



NOTICE OF REGULAR MEETING ENVIRONMENT AND PARKS COMMITTEE

9:00 a.m.

Wednesday, October 3, 2012

2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

A G E N D A

Note: Recommendation is shown under each item, where applicable.

1. ADOPTION OF THE AGENDA

1.1 October 3, 2012 Regular Meeting Agenda

That the Environment and Parks Committee adopt the agenda for its regular meeting scheduled for October 3, 2012 as circulated.

2. ADOPTION OF THE MINUTES

2.1 September 11, 2012 Regular Meeting Minutes

That the Environment and Parks Committee adopt the minutes of its regular meeting held September 11, 2012 as circulated.

3. DELEGATIONS

3.1 Pamela Zevit, RPBio. Coordinator South Coast Conservation Program

Subject: **Introduction to the South Coast Conservation Program (SCCP)**

4. INVITED PRESENTATIONS

4.1 Theresa Harding, Community Development Coordinator, Parks West Area Trina Sakata, Community Development Coordinator, Parks Central Area Metropolitan Planning, Environment and Parks Department Subject: Presentations on Metro Vancouver Regional Parks Partnership Program

4.1a Dave Smith, Chair

Ross Davies, Volunteer Coordinator

Kanaka Education & Environmental Partnership Society

4.1b Ryan Ayre, Chair

Pacific Spirit Park Society

4.1c Brian Green, Chair

Burnaby Lake Park Association

- 4.2 Darrell Desjardin**, Director, Environmental Programs
Ronan Chester, Manager, Strategic Environmental Initiatives
Subject: **Port Metro Vancouver (PMV) Air Action Programs**

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Update on Wreck Beach Preservation Society presentation
Verbal Update

Designated Speaker:

Gaëtan Royer, Manager

Metropolitan Planning, Environment and Parks Department

5.2 2013 Environment and Parks Committee – Programs and Priorities

Designated Speaker:

Gaëtan Royer, Manager

Metropolitan Planning, Environment and Parks Department

That the Environment and Parks Committee endorse the proposed programs and key priorities as set out in the report dated September 26, 2012, titled “2013 Environment and Parks Committee Programs and Priorities”, as the basis for the budget to be considered at the Board Budget Workshop on October 17, 2012.

5.3 Colony Farm Regional Park - Kwantlen Polytechnic University request to establish a teaching farm

Designated Speaker:

Frieda Schade, Central Area Parks Manager

Metropolitan Planning, Environment, and Parks Department

That the Environment and Parks Committee support the proposal to partner with Kwantlen Polytechnic University and establish a teaching farm in an area designated for agriculture in the existing Colony Farm Land Use Plan.

5.4 Regional Parks Fees and Charges 2013

Designated Speaker:

Stephen Suddes, Division Manager

Public Programs and Community Development

Metropolitan Planning, Environment and Parks Department

That the Board:

- a) introduce and give first, second and third reading to Greater Vancouver Regional District Regional Parks Fees and Charges Bylaw No. 1173, 2012; and
- b) reconsider, pass and finally adopt Greater Vancouver Regional Parks Fees and Charges Bylaw No. 1173, 2012.

5.5 Burrard Inlet Area Local Air Quality Study Results

Designated Speakers:

Laurie Bates-Frymel, Air Quality Planner

Ali Ergudenler, Senior Engineer

Metropolitan Planning, Environment and Parks Department

That the Board authorize staff to:

- a) initiate a review of Metro Vancouver’s ambient air quality objectives for sulphur dioxide (SO₂), and
- b) work with Port Metro Vancouver and other partners to establish a network of key SO₂ monitoring sites to assess the effectiveness of the Emission Control Area for ships and inform the SO₂ objective review.

5.6 Manager's Report

Designated Speaker:

Gaëtan Royer, Manager

Metropolitan Planning, Environment and Parks Department

That the Environment and Parks Committee receive for information the report dated September 19, 2012, titled "Manager's Report".

6. INFORMATION ITEMS

6.1 Summary of Events – Snapshot of Metro Vancouver's Website Events Calendar – October 2012.

6.2 2012 UBCM Resolution on Outdoor Smoke-Free Public Places – Correspondence dated August 31, 2012 from the Heart and Stroke Foundation and BC Lung Association addressed to Chair Greg Moore, Metro Vancouver Board.

6.3 Air pollution from wood burning – Correspondence dated August 26, 2012 from Brie Oishi addressed to the Environment and Parks Committee, Metro Vancouver.

7. OTHER BUSINESS

No items presented.

8. RESOLUTION TO CLOSE MEETING

Staff Recommendation:

That the Environment and Parks Committee close its regular meeting scheduled for October 3, 2012 pursuant to the Community Charter provisions, Section 90 (1) (e), (f) and (k), as follows:

"90 (1) A part of a meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:

- (e) the acquisition, disposition or expropriation of land or improvements, if the board or committee considers that disclosure could reasonably be expected to harm the interests of the regional district;
- (j) information that is prohibited, or information that if it were presented in a document would be prohibited, from disclosure under section 21 of the *Freedom of Information and Protection of Privacy Act*; and
- (k) negotiations and related discussions respecting the proposed provision of a regional district service that are at their preliminary stages and that, in the view of the board or committee, could reasonably be expected to harm the interests of the regional district if they were held in public".

9. ADJOURNMENT/TERMINATION

That the Environment and Parks Committee conclude its regular meeting of October 3, 2012.

**GREATER VANCOUVER REGIONAL DISTRICT
ENVIRONMENT AND PARKS COMMITTEE**

Minutes of the Regular Meeting of the Greater Vancouver Regional District (GVRD)
Environment and Parks Committee held at 12:31 p.m. on Tuesday, September 11, 2012 in
the 2nd Floor Boardroom, 4330 Kingsway, Burnaby, British Columbia.

PRESENT:

Chair, Director Heather Deal, Vancouver
Vice Chair, Director Gayle Martin, Langley City
Director Bruce Banman, Abbotsford
Director Sav Dhaliwal, Burnaby
Director Helen Fathers, White Rock
Councillor Bob Long, Langley Township
Councillor Darrell Penner, Port Coquitlam
Councillor Selina Robinson, Coquitlam
Director Andrew Stone, Bowen Island
Councillor Barbara Steele, Surrey
Director Harold Steves, Richmond
Director Deb Walters, Pitt Meadows

ABSENT:

None

STAFF:

Carol Mason, Commissioner/Chief Administrative Officer, Chief Administrative Officer's
Department
Gaëtan Royer, Manager, Metropolitan Planning, Environment and Parks Department
Janis Knaupp, Assistant to Regional Committees, Board Secretariat and Corporate
Information Department

1. ADOPTION OF THE AGENDA**1.1 September 11, 2012 Regular Meeting Agenda****It was MOVED and SECONDED**

That the Environment and Parks Committee adopt the agenda for its regular
meeting scheduled for September 11, 2012 as circulated.

CARRIED

2. ADOPTION OF THE MINUTES**2.1 July 4, 2012 Regular Meeting Minutes****It was MOVED and SECONDED**

That the Environment and Parks Committee adopt the minutes of its regular
meeting held July 4, 2012 as circulated.

CARRIED

3. DELEGATIONS

3.1 Judy Williams and Cécile Bruyninckx - Wreck Beach Preservation Society

Judy Williams and Cécile Bruyninckx, Wreck Beach Preservation Society (WBPS), provided the Environment and Parks Committee with a presentation raising concerns related to the safety of Wreck Beach users and wildlife and preservation of Pacific Spirit Regional Park's Wreck Beach; specifically the swimming area located on a section of Trail 6.

The delegation highlighted the following concerns: negatives impacts to ecological and human health, public safety, increased numbers of vessels, navigational challenges for the Canadian Coast Guard Hovercraft to respond to medical emergencies, noise, aggressive behaviour by vessel operators and lack of RCMP presence/enforcement.

Judy Williams presented a petition titled "24 Hour Petition Toward the Banning of Motorized Vessels and Personal Watercraft at Wreck Beach Swimming Areas" signed by 2,563 people. The Petition was retained for the record with a sample retained with the September 11, 2012 Environment and Parks Committee agenda.

The delegation requested that the Board:

- Request responsible authorities and agencies address concerns raised;
- Enforce Greater Vancouver Regional District Regional Parks Regulation Bylaw No. 1048 (2006);
- Consider better signage on buoys to notify boaters of the swimming area; and
- Clarify authorities and responsibilities around enforcement

In response to a request, members were informed that:

- Metro Vancouver was first made aware of concerns by the Wreck Beach Preservation Society in 2002
- Transport Canada: opposed the ban of jet skis concluding there was no obvious danger to the public (2005); regulations were unnecessary (2007); and further consideration would not be given to the matter at that time (2008)
- Federal regulations to ban vessels apply to all watercourses
- The large swimming area makes it a challenge to enclose with rope between buoys to restrict boat access

Members further discussed the need to:

- Confirm Metro Vancouver's jurisdiction and potential liability
- Resume discussions with Transport Canada and the RCMP
- Explore options to increase public safety in the swimming area
- Investigate Metro Vancouver's water lot lease agreement
- The need to communicate with authorities clearly identifying concerns and requesting due diligence be exercised regarding enforcement

In response to questions members were informed that:

- The swim area is currently open to water craft however rules must be followed including reducing vessel speed
- Staff communicate with the RCMP on a regular basis and in response to reported incidents; staff resources to enforce are limited
- Current signage is in place on buoys in the swimming area

Request of Staff

Staff was requested to report back to the Environment and Parks Committee, in response to concerns raised by the September 11, 2012 delegation related to motorized water vessels in the swimming area at Wreck Beach including:

- Metro Vancouver's jurisdiction, enforcement and water lot lease agreement (and potential impacts from regional environmental bylaws)
- Responsible authorities with jurisdiction over: human safety of motorized boats to swimmers; monitoring of boating licenses; and boating safety
- Details of Transport Canada's position and indication of whether they would reconsider the matter
- Any local/regional government models where land fronts onto oceanfront
- Any guidelines related to swimming area size

Presentation material is retained with the September 11, 2012 Environment and Parks Committee agenda.

4. INVITED PRESENTATIONS

No items presented.

5. REPORTS FROM COMMITTEE OR STAFF

5.1 Invasive Species Council of Metro Vancouver Funding Request

Report dated August 16, 2012 from Heather McNell, Regional Planning Division Manager and Alison Evely, Natural Resource Management Specialist, Metropolitan Planning, Environment and Parks Department, responding to a request by a delegation from the Invasive Species Council of Metro Vancouver who appeared before the July 4, 2012 Environment and Parks Committee meeting, for a \$40,000 contribution to develop a regional strategy to manage invasive species in Metro Vancouver.

In response to a question, members were informed about the relationship between the proposed project and Metro Vancouver's corporate management plans. It was suggested that future report regarding funding requests identify links to Metro Vancouver corporate plans.

Regarding a regional invasive species management strategy, discussion ensued about: the need to develop a mechanism for municipalities to collaborate; the status of the proposed regional parks advisory committee; Metro Vancouver's potential long-term role, and project outcomes.

It was MOVED and SECONDED

That the Board approve a one-time \$40,000 capacity building grant to the Invasive Species Council of Metro Vancouver (ISCMV) to facilitate the development of a regional invasive species strategy.

CARRIED

5.2 Western Economic Diversification Canada Community Infrastructure Improvement Fund Application

Report dated August 15, 2012 from Tom McComb, West Area Acting Manager, Metropolitan Planning, Environment and Parks Department, seeking Board authorization for a grant application post submission due to the Federal Government August 2, 2012 deadline in the amount of \$250,000 to the Western Economic Diversification Canada Community Infrastructure Improvement Fund for rehabilitation work at Camp Capilano.

It was MOVED and SECONDED

That the Board authorize a grant application in the amount of \$250,000 to the Western Economic Diversification Canada Community Infrastructure Improvement Fund for Camp Capilano rehabilitation project in Capilano River Regional Park.

CARRIED

5.3 Experience the Fraser: Final Concept and Implementation Plans

Report dated August 16, 2012 from Heather McNell, Regional Planning Division Manager and Wendy DaDalt, Parks East Area Division Manager, Metropolitan Planning, Environment and Parks Department, seeking Board adoption of the Experience the Fraser Concept Plan and endorsement of the Experience the Fraser Implementation Plan for Local Governments, with accompanying adoption of actions identified for Metro Vancouver.

Members were provided an update presentation on Experience the Fraser Final Concept and Implementation Plans highlighting changes endorsed by the Committee in July 2012 in consultation with member municipalities and other partners.

Presentation material titled "Experience the Fraser" is retained with the September 11, 2012 Environment and Parks Committee agenda.

It was MOVED and SECONDED

That the Board:

- a) adopt the Experience the Fraser Concept Plan;
- b) endorse the Experience the Fraser Implementation Plan for Local Governments; and
- c) approve the actions identified for Metro Vancouver subject to regular budget and planning processes, including maintaining the current governance structure for the project for the short to mid-term, but reviewing longer-term governance options.

CARRIED

5.4 Surrey Bend Regional Park - Transportation Investment Corporation (TI Corp) Proposal for Fish Habitat Compensation Project

Report dated August 22, 2012 from Frieda Schade, Parks Central Area Division Manager and Alison Evely, Natural Resource Management Specialist, Metropolitan Planning, Environment and Parks Department, informing the Environment and Parks Committee of a proposal by TI Corp to develop salmon habitat at Surrey Bend Regional Park.

In response to questions, members were informed about: local stewardship representation, opportunities to align with other projects and that given the project was in the initial stages, the full scope was not yet defined.

It was MOVED and SECONDED

That the Environment and Parks Committee receive for information the report dated August 22, 2012, titled "Surrey Bend Regional Park - Transportation Investment Corporation (TI Corp) Proposal for Fish Habitat Compensation Project".

CARRIED

5.5 Riverview Lands – Update on Technical Submission to the Province

Report dated August 14, 2012 from Jamie Vala, Parks Planner, Metropolitan Planning, Environment and Parks Department, informing the Environment and Parks Committee about staff's submission to the Riverview heritage values consultation process.

It was MOVED and SECONDED

That the Environment and Parks Committee receive for information the report dated August 14, 2012, titled "Riverview Lands - Update on Technical Submission to the Province".

CARRIED

5.6 Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008 - Staff Appointments

Report dated August 17, 2012 from Ray Robb, Environmental Regulation and Enforcement Division Manager, Metropolitan Planning, Environment and Parks Department, updating staff appointments under the *Environmental Management Act* and Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008.

It was MOVED and SECONDED

That the Board, pursuant to the *Environmental Management Act* and Greater Vancouver Regional District Air Quality Management Bylaw No. 1082, 2008:

- a) Appoint the following as Officers: Dennis Klick, Natasha Markovic-Mirovic and Susy Marble;
- b) Appoint Darrell Wakelin as Assistant District Director; and
- c) Rescind Silvano Padovan as Assistant District Director and Officer.

CARRIED

5.7 Implications of the BC Carbon Tax for the Region

Report dated August 27, 2012 from Jason Emmert, Air Quality Planner, Metropolitan Planning, Environment and Parks Department and Ann Rowan, Sustainability Strategist, Chief Administrative Officer's Department, reporting on the revenue implications of the BC Carbon Tax on Metro Vancouver residents and businesses, its effectiveness in reducing greenhouse gas (GHG) emissions, and identifying how Metro Vancouver could work with the Province to ensure that the tax achieves its objectives of reducing GHGs.

In response to questions, members were informed that: the Province has not responded to the Board's request for an extension to the comment period; and that staff will be reporting back to the Finance Committee on design, revenue neutrality and program effectiveness.

Request of Staff

Staff was requested to report back to the Environment and Parks Committee with information regarding implications to transportation in Metro Vancouver (and TransLink), related to the success of the BC Carbon Tax.

It was MOVED and SECONDED

That the Environment and Parks Committee direct staff to further develop the actions related to the carbon tax as outlined in the Integrated Air Quality and Greenhouse Gas Management Plan, and provide more detailed recommendations to the Province. Those actions include:

- The return of carbon tax revenues to local governments to fund greenhouse gas reduction actions;
- Adjustment of the future carbon tax rate, including measures to mitigate the impact on low income households; and
- Encourage adoption of the carbon tax in other jurisdictions.

CARRIED

5.8 Manager's Report

Report dated August 7, 2012 from Gaëtan Royer, Manager, Metropolitan Planning, Environment and Parks Department, updating the Environment and Parks Committee on: the Committee's 2012 Workplan, Catching the Spirit Youth Society at Picken House, Special Park Districts Forum, encroachment at Kanaka Creek Regional Park, Status of South Carvolth School, Campbell Valley Regional Park, Matsqui Trail and Aldergrove Lake Regional Park Management Plans, park partnership leverages grant, meteor shower watch at Aldergrove Regional Park, Experience the Fraser presentation at the Union of BC Municipalities, charging stations application results to the Community Charging Infrastructure Fund, development of a Regional Climate Action Fund and air quality advisory issued in August 2012.

Members were provided a presentation regarding the 2012 Special Parks District Forum held in Plymouth, Minnesota.

Members were informed that:

- Metro Vancouver is co-hosting, with the Capital Regional District, the 2013 Districts Park Forum scheduled for June 10-15th, 2013

- Regarding the development of a Regional Climate Action Fund, the Pacific Parklands Foundation has indicated interest in becoming a grant partner and fundraising for two of the four streams presented as part of an action in the Integrated Air Quality and Greenhouse Gas Management Plan (if the grant program proceeds)

Presentation material titled “Special Parks District Forum Update” is retained with the September 11, 2012 Environment and Parks Committee agenda.

It was MOVED and SECONDED

That the Environment and Parks Committee receive for information the report dated August 7, 2012, titled “Manager’s Report”.

CARRIED

6. INFORMATION ITEMS

It was MOVED and SECONDED

That the Environment and Parks Committee receive for information the following Information Items:

- 6.1 **Summary of Events** – Metro Vancouver’s Website Events Calendar.
- 6.2 **Opening of Westminster Pier Park** – Correspondence dated July 3, 2012 from Mayor Wayne Wright, City of New Westminster addressed to Heather McNell, Senior Planner, Metro Vancouver regarding the opening of Westminster Pier Park.
- 6.3 **Salmonids in the Classroom Program in Maple Ridge School District** – Correspondence dated July 3, 2012 from Bev Bowler, Education Coordinator, Fisheries and Oceans Canada addressed to Ross Davies, Kanaka Education and Environmental Partnerships Society (KEEPS) regarding Salmonids in the Classroom Program in the Maple Ridge School District.
- 6.4 **Changes to Canada *Fisheries Act*** – Correspondence dated June 21, 2012 from City of Burnaby addressed to Chair Greg Moore, Metro Vancouver Board regarding changes to the Canada *Fisheries Act*.
- 6.5 **Protection of Fish Habitat in Waterways** – Correspondence dated June 21, 2012 from Mayor Derek Corrigan, City of Burnaby, addressed to The Honourable Minister Keith Ashfield, Ministry of Fisheries and Oceans regarding protection of fish habitat in waterways.
- 6.6 **BC Climate Actions Charter** – Correspondence dated July 20, 2012 from the Green Communities Committee addressed to Chair Greg Moore, Metro Vancouver Board regarding the BC Climate Action Recognition Program.
- 6.7 **Vancouver Landfill Technical Liaison Committee** – Correspondence dated July 20, 2012 from The Corporation of Delta addressed to Metro Vancouver’s Environment Committee regarding the Vancouver Landfill Technical Liaison Committee.
- 6.8 **Interim Strategy for Addressing Sewage Heat Opportunities** – Report dated June 28, 2012 from Jeff Carmichael, Utility Research and Innovation Division Manager, and Genevieve Tokgoz, Project Engineer, Utility Planning Department, Metro Vancouver, regarding an interim strategy for addressing sewerage heat opportunities, as presented to the Utilities Committee at their meeting of July 11th, 2012.

6.9 Juvenile Arthritis Camp Changing Lives in North Vancouver – News article dated July 26, 2012 published in North Shore News.

6.10 British Columbia State of the Air Report 2012 – Publication – BC Lung Association.

CARRIED

7. OTHER BUSINESS

No items presented.

8. RESOLUTION TO CLOSE MEETING

It was MOVED and SECONDED

That the Environment and Parks Committee close its regular meeting scheduled for September 11, 2012 pursuant to the *Community Charter* provisions, Section 90 (1) (e) (i) and 90 (2) (b) as follows:

“90 (1) A part of a committee meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:

- (e) the acquisition, disposition or expropriation of land or improvements, if the board or committee considers that disclosure could reasonably be expected to harm the interests of the regional district;
- (i) the receipt of advice that is subject to solicitor-client privilege, including communications necessary for that purpose”; and

“90 (2) A part of a meeting must be closed to the public if the subject matter being considered relates to one or more of the following:

- (b) the consideration of information received and held in confidence relating to negotiations between the regional district and a provincial government or the federal government or both, or between a provincial government or the federal government or both and a third party”.

CARRIED

9. ADJOURNMENT/TERMINATION

It was MOVED and SECONDED

That the Environment and Parks Committee adjourn its regular meeting of September 11, 2012.

CARRIED

(Time: 2:15 p.m.)

Janis Knaupp,
Assistant to Regional Committees

Heather Deal, Chair

To: Corporate Secretary's Office, Metro Vancouver Regional District:

I would like to appear in front of the Environment and Parks Committee at their September 11 2012 meeting for the intended purpose of introducing committee members to my organization - the South Coast Conservation Program (SCCP). The SCCP is a partnership of 'joint venture' between various levels of government, non-government and industry/private sector partners working together to facilitate projects and activities to restore and protect species and ecological communities at risk on the South Coast of B.C.

It is hoped that introducing the SCCP will provide for further opportunities for shared learning, collaboration and assistance to local governments in their varied capacities to deal with local species and ecological communities at risk issues.

I understand that the usual time allotted is five (5) minutes. If the agenda allows it and the committee permits, if possible it would be greatly appreciate if more time could be provided for my presentation (e.g. 15 minutes). Ideally this will allow me to cover off the key aspects of the program and where we are heading for 2012-13. I have a PDF version of our introductory PowerPoint (5.6mb) if you would like me to send it to you.

Please let me know if you require any further information or clarification.

Sincerely,

Pamela Zevit, RPBio. Coordinator.

The South Coast Conservation Program - a multi partner conservation program helping facilitate projects and activities to restore and protect species and ecological communities at risk on the South Coast of B.C.

www.sccp.ca

604-939-0523

Stay up to date with all the SCCP News through our RSS feed & Facebook Page!

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Environment and Parks Committee Meeting Date: October 3, 2012

To: Environment and Parks Committee

From: Theresa Harding, Community Development Coordinator, Parks West Area
Trina Sakata, Community Development Coordinator, Parks Central Area
Metropolitan Planning, Environment and Parks Department

Date: September 21, 2012

Subject: **Presentations on Metro Vancouver Regional Parks Partnership Program**

The Environment and Parks Committee will hear about the Regional Parks Partnership Program and its sustainability benefits to Metro Vancouver and regional parks.

Through community engagement, the Regional Parks Partnership Program provides a way for park volunteers and parks staff to work together for the benefit of Metro Vancouver regional parks. Park associations act as stewards of the park. They provide a way for groups and individuals working within a regional park to meet, coordinate activities, educate, assist understanding among users, raise funds for special events or recruit new members and volunteers. Metro Vancouver's capacity building grants help these park associations to achieve results.

The following Park Associations, who are grant recipients, will each provide a presentation highlighting their achievements over the past year.

4.1a Dave Smith, Chair
Ross Davies, Volunteer Coordinator
Kanaka Education & Environmental Partnership Society

4.1b Ryan Ayre, Chair
Pacific Spirit Park Society

4.1c Brian Green, Chair
Burnaby Lake Park Association



Environment and Parks Committee Meeting Date: October 3, 2012

To: Environment and Parks Committee

From: Gaëtan Royer, Manager
Metropolitan Planning, Environment and Parks Department

Date: September 26, 2012

Subject: **2013 Environment and Parks Committee – Programs and Priorities**

Recommendation:

That the Environment and Parks Committee endorse the proposed programs and key priorities as set out in the report dated September 26, 2012, titled “2013 Environment and Parks Committee Programs and Priorities”, as the basis for the budget to be considered at the Board Budget Workshop on October 17, 2012.

1. PURPOSE

To provide the 2013 programs and key priorities under the purview of the Environment and Parks Committee for discussion and/or amendment for Board consideration at the Board Budget Workshop.

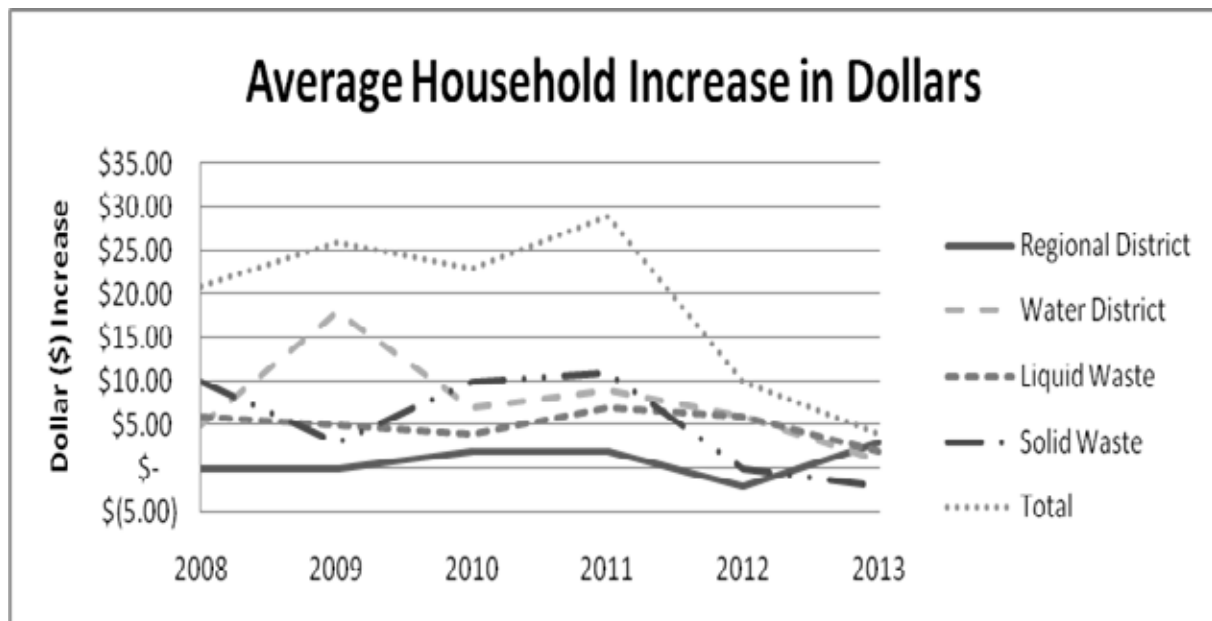
2. CONTEXT

- a. Overview: Metro Vancouver’s annual budgets are driven primarily by the costs of delivering fundamentally important utility services, in partnership with member municipalities, to the region’s citizens and businesses.

The 2013 budget presentation and consultation process was augmented with five sub-regional Council of Councils meetings aimed at both informing participants and capitalizing on local insights as they relate to Metro Vancouver program planning and budgeting. Further consultation with municipalities, stakeholders and broader publics, coupled with an engagement strategy to better inform audiences of the significant value provided by Metro Vancouver services, will also contribute to budget deliberations by committees and the board.

Mindful of both global and economic challenges, and true to the region’s focus on debt avoidance, the board established a financial target increase of 2.5 percent (\$11) to the average regional household for 2013.

- b. Overall 2013 Budget: For 2013, the Draft Metro Vancouver Budgets, including both operations and debt service requirements, proposes a \$4 increase or 0.9 percent increase to the average household in the region which is below the \$11 target set by the board. The draft budget totals \$635.6 million up 2.5 percent over the prior year after accommodating for delivery of program priorities, inflation and increased service demands resulting from growth in the region.



c. Committee Programs Budget Review

The programs under the purview of this Committee are financed primarily through the GVRD Municipal Levy. However, the impact on the levy has been decreased for a number of programs and activities through cost recovery from, for example, environmental permit and regulatory fees, filming revenues, registration fees for parks events, and park facility user fees and rentals.

Pages 2 through 4 in the Attachment summarize the 2013 draft budget for the programs under the purview of the Environment and Parks Committee.

A key focus during the development and review of the 2013 budget was funding for capital projects in regional parks. This issue has been discussed with the Committee during 2012, including parks land acquisition (new sites, deficient parcels, and expansions and upgrades of existing sites) and capital replacement, recognizing that much of our parks infrastructure is aging. The capital budget is summarized in the last four items on page 4 of the attachment, and in the program narratives on pages 48 through 54.

Within the 2013 programs, net staffing changes include 6 new regular full time positions (1 of which does not impact on the levy because it is funded by air quality permit fees) and 1 new full time temporary position (funded by parks events revenues). The staffing levels shown in the attachment also indicate several transfers of positions to centralize department support and administration, but these results in no net increase staffing levels.

d. Strategic Objectives:

A key strategic objective in 2013 is the completion and implementation of a *Regional Parks Master Plan*, which was discussed with the Committee during 2012, including at a visioning workshop held in the spring. The master plan will include a strategy for parks land acquisition and funding, as well as a consistent framework for services provided

within regional parks. While a one-time contribution from reserves is used in 2013 to address a backlog of projects within the adopted capital plan, the 2013 work program includes the development of new sources of funding for land acquisition and capital projects.

Within its Terms of Reference, a number of plans in the Compendium of Regional Plans fall under the purview of the Environment and Parks Committee. Ongoing implementation of the Regional Parks Plan, Ecological Health Action Plan and Integrated Air Quality and Greenhouse Gas Management Plan, all adopted in 2011, are a significant aspect of the Committee's 2013 work program. In addition, the Committee's work program is strongly linked to other plans such as the Regional Growth Strategy and Regional Food System Strategy, and energy and environmental aspects of management plans for solid waste, liquid waste and drinking water.

Within these areas, some key strategic objectives for 2013 are highlighted below:

Ecological Health:

- Development of the Regional Green Infrastructure Network;
- Regional ecosystem management program to address invasive plant species;
- Implementation of the initial projects identified in the EHAP, including enhancing the Lower Brunette River through targeted restoration, enhancing the Lower Seymour River and augmenting habitat at Boundary Bay Regional Park.

Air Quality and Climate Change:

- With partners, develop a program to reduce emissions from on-road heavy-duty diesel vehicles;
- Continued adoption of new air quality bylaws, regulations and programs in priority areas identified in the air quality management plan;
- Update prioritization of air contaminants with respect to health impacts;
- Adopt new ambient air quality objectives for sulphur dioxide;
- Continue to improve outreach and communications, including the second annual Caring for the Air report;
- Develop a regional fund to support greenhouse gas reduction projects.

