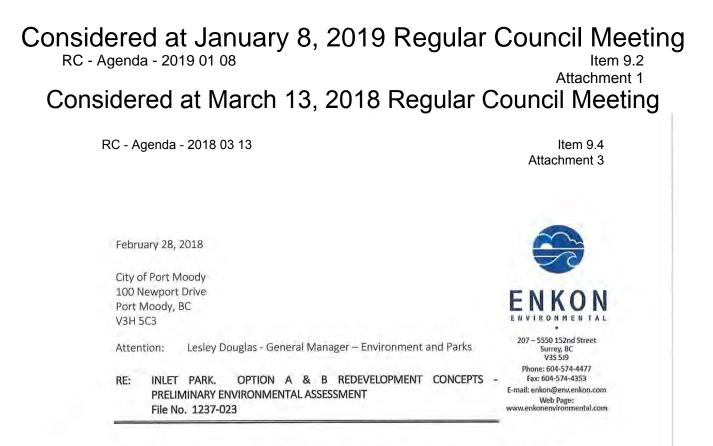
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ENKON Environmental Limited (ENKON) has been retained as a sub-consultant to R.F. Binnie & Associates to complete a preliminary environmental assessment of the Inlet Park facilities and surrounding areas to support the proposed park expansion of existing play field and parking/ancillary facilities at 3024 Murray Street, Port Moody BC.

The following is provided as a summary of the environmental resource values, environmental impacts, and regulatory considerations applicable to the proposed Option A and Option B park design plans to support the park planning decision making process and selection of the preferred park design. Upon selection of the preferred design, a more detailed impact assessment and mitigation measures will be prepared in support of regulatory approval requirements.

Aquatic and Riparian Resource Considerations

Two (2) seasonal watercourses are located to the immediate north of the existing play field and parking areas. The drainage features are confirmed as natural watercourses and will be considered as regulated 'streams' pursuant to the *Water Sustainability Act*.

It is ENKON's conclusion that 15m SPEA setbacks will be required pursuant to Sections 5.2.1 and 5.2.2 of Zoning Bylaw 1988, No. 1890.

A preliminary impact assessment has been completed based on available topographic survey information. Table 1 summarizes the preliminary aquatic and riparian area impacts. Figures 1 and 2 illustrate the location and extent of aquatic and riparian area impacts for park design Option A and Option B, respectively.

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Habitat Type	Option A	Option B
Aquatic	103 m ²	23 m ²
Riparian	1047 m ²	489 m ²

The footprint of both Option A and Option B park designs will yield impacts affecting aquatic habitats and influencing the seasonal hydrologic functions of watercourses with direct downstream connectivity to Burrard Inlet.

Subject to endorsement by the City of Port Moody, refinements to the impact assessment to reflect application of the Riparian Areas Regulation, detailed assessment methods may be pursued to limit the scope of aquatic and riparian habitat compensation requirements associated with delivery of the park redevelopment. ENKON has delineated the high water mark and top of bank ecological boundaries for future survey pickup and refinement of impact assessments subject to confirmation of detailed park design.

It is ENKON's opinion that the present-day headwater segment (approx. 25m) of the east watercourse originates as an excavated linear drainage ditch with connection to a natural watercourse. The full extent of the western aquatic habitat feature is considered a natural watercourse.

It is ENKON's assertion that the park designs will require habitat compensation or offsetting measures and that approvals under Section 11 of the *Water Sustainability Act* will be required.

Typically applications and approvals under Section 11 have required at least 140 days for processing following submission via Front Counter BC; however, recent delays in application processing by the Ministry of Forests, Lands, Natural Resource Operations and Rural Development have been experienced. <u>Receipt of approvals to proceed with works affecting the bed and banks of the streams/wetlands may not be possible to facilitate construction in 2018.</u>

Vegetation Resources and Terrestrial Ecosystem Considerations

The immediate vicinity of the existing park facilities have been historically impacted through clearing and grading. Generally, areas within 10m of the existing park facilities boundary have been disturbed and reflect a regenerating deciduous forest with increased conifers present along the southeast park boundary.

Beyond the immediate margins of the existing park facilities, the vegetation communities are described as a young deciduous or mixed deciduous and coniferous forest habitat with a dense shrub layer dominated by salmonberry (*Rubus spectabilis*), vine maple (*Acer circinatum*), and Himalayan blackberry (*Rubus armeniacus*).

