

Iona Island Wastewater Treatment Plant Projects: Barge Berth

October 5, 2023

Open House Engagement Summary



Acknowledgements

Thank you to everyone who participated in the Barge Berth Open House on October 5, 2023 and provided input. At the open house, Metro Vancouver provided an update on the barge berth project, proposed locations, and site selection processes. We recognize that for some residents of Deering Island and Southlands, one of the proposed locations is concerning due to the close proximity to the community and potential health impacts related to noise, air quality, and light.

The purpose of the open house was to listen and receive feedback from diverse perspectives. A final decision on the barge berth site has not been made. We continue to work with technical team members and third-party consultants in evaluating the proposed site locations. Feedback from nearby residents and the local community will be considered in selecting a preferred option.

We value everyone's feedback, time, and patience as we compiled the comments received. We will continue to provide updates on the project as it becomes available.

About Metro Vancouver

Metro Vancouver is a diverse organization that plans for and delivers regional utility services, including water, sewers and wastewater treatment, and solid waste management. It also regulates air quality, plans for urban growth, manages a regional parks system, provides affordable housing, and serves as a regional federation. The organization is a federation of 21 municipalities, one electoral area, and one treaty First Nation located in the region of the same name. The organization is governed by a Board of Directors of elected officials from each member jurisdiction.

This report has been updated to reflect the preliminary design phase timeline of the Iona Island Wastewater Treatment Plant. These changes do not affect the barge berth timeline or feedback received in this report. For questions or to provide further feedback, please email: ionawwtp@metrovancover.org.

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1. About the Iona Island Wastewater Treatment Plant – Barge Berth

The Iona Island Wastewater Treatment Plant is being upgraded to ensure continued protection of public health and the environment in a growing region. The current plant is a primary treatment facility that serves approximately 750,000 residents in the Vancouver Sewerage Area. Built in 1963, the existing treatment facility is one of the last plants on the west coast of North America to provide only primary level wastewater treatment. It is highly vulnerable to both earthquakes and sea level rise, and much of the existing plant is reaching the end of its service life.

The Iona Island Wastewater Treatment Plant Projects combined are Metro Vancouver's largest infrastructure project, and will require significant movement of goods and peoples for construction over the next 15 years. The project is currently in the preliminary design phase, which includes planning of schedule, cost, and risk assessments. This phase is anticipated to continue until 2026.

The site requires extensive ground improvements due to its location in the Fraser River Delta. With limited road access to xʷəyeyət (Iona Island), the barge berth will facilitate the movement of materials so that we can build a strong and reliable foundation. The ground improvements will allow the future treatment plant to withstand a large magnitude earthquake and future rising sea levels. To facilitate construction on Iona Island, a temporary barge berth is currently being evaluated. Benefits of a barge berth include:

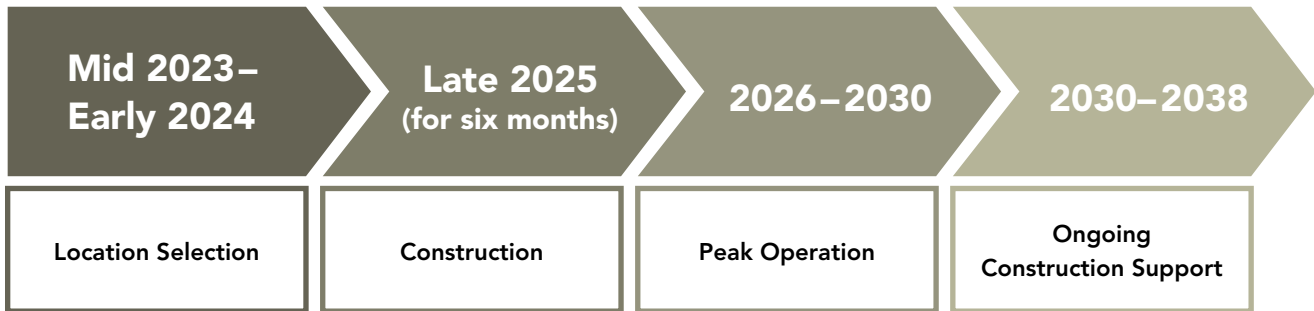
- **Reducing construction traffic** by replacing approximately 500 dump trucks each day
- **Improving safety** for over 370,000 annual park visitors