Regional Parks:

- As described above, complete Regional Parks Master Plan with linkages to individual parks management plans and the parks capital program;
- Ongoing work related to the Experience the Fraser Project;
- Initiate pilot projects to reduce solid waste and increase recycling and diversion of organics;
- Increase capacity for and quantity of volunteer stewardship projects (facilitated by three proposed part time technical coordinator positions) and for resource-related initiatives in general;
- Develop new approach to filming supervision in parks;
- Co-host the Special Parks District Forum;
- Provide funding for interpretive signs and exhibits which animate the parks and add value to visitor experiences;
- Continue to solidify the parks bylaw compliance program by operationalizing new systems for ticket processing and disputes to meet public expectations that park rules will be respected.

In addition to these strategic priorities, work in regional parks is ongoing, to complete projects such as Phase II of the Centennial Beach project at Boundary Bay, proper washroom facilities at Colony Farm, and improved day-use facilities at Matsqui Trail Regional Park. Other projects include commencing or continuing design and feasibility work to replace facilities that are deteriorating or have been demolished or closed, such as the Colony Farm Sheep Paddocks Trail, Camp Capilano and the Kanaka Creek Watershed Stewardship Centre, a value added component of the hatchery which itself is being replaced in 2012.

3. ALTERNATIVES

The Committee could:

- a) Endorse the 2013 programs and key priorities as set out in this report – recommended option.
- b) Direct staff to prepare program changes, as appropriate, for discussion at the Board Budget Workshop.

4. CONCLUSION

These programs comprise part of the overall Draft Metro Vancouver Budget that proposes a modest increase of less than one percent to the average regional household. These programs can be adjusted throughout 2013 should circumstances require; however, it is important to understand that any program changes subsequent to budget approval can only be made if there is a corresponding offsetting program adjustment elsewhere within the same overall function.

ATTACHMENT

Program Summaries for the Environment and Parks Committee (Doc. #6570620).

Program Summaries

Environment & Parks

**Metro Vancouver
2013 Draft Budget
Environment and Parks Committee - 2013 Programs**

Program	2012 Budget	2013 Budget	\$ Change	%	2013 Staffing	Rationale	Page Number
Parks-Operations & Maintenance	\$ 10,942,515	\$ 10,995,674	\$ 53,159	0.5%	92.0	1.66 new positions to meet service demands offset by operational savings	5
Air Quality Regulation	2,201,869	2,126,015	(75,854)	(3.4)%	17.3	0.5 new position offset by a reduction due to a shift from the Air Quality component to the Solid and Liquid Waste components of regulation software development	9
Parks-Visitor Services	1,782,061	2,097,487	315,426	17.7%	20.3	Addition of one-time board approved District Forum, 1.0 position transferred from Revenue Generation and some temporary resources to meet service requirement for 2013	10
Planning Environment and Parks-Department Support	730,086	1,601,656	871,570	119.4%	21.3	Centralization of all support staff for 2013 -no new resources	13
Ambient Air Quality Monitoring	1,653,492	1,523,649	(129,843)	(7.9)%	9.0	Transfer of a position to Department Support and adjustment for one-time project from 2012	15
Operations Services	1,422,152	1,274,262	(147,890)	(10.4)%	4.5	Transfer of 1.0 position to Department Support and the adjustment for a one-time project in 2012	17
Parks-Area Administration	1,668,965	1,077,834	(591,131)	(35.4)%	6.0	Transfer of 9.0 positions to Department Support	22

**Metro Vancouver
2013 Draft Budget
Environment and Parks Committee - 2013 Programs**

Program	2012 Budget	2013 Budget	\$ Change	%	2013 Staffing	Rationale	Page Number
Parks-Planning & Research	1,111,329	1,070,511	(40,818)	(3.7)%	8.0	1.0 new supervisor position offset by 2.0 positions transferred to Department Support	24
Air Quality Policy and Management	820,793	940,277	119,484	14.6%	6.0	1.0 new positions	26
Planning Environment and Parks-Administration	351,096	738,200	387,104	110.3%	4.0	Centralization of department management for 2013 - no new resources	28
Parks-Engineering Services	688,507	702,376	13,869	2.0%	5.0	Labour inflation	29
Climate Change Policy and Management	613,489	670,025	56,536	9.2%	4.0	Increase in the Carbon Tax Refund allows for additional studies	30
Parks-Area Resource Management	395,774	558,194	162,420	41.0%	4.8	One-time consulting studies and temporary resources to meet demands for 2013	32
Rental Program	402,085	454,214	52,129	13.0%	-	Higher maintenance cost expected for roof repairs in 2013	34
Parks-Partnerships	437,660	438,514	854	0.2%	3.5		35
Air Quality Data and Assessment	468,320	415,101	(53,219)	(11.4)%	2.8	Reduction due to the adjustment of a one-time project in 2012	37
Parks-Area Planning	445,593	407,762	(37,831)	(8.5)%	3.0	Reduction due to the adjustment of two one-time projects in 2012	38
Debt Program-Parks	565,524	327,737	(237,787)	(42.0)%	-	Maturing debt issues	41

**Metro Vancouver
2013 Draft Budget
Environment and Parks Committee - 2013 Programs**

Program	2012 Budget	2013 Budget	\$ Change	%	2013 Staffing	Rationale	Page Number
Environment	249,561	322,808	73,247	29.4%	1.5	Addition of Ecological Health Action Plan initiatives - funded from reserves	42
Air Sampling and Investigation	285,882	273,687	(12,195)	(4.3)%	2.3		43
Parks-Operations & Maintenance-Burns Bog Eco Conservancy	243,194	244,953	1,759	0.7%	1.6		45
Parks-Revenue Generation	292,693	209,102	(83,591)	(28.6)%	2.0	Transfer of 1.0 position to Visitor Services	46
Parks-Quality Control-Allocated	138,258	72,451	(65,807)	(47.6)%	0.7	Reallocation of efforts based on 2013 requirements	47
Parks-Basic Facilities-Capital	3,978,500	6,080,000	2,101,500	52.8%	-	Capital programs comprise annual requirements included in the Parks long range capital plan.	48
Parks-Capital Replacement - Capital	1,600,000	1,600,000	-	0.0%	-	Capital programs comprise annual requirements included in the Parks long range capital plan.	51
Parks-Heritage Parkland Acquisition Fund - Capital	5,000,000	5,000,000	-	0.0%	-	Capital programs comprise annual requirements included in the Parks long range capital plan.	52
Contribution to Capital - Parks	7,999,203	9,083,000	1,083,797	13.5%	-	More funding required to complete capital work as part of the management plan	54

Program: Parks-Operations & Maintenance

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Description

Supervise and maintain public facilities, infrastructure, trails; organise public, group use; provide on-site PR, information, education, patrols, visitor security; monitor land-banked & conservation sites; enforce bylaws, regulations; assess risks, implement occupier liability reduction actions; conduct emergency response; respond to natural resource/property threats; maintain a safe work environment, provide effective supervision of staff, volunteers, caretakers, partners, contractors; ensure adequate staff training/development; ensure decentralized field delivery consistent with standards, programs, policies, priorities; deliver long-term operational planning, budgeting, policy needs; supplement capital development program with skilled labour, supervision of work crews and contractors.

Purpose

Provides supervision, staff, supplies, services for the day-to-day operations and maintenance of Parks' sites, facilities, activities, resources; and long-term operations planning.

Program: Parks-Operations & Maintenance
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outputs

Enthusiastically serving the region by operating and maintaining 33 regional park, greenway, reserve and ecological conservancy area sites, over 14,400 hectares, pursuing best management practices to conserve natural capital while providing exemplary parks services to the public.

Milestones

Operationalize Infor Electronic Asset Management initiative in each Area.

Date

Initiate more pilot projects to reduce solid waste, increase recycling & divert compostables, including dog waste, resulting from 2012 research & work.	9/30/2013
Develop operational response to change in filming supervision approach in parks, as per 2011 study.	6/30/2013
Supply significant operational support to 2013 Special Parks District Forum, co-hosted in June 2013 w with Capital Regional District.	6/30/2013
Develop operational response & make resource allocation decisions to facilitate implementation of Natural Resource Management program & increased volunteer projects.	12/31/2013
Complete kiosk replacements at Pacific Spirit and other sites.	
Initiate replacement of Pacific Spirit service yard facilities.	
Develop Musqueam First Nation/ Metre Vancouver Regional Parks working group terms of reference.	
Monitor performance of new Wreck Beach toilet facilities & plantings during warranty period.	
Establish new operations program at Delta Nature Reserve.	
Decide if hook-ups to Belcarra municipal water system are feasible (location & cost).	
Implement operational response to construction of washrooms, expanded picnic facilities & other improvements at Colony farm (if approved).	
Test vermiculture as an alternative to toilet composting at Tynehead.	
Develop & enhance dog off-leash activities in the expanded leash-optional compound at Derby Reach.	10/1/2013
Collaborate with the Derby Reach Park Association to fundraise & construct a universally-accessible fishing opportunity.	4/1/2013
Identify additional programming space for Fort Camping in collaboration with the contractor.	4/1/2013
Facilitate redevelopment of Bell-Irving Hatchery facility & operation.	12/31/2013
Respond to Kanaka Creek property encroachments.	12/31/2013
Implement Operating Plan for Pitt River Greenway with Pitt Meadows.	12/31/2013

Program: Parks-Operations & Maintenance
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Support major capital project at Matsqui Trail.	12/31/2013
Establish new operations program for the the west & southeast lands at Sumas Mountain.	2/28/2013
Complete & adopt an Operating Plan for Sumas Mountain Interregional Park with FVRD.	
Resurface trail east of Poplar Bar day-use area at Glen Valley.	9/30/2013

Serve over 9.3 million visitors annually in day visits, group use, overnight camping, special events and interpretive programs.
Work with community partners to achieve mutual conservation, recreation and education goals.

Outcomes

Decentralized field delivery of park services is consistent with and demonstrates Metro Vancouver Sustainability Framework values, policies & aspirations.

Using best management practices and a total systems approach, protects ecosystems and land in our stewardship while delivering to the public well-maintained and accessible parks and facilities, operated with minimum risk to people, facilities and land every day.

Program: Parks-Operations & Maintenance
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

2013 Staffing

Regular Full Time	52.67
Regular Part Time	0.00
Temporary Full Time	37.07
Temporary Part Time/Auxiliary	2.22
Total Staffing (FTE)	91.96

Total Expenditure

INACTIVE-Parks-O&M-East-Grant Narrows Park	\$0
Parks-O&M-Central-Belcarra Park	\$1,072,000
Parks-O&M-Central-Brunette Fraser Greenway	\$167,000
Parks-O&M-Central-Burnaby Lake Park	\$432,000
Parks-O&M-Central-Colony Farm Park	\$359,000
Parks-O&M-Central-General Costs	\$162,000
Parks-O&M-Central-Minnehada Park	\$396,000
Parks-O&M-Central-Surrey Bend Park	\$9,000
Parks-O&M-Central-Thwaytes Landing Recreation Area	\$13,000
Parks-O&M-Central-Tynehead Park	\$432,000
Parks-O&M-Central-Widgeon Marsh Park	\$29,000
Parks-O&M-East-Aldergrove Regional Park	\$499,000
Parks-O&M-East-Blaney Bog	\$2,000
Parks-O&M-East-Brae Island Park	\$112,000
Parks-O&M-East-Campbell Valley Park	\$646,000
Parks-O&M-East-Codd Wetlands	\$2,000
Parks-O&M-East-Derby Reach Park	\$671,000
Parks-O&M-East-General Costs	\$320,000
Parks-O&M-East-Glen Valley Park	\$73,000
Parks-O&M-East-Kanaka Creek Park	\$530,000
Parks-O&M-East-Matsqui Trail Park	\$417,000
Parks-O&M-East-Pitt River Greenway	\$225,000
Parks-O&M-East-Sumas Mountain Park	\$46,000
Parks-O&M-East-West Creek Wetlands	\$4,000
Parks-O&M-West-Boundary Bay Park	\$582,000
Parks-O&M-West-Capilano River Park	\$619,000
Parks-O&M-West-Crippen Park	\$330,000
Parks-O&M-West-Deas Island Park	\$399,000
Parks-O&M-West-Delta Airpark	\$188,000
Parks-O&M-West-General Costs	\$287,000
Parks-O&M-West-Iona Beach Park	\$229,000
Parks-O&M-West-Lynn Headwaters Park	\$379,000
Parks-O&M-West-Pacific Spirit Park	\$1,366,000
	\$10,997,000

Program: Air Quality Regulation

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Description

The program administers Metro Vancouver's regulatory authority to protect human health and the environment. The program controls and/or prevents the release of air contaminants from various sources within Metro Vancouver through issuance of permits and orders and promotes compliance with Metro Vancouver 's Air Quality Management Bylaws. Compliance is assessed by inspections and review of data and other submissions. Compliance is promoted through various means including: education, negotiation, warnings, prosecution and publication of offenders.

Purpose

To protect human health and the environment from air contaminants.

Outputs

Implement new organics processing odour managment regulation through outreach, inspection and enforcement

Deveop Open Burning regulation

Promote Air Quality Bylaw compliance through inspections, data review, and prosecution and public disclosure as appropriate.

Negotiation of permit requirements to protect the environment.

Milestones

Date

Outcomes

high levels of awareness and compliance with new non road diesel regulation

High levels of compliance with fair, effective and efficient environmental protection requirements for air emission sources in support of the Air Quality Management Plan

2013 Staffing

Regular Full Time	15.60
Regular Part Time	0.00
Temporary Full Time	1.66
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	17.26

Total Expenditure

Air Quality Regulation-allocated	\$273,000
Air Quality Regulation-initial	\$1,853,000
	\$2,126,000

Program: Parks-Visitor Services
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

The Visitor Services program delivers a number of highly visible , integrated public services which are key in communicating important messages for Metro Vancouver 's sustainability framework. Emphasis is placed on themes associated with ecological health, biodiversity, protection of species. Important services include interpretation programs for the public, curriculum-based programming to schools and educators, park information services, registration services for programs and facility rentals, fee collection and special events. A variety of techniques are used including personal contact , publications, displays and new media. Interpretation programs inspire residents of the region to learn about Metro Vancouver -- its mission, mandate, values and principles as outlined in the sustainability framework. Programs encourage awareness of ecological health, stewardship, environmental citizenship and outdoor recreation in a manner which demonstrates respect for the land, personal responsibility, and is key to achieving a sustainable region. Park information services include basic directional signs, safety signs, park information kiosks and interpretive signs. This program also facilitates program announcements, and coordinates parks input to the corporate program brochure (Check It Out). Other deliverables include maps, brochures and information on services in direct support of visitor enjoyment and appreciation. Facility rentals provide safe, well-maintained facilities; registration helps to ensure equitable access and fee collection provides a revenue stream to offset costs and ensure efficient use of facilities . Visitor Services provides registration services to other departments including O&M (watershed tours) and Corporate Relations (workshop registrations). Special Events are offered as family and community-oriented programs that help to promote values founded in Metro Vancouver's sustainability framework. Special events are centred on traditional park messaging but also integrate emerging themes such as regional culture, food security, farming, and youth.

Purpose

A key driver will be to support the goal of 10 million regional park visitors annually by year-end 2012. Programs are delivered in an integrated way and broaden opportunities for citizen involvement through environmental education, outdoor recreation, stewardship and citizen engagement. Delivery is strategic and reinforces the environmental, social and economic contributions made by Metro Vancouver through its programs

Program: Parks-Visitor Services
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outputs

Collaboration with other departments and external partners in delivering workshops and training sessions for educators, promoting use of regional parks as venues and as outdoor classrooms; Group programs are targeted to regional educators in all 33 school districts in the region.

Content including treatments, scripts and imagery for new / rich media showcasing themes, programs, educational opportunities, features and events at regional parks.

In-park interpretation-education programs and services delivered for 25,000 people; - Continued operation of four Park Centres and one Nature House with support of volunteers.

Provision of outdoor recreation, health and wellness opportunities in regional parks.

Special and community events in regional parks attended by 20,000 people. Metro Vancouver is profiled at major community events and festivals throughout the region. Youth are provided with meaningful opportunities for engagement through regional park programming. Openings and ceremonies are held jointly with partners for donor recognition and celebrating key openings.

Park entrance signs, directional signs, park kiosks and safety signs are maintained and current, and comply with standards respecting corporate visual identity

Quality registration services are provided for Metro Vancouver facilities and services; fees are collected in accordance with bylaws;

Milestones

Date

Continue implementation of iParks Navigaor version 4 with expected rollout to include all municipal partners and other partnering organizations such as FVRD and Translink.

7/1/2013

Prepare a 10 year strategy for the recapitalization of interpretive signs and exhibits; including recommendations for new installations

7/1/2013

Complete implementation and upgrade to CLASS hosted registration and booking system.

4/1/2013

Program: Parks-Visitor Services
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outcomes

A range of appropriate services catering to visitor and client needs are provided; park visitors have an increasing range of healthy food choices available from vendors

Effective delivery of curriculum-based programs and activities related to major themes including biodiversity and ecological health are delivered to students and teachers, and where appropriate offered collaboratively with partners.

Enhanced engagement with community, ethnic & social organizations to expand recreation and wellness opportunities

Improved health, wellness & social well being of residents & reduce those costs through programming, recreation opportunities & partnerships.

Increased public awareness and enjoyment of participation in, and appropriate behaviour towards the natural environment and heritage resources in the regional parks system and of the role Metro Vancouver plays in providing environmental, social and economic benefits in the region.

Successful delivery of education programs to foster environmental stewardship, personal safety & social responsibility

2013 Staffing	
Regular Full Time	15.00
Regular Part Time	0.60
Temporary Full Time	0.50
Temporary Part Time/Auxiliary	4.18
Total Staffing (FTE)	20.28

Total Expenditure	
Parks-VisitorServ-Area Interpretation-Central	\$367,000
Parks-VisitorServ-Area Interpretation-East	\$330,000
Parks-VisitorServ-Area Interpretation-West	\$357,000
Parks-VisitorServ-Head Office	\$535,000
Parks-VisitorServ-Special Events	\$508,000
	\$2,097,000

Program: Planning Environment and Parks-Department Support
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Allocation

Description

This program provides administrative coordination and office management services for all divisions of the Metropolitan Planning , Environment and Parks department.

Promotes an efficient and effective operation of the department by ensuring that staff are properly trained and supplied with the essential resources to support and deliver corporate and departmental programs.

Purpose

To provide office management, and administrative support for the Metropolitan Planning, Environment and Parks department.

Outputs

Conducts recruitment of administrative positions within department.

Manage and maintain administrative services. Provides administration support to undertake and achieve corporate needs such as budget, assembling documents for public tender, assembling progress payment documents, arranging for office space and equipment, providing records management services, tracking and follow up on incoming and outgoing communication, and internal service requests. Ensures that administrative processes comply with corporate standards.

Manages and organizes meeting requests received from external organizations and individuals, responds to public enquiries for program or plan information in person, by phone or email.

Prepares, coordinates and assembles staff reports to Metro Vancouver Board and Metro Vancouver Committees, such as the Planning and Agriculture Committee, Electoral Area Committee, Environment and Parks Committee, etc.

Processes documents and maintains a variety of data bases, including regulation and enforcement, stakeholder consultation, mailing lists, research publications and plans, and issuance of permits.

Provide administrative support to Belcarra Park in peak season; makes most efficient use of administration time given the number of employees there.

Outcomes

Effective and efficient customer service for public, agencies department staff, Board and Committee members and private sector

Efficient management and administration services for Metropolitan Planning, Environment and Parks.

Milestones

Date

Program: Planning Environment and Parks-Department Support

Allocation

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

2013 Staffing

Regular Full Time	21.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.25
Total Staffing (FTE)	21.25

Total Expenditure

Planning Environment and Parks-Department Support	\$1,602,000
	\$1,602,000

Program: Ambient Air Quality Monitoring
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

This program provides for the operation and maintenance of a network of monitoring stations equipped with air quality and meteorological instrumentation, and the transmission of data from those stations to a centralized data collection, processing and storage facility. The Program also uses mobile equipment and monitoring systems to collect short-term ambient air quality monitoring data from areas not covered by the fixed monitoring network for special air quality studies and research, and for complaint and emergency response. Data from both fixed and mobile stations is analyzed using computer analytical tools and models to provide ongoing assessments of air quality and trends.

Data is provided to the public through the media, the Metro Vancouver website and to numerous government agencies and other clients. The Air Quality Health Index and the issuance of public air quality advisories is also based on this data.

This program provides data used by all other air quality programs.

Purpose

To characterize ambient air quality based on data collected from fixed continuous and mobile sites throughout the region, to identify air quality management issues, respond to air quality emergencies and to provide information about and assessments of levels of air contaminants to many Metro Vancouver programs, partners and the public.

Outputs

Air quality monitoring data for special studies, air quality research, complaint response and emergency response.

Evaluation and assessment of ambient air quality, based on established objectives and standards for the region.

Public distribution of daily air quality health index, air quality advisories and forecasts.

Implementation of adaptive management framework for review of the air quality monitoring network, and enhancements to respond to priority issues.

Preparation of an annual Lower Fraser Valley air quality report.

Milestones

Undertake a roadside monitoring pilot project at one or more priority locations in support of program development.

In collaboration with others, establish a network of key sulphur dioxide monitoring sites and a program to assess the effectiveness of ECA (Emissions Control Area) and to inform the review of the sulphur dioxide objective.

Date

12/31/2013

12/31/2013

Outcomes

Ongoing availability of information on which air quality management programs and sustainable region initiatives can be based and their effectiveness assessed.

Program: Ambient Air Quality Monitoring

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

2013 Staffing

Regular Full Time	9.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	9.00

Total Expenditure

Ambient Air Quality Monitoring-initial	\$1,524,000
INACTIVE-Ambient Air Quality Monitoring-allocated	\$0
	\$1,524,000

Program: Operations Services
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

Supervises & implements MPEP departmental programs & systems including safety management, emergency management, occupier's liability risk management. Provides Corporate ticketing (MTIs, NBVs) tools, training & administration. Provides investigations & collections support systems & processes to MPEP Enforcement Officers. Supervises Parks regulatory compliance program. Develops operational policies, procedures, standards, BMPs. Oversees the Duty Officer system. Identifies evolving operating issues & coordinates staff & outside experts to resolve. Generates long-term Park operating forecasts for staff and other expenditures, monitors property tax, utility, permit costs & log booming revenues. Directs & administers Parks rental housing portfolio through GVHC. Coordinates equipment purchases, vehicle procurement, radio system & insurance. Coordinates the delivery of decentralized Parks field operations to ensure consistency with departmental & corporate standards, policies & priorities. Handles departmental labour relations issues, participates on GVRDEU bargaining committee.

Purpose

To provide a strong central core of products & services geared to identify & implement effective & sustainable operations approaches which fully support & enhance consistent & coordinated delivery of MPEP operations.

Program: Operations Services
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outputs

WSBC- & MV-compliant MPEP safety management system is developed, implemented & maintained; department safety standards, safe work procedures, HIRAs are completed on a prioritized basis; safety performance is measured; MPEP Joint Health & Safety Committee is supported.

MPEP emergency management system is developed & maintained; plans are kept current; drills and exercises are performed & resultant recommendations are used to continually improve system.

Parks field operations meeting consistent safety and high quality performance standards are provided at 33 regional park, greenway, reserve & ecological conservancy area sites to over 9.3 million visitors annually.

Develop & distribute park operations policy framework, procedures and tools.

Manage Parks rental assets.

Systems & processes for ticketing (MTIs, NBVs), investigations, collections & court processes to Park Officers, Electoral Area A Building Inspector & Environmental Regulations & Enforcement Officers .

Regulatory compliance policies, procedures, standards & tools for Parks field staff.

Current Park Officer curricula & annual training.

Corporate Bylaw Ticket Management System (Tempest) is maintained & administered.

Notice of Bylaw Violation (NBV) Screening Officers, provincially-appointed adjudicators, NBV dispute adjudication sessions.

Milestones

Implement replacement of audit application software, which may include feasibility analysis of O&M's new software tool.

Develop & implement MPEP Lock-Out Program.

Complete gaps analysis of departmental, divisional & site emergency plans. Develop, complete or update plans to met gaps. (Carried forward from 2012.)

Contract for TEM, data capturing, wildfire risk analysis; and complete emergency mapping attributes for Sumas Mountain Inter-Regional Park.

Establish training standard & curriculum for freshet response.

Train MPEP management team for MPEP DOC operation.

Develop a repeatable Park Operations audit which identifies internal & external service performance measures & indicators. (Carried forward from 2012 due to cuts in base labour resources.)

Develop centralized collections processes.

Implement a re-focussed, centralized, robust & consistent Parks regulatory compliance program.

Implement use of a communications tool for Parks Officers to optimize labour time spent when in the field.

Confirm to regular business process, with redundancy coverage, the administration of the Tempest system. Assign this responsibility to regular position(s).

Investigate feasibility of on-line ticket payment & entering disputes on-line.

Date

3/31/2013

6/30/2013

9/30/2013

9/30/2013

3/31/2013

12/31/2013

9/30/2013

3/31/2013

3/31/2013

6/30/2013

3/31/2013

6/30/2013

Program: Operations Services

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Equipment purchases, prioritized over a 3-year forecast and updated annually, support a replacement program for \$9.2 million existing equipment inventory; sustainability principles are incorporated in specifications; radio communications system is optimized & maintained.

Implement an MPEP equipment inventory system or application which supports asset management best practices.

12/31/2013

In consultation with Purchasing, develop equipment disposal procedures.

3/31/2013

Property revenue & expenditure actuals are correct & match budget.

Program: Operations Services
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outcomes

MPEP "walks the talk" of sustainability in our day-to-day operations & operational policy directions.

Ensures park operations has the policy framework, procedures and tools to effectively deliver & sustain high-quality, consistent field services to the public.

Parks rental assets are well managed.

A safe working & operating environment, consistent with MV OH&S standards & compliant with WSBC regulations.

Readiness & capacity to respond appropriately & professionally to any urgent emerging situation or emergency, both within MPEP department & to support corporate response.

Enforcement activity synergies available through MPEP amalgamation are realized. Legal risk is avoided by having the centralized ticketing system & a central Parks program lead. Park Officers, Electoral area A Building Inspector Environmental Regulation & Enforcement officers have strong centralized support & systems for enforcement options.

Due diligence is met for the Corporate Bylaw Ticket Management System (Tempest); MV staff are trained in its use & administration.

Park users have consistent messaging about expected behaviours & protecting park assets.

Parks bylaw enforcement initiatives & Park Ranger activities are prioritized & planned to make most effective use of limited resources.

Safe and sustainable use of parkland by public; great park experiences with a minimum of conflict; reduced damage to park natural & built assets.

Program: Operations Services

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Operating

MPEP has the major equipment and radio system to effectively deliver field services to the public & respond effectively to emergencies. Equipment is right-sized & supports "greening" improvements.

Parks property costs & revenues variances are reduced providing stability & certainty to operating budget.

2013 Staffing	
Regular Full Time	4.00
Regular Part Time	0.00
Temporary Full Time	0.50
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	4.50

Total Expenditure	
Ops Serv-Department Safety & Emergency Management	\$229,000
Ops Serv-Equipment	\$338,000
Ops Serv-Property Costs	\$61,000
Ops Serv-Public Regulatory Compliance	\$24,000
OpsServ-Operations Coordination	\$623,000
	\$1,275,000

Program: Parks-Area Administration
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

Regional Parks is structured into three operating areas to facilitate effective delivery of regional park programs , to ensure integration and implementation of all programs and activities, and provides direct staff liaison with surrounding communities , agencies, municipal staff and park partners. In each of the three operating areas this program is responsible for advising on and implementing corporate and departmental policy, plans, procedures and priorities, developing Area Work Plans, records management, and training and support activities for staff and volunteers. The program ensures Regional Parks' compliance with municipal, provincial and federal regulations. Area Offices also provide meeting, training and work space for the Parks Partnership Program volunteers. Area Office meeting space is also used for staff training , education and instruction. Area Offices serve as park centres providing departmental and corporate information to the public .

Purpose

This program provides: decentralized administration support, technical/research support, supervision, area wide coordination, planning, and oversee the delivery and implementation of all corporate and departmental policy and programs in each of the three operating areas managing 22 Regional Parks, 3 Regional Reserves, 5 Greenways and 2 Ecological Conservancy Areas.

Outputs

Reports to Committee and Board; responds to public requests, complaints, and suggestions; provides overall supervision of all park programs and staff within the area and some system-wide coordination responsibilities; ensure compliance with corporate and departmental policy and procedures, records management, operating agreements and permits; full administration support to area staff and volunteers; information to agencies, citizen groups, non-profits, and individuals; timekeeping, budget management and expenditure reports; revenues, collection and deposit from specific facilities or programs.

Milestones

Support Implementation of common MPEP Public Comment database
Train and Develop staff and Migrate Annual work planning to MS
Project

Date

Outcomes

Through a decentralized point of contact foster and develop active public, agency and private sector involvement for a grouping of Regional Parks, Greenways and ECA's, provide effective administration and supervisory services in the planning and delivery of Corporate and Departmental programs and activities, and provide advice to Committees and Board.

Program: Parks-Area Administration

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

2013 Staffing

Regular Full Time	6.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	6.00

Total Expenditure

Parks-Area Admin-Central	\$297,000
Parks-Area Admin-East	\$298,000
Parks-Area Admin-West	\$483,000
	\$1,078,000

Program: Parks-Planning & Research

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Description

Planning and Research undertakes long range planning and supportive research for the Parks Division and for the Corporation to identify and respond to outdoor recreation trends, acquiring land for of regional parks, greenways and conservation areas. Planning & Research also collects, analyzes and maintains environmental related to corporate initiatives such as sensitive ecosystem mapping and the Green Infrastructure Network.

It identifies natural regional features to be protected; develops parks plans; prepares policy recommendations, resource management prescriptions, mapping and technical support for site management and planning for the park system.

Purpose

To define sustainable system-wide recreation and conservation strategies, policy and program targets and plans to achieve regional parks, regional conservation and greenways objectives, and to provide leadership coordination for overall outdoor recreation & conservation planning in the region.