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The Western hemlock (*Tsuga heterophylla*) dominated forest with Western redcedar (*Thuja plicata*) and Douglas-fir (*Pseudotsuga menziesii*) exhibits unique characteristics and significant wet season ponding and at-surface or near surface water tables suggesting forested swamp conditions. However, the lack of hydrophytic vegetation and presence of the Murray Street alignment and upslope development are interpreted as likely influences having altered historic hydrologic dynamics. Notwithstanding the observations of significant humocks and winter season ponding the forested areas are not considered as functional wetland habitat.

Vegetation species composition supports classification of the forested areas in the immediate vicinity of the park boundary as a Western redcedar – Foamflower ecological community (CWHdm07). The forested ecosystems surrounding the immediate margins of the existing park and affected by the Option A and Option B park designs and in the vicinity of the existing park facilities are predominantly regenerating deciduous forests, save for a more contiguous patch of conifers along the southeast boundary.

Available survey information as provided by Binnie & Associates includes larger trees potentially affected by the park design option. At this time the available survey information is limited to larger trees greater than or equal to 8 inch diameter at breast height (e.g. 20cm DBH). A GIS based impact assessment of the park design options A and B affecting existing vegetation resources (e.g. native tree and shrub communities) has been completed to provide a graphic representation of the significant (e.g. 20cm DBH) trees affected.

Future detailed design planning will require survey update to reflect all trees down to a 4" (10cm) DBH pursuant to Bylaw 2961, 2015 requirements to facilitate a detailed impact assessment and determination of final tree replacement requirements.

The preliminary analysis of significant tree impacts are illustrated in Figures 3 & 4.

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A field inventory of trees down to the 6" (15cm) DBH was completed by Binnie & Associates and is attached as Appendix A. ENKON has completed a review and interpretation of the tree inventory and impact summary affecting 15cm DBH trees. The assessment concludes the following impacts:

- Option A: 135 trees,
- Option B: 69 trees.

Table 2 summarizes the natural vegetation area impacts as illustrated in Figures 3 & 4, and a summary of impacts based on the available 15cm tree inventory information. Figure 5 provides a graphic illustration of the tree impacts including a breakdown of deciduous vs. coniferous species.

Table 2 - Preliminary Natural Vegetation Area & Tree Impact Summary**

Vegetation Resource Impacts	Option A	Option B
CWHdm/07 Impacts	3,425m ²	1,098 m ²
Total Trees	135	69
Total Conifers	56 (41%)	19 (28%)
Total Deciduous	79 (59%)	50 (72%)

**Note: Tree summary numbers based on available survey down to 15cm DBH. Future survey update required per Bylaw 2961, 2015.

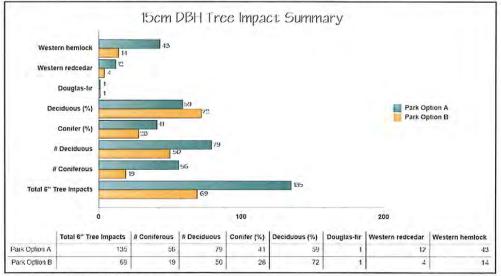


Figure 5 - 15cm DBH Tree Impact Summary

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Compensation & Offsetting

ENKON has consulted with City of Port Moody staff and it is understood that a formal tree survey to include all trees down to a 4" (10cm) DBH will be required to support detailed design and the final project impact assessment and mitigation/offsetting strategies pursuant to Bylaw 2961, 2015.

Preliminary consideration of the available tree inventory and Schedule A, Section 3 requirements (e.g. tree replacement) of Bylaw 2961, 2015 suggests that a minimum of 270 trees would be required for replanting to offset Park Option A impacts, and 138 trees required to offset Park Option B impacts¹. Prior project experience have required individual tree replacement valuation at \$300/unit for the supply and installation of specimen quality nursery stock trees.

Aquatic and riparian area impacts will typically require habitat compensation or enhancement efforts to offset residual impacts. In the absence of detailed compensation design options, it is assumed that both aquatic and riparian habitat impacts would be compensated at a 1:1 ratio and valued at $$500/m^2$ and $$25/m^2$, respectively.

Table 3 summarizes preliminary habitat compensation cost estimates, not including design and permitting costs.