- **Reducing greenhouse gas emissions** through traffic reduction, aligning with regional sustainability objectives
- **Maintaining the project schedule**, which will minimize costs and delays to comply with regulatory requirements

Through our engagement with the community to date, a number of priorities have been identified. Metro Vancouver is completing site analysis studies and determining mitigation strategies and measures for construction and operation of the barge berth. Metro Vancouver is committed to minimizing impacts on the community, and will undertake air and noise monitoring to ensure that dust and noise are reduced and comply with municipal by-laws, as well as implementing mitigation measures to reduce light pollution. Steps will also be taken to reduce environmental impacts by complying with Transport Canada and Fisheries and Oceans Canada, and work with regulators to ensure the project considers all marine user safety standards.

The Barge Berth Open House took place on October 5, 2023 and provided a venue for area residents from Deering Island and Southlands to express interest in aspects of the project, ask questions, and communicate their concerns to Metro Vancouver. The following report provides a summary of what we heard during this session and how we will respond to address these items.

Barge Berth Anticipated Timeline



2. Executive Summary

This report describes engagement activity and participation for the proposed barge berth during a public open house for Deering Island and Southlands residents. During the Barge Berth Open House on October 5, 2023 held at the Dunbar Community Centre, attendees had the opportunity to engage with several subject matter experts from the Iona Island Wastewater Treatment Plant Projects. These representatives provided details on the proposed project and spoke to key areas, including:

- The existing facility and rationale for the upgraded facility, including environmental and social benefits
- Key components and features of the new plant
- Purpose and benefits of the barge berth
- Timeline for the barge berth
- Public engagement process and commitment to the community
- Mitigation measures for the community
- Selection criteria for the barge berth locations, as well as the advantages and constraints/risks identified for each of the following considered locations:
 - Proposed Site Location 1: Northwest of Iona Island
 - Proposed Site Location 2: South of Deering Island, Adjacent to Construction Laydown Area
 - Proposed Site Location 3: McDonald Slough

A total of 88 attendees engaged with the Metro Vancouver project team during the open house. Attendees were able to speak directly with subject matter experts throughout the event and provide their feedback as part of informal conversations. All feedback was captured by Metro Vancouver through notetaking by project team members; attendees also had the opportunity to provide their feedback directly through comment cards and an online feedback form. 35 feedback forms were submitted at the event, and one was submitted online.

3. About the Engagement

Engagement Timeline



The open house was originally planned as a ‘town hall’-style meeting with online and in-person participation opportunities. Due to the high level of interest, a drop-in approach for the open house was implemented to allow for interested residents to engage with staff members. An additional virtual session is being planned for the near future.

The open house took place on October 5, 2023 and was focused on receiving community feedback from Deering Island and Southlands residents related to the proposed barge berth, the site locations being considered and measures to mitigate impacts to the community. A total of 88 people attended the event at the Dunbar Community Centre. From demographic information collected at registration, the majority of attendees were Deering Island and Southlands residents.



Left: Map displaying aerial view of the Barge Berth Locations under consideration.



4. Engagement Promotion

The open house for the proposed barge berth was promoted on the Metro Vancouver [website](#), by email to area residents who have expressed interest and are subscribed to project updates, and by hand-delivered invitations to homes in the area.

Website

The Iona Island Wastewater Treatment Plant (IWWTP) project webpage hosts information about the wastewater treatment plant upgrades and project components. The open house information was posted on September 26, 2023 and materials for the open house were posted on October 5, 2023. There were 100 views of the event page, from over 53 active users.