Outputs	Milestones	Date
Participate in integration of Parks with corporate plans and goals	Complete development of an implementation plan for the 2011 Regional Parks Plan (Parks Master Plan)	12/31/2013
	Participate in development of Regional Green infrastructure Network	12/31/2013
Provide guiding policy and long range planning for Parks system across region	Begin development of a heritage and cultural resources framework for regional parks	12/31/2013
Analysis and response to supply, demand and trends in outdoor recreation & conservation	Conduct in-park recreation use and satisfaction survey.	11/30/2013
	Share regional outdoor recreation gap analysis information with municipal parks organizations.	12/2/2013
Greenways Planning and partnerships with other agencies to create a network of recreation connections		
Set priorities and create long range strategies to guide land acquisition ensuring conservation of natural capital		
Provide access to accurate data related to Natural and Infrastructure assets	Continue developing and implementing EAM system, integrating GIS with asset management databases.	12/1/2013
	Combine independently commissioned Sumas Mountain and Bowen Island sensitive ecosystem inventories into the existing MV SEI.	9/1/2013
	Provide SEI content to corporate map viewer, allowing partners and public to determine locations, content and condition of sensitive ecosystems within the region.	12/1/2013
Maintain systematic approach to collect and manage natural resource information within our Parks and ECAs.	Complete Wildfire Risk Management Strategy for Sumas Mountain Interregional Park.	10/30/2013
Applied research and policy reports on natural resource issues, recreation, legislative and conservation issues.		12/31/2013

Program: Parks-Planning & Research
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outcomes

1. Systematic approach to identifying future land and facility requirements to achieve Parks' Open Space goals based on Metro Vancouver's Sustainability Principles.
2. Regionally significant recreation and conservation lands and features are protected, contributing to the natural capital of Metro Vancouver.
3. Reliable resource information provided for land acquisition and operation of a parks and greenways system built on Metro Vancouver Sustainability Principles.
4. Regional coordination for planning and provision of outdoor recreation opportunities that contribute to health and wellness while ensuring the conservation of our ecosystems.
5. Accurate visitor use statistics for planning, operations, and management decision-making

2013 Staffing

Regular Full Time	7.00
Regular Part Time	0.00
Temporary Full Time	1.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	8.00

Total Expenditure

Parks-Planning & Research	\$1,071,000
	\$1,071,000

Program: Air Quality Policy and Management

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Description

This program supports the review, development and implementation of the Air Quality Management Plan (AQMP) and associated policies and strategies, within the context of Metro Vancouver's air quality mandate, applicable standards and legislation, and the directions and priorities established through the Sustainable Region Initiative. It includes consultation, development of policy and implementation actions on air quality issues, the review of major emission source proposals, and other actions. Program staff participate in the related initiatives of senior governments and other agencies to help ensure that the plans and actions of these agencies are consistent with , and support, Metro Vancouver objectives. This program also provides services to other Metro Vancouver departments and programs including : assessment of air quality impacts and implications of Metro Vancouver emission sources; dispersion modeling of air emissions; and technical reviews of third-party monitoring and modeling reports.

Purpose

To develop, maintain and implement plans and policies for air quality improvement actions in support of Metro Vancouver's air quality mandate.

Outputs

Air quality management plans and strategies

Prioritization and implementation of air quality management actions in the region

Technical and Board reports on air quality management and related issues

Air quality impact assessment for major/new emission sources in the Lower Fraser Valley international airshed.

Collaboration with and assistance to Metro Vancouver departments and programs on air quality impacts and implications of Metro Vancouver management plans, actions, utility operations and other facilities.

Collaboration with external agencies and assistance to member municipalities on air quality management actions

Communication and workshop materials related to air quality improvement

Milestones

Initiate development of ground-level ozone strategy for the Lower Fraser Valley, targetting priority VOCs identified in 2012

Initiate the review of Metro Vancouver's sulphur dioxide objectives considering the recent WHO guidelines for SO₂

With partners, initiate development of a program to reduce emissions from heavy-duty diesel vehicles, building on the results of the remote sensing project completed in 2012

Complete the testing and evaluation of Visual Air Quality Rating (VAQR) for the Lower Fraser Valley

Provide air quality expertise, assist in the preparation of consultation materials and participate in public/stakeholder consultation activities in support of the establishment of new waste-to-energy capacity

Undertake two innovative communications, public outreach and education projects to increase knowledge and awareness of air quality issues

Date

12/31/2013

12/31/2013

Outcomes

Air quality management plans/strategies that result in the steady improvement in Metro Vancouver's air quality.

Program: Air Quality Policy and Management

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

2013 Staffing

Regular Full Time	5.00
Regular Part Time	0.00
Temporary Full Time	1.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	6.00

Total Expenditure

Air Quality Policy and Management-initial	\$940,000
INACTIVE-Air Quality Policy and Management-allocated	\$0
	\$940,000

Program: Planning Environment and Parks-Administration

Allocation

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Description

This program provides senior level leadership, management and associated administrative services required by all programs within Metropolitan Planning, Environment and Parks. Key to the successful implementation of this program is the relationships established with Metro Vancouver Board and Committees , member municipalities, senior levels of government, Translink, other air quality authorities in the airshed, health authorities, public, non profit organizations, park partners, and private sector. This program also includes representation on the Metro Vancouver Management Committee and liaison with other Metro Vancouver departments on corporate issues .

Purpose

To manage and administer all Metropolitan Planning, Environment and Parks programs.

Outputs

This program provides advice to Committees and Board and direction to staff.

Milestones

Date

Outcomes

The effective management and administration of Metropolitan Planning, Environment and Parks.

2013 Staffing	
Regular Full Time	3.95
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	3.95

Total Expenditure	
Planning Environment and Parks-Administration	\$738,000
	\$738,000

Program: Parks-Engineering Services

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Description

This program manages Parks built assets, erosion protection measures, dyking systems and slope stability works by providing inspection, design, and project management services as well as delivering operations and maintenance projects. The Parks Capital Replacement and Basic Facilities Capital Programs are also managed through this program.

Purpose

To provide technical expertise for the execution of Parks Asset Management and Basic Facilities Programs and to continue development an asset management program utilizing the corporate Enterprise Asset Management system, Infor.

Outputs

1. Prepare engineering reports, studies, project planning and preparation of conceptual through detailed designs incorporating sustainability principles including water management, energy conservation, material reuse and waste management
2. Contract preparation and tendering, request proposals for projects requiring specialized expertise, provide inspection services, provide assist Operations staff in technical matters. Obtain approvals from external agencies
3. Manage the Infor EAM Asset Management Program and Basic Facilities Programs, develop and update the Capital Plan, manage water systems and water quality monitoring program.
4. Manage and maintain inventory database, manage and advance the development of the asset management system in accordance with the corporate Enterprise Asset Management program.

Milestones

Date

Continue Implementing Infor EAM (currently used by O&M) as the Parks asset management system in 2013. Including mobile usage throughout our parks; utilizing the EAM Inspection module.

12/31/2013

Outcomes

The Parks Asset Management and Basic Facilities Programs are executed in a sustainable manner that conserves and develops natural, economic and social capital to ensure visitor safety, service level obligations and access to outdoor recreation.

2013 Staffing	
Regular Full Time	4.00
Regular Part Time	0.00
Temporary Full Time	1.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	5.00

Total Expenditure	
Parks-Engineering Services	\$702,000
	\$702,000

Program: Climate Change Policy and Management
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

This program supports the review, development and implementation of the corporate and regional climate change plans and associated policies and strategies, within the context of Metro Vancouver's Sustainability Framework. It includes development of policies, strategies, and implementation plans; consultation on actions; collaboration with external agencies on broader climate change issues and prioritization and implementation of actions. This program also works collaboratively with and provides guidance to other Metro Vancouver departments and programs on projects to reduce greenhouse gas emissions, conserve energy, and recover and generate energy from Metro Vancouver operations. The program works to ensure that climate change and energy considerations are integrated into and accounted for in plans, policies and programs both internally and externally.

Purpose

To develop, maintain and implement plans and policies for climate change actions in support of Metro Vancouver's Sustainable Region Initiative, air quality mandate and the Board direction on climate change.

Outputs

Climate change action plans, policies and strategies including the Corporate Climate Action Plan and Regional Energy and Climate Action Strategy

Prioritization and implementation of climate change management actions

Regional and corporate greenhouse gas emission inventories, GHG reduction targets and indicators

Climate change risk assessment and adaptive policies

Technical and Board reports on climate change management and related issues

Collaboration with and assistance to Metro Vancouver departments and programs on climate change impacts and implications of Metro Vancouver management plans, actions, utility operations and other facilities.

Collaboration with external agencies and assistance to member municipalities on regional climate change management actions
 Support for the REAC Climate Protection Sub-Committee

Purchasing procedures and model bylaws that aim for increased energy efficiency and greenhouse gas reduction

Communication and workshop materials related to climate change actions

Milestones

Establish a framework to meet Metro Vancouver Board's Climate Action Charter commitment to become carbon neutral in 2013 and maintain that status in subsequent years

Prepare business case for incentive-based measures within a Regional Climate Action Fund to incentivize municipal plans and actions in support of Urban Centres and Frequent Transit Development Areas

Based on the needs assessment work for the small & medium enterprise program completed in 2012, implement a GHG reduction program focusing on priority business sectors

Implement or validate two new compensation projects in pursuit of becoming carbon neutral in Metro Vancouver corporate operations

Develop Innovative Tools for Enhanced Energy and Climate Change Community Planning (Board Approved Grant to UBC CALP)

Date

9/30/2013

10/31/2013

12/31/2013

12/31/2013

12/31/2014

Program: Climate Change Policy and Management
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outcomes

Climate change action plans and strategies that result in a reduction in the region's contribution to global climate change, and achieve the organization's corporate climate change goals.

2013 Staffing	
Regular Full Time	4.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	4.00

Total Expenditure	
Climate Change Policy and Management - initial	\$670,000
INACTIVE-Climate Change Policy and Management - allocated	\$0
	\$670,000

Program: Parks-Area Resource Management
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

The Resource Management Program contributes to the development coordination and implementation of best practices in order to comply with environmental legislation and ensure habitat/species protection. The program also assists to coordinate and conduct research and biophysical assessments of natural assets. Specific resource management issues are assessed and strategies developed to resolve use conflict and protect natural features in a sustainable manner. Local community knowledge, expertise of subject matter experts, park staff and other agencies are used to assist in the development of resource strategies, practices and policies. The Program also responds to external drives such as climate change, regional and municipal planning initiatives, boundary encroachments and partner/public requests for stewardship activities.

Purpose

To assist in developing resource management plans for parks, conservation sites, greenways by providing a local perspective and knowledge;
 ·To facilitate best practices and permitting in order to comply with environmental legislation ;
 ·To train staff to implement best practices, assist with enhancement projects and management programs in order to achieve planned objectives;
 ·To provide or oversee the collection of baseline biophysical data in accordance with system standards and priorities for park management and site planning ;
 ·To protect natural resources in parks, conservation and greenway sites in partnership with environmental organizations, educational institutions and agencies to support sustainable land management practices;
 ·Provide input into educational materials to inform both staff and public regarding natural resources, sensitive areas, species and best practices.

Outputs

Biophysical assessments, policies, guidelines and interpretive information on natural resource, stewardship and recreation management issues.

Design and management guidelines for facility maintenance, new facilities, and revenue initiatives; best practices and permitting for compliance.

Habitat enhancement, rehabilitation or creation projects in order to improve overall biodiversity and sustainable carrying capacities.

Resource management plans for parks, conservation sites and greenways.

Resource management programs, policies, guidelines and best practices to deal with specific issues for resource protection such as: invasive species control, species at risk protection, old field management, integrated pest management, specific species management (beaver, bats, bears, barn owls).

Targets and measures for monitoring ecological health and sustainability.

Milestones

Date

Develop Best Management Practices for construction in parks.

12/31/2013

Small restoration projects created and designed and support provided to respond to group, corporate and individual interest in undertaking hands-on environmental stewardship.

11/30/2013

Invasive plant species (Japanese knotweed, comfrey, lamiastrum, scotch broom, giant hogweed, wild chervil) controlled in 12 - 15 Regional Parks and 5 - 8 sites restored with natural vegetation.

12/31/2013

Sensitive Ecosystem Inventory and Environmental Sensitivity mapping rolled out to staff and partners and incorporated into park planning and operation activities.

12/31/2013

Program: Parks-Area Resource Management
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outcomes

A total systems approach to improved inventory and overall resource knowledge of parks, conservation sites and greenways enabling informed decision making.

Captured community resources, creativity and knowledge for park initiatives.

Habitat enhancement, restoration and/or creation.

Improved educational materials and/or programs.

Improved regulatory compliance.

Protection of critical habitats, sensitive areas, species at risk and heritage features.

Quality partnerships with environmental organizations, educational institutions and other agencies.

Special resource management initiatives for habitat types (ponds, wetlands, fields, forests, bogs, riparian areas), specific species (bats, bears, beaver, barn owls) or pests (invasive species, mosquitoes).

Supporting acquisition of habitat and conservation lands.

2013 Staffing

Regular Full Time	3.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	1.80
Total Staffing (FTE)	4.80

Total Expenditure

Parks-Area Resource Management-Central	\$190,000
Parks-Area Resource Management-East	\$184,000
Parks-Area Resource Management-West	\$183,000
	\$557,000

Program: Rental Program

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Operating

Description

About 33 market-rent residential properties, land-banked for future park use, are rented for income to reduce departmental tax levy until either the land is required for active park use or the building or utility services condition warrant demolition. The housing portfolio is managed by GVHC; directed & administered by Park Operations Services. Using external contractors the program provides consistent repair services at any hour without significantly affecting park operations staffing and union agreements .

Purpose

Produces a small amount of on-going non-tax revenues to support Parks programs while maintaining rental properties on land banked for future park use. Adaptive use for 11 heritage houses until public programming is feasible.

Outputs

About 33 residential units produce a net income of approximately \$29,000.

Milestones

Implement recommendations (either investment or demolition) for Belcarra's Bole House & Belcarra South Preservation Society lease cabins.

Replace rental house roofs at Kanaka Creek, Campbell Valley & Tynehead (McCaskill House).

Complete scheduled larger general repairs at Campbell Valley, Widgeon Marsh, Derby Reach (Houston House exterior painting) rental houses.

Date

10/31/2013

10/31/2013

12/31/2013

Outcomes

Through a small portfolio of rental housing, delivers shelter, a non-tax revenue source, security and stewardship of Parks' assets and lands.

2013 Staffing	
Regular Full Time	0.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	0.00

Total Expenditure	
Rental Program	\$454,000
	\$454,000

Program: Parks-Partnerships
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

The program uses a community development approach to conserve and build social capital and to facilitate meaningful and enduring citizen engagement in how regional parks are cared for, used and protected. This program facilitates the development of community-based park associations and develops partnerships in park related projects and strategic initiatives on a region wide basis; strengthening links with other societies, associations, community groups and volunteers to encourage and enable people of all ages, interests and abilities to support and participate in Regional Parks. The program provides coordination, strategic direction and supports major project implementation.

Purpose

To provide and support opportunities for meaningful citizen engagement in Regional Parks. Through a community development approach this program ensures social, environmental and economic sustainability objectives are achieved through citizen engagement and partnership in planning, management and implementation of stewardship, conservation, educational and recreational activities.

Outputs

Program Development - Develop and application of Park Partnership program vision, mission and principles, core program documents and instruments including agreements, grants to external organizations such as Park Associations, Catching the Spirit Youth Society; and forming strategic partnerships.

Capacity Building - education, trianing, workshops and coaching staff and partners.

Communication - Communication and dissemination of core corporate, department and program messages; partner and volunteer print and web-based media, articles, presentations and displays are facilitated and coordinated. Relevant program articles, presentations, reports are prepared and shared. Park Partner website, newsletter, are supported and updated.

Administration - budget, records managment, policy development, integration of corporate and department policies into program delivery, volunteer data collection.

Program planning and Implementation - support Park Associations and partner groups, implementation of park projects and initiatives, outreach and links between groups, committees and working groups.

Community Development and public engagement -strategies and methods to support collaborative decision making and project development, research on best practices, participation in working groups and corporate, department intiatives, outreach with First Nations, local community groups, corporations and municipal partners.

Milestones

Date

Program: Parks-Partnerships
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outcomes

Citizens with the tools and skills working together more effectively and respectfully.

Expanded community commitment and support for regional parks and greenways.

Strong civil society engagement in parks care and decision making; responsible individual behavior in parks; individual and community aspirations are achieved all supportive of the sustainability framework.

2013 Staffing	
Regular Full Time	3.50
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	3.50

Total Expenditure	
Parks-Partnerships-Central Area	\$94,000
Parks-Partnerships-East Area	\$96,000
Parks-Partnerships-General	\$153,000
Parks-Partnerships-West Area	\$97,000
	\$440,000

Program: Air Quality Data and Assessment

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Operating

Description

This program acquires, produces, analyzes and disseminates data on common air contaminants and air toxics and prepares emission inventories and forecasts, as well as performance measures related to air quality planning. The emission inventories, updates, and ambient air quality data are used to forecast future emission levels and future air quality to evaluate the effectiveness of emission reductions from proposed and implemented air quality initiatives . In addition, the data is used to provide air quality information to the public to encourage taking action towards improving air quality.

Purpose

To develop/maintain detailed inventories and forecasts for air emissions; to acquire, produce, analyze and disseminate data and projections for air quality planning, to measure performance in achieving air quality improvement goals, and to communicate air quality information to the public.

Outputs

Emission inventory and forecast reports for common air contaminants for the Lower Fraser Valley airshed used in Air Quality Management Plan implementation and other projects.

Technical assessment of emission reduction options/strategies.

Assessment of historical air quality trends.

Ambient air quality assessment/reports

Technical tools for representation and characterization of emissions and their impacts on air quality.

Publication of annual report on air quality and climate change for public engagement and education.

Milestones

Prepare an inventory of air toxics emissions in the Lower Fraser Valley , including updated prioritization of health risk.

Date

Outcomes

Knowledge of air emissions/trends and air quality issues that provide the information base for the planning and implementation efforts of Metro Vancouver and its partners.

2013 Staffing	
Regular Full Time	2.75
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	2.75

Total Expenditure	
Air Quality Data and Assessment-initial	\$415,000
INACTIVE-Air Quality Data and Assessment-allocated	\$0
	\$415,000

Program: Parks-Area Planning
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

Staff manage and coordinate the interpretation of biophysical data and cultural resource information , and utilize site knowledge to determine suitable land use, management, public facility requirements and design within regional parks. Staff work with park partners to help them deliver their programs and projects in a manner consistent with park management plans and operating policies.

Key operating program responsibilities include: preparing park management, concept and site plans; designing formal and informal public consultation processes; resolving public issues; working with community and partner groups; initiating and supporting stewardship projects; facilitating capital projects; developing and coordinating the implementation of agreements; developing and presenting administrative and planning presentations and reports to Park Committee, municipal councils, and other decision-makers and agencies.

Staff evaluate external proposals for park land use . The workload associated with this component is dependent upon the number of unsolicited proposals received. In addition, staff participate in adjacent land use planning initiatives with municipalities and other agencies . Staff manage available resources, supervise specialist contractors and consultants, consult on plans and issues, and support partner and non-profit group projects and processes. Grant funding is secured in collaboration with non-profit groups and other agencies to provide new facilities, environmental enhancement, events and other activities within parks. Staff participate actively in departmental policy development. Staff support park operations, and partners, volunteers and fund raising in a variety of ways.

Purpose

Within the framework provided by corporate and departmental policies, to provide planning for land use, stewardship, and facility design and capital projects in 32 park and reserve sites and greenways striving to balance the needs of the people and communities served with environmental conservation and financial sustainability. To ensure public involvement and collaboration in park planning and decision making and park projects.

Program: Parks-Area Planning
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Outputs

Annual outputs include: one to three park management plans underway at one time with adoption of approximately one plan every year; design and specifications for park projects and capital projects, assessment of external project proposals, participation in major corporate, departmental, municipal and senior government planning initiatives affecting parks, planning assistance consultation and guidelines for capital projects, planning assistance to park operations, park associations, partners, licensees and volunteers, coordinate and keep up to date a variety of license and legal agreements.

Milestones

Provide input into Parks System Master Plan and consultation and pursue design and construction of area accessibility projects

Adopt Colony Farm Sustainability Plan and Aldergrove Management Plan
Develop concepts or explore feasibility of: incubator farms at Colony Farm; redevelopment of Camp Capilano at Capilano River, Cumberland Point and Spruce street plan for Brunette Fraser Greenway and Burns Bog northern drainage management.

Initiate detailed design of Aldergrove and Matsqui Trail phase 1 developments; Surrey Bend facilities and trails and Gerow Barn (contingent upon further direction)

Pursue greening of Cleveland Dam parking lot (EHAP); business plan for Orchard Cottages at Crippen and initiate cultural resource area assessment at Pacific Spirit

Pursue acquisition and operating agreement for Delta Nature Reserve addition to Burns Bog ECA

Provide input and resolve property issues for significant projects undertaken by others which affect regional parks, specifically twinning the water main through Colony Farm, twinning the Maple Ridge forcemain through Surrey Bend and Lower Brunette Watershed restoration (EHAP)

Complete detailed design of Matsqui Trail Regional Park Plan Phase 1 Infrastructure Improvements

Date

Program: Parks-Area Planning

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Operating

Outcomes

Park plans guide site management and decision making.

Park visitors provided with well designed, safe and long lasting facilities which incorporate sustainable elements; park land is protected and enhanced; community satisfaction and engagement maintained through inclusive processes.

Resolution of competing demands achieved in a fair and inclusive way. Member municipalities served and engaged. Municipal, private and non profit group requests for use of park land or projects that affect park land evaluated in a timely fashion.

2013 Staffing	
Regular Full Time	3.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	3.00

Total Expenditure	
Parks-Area Planning-Central	\$153,000
Parks-Area Planning-East	\$132,000
Parks-Area Planning-West	\$123,000
	\$408,000

Program: Debt Program-Parks
Department: Finance & Administration
Committee: Environment & Parks

Debt

Description

The Program provides annual interest and principle payments as required by the legal agreements of each outstanding debenture issue. The payments ensure the future retirement of the issue on or before the maturity date.

The Program also ensures that short term financing obligations are met until the outstanding balance is repaid or transferred to long term debt.

Purpose

To repay financing costs on funds borrowed for capital projects.

Outputs

The Program provides annual interest and sinking fund payments on all short and long term debt associated with capital programs.

Milestones

Date

Outcomes

Legal obligations are satisfied and the District maintains a favourable credit rating.

2013 Staffing	
Regular Full Time	0.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	0.00

Total Expenditure	
Debt Program-Parks	\$328,000
	\$328,000

Program: Environment

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Operating

Description

This program provides support for the Environment and Parks Committee, Regional Planning and Agriculture Committee and other Board committees as appropriate . Program elements include incorporating management and protection of regional air, land and water and the ecosystem services they provide into existing programs, plans and priorities for improvement by Metro Vancouver or other governments and agencies . Main program focus includes implementation of the Ecological Health Action Plan and support for Regional Growth Strategy implementation, including research and development of cross-cutting issues related to climate change, land use, habitat protection, agriculture, and other matters related to general environmental quality.

Purpose

To maintain and enhance regional air, land and water environmental quality through the development and integration of plans, policies, and projects and identification of priorities for action, including implementation of the Ecological Health Action Plan and the Regional Growth Strategy .

Outputs

Implementation of the Ecological Health Action Plan

Prepare annual report on the Ecological Health Action Plan

Prepare timely research and establish regional incentives to support municipalities in the development of the Regional Green Infrastructure Network and incorporation of green infrastructure techniques

Provide professional environmental planning and policy research services to the Metro Vancouver Board .

Milestones

Date

Outcomes

This program helps to improve understanding of Metro Vancouver's regional environmental quality, the environmental aspects of regional livability and sustainability and the identification of areas for further action.

2013 Staffing	
Regular Full Time	1.50
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	1.50

Total Expenditure	
Environment-allocated	\$0
Environment-initial	\$323,000
	\$323,000

Program: Air Sampling and Investigation
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

There are two core functions of this program. The first is in response to a growing public concern about neighbourhood scale (local) air quality in Metro Vancouver. The program provides specialized short-term air quality testing and assessment that can characterize air quality at the neighbourhood scale and investigate areas of particular concern not covered by the fixed/permanent ambient air quality monitoring network. This can include problem areas in areas of mixed land use, or those identified through citizen complaints, or in response to air quality emergencies such as fires, uncontrolled releases, etc. These special studies typically deploy mobile or portable air monitoring equipment that provides a great deal of flexibility and that can be readily adjusted to accommodate changing needs and priorities.

The second function of this program is to conduct field testing of regulated industrial and commercial air emission sources. Staff conducts these tests in order to gather air emission data as part of a regulatory compliance testing program and to gather input data for Metro Vancouver emission inventories, regulation development initiatives as well as for other regional programs and initiatives. Staff is responsible for the servicing, repair and calibration of all related monitoring equipment and they also ensure adherence to approved testing protocols by auditing third-party field sampling programs, protocols and data reports as part of a regulatory compliance and enforcement program.

Purpose

To respond to special air quality monitoring and assessment needs, such as public concern or complaints about air quality, nuisance or health effects related to air pollutants in localized areas. The purpose of the specialized monitoring is to investigate the source(s) of air quality impacts and recommend remedial measures or local air quality action plans. The sampling may also be in response to air quality episodes or emergency situations.

To support the air quality regulatory program by monitoring area, industrial and commercial air emissions as well as issuing daily burning advisories. In addition, air testing is conducted on various sources in support of other Metro Vancouver departments and programs such as the WWTPs and the Regulation and Enforcement Division of P & P. Auditing third party measurements of emission sources and reviewing all third party emission testing reports.

Outputs

Testing and monitoring of industrial and commercial sources of air emissions (conducted by staff or consultants) to assess compliance with GVRD permits and regulations, or to support other GVRD departments.

Investigation of local (neighbourhood) scale air quality and provision of air quality complaint response and emergency response.

Milestones

Review of approximately 60 third party air emission (stack) test reports, field auditing of approximately 25 third party stack tests, and stack testing and reporting of approximately 10 sources by staff.

Undertake two local air quality investigations in identified problem areas in support of program development, using new mobile air quality monitoring station and/or portable equipment.

Date

12/31/2013

12/31/2013

Program: Air Sampling and Investigation

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Outcomes

Compliance with permits and regulations. Data on GVRD emission sources in support of corporate SRI initiatives. Development of regionally relevant air emission rules and regulations.

The burning advisory service prevents open burning on days with poor air circulation.

Provide guidance for local and regional decision-makers on land use decisions

Resolution of localized air quality concerns and provision of timely response to complaints and emergencies.

2013 Staffing

Regular Full Time	2.25
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	2.25

Total Expenditure

Air Sampling and Investigation-initial	\$274,000
INACTIVE-Air Sampling and Investigation-allocated	\$0
	\$274,000

Program: Parks-Operations & Maintenance-Burns Bog Ecological
Department: Conservancy Area
 Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Operating

Description

This sub-program supports the regional parks O&M activities at Burns Bog, Parcel 2 and the newly opened section of the Delta South Surrey Greenway by providing resources to undertake basic site management activities; patrol to address encroachments, trespass, conduct access orientations, maintain relations with emergency response agencies, liaise with Corporation of Delta and others to ensure SIR activities are consistent with BBECA Management Plan .

Purpose

To provide supervision, staff, supplies and services for the delivery of day-to-day operations and maintenance at Burns Bog Ecological Conservancy Area and Delta South Surrey Greenway.

Outputs

This program supports Metro Vancouver activities related to:
 Conserving natural capital and the bog's ecological integrity, reducing liability, security, safety, and operations including coordination and documentation of property boundaries, management issues, related public inquiries, commercial neighbours, hunting issues and trespass.
 Take lead role in the coordination and development of written protocols with Corporation of Delta with current water regime and fire management strategies. Control access for research activities and monitor researchers' in the Bog.

Milestones

Develop and implement operations plan for Delta Nature Reserve

Date

12/31/2013

Outcomes

Burns Bog's ecological integrity and natural processes are restored and self-sustaining contributing to the natural capital of the region.

2013 Staffing	
Regular Full Time	1.33
Regular Part Time	0.00
Temporary Full Time	0.25
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	1.58

Total Expenditure	
Parks-Operations & Maintenance-Burns Bog Ecological Conservancy Area	\$245,000
	\$245,000

Program: Parks-Revenue Generation

Operating

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Description

Parks and other Metro Vancouver sites, buildings and facilities are rented for film production through the Metro Vancouver Film Coordination Office staffed by Regional Parks and guided by the Metro Vancouver Filming Policy and Regulations. Filming site supervision is contracted out. Costs are recovered from the production companies and revenue is generated from site and facility rental fees. Filming currently provides the major source of business revenue for Regional Parks.

Purpose

To generate reliable non-tax business revenue as part of Parks' resourcing strategy by taking advantage of Parks' physical assets and the business opportunities presented by the rapidly growing film industry in the region.

Outputs

Bookings for filming shoots, revenue from filming. The Metro Vancouver Filming Coordination Office generates an annual summary report, produces the Metro Vancouver Locations For Film Makers electronic "binder", updates and reviews annually the Metro Vancouver Film Policy & Regulations, and develops site procedures and guidelines for filming.

Milestones

Date

Outcomes

Film production students are sensitized to Metro Vancouver's filming policy and regulations and hopefully go on to be responsible film makers. Revenues from filming at LSCR and corporate locations are returned to those programs.

Revenue generated offsets operating costs for the Filming Coordination Office and helps pay for park facilities and services for the public.

2013 Staffing

Regular Full Time	0.00
Regular Part Time	0.00
Temporary Full Time	2.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	2.00

Total Expenditure

Parks-Revenue Generation	\$209,000
	\$209,000

Program: Parks-Quality Control-Allocated

Operating

Department: Operations & Maintenance

Committee: Environment & Parks

Description

The collection and analysis of drinking water and bathing beach samples from Metro Vancouver parks.

Purpose

To provide analytical and field services for monitoring drinking water quality (bacteriology and chemistry) and bathing beach bacteriological quality in Metro Vancouver Parks.

Outputs

Data and reports on the quality of the drinking water samples and bathing beach samples collected in Metro Vancouver parks.

Metro Vancouver laboratories analyzed 832samples and completed 2,495 tests for the Parks Water monitoring program in 2011.

Milestones

Date

Outcomes

Drinking water supplies and bathing beach bacteriological water quality in Metro Vancouver parks are monitored on an ongoing basis.

2013 Staffing

Regular Full Time	0.57
Regular Part Time	0.03
Temporary Full Time	0.08
Temporary Part Time/Auxiliary	0.01
Total Staffing (FTE)	0.69

Total Expenditure

Parks-Quality Control-Allocated	\$72,000
	\$72,000

Program: Parks-Basic Facilities
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Capital

Description

The Basic Facilities Program funds project costs for concept development, engineering studies, site plan development and detailed design, preparation of contract documents and construction. All projects are financed on a pay-as-you-go basis. Revenues and grants are used to supplement allocated funding whenever available.

The Pacific Parkland Foundation provides supplementary funding for enhancement and value added public amenities in parks.

Purpose

To deliver major facility and infrastructure development in new park sites. To expand facilities in existing parks where demand and current use are high.

Outputs

Provide facilities to support outdoor recreation that contributes to health and wellness while respecting and protecting our land base, natural resources and ecosystems; capital improvements include-

- Parking, washrooms, signs
- Walking, cycling and equestrian trails
- Picnic sites and group facilities
- Heritage building restoration, service yards
- Shoreline access, boardwalks
- Water, sewer, power and fire protection utilities

Milestones

Date

Outcomes

New park infrastructure and land base is managed in a manner supporting sustainable principles to ensure visitor safety, service level obligations and access to outdoor recreation.

