
MEMORANDUM

TO: Port Metro Vancouver

FROM: Kirk & Co. Consulting Ltd.

DATE: July 8, 2014

RE: McDonald and Point Grey Tidal Marsh Projects – Engagement Summary Memo

1. Background

From May 26 to June 8, 2014, Port Metro Vancouver engaged the public and stakeholders regarding features of the proposed McDonald Tidal Marsh Project and the proposed Point Grey Tidal Marsh Project. These projects are part of Port Metro Vancouver's Habitat Enhancement Program, an initiative focused on creating and enhancing fish and wildlife habitat in advance of future port development.

The proposed **McDonald Tidal Marsh Project** is located on Sea Island, north of Vancouver International Airport (YVR) in Richmond and upstream from the mouth of the McDonald Slough. The proposed project would involve the conversion of approximately 5.2 hectares of mudflat into high quality fish and wildlife habitat through the establishment of intertidal brackish marsh.

The proposed **Point Grey Tidal Marsh Project** is located along the eastern portion of the Point Grey Booming Grounds, near the mouth of the North Arm Jetty of the Fraser River. The proposed project would convert approximately 41 hectares of existing unvegetated intertidal mudflat into productive intertidal brackish marsh.

McDonald and Point Grey Tidal Marsh Projects – Community and Stakeholder Engagement

The engagement, which took place May 26 to June 8, 2014, included opportunities for the public and stakeholders to provide feedback on features of each of the proposed projects.

Prior to the engagement, Port Metro Vancouver conducted pre-engagement with key stakeholders regarding both proposed projects. A summary of pre-engagement feedback is provided on page 2 of this memo.

A separate, but parallel, consultation process with Aboriginal groups regarding the proposed McDonald and Point Grey Tidal Marsh Projects has been undertaken by Port Metro Vancouver.

The engagement included:

- A Discussion Paper and Feedback Form, and an online version of the feedback form (These materials can be found in Appendix 1)
 - A total of **20 feedback forms, 9 open submissions** and a petition with 2,072* signatures were returned as part of the engagement. (*Number of signatures received by Port Metro Vancouver as of consultation close, June 8, 2014)
- Open house meetings, which took place June 2 at the Delta Vancouver Airport in Richmond and June 4 at the Liu Institute for Global Issues at the University of British Columbia

Engagement topics included:

- Potential incorporation of bird nest boxes within or adjacent to the proposed new marsh habitat
- Potential installation of educational signage
- Potential for educational opportunities about the value and function of tidal marsh habitat
- Ecological considerations

Notification included:

- An email to approximately 295 stakeholders in advance of engagement (A copy of the notification email can be found in Appendix 2)
- Follow-up calls and emails to approximately 40 stakeholders
- Two reminder emails to approximately 295 stakeholders during the engagement period
- Newspaper advertisements in the Richmond Review on May 23 and 28, in the Richmond News on May 21 and 30, and in the Vancouver Courier on May 23 and 30 (A copy of the advertisement can be found in Appendix 3)

Pre-Engagement

In 2013 and 2014, Port Metro Vancouver undertook ongoing pre-engagement outreach with key stakeholders regarding the proposed McDonald and Point Grey Tidal Marsh Projects. Pre-engagement included outreach to the following organizations:

- Vancouver Airport Authority (YVR)
- YVR's Environmental Advisory Committee
- City of Richmond
- City of Vancouver
- Metro Vancouver Regional Parks West Area
- Pacific Spirit Park Society
- Wreck Beach Preservation Society
- Fraser River Coalition
- Nature Vancouver
- Environment Canada
- Ministry of Forests, Lands and Natural Resource Operations
- Fisheries and Oceans Canada (DFO)
- Fraser Basin Council
- University of British Columbia

Stakeholders were asked to provide feedback on:

- Potential topic areas for inclusion in the public and stakeholder engagement on the proposed McDonald and Point Grey Tidal Marsh Projects, including:
 - Educational signage and programming opportunities;
 - The construction of bird nesting features; and
 - Public access to and/or wildlife viewing opportunities at the proposed project sites.

- Preferred engagement methods, including, but not limited to:
 - One-on-one interviews;
 - Presentations to organization membership or staff; and
 - Online and hard-copy feedback forms.

Pre-engagement participants indicated significant concern regarding public access to the proposed McDonald and Point Grey Tidal Marsh project sites resulting from the installation of wildlife viewing features. Port Metro Vancouver took this into consideration and removed this from the project scope and did not seek feedback about the installation of these features as part of the public and stakeholder engagement process.

Pre-engagement participants also indicated that they wanted the opportunity to participate in a public open house as part of the engagement. Two public open houses were scheduled and facilitated during the engagement period.

2. Engagement Results – Feedback Forms

20 feedback forms were completed as part of the McDonald and Point Grey Tidal Marsh Projects engagement, of which 12 were submitted online and 8 were submitted in hardcopy by mail or at the open house meetings.

PROPOSED MCDONALD TIDAL MARSH PROJECT

Three questions were asked regarding proposed features of the McDonald Tidal Marsh Project. Please note that the number of comments may exceed the total commenting, as participants may have commented on more than one topic.

Q1. Ecology of the McDonald Tidal Marsh Project

Please provide any additional interests and/or considerations that you may have regarding the ecology of the McDonald Tidal Marsh Project area (e.g. your own observations of habitat or historical conditions):

9 participants provided additional comments.

Comment/Theme	Number of Mentions n = 9
Do not support use of dredged sediments/believe it may cause additional environmental damage	5
Leave the tidal marshes to naturally recover/they are currently recovering and/or supporting increased wildlife populations	3
Concern about perceived possibility of negative environmental impact to Wreck Beach	3
Project should include comprehensive environmental assessment/ account for previous site activities/ record baseline measures for current wildlife and vegetation/ include anticipated impact of project	2
Concern project would bias some bird species over others/ would like to see a balance of bird species accommodated in the area	1
Need to consult with Musqueam First Nations	1
Concern regarding woody debris accumulation in the area/ should be addressed	1
PMV should continue to consult with the City of Richmond to ensure issues such as control of invasive species, YVR outfall and sedimentation are addressed by the project.	1

Q2. Installation of Bird Nesting Features

Please indicate your level of agreement with the installation of bird nesting boxes (benefiting small, non-flocking birds) as part of the new tidal marsh habitat at the proposed McDonald Tidal Marsh Project site:

16 participants responded to this question:

- 9 participants either strongly agreed or somewhat agreed
- 7 participants either strongly disagreed or somewhat disagreed

Please provide reasons for your answer:

Comment/Theme	Number of Mentions n = 12
Concern regarding nest boxes (e.g. cost, maintenance, unable to compensate for loss of habitat, could impact the balance of species)	5
Mud flats already provide habitat for multiple species, man-made boxes not needed	5
Tidal marshes should be left alone to recover naturally/support increase in wildlife populations	4
Opposed to the project	3
Nest boxes may cause additional environmental damage	2
Environmentally sensitive area/do not support features	2
Support all protection and enhancement of nature	1
Baseline studies should be conducted that support the installation of nesting features	1
The project should consult closely with the Canadian Wildlife Service	1

Please provide any additional interests and/or considerations regarding the installation of bird nesting boxes at the McDonald Tidal Marsh Project site:

Comment/Theme	Number of Mentions n = 7
Leave the tidal marshes to naturally recover/tidal marshes currently recovering/supporting increased wildlife populations	3
Nest box concerns (e.g. location of boxes, maintaining balance of species)	2
Opposed to the project	2
Concerned about potential aviation bird strikes	1

Q3. Installation of Educational Signage

Please indicate your level of agreement with installation of educational signage near to the proposed McDonald Tidal Marsh Project site:

15 participants responded to this question:

- 6 participants either strongly agreed or somewhat agreed
- 8 participants either strongly disagreed or somewhat disagreed
- 1 neither agreed nor disagreed

Please provide reasons for your answer:

Comment/Theme	Number of Mentions n=13
Environmentally sensitive area/do not support public access to tidal marshes or mudflats/educational signage unnecessary	8
Opposed to project/questions about project or program rationale	3
Support educational signage	4
The project should consult closely with the City of Richmond regarding public access to the site to ensure appropriate considerations for public use	1

Please provide any additional interests and/or considerations regarding the installation of educational signage near to the proposed McDonald Tidal Marsh Project site:

Comment/Theme	Number of Mentions n=17
Opposed to project/questions about project or program rationale	3
Support educational signage	3
Environmentally sensitive area/do not support public access to tidal marshes or mudflats/educational signage unnecessary	2

PROPOSED POINT GREY TIDAL MARSH PROJECT

Two questions were asked regarding proposed features of the Point Grey Tidal Marsh Project.