Compensation Habitat	Option A	Option B
Aquatic	\$51,500	\$11,500
Riparian	\$26,175	\$12,225
Tree Replacements	\$81,000	\$41,400
Total	\$158,675.00	\$65,125.00

Table 3 - Preliminary Compensation & Offsetting Cost Estimate

Windfirm Boundary Considerations

In light of the hummocky terrain and seasonally high water tables, the future vegetation boundaries may pose an increased risk of windthrow due to exposure. A detailed tree risk assessment and consideration of windthrow hazards is recommended upon completion of the

¹ Note: Tree replacement estimates are based on the current inventory of 15cm DBH trees. The total tree replacement requirements are anticipated to increase subject to inventory and survey down to the 100mm DBH requirements of Bylaw 2961, 2015.

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selected park concept. Exposure of mature conifers may require hazard mitigation through tree removals, thinning, or spiral pruning.

It is anticipated that a tree risk and windfirm boundary assessment may increase the total number of tree removals required beyond the selected park design impacts as summarized above.

Species at Risk

The terrestrial and aquatic habitats present within the proposed park design options provide potentially suitable habitat for red-legged frog (*Rana aurora*) and Pacific waters-shrew (*Sorex bendirii*). It is ENKON's conclusion that the aquatic habitats are unlikely to provide suitable breeding habitat values for amphibians due to their seasonal/ephemeral nature. Furthermore, due to the seasonality of the aquatic habitats, the study area is concluded to provide negligible habitat value for Pacific water-shrew. A review of the Province of BC's Conservation Data Center (CDC) confirms no historic species at risk occurrence records within the immediate vicinity of study area. The nearest historic occurrences for species at risk include an 1894 record of Pacific water shrew associated with the Hett Creek watershed on the north shore of Burrard Inlet.

Wildlife Considerations

The proposed park designs will require vegetation clearing beyond the limits of existing disturbance and previously disturbed regenerating shrub vegetation. With respect to Province of BC Develop with Care 2014 guidelines, clearing occurring within the period of March 1 – August 31 is considered to fall within typical breeding season and may pose a risk of contravention of Section 34 of the *Wildlife Act* and the *Migratory Birds Convention Act*. Notwithstanding the Province of BC least risk window, recent guidance documents prepared by Environment Canada provide more detailed consideration of the risk of vegetation removals with respect to breeding bird activity.

Figure A illustrates the general nesting periods and calendars for birds for Zone A1 which includes Burnaby BC with a regional nesting period specified as Late March through Mid-August. The nesting calendar illustrates the relative percentage of bird species nesting in Zone A1's forested habitats with outliers identified in early March (~March 12) with increases in active breeding from late March (0-5%) and then declining numbers towards mid-August.

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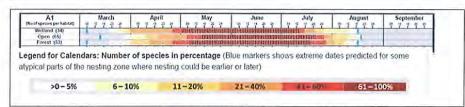


Figure A: Calendar for Nesting Zone A1 which is located in the BC's South Coast Region.

Frequent raptor use of the area has been confirmed through visual observations; however, raptor nests requiring permanent protection or consideration of nesting season noise buffers were not observed in the vicinity of the existing park facilities or limits of Option A or Option B. No constraints related to *Wildlife Act*, Section 34(b) are anticipated based on 2018 field observations.

Summary & Closure

The proposed park design options have been reviewed in the context of existing environmental resource values. Both park design concepts will require explicit consideration of aquatic and riparian area impacts. Regulatory approvals required for the aquatic habitat impacts are likely to exert a significant influence on the ultimate project schedule.

Vegetation resources and ecosystem values are not anticipated to pose a concern with respect to listed ecosystems or species at risk habitat values. Vegetation and tree removals will require explicit consideration and will yield impacts existing terrestrial ecosystems the intrinsic values associated with Inlet Park.

The timing of vegetation clearing will require consideration of breeding bird nesting season and periods of least risk for vegetation removals. The ultimate vegetation boundaries at the interface with the future park will require further consideration of danger tree hazards and windthrow risk.

If you have any further questions, please do not hesitate to contact us.

Sincerely,

Ryan W. Preston, B.Sc, P.Ag, CPESC Principal/Senior Environmental Specialist.

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Attachment 4

Original Concept Plan