Program: Parks-Basic Facilities

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Capital

2013 Staffing

Regular Full Time	0.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	0.00

Total Expenditure

INACTIVE-Parks-BasicFacilities-Pacific Spirit Wreck Beach Washrooms	\$0
INACTIVE-Parks-BasicFacilities-Small Basic Facilities projects	\$0
Parks-Basic Facilitie-Colony Farm Day-Use Washroom	\$860,000
Parks-Basic Facilities-Aldergrove Upgrades	\$250,000
Parks-Basic Facilities-Camp Capilano Redevelopment	\$350,000
Parks-Basic Facilities-Campbell Valley Perimeter Trail Phase 5	\$20,000
Parks-Basic Facilities-Colony Farm Sheep Paddocks Trail	\$270,000
Parks-Basic Facilities-Ecological Health Plan	\$250,000
Parks-Basic Facilities-Exhibits, Interpretation & Public Art	\$200,000
Parks-Basic Facilities-Natural Resource Management	\$200,000
Parks-Basic Facilities-Projects from 2014-2022	\$0
Parks-Basic Facilities-Small Projects	\$250,000
Parks-Basic Facilities-Universal Accessibility	\$150,000
Parks-Basic Facilities-Workplace Health and Safety	\$500,000
Parks-BasicFacilities-Boundary Bay-Centennial Beach	\$750,000
Parks-BasicFacilities-Experience the Fraser	\$380,000
Parks-BasicFacilities-Kanaka Creek Watershed Stewardship Centre Academy	\$850,000
Parks-BasicFacilities-Matsqui Trail - Phase 1 Infrastructure Improvements	\$600,000
Parks-BasicFacilities-Surrey Bend	\$200,000
	\$6,080,000

Program Capital Costs

Actual Costs Prior to 2013	0
Capital Costs 2013 to 2022	0
Capital Costs After 2022	0
Total Capital Costs	0

Program: Parks-Basic Facilities
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Capital

Project Name	Cost	Project Description	Start Date	End Date
INACTIVE-Parks-BasicFacilities-Pacific Spirit Wreck Beach Washrooms	0		Jan 2013	
INACTIVE-Parks-BasicFacilities-Small Basic Facilities projects	0		Jan 2013	
Parks-Basic Facilitie-Colony Farm Day-Use Washroom	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Aldergrove Upgrades	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Camp Capilano Redevelopment	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Campbell Valley Perimeter Trail Phase 5	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Colony Farm Sheep Paddocks Trail	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Ecological Health Plan	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Exhibits, Interpretation & Public Art	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Natural Resource Management	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Projects from 2014-2022	0		Jan 2013	
Parks-Basic Facilities-Small Projects	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Universal Accessibility	0		Jul 2012	Jul 2012
Parks-Basic Facilities-Workplace Health and Safety	0		Jul 2012	Jul 2013
Parks-BasicFacilities-Boundary Bay-Centennial Beach	0		Jan 2013	
Parks-BasicFacilities-Experience the Fraser	0		Jan 2013	
Parks-BasicFacilities-Kanaka Creek Watershed Stewardship Centre Academy	0		Jan 2013	
Parks-BasicFacilities-Matsqui Trail - Phase 1 Infrastructure Improvements	0		Jul 2012	Jul 2012
Parks-BasicFacilities-Surrey Bend	0		Jan 2013	
Total Cost	0			

Program:	Parks-Capital Replacement	Capital
Department:	Metropolitan Planning, Environment and Parks	
Committee:	Environment & Parks	

Description

This program funds the repair, replacement or upgrading of existing park physical assets. These assets are estimated to have a total replacement value in excess of \$140 million. The program also protects the Parks land base through slope stabilization measures and erosion and flood control systems. The projects in this program are funded on a pay-as-you-go basis. Revenues and grants are used to supplement allocated funding whenever available. Services to carry out this program are provided primarily through the Parks Engineering Services Program.

Purpose

To repair, replace and upgrade existing park infrastructure to appropriate standards of safety or service level and to protect the Parks land base in a cost-effective manner.

Outputs

More than 100 projects involving the repair, upgrading or replacement of Parks infrastructure are scheduled, designed and executed annually.

Milestones

Date

Outcomes

Existing park infrastructure and land base is maintained and if required, replaced, in a manner based on sustainable principles to ensure visitor safety, service level obligations and access to outdoor recreation.

2013 Staffing	
Regular Full Time	0.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	0.00

Total Expenditure	
Parks-CapRepl-Projects	\$1,600,000
	\$1,600,000

Program Capital Costs

Actual Costs Prior to 2013	0
Capital Costs 2013 to 2022	0
Capital Costs After 2022	0

Total Capital Costs 0

Project Name	Cost	Project Description	Start Date	End Date
Parks-CapRepl-Projects	0		Jan 2013	
Total Cost	0			

Program: Parks-Heritage Parkland Acquisition Fund

Department: Metropolitan Planning, Environment and Parks

Committee: Environment & Parks

Capital

Description

The Land Acquisition program acquires new land, accesses, or rights-of-way to expand existing Parks, complete or expand greenways and develop new parks within Metro Vancouver.

The HPAF supports appraisals, negotiations, purchase and legal costs for acquisition and disposal, site protection, restoration and rehabilitation of acquired sites. Land acquisition decisions are based on how candidate sites support a sustainable region by providing quality recreation experiences; protecting critical habitat and species at risk, and protecting heritage values.

The regional greenways program is also supported by HPAF including acquisition of public access right-of-ways, waterfront access, staging areas for recreation oriented greenways and riparian / habitat protection for environmental greenways.

Purpose

To acquire regionally important conservation and recreation lands to support environmental, social and economic sustainability of the region, including managing the disposal of surplus lands.

To create working partnerships with other groups and agencies for acquisition and management of key sites.

Outputs

Actions and negotiations to acquire by grant, lease or purchase or disposal by sale or trade of specific lands to increase regional representation, secure threatened ecological areas and expand recreation opportunities

Milestones

On a willing seller basis, acquire lands identified as needed to complete existing park sites (deficiencies)

Date

12/31/2013

Seek opportunities to support Experience the Fraser Project and create partnerships to make acquisitions if feasible

12/31/2013

Outcomes

Acquisition of natural landscapes, habitats, ecosystems and heritage features to ensure the conservation and appropriate development of natural capital by promoting regional biodiversity while providing access for outdoor recreation opportunities.

2013 Staffing	
Regular Full Time	0.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	0.00

Total Expenditure	
Parks-Heritage Parkland Acquisition Fund	\$5,000,000
	\$5,000,000

Program: Parks-Heritage Parkland Acquisition Fund
Department: Metropolitan Planning, Environment and Parks
Committee: Environment & Parks

Capital

Program Capital Costs

Actual Costs Prior to 2013	0
Capital Costs 2013 to 2022	0
Capital Costs After 2022	0
Total Capital Costs	0

Project Name	Cost	Project Description	Start Date	End Date
Parks-Heritage Parkland Acquisition Fund	0		Jan 2013	
Total Cost	0			

Program: Contribution to Capital-Parks
Department: Finance & Administration
Committee: Environment & Parks

Contr. to Capital

Description

Payments saved on matured debentures are applied to current capital projects, thereby decreasing future long term debenturized debt.

Purpose

To reduce interest costs on future borrowings for capital projects.

Outputs

Dependence on debenture financing is reduced.

Milestones

Date

Outcomes

The cost of financing of Parks capital projects is reduced. Progress is made toward funding all future capital projects through "Pay as You Go".

2013 Staffing	
Regular Full Time	0.00
Regular Part Time	0.00
Temporary Full Time	0.00
Temporary Part Time/Auxiliary	0.00
Total Staffing (FTE)	0.00

Total Expenditure	
Contribution to Capital-Parks	\$9,083,000
	\$9,083,000



Environment and Parks Committee Meeting Date: October 3, 2012

To: Environment and Parks Committee

From: Frieda Schade, Central Area Parks Manager
Metropolitan Planning, Environment, and Parks Department

Date: September 13, 2012

Subject: **Colony Farm Regional Park - Kwantlen Polytechnic University request to establish a teaching farm**

Recommendation:

That the Environment and Parks Committee support the proposal to partner with Kwantlen Polytechnic University and establish a teaching farm in an area designated for agriculture in the existing Colony Farm Land Use Plan.

1. PURPOSE

The purpose of this report is to seek the support of the Environment and Parks Committee for a proposal by Kwantlen Polytechnic University (KPU) to use approximately 5.6 ha (14 acres) of land in Colony Farm Regional Park for a small teaching farm for their Bachelor of Applied Science in Sustainable Agriculture Program.

2. CONTEXT

In September 2012, the Environment and Parks Committee and the Board authorized staff to continue operational business and projects in the park and to consider proposals from other agencies for appropriate uses that fit within the existing Colony Farm Land Use Plan.

Kwantlen Polytechnic University submitted a proposal for use of approximately 5.6 ha (14 acres) of land at Colony Farm Regional Park to start a teaching and demonstration farm. This will be in support of their new Bachelor of Applied Science in Sustainable Agriculture Program (Attachment 1).

The proposal outlines a phased approach for farming in the park, an area for modest operational facilities including a modular trailer for classroom space, storage and crop washing facilities.

KPU is proposing to follow the Canadian Organic Production Systems General Principles and Management Standards as a minimum level of sustainable agricultural practice and enhance habitat through development of hedgerows and continued protection of key habitat features. They will also practice soil conservation, work to control invasive plant species using Metro Vancouver approved methodologies, and meet guidelines developed by Metro Vancouver staff for establishing agriculture at Colony Farm (Attachment 2).

The proposed location for the teaching farm is located in the part of the park that was most recently farmed (2003-2004). This area is where some access to utilities and services is already available. The area is clearly designated for agricultural use in the Colony Farm Land Use Plan (Attachment 3 - Location Map). Drainage is a challenge throughout the park and KPU is aware of these challenges. The proposed location has a high land elevation and good drainage.

The proposal outlines a phased approach starting with 2 hectares (5 acres) made up of 0.8 hectares (2 acres) of annual market crops, 0.4 hectares (1 acre) of perennial demonstration crops and 0.8 hectares (2 acres) of production orchard with tree fruit and nut crops. The proposed area includes expansion of the market crops production area by an additional 0.4 hectares (1 acre) by 2015 and up to a total of 4.8 hectares (12 acres) as demand for the program grows. Produce grown at the farm will be sold offsite and proceeds will be put back into supporting the operations of the teaching farm.

Although there are no formal recreational facilities in this section of the park, the public will continue to have access to informal trails and to local bird watching areas. The teaching farm will be accessible to the public via pathways and educational signage. KPU also seeks to incorporate short term educational programs in sustainable agriculture in the form of workshops and field days for industry and the public.

Initial outreach for the Sustainability Plan conducted in the fall and winter of 2011 with member municipalities and community partners indicated that farming with an educational component would be the most acceptable form of agriculture at Colony Farm. KPU aims to train new farmers on small scale, sustainable agriculture providing a regional public benefit and investing in infrastructure and land management at Colony Farm.

Metro Vancouver staff plan to work closely with KPU to develop the teaching farm. The main elements of an agreement with KPU would include:

- Length of term appropriate to cost of investment (10 years)
- Land provided free of charge for the first five years in exchange for KPU investment in land and drainage improvements. The agreement would be reviewed after five years and a fair market rental rate would be established.
- Ongoing liaison with Metro Vancouver staff on all significant aspects of onsite work.
- Metro Vancouver approval on any improvements, servicing or modifications to the property.
- Requirements for environmental considerations including adherence to the Canadian Organic Production Systems General Principles and Management Standards and Guidelines for Establishing Agriculture at Colony Farm.
- KPU to integrate site security and safety of students, staff, and the public.
- KPU to cover all expenses including: taxes, future rent, utilities costs, development and operating costs.
- KPU to obtain all relevant permits and approvals.
- Reports for review by the Environment and Parks Committee at the end of year 1 and year 5.

3. ALTERNATIVES

That the Environment and Parks Committee:

- a) support the proposal to partner with Kwantlen Polytechnic University and establish a teaching farm in an area designated for agriculture in the existing Colony Farm Land Use Plan.

Or

- b) direct staff to reject this proposal from KPU for a teaching farm,

Or

- c) provide staff with other direction.

4. CONCLUSION

The Colony Farm Land Use Plan, a registered covenant on title, specifies agriculture as one of the key uses of the site. KPU has outlined a proposal for farming that fits with the principles outlined in the Land Use Plan, is in an area clearly designated for Agriculture, and fits with other current activities in the park. KPU plans to demonstrate environmentally sound agricultural practices, teach new farmers practical skills through a variety of hands-on experiences, and incorporate short term educational programs for industry and the public.

This proposal is also consistent with the Metro Vancouver Food Systems Strategy. As local food production is an important priority and the lack of new farmers is a key issue facing the region, there are many public benefits to supporting educational farming on public land.

An agreement would provide enough security for KPU to make the necessary investment and grow perennial crops. If approved, Metro Vancouver and KPU would hold a meeting to inform the public about the proposal, receive input and answer any questions.

ATTACHMENTS

1. Sustainable Agriculture Teaching & Demonstration Laboratory Farm At Colony Farm – Phase I Proposal – August 2012 (Doc. #6519121).
2. Guidelines for Establishing Agriculture at Colony Farm Regional Park (Doc. #6519004).
3. Location Map – Colony Farm Land Use Designations and KPU Proposed Teaching Area (Doc. #6519468).

**Sustainable Agriculture Teaching & Demonstration Laboratory Farm
At Colony Farm**

Phase I Proposal

August 2012

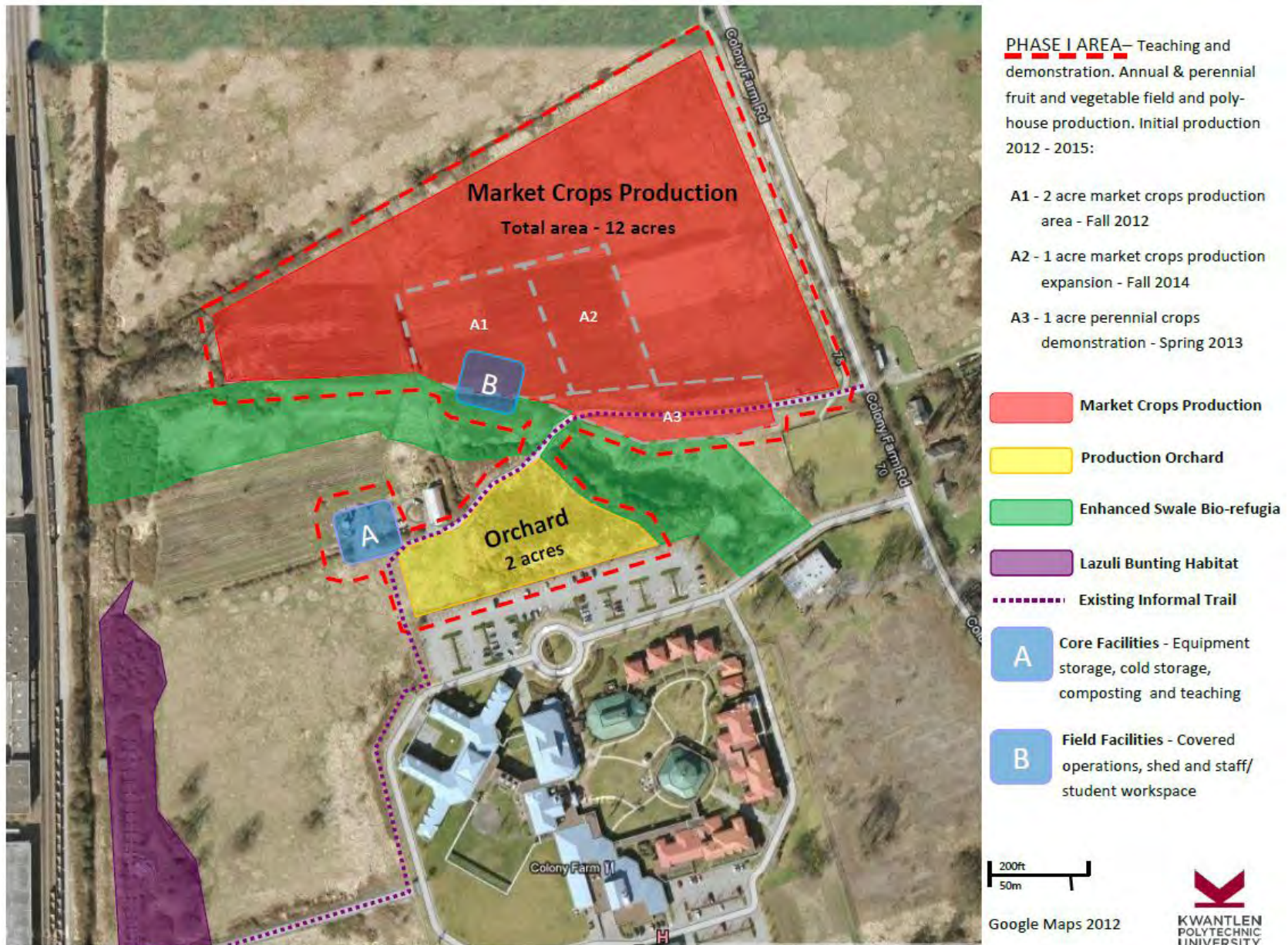
Prepared by:
Dr. Kent Mullinix
Anna Rallings



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Fig.1: Proposed Site Plan



Introduction

In Fall 2012, Kwantlen Polytechnic University (KPU) will commence the inaugural year of a new Bachelor of Applied Science in Sustainable Agriculture offering a degree with a unique combination of classroom-based theory and farm-based experiential learning (see Appendix A). To deliver this innovative programming, KPU has sought to develop a teaching and demonstration laboratory farm in the Metro Vancouver region for practical coursework and research. Simultaneously, Metro Vancouver (MV) has been exploring the potential for agricultural programming and land use at Colony Farm Regional Park. In what follows, this document delineates the development and operation of a proposed teaching and demonstration farm which could be put in place at Colony Farm to meet the needs of KPU as well as supporting goals of MV and other associated organizations.

Background

The newly developed B.A.Sc. in Sustainable Agriculture program at KPU offers a comprehensive perspective on and study of:

- The science of agro-ecosystem design and stewardship;
- Innovative and ecologically sound crop production methods;
- Sustainable farm business management; and,
- The economic, social, and environmental challenges facing our food system

The curriculum is designed in recognition of the need for integrated applied and theoretical educational programming supporting the new powerful sustainable, human scale, ecologically based, regional agriculture and food systems movement. Students will be immersed in educational environment that fosters experiential learning and exploring personal aspirations. KPU anticipates that our graduates will be sought after in fields as diverse as planning, resource management, politics, government, non-government organizations, related business and production and post-production agriculture.

During our four year Bachelor's degree program students will achieve three major learning outcomes:

- *The ability to grow fruit and vegetable crops within a sustainable, ecologically-sound context.* A full spectrum of experiential field-based agricultural courses are offered in Year 3 which, by necessity, follows the complete cropping cycle beginning in the spring and extending through summer into the fall. These applied courses function as a mechanism to bring the theoretical concepts and principles of sustainable agro-ecosystem design, function and management to practical realization.
- *Develop the business, sales and marketing skills necessary to manage a sustainable agricultural farming business.* The development of these skills is facilitated by the inclusion of a broad base of foundational courses supplemented by a multidisciplinary, integrated planning and business management course in Year Four.
- *Develop practical, problem solving and research skills as well as an understanding of government economic and business policies needed to address issues of sustainable agri-food systems as they relate to employment in government and non-government organizations.*

Additionally, KPU seeks to incorporate short-term education programs, such as workshops and field days, for industry and the public into sustainable agriculture educational programming. The laboratory farm will facilitate doing so.

The multifaceted nature of the program allows KPU to impart the understanding and tools necessary to face the challenges of the future and to build the healthy communities we need, in which sustainable agri-food systems are inextricably a part of. However, critical components of such educational programming can only be facilitated in the environment of a laboratory farm. The lab farm serves as a teaching and learning space for students to apply theory,

develop and hone their skills and showcase environmentally-sound agricultural practices. KPU has been seeking a community partner to develop such a site by Spring 2013, in time for 3rd year courses.

In Spring 2012, KPU and Metro Vancouver (MV) began to explore the possibility of cooperation at Colony Farm Regional Park. The two parties have delineated their mutually supportive goals and are looking into a potential partnership on the site to deliver valuable educational opportunities for KPU students and the public alike (see Appendix B).

PHASE I: Proposed Operations

Proposed Phase I operations are designed to provide a core area of production of both annual and perennial market crops using a diversity of sustainable methods intended for teaching as well as demonstration to the greater public. This area includes a 12 acre site for market crops and a perennial crops demonstration site which will be developed over the period of several years, starting with only 3 acres in Year 1. The Phase I area also includes a 2 acre production orchard as well as two small facilities for both field and classroom operations. The farm will be managed by KPU on a modest budget to build basic operations that will be able to grow in complexity and funding over time while demonstrating financially sustainable practices. In conjunction with increasing enrolment, KPU will in due course bring the whole of the Phase I area into cultivation.

Objectives

- Explore a wide range of research, teaching, learning and community engagement opportunities which create and advance a bio-regional food system that is respectful of and meaningfully integrated with the immediate and regional ecosystems and communities;
- Establish a multi-acre laboratory farm demonstration facility that can accommodate a wide diversity of crops and ecologically sound agricultural practice;
- Provide a functional production agriculture teaching site with plantings to support diverse technical instruction mechanisms;
- And increase public awareness of sustainable agriculture through demonstration of responsible practices.

Field Operations

KPU's proposed laboratory farm seeks to fulfill its objectives through establishing and operating a diversity of human scale, low input agricultural crop production plantings on a compact teaching and demonstration site. The site will be developed over the period of three years, providing ample opportunity to observe the landscape and install the features of the farm in a judicious and appropriate manner. The two major areas of Phase I are as follows:

Market Crops Production – approximately 12 acres of production area primarily for rotational market crops and perennial fruit crops production.

Production will begin with a 2 acre parcel, expanding into the full 12 acre area over several years.

- *Annual crop production* – organic, gravity fed irrigation delimited by hedgerows
 - Fall 2012 - Initial production of 2 acres (A1)
 - Fall 2014 - 1 acre of expansion (A2) starting in Year 3

- *Perennial Crops Demonstration (A3)* – 1 acre of mixed tree fruit, small fruit and nut crops, including apple, pear, plum, blueberry, raspberry, strawberry, grape, goji berry, hazelnut etc. planted in Spring 2013. It is intended that this area will be open to the public and have educational signage.

Production Orchard (PO) – 2 acres site for Year 2 – including advanced orchard systems & living mulches

- Combination of tree fruit and nut crop production in a variety of orchard/planting management approaches
- Proposed small-scale high tunnel production pilot project on a limited portion of the site
- Small apiary which may be operated by KPU or in partnership with a local apiculturist

Evely (2009) identified the proposed Phase I site as a good candidate for vegetable production with some limitations due to wetness and organic soils. Areas under production will expand annually into the full 12 acre Market Crops Production site. Several adjacent areas have been identified as potential sites for expansion of operations, which may in future include small animal agriculture integrated with crop production. Further expansion will be reviewed and proposed in later years once the Phase I site has been established.

Irrigation – Proposed operations include the use of gravity-fed drip distribution that will utilize the natural slope of the production areas. System will be scoped in Year 1 for installation in Year 2. KPU will explore the potential of various water sources, including ditch, metered water and wells.

Tillage – The fine textured clay loam soils found on the Phase I site in combination with the seasonal soil moisture do not lend themselves to heavy implement use (Evely 2009, Suess 2012). The proposed plan includes the purchase of smaller, lighter farm machinery combined with a commitment to soil building through onsite composting. Operations will also include experimentation with many types of production methods, including no till agriculture. Soil quality will be enhanced and soil will be protected from erosion.

Cover Cropping and Rotation – Implementation and farm management plans include the extensive use of nitrogen-fixing cover crops and rotations (1/3 of annual crop production area annually). KPU will manage soil as per the recommendations laid out in Suess (2012).

Agro-ecosystem Design & Management – In line with KPU's objective of ecologically sound farm design and management, the proposed farm plan will feature the inclusion of KPU-managed enhanced hedgerows (diverse plant material and architecture) within the Phase I crop production area (HB Lanarc Consultants 2009), natural mixed ground cover (particularly within the orchard sites) and the preservation of the natural swale running east-west through the site. All practices onsite will be as per Canadian Organic Production Systems General Principles and Management Standards and perhaps other certification programs (Salmon Safe, etc.). Ecologically based pest management strategies will be utilized. Farm management will review plans annually to incorporate observations and improvements.

Facilities

In order to deliver its curriculum onsite and manage the farm operations, KPU will install two main facilities on the site. The Core Facilities will be located adjacent to the current MV storage facilities (Fig 1 – Site A) while the Field Facilities will be located on the southwestern corner of the crop production fields (Fig.1 – Site B).

Core Facilities (A) – designated for private KPU buildings and larger equipment storage.

- Classroom – modular trailer as a temporary classroom area, including self-contained toilet

- Equipment storage – dry, secure, covered area for machinery such as tractors and amendments including an area for maintenance and workshop
- Cold storage – 20'-40' refrigerated container (electrical) – potential for renewable energy
- Covered area with crop processing capability (washing, sorting, etc) – connected to metered water
- Composting facility – 3-5 (10'x10') bay concrete pad for onsite composting and recycling of organic materials in accordance with environmental regulations.

Field Facilities (B) – designated to support field work within Phase I area and provide in-field teaching space

- Tool shed – storage of smaller frequent-use tools for field activities
- Covered work area – shade-dependent activities, including adequate shaded teaching space, for seeding and potting as well as washing and field heat removal from produce – hooked up to stored or metered water
- Water storage – possible site of water storage for gravity fed irrigation systems as well as bicycle-powered systems

Farm Management

The Phase I farm will operate approximately 3 acres of annual vegetable field crop production and 3 acres of intensive perennial crop production by Year 3 with expansion planned for the Market Crop Production area. The management of the site, programs and labor will require investment in a full-time staff to coordinate operations with continuity year-to-year. Other faculty and student time will be required and additional farm labor may be required during the growing season. KPU assumes liability for their operations, including KPU student and staff activity, and will provide adequate insurance coverage.

Farm Manager – One full-time staff coordinates and performs farm operations on the site. Farm revenue generated will offset costs for this position.

Responsibilities include:

- Development and implementation of crop production plans – including annual and perennial production and sales
- Development and implementation of farm management plan – includes soil, nutrient, water, pest and biodiversity strategies
- Liaising with Kwantlen faculty and students to integrate educational programming into the operational plan and providing instructional support
- Personnel management of farm staff and students
- Identification and procurement of resources and equipment
- Site maintenance including facilities and composting
- Liaising with Metro Vancouver, municipal staff and other agencies to coordinate site activities

Student Participation – During AGRO 3290, 3390 & 4190 as well as AGRO 3260 & 3270 (see Appendix A), students will be required to manage the farm in collaboration with the Farm Manager and faculty. On average each student will be required to contribute 6 hours of farm work weekly outside of their formal classes to do field work (practicum) and participate in other farm operations.

Faculty Participation – Faculty will be assisting in the management of their respective domains through the contribution of expertise and time during their semesters on the farm.

Summer Farm Hand(s) – Full-time contract employees will assist in the operations of the farm during the portions of the season where labor will be needed (May – September). Although students will be working onsite, additional employees will be needed to ensure critical tasks are completed. These positions create the opportunity to connect to the local community, including Kwikwetlem First Nations. Additional funding may be available through government and non-government grant programs.

Public Outreach – Staff, faculty, students and visiting professionals will seek to engage the public and industry in activities centered on agricultural education. These activities may include workshops, field days, tours and potentially on-farm volunteering opportunities.

Phase II: Potential Future Expansion

Once the Phase I area operations have been established, MV and KPU may elect to expand the teaching and research farm site. Potential activities in these areas may include:

- Research plots – KPU researchers (students and staff) may undertake projects exploring new crops and alternative cropping systems for regional agriculture.
- Expanded crop production – particularly for experimentation with new techniques.
- Animal agriculture such as small livestock, including chickens, sheep or goats.
- Farm School – Implementation of the demonstration farm will allow for the operation of a Farm School program onsite.
- Incubator Farm Program – implementation of Colony Farm Sustainability Plan will allow for the incorporation of small plot incubator farms for graduates of Kwantlen programs.

References

Colony Farm Land Use Steering Committee. 1995. Colony Farm Land Use Plan. http://www.metrovancouver.org/services/parks_lscr/ColonyFarmSustainabilityPlan/ColonyFarmDocs/ColonyFarmLandUsePlan1995.pdf

Evely, A. 2009. Colony Farm Regional Park: biophysical summary. Burnaby: Metro Vancouver.

HB Lanarc Consultants Ltd. 2009. Colony Farm Regional Park preliminary sustainability plan. Burnaby: Metro Vancouver.

Suess, A. 2012. Colony Farm phase I: farm site preparation plan. Burnaby: Metro Vancouver.

PHASE I: Proposed Detailed Work Plan

Semester	Activity	Estimated Date of Completion
Year 1: Fall 2012 - Summer 2013		
Fall 2012	A1 - Delineate and till 2 acres in Phase I area - apply amendments	Oct-12
	A1 - Plant fall cover crop (barley or rye, potentially crimson clover)	Oct-12
	Scope installation of Field Facilities and Core Facilities	Dec-12
	A3 - Scope (perennial demonstration) for planting in Spring 2013	
	Develop site plan, including contouring, soil characterization and observations	Aug-13
	Develop nutrient management, biodiversity management and IPM plans	Aug-13
Spring/Summer 2013	A1 - Turn under fall cover crop and resample field for pH & major nutrients, apply amendments	Jun-13
	A1 - Plant summer cover crop (alfalfa) for tilling in Spring 2014	Aug-13
	Scope installation major components of irrigation system	Aug-13
	Build Field Facilities	Aug-13
	A3 - Amend soil and plant mixed perennial crops	Jun-12
	Scope site for perennials plantings including Production Orchard (PO) and hedgerow enhancement and clear site of invasives	Aug-13
Year 2: Fall 2013 - Summer 2014		
Fall 2013	Prepare areas & purchase equipment for planting perennials in Spring 2014	Nov-13
	Till PO for partial planting in Spring 2014, apply amendments and cover crop with crimson clover	Sep-13
Spring/Summer 2014	A1 - Turn under alfalfa cover crop and resample field for pH & major nutrients, apply amendments (as per sample)	Jun-14
	Planting of first portion of PO and hedgerows	May-14
	A3/PO - Installation of orchard irrigation systems	Sep-14
	Installation of Core Facilities for students in January 2015	Dec-14
	A1 - Prepare for production – building beds, plant summer cover crop	Aug-14
Year 3: Fall 2014 - Summer 2015		
Fall 2014	A2 - Till additional 1 acre for crop production in Phase I area, apply amendments and cover crop with barley	Sep-14
	A1 - Installation of final drip irrigation system	Oct-14
	A1 - Plant 0.5 acres garlic crop for harvest in Summer 2015 for off-site sales	Oct-14
	Install 20'x50' polyhouse for propagation and season extension	Oct-14
	Prepare planting plans for 2015 – integrated with student course work (AGRO 3290, 3390 & 4190 as well as production classes AGRO 3260, 3270)	Dec-14

Year 3: Fall 2014 - Summer 2015 (Cont'd)		
Spring/Summer 2015	First intake of 3rd year students – classes take place on Colony Farm site	Jan-15
	Installation of two 10'x50' polyhouse in the field	Jun-15
	A1 - Turn under alfalfa cover crop in and resample field for pH & major nutrients, apply amendments (as per sample)	Apr-15
	PO - Plant second portion of orchard and expansion of irrigation system	May-15
	A2 - Turn under barley cover crop, resample and plant summer alfalfa cover crop	Jun-14
	A1 - Prepare beds, apply amendments and plant annual crops for sale through CSA for local residents and direct sales	Apr-15
	A1 - Plant fava bean cover crop for tilling in 6 weeks	Aug-15
	A1 - Plant 0.5 acres garlic crop for harvest in Summer 2016 for off-site sales	Sep-15
	A1 - Incorporate cover crop rotation into plantings after 2015 season	Oct-15
Year 4: Ongoing Education and Production		
Year Round	A1 & A2 - Till cover crop, resample field for pH & major nutrients, apply amendments	Spring
	A1 & A2 - Prepare beds, apply amendments and plant annual crops for sale through CSA for local residents and direct sales	Spring
	A3 & PO - apply amendments, implement & maintain IPM plan	Spring
	A1 & A2 - Plant 0.5 acres garlic crop for harvest in Summer 2015 for direct sales	Fall
	Incorporate cover crop rotation into plantings after 2015 season	Spring
	Till additional 1 acre area of expanded production annually or when staff deems appropriate	Spring

Bachelor of Applied Science in Sustainable Agriculture

Join the community of leaders and entrepreneurs who are helping to build our sustainable future. Enroll in Kwantlen Polytechnic University's new degree in Sustainable Agriculture. Through a unique combination of classroom and farm-based learning, the program offers a comprehensive perspective on:

- The science of agro-ecosystem design and stewardship;
- Innovative and ecologically sound crop production methods;
- Sustainable farm business management; and,
- The economic, social, and environmental challenges facing our food system

Sustainable, local food production is a rapidly developing component of communities that is on the minds of the public and governments alike. Program graduates will be sought after in fields as diverse as planning, resource management, politics, government, non-government organizations, related business, and production agriculture. This program offers an exploration of the practical foundations and practice of healthy farming as well as an examination of how food and land builds our communities and ties them together.