Q4. Ecology of the Point Grey Tidal Marsh Project

Please provide any additional interests and/or considerations that you may have regarding the ecology of the Point Grey Tidal Marsh Project area (e.g. your own observations of habitat or historical considerations):

Comment/Theme	Number of Mentions n=15
Do not support use of dredged sediments/concern it may cause additional environmental damage/impact important salmon breeding ground	10
Leave the tidal marshes to naturally recover/tidal marshes are currently recovering/already supporting a variety of species increased wildlife populations	8
References to previous academic/government environmental studies/calls for detailed environmental assessment	5
Concern about consultation/broader, more detailed consultation required	3
Concern about perceived possibility of negative environmental effect on Wreck Beach	2
Suggest other areas for habitat enhancement projects (e.g. Lulu Island Wetlands, North Arm of Fraser River – Cambie Street to Hudson Street, North Jetty of Iona Island)	1
Suggest use of current baseline data (including hydrological) to better understand trade-off concerns between fish and birds/consult with DFO to ensure the project is clear about the benefits to fish habitat in the area	1

Q5. Installation of Bird Nesting Features

Please indicate your level of agreement with the installation of bird nesting boxes (benefiting small, non-flocking birds) as part of the new tidal marsh habitat at the proposed Point Grey Tidal Marsh Project site:

16 participants responded to this question.

- 4 participants either strongly agreed or somewhat agreed
- 9 participants either strongly disagreed or somewhat disagreed
- 3 neither agreed nor disagreed

Please provide reasons for your answer:

Comment/Theme	Number of Mentions n=14
Leave the tidal marshes to naturally recover/they are currently recovering/already support a variety of species/increased wildlife populations	6
Features would provide safe nesting areas/support more bird species in the area	3
Concern boxes would favour certain bird species over others in the area and change natural balance	2
Do not support use of dredged sediments/may cause additional environmental damage	1

Concern about cost/maintenance of nest boxes	1
Concern about attracting predators/other wildlife species to the area	1

Please provide any additional interests and/or considerations regarding the installation of bird nesting boxes at the Point Grey Tidal Marsh Project site.

Comment/Theme	Number of Mentions n=4
Leave the tidal marshes to naturally recover/they are currently recovering/already supporting a variety of species/increased wildlife populations	3
Will provide safe nesting areas/support more bird species in the area	1
Do not support use of dredged sediments/may cause additional environmental damage	1

Q6. Potential Educational Opportunities

Please indicate your level of agreement with Port Metro Vancouver exploring opportunities to work with local organizations to support education about the value and function of tidal marsh habitat in the Fraser River estuary as part of the proposed McDonald and Point Grey Tidal Marsh Projects.

16 participants responded to this question:

- 7 participants either strongly agreed or somewhat agreed
- 7 participants either strongly disagreed or somewhat disagreed
- 2 neither agreed nor disagreed

Please provide reasons for your answer:

Comment/Theme	Number of Mentions n=16
Support educational efforts	7
Questions about project or program rationale/success of working with local organizations	4
Positive comments regarding consultation/working with local organizations	3
Environmentally sensitive area/do not support increased educational viewing platforms/public access to tidal marshes or mudflats	3
Opposed to project	2
Other areas of the mud flats are already accessible, so further access is unnecessary	1

Please provide any additional interests and/or considerations regarding educational opportunities, including suggestions for possible programs or partnerships:

Comment/Theme	Number of Mentions n=8
Suggestions for educational programs (e.g. live streaming video, on-site educational centre, sell items to fund project)	3
Suggestions for other areas for habitat enhancement projects (e.g. Lulu Island Wetlands, North Arm Fraser River – Cambie Street to Hudson Street, North jetty of Iona Island)	2
Positive comments regarding consultation/working with local organizations	2
Leave the tidal marshes to naturally recover/they are currently recovering/already supporting a variety of species/increased wildlife populations	2
Environmentally sensitive area/do not support increased educational viewing platforms/public access to tidal marshes or mudflats	1

7.0 Additional Comments

Participants were asked to provide any additional comments regarding the proposed McDonald and Point Grey Tidal Marsh Projects.

Comment/Themes	Number of Mentions n=14
Environmentally sensitive area/do not support increased educational viewing platforms/public access to tidal marshes or mudflats	7
Would like more information/broader consultation	5
Opposed to projects	5
Questions about project or program rationale	4
Do not support use of dredged sediments/may cause additional environmental damage	4
Leave tidal marshes to naturally recover/they are currently recovering/mudflats already supporting variety of species/increased wildlife populations	3
Suggestions for other areas for preservation projects (i.e. Lulu Island Wetlands, North Arm Fraser River – Cambie Street to Hudson Street, North jetty of Iona Island)	2
Need to conduct environmental assessment	2
Support the project	1

3. Submissions

In addition to Feedback Forms, 9 submissions and a petition were received during the consultation period via mail and email. The petition included 2,072 signatures¹. The submissions and the petition include the key themes listed below.

Open Submissions – Key Themes	
<i>P</i> = Key theme also present in the content of the petition.	Number of Mentions n=9
Suggestions for other areas for PMV preservation projects (i.e. Lulu Island Wetlands, North Arm Fraser River – Cambie St to Hudson St, North Jetty of Iona Island)	7 and <i>P</i>
Leave tidal marshes to naturally recover/they are currently recovering/mudflats already supporting variety of species/increase wildlife populations	7 and <i>P</i>
Do not support use of dredged sediments/may cause additional environmental damage	5 and <i>P</i>
Do not support increased public access to tidal marshes/mudflats	4 and <i>P</i>
Improve recovery/handling of log booms to reduce ecological damage	4 and <i>P</i>
Concerned about potential aviation bird strikes	4 and <i>P</i>
Positive comments regarding consultation process	2
Use dredged material from other Fraser River locations to build these structures	1
Concern that deposited dredged sediments would not stay at set locations	1
Concern that projects would favour certain bird species over other species in the area	1
Consultation process not adequate	2
DFO acceptance of Habitat Enhancement Projects as offsetting for future development not adequate	1

¹ Number of signatures received by Port Metro Vancouver as of consultation close, June 8, 2014. A copy of the petition can be found in Appendix 6 of this memo.

4. Open House Meetings

The following are key themes from the question and answer period at the June 4 open house:

- Participants expressed concern that dredged sediment used for the proposed habitat enhancement projects could be contaminated, resulting in possible harm to people and existing habitat.
- Participants expressed that the proposed habitat enhancement projects are unnecessary, stating that the proposed project sites provide valuable habitat in their current state.
- Participants expressed desire to review the ecological reports and baselines studies for the proposed projects.
- Some participants suggested alternatives to the proposed Point Grey Tidal Marsh Project, including potential clean-up of refuse at Iona Island.

Due to low participation, the June 2 open house did not include a question and answer period.

5. Next Steps

Port Metro Vancouver will consider the input summarized in this document, along with technical and financial information, in its plans for features associated with proposed McDonald and Point Grey Tidal Marsh Projects, along with potential educational opportunities. A Consideration Memo will be posted online at PortTalk.ca/HabitatEnhancement.

Appendices:

Appendix 1: Discussion Paper and Feedback Form

Appendix 2: Email Notification

Appendix 3: Engagement Newspaper Advertisement

Appendix 4: Tweet

Appendix 5: June 4 Open House Meeting Notes

Appendix 6: Petition (Separate document)

Appendix 1:

Discussion Paper and Feedback Form



PORT METRO
vancouver

Port Metro Vancouver

Proposed McDonald and Point Grey Tidal Marsh Projects

Public and Stakeholder Engagement

May 26 to June 8, 2014

Discussion Paper and Feedback Form

**Port Metro Vancouver
Proposed McDonald and Point Grey Tidal Marsh Projects
Public and Stakeholder Engagement – May-June 2014**

LEARN MORE AND PROVIDE FEEDBACK

The purpose of this discussion paper is to provide information about the proposed McDonald and Point Grey Tidal Marsh Projects. It is designed to gather feedback from communities, stakeholders and the public. It includes a feedback form with questions about additional considerations related to area ecology, as well as questions regarding opportunities for bird nesting features, educational opportunities, and public educational signage.

The engagement program includes:

- Discussion Paper and Feedback Form
- Online Feedback Form
- 2 Public Open Houses (see below for details)
- PortTalk web forum

HOW TO PARTICIPATE

- Read this Discussion Paper and submit a Feedback Form (in print or online at www.PortTalk.ca/HabitatEnhancement)
- Sign up for the PortTalk web forum: www.PortTalk.ca/HabitatEnhancement
- Attend a public open house:
 - Monday, June 2, 2014, 6:00-8:00 p.m. at the Delta Vancouver Airport (3500 Cessna Drive, Richmond B.C.)
 - Wednesday, June 4, 2014, 6:00-8:00 p.m. at UBC: Liu Institute for Global Issues (6476 NW Marine Drive, Vancouver B.C.)
- Provide a written submission: habitat.enhancement@portmetrovancover.com

Please email habitat.enhancement@portmetrovancover.com or phone (604) 665-9066 for additional information.