Learning Outcomes

The curriculum is designed in recognition of the need for both practical and academic training within the new powerful movement in sustainable agriculture. Students will be immersed in a setting which fosters experiential learning and exploring personal interests. During our four year Bachelor's degree program, will work to to achieve three major learning outcomes:

- *The ability to grow fruit and vegetable crops within a sustainable ecological context.* A full spectrum of experiential field-based agricultural courses are offered in Year 3 which, by necessity, follows a complete crop cycle beginning in the spring and extending through summer into the fall. These applied courses function as a mechanism to bring the theoretical concepts and principles of sustainable agro-ecosystem design, function and management to practical realization.
- *Develop the business, sales and marketing skills necessary to manage a sustainable agricultural farming business.* The development of these skills is facilitated by the inclusion of a broad base of foundational courses supplemented by a multidisciplinary business management course in Year Four.
- *Develop practical, problem solving and research skills as well as an understanding of government economic and business policies needed to address issues of sustainable agri-food systems as they relate to employment in government and non-government organizations.*

Program Overview

During the first two years of the BASc, students will learn about fundamental dimensions of our natural and social environment as well as concepts and dimensions inherent in sustainable agriculture and food systems. The latter part of the program immerses students in a living agriculture laboratory - our teaching and research farm. Through participation in crop and animal production and year-round agro-ecosystem management classes as well community/ land-based research and internships, our undergraduates become confidently knowledgeable of the scientific, practical and business elements of sustainable small scale, human intensive, alternate market farming and food systems. Our multifaceted program imparts the understanding and tools necessary to face the challenges of the future and to build the healthy communities, in which sustainable agri-food systems are inextricably a part of, that we need.

Year 1: Student can expect a wide-ranging introduction to the scientific foundations of biology, environmental chemistry and mathematics, geography as well as a primer on the state of agriculture and food today. Agri-food Tour (AGRI 1150) will take you to farms across southern British Columbia to take stock and assess the sustainability of current agricultural production methods and operations as well as the impressive, innovative projects our region.

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Year 2: The third and fourth semesters of the program focus on developing the students' understanding of the world around them, both physical and social. They will explore agricultural systems in depth and learn about important scientific elements of the agroecosystem landscapes.

Year 3: Production and farm management become the central focus of these two semesters. Students engage in crop and small animal production and follow the cycle of the agricultural year at our living laboratory farm. Students will develop their knowledge through their research in AGRI 3225 and 3399.

Year 4: In the final year, our students will conclude their in-depth study of agroecosystems development and operation and begin to pair their knowledge of production and farming systems with business management. Through workplace internship and research, students will take their skill outside the program and begin to enter the existing community of agricultural livelihoods, whether in farm businesses or institutions. In their capstone course, AGRI 4298, students look forward to the future of the food system and use their experiences to gain an understanding of the challenges we face as well as solutions to them.

Proposed Program Outline

	Year 1	Year 2	Year 3	Year 4
Fall	BIOL 1110 Biology I (4) ENVI 1106 Env Chem I (4) GEOG 1101 Intro Geog (3) MATH 1117 Env Math (3) AGRI 1150 Sust Ag (3) Credits: 17	BIOL 2322 Ecology (4) PHYS 1500 Physics of Env. (4) GEOG 2250 Urban Geog (3) AGRI 2190 Plant Science (3) POST 2100 <i>Environmentalism and Canadian Politics</i> (3) Credits: 17		AGRI 3135 Business of Agriculture (6) AGRI 4190 Agro-ecosyst. Management III (3) Elective (3) Elective (3) Credits: 15
Spr	BIOL 1210 Biology II (4) ENVI 1206 Env Chem II (4) ENGL 1100 Writing (3) AGRI 1299 Agri-food Tour(1) POST 1100 Sustainability: Analysis and Ethics (3) Credits: 15	MATH 1115 Statistics (3) AGRI 2220 Soil Science (4) AGRI 2240 Ecological Pest Management (3) AGRI 2250 Agriculture and Food Systems (3) AGRI 2230 Sust. Human Economy (3) Credits: 16	AGRI 3260 Animal Agriculture (3) AGRI 3280 Pomology (3) AGRI 3270 <i>Olericulture</i> (3) AGRI 3225 Exp. Design and Analysis (3) AGRI 3290 Agro-ecosyst. Management I (3) Credits: 15	AGRI 4298 World Trends in Agriculture (3) AGRI 4299 Research Project II (3) AGRI 4295 Internship (3) Elective (3) Credits: 12
Su			AGRI 3390 Agro-ecosyst. Management II (6) AGRI 3398 Crop Physiology and Ecology(3) AGRI 3399 Research Project I (3) Elective (3) Credits: 15	Total credits:122

Note: New courses are in *italics*. Number of credits, per course and per semester, are in brackets.

Proposed New Courses

PHYS 1400 CR-4 Physics of the Environment

Students will learn the basic principles of environmental physics. They will build, analyze, and critique physical models of environmental processes. They will apply environmental physics concepts to topical problems such as consumer energy use, carbon footprint, and global warming. They will perform labs that illustrate the physical principles underlying common environmental applications. **Prerequisites:** *Principles of Math 11 with a C+ or MATH 1117*

AGRI 1150 CR-3 Sustainable Agriculture

Students will study the basic principles of environmental, social, and economic sustainability in the context of agriculture, environmental stewardship and food security. They will study key concepts and elements of and agri-food systems highlighted by case studies, literature review, critical analysis and exercises.

AGRI 1299 CR-1 Agri-food Systems Tour

Students will tour, over one week, selected key agri-food system sites (farms, processing units, research stations, etc) in Southern British Columbia. They will examine and critique operations and their attributes through the lens of sustainable agriculture. They will prepare evaluative reports for each site and consolidate their learning in a field journal.

AGRI 2190 CR-3 Plant Science

Students will study basic crop plant anatomy, morphology, taxonomy, physiology, plant growth and development, reproduction, genetics and improvement. They will also study environmental (biotic and abiotic) and agro-ecosystem management interactions and investigate their ramifications on plant growth, development and productivity. **Prerequisites:** *BIOL 1210*

AGRI 2220 CR-4 Soil Science

Students will study the main characteristics of agricultural soils and their management with emphasis on understanding soil as a living system and precious natural resource. They will study soil formation and classification, soil physical and chemical properties, plant nutrition, soil organic matter management, soil water management, biology and ecology of soils, and soil conservation. They will perform practical laboratory exercises focused on soil profile assessment, carbon management, soil biology, composts and composting, physical property assessment, chemical property assessment, plant nutrition, soil water management, soil conservation and others to gain an understanding of soil health and management in agro-ecosystems as the foundation of sustainable agriculture. **Prerequisites:** *BIOL 1210, ENVI 1206*

AGRI 2240 CR-3 Ecologically Based Pest Management

Students will study common plant, insect, mite, bacterial, fungal, viral and vertebrate pests and associated injury and disease caused to crop plants. They will study cultural, chemical, physical, behavioural and biological controls with an emphasis on ecologically based methods which enhance agro-ecosystem integrity and sustainability. They will learn how to identify insect and weed species and develop appropriate management strategies and action plans. **Prerequisites:** *AGRI 1150, AGRI 2190, BIOL 2322. Co-requisite:* *AGRI 2220*

AGRI 2230 CR-3 Sustainable Human Economy

Students will learn about economic principles within the context of environmental and social sustainability. They will study key principles and concepts of ecological economics in comparison to classical and neo-classical economics. **Prerequisites:** *AGRI 1150, BIOL 2322, MATH 1117*

AGRI 2250 CR-3 Agriculture and Food Systems

Students will study the history of agriculture. They will examine and compare different systems of food production

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such as traditional, industrial, organic, biodynamic, swidden, permaculture and garden agriculture in their historical, environmental, social and economic contexts.

AGRI 3260 CR-3 Animal Agriculture

Students will learn the principles and practice of animal production relevant to BC in the context of integrated, sustainable agriculture methodology. They will study concepts of animal health, feeding, management and integration into cropping systems for soil and field improvements and health and as an integral aspect of sustainable farming systems. **Prerequisites:** AGRI 2190, AGRI 2220

AGRI 3280 CR-3 Pomology

Students will learn the principles and practice of fruit and nut crop production relevant to BC. They will study concepts of plant and tree growth and development, site preparation, orchard planning and establishment, nutrition, pollination, canopy management, crop specific pest management, crop maturation and harvest and post-harvest physiology and handling. They will focus on the production of fruit traditionally important to BC such as apple, peach, blueberry, cranberry and raspberry as well as new crops such as persimmon, kiwi, Saskatoon berry, filberts or walnuts. **Prerequisites:** AGRI 2190, AGRI 2220

AGRI 3270 CR-3 Olericulture

Students will learn the principles and practice of vegetable production relevant to BC. They will study key crop types, cultivars, establishment, growth and development, crop specific management systems, nutrition pest management, season extension and harvest and post-harvest handling. **Prerequisites:** AGRI 2190, AGRI 2220

AGRI 3290 CR-3 Agro-Ecosystems Management I

Students will study the scientifically based, holistic methodologies for designing, establishing and managing various agro-ecosystems and the cultivation of selected annual and perennial crops. They will learn the practical aspects of crop and stock systems planning and integration, soil and seedbed preparation and management, water management, animal husbandry and resource stewardship and conservation. Students will complete this course as the first in a series of three, where they will study field crop production from planning to harvest over the course of a growing season. **Prerequisites:** AGRI 1150, AGRI 2220, AGRI 2190

AGRI 3390 CR-6 Agro-Ecosystems Management II

Students will continue their study of the practical aspects of scientifically based, holistic methodologies for agro-ecosystem management and agricultural annual and perennial crop production. They will gain practical experience and learn about crop rotation, cultivation, and integration of small animal agriculture. Students will complete this course as the second in a series of three, where they will study field crop production from planning to harvest over the course of a growing season. **Prerequisites:** AGRI 1150, AGRI 2220, AGRI 2190

AGRI 3398 CR-3 Crop Physiology and Ecology

Students will learn how crop plants grow and develop in agro-ecosystems, focusing on whole plants and plant communities. They will study the biological processes that control yield with an emphasis on the intimate interactions between plants and their environment. Students will examine primary production including photosynthesis, respiration, nitrogen fixation, nutrient uptake and the utilization of assimilates for growth and yield attainment. Students will investigate how these processes are affected by abiotic and biotic components of the environment. **Prerequisites:** BIOL 2322, AGRI 2220, AGRI 2190

AGRI 3225 CR-3 Experimental Design and Analysis

Students will study appropriate and widely used experimental methods and designs for field and laboratory experimentation. They will study the commonly used statistical analysis techniques including analysis of variance and linear and non-linear correlation, learn how to use statistical analysis software as well as how to interpret results. Students will design a research project and prepare a formal research proposal. **Prerequisites:** MATH 1115

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AGRI 3399 CR-3 Research Project I

Students will initiate an applied research project of their own design or participate in the conduct of an applied research project. They will establish experimental plots or units and then collect and analyze a preliminary set of data. Students will document their methodologies and the progression of their experiment in the form of a progress report. **Prerequisites:** ENGL 1100, AGRI 3225

AGRI 3135 CR-6 Business of Agriculture

Students will learn basic principles and practical applications of farm and agri-business planning, financial management, marketing and sales which will be presented in an integrated manner reflective of agriculture business. They will study a range of topics including business planning, record keeping, records analysis, enterprise analysis, partial budgeting, cash flow projection, market evaluation and marketing strategy, and sales with an emphasis on direct producer to consumer approaches such as community supported agriculture, food co-operatives, food security programs, marketing ethics, and others. Students will also acquire an overview of the structure and institutional aspects of the commodity marketing system including global markets, marketing boards, and cooperatives. They will develop skills in organization, communication, leadership, and managerial abilities. **Prerequisites:** MATH 1117, AGRI 2230

AGRI 4190 CR-3 Agro-Ecosystems Management III

Students will complete their study of the practical aspects of scientifically based, holistic methodologies for agricultural production. They will gain hands-on practical experience relating to crop maturation, harvesting and post-harvest handling cover crops, rotation and fallow systems, fertilizer and compost systems, season extension and winter cropping systems. Students will complete this course as the third in a series of three, where they will study field crop production from planning to harvest over the course of a growing season. **Prerequisites:** AGRI 1150, AGRI 2220, AGRI 2190

AGRI 4299 CR-3 Research Project II

Students will complete their research project work, analyze final results, and present their findings and conclusions in a formal report, technical bulletin or manuscript as well as in an oral presentation. **Prerequisites:** AGRI 3399

AGRI 4298 CR-3 World Trends in Agriculture

Students will, in this senior seminar type course, investigate, critically examine and present information in a formal oral presentation about an issue germane to sustainable agriculture and society. They will examine their chosen subject historically and contemporarily to inform discussion regarding its future directions that might or might not advance sustainability of the human enterprise. Students will document their findings in two sequential written reports accompanying oral presentations. **Prerequisites:** ENGL 1100, AGRI 1150, AGRI 2250, AGRI 2230

AGRI 4295 CR-3 Internship

Students will work and learn in an industry or community based setting (commercial, governmental, or NGO) that supports their personal and professional goals. Students will work in consultation with faculty to identify suitable internships and establish learning experience objectives. Students will maintain a log of activities and submit a final report delineating the achievement of learning objectives as well as additional outcomes and experiences.

POST 1100 CR-3 Sustainability: Analysis and Ethics

Students will study elements of traditional philosophy courses such as critical thinking, philosophy of science, and ethics to provide a detailed analysis of a variety of concepts of sustainability. They will examine sustainability policies and practices related to the environment, social equity and economics.

POST 2100 CR-3 Environmentalism and Canadian Politics

Students will examine debates around environmentalism, ecologism, and sustainability in Canadian politics. They will survey the relationship between green ideas and Canadian political culture, the evolution of the environment as a policy field in Canada, the development and impacts of environmental social movements and interest organizations in Canadian politics, and the ramifications of globalization and other transnational and international

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factors for Canadian efforts to manage the environment. Students will engage specific debates, such as arguments surrounding climate change, and deepen their understanding of one of the great issue-areas of 21st-century Canadian politics.

Admissions Requirements

In addition to the University entrance requirements, students entering this program must possess the following (or their equivalent) as minimum requirements:

- English 12 with a B
- Principles of Mathematics 11 with a C
- Chemistry 11 with a C+

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Letter of Intent

This letter expresses Metro Vancouver and Kwantlen Polytechnic University's intent to cooperate.

Metro Vancouver (MV) has a Plan for Colony Farm Regional Park which has been adopted by MV's Board in principle for purposes of public engagement, seeking partnerships and fund raising. The Colony Farm Regional Park Preliminary Sustainability Plan envisions the park with an Academy for Sustainable Food Production (tentative title) as a place where small scale sustainable agriculture is integrated with wildlife habitats and recreational amenities for the benefit of all regional residents. Through a variety of programs and partnerships, Colony Farm will demonstrate ecologically sound agricultural practices allowing people to enjoy nature while learning about the regional food system (see Attachment 1- Expresses Metro Vancouver's Vision for the site and shows the Phase 1 program).

Kwantlen Polytechnic University (Kwantlen) is developing a degree program, the Bachelor of Applied Science in Sustainable Agriculture described in Attachment 2- Letter of Approval from the Minister of Advanced Education for the Sustainable Agriculture degree and statements about the Bachelor of Applied Science in Sustainable Agriculture 2/15/2012 document. The University is unequivocally committed to agriculture as a foundational manifestation of its polytechnic mandate. Kwantlen Polytechnic University aims to accomplish this via applied research, education and extension (community and industry outreach) programming supporting the advancement of sustainable agriculture and food systems, appropriate for the 21st century, in British Columbia and Canada. In addition to the implementation of the BASc- Sustainable Agriculture, Kwantlen Polytechnic University also operates, as part of its flagship agricultural programming, a farm school in Richmond, currently in its third year, which prepares urbanites to engage in small lot direct market agriculture.

Scope of Cooperation

The parties agree to explore cooperation with respect to the use of Colony Farm Regional Park to facilitate delivery of experiential field-based agricultural courses, applied research, and community/industry engagement as part of Kwantlen's Bachelor of Applied Science degree in Sustainable Agriculture, Farm School, and overall agriculture programming focused on ecologically sound, human intensive, regional agri-food systems.

This may take place in connection with MV's Academy for Sustainable Food Production but Kwantlen will maintain a distinct identity in keeping with its needs.

July 25, 2012

Shared Interests - The parties agree that they are both interested in:

- a) exploring a wide range of research, learning, and community engagement opportunities which create and advance a bio-regional food system that is respectful of and meaningfully integrated with ecosystems;
- b) providing learning opportunities that foster a holistic approach to the agri-food system enterprise;
- c) training and preparing people to engage in small scale, ecologically sound, organic food production and land management;
- d) developing community-based research and internships intended to extend and strengthen ties with community businesses, organizations and local municipal councils while promoting understanding of regional agricultural systems, knowledge gaps and professional opportunities;
- e) demonstrating sustainable farming practices and the integration of agricultural use with fish, wildlife and urban activities such as recreation uses;
- f) developing innovative methods of teaching and learning to effectively engage students in integrated and applied learning experiences associated with a living laboratory at Colony Farm;
- g) fostering the development of the business, sales and marketing skills necessary to manage sustainable agricultural farming businesses;
- h) developing practical, problem solving and research skills as well as an understanding of government economic and business policies needed to address issues of sustainable agri-food systems;
- i) pursuing different ways to provide interactive community engagement experiences and involvement with the activities that are occurring on site through the use of a variety of learning opportunities and perspectives;
- j) exploring land use within the park and infrastructure needs to support the Kwantlen program and MV's Academy while minimizing the built footprint on the land and avoiding conventional monoculture farming practices;
- k) exploring utilization of green technologies related to sustainable agriculture to model energy, water, and waste efficiency and reuse;
- l) supporting development of programs and site elements such as trails and recreation, on-site sales, incubator farms, therapeutic agriculture, community events, and working with First Nations.

Acknowledgements:

1. The parties must negotiate and agree on the specific terms of cooperation and exchange, including financial terms, land use and license or interests in land (if appropriate).
2. The parties agree to make a joint public announcement of the intent to cooperate, when appropriate to both parties and to not take unilateral action.
3. The parties will collaboratively present this agreement to other bodies within their respective organizations and to the public, as and when appropriate and will not take any unilateral action.
4. The parties will jointly develop, along with other parties, a shared governance model for Colony Farm and the Academy that gives each party fair representation.
5. The parties acknowledge that Kwantlen Polytechnic University will require access to land for their undergraduate program in the fall of 2014. An interim arrangement may be necessary if the required drainage work at Colony Farm has not been completed by this time.
6. The parties agree to work together to identify potential funders, funding sources and garner resources.
7. The parties agree that programs at Colony Farm will demonstrate good stewardship; an attractive farm is a healthy farm.
8. The parties will jointly plan appropriate public access to the Kwantlen teaching farm.
9. The parties agree there is a willingness to share resources and facilities, especially in the beginning.

Kwantlen acknowledges that:

1. The Kwantlen Program will not be the only means of MV achieving the shared objectives and activities identified above.
2. MV may prepare similar statements of intent to cooperate with other groups; and agrees to consult with and involve Kwantlen as new relationships develop.

Metro Vancouver acknowledges that:

1. Some areas of interest to MV are not of interest to Kwantlen such as basic park facilities, gardening, wildlife and fish enhancements, and other.
2. Kwantlen may pursue and develop other land based agriculture research and education venues in addition or in complement to Colony Farm

This Letter is Subject to:

1. A final Plan for Colony Farm Regional Park being adopted by Metro Vancouver's Board in a timely fashion with appropriate content to facilitate the cooperation and activities described.
2. Successful budgeting and fund raising.


Board of Governors.

Appointment of representatives to spearhead further work and discussions:

Metro Vancouver – Frieda Schade and Laurie Fretz

Kwantlen Polytechnic University – Kent Mullinix


This letter of intent will be reviewed periodically.



Metro Vancouver signature - Delia Laglagaron, Acting CAO

AUGUST 14, 2012

Date



Kwantlen Signature - Graham Rankin, Dean, Science and Horticulture

July 25, 2012

Date

Attachment #1 – Metro Vancouver's Vision for Colony Farm Regional Park and Phase 1 Concept Plan

Attachment #2 - Letter of Approval for program and statements about the Bachelor of Applied Science in Sustainable Agriculture 2/15/2012 document.

Attachment #3 – Kwantlen's Proposed Activities at Colony Farm Regional Park

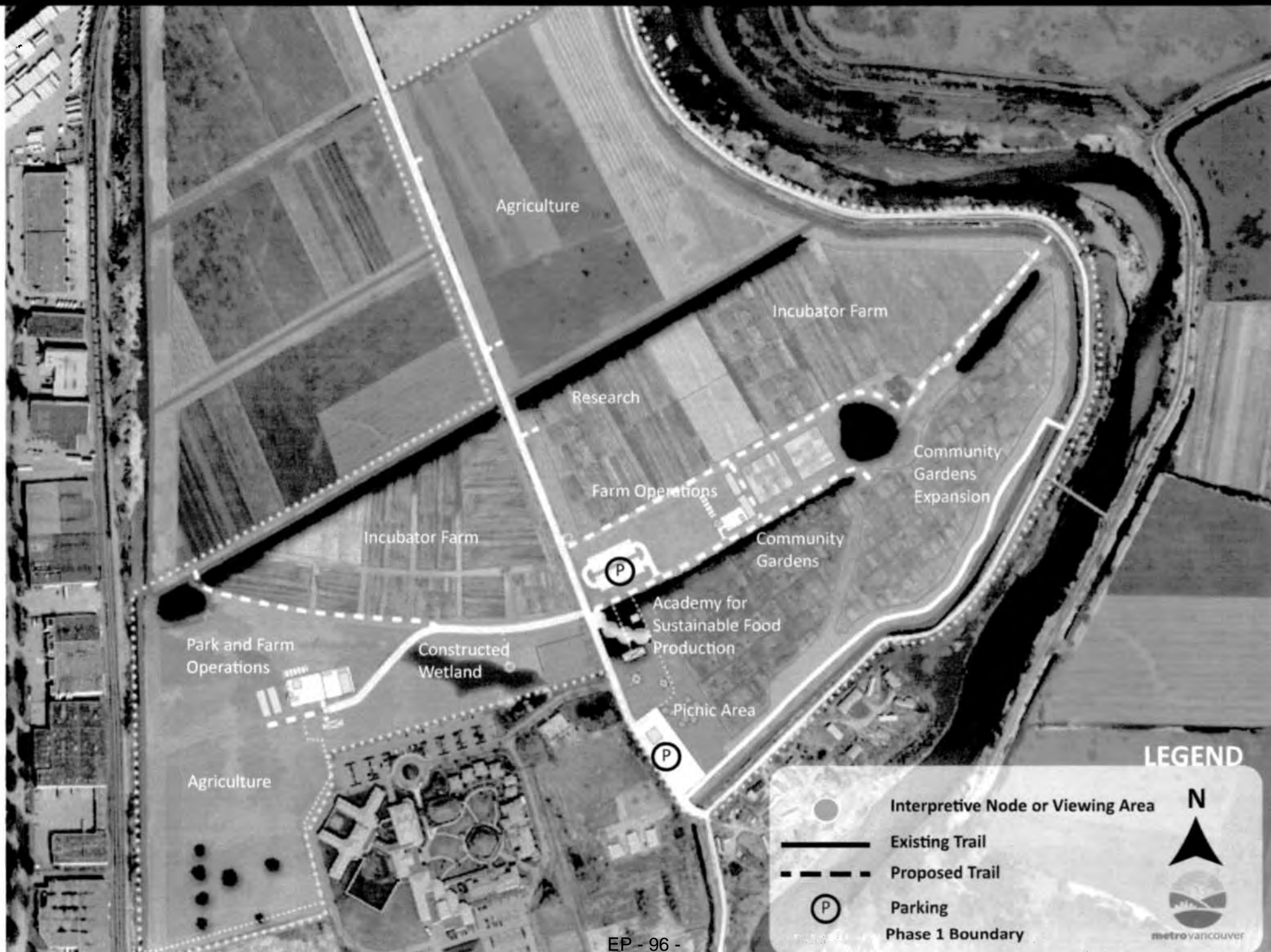
July 25, 2012

Attachment #1

Metro Vancouver's Vision for the Site

Colony Farm Regional Park provides outdoor recreation, protects fish and wildlife habitat, and is a learning hub for Academy programs and research where small-scale environmentally sensitive farming is blended with typical park activities to inspire appreciation, understanding, and actions towards sustaining our ecosystems and food systems.

Phase 1 Concept Plan (Approved in principle for the purpose of final consultation with stakeholders and the public)





Attachment #2

Kwantlen Polytechnic University Degree Programs Bachelor of Applied Science in Sustainable Agriculture

Bachelor of Applied Science in Sustainable Agriculture

The Bachelor of Applied Science in Sustainable Agriculture degree is unique to North America and is distinguished from other agriculture degree programs by providing a broad scope of study related to the environmental, social and economic dimensions of sustainable food production. It is scheduled for implementation in Fall 2012.

Sustainable Urban Development, food security and local-regional/urban food production are rapidly emerging elements of sustainability relating to increasingly prominent government strategic policies and private sector initiatives. This is generating a demand for people skilled in:

- Small scale, ecologically sound food production and management
- Agrology
- Policy analysis and community planning

Students graduating with a B.A.Sc. in Sustainable Agriculture will comprise a new class of agriculturists and leaders. They will be sought after in fields as diverse as urban development and planning, resource management, politics, government and non-government agencies, business operations, food security and production agriculture. More specifically, graduates can expect employment with municipal staffs, community service utilities, environmental and urban planning consultants, alternate (Community Supported Agriculture, farmer's markets) and traditional food distribution companies and most importantly, as urban and peri-urban food producers through new food initiatives developed by municipalities.

The curriculum structure is designed to facilitate the achievement of the program's key outcomes by the inclusion of:

- Innovative methods of teaching and learning to effectively engage students in integrated and applied learning experiences associated with a living laboratory
- Agro-ecosystem management courses which follow a full-year cycle
- Courses which span a range of disciplines to provide a holistic approach to the agri-food system enterprise
- Community-based research and workplace internship intended to extend and strengthen ties with community businesses, organizations and local councils while promoting understanding of regional agriculture practice, knowledge gaps and professional opportunities

The B.A.Sc. in Sustainable Agriculture has three major learning outcomes for graduates:

- The ability to grow fruit and vegetable crops within a sustainable ecological context. A full spectrum of experiential field-based agricultural courses are offered in Year 3 which, by necessity, follows a complete crop cycle beginning in the spring and extending through summer into the fall. These applied courses function as a mechanism to bring the theoretical concepts and principles of sustainable agro-ecosystem design, function and management to practical realization.
- Develop the business, sales and marketing skills necessary to manage a sustainable agricultural farming business. The development of these skills are facilitated by the inclusion of a broad base of foundational courses supplemented by a multidisciplinary business management course in Year 4.
- Develop practical, problem solving and research skills as well as an understanding of government economic and business policies needed to address issues of sustainable agri-food systems as they relate to employment in government and non-government organizations.



Our Ref. 88475

File #: 60100-20/KUC/1112KUC0043

AUG 18 2011

Dr. John McKendry
Interim President and Vice-Chancellor
Kwantlen Polytechnic University
12666 72nd Ave.
Surrey BC V3W 2M8

Dear Dr. McKendry:

I am pleased to provide Minister's approval of the Kwantlen Polytechnic University (Kwantlen) proposed new Bachelor of Applied Science in Sustainable Agriculture (B.A.Sc) program as required by section 48(2) of the *University Act*.

As Kwantlen has exempt status to the baccalaureate degree level, and because I do not have any concerns about the proposed degree, I am approving this degree without review by the Degree Quality Assessment Board.

I wish you every success in implementing this new degree program.

Sincerely,

Naomi Yamamoto
Minister

pc: Dr. Anne Lavack, Interim Provost and Vice-President, Academic
Kwantlen Polytechnic University

Ministry of
Advanced Education

Office of the
Minister

Mailing Address:
PO Box 9080 Stn Prov Govt
Victoria BC V8W 9E2

Location:
Parliament Buildings
Victoria

Attachment #3 Kwantlen's activities on site

Without commitment, Kwantlen Polytechnic University and Metro Vancouver jointly agree to explore the following preliminary activities on site that are in keeping with the Plan and Academy within a Regional Park are:

Start Up Requirements

1. A farm license agreement based on a mutually agreed upon land use plan
2. 15 - 20 acres for mixed market crops, mixed perennial fruit, and research; arrangement of crops and plots sizes to demonstrate a holistic approach to farm management and avoidance of monocultures.
3. Greenhouse and hoop houses for crop production
4. Built facility/barn/shed that would accommodate a secure storage area, crop processing area (washing and storage, ideally cold storage), and a modest indoor teaching space for approximately 35 undergraduate students and 15-20 farm school students.

Future expansion requirements may be examined as part of this exploration.

Guidelines for Establishing Agriculture at Colony Farm Regional Park

This document describes that type of farming that will be integrated into Colony Farm Regional Park as part of Phase One of the Sustainability Plan.