HOW INPUT WILL BE USED

At the conclusion of the May-June 2014 engagement program, input received will be summarized in an Engagement Summary Report which will be posted online. Port Metro Vancouver will also prepare a Consideration Memo, demonstrating how input was considered.

Please review this discussion paper and submit your completed feedback form by June 8, 2014.

1. Pre-Engagement: What We Heard

In 2013 and 2014, Port Metro Vancouver engaged in pre-engagement with key stakeholders regarding the proposed McDonald and Point Grey Tidal Marsh Projects. The pre-engagement included interactions with representatives from Vancouver Airport Authority (YVR); YVR's Environmental Advisory Committee; City of Richmond; City of Vancouver; Metro Vancouver Regional Parks West Area; Pacific Spirit Park Society; Wreck Beach Preservation Society; Fraser River Coalition; Nature Vancouver; Environment Canada; Ministry of Forests Lands and Natural Resource Operations; Fisheries and Oceans Canada; Fraser Basin Council and University of British Columbia.

Stakeholders were asked to provide feedback on:

- Potential topic areas for inclusion in the public and stakeholder engagement on the proposed McDonald and Point Grey Tidal Marsh Projects, including:
 - Educational signage and programming opportunities;
 - The construction of bird nesting features; and
 - Public access to and/or wildlife viewing opportunities at the proposed project sites.
- Preferred engagement methods, including, but not limited to:
 - One-on-one interviews;
 - Presentations to organization membership or staff; and
 - Online and hard-copy feedback forms.

Pre-engagement participants indicated that they have significant concerns regarding public access to the proposed McDonald and Point Grey Tidal Marsh project sites resulting from the installation of wildlife viewing features. Port Metro Vancouver has taken this into consideration and will not be seeking feedback about the installation of these features.

Pre-engagement participants also indicated that they would like the opportunity to participate in a public open house as part of the engagement for the proposed projects. Two public open houses have been scheduled:

- Monday, June 2, 2014, 6:00-8:00 p.m. at the Delta Vancouver Airport (3500 Cessna Drive, Richmond B.C.)
- Wednesday, June 4, 2014, 6:00-8:00 p.m. at UBC: Liu Institute for Global Issues (6476 NW Marine Drive, Vancouver B.C.).

2. About the Habitat Enhancement Program

The Habitat Enhancement Program is a Port Metro Vancouver initiative focused on creating and enhancing fish and wildlife habitat. This program is a proactive measure intended to provide a balance between a healthy environment and future development projects that may be required for port operations.

3. About the Proposed McDonald Tidal Marsh Project

The proposed McDonald Tidal Marsh Project is on Sea Island, north of Vancouver International Airport (YVR) in Richmond. Situated just upstream from the mouth of the McDonald Slough, the site is located along the south side of the North Arm of the Fraser River. Historical aerial photos indicate that the site was previously tidal marsh, until the 1940s or 1950s when it was filled. More recently, it was used as an aggregate off-loading area in the 1990s, with a small area of fill removed to facilitate a barge loading/off-loading ramp.

The proposed McDonald Tidal Marsh Project would involve the conversion of approximately 5.2 hectares into high quality fish and wildlife habitat through the excavation of upland areas and the establishment of intertidal brackish marsh¹. Riparian habitat would also be enhanced and an intertidal channel system would be installed throughout the marsh. The proposed project is subject to permitting requirements and land tenure.

3.1 Rationale for the Proposed McDonald Tidal Marsh Project

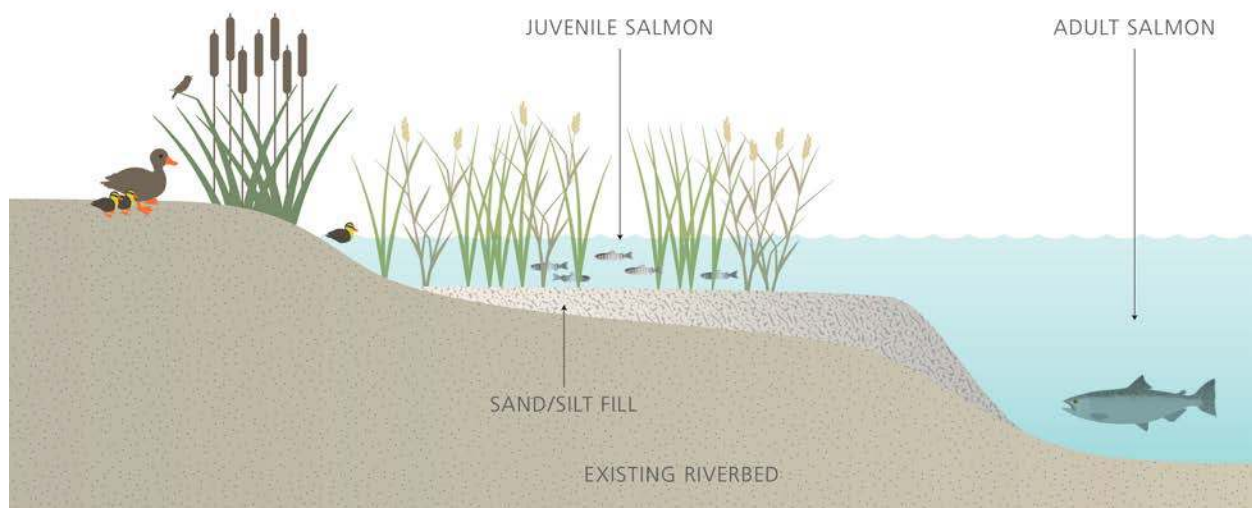
The proposed McDonald Tidal Marsh Project site is currently characterized as a grassland habitat with some invasive plant species and sparse, scattered shrubs and trees. The shoreline is armored with riprap and provides limited foreshore habitat values.

Port Metro Vancouver is proposing the McDonald Tidal Marsh Project to maximize subtidal, intertidal and riparian estuarine habitat for juvenile salmon and other fish, by establishing intertidal brackish marsh through the excavation of upland areas. The project would also enhance riparian habitat through the installation of an intertidal channel system.

3.2 Ecological Considerations

Port Metro Vancouver engaged professional biologists to study existing biophysical conditions, including physical characteristics, habitat types, and fish and wildlife species, at the proposed McDonald Tidal Marsh Project site². Tidal marsh creation at the proposed site would provide ecological benefits through the enhancement of existing fish and wildlife values.

Example Cross-Section of a Constructed Tidal Marsh Project



¹ “Brackish” refers to the mix of salt water and fresh water that occurs in estuarine environments, where the salt water of the ocean meets the freshwater of a river or stream.

² Existing Ecological Conditions at Proposed McDonald Tidal Marsh Creation Project (Hemmera, May 2014)

PROPOSED MCDONALD TIDAL MARSH PROJECT

Current State at Low Tide



Completed Project at Low Tide



3.3 Interests Related to Area Ecology

Port Metro Vancouver has referenced the following information in the preparation of the finalized ecological conditions report for the proposed McDonald Tidal Marsh Project:

- Online Sensitive Habitat Inventory and Mapping database (SHIM 2013)
- Online Fraser River Estuary Management Program and Burrard Inlet Environmental Action Program Habitat Atlas database (FREMP 2013)
- Online Fisheries Information Summary System database (FISS 2013)
- Online E-fauna BC database
- Online BC Species and Ecosystems Explorer database
- Online iMap database
- Online City of Richmond mapping system
- Sea Island Conservation Area (SICA) Bird Survey results
- Aerial photographs
- Fire ant surveys (ongoing)

Port Metro Vancouver is seeking feedback on any additional interests and/or considerations that you may have regarding the ecology of the McDonald Tidal Marsh Project area (e.g. personal observations of habitat or historic site conditions).

3.4 Bird Nesting Features

The Habitat Enhancement Program tries to maximize broad benefits for the widest possible range of fish and wildlife species at all of the project sites by including design considerations, including bird nesting features, that provide key habitat needs, except where this conflicts with other land management objectives such as aviation and public safety considerations.

Port Metro Vancouver is seeking feedback on the incorporation of bird nest boxes and nesting structures that could be established within or adjacent to the new marsh habitat at the proposed McDonald Tidal Marsh Project site. These structures could help to diversify the bird community at this location, by providing habitat for small, non-flocking birds.

3.4.1 Rationale and Benefit

A wide range of bird species depend on wildlife trees for nesting. For example, older and decaying live trees or dead trees (called snags) provide essential habitat for cavity nesting birds like woodpeckers and swallows. Bird nest boxes can provide artificial nesting opportunities for these birds where wildlife trees are absent or scarce.

Although riparian habitats will be enhanced through the planting of native shrubs and trees, cavity nesting opportunities will take many decades to develop, as the riparian habitats take time to mature. In the interim, the installation of bird nest boxes on suitably anchored posts can provide nesting opportunities for cavity nesting birds.

3.4.2 Design

A number of different bird species are likely to benefit from the installation of nesting boxes at the proposed McDonald Tidal Marsh Project site. Nest boxes installed near the edge of the marsh are likely to be used by tree swallow and violet-green swallow, both migratory birds that are highly dependent upon the availability of suitable nesting locations. Additional nest boxes can be installed in more upland locations, further from the marsh edge, and are likely to be used by other cavity nesting birds such as the year-round resident black-capped chickadee.

For each of these species there are different types of proposed nesting features:

- Black-capped chickadee: Nest boxes installed on poles/posts on the edge of the constructed marsh habitat



Preliminary rendering of bird nesting features at the proposed McDonald Tidal Marsh Project, which could be established within or adjacent to the site.

- Tree and Violet-Green Swallow: Nest boxes installed on poles/posts within the constructed marsh habitat

Poles or posts would be installed by machine, presumably during the marsh construction work. Poles could most likely be pushed into soft substrates with an excavator, to sufficient depth to be stable. Nest boxes would need to be installed at a later date.

3.5 Educational Opportunities

As part of the proposed McDonald Tidal Marsh Project, Port Metro Vancouver is seeking opportunities to work with local organizations to support education about the value and function of tidal marsh habitat in the Fraser River estuary. Since public access to the McDonald Tidal Marsh Project site is limited, these opportunities could occur at other locations in the local area, including interpretive centres or educational institutions. Potential partnering opportunities will be considered based on funding requirements and availability.

3.6 Educational Signage

As part of the proposed McDonald Tidal Marsh Project, Port Metro Vancouver is seeking feedback on the installation of educational signage in the vicinity of McDonald project site. This signage could include information on:

- Area ecology
- Site history
- Tidal marsh habitat
- Why tidal marshes matter
- What species of fish and wildlife benefit from tidal marsh habitat

4.0 About the Proposed Point Grey Tidal Marsh Project

The proposed Point Grey Tidal Marsh Project is located along the eastern portion of the Point Grey Booming Grounds, near the mouth of the North Arm Jetty of the Fraser River. The proposed project would convert approximately 44 hectares of existing unvegetated intertidal mudflat into productive intertidal brackish marsh.

The site was formerly used as a log booming storage area. Although the west end of the Point Grey Booming Grounds is still actively used for log booming by the forest industry, the eastern end of the property, where the project is proposed, has not been actively used for this purpose for several decades.

Remnant woody debris is prevalent throughout the site. Immediately east of the property, there is an established intertidal brackish marsh. The existing mudflat is largely exposed at low tide, except for a few deep channels that have formed throughout the area.

Material used in the creation of tidal marsh would be naturally-occurring sand dredged from the Fraser River. It must meet regulatory standards related to contaminants.

4.1 Rationale for the Proposed Point Grey Tidal Marsh Project

The proposed Point Grey Tidal Marsh Project would provide high-value habitat for fish and wildlife, by converting the existing low-value mudflat into intertidal brackish marsh. Brackish marshes are essential rearing areas for juvenile salmon, which help to sustain Pacific salmon stocks. Enhancement of drainage channels would provide good habitat for fish rearing for juvenile salmon and adult trout.

4.2 Ecological Considerations

Port Metro Vancouver engaged professional biologists to study existing biophysical conditions, including physical characteristics, habitat types, and fish and wildlife species at the proposed Point Grey Tidal Marsh Project site.³ Tidal marsh creation at the proposed site will provide ecological benefits through the enhancement of existing fish and wildlife values.

³ Existing Ecological Conditions at Proposed Point Grey Tidal Marsh Project (Hemmera, May 2014)

PROPOSED POINT GREY TIDAL MARSH PROJECT

Current State at Low Tide



Completed Project at Low Tide



4.3 Interests Related to Area Ecology

Port Metro Vancouver has referenced the following information in the preparation of the finalized ecological conditions report for the proposed Point Grey Tidal Marsh Project:

- Online Sensitive Habitat Inventory and Mapping database (SHIM 2013)
- Online Fraser River Estuary Management Program and Burrard Inlet Environmental Action Program Habitat Atlas database (FREMP 2013)
- Online Fisheries Information Summary System database (FISS 2013)
- Online E-fauna BC database
- Online VanMap database
- Online BC Species and Ecosystems Explorer database
- Online iMap database
- Aerial photographs
- Overwintering bird surveys
- Water bird surveys (ongoing)

Port Metro Vancouver is seeking feedback on any additional interests and/or considerations that you may have regarding the ecology of the Point Grey Tidal Marsh Project area (e.g. personal observations of habitat or historic site conditions).

4.4 Bird Nesting Features

The Habitat Enhancement Program tries to maximize broad benefits for the widest possible range of fish and wildlife species at all of the project sites, by including design considerations, including bird nesting features, that provide key habitat needs, except where this conflicts with other land management objectives such as aviation and public safety considerations.

Port Metro Vancouver is seeking feedback on the incorporation of bird nest boxes and nesting structures that could be established within the new marsh habitat at the proposed Point Grey Tidal Marsh Project site. These structures could help to diversify the bird community at this location, by providing habitat for small, non-flocking birds.

4.4.1 Rationale and Benefit

A wide range of bird species depend upon wildlife trees for nesting. For example, older and decaying live or dead trees (called snags) provide essential habitat for cavity nesting birds like woodpeckers and swallows. Bird nest boxes could provide artificial nesting opportunities for cavity nesting birds, where wildlife trees are either absent or scarce. The installation of bird nest boxes on existing pilings at the project site could provide nesting opportunities for cavity nesting birds.

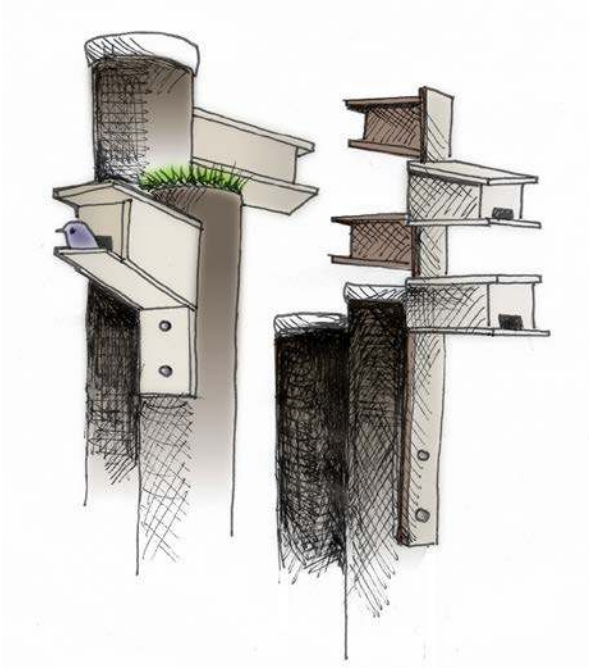
4.4.2 Design

Any bird nesting features would need to be installed at a sufficient height (4 to 5 metres above the high-water mark), given changing water levels from tidal influences. The existing pilings that are present at the site would provide good opportunities for the installation of nest boxes.

There are three bird species that are most likely to benefit from the installation of nesting boxes within the constructed brackish marsh habitat at the proposed Point Grey Tidal Marsh Project site: purple martin; tree swallow; and violet-green swallow. These are all migratory birds that are highly dependent upon wildlife trees and would benefit from the installation of nesting features at this site. Of the three species, purple martin are of particular note given their conservation status as a species of “Special Concern” in B.C.

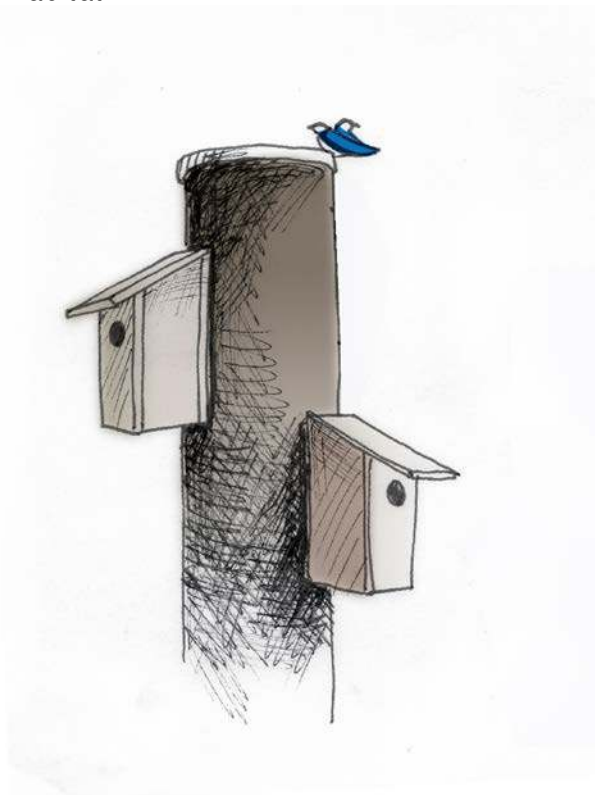
For each of these species there are different types of proposed nesting features:

- Purple Martin: Nest boxes installed on existing pilings within the constructed marsh habitat



Preliminary rendering of purple martin nest box design

- Tree and Violet-Green Swallow: Nest boxes installed on existing pilings within the constructed marsh habitat



Preliminary rendering of swallow nest box design

4.5 Educational Opportunities

As part of the proposed Point Grey Tidal Marsh Project, Port Metro Vancouver is seeking opportunities to work with local organizations to support education about the value and function of tidal marsh habitat in the Fraser River estuary. Since public access to the Point Grey Tidal Marsh Project site is limited, these opportunities could occur at other locations in the local area, including interpretive centres or educational institutions. Potential partnering opportunities will be considered based on funding requirements and availability.