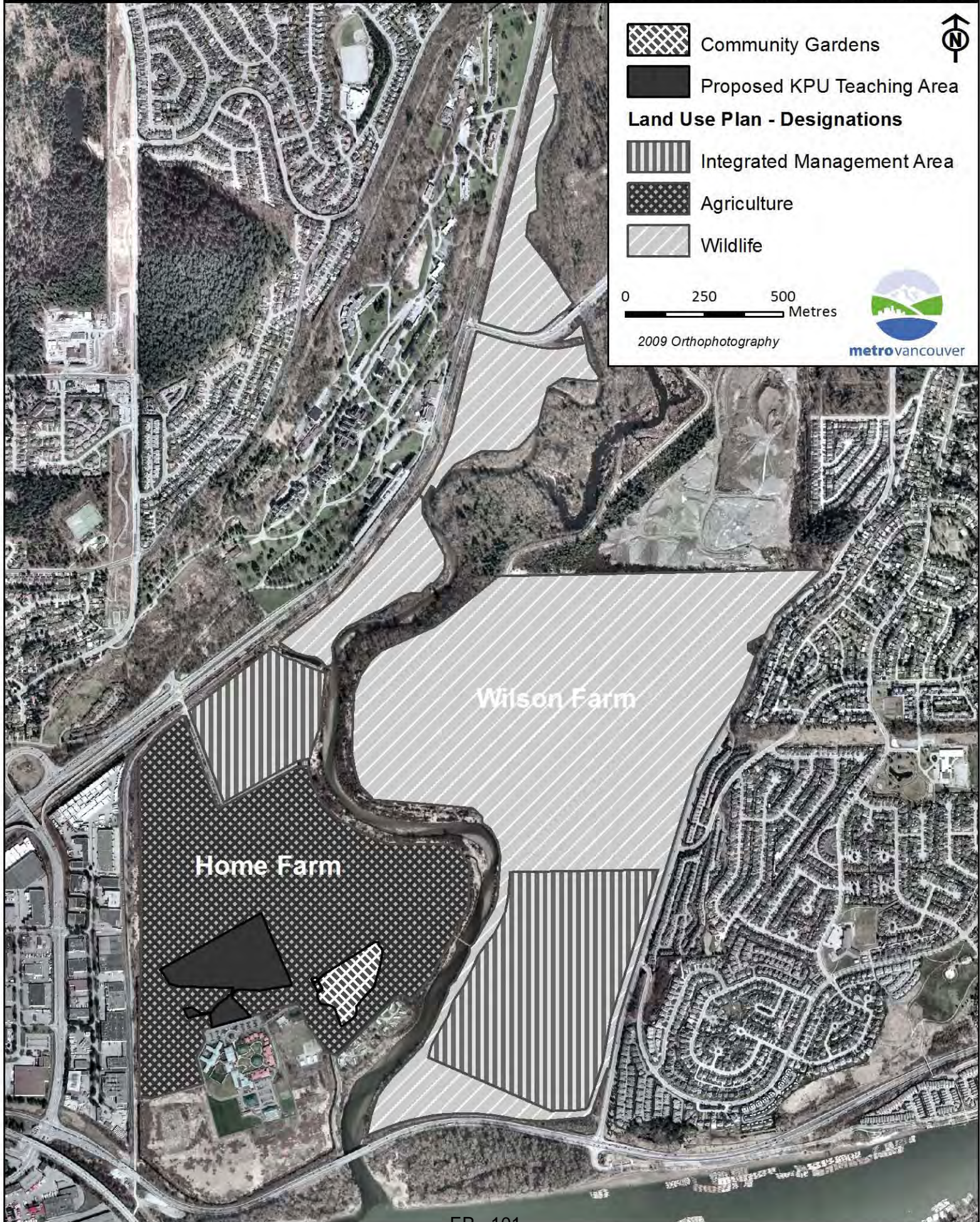
In Phase One the farming activities in the park will:

1. Be primarily soil-based.
2. Include various types of food crops such as summer and winter vegetables, fruit, nuts, grains and livestock.
3. Demonstrate best management farm practices as identified by the Canada – British Columbia Environmental Farm Plan Program.
4. Only organic methods of food production (no pesticides or chemical fertilizers) as described in the Canada Organic Standards.
 - a. Some exceptions to these standards may be considered
 - b. Organic practices not necessarily certification
5. Enhance soil quality through crop rotations, cover crops, set asides and applications of compost or manure.
6. Protect significant natural features, sensitive areas and other park values including water quality/quantity in surrounding ditches for native fish species.*
7. Accommodate hedge rows, buffer strips, field margins and other habitat enhancements*
8. Manage invasive plants to prevent their spread onto parkland.
9. Employ farm practices that are sensitive to wildlife
10. Participate in research activities that inform agro-ecology practices and accommodate other studies deemed beneficial to park values whenever possible.
11. Enable public educational opportunities and participate in park events whenever possible.
12. Some areas may not be appropriate for dogs.

* Note

- Park staff need to identify significant natural features, sensitive areas and other park values that require protection.
- Habitat enhancement activities are not the responsibility of the farmers but arrangements can be made under separate agreements.

Attachment 3: Location Map - Colony Farm Land Use Designations & KPU Proposed Teaching Area





To: Environment and Parks Committee

From: Stephen Suddes, Division Manager
Public Programs and Community Development
Metropolitan Planning, Environment and Parks Department

Date: September 17, 2012

Subject: **Regional Parks Fees and Charges 2013**

Recommendation:

That the Board:

- a) introduce and give first, second and third reading to Greater Vancouver Regional District Regional Parks Fees and Charges Bylaw No. 1173, 2012; and
 - b) reconsider, pass and finally adopt Greater Vancouver Regional Parks Fees and Charges Bylaw No. 1173, 2012.
-

1. PURPOSE

The purpose of this report is to introduce a new Fees and Charges Bylaw including recommendations for changes to certain fees contemplated which will become effective on January 1, 2013. The report also highlights direction proposed for certain fees which would become effective January 2014, subject to approval by Board and contingent on the outcome of discussions with stakeholders.

2. CONTEXT

Fees for services and facilities may be established by bylaw pursuant to the *Local Government Act* provisions, Part 10, Division 3, Section 363. Fees have been imposed for certain park facilities and services since 1979. The policy of charging fees for 'enhanced services' or 'exclusive use' was adopted in 1993. Fee are periodically adjusted to reflect level of service provided and to recover or partially offset increases in operating costs.

Setting fees is the result of an analysis of rising operating costs against a detailed review of fees for similar programs and services offered by the private sector, member municipalities and other government and non-profit agencies. The proposed fees should reflect fair market value and take into account "price elasticity" i.e., how higher fees may reduce participation and result in lower revenues. Fees for programs and services should also reflect public expectations.

Proposed Changes

This report addresses the more significant changes that are being proposed to facility and program fees for 2013. In addition, this year, the Regional Parks Fees and Charges Bylaw is being restructured. The objective is to make it more readable through the use of contemporary language and make it easier to understand fee schedules.

The second stage of restructuring the bylaw will be to incorporate the proposed fee schedules into a revised Park Regulation Bylaw, expected later this year.

The following fees for regional park programs and services are proposed to become effective on January 1, 2013:

- a. **Picnic Shelters**
Metro Vancouver maintains six reservable picnic shelters. In 2011, total revenues were approximately \$21,900. Shelters are rented on a per day basis. The fee proposal for 2013 entails removal of a discount for shoulder/off season but retention of a discount for weekday use. Weekend use of most reservable picnic shelters will be priced at \$135 per day, up from \$125 per day. Anomalies include the Marpole shelter at Aldergrove Regional Park, where the fee was increased to bring it in line with the other picnic areas.
- b. **Group Camping**
Metro Vancouver operates three group campsites in regional parks. Generally, these are primitive sites with minimal services and typically include tenting pads, pit toilets, and a shelter. At one site potable water is not available. Only one change is proposed, and that is the elimination of the weekday/shoulder season rate. A discount for use by youth groups is retained.
- c. **Camp Capilano**
Camp Capilano is a popular residential camp offering one of the most popular facilities in the park system. Core clientele include youth groups and community service groups and private schools. Over the last five years, there have been concerns over other groups better positioned to reserve the camp and monopolize its use. Any proposals for changes to fees must take into consideration not only the needs of the core clientele, but also the fact that the facility is in need of major renovations. For groups serving the needs of youth, fee changes proposed for 2013 include youth day use being increased from \$200 to \$210 per day and the overnight rate for youth groups from \$400 to \$420 per night. Based on occupancy of 44 youth, the fee would be approximately \$5 per child per day for day use and \$10 per child for overnight. Significant increases are proposed for adult and family use of the camp. Overnight use is proposed to increase from \$650 per night to \$1,000 per night. Day use for adult and family groups would be increased from \$400 per day to \$500 per day. The rationale for such increases is to alleviate the impact of recent trends where adult groups book Camp Capilano for a relatively inexpensive holiday close to the city. It is felt important that adult pay market rates while preserving lower rates for youth groups.
- d. **Cambridge House**
The fee structure is being simplified, so that rental is now based only on an hourly rate. Rates for booking this facility for meetings on an hourly basis are proposed to increase by \$5 per hour. The Tent Overcapacity Fee, allowing clients to erect a tent on the grounds, is proposed to increase from \$200 to \$250. The current bylaw allows for certain community groups to continue to rent the facility at reduced rates.

- e. **Inverholme Schoolhouse and Minnekhada Lodge**
The fee structure is being simplified, so that rental is now based only on an hourly rate. Rates for booking the facility for meetings on an hourly basis increase by \$5 per hour. The current bylaw allows for certain community groups to rent the facility at reduced rates.

- f. **Field Rentals**
Metro Vancouver offers twelve open fields for rental and these are reserved by larger parties for family or group picnics, outdoor games and gatherings. With the exception of Rowlatt Farmstead in Campbell Valley Regional Park, field rentals are proposed to increase to a range between \$80 and \$100 for the day. Rowlatt Farmstead will have a base rental rate of \$100 per day, but will also be available for rent with additional fees for enhancements including group access to washrooms, access to electrical power, dedicated parking and the option of renting tents from Metro Vancouver.

- g. **Private Special Events**
The current framework used to set core fees for private special events was reviewed in detail against market rates and best practices. Simple events (up to 300 participants) would be set at \$250 per event per day. Complex events (301 to 500 participants) will increase to \$375 per event per day, and Large Scale events (over 500 participants increase to \$500 per event per day. Standard events, for groups under 50 participants, where there is no demand on park resources for setup and monitoring, and where participants are not charged admission by the organizers will still be allowed without a fee or the requirement for a permit.

Additional fees will be charged for private special events, to be negotiated through the application process and based on recovery of Metro Vancouver expenditures in support of each event including staff time, security, cleanup, mitigation, special equipment and infrastructure.

It is proposed that a new category of fee be enacted to permit camping at locations not formally designated as a campground in a regional park. Such camping would be approved only as part of an approved private special event. A fee of \$5.00 per person per night is proposed to offset additional operating costs associated with provision of such camping.

- h. **Camping Fees**
It is proposed that fees for camping continue to be increased as part of an ongoing strategy to help offset increasing operating costs and better align fees with those charged by other campground operators. It is proposed that camping fees at Derby Reach Regional Park increase \$24 per night. Fees for camping at Brae Island Regional Park are not included, since that campground operation is managed on a concession basis and fees are set by the concession operator.

- i. **Parking - Commercial Tour Bus Parking Fees**
Parking fees for commercial tour buses using the Capilano River Regional Park hatchery parking are currently \$24 per visit for a bus with a capacity of 24 passengers or less, and \$43 for a bus with a capacity in excess of 24 passengers. For 2013, this fee will be changed from a "parking" fee to an "entry" fee.

Commencing 2014, a new fee is proposed for vehicles with 11 seats or less. This will cover the growing number of extended commercial vans used by the industry. Operators will have the option of buying daily passes for vehicles, or alternatively an annual pass. Rates will be set to compare favorably with similar fees charged by other jurisdictions. Typically, bus tour operators set schedules and pricing up to one year in advance, therefore, these changes will be brought forward for further consideration following consultation with the industry in 2013.

Impact of Rescinding the Harmonized Sales Tax (HST)

British Columbia implemented a Harmonized Sales Tax (HST) on July 1, 2010. Up until then, some services authorized under this bylaw were either exempt from tax, subject to a Goods and Services Tax (GST), a provincial Social Services Tax (SST) or both. Guidance from Canada Revenue Agency at the time had a significant impact on regional parks fees and charges. One impact was the duty to collect and remit HST on admissions in excess of \$1.00 for "places of amusement," including special events such as Country Celebration. Another impact was the cumulative effect of a layered tax (provincial Social Services Tax) on parking fees. The Province has indicated it will rescind the HST in 2013 but at this time the full impact of this decision is not known.

3. ALTERNATIVES

That the Board:

Option 1: Endorse proposed changes to fees and charges as proposed in this report and enact Bylaw No. 1173, 2012 as presented.

Advantages:

- Fee adjustments protect Metro Vancouver against revenue shortfalls and help to ensure that scheduled fees for programs and services offset increasing operating costs.
- Fee adjustments help to ensure Metro Vancouver services and facilities are not unfairly priced lower than those of similar scope and value offered by other municipalities, agencies or the private sector; and
- Continues the practice of applying periodic, incremental increases, which reduce the need to impose sudden, larger fee increases at less frequent intervals.

Disadvantages:

- There is risk that some fee increases will be seen as too dramatic;
- Fee increases may cause reduced use of some facilities, resulting in lower than projected revenues.

Option 2: Retain current fee structure with no amendments

Advantages:

- Public is familiar with current rates;
- Requires no additional investment in staff time and resources to publish new fee schedules or amend posted rates and promotional materials;

Disadvantages:

- A greater proportion of operating costs will have to be covered through a re-allocation of annual operating.
- Will invite criticism from the private sector and other third-parties, who will argue that Metro Vancouver is offering facilities and programs below market rates and unfairly subsidizing programs thereby engaging in unfair competition;
- Future amendments to the bylaw may prove more difficult, since price increases appear higher because price adjustments cover a multi-year jump in escalating operating costs.

4. CONCLUSION

This report documents proposed fee increases for access to facilities and services in our Regional Parks. There are a small number of significant increases that are explained in this report. These are attributed to Metro Vancouver priorities or external factors. In some cases, such as rental of indoor facilities, while the rate increase may seem high, it also means clients now have the option of renting a facility only for the hours that are needed rather than paying for a full day's rental. Some of the more significant increases such as facility rental cover costs associated with providing a higher level of service for private parties or weddings, and for clientele outside of the department's core audience. Overall, the fees proposed are competitive compared to similar facilities operated by other jurisdictions and the private sector.

Generally, more emphasis was placed on full cost recovery for private special events that are commercial in their nature.

Many fees will see no increase at all because they are already at par with the market. For example, group camps and interpretive programs are not proposed to be increased. Most commercial use permit fees see no increase, except for commercial dog-walking.

Option 1, approving proposed changes to fees and charges as proposed in draft Bylaw No. 1173, 2012 is recommended by staff.

ATTACHMENT

Regional Park Fees and Charges Bylaw No. 1173, 2012 (Doc. #6533101).

GREATER VANCOUVER REGIONAL DISTRICT BYLAW NUMBER 1173, 2012

A BYLAW TO GOVERN THE USE OF, AND TO FIX AND CHARGE FEES FOR ADMISSION TO AND FOR THE USE OF, CERTAIN FACILITIES IN REGIONAL PARKS OF THE GREATER VANCOUVER REGIONAL DISTRICT

WHEREAS the *Local Government Act* provisions, Part 10, Division 3, Section 363 give authority to the Greater Vancouver Regional District Board of Directors to govern the use of, and to fix and charge fees for admission to and for the use of, certain facilities and programs in specific regional parks;

NOW THEREFORE, the Greater Vancouver Regional District Board of Directors, in open meeting assembled, enacts as follows:

1. Definitions

Administration Fee	A fee charged for changes to dates, times and locations for previously booked group interpretation programs, site rentals, facility rentals or private special events.
Application Fee	A non-refundable fee charged to offset administrative costs associated with review and approval of an application.
Camping Party	For the purpose of charging an individual campsite fee, a camping party consists of: <ul style="list-style-type: none">• a maximum seven (7) persons which includes 1 to 4 adults maximum.• one vehicle and trailer; one but not both may be a recreational vehicle (RV).
Cancellation Charges	The non-refundable portion of a fee.
Client Categories	For the Purposes of Public Programs the following terms identify: <ul style="list-style-type: none">• Adult - an individual 19 years or older but under the age of 65.• Senior - an adult individual 65 years or older.• Child - an individual between the ages of 3 and 14 years.• Youth - an individual between the ages of 15 and 18 years.• Family/Small Group - a group normally comprising 2 Adults and up to 4 children or youth; one additional child or youth may be substituted in place of one adult.
Commercial Use	A class of activity conducted in a regional park, the primary purpose of which is 'for-profit' or private benefit.
Group Program	An interpretive program provided to an organized group or sponsoring organization (i.e. School field trip, birthday party).
Liquor Fee	A non-refundable fee applied to any function or activity where alcohol is consumed in accordance with park bylaws.

Parks Manager	The Manager, Metropolitan Planning, Environment and Parks or designate.
Performance Deposit	Is a refundable fee that is returned at the expiry of a license if all terms and conditions of such have been met.
Public Program	An interpretive program open to the general public, for which pre-registration and a fee may be required.
Security Deposit	Is a refundable fee that is returned at the completion of an event subject to all terms and conditions of performance being met.
Special Occasion License	A license issued by the British Columbia Liquor Control Branch, required by any individual or group holding a function where alcohol is served in a public place. This is separate and distinct from a "liquor fee" and it is the responsibility of the applicant to obtain a Special Occasion License.

2. Taxes - All fees are subject to applicable taxes except as otherwise noted.

3. Repeal of Previous Bylaws

"Greater Vancouver Regional District Park Fees and Charges Bylaw No. 1149, 2011" is hereby repealed.

4. Citation

This bylaw shall be cited as "Greater Vancouver Regional District Parks Fees and Charges Amending Bylaw Number 1173, 2012".

5. Effective Date

This bylaw shall come into force and effect at 12:01 am Pacific Standard Time on January 1, 2013.

READ A FIRST, SECOND AND THIRD TIME this ____ day of _____, 2012.

RECONSIDERED, PASSED AND FINALLY ADOPTED this ____ day of _____, 2012.

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair

Fee Schedule A – Outdoor Facilities

Picnic Shelters (Reservable)		(Tax NOT Included)	
Regional Park	Shelter	Weekends and Holidays	Weekdays
Aldergrove	Blacktail	\$ 135.00 <i>per Day</i>	\$ 65.00 <i>per Day</i>
Belcarra	Belcarra 1	\$ 135.00 <i>per Day</i>	\$ 65.00 <i>per Day</i>
Belcarra	Belcarra 2	\$ 135.00 <i>per Day</i>	\$ 65.00 <i>per Day</i>
Campbell Valley	Old Orchard	\$ 135.00 <i>per Day</i>	\$ 65.00 <i>per Day</i>
Crippen	Crippen	\$ 65.00 <i>per Day</i>	\$ 55.00 <i>per Day</i>
Deas Island	Deas	\$ 135.00 <i>per Day</i>	\$ 65.00 <i>per Day</i>
Deas Island	Muskrat Meadows	\$ 135.00 <i>per Day</i>	\$ 65.00 <i>per Day</i>
Derby Reach	Marpole	\$ 135.00 <i>per Day</i>	\$ 65.00 <i>per Day</i>
Fields (Reservable)		(Tax NOT Included)	
Regional Park	Field	Rate	
Aldergrove	Aldergrove Bowl	\$ 100.00 <i>per Day</i>	
Aldergrove	Sedge Field	\$ 80.00 <i>per Day</i>	
Campbell Valley	Little River Bowl/Field	\$ 80.00 <i>per Day</i>	
Campbell Valley	Rowlatt Farm	\$ 100.00 <i>per Day</i>	
Campbell Valley	Rowlatt Farm Enhanced	\$ 250.00 <i>per Day</i>	
Campbell Valley	CAM Picnic Terrace	\$ 80.00 <i>per Day</i>	
Capilano River	Cleveland Dam Field	\$ 80.00 <i>per Day</i>	
Crippen	Snug Cove/Middle Field	\$ 80.00 <i>per Day</i>	
Deas Island	Fisher's Field	\$ 80.00 <i>per Day</i>	
Lynn Headwaters	Lynn Headwaters Field	\$ 80.00 <i>per Day</i>	
Pacific Spirit	Plains of Abraham	\$ 80.00 <i>per Day</i>	
Tynehead	Festival Field	\$ 80.00 <i>per Day</i>	
Ball Diamond Rental (Reservable)		(Tax NOT Included)	
Regional Park	Field	Rate	
Boundary Bay	Ball Diamond	\$ 80.00 <i>per Day</i>	
Crippen	Ball Diamond	\$ 80.00 <i>per Day</i>	
Miscellaneous Outdoor Facilities (Reservable)		(Tax NOT Included)	
Regional Park	Facility	Rate	
Belcarra	Commercial Use Belcarra Wharf	\$ 75.00 <i>per Hour</i>	
Campbell Valley	Campbell Downs Equestrian Centre	\$ 140.00 <i>per Day</i>	
Campbell Valley	Equestrian Centre Overflow parking Lot	\$ 80.00 <i>per Day</i>	
Campbell Valley	MacLean Pond	\$ 25.00 <i>per Day</i>	
Group Camping (Reservable)		(Tax NOT Included)	
Regional Park	Group Camp	Adult and Family Rate	Youth Rate
Campbell Valley	Camp Coyote	\$ 200.00 <i>per Night</i>	\$ 100.00 <i>per Night</i>
Deas Island	Muskrat Meadows	\$ 200.00 <i>per Night</i>	\$ 100.00 <i>per Night</i>
Tynehead	Raven's Nest	\$ 200.00 <i>per Night</i>	\$ 100.00 <i>per Night</i>
Frontcountry Camping		(Tax Included)	
Regional Park	Facility	Regular Rate	Seniors / Disabled
Derby Reach	Edgewater Bar	\$ 24.00 <i>per Night</i>	\$ 21.00 <i>per Night</i>

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair

Fee Schedule B – Indoor Facilities

Camp Capilano	Capilano River Regional Park	(Tax NOT Included)	
Category	Service	Adult and Family Rate	Youth Rate
Overnight		\$ 1,000.00 <i>per Night</i>	\$ 420.00 <i>per Night</i>
Day Use	9 am to 5 pm	\$ 500.00 <i>per Day</i>	\$ 210.00 <i>per Day</i>
Late Checkout Fee		\$ 200.00 <i>per Hour</i>	\$ 200.00 <i>per Hour</i>
Lifeguard		\$ 35.00 <i>per Hour</i>	\$ 35.00 <i>per Hour</i>
Extraordinary Cleaning		\$ 25.00 <i>per Hour</i>	\$ 25.00 <i>per Hour</i>

Cambridge House	Boundary Bay Regional Park	(Tax NOT Included)	
Facility Rental		\$ 60.00 <i>per Hour</i>	
Tent - Over Capacity Fee		\$ 250.00 <i>per Day</i>	
Late Checkout Fee		\$ 200.00 <i>per Hour</i>	

Inverholme Schoolhouse	Deas Island Regional Park	(Tax NOT Included)	
Facility Rental		\$ 50.00 <i>per Hour</i>	

Minnekhada Lodge	Minnekhada Regional Park	(Tax NOT Included)	
Facility Rental		\$ 75.00 <i>per Hour</i>	
Late Checkout Fee		\$ 200.00 <i>per Hour</i>	

BC Mills House	Lynn Headwaters Regional Park	(Tax NOT Included)	
Facility Rental		\$ 15.00 <i>per Hour</i>	

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair

Fee Schedule C – Parking

PARKING FEES		(Tax Included)	
Regional Park	Location	Hourly Rate	Daily Rate
Pacific Spirit Regional Park	Fraser Lot	\$ 1.50	\$ 7.50

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair

Fee Schedule D – Private Special Events

Private Special Events	All Regional Parks (where permitted) (Tax NOT Included)	
Standard Event		No Fee / No permit
Fee - Simple Event	Up to 300 participants	\$ 250 <i>Event/day</i>
Fee - Complex Event	301 to 500 participants	\$ 375 <i>Event/day</i>
Fee - Large Event	Over 500 participants	\$ 500 <i>Event/day</i>
Camping	Outside designated campsites	\$ 6 <i>pp/night</i>

1. **Standard Event** as shown in this schedule applies to those activities where less than fifty participants are involved, special requirements such as tents, amplification, music, generators will not be used, fees are not charged to participants or spectators, donations are not solicited, the activity is not publicly advertised, exclusive use of a park area is not requested and the event occurs during regular park hours.
2. **Simple, Complex or Large Events** as outlined in this schedule are subject to a fee and require a permit issued in advance. Participants or spectators are charged a fee or minimum donation and park staff is required to prepare for or monitor the event. The activities planned are deemed to have an impact on other users of the park or surrounding residents.
3. Except for Standard Events as described in this schedule, all private special events require a permit and are subject to fees including regular facility rental fees and liquor fees. Additional fees to recover operating costs including but not limited to gate access, security deposits, and costs incurred by Metro Vancouver to have staff monitor the event may be applied. Event approval is conditional upon satisfactory agreement on the range and scope of additional fees to be applied, and will be outlined on the private special event permit.
4. In addition to fees charged for Private Special Events shown in this schedule, additional staff involvement on an initial or on-going basis shall be charged at the rate of Sixty-five Dollars (\$65.00) per hour.
5. Metro Vancouver reserves the right to request compensation for lost revenues arising out of the closure of facilities as a result of a private special event.
6. If an event occurs more than three times in any calendar year it may be deemed as "commercial use" and other policies may therefore apply.
7. The fees charged for Private Special Events as defined in this schedule are payable in advance.

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair

Fee Schedule E – Miscellaneous Services

Liquor Fees		All Regional Parks (where permitted) (Tax NOT Included)		
	Up to 199 participants	\$	100	<i>per event/day</i>
	200 - 299 participants	\$	150	<i>per event/day</i>
	300 - 999 participants	\$	200	<i>per event/day</i>
	Over 1000 participants	\$	300	<i>per event/day</i>

Tent Rental		(Tax NOT Included)		
Wall Tent	6.09m x 6.09 m (20' x 20')	\$	780	<i>per Day Includes setup/take down</i>
Wall Tent	6.09m x 9.14m (20' x 30')	\$	945	<i>per Day Includes setup/take down</i>

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair

Fee Schedule F – Interpretation Program and Public Special Event Fees

Type of Program	Maximum Prescribed Fees (Tax Included)				
	Adult 19-64 years	Child 4-14 years	Youth 15-18 years	Senior 65 or older	Small Group
Children's Program (Up to 3 hr)	Free	\$10.50		Free	N/A
Children's Program (Multi day)	N/A	\$35.00			N/A
Parent/Preschool Program	\$12.00 per adult/child pair				
Group Program	Maximum 15 persons pre-booked / \$35.00 per interpreter per hour				
Special Program					
Drop-in Fee	\$5.50	Free	\$3.25		\$14.00
Canoeing Program	\$21.50				

Fees include applicable taxes.

Public Special Events

An admission fee may be charged for events sponsored by Greater Vancouver Regional District Parks.

Notes: **

1. "Small Group" intended to accommodate families normally comprising of two adults (19 and over) and up to four children (under the age of 19); one additional child may be substituted in place of one adult; maximum of 6 persons per Small Group;
2. One adult and up to 2 children per registration;
3. Children's programs (multi-day) are normally up to 3 hours per day duration, and may occur over multiple days;
4. "Special Programs" may be new or pilot programs, programs offered in partnership with municipalities or other third parties. Program fees may be calculated based on an assumed base rate of \$35/hr for each Park Interpreter and also considering factors such as program length, skill development value and associated delivery costs.
5. There is no charge for children under the age of 3 years.
6. For program participants who have special needs - (e.g., confined to wheelchair, vision impaired) there is no charge for one (1) accompanying attendant.
7. Drop-in program fees may be waived for participants who can produce a valid bus transfer for fare to the program.

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair

Fee Schedule G – Cancellation Charges, Refunds, Waivers, Reductions and Exemptions

CANCELLATION FEES		(Tax NOT Included)
		Penalty
Indoor Reservable Facilities	Cancellation more than 6 months in advance of rental date	50% security deposit forfeited
	Cancellation less than 6 months in advance of rental date	100% security deposit forfeited
Outdoor Reservable Facilities	Cancellation more than 2 months in advance of rental date	\$25 Administration Fee
	Cancellation less than 2 months in advance of rental date	No refund
Private Special Events	Cancellation more than 2 months in advance of event date	\$25 Administration Fee
	Cancellation less than 2 months in advance of event date	No refund
Interpretive Programs	Cancellation more than 7 days in advance of program date	Full refund
	Cancellation less than 4 days	No refund
Group Programs	Cancellation more than 13 days in advance of program date	Full refund less \$25 administration fee
	Cancellation less than 14 days in advance of program date	No refund
CHANGE OF BOOKING DATE		(Tax NOT Included)
Indoor Reservable Facilities	Request for change of program date within current year	\$25 administration fee
Outdoor Reservable Facilities	Request for change of program date within current year	\$25 administration fee
Private Special Events	Request for change of program date within current year	\$25 administration fee
Interpretive Programs	Request for change of program date within current year	\$25 administration fee
Group Programs	Request for change of program date within current year	\$25 administration fee

- A fee or charge payable under this bylaw may be refunded in the discretion of the Parks Manager or otherwise on conditions set forth in this bylaw if a person or organization;
 - no longer requires the service to which the fee or charge relates; or
 - no longer undertakes the activity or thing for which a license, permit or approval was required.
- Charges for withdrawal from a Public or Group program shall be as set out in Schedule F to Bylaw XXXX, 2012.
- Charges for late cancellation of Private Special Events, Outdoor Ceremonies and rental of sites and/or facilities within Greater Vancouver Regional District Parks shall be as set out in Schedule F to Bylaw XXXX, 2012.
- Fees or charges for Private Special Events under this bylaw are not payable by applicants holding events specifically for the purpose of fundraising and who meet the following three criteria:
 - the applicant is a member of an enumerated class of entities listed in Schedule I to this bylaw;
 - an event coordination company is not being paid to plan the event; and
 - net proceeds will be donated to a recognized charity or the GVRD.
- The GVRD reserves the right to request proof of receipts and the donation made in respect of subsection 4(c) above.
- Fees and charges for certain facility rentals or programs under this bylaw are not payable by applicants who are members of an enumerated class of entities listed in Schedule I to this bylaw where the exemption will result in a substantial net benefit to the GVRD as determined by the Parks Manager. Those facility rentals and programs eligible for exemptions are indicated on the schedules to this bylaw setting out the usual fees and charges for each.
- In the event that an automatic exemption for fees and charges pursuant to subsections 4 (a)(b) and (c) on this schedule are not applied at the time of booking, application for a refund or exemption may be made in writing to the Parks Manager a minimum of thirty (30) days in advance of the date of the event or reservation.