Port Metro Vancouver is exploring opportunities for the installation of bird nesting features as part of the new tidal marsh habitat at the proposed McDonald and Point Grey Tidal Marsh Projects.

2. Please indicate your level of agreement with the installation of bird nesting boxes (benefiting small, non-flocking birds) as part of the new tidal marsh habitat at the proposed McDonald Tidal Marsh Project site:

Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide reasons for your answer:

Please provide any additional interests and/ or considerations regarding the installation of bird nesting boxes at the McDonald Tidal Marsh Project site:

Port Metro Vancouver is exploring opportunities for the installation of educational signage near to the proposed McDonald Tidal Marsh Project site.

3. Please indicate your level of agreement with the installation of educational signage near to the proposed McDonald Tidal Marsh Project site:

Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide reasons for your answer:

Please provide any additional interests and/ or considerations regarding the installation of educational signage near to the proposed McDonald Tidal Marsh Project site:

Port Metro Vancouver is exploring opportunities for the installation of bird nesting features as part of the new tidal marsh habitat at the proposed McDonald and Point Grey Tidal Marsh Projects.

5. Please indicate your level of agreement with the installation of bird nesting boxes (benefiting small, non-flocking birds) on existing pilings as part of the new tidal marsh habitat at the proposed Point Grey Tidal Marsh Project site:

Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide reasons for your answer:

Please provide any additional interests and/ or considerations regarding the installation of a bird nesting boxes at the Point Grey Tidal Marsh Project site:

Port Metro Vancouver is exploring opportunities to work with local organizations to support public education about the value and function of tidal marsh habitat in the Fraser River estuary.

6. Please indicate your level of agreement with Port Metro Vancouver exploring opportunities to work with local organizations to support education about the value and function of tidal marsh habitat in the Fraser River estuary as part of the proposed McDonald and Point Grey Tidal Marsh Projects:

Strongly Agree	Somewhat Agree	Neither Agree Nor Disagree	Somewhat Disagree	Strongly Disagree
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please provide reasons for your answer:

Please provide any additional interests and/ or considerations regarding potential educational opportunities, including suggestions for possible programs or partnerships:

How Input Will Be Used

Input received during this engagement will be considered, along with technical and financial information, in refining project plans.

Contact Information

Please provide your contact information (*optional*):

Name:

Mailing Address:

Postal Code:

Phone:

Email:

Personal information collected relates directly to the engagement process and will not be shared for any other purpose. If you have questions about the engagement process or the information collected, please contact Port Metro Vancouver by telephone at (604) 665-9066 or by email to habitat.enhancement@portmetrovancover.com

Please return your feedback form by June 8, 2014.

Online: PortTalk.ca/HabitatEnhancement
Email: habitat.enhancement@portmetrovancover.com
Mail: Attn: McDonald and Point Grey Tidal Marsh Projects
Port Metro Vancouver
100 The Pointe, 999 Canada Place
Vancouver B.C.
V6C 3T4

Appendix 2:

Email Notification



PORT METRO
vancouver

Engagement Notification: Habitat Enhancement Program

Proposed McDonald and Point Grey Tidal Marsh Projects

Between May 26 and June 8, 2014 Port Metro Vancouver invites you to participate in a public engagement regarding the proposed McDonald and Point Grey Tidal Marsh Projects.

- The proposed McDonald Tidal Marsh Project site is located on Sea Island, north of the Vancouver International Airport and upstream of the mouth of the McDonald Slough.
- The proposed Point Grey Tidal Marsh Project site is located along the eastern portion of the Point Grey Booming Grounds, near the mouth of the North Arm Jetty of the Fraser River.

The proposed projects are initiatives of Port Metro Vancouver's Habitat Enhancement Program and involve the creation of intertidal marsh habitat to benefit fish and wildlife.

We invite you to participate by:

- Reading the Discussion Paper and Submitting a Feedback Form (in print or online at www.PortTalk.ca/HabitatEnhancement)
- Signing up for the PortTalk web forum: www.PortTalk.ca/HabitatEnhancement
- Providing a written submission to habitat.enhancement@portmetrovancover.com
- Attending a public open house at one of the following locations:
 - **Monday, June 2, 2014, 6PM - 8PM, Delta Vancouver Airport (3500 Cessna Drive, Richmond B.C.)**
 - **Wednesday, June 4, 2014, 6PM - 8PM, UBC: Liu Institute for Global Issues (6476 NW Marine Drive, Vancouver B.C.)**

Engagement materials (including Discussion Paper and Feedback Form) will be available online on May 26. The deadline for submitting a completed Feedback Form or providing a written submission is June 8, 2014.

All input received during the engagement period will be compiled in an Engagement Summary Report. Port Metro Vancouver will also prepare a Consideration Memo, demonstrating how feedback will be considered by the Port.

For more information, please email habitat.enhancement@portmetrovancover.com or phone (604) 665-9066.

Regards,

The Habitat Enhancement Program Team

Appendix 3:

Newspaper Advertisement



PORT METRO
vancouver

McDonald and Point Grey Tidal Marsh Projects

Proposed McDonald and Point Grey Tidal Marsh Projects

Between May 26 and June 8, 2014 Port Metro Vancouver invites you to participate in a public engagement regarding the proposed McDonald and Point Grey Tidal Marsh Projects.

The proposed projects are initiatives of Port Metro Vancouver's Habitat Enhancement Program and involve the creation of intertidal marsh habitat to benefit fish and wildlife. The proposed McDonald Tidal Marsh Project site is located on Sea Island, north of Vancouver International Airport and upstream of the mouth of the McDonald Slough. The proposed Point Grey Tidal Marsh Project site is located along the eastern portion of the Point Grey Booming Grounds, near the mouth of the North Arm Jetty of the Fraser River.

We invite you to participate by:

- Reading the Discussion Paper and submitting a Feedback Form (in print or online at www.PortTalk.ca/HabitatEnhancement)
- Signing up for the PortTalk web forum:
www.PortTalk.ca/HabitatEnhancement
- Providing a written submission to:
habitat.enhancement@portmetrovancover.com
- **Attending a public open house:**

DATE	TIME	LOCATION
Monday, June 2nd	6:00 PM- 8:00 PM	Delta Vancouver Airport, 3500 Cessna Dr, Richmond B.C.
Wednesday, June 4th	6:00 PM- 8:00 PM	UBC: Liu Institute for Global Issues, 6476 NW Marine Drive, Vancouver B.C.

Engagement materials, including the Discussion Paper and Feedback Form, will be available online on May 26. The deadline for submitting a completed feedback form or providing a written submission is June 8, 2014.

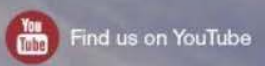
All input received during the engagement period will be compiled in an Engagement Summary Report. Port Metro Vancouver will also prepare a Consideration Memo, demonstrating how feedback will be considered by the Port. For more information, please phone **(604) 665-9066** or email habitat.enhancement@portmetrovancover.com.

Appendix 4:

Tweet



Our business isn't just to deliver the goods. It's to do it in a good way.



For project updates and inquiries visit porttalk.ca



portmetrovancover.com

Port Metro Vancouver @PortMetroVan

Follow

We need your feedback on the proposed McDonald and Point Grey Tidal Marsh Projects. More info at ow.ly/wOoKM. #portalk

Reply Retweet Favorite More

RETWEETS 5 [User avatars]

2:39 PM - 13 May 2014

Don't miss any updates from Port Metro Vancouver

Join Twitter today and follow what interests you!

Full name [input] Email [input] Password [input]

Text follow PortMetroVan to 21212 in Canada

Sign up

Appendix 5:
June 4 Open House Meeting Notes

MEETING DETAILS	Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.
------------------------	--

PURPOSE	Notes from a question and answer session from a public open house for the proposed McDonald and Point Grey Tidal Marsh Projects, held on June 4, 2014 at the UBC Liu Institute for Global Issues, Vancouver B.C.
FACILITATOR	Judy Kirk, Kirk and Co. Consulting Ltd.
PROJECT TEAM ATTENDEES	Gord Ruffo, Program Manager, Habitat Enhancement Program, Port Metro Vancouver Charlotte Olson, Environmental Project Management Specialist, Infrastructure Delivery, Port Metro Vancouver Jim Roberts, Project Biologist, Hemmera Envirochem Elizabeth Robbins, Communications Advisor, Project Development Community & Aboriginal Affairs, Port Metro Vancouver Carmen Bennett, Kirk & Co. Consulting Ltd. Laura Abbott, Kirk & Co. Consulting Ltd., Meeting Recorder
AGENDA	1. Welcome and Review Agenda 2. Q&A 3. Closing Remarks

KEY THEMES

- Participants expressed concern that dredged sediment used for the proposed habitat enhancement projects could be contaminated, resulting in possible harm to people and existing habitat.
- Participants expressed that the proposed habitat enhancement projects are unnecessary, stating that the proposed project sites provide valuable habitat in their current state.
- Participants expressed desire to review the ecological reports and baselines studies for the proposed projects.
- Some participants suggested alternatives to the proposed Point Grey Tidal Marsh Project, including potential clean-up of refuse at Iona Island.

The record notes that the Q&A portion of the Open House was called to order at 7:02 p.m.

MEETING DETAILS	Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.
------------------------	--

DISCUSSION

1. Welcome and Introductions – Judy Kirk

Judy Kirk welcomed participants to the open house, and explained the format of the Q&A session. Judy informed participants that the Q&A session was being recorded for accuracy. Port Metro Vancouver Habitat Enhancement Program team members introduced themselves.

2. Discussion – All

(Abbreviations will be used and mean – Q: Question, A: Answer, C: Comment)

C: *Judy Williams: I wanted to make a presentation of the petitions that we have put together on the beach and online. The “on the beach” petitions are somewhere in my car, after I had a kerfuffle with the concrete yesterday. I have the online ones that we pulled off today. We have 277 signatures from the online petition, making a total of about 1,185 signatures in just a few days. As a point of interest, when we do our petitions, we have about 84 to 85 percent of our signatures from the Lower Mainland. However, we have 40 cities in the rest of B.C. represented; almost every province in Canada represented, except the Northwest Territories; three states in the United States represented; Hong Kong and Singapore represented; many European countries; Australia represented. I want to show you something; if you are adverse to nudity you can just close your eyes. This was a family portrait that we took last summer. The area that we love so much is beyond Point-No-Point; that last point back there. The area where the booms are is south of that. Right here where we’re standing in this photo is where the breakwater touches the land. We did a sediment analysis at the booms about 15 years ago, it cost us over \$600 and GVRD chipped in a bit and we had the provincial labs analyze what’s there. I can’t prove that a lot of the old-timers who died of lower body cancers died from the contaminants there, but we had hundreds of contaminants and most of them are carcinogenic, whether that comes from Chatterton having toluene going out the river and so forth. We have a vested interest and love of the estuary. We do not feel that the Roberts Bank Terminal 2 Project merits the destruction of our marsh and our intertidal areas, which are not the same as the coastal intertidal areas. We believe instead and – I’m sorry, but when I fell yesterday, people kindly took my clipboard that had all the photos that Dave Murdoch sent to me when he did a tour of the Iona Jetty with Jim from Hemmera. We have a question for you; we had*

MEETING DETAILS	<p>Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.</p>
------------------------	---

photographs showing how terrible the pile up of debris is at the jetty, which is just across from Wreck Beach. If you wanted to do some habitat compensation, that's the perfect place for it. The question that we have is, who absolutely has jurisdiction? If it's the Department of Public Works, they should work with Port Metro Vancouver to rehabilitate it, then you don't have to mess with our marshes. **DO NOT MESS WITH OUR MARSHES!** This is the press release that went out today. It reads: Please sign the petition. Port Metro Vancouver is proposing a devastating project called the Point Grey Tidal Marsh Project at Booming Ground Creek. This project will dump 100 acres of potentially-contaminated dredgeate in the precious marshes near the mouth of the Fraser River, near the eastern portion of the Point Grey Booming Grounds. It will have a devastating impact on the ecology of the marshes, which are finally coming back to life and they have biofilm on them that the western sandpipers need. We have the entirety of the western hemisphere's sandpiper population coming here with their long beaks... they are poetry in motion... they swoop down and they all scoop up that biofilm with their long bills, and that keeps them strong so they go back to South America. Basically, I'm sorry I don't have the "on the beach" petitions, we have altogether 1,183 signatures, which will be 2,000 by the end of the week I'm sure. You may say that the material you will be scooping up and putting over the marsh is clean, but there is nothing that comes out of an industrial river from way up river that is clean. Anything you can take from the Fraser River is 83 percent silt. That silt will float around to the bathing beach on the west side of the breakwater. Without further ado, I'm going to give you the online petitions. These online petitions also have comments that people have written in online. Please read their comments; they're from the heart.

A: *Gord Ruffo:* We will.

C: *Judy Williams:* We want to know who has jurisdiction on the North Arm Jetty. Who has that? Why can't you work with the Department of Public Works if they have the jurisdiction to rehabilitate that, and leave our marshes alone? Do we have a guarantee – can we go away knowing – that you are going to respect the feeling of every person in this room about not destroying our marsh.

A: *Gord Ruffo:* We looked at the materials and what could be done. The process is underway now to determine who owns that property.

C: *Judy Williams:* Don't forget the river otters. After 1974, they were poisoned. They are finally coming back. If enough people said no to this project, would you go away? Have you abandoned the idea of a viewing tower or elevated walkway through the marsh?

A: *Gord Ruffo:* We heard loud and clear that public access to the Point Grey site was not appealing. We are not pursuing that. Educating the public is important – through signage

MEETING DETAILS	Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.
------------------------	--

and viewing opportunities. However, we heard through several meetings with Judy that viewing platforms are not appealing and they are not being considered.

- C: *Judy Kirk:* If someone does want viewing platforms, put that in your feedback form. Gord, what about an answer to the first question: if enough people say “no” to this project, will it move forward?
- A: *Gord Ruffo:* The ultimate decision about whether this project proceeds is with the regulators. We are here in the community to find out what the interests are. Two nights ago we were at another open house. Once the engagement is complete, we will sit down and look at the feedback and decide where we are at that point.
- Q: *Bev Ramey:* Who are the regulators?
- A: *Gord Ruffo:* Fisheries and Oceans Canada.
- C: *Jeremy McCall:* Over the last 12 years, I have been part of the team talking about the McDonald site. I have participated in the bird survey on the west dyke, past the area you are proposing to reconfigure. This is very important bird habitat. The area protects airport operations by drawing birds away from the airport. We have been keeping tabs on that area. We feel that area is ours. I am terribly shocked that you want to exchange one type of very valuable bird habitat for a supposed tidal marsh enhancement. I do not think that is a good or necessary exchange. You need to take about 4 or 5 feet of perfectly good soil off of that area. You would have to remove about half a kilometer of rip rap, at huge expense, only to exchange one type of habitat for another. Why on earth do you feel you need to do that? To my mind, it’s on the borderline of being disruptive. Have you looked to the tidal marshes that used to be immediately east of Sturgeon Bank, where there are many acres of what used to be tidal marsh, which has now become accreted land? There you could put some channels in. That would be a far more satisfactory solution in my view.
- C: *Gord Ruffo:* Site identification is an important part of our process. We identify opportunities to enhance sites. The thing that’s challenging is that they’re limited throughout the lower Fraser River estuary. Tidal marshes are important to fish and birds. The history of the McDonald property is that this is an old fill site. We’ve gone back and looked at aerial photos, and if you look immediately downstream, there’s very good tidal marsh in this area. This is sand-filled; it’s dredgeate that started being placed in the 1930s and 1940s. You can see it being built up over time.
- C: *Jeremy McCall:* It’s a very nice meadow now, with trees and shrubs in it.
- A: *Gord Ruffo:* There are also invasive species in there. Our work would be to lower it down and recreate what was there years ago and bring it back to its original condition and create a tidal marsh, which provides good habitat for fish and wildlife.