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair

Fee Schedule H - Commercial Use

COMMERCIAL USE PERMITS	(Tax NOT Included)	(Tax NOT Included)	
All Regional Parks	Where Allowed Under Permit	Rate	Term
Business Permit Application Fee	Non-refundable	\$ 100.00	<i>per Application</i>
Regional Park Business Permit		\$ 100.00	<i>Annual</i>
Vendor Storage	Rental Where Available	\$ 100.00	<i>Annual</i>
Fishing Tours	Where Allowed	\$ 100.00	<i>Annual</i>
Commercial Portrait Photography	Where Allowed	\$ 100.00	<i>Annual</i>
Commercial Bicycle Tours	Where Allowed	\$ 200.00	<i>Annual</i>
Guided Equestrian Rides	Where Allowed	\$ 200.00	<i>Annual</i>
Walking Tours	Where Allowed	\$ 100.00	<i>Annual</i>
Use of Fields for Dog Training	Where Allowed	\$ 100.00	<i>Annual</i>
Commercial Dog Walking	Up to 4 dogs	\$ 450.00	<i>Annual</i>
Commercial Dog Walking	More than 4 dogs	\$ 750.00	<i>Annual</i>

COMMERCIAL BUS ENTRY FEE	(Tax NOT Included)		
	Effective January 1, 2013	Fee	
Capilano River (Fish Hatchery Entrance Only)	Commercial Bus - Up to 24 pass	\$ 24.00	<i>per Day/vehicle</i>
Capilano River (Fish Hatchery Entrance Only)	Commercial Bus - Over 24 pass	\$ 43.00	<i>per Day/vehicle</i>
	Effective January 1, 2014		
All Regional Parks	Commercial Bus or Van- 11 seats or less	\$ 15.00	<i>per Day/vehicle</i>
All Regional Parks	Commercial Bus or Van- 11 seats or less	\$ 600.00	<i>per Day/vehicle</i>
All Regional Parks	Commercial Bus - 12 to 24 seats	\$ 24.00	<i>per Day/vehicle</i>
All Regional Parks	Commercial Bus - 12 to 24 seats	\$ 850.00	<i>per Day/vehicle</i>
All Regional Parks	Commercial Bus 25 seats or more	\$ 43.00	<i>per Day/vehicle</i>
All Regional Parks	Commercial Bus 25 seats or more	\$ 1,250.00	<i>per Day/vehicle</i>

- Activities of a commercial nature are permitted only in certain regional parks, and such activities require a "Commercial Use Permit." This does not apply to those commercial activities covered under separate license agreements, concession agreements or partnering agreements.

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair

Fee Schedule I

GROUPS EXEMPT FROM CERTAIN FEES OR CHARGES

Park Associations including but not limited to:

Burnaby Lake Park Association
Cambridge House Committee and
Boundary Bay Regional Park Volunteers
Campbell Valley Park Association
Catching the Spirit Youth Society
Colony Farm Park Association
Delta Heritage Air Park / RAA BC
Derby Reach & Brae Island Park Association

Kanaka Education and Environmental
Partnership Society
Minnekhada Park Association
Pacific Spirit Park Association
Trails BC
Wreck Beach Preservation Society

Recognized Groups Active in Supporting Regional Parks including but not limited to:

Bowen Island Community Fair Association
Bowen Island Fish & Wildlife Club
British Columbia Wildlife Watch
Burke Mountain Naturalists
Burns Bog Conservation Society
Canadian Parks & Wilderness Society
Central Valley Naturalists
Colony Farm Community Gardens Society
Critter Care
Delta Deas Rowing Club
Delta Naturalists Society
Dogwood Canoe Club
Ducks Unlimited Canada
Equestrian Trails Council
Evergreen Foundation
Farm Folk / City Folk
Federation of Individual Dog Organizations (FIDO)
Golden Ears Trail Preservation
Haney Horsemen

Herbwalk Presentation
Langley Centennial Museum
Langley Environmental Partners Society
Langley Field Naturalists
Langley Horse Federation
Marpole Richmond Sportsman Association
Nickomekel Young Naturalists Club
Nova Scotia Duck Tolling Retriever Club
Pacific Parklands Foundation
Pitt Polder Preservation Society
Port Moody Power Squadron
River Works - Vancouver Aquarium
Royal Astronomical Society - BC Chapter
Royal Engineers
Serpentine Enhancement Society
Trail Initiatives Group
Trans Canada Trail Society
Vancouver Natural History Society Tours

Greater Vancouver Regional District Member Municipalities

Public and Private Educational Institutions

Schedule I - continued

Organizations Promoting Health and Wellness including but not limited to:

Arthritis Society
BC Association for Community Living
BC Mobility Opportunities Society
Burnaby Healthy Heart Program
Canadian Cancer Society
Canadian National Institute for the Blind
Coquitlam Stroke Recovery Group
Developmental Disabilities Association

Get in Line, Get in Motion
BC and Yukon Heart & Stroke Foundation
Pacific Developmental Pathways
Pacific Riding for the Disabled Assoc
South Delta RHWIM Event Committee
Terry Fox Run for Cancer Research
Volunteers for Seniors - Step Out

Community Service Organizations including but not limited to:

Bowen Island Gymnastics Club
Bowen Island Memorial Garden Society
Boy Scouts of Canada
Cedar Cottage Adult Day Centre
Community Futures Development (BC)
Downtown Eastside Seniors Association
Eldercollege
Elderhostel
Elks Club
Fraser Valley Field Day Club
Girl Guides of Canada
Lions Club
North Shore Association for Mentally Handicapped
OFU Seniors Group
Rotary Club
SUCCESS Chinese Family Association
Surrey Amateur Radio Club
Trail Trekkers

6533101

Paulette Vetleson
Corporate Secretary

Greg Moore
Chair



Environment and Parks Committee Meeting Date: October 3, 2012

To: Environment and Parks Committee

From: Laurie Bates-Frymel, Air Quality Planner
Ali Ergudenler, Senior Engineer
Metropolitan Planning, Environment and Parks Department

Date: September 10, 2012

Subject: **Burrard Inlet Area Local Air Quality Study Results**

Recommendation:

That the Board authorize staff to:

- a) initiate a review of Metro Vancouver's ambient air quality objectives for sulphur dioxide (SO₂), and
 - b) work with Port Metro Vancouver and other partners to establish a network of key SO₂ monitoring sites to assess the effectiveness of the Emission Control Area for ships and inform the SO₂ objective review.
-

1. PURPOSE

To report on the results of the Burrard Inlet Area Local Air Quality Study (BIALAQS) and to identify further actions for Metro Vancouver to address the air quality issues identified during this study.

2. CONTEXT

In its 2005 Air Quality Management Plan, Metro Vancouver committed to “assessing and monitoring possible local air quality priority areas, and where needed, partnering with the appropriate governments, health agencies, the public and owners/operators of emission sources to develop and implement local air quality action plans”. Metro Vancouver identified the Central Burrard Inlet Area as a local air quality priority area since a wide variety of air emission sources are situated within this densely-populated area and emissions are expected to increase due to port expansion and/or increased activities.

The Central Burrard Inlet Area (CBIA) is roughly bounded by the Lions Gate Bridge to the west, the TransCanada Highway to the north, the Chevron refinery to the east, and Hastings Street to the south. The main sources of air emissions in the CBIA include: ocean-going vessels, cruise ships, harbour vessels, non-road engines (including cargo handling and construction equipment), heavy-duty trucks, locomotives, small aircraft, commuter traffic, and industrial sources (such as a refinery and bulk shipping terminals), as well as commercial and residential sources.

The main objectives of the study were to:

- (a) determine how air quality in the CBIA differs from other parts of Metro Vancouver and the Fraser Valley Regional District,
- (b) determine how pollutant levels vary by space and time, and
- (c) provide information that may be used to determine the major sources contributing to air quality levels.

Metro Vancouver measures air quality at six existing monitoring stations within the CBIA. Between July 2008 and June 2010, Metro Vancouver supplemented the existing monitoring network by collecting air quality data from ten additional sites using portable samplers and a mobile trailer (Figure 1).



Figure 1: Air quality monitoring sites - Burrard Inlet Area Local Air Quality Study

Data from all sites were validated using Metro Vancouver's quality assurance and control procedures. The air quality readings were then compared to other areas in the Lower Mainland, as well as Metro Vancouver's air quality objectives.

Study Results

The study findings are summarized in the attached executive summary of *The Burrard Inlet Area Local Air Quality Study: Monitoring Program Results* (September 6, 2012). The main conclusions of the study include:

1. *The CBIA experienced elevated sulphur dioxide (SO₂) levels.*
 - On average sulphur dioxide (SO₂) levels were higher in the CBIA than the rest of Metro Vancouver and the Fraser Valley Regional District. The largest sources of SO₂ emissions in the Burrard Inlet area are marine vessels and a petroleum refinery.

According to Health Canada, exposure to high levels of SO₂ can cause breathing problems in people with asthma. Exposure to elevated SO₂ levels may increase hospital admissions and premature deaths.

- SO₂ levels were better than Metro Vancouver's air quality objectives most of the time, except during one fog event in January 2009. This SO₂ exceedance occurred at one station adjacent to the Chevron refinery in North Burnaby.
 - The World Health Organization (WHO) published new guidelines for SO₂ in 2005, which are more stringent than Metro Vancouver's current objectives. While levels in the CBIA comply with the Metro Vancouver objectives, they exceeded the WHO's SO₂ guidelines several times at all but one location (Mahon Park in North Vancouver). Although the WHO's air quality guidelines are not legally-binding standards, they are intended to provide guidance to air quality agencies to support air quality improvement and the protection of public health. The WHO also recognizes that governments should consider their own local circumstances carefully before adopting these guidelines as air quality objectives.
2. *Fine particulate matter (PM_{2.5}) levels were periodically elevated in the CBIA.* PM_{2.5} levels were better than MV's objectives most of the time, except during a fog event in January 2009 and a summer regional air quality advisory in July/August 2009.
3. *Black carbon, vanadium and nickel levels were elevated in the CBIA.* Tests on several PM_{2.5} samples revealed elevated levels of black carbon (soot), vanadium and nickel. Black carbon is an indicator of diesel fuel combustion and/or wood smoke, while vanadium and nickel are tracers for marine fuel combustion. Levels of vanadium and nickel measured in the CBIA were well below established guidelines.
- Fine particulate with a diameter of 2.5 micrometres (µm) are small enough to be inhaled deeply and enter the bloodstream.*
- The World Health Organization classifies diesel exhaust as carcinogenic – accounting for 67% of lifetime cancer risk in Metro Vancouver.*

Actions Underway

Several initiatives are already underway that will reduce emissions of SO₂ and PM_{2.5} in the CBIA. These initiatives, listed below, have been developed by Metro Vancouver, or as collaborative efforts involving Metro Vancouver and a number of partners::

- Starting this year, marine vessels in North American waters will be required to meet stringent emission control standards which will significantly reduce SO₂ and nitrogen oxide emissions, as well as PM_{2.5} levels. Transport Canada is responsible for compliance promotion and enforcement of these regulations in Canadian waters.
- Port Metro Vancouver has established "shore power" at Canada Place which enables properly-outfitted cruise ships to shut down their engines while docked and connect to the electrical grid.
- Port Metro Vancouver has also introduced increasingly stringent environmental requirements for container trucks focusing on the phasing out of older trucks, mandatory opacity testing and idling limits, and an awareness program. By 2017, these requirements will reduce emissions of diesel exhaust particles significantly.

- In 2011 Metro Vancouver adopted a Non-Road Diesel Engine Emission Regulation that requires operators of older, dirtier non-road diesel equipment (including cargo handling and construction equipment) to pay fees. If an old engine is permanently retired from use in Metro Vancouver or is upgraded to significantly cleaner emission standards, 80% of these fees will be returned to the operators to cover those costs.
- Metro Vancouver is working with the port and other partners to implement other actions in its Integrated Air Quality and Greenhouse Gas Management Plan that reduce diesel exhaust.
- Metro Vancouver is working with Chevron Refinery staff to ensure reliable ambient air quality data communications and routinely review SO₂ excursion mitigation procedures. In addition, Environment Canada is also developing emissions requirements for industrial sectors which may require further emission reductions from petroleum refineries.

Recommendations for Further Action

In addition to these actions that are underway, Metro Vancouver staff proposes the following new actions:

- *Initiate a review of Metro Vancouver's SO₂ objectives.* This review would consider: the results of this study with consideration of forecast levels of emissions of SO₂ taking into account growth in shipping activity as well as pending emission controls and fuel quality improvements; the conclusions of a forthcoming Health Canada SO₂ Health Science Assessment; information from the World Health Organization and other agencies; as well as other stakeholder input.
- *Work with Port Metro Vancouver and other partners to establish a network of key SO₂ monitoring sites.* This enhanced monitoring will help to assess the effectiveness of the Emission Control Area for ships and inform the SO₂ objective review. It is expected that funding for this enhanced monitoring will be provided by Port Metro Vancouver and other partners.

3. ALTERNATIVES

That the Environment and Parks Committee may:

- a) Direct staff to initiate a review of Metro Vancouver's sulphur dioxide objectives and to work with Port Metro Vancouver and other partners to establish a network of key SO₂ monitoring sites to assess the effectiveness of the Emission Control Area for ships and inform the SO₂ objective review; OR,
- b) Direct staff to take an alternative course of action; OR,
- c) Receive this report for information and take no further action at this time.

4. CONCLUSION

As part of its 2005 Air Quality Management Plan, Metro Vancouver committed to developing new programs to address local air quality – recognizing that while air quality may be acceptable on a region-wide basis, there may be localized “hot spots” at the sub-regional level. The Central Burrard Inlet Area was chosen as a specialized study area since it contains many air emission sources and several densely-populated neighbourhoods.

Elevated levels of sulphur dioxide and fine particulate matter were observed during this study, which was not unexpected given the level of marine vessel, port and industrial activity and emissions associated with goods movement. Although a number of new initiatives (including the implementation of the Emission Control Area for ships) and Metro Vancouver’s programs to address diesel particulate matter are expected to reduce air emissions in this area, enhanced monitoring will help to track progress. Metro Vancouver’s air quality program includes a principle of continuous improvement, including the review and establishment of new ambient air quality objectives. The World Health Organization has introduced new guidelines for SO₂ that are more stringent than Metro Vancouver’s current objectives and it is recommended that Metro Vancouver’s sulphur dioxide objectives be reviewed and updated to ensure the protection of public health in our region.

ATTACHMENT

The Burrard Inlet Area Local Air Quality Study: Monitoring Program Results (September 6, 2012) - Executive Summary (Doc. # 6546652).

Executive Summary

In its 2005 Air Quality Management Plan, Metro Vancouver committed to “assessing and monitoring possible local air quality priority areas, and where needed, partnering with the appropriate governments, health agencies, the public and owners/operators of emission sources to develop and implement local air quality action plans.” Metro Vancouver identified the Central Burrard Inlet Area (CBIA) as a possible local air quality priority area since a wide variety of air emission sources are situated within this relatively densely-populated area and emissions are expected to increase due to port expansion.

The objectives of the monitoring portion of the Burrard Inlet Area Local Air Quality Study (BIALAQS) were to: a) determine how air quality in the CBIA differs from other parts of Metro Vancouver and the Fraser Valley Regional District, b) determine the spatial and temporal variability of pollutants, and c) provide information that may be used to determine the major sources contributing to air quality levels. The monitoring portion of the BIALAQS was conducted from July 2008 to June 2010 using twelve fixed monitoring sites and one mobile monitoring trailer which rotated between four locations in the CBIA. Information was collected about air pollutants that have been associated with human health impacts including fine particulate matter, sulphur dioxide and nitrogen dioxide. This report provides a detailed summary of the levels of specific air pollutants observed within the CBIA during this study period. Where possible, recommendations have been provided for further action.

In general, the BIALAQS monitoring program concluded that the CBIA experienced unique air quality compared to other areas in Metro Vancouver and the Fraser Valley Regional District. In particular, this study yielded the following conclusions:

- a) *The CBIA experienced elevated sulphur dioxide (SO₂) levels.* Average SO₂ concentrations were generally higher at sites closer to the Burrard Inlet. The largest sources of SO₂ in the CBIA are marine vessels and petroleum refining. Pollution roses and diurnal profiles indicate that marine vessels are the likely source of elevated average SO₂ levels at most sites. However, during a winter inversion episode in January 2009, SO₂ concentrations exceeded Metro Vancouver’s 1 and 24-hour SO₂ objectives at the Burnaby-Capitol Hill site for a short period. Elevated SO₂ concentrations were also recorded at other CBIA sites during this episode, but due to the proximity of the Burnaby-Capitol Hill site to a nearby petroleum refinery and the lack of dispersion during this event, it is suspected that the refinery was

primarily responsible for the short-term SO₂ exceedances at the T23 Burnaby-Capitol Hill station.

- b) *Fine particulate matter (PM_{2.5}) levels were periodically elevated in the CBIA.* PM_{2.5} concentrations exceeded Metro Vancouver's 24-hour objective at two CBIA sites with standard network monitors during a winter inversion episode and a regional summertime air quality advisory. Several other CBIA sites also recorded exceedances, but these sites employed non-standard monitoring technology with greater uncertainty than the standard network monitors. There were no PM_{2.5} exceedances at any other Lower Fraser Valley (LFV) network stations outside the CBIA during these episodes.
- c) *Black carbon levels were slightly elevated in the CBIA.* A component of PM_{2.5}, black carbon is often used as an indicator for diesel fuel combustion and/or wood smoke. Black carbon concentrations were slightly higher at the two CBIA sites compared to the only other station monitoring black carbon at the time in Abbotsford. However, these concentrations were only monitored for a short portion of the study.
- d) *The CBIA experienced elevated vanadium and nickel levels.* Nickel and vanadium are found in residual/heavy fuel oil burned in ocean-going vessels and are emitted as particles during combustion. Vanadium and nickel levels were significantly higher in the three sets of PM_{2.5} samples collected from CBIA sites.
- e) *Nitrogen dioxide (NO₂) levels were similar to the rest of the LFV network, with the exception of the Downtown Vancouver site.* Due to its proximity to a major roadway with high traffic volumes, average NO₂ concentrations at the Downtown Vancouver site slightly exceeded Metro Vancouver's annual NO₂ objective.
- f) *Unique poor air quality episodes occurred within the CBIA.* With a combination of distinctive meteorology, topography and emissions, the CBIA experienced several unique air quality episodes during the study. PM_{2.5} and SO₂ concentrations exceeded Metro Vancouver's short-term air quality objectives at several CBIA sites during four episodes -- two during summer and two during winter. There were no exceedances of Metro Vancouver's PM_{2.5} or SO₂ objectives at any LFV network stations outside the CBIA during these episodes.

Based on these conclusions and other detailed analyses presented in this report, the following actions are recommended:

- a) Metro Vancouver should review its ambient air quality objectives for SO₂ using the results of Health Canada's assessment (when complete), the World Health Organization's guidelines, and input from public and industry stakeholders.

- b) Metro Vancouver should continue to work with Port Metro Vancouver and other stakeholders to investigate and implement measures that will reduce SO₂ emissions from marine vessel activities. A number of measures are already underway.
- c) Metro Vancouver should continue to work with the Chevron Refinery to ensure reliable ambient air quality data communications and routinely review SO₂ excursion mitigation procedures.
- d) Additional assessment work which should be considered, in collaboration with partners, includes:
 - Additional PM_{2.5}, speciation and black carbon monitoring within a few CBIA communities using standard instrumentation.
 - Enhanced monitoring of SO₂, particularly on Port Metro Vancouver lands and adjacent populated communities on the CBIA's south shore.
 - Collection of representative meteorological measurements (including wind speed and direction, air temperature and humidity) within the community where most of the complaints originate.
 - Evaluating the value of the Second Narrows station within the LFV network.
 - Analysing the speciated volatile organic compound data collected during the BIALAQS.
 - Completing additional dispersion modelling to further assess the contribution of emission sources and test the effectiveness of emission reduction strategies.



Environment and Parks Committee Meeting Date: October 3, 2012

To: Environment and Parks Committee

From: Gaëtan Royer, Manager
Metropolitan Planning, Environment and Parks Department

Date: September 19, 2012

Subject: **Manager's Report**

Recommendation:

That the Environment and Parks Committee receive for information the report dated September 19, 2012, titled "Manager's Report".

Environment and Parks Committee 2012 Workplan

Attachment 1 to this report sets out the Committee's Workplan for 2012. The matrix is updated to include new issues that arise, items requested by the Committee, and changes in the schedule. Items highlighted in bold identify completed work program elements.

Kwantlen Polytechnic University Proposal regarding participation and support for a Food System Design and Implementation Plan

Metro Vancouver received a letter, dated July 26th, 2012 from Kent Mullinix and Arthur Fallick from the Institute for Sustainable Agriculture at Kwantlen Polytechnic University requesting engagement in, and support for, a "Food System Design and Implementation Plan for southwest British Columbia". The letter requests an annual financial contribution for three years as well as staff engagement. The request will be clarified through a delegation on their proposal to the Regional Planning and Agriculture Committee on October 5, 2012.

Update on Ecological Health Action Plan Project #2: Lower Brunette River

The Lower Brunette River remains a significant problem for fish because of poor habitat and fluctuating water levels.

In Metro Vancouver's 2012 Action Plan, under Ecological Health, a key milestone is to prioritize habitat enhancement work in the Lower Brunette River. To this end, staff identified the following actions to address deficiencies in the Lower Brunette:

1. Improve in-stream salmon habitat, (including summer rearing, overwintering and spawning habitat) through the construction of new off-channel habitat and the introduction of Large Woody Debris structures;
2. Improve habitat for endangered Nooksack Dace by adding more riffles into the system; and
3. Remove invasive species and plant native species to restore the riparian zone.

These actions in support of 'Salmon in the Cities' and the Ecological Health Action Plan will be proposed for implementation as part of Metro Vancouver's 2013 Action Plan.

Update on Ecological Health Action Plan Project #3: Upper Brunette River

Over the past three years, fish habitat in the Upper Brunette River has greatly improved. Metro Vancouver's Sewer and Water Use Planning group in collaboration with partners, including Transportation Investment Corporation (as partial compensation for the construction of the new Port Mann Bridge), Sapperton Fish and Game Club, Department of Fisheries and Oceans, and the cities of Coquitlam, Burnaby and New Westminster have taken on signification restoration projects with great success.

Through attention to detail and innovative use of materials and resources the Upper Brunette River system now has greater in-stream complexity, fewer migration barriers and improved riparian habitat.

As a result of the extensive work to improve habitat in the Upper Brunette River, fish stocks have increased including the endangered Nooksack Dace.

Update on Aldergrove Management Plan Open House

Staff will present a verbal update on the September 25 Open House regarding Aldergrove Regional Park Management Plan.

Air Quality Monitoring in New Westminster

Metro Vancouver has completed an air quality monitoring study in the City of New Westminster. One of the objectives of the study was to respond to a request from New Westminster to monitor air quality in the vicinity of a heavy duty truck route along Front Street. A second objective was to assess a potential gap in the regional airshed air quality monitoring network, with the absence of a permanent monitoring station in New Westminster. To this end, Metro Vancouver conducted monitoring at a number of locations to characterize traffic impacts, but also placed a temporary monitoring station at Sapperton Park in order to assess background levels in the community.

The study identified elevated levels of fine particulate matter (including diesel particulate) and nitrogen dioxide in the Front Street area. Staff provided a number of recommendations to City of New Westminster staff to mitigate the observed air quality issues.

The study also concluded that New Westminster is not adequately represented by adjacent monitoring stations in Burnaby and Delta. It is also noted that there are a number of air quality issues in the community related to New Westminster's placement as a major transportation corridor, the proximity of truck routes to schools, and the potential for increased traffic volumes. Accordingly, staff initiated the process to add a permanent monitoring station in New Westminster. This station will enhance the existing airshed monitoring network.

Future of the AirCare Program for Motor Vehicles (Attachment 2)

In a letter received just before the agenda package was published, the BC Minister of Environment acknowledges that "Metro Vancouver's innovative policies and programs are viewed as models for action by many other agencies". Minister Lake also expresses appreciation for Metro Vancouver's role regarding heavy-duty vehicles emissions. In the same letter, the Minister also confirms the government's decision to phase out the AirCare light-duty vehicle inspection and maintenance program.

Fraser River Delta Ramsar Site (Attachment 3)

Staff will provide a verbal update.

ATTACHMENTS

1. Environment and Parks Committee – 2012 Workplan (Doc. # 6537619).
2. Future of the AirCare Program for Motor Vehicles in Metro Vancouver – Correspondence dated September 18, 2012 from Minister Terry Lake, Ministry of Environment addressed to Chair Greg Moore, Metro Vancouver Board (Doc. #6562806).
3.
 - a. Media Release dated September 26, 2012 (Doc. #6566873).
 - b. Fraser River Delta Ramsar Site – Map (Doc. #6568325).

5.6 ATTACHMENT 1

Environment and Parks Committee 2012 Workplan

1st Quarter

Key priorities

- 2012 Committee orientation.
- Develop Committee Terms of Reference.
- Complete park sensitivity zoning mapping (condition and species at risk assessments).
- Implement salmon habitat enhancement at Acadia Creek.
- Fully implement the Non-Road Diesel Engine Emissions Regulation.
- Assess and respond to Parks Canada National Parks Reserve feasibility study for Crippen Regional Park.
- Implement “no smoking policy” in Regional Parks, effective January 1, 2012.

2nd Quarter

Key priorities

- 2012 Committee visioning workshop and development of work plan.
- Launch new publicly accessible annual “state of the air” report.
- Support consultation process for proposed new waste-to-energy capacity.
- Advance Sumas Mountain Regional Park.
- Secure new provincial funding (\$1 million) for Experience the Fraser and sign Memorandum of Understanding.
- Complete remaining classes for sensitive ecosystem inventory and analysis as part of development of Green Infrastructure Network (GIN); protection of wetlands and parks sensitivity zoning.
- Complete a survey and analysis of regional outdoor recreational opportunities and identify gaps.
- Complete the design of the Kanaka Creek Hatchery and initiate fundraising.
- Expand mapping for the iParks Navigator “app” to include municipal content.
- Adopt new park land acquisition priorities and framework.
- Initiate process for prohibiting residential wood smoke in urban areas.

Note: **Bold** – completed items

3rd Quarter

Key priorities

- Add two new air quality monitoring stations in the Fraser Valley Regional District.
- Report and funding request for habitat enhancement work in the Lower Brunette River.
- Adopt Experience the Fraser Concept Plan and identify governance, partnerships and sustainable funding model.
- Adopt Matsqui Trail Park Management Plan.
- Complete an inventory of disturbed and developable lands within the regional parks.
- **Increase youth engagement with Metro Vancouver priorities through a broad range of activities including K-12 curriculum development and teaching resources; and interpretative, educational and special programming in regional parks and watersheds.**

4th Quarter

Key priorities

- 2013 Program and Priorities.
- Receive draft Regional Parks Master Plan Framework.
- Integrate sensitive ecosystem inventory information into land acquisition process.
- Develop best management practices for trail placement, construction and maintenance for Regional Parks (context sensitivity zoning).
- Design the Matsqui Trail Regional Park Mission Bridge Recreation Hub.
- Complete Aldergrove Regional Park Management Plan Concept.
- Work with other levels of government to complete design of the AirCare program beyond 2012, including enhanced focus on heavy duty trucks.
- Complete pilot program to reduce greenhouse gas emissions from small- and medium- sized enterprises and provide recommendations for future program.
- **Propose an Organics Management Odour Control Air Emissions Regulation.**
- Undertake consultation on a Metro Vancouver Open Burning Smoke Control Regulation.
- Propose a Printers Volatile Organic Compounds Emission Control Regulation.
- Complete public engagement process for Colony Farm sustainability plan.
- Make a decision about an incubator farm and other related measures at Colony Farm Regional Park.
- Assess replacement strategies for redevelopment of Camp Capilano.
- Progress report on the preliminary Regional Green Infrastructure Network and proposed integration with Parks Master Plan, regional and municipal plans
- Status report on Ecological Health Action Plan.



5.6 ATTACHMENT 2

Reference: 176360

SEP 18 2012

Greg Moore, Chair
and Directors
Metro Vancouver Board
4330 Kingsway
Burnaby BC V5H 4G8

Dear Chair Moore and Directors:

Thank you for your letter of August 15, 2012, regarding the future of the AirCare program for motor vehicles in Metro Vancouver.

First, I would like to acknowledge the leadership that Metro Vancouver has displayed in protecting air quality within its boundaries. Metro Vancouver's innovative policies and programs are viewed as models for action by many other agencies. I also want to thank you and the Metro Vancouver Board of Directors for your strong support of British Columbia's efforts to reduce particulate emissions, particularly mobile source emissions. I agree that reducing these emissions will improve the health of British Columbians.

I appreciate the collaborative efforts of Metro Vancouver staff, ministry staff and other partners on the mobile source heavy-duty vehicle subcommittee of the AirCare Steering Committee. I expect that this subcommittee will act as a resource to help identify policies and programs for minimizing heavy-duty vehicle emissions. The results of the remote sensing pilot program will help inform future such policies and programs.

The decision to phase out the AirCare light-duty vehicle inspection and maintenance program at the end of 2014 was taken after careful consideration of all information at our government's disposal. We share your desire that there be no "backsliding" on the significant reductions in light-duty vehicle emissions that were achieved during the life of the program. I have asked ministry staff to be mindful of this issue and to propose further actions if they are warranted.

I look forward to the continued collaboration of our two agencies in protecting the quality of the air in the Lower Mainland airshed. If you have any questions, please contact Mr. Glen Okrainetz, Air Protection Manager in the Ministry of Environment, at 250 953-3417 or Glen.Okrainetz@gov.bc.ca.

...2

Ministry of
Environment

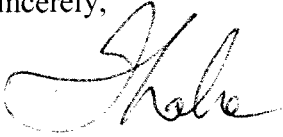
Office of the
Minister

Mailing Address:
Parliament Buildings
Victoria BC V8V 1X4

Telephone: 250 387-1187
Facsimile: 250 387-1356

Thank you again for your agency's commitment to our shared goal of protecting air quality.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Lake", written in a cursive style.

Terry Lake
Minister of Environment

cc: Glen Okrainetz, Air Protection Manager, Environmental Standards Branch, Ministry of
Environment

5.6 ATTACHMENT 3a



September 26, 2012

BURNS BOG AND FRASER RIVER DELTA DECLARED WETLANDS OF "INTERNATIONAL IMPORTANCE"

The Burns Bog Ecological Conservancy Area and vast expanses of the Fraser River estuary have now been recognized on the world stage as a "Ramsar Wetland of International Importance."

The Convention on Wetlands is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources. It was adopted in the Iranian city of Ramsar in 1971 and is the only global environmental treaty that deals with a particular ecosystem.

On Sept. 22, 2012, the Switzerland-based Convention Secretariat announced it had approved Canada's application for a Ramsar designation for the ecological conservancy area and natural areas in the Fraser River estuary.

Delta Mayor Lois E. Jackson, a Metro Vancouver Director, said the Corporation of Delta has been working towards achieving this Ramsar designation for many years.

"Our hard work has finally paid off and we are so pleased to have achieved this important designation for wetlands in and around Delta," Mayor Jackson said. "This designation is a significant step in our ongoing focus of protecting the environment in Delta and will ensure the security of our wetlands for generations."