MEETING DETAILS	<p>Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.</p>
------------------------	---

- C: *Judy Kirk:* The other part of the question the gentleman asked was if you have considered other habitat to the west of Sturgeon Bank.
- C: *Jeremy McCall:* From the mouth of the Middle Arm, down as far as the South Arm. Down as far as Steveston, there are huge areas which are not tidal marsh any more.
- A: *Gord Ruffo:* From the Middle Arm, down to Garry Point? The Sturgeon Bank area. Environment Canada and the Canadian Wildlife Service Science and Technology Department have been monitoring Sturgeon Bank for years. There is the potential that the marsh is eroding in that area and we are taking a look at it with Environment Canada. We are looking at that area.
- C: *Roger Emsley:* I'm with the "Against Port Expansion in the Fraser Estuary" community group, from South Delta. My question, which is equally true about the project that was done in Boundary Bay and the project that is proposed for Canoe Pass, is where are the baseline surveys? You can't do this kind of restoration and monitoring without a very good baseline survey. I have looked on the website; they are either not apparent or they're not there. That is what we need.
- C: *Judy Kirk:* Just so everyone knows, a baseline survey generally refers to a study that is the technical analysis of the current condition of something. Gord, have those been done?
- A: *Gord Ruffo:* I'm going to let Jim respond to that question.
- C: *Judy Kirk:* The question is, are you doing a baseline survey, or is there baseline work being done for McDonald and Point Grey.
- A: *Jim Roberts:* I believe it's been posted online; we have ecological conditions reports for McDonald and Point Grey.
- C: *Judy Kirk:* The current conditions?
- A: *Jim Roberts:* The current conditions. It's based on literature reviews and ground truthing. We're also doing a variety of different surveys in advance of construction. For example, at McDonald, we've recently done a fire ant survey. One of the challenges on that site – similar to the park to the east – is that there is an infestation of fire ants on that site. The work that's proposed for the site will actually reduce the habitat values for that species and will convert to a higher form. Point Grey would be another example; there is a series of nine surveys for shorebirds and other water birds. We are looking at the existing mudflats that are proposed for conversion of marsh. We are also looking at the mudflats further west and the marshes to the west and east. In that case, we did the months of April, May and June, during the peak months of shorebird migration. We are still coding the information from that work. We did six overwintering bird surveys at Point Grey this past winter and we are doing some additional shorebird water work over the course of

MEETING DETAILS	<p>Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.</p>
------------------------	---

summer. There are some additional surveys that are being undertaken and being driven to some extent by existing values at the site.

C: *Judy Kirk:* What I'm going to take from that – correct me if I'm wrong – is that yes, you are doing baseline studies and there other studies that are being done. Roger, I'm going to guess that you would ask this, and tell me if you don't want me to ask this, but when will those studies be available?

C: *Roger Emsley:* Yes. Where are they?

A: *Jim Roberts:* We are still collating the results from the surveys and some surveys haven't been done yet.

Q: *Judy Kirk:* When will the studies be available?

A: *Jim Roberts:* I would say over the next month or two.

Q: *Roger Emsley:* They will be available online?

A: *Judy Kirk:* I don't know the answer to that and I don't think these gentlemen do either but, in any case, once the studies are completed.

C: *Marilyn Hoggan:* Thanks for having this dialogue. I confess I don't know everything there is to know about ecosystems and studies and surveys. I'm sure there's value to them. I'm also really concerned about what is allowed and what is right. Something might be legal – I can speak for most of us here when I say that maybe we don't know all of the minutiae of what's permissible or even the projections from people who do surveys. We may not know that. What we do know is that there are not very many natural ecosystems left in the world. I know that this is going to sound like David Suzuki, but he talks about thinking globally and acting locally. I saw him in a lecture last year and it was very powerful and moving. Wonderful. He talked about places in the world where they are helping to bring back the little bit of life there is around marshes and rivers that have been damaged by industry. They are springing back to life. And the places that actually support that – the communities that get together and work together, like we're all trying to do, will help find ways to enable that to happen, so that we can continue to all do what we each can do in our local environments to recognize that these ecosystems are very fragile and need to be supported. I don't like the term "mudflats." I just wish that people had brought up other suggestions about alternatives. The thing that really gets my goat is that I really don't think that there's been enough time between the pre-engagement and the engagement time and the feedback time. This is hardly giving us enough time to really understand the ramifications, in terms of proposals, and digest it, think about it, and come up with alternatives to help give you the feedback that might be really useful, which you can then take to your people. In other words, if we're going to work on this together, this doesn't seem like the proper process. It's too short of a time frame.

MEETING DETAILS	Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.
------------------------	--

- C: *Judy Williams*: Absolutely.
- C: *Marilyn Hoggan*: Is there some way to rectify this? There has to be more steps before making final decisions, especially when you might kill something that's finally coming back to life. I would hate to see that happen and I'm sure I speak for the 1,100 people who signed the petition, and those who would sign the petition if they had the time or they knew about this. I'm very disappointed and I'm very disappointed that you didn't take more account of what we said. You talk about "naturally-occurring sand." It's not just innocuous; it's going to have chemicals in it. It's not what the birds need. Birds need what's already there; algae and biofilm and so on. I like the idea of redirecting things and cleaning up Iona Island and coming up with some ideas for a different way to approach this.
- C: *Judy Kirk*: Thank you. Is there anyone else who would like to speak?
- C: *Kim Siren*: Hello everyone. I've been a park user since 1998. I love Pacific Spirit Park. I love sitting at the back of the beach to look over into the marsh. That's where I sit all the time. You can hear the birds singing and see so much activity going on in the marshes. It's just stunning. My question has to do with the fact that I just found out on Monday about this whole thing happening. When I looked at the website, I saw that the window of opportunity to provide feedback was from May 26 to June 8. Those studies apparently aren't done yet. I'm not sure how a comment could possibly be constructive in any way, if these studies haven't been completed and we don't know when they're going to be available. What's the rush? It's big money you're going to be spending; I think part of our money. I would rather not spend that money doing this. Nature seems to be doing her job quite well; it takes a while. You have to be patient with nature. What's the rush? Why is it closed? My last comment is that this wasn't posted in any newspaper I've seen; the only way I found out about this was because I was on the beach on Monday.
- Q: *Judy Kirk*: Was this advertised?
- C: *Carmen Bennett*: We advertised in the Vancouver Courier and the two Richmond newspapers.
- C: *Judy Williams*: You are still not doing what we asked, which is to advertise in the Vancouver Sun and the Province. You have never done that.
- C: *Judy Kirk*: Fair enough. I hear you loud and clear on that, and you too Kim.
- C: *Unknown*: There's still no answer to the question "what's the rush?"
- C: *Judy Kirk*: I'm not sure if there's an answer. What I'm going to take from that is that you would ask for another round of engagement, if and when the studies are complete.
- C: *All*: [Applause]
- C: *Judy Kirk*: I'm not saying that will happen; I'm saying that's what I'm interpreting.

MEETING DETAILS	Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.
------------------------	--

- C: *Ozias Northstar*: My question and comment is a composite of things that I'm hearing tonight. Roger brought up the baseline studies. Judy Williams had been talking about the results of lab tests that were taken quite a while ago – about 20 years ago. I'm hearing that the ecological studies, the ecosystem studies involving understanding what can live in this area, have been approached and somewhat completed, but not necessarily totally completed. To do lab tests tells us what's in the soil and whether it sustains life or notes. The actual chemical tests that could be done regarding this area have not been spoken to.
- C: *Judy Kirk*: I want to make sure that I capture the question clearly for the record: Has there been a chemical analysis of the current matter?
- C: *Judy Williams*: Especially where river is brought to rest at the breakwater.
- C: *Judy Kirk*: Has there been a chemical analysis done?
- A: *Gord Ruffo*: Environment Canada is the regulator for the movement of material within the river. With today's standards, it is very tightly controlled. There is a comprehensive testing program required before the transport of material to the site.
- C: *Judy Kirk*: Does this program include a chemical analysis of the material?
- A: *Gord Ruffo*: Yes.
- C: *Unknown*: Has it been done? We know you can do it in the future.
- C: *Judy Kirk*: I think it will be done, but it hasn't been done yet.
- A: *Gord Ruffo*: The sediment planned for this area would be coming from the South Arm of the Fraser River, as part of regular dredging. The chemical analysis of that material is done every year. It is very consistent; it will be done again.
- C: *Judy Kirk*: Do you have a follow-up sir?
- C: *Ozias Northstar*: My question is more to an analysis of the matter that will be covered by the dredging. In other words, the baseline analysis of area as it now stands, because obviously it will be different once it's covered by dredgeate.
- C: *Judy Kirk*: Thank you for that clarification.
- A: *Jim Roberts*: At McDonald, our program included assessing the conditions at the site and we determined that some of the material – the very superficial upper-layer – should stay on site.
- C: *Judy Kirk*: Was there chemical analysis done?
- A: *Jim Roberts*: Yes. The level of analysis we did at Point Grey is probably less than what we did at McDonald, because we are not entertaining moving any material off-site.
- Q: *Judy Kirk*: So no chemical analysis there?
- A: *Jim Roberts*: Not that I'm aware of. We are basically capping that site. There's a lot of wood waste; it's a historic booming site.
- C: *Judy Kirk*: At least that's what's proposed.
- Q: *Unknown*: What are you going to cap it with?

MEETING DETAILS	<p>Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.</p>
------------------------	---

- A: *Jim Roberts*: Clean material.
- Q: *Corky Day*: Thank you for your answers so far. As I understand it, Gord said that you do analysis every year of sediment from the South Arm and that it's consistent. Is that consistently clean or consistently dirty?
- A: *Gord Ruffo*: It's consistently tested and it meets regulatory requirements.
- C: *Corky Day*: It meets regulatory requirements for certain standards of cleanliness.
- A: *Gord Ruffo*: Yes.
- Q: *Corky Day*: Are those in published reports?
- A: *Gord Ruffo*: That's part of the regular dredging program; I don't know whether they're published. Our reports, done for our program, would be.
- Q: *Corky Day*: A friend of mine here said that he is wondering about the heavy equipment on site. We're most concerned about Point Grey, but it might also apply to the other site. What effects will having heavy equipment on-site have? It will have effects; whenever you have heavy equipment on land it will have an effect. What are those effects and how long will they last?
- A: *Gord Ruffo*: When people see large pieces of equipment they think it's heavy, but there is more pressure exerted by me putting my heel on the ground than that equipment exerts. The equipment would be on-site for five to six months' worth of work. As to the effect, there wouldn't be any. There is no compaction. The load is very spread out. There are not any anticipated long-term effects from that equipment.
- C: *Judy Williams*: I have few points. One is regarding the vapor, which is from the jet fuel that we're fighting in the South Arm. You said you're going to get your dredgeate from the south arm. We have taken the provincial government to court at great expense, out of our own coffers. Jet fuel is deadly. If that succeeds in going ahead, and you're taking dredgeate from there within a two-year span of time, that jet fuel will be going out there and we don't want that on our marshes. Number two: what disturbs me about this whole thing is that you say that the regulators are Fisheries and Oceans Canada and the Ministry of Environment. The reason that we're taking the provincial government to court is that they cut off the deadline for public feedback, and then all of these very salient studies were done and the public didn't have access to them. You're suggesting you're going to do the same thing, and we don't have access that we can speak to, so back up to how much money has been spent and is being spent. Once these things become very expensive, then what happens is that it is too late to change it. It's cast in stone.
- Q: *Judy Kirk*: Gord, how much money has been spent on the program to date?
- A: *Gord Ruffo*: I don't have that number with me.

MEETING DETAILS	<p>Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.</p>
------------------------	---

- Q: *Judy Williams*: It's substantial. The regulators aren't going to back down. Who are the contacts at Fisheries and Oceans and the environmental assessment? I would like both of those names because I would like to personally go in and visit with them.
- Q: *Unknown*: Can you put it on the website?
- A: *Judy Kirk*: Absolutely.
- C: *Judy Williams*: Kim said it all when she asked "What's the rush?" The answer that I got when I asked that question is that this typical amount of time that is given. This isn't typical; this is precious and rare and worth being protected forever. I'm going to give you this poster. We want that protected.
- Q: *Jeremy McCall*: What is the budget for this program? How will it be financed?
- C: *Judy Kirk*: I think what Gord said is that he doesn't have that number here.
- C: *Jeremy McCall*: There must be a budget.
- C: *Judy Kirk*: Noted. I think that too could be put on the website.
- C: *Unknown*: There were two different questions: one is how much money has been spent, and one is what is the budget.
- C: *Judy Kirk*: Correct. Do you know what's been spent?
- C: *Jeremy McCall*: The other was "how will it be financed."
- C: *Judy Kirk*: Let's answer the finance question, as this is the first time that's come up. How is this financed?
- A: *Gord Ruffo*: The Port pays the cost for the project. It is not public funds, it is from the Port's own funds.
- C: *Jeremy McCall*: But that is public funds.
- C: *Judy Kirk*: To be clear, it's not. It is money collected from tenants and leases. It's not taxpayer money.
- A: *Gord Ruffo*: That's correct.
- Q: *Ozias Northstar*: Who are typical tenants and lessees?
- A: *Judy Kirk*: Centerm and Vanterm.
- C: *Judy Williams*: Sawmills.
- Q: *Greg Ferguson*: The first question I had when I came in is that I'm kind of uncertain as to why this process is even happening for a project that hasn't received approval.
- A: *Judy Kirk*: We always undertake this process before any approvals.
- Q: *Greg Ferguson*: Is that just to say "we've figured out how to make this project work, so approve it?" It feels like you're setting the stage for getting approval.

MEETING DETAILS

**Port Metro Vancouver
Habitat Enhancement Program
Proposed McDonald and Point Grey Tidal Marsh Projects**
Public Open House
June 4, 2014 6:00 p.m.-8:00 p.m.
UBC Liu Institute for Global Issues
6476 NW Marine Drive, Vancouver, B.C.

- A: *Judy Kirk*: A classic example is people saying they seem not to want any observation structures. That's a classic example of asking for feedback in advance and actually changing a feature.
- Q: *Greg Ferguson*: I guess the follow up on that is how do you calculate the compensation? Is that through the regulators, or what studies have you done?
- Q: *Judy Kirk*: How do you calculate the value of the compensation?
- A: *Gord Ruffo*: Smaller projects get calculated on a square metre basis, larger projects get calculated on biomass – ongoing productivity – what does the ecosystem produce and how do you maintain that?
- C: *Greg Ferguson*: In this circumstance, it seems that we have an ecosystem that is not comparable. The habitat that you're talking about is not equal. It doesn't seem like this area of the river represents the ocean, where you want to place RBT2. You're not compensating for the habitat that is actually being lost.
- C: *Judy Kirk*: Let me be clear on what you're asserting: if you were to use one of the areas that we're talking about here for compensation, it's not compensating for the type of habitat that would be lost with the development of RBT2, and therefore it doesn't make sense. I think that's what you're saying.
- C: *Greg Ferguson*: If the shorebirds that go there lose their habitat, they're not likely to come here because it's not the same type of habitat.
- A: *Gord Ruffo*: Projects are evaluated on an ecosystem basis, by species. For example, Chinook salmon. What is the ongoing productivity of that species? What can you do to benefit that species? That's the way it's evaluated.
- Q: *Greg Ferguson*: Western Sandpipers? So this will try and compensate for a loss to their habitat?
- A: *Gord Ruffo*: I can't comment on Western Sandpipers with respect to Point Grey and McDonald.
- C: *Greg Ferguson*: I think it's important to note that I don't think this process is going to be heard by anyone, especially since the regulators themselves aren't here to listen to what people have to say, which is kind of sad, since they're the ones making the decision. Despite all of these petitions, which I think are fabulous, these people can go into a back room and make a decision and that's just that.
- C: *Judy Williams*: That's why I want to know who the regulators are.
- C: *Greg Ferguson*: Have you considered climate change? The oceans are going to rise; they are rising. The marsh you create will get flooded by higher sea levels and will be useless anyway. You're compensating for something that will likely be lost. The other thing is that I don't think the clean-up of Iona – the North Jetty – should be counted as compensation at all. The person who owns that property should be responsible and clean that stuff up. It's

MEETING DETAILS	<p>Port Metro Vancouver Habitat Enhancement Program Proposed McDonald and Point Grey Tidal Marsh Projects Public Open House June 4, 2014 6:00 p.m.-8:00 p.m. UBC Liu Institute for Global Issues 6476 NW Marine Drive, Vancouver, B.C.</p>
------------------------	---

not acceptable that they've left that garbage there. It should not be counted as compensation for Port Metro Vancouver to develop something else.

- C: *Judy Williams*: I really want to thank everyone for coming out tonight. It's really hard to do when we have such beautiful beach weather. I know you have all sacrificed to be here and thank you for doing that. This is critical stuff. I'm concerned about the time limit. This is something spiritual and unique and makes Wreck Beach what it is and Fisheries and Oceans and Environment Canada haven't taken into account the human aspect; the fact that hundreds of thousands of people use this beach every year. We generate goods and services between \$61M and \$100M every year. That is a fact. We have letters on record from Tourism B.C. extolling Wreck Beach because they have communications from all over the world from people wanting to come to our beach, regardless of the negative press the RCMP are giving us. We need to know exactly who is pushing this. One last question: I have been doing this since 1969 and you wouldn't believe the threats to our beach. What connection, if anything, does your wanting to fill in those tidal flats have with the "Experience the Fraser" Program? It's a way of opening the river to the public through boat launches and such. They said it was only going to go to Tsawwassen. When they showed us the movie, the first image in it was of Point Grey. I said into the microphone "That will be a cold day in hell – you're not coming to Wreck Beach."
- Q: *Judy Kirk*: Does this program have anything to do with the "Experience the Fraser" program?
- A: *Gord Ruffo*: No.
- Q: *Judy Williams*: Where does the public go from here?
- A: *Judy Kirk*: Judy just asked "what happens next?" or "where does the public go from here?" We will be compiling the input – what we've recorded tonight, plus any written submissions you provide and any feedback forms, which I suggest you fill in online – and there will be a notification sent out when that report is done. The Port will also prepare a Consideration Memo. From there, it will be up to the Port and the regulator to notify you about what's next.
- C: *Judy Williams*: I want everyone to know we are going to continue with the petition. Get everyone to sign it.

3. Closing Remarks

Judy Kirk wrapped up the Q&A session at 8:00 p.m., thanked participants for their time and encouraged them to complete a feedback form.

Appendix 6:
Petition
(Separate document)