"The wetlands where the Fraser River meets the sea are the most important bird and fish habitat on the west coast of Canada," said Metro Vancouver Board Chair Greg Moore. "This Ramsar designation puts a regional treasure on the international map."

Delta played an integral role in the negotiations for the 2004 acquisition and protection of Burns Bog with three other levels of government and promoting the goal of a Ramsar designation for Burns Bog through the Burns Bog Management Plan. After many years of lobbying senior levels of government, including delegations to Ottawa in 2010 and 2011 during which Mayor Lois E. Jackson, Councillor Ian Paton and George V. Harvie, Chief Administrative Officer met with the Honourable Peter Kent, Minister of Environment, an application to the Ramsar secretariat was submitted in early 2012.

"The Government of B.C. appreciates this international recognition of our ongoing efforts to protect provincial lands, including our designation and ongoing management of the Sturgeon Bank, South Arm Marshes, Boundary Bay and Serpentine Wildlife Management Areas," said

Steve Thomson, Minister of Forests, Lands and Natural Resource Operations. “We work hard with our conservation partners to ensure sensitive wetlands are preserved for future generations.”

Heather Deal, the Chair of Metro Vancouver’s Environment and Parks Committee, said Burns Bog is one of Canada’s largest undeveloped land masses within an urban area.

“It supports distinctive bog vegetation communities and recognized rare and endangered plant and wildlife species,” she noted. “Research work is well underway with a goal to achieving a 100-year vision of a self sustaining raised bog ecosystem. Metro Vancouver and the Corporation of Delta are committed to restore the raised bog ecosystem and maintain its integrity in accordance with the best scientific principles and stewardship practices of the time.”

Most of Burns Bog became a protected area in 2004 when the Corporation of Delta, Metro Vancouver, the Province of British Columbia and the Government of Canada contributed a total of \$73 million to buy more than 2,000 hectares of privately-owned lands. Over the years, Burns Bog had been a proposed site for a superport, industrial lands and other commercial developments.

Metro Vancouver now manages Burns Bog Ecological Conservancy Area, as a closed area with no public access, while Delta is responsible for drainage management and fire management.

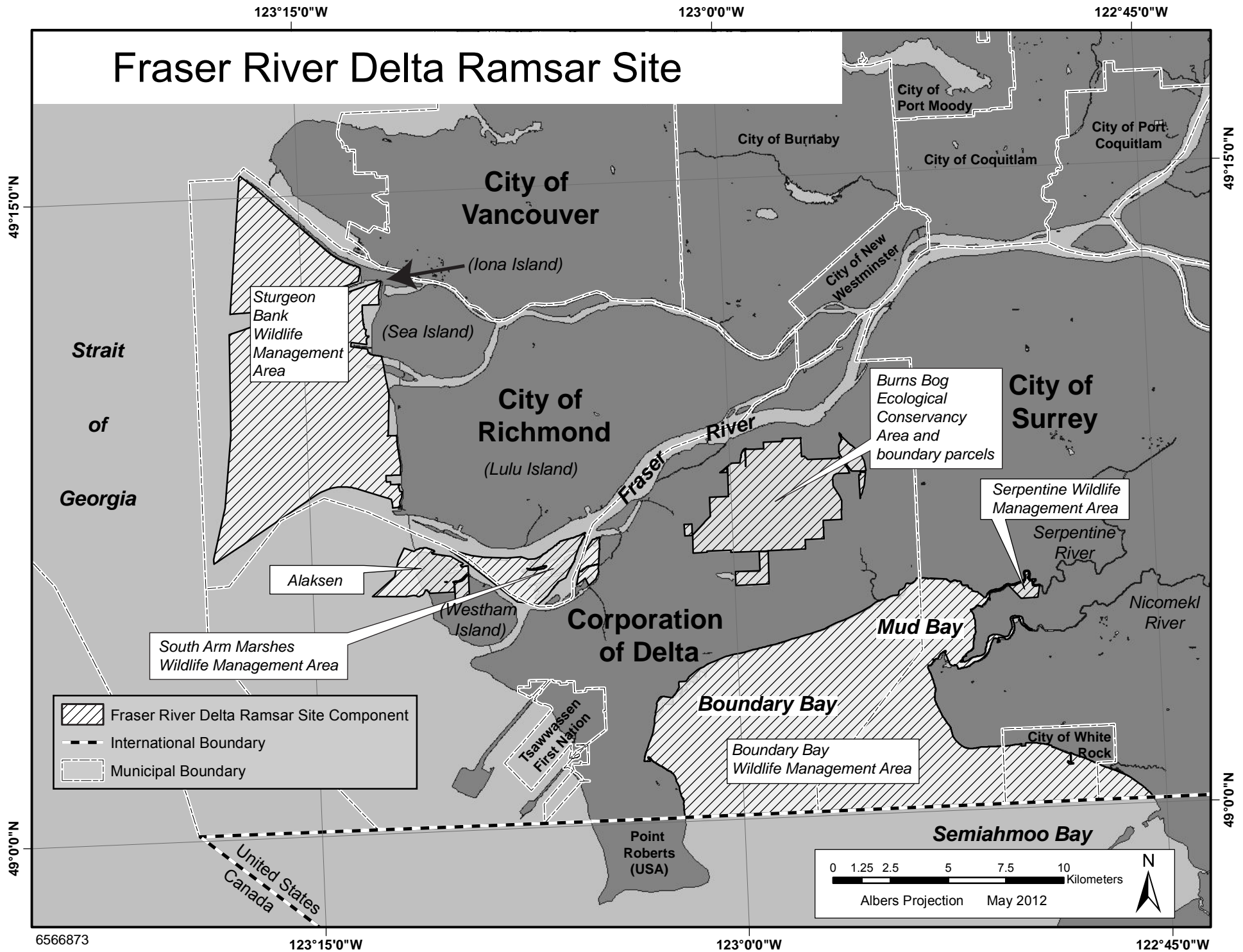
The Corporation of Delta will continue to pursue opportunities to protect and preserve its natural areas. For example, Council recently approved the addition of some 405 hectares to the Burns Bog Ecological Conservancy Area.

The Government of Canada has vastly extended the existing Alaksen Ramsar Site in Delta, which was first designated in 1982, from 586 hectares to 20,682. The resulting Ramsar Site, now renamed “Fraser River Delta”, is formed by six components: the Burns Bog Ecological Conservancy Area (BBECA), Sturgeon Bank, South Arm Marshes, Boundary Bay, Serpentine, and the former ‘Alaksen’ Ramsar site.

Media contacts:

Metro Vancouver – Glenn Bohn, communications specialist, 604-451-6697 office, 604-314-5964 mobile, Glenn.Bohn@metrovancover.org

Delta - Contact the Mayor’s Office at 604-946-3210 or mayor@corp.delta.bc.ca



Metro Vancouver > Outreach > **Events Calendar**

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Events Calendar

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Upcoming Events

October

- October 02 - Future of the Region Sustainability Dialogue
- October 06 - Spying on Spiders
- October 07 - Bowen Island Applefest
- October 09 - Future of the Region Sustainability Dialogue
- October 10 - Sustainability Community Breakfast
- October 13 - Calling Volunteers! Invasive Species Removal
- October 13 - Fall Frisky Frolics
- October 13 - Pumpkin Fest
- October 13 - Remove English Ivy at Tynehead Regional Park in Surrey
- October 13 - Compass Crazy and Hiking Skills
- October 13 - Introduction to Geocaching
- October 14 - Calling Volunteers! Weedbusters at Burnaby Lake
- October 18 - Future of the Region Sustainability Dialogue
- October 20 - Cirtter Capers - Case of the Mysterious Bones
- October 21 - Salmon in the Seymour
- October 21 - Return of the Salmon
- October 27 - Fresh Air Hikes - Low Knoll and Fern Trail
- October 27 - Introduction to Geocaching
- October 30 - Future of the Region Sustainability Dialogue
- October 30 - Burns Bog Ecological Conservancy Area Scientific Advisory Panel meeting

Note: This page links to the Metro Vancouver website.
Events may have been updated since this page was created.



August 31, 2012

Chair Greg Moore & Members of the Regional Board
Metro Vancouver
4330 Kingsway
Burnaby, BC V5H 4G8

Dear Chair Moore & Members of the Regional Board:

Subject: 2012 UBCM Resolution on Outdoor Smoke-Free Public Places

As we wrote to you in the spring of this year, the health hazards associated with tobacco smoking and exposure to second-hand tobacco smoke are well-known and irrefutable, even in outdoor settings. Simply, there is no safe level of exposure to second-hand tobacco smoke, and smoking in and of itself kills when cigarettes are used as directed.

We have continually encouraged the provincial government to implement legislation to ban smoking in certain outdoor public places, most specifically places where people congregate for extended periods of time, and/or where children are often present. These places include customer service patios of restaurants and bars; in parks, on playgrounds and on beaches; and at public events. In the absence of provincial legislation, we have also encouraged individual municipalities in BC to protect their residents by implementing a bylaw on this issue. However, we still would prefer that the provincial government implement legislation on the issue to provide harmonization, consistency and continuity across the province instead of the current patchwork of municipal bylaws.

We are pleased that the City of Kamloops has forwarded a resolution to the 2012 UBCM Convention requesting the UBCM and provincial government consult with industry in order to develop and implement province-wide, uniform legislation banning smoking in specific outdoor public places, including those mentioned above. The specific resolution is attached for your information.

We encourage you to support the resolution at the 2012 UBCM Convention. Having such provincial legislation will create a more consistent framework across the province, and provide greater protection for all BC residents from second-hand tobacco smoke.

Sincerely,

Diego Marchese
CEO, BC & Yukon
Heart and Stroke Foundation

Scott McDonald
President & CEO
BC Lung Association

Attach. City of Kamloops, Smoke-Free Outdoor Public Places Resolution

cc. Christina Tonella, Vancouver Coastal Health Authority
Jami Brown, Fraser Health Authority

1212 West Broadway,
Vancouver, BC V6H 3V2
T 604.736.4404 F 604.736.8732
heartandstroke.ca

2675 Oak Street,
Vancouver, BC V6H 2K2
T 604.731.5864 F 604.731.5810
bc.lung.ca

SMOKE FREE OUTDOOR PUBLIC PLACES

CITY OF KAMLOOPS

WHEREAS the US Surgeon General, in a definitive report issued June 2006, concluded that there is no safe level of exposure to second-hand tobacco smoke, even in outdoor settings. Scientific evidence shows that, although varying from situation to situation, the fine particulate matter in second-hand tobacco smoke generally does not dissipate until 7.5 m from its source; and

WHEREAS thirty (30) municipalities across British Columbia have taken a leadership role in implementing smoke-free outdoor public places by-laws, unfortunately these by-laws contain a variety of different requirements and conditions which can cause confusion for the public.

THEREFORE BE IT RESOLVED that the Union of British Columbia Municipalities (UBCM) and the provincial government be requested to consult with industry and implement legislation banning tobacco smoking in customer service patios of restaurants, in bars and pubs; in parks; on playgrounds, on beaches; at public events; and at least 7.5 m from each of these locations; and at least 7.5 m from doors, windows and air intakes of public buildings.

Donna Davis

Subject: FW: Resolution from City of Kamloops to 2012 UBCM
Attachments: 120831 Metro Vancouver.pdf

From: Gene Chin [mailto:gene.chin@shaw.ca]

Sent: Friday, August 31, 2012 8:44 AM

To: icentre@metrovancover.org; Greg Moore, Mayor; heather.m.anderson@telus.net; kbaird@tsawwassenfirstnation.com; mayor@abbotsford.ca; mayorea@richmond.ca; mayor.broughton@lionsbay.ca; mike.clay@cityofportmoody.com; mayor.corrigan@burnaby.ca; edaykin@mapleridge.ca; clrdeal@vancover.ca; sav.dhaliwal@telus.net; rdrew@belcarra.ca; hfathers@whiterockcity.ca; jfroese@tol.ca; moegill@shaw.ca; mariaharris@telus.net; lmhepner@surrey.ca; jmhunt@surrey.ca; mayor@corp.delta.bc.ca; cjordan@comsavings.com; raymond.louie@vancover.ca; djoyal@langleycity.ca; geoff.meggs@vancover.ca; mayor@cnv.org; mreid@coquitlam.ca; clrreimer@vancover.ca; gregor.robertson@vancover.ca; msmith@westvancover.ca; clrstevenson@vancover.ca; hsteves@richmond.ca; rstewart@coquitlam.ca; astone@bimbc.ca; javilleneuve@surrey.ca; dwalters@pittmeadows.bc.ca; lhorton@dnv.org; mayor@surrey.ca; wwright@newwestcity.ca

Subject: Resolution from City of Kamloops to 2012 UBCM

Dear Chair Moore and Members of the Metro Vancouver Regional Board:

Please find attached correspondence from Diego Marchese, CEO | BC & Yukon of the Heart and Stroke Foundation, and Scott McDonald, President & CEO of the BC Lung Association regarding the City of Kamloops' smoke-free public places resolution submitted to the 2012 UBCM.

Sincerely,

Gene Chin

for Diego Marchese and Scott McDonald

(Mr.) Gene Chin

Provincial Coordinator

Clean Air Coalition of B.C.

A coalition of the Heart and Stroke Foundation & the BC Lung Association

telephone/fax: 604.685.7036

email: gene.chin@shaw.ca



www.cleanaircoalitionbc.com

Dear Metro Environment and Parks Committee,

This is in support to the Environment and Parks Committee's effort to rid neighbourhoods of air pollution from wood burning.

Keeping woodsmoke out of the environment will have numerous positive advantages; especially in residential areas where wood-burning fireplaces and out door solid fuel burning devices exist and operate.

It will keep the hazardous chemicals contained in woodsmoke out of neighbourhoods. Thus bringing forth the much needed healthier environment for young and old!

It is apparent that a Bylaw is needed that prohibits the use of wood burning fireplaces and to ban the use of woodchips (purchased or homegrown) and other solid fuel in /on BBQs and other outdoor food cooking devices and, ban the use of fire pits and any other wood burning facilities where wood material can be burned for recreational purposes.

A ban is needed to achieve this successfully, as any other regulatory suggestion will not work.

All of the above mentioned burning facilities are contributing to air pollution in neighbourhoods. This is a very unwelcome situation because smoke emissions from these devices are trespassing into other people's properties and dwellings. Thus depriving other homeowners /occupants of the right to breathe air that is not contaminated with toxic woodsmoke!

Woodsmoke emissions have contaminated the environment for many years but this has not been recognized as toxic by government until a few decades ago.

A fire in the hearth was a symbol of Canadian tradition and so were beach fires, and fires on camping grounds. Presently, numerous other wood burning facilities are being used in yards and on balconies, along with meat smokers and BBQs that, additionally, are fuelled with wood products.

Some individuals use their BBQs for dual purposes and after cooking food, they create a bonfire on the device and keep those fires going into the wee hours of the morning; even in communities that have a "Non Tolerance" Outdoor Burning Bylaw.

These out door fires create enough smoke emissions to spread throughout the neighbourhoods, wherever the airflow carries it and then drift into neighbouring homes. Thus forcing other neighbours, who do not wish to breathe the smoky smell, to be incarcerated behind closed windows and doors on hot summer evenings and nights while the indoor temperature in their homes is at a sweltering 83 degree Plus Fahrenheit.

This is inhumane; and a strict law is needed to prohibit the practices of outdoor burning which create any type of smoke pollution in neighbourhoods.

Most of these out door burning devices are used to create ambiance and so are indoor wood burning fireplaces. The later one is also being used, by some citizens, to burn flammable garbage, and this is adding more hazardous chemicals to neighbourhood air.

Further, woodsmoke is not only an air pollutant; it also is a health hazard; and this needs to be taken seriously into consideration and has to play an important role in your decision to ban woodsmoke emission in neighbourhoods.

Woodsmoke contains health hazardous chemicals, (please see attachments) some of these chemicals are toxic and they combine with the PM 2.5, these are also toxic according to the Canadian Environmental Protection Act. Most of the particulate matter in woodsmoke is smaller than 2.5 microns in diameter; they consequently may be carried deep into the lungs while breathing.

Please think - that these chemicals, particularly PAHs, aldehydes and phenols (**all of which are carcinogenic and mutagenic**) can enter the body system through inhalation and have a chance to interfere with the integrity of any one of the approximate 100 trillion cells that comprise the human body resulting in possible cellular mutation.

This will not happen to everyone but, it can happen to anyone – any time –every time when they breathe air that smells of woodsmoke.

Most forms of cancer are cellular mutations.

Woodsmoke emissions, whether created outdoors or indoors, are an air pollutant that needs to be kept out of the environment!

Outdoor burning facilities have probably no pollution control like the stoves which have been offered to the public through the woodstove exchange program. And wood burning fireplaces are a, very, uncontrolled source of air pollution according to UBC Professor, Michael Brauer.

Further, all these burning devices are mostly used for recreational purposes that we can do without, if we have to. We can replace them with cleaner fuelled apparatuses in order to rid the environment of some air pollution that is caused by woodsmoke.

Please note: that I am one voice of many that would like to say; “Creating a cleaner environment is an obtainable goal that could be started, getting woodsmoke emissions out of neighbourhoods.

But a Bylaw is needed because leaving the choice ‘to burn or not to burn’ up to citizens has not worked; neither will it in the future.

Therefore You, members of Metro’s Environment and Parks Committee, you have the power and opportunity, at present, to make the decision that will consequently contribute to a, much needed, cleaner and healthier neighbourhood environment throughout the Metro Region as you eliminate air polluting woodsmoke emissions, once and for ever.”

May God guide you!

Sincerely,


Brie Oishi, Port Coquitlam, B.C. August 26, 2012

*Please view and read attachments: Thank you!

These pictures of woodsmoke emissions are, very, real!

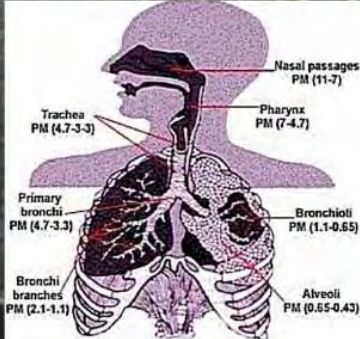
This is in my area in Port Coquitlam, BC
Typical Neighbourhood Air Quality where wood burning exists!

Compiled:
by Brie Oishi (2012)



Health Effects

THE LUNG ASSOCIATION™
When you can't breathe, nothing else matters.



Disposition of Particulate Matter (PM)
in the Respiratory system
(Richard Wilson, Harvard Press, 1996)

**This is near an Elementary School where Children
are walking to and from - and play - and breathe!**

"Do we want woodsmoke in our neighbourhoods?"

Health Effects of Wood Smoke

Burning wood adds harmful fine particles and toxics to the air. "The fine particles (or particulate matter (PM)) in wood smoke can trigger asthma attacks in a manner similar to diesel exhaust or secondhand cigarette smoke," said Laura Oatman, environmental research scientist from the Minnesota Department of Health (MDH).



Health Canada

www.hc-sc.gc.ca

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Home > Environmental & Workplace Health > Reports & Publications > Environmental Contaminants > Second Priority Substances List (PSL2) Assessments > Second Priority Substances List (PSL2) Assessments

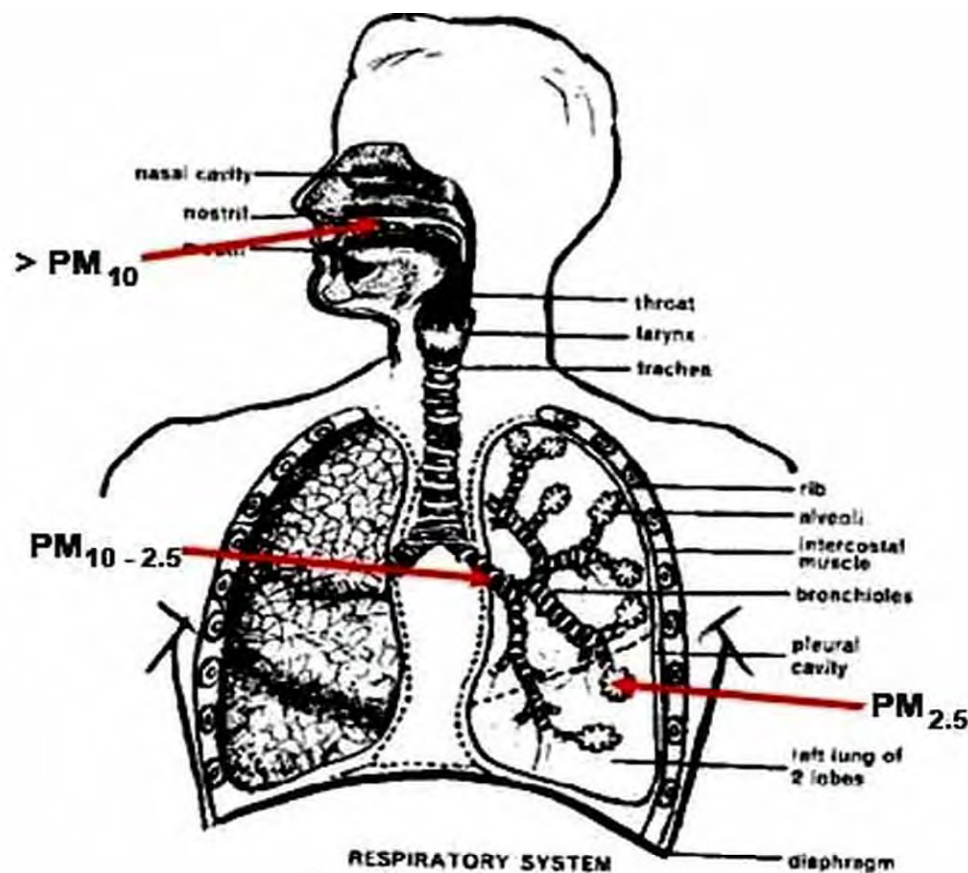
Current Subject

Environmental and Workplace Health

Environmental & Workplace Health Reports &

Print | Text Size: S M L XL Help | Share

Priority Substances List Assessment Report for Respirable Particulate Matter



Where Does Particulate Matter Go?*

* PM10= particulate matter sized at 10 microns; PM 2.5 = particulate matter sized at 2.5 microns.

Most of the particulate matter in wood smoke is smaller than 2.5 microns in diameter. These are called "fine particles" or PM2.5. Their small size allows them to go deep into the lungs. Some of the toxic chemicals from wood smoke combine with the fine particles and are also carried deeper into the lungs.

"Do we need woodsmoke in our neighbourhoods?"

particularly PM_{2.5} are considered to be "toxic" as defined in Section 64 of the *Canadian Environmental Protection Act, 1999* (CEPA 1999).

"No;

We do not need Woodsmoke in our Neighbourhoods"

My name is Brie Oishi – I am a Mother and a Wife; and a Canadian Citizen. And, I do urge all levels of Canadian Government, appointed or elected, to exercise their power and eliminate toxic woodsmoke emissions from our Neighbourhoods.

Thus giving our Children the healthiest chance to grow up – and keeping our Senior People healthier; thus allowing them to outlive their days with dignity in their old familiar surroundings instead of in a hospice or overcrowded hospitals; or worse.

Woodsmoke is toxic – no matter how much we all would like to ignore this. And in most areas in Canada we do have cleaner heating fuel available. We do have to consider the allover effect that woodsmoke emission has on our environment and on human health if we want a healthier future for us and our children.

"Everyone has been part of the problem – now let's all be part of the cure!"



Brie Oishi, Port Coquitlam, B.C.
CANADA

Some important facts about woodsmoke!

Excerpts on woodsmoke exposure and health impacts, from Professor Michael Brauer's June 13, 2010 Presentation!

Compiled by Brie Oishi, February 2012 *Appendix revised August 26, 2012

Michael Brauer ©

School of Environmental Health
The University of British Columbia

June 13, 2010

School of
Environmental
Health

(Some) Constituents of woodsmoke

Particulate Matter (PM _{2.5})	→	Inflammation, Oxidative stress
Carbon monoxide	→	Asphyxiant
Nitrogen dioxide	→	Irritant
PAHs	→	Carcinogenic, mutagenic
Aldehydes	→	Irritant, carcinogenic, mutagenic
Alcohols	→	Irritant, teratogenic
Phenols	→	Irritant, carcinogenic, mutagenic, teratogenic
Quinones	→	Irritant, allergenic

adapted from Naeher et al, 2007

But....presence ≠ impact. Exposure and individual susceptibility matter

9

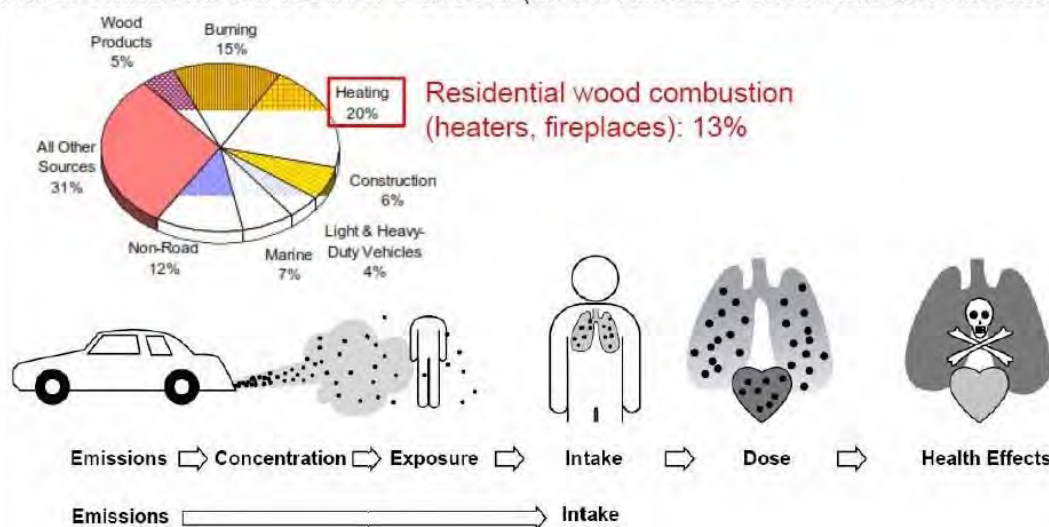
Air pollution (fine particles) and health

- Premature mortality (**cardiac**); decreased life expectancy
 - In Metro Vancouver ~600 deaths/yr attributable to air pollution (5% of non-trauma total)
- Lung cancer
- Cardiac / respiratory hospital admissions and emergency visits
- Work/school absences
- Cardiac: cardiac arrhythmia, myocardial infarction onset, arterial vasoconstriction, systemic inflammation
- Respiratory: aggravated asthma, chronic bronchitis, respiratory symptoms, lung function,

10

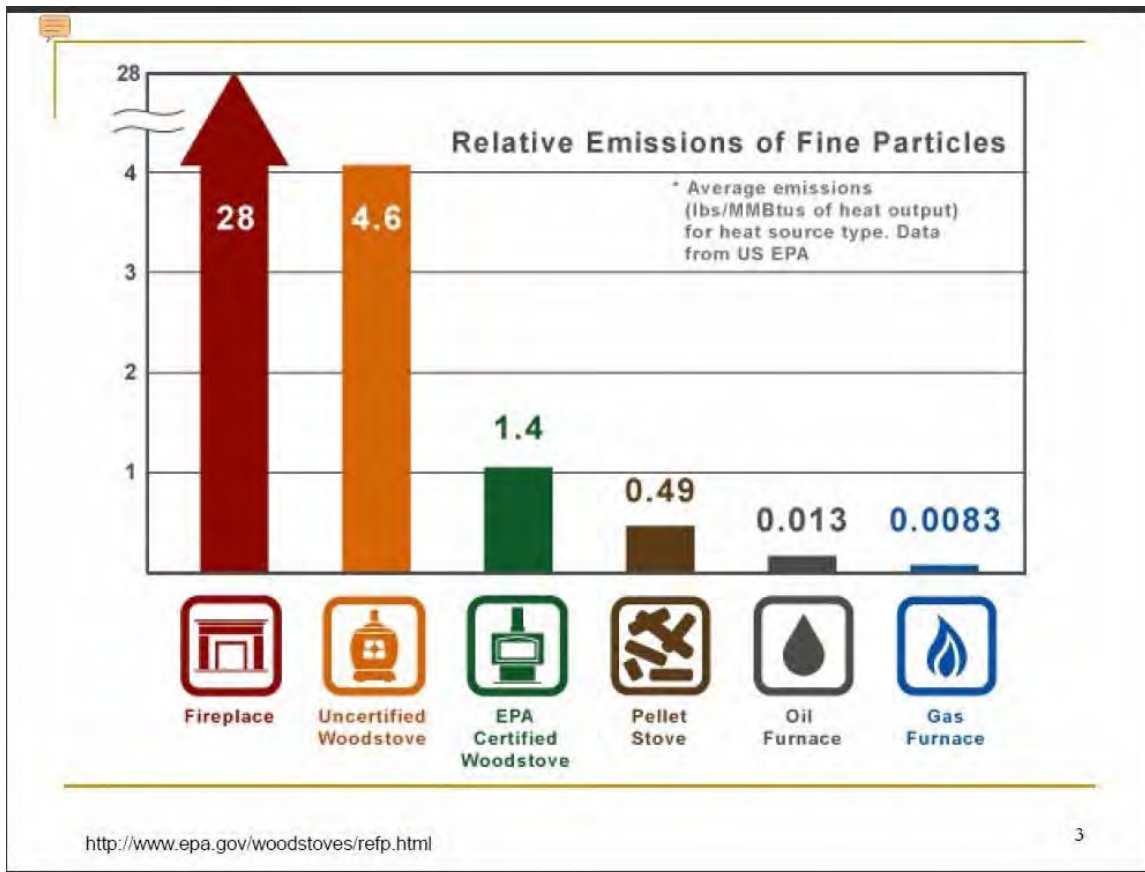
Residential woodsmoke: an important pollution source

PM_{2.5} emissions sources in LFV airshed (Metro Vancouver 2005 emissions inventory)



Location also matters: woodsmoke "intake fraction" similar to vehicles

6



Appendix:

This combination of graphic information points out **some** of the chemicals contained in woodsmoke and **some** of the health effects they have on humans.

Scientific research has shown that these are, very, real.

Now society has to heed these warnings if we value our own health and respect that of our neighbours

We may not even know our neighbours but we definitely do not have the right to pollute the very air he/she is breathing; and destroy his/her health; even in this free country of ours. Canada!

Yielding to the following, unwritten, universal moral law “It is better to protect than to destroy” is a very good safety margin to oblige by. And.

“The air belongs to everyone, and no-one has the right to pollute it”

These words were used by columnist, Ann Landers, years ago, and still give anyone something to think about.

Brie Oishi, Port Coquitlam, B.C.

This should be outlawed!

The smoke is happening in a neighbour's property and the airflow is carrying it into ours and right into our open windows every time they light this apparatus. Many times this goes on till the early hours in the morning.



These pictures were taken in May 2011



When smoke like this (or worse) happens, we have to close our windows, even at night, no matter how hot it is. Many neighbourhoods will have the same problem.

This happened in July 2012, when we were able to take these pictures.



There should be a Bylaw to stop this. Mar and Brie Oishi, Port Coquitlam