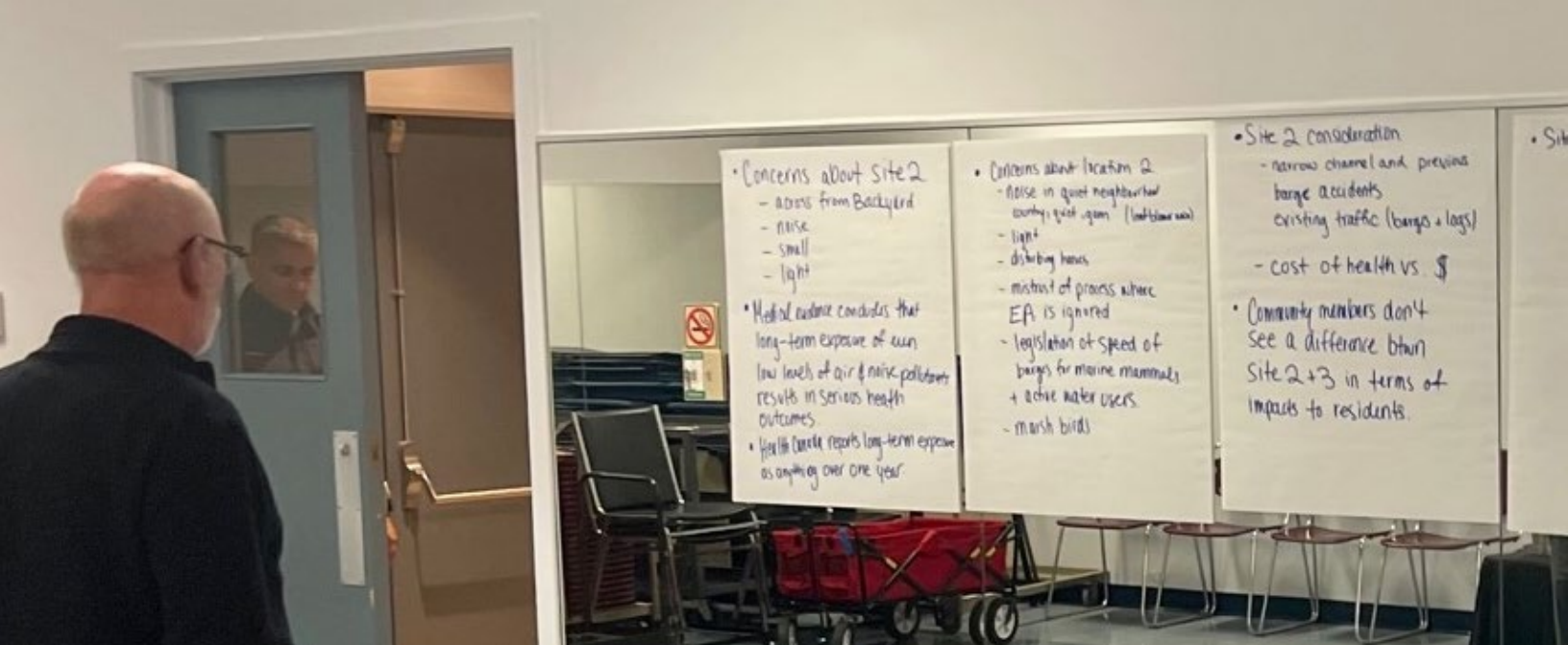
Email

Email invitations about the open house were sent directly to five key contacts from the Deering Island and Southlands community on August 22, 2023. These contacts, who had been in contact with the project team, circulated the invitation to their communities. Reminders about the event were delivered on September 19, 2023, and 24 people confirmed their attendance before the event.

Hand-delivered Invitations

An open house invite, in the form of an information postcard, was delivered on September 22, 2023 to 75 residences on Deering Island and Southlands, located closest to the Iona project.





5. Engagement Materials

The following materials were available at the open house and posted online as of October 5, 2023.

Feedback Form

Feedback forms were available at the open house and online. The form allowed for participants to provide their feedback. Online and written forms had identical questions.

A public feedback form was made available online during the event until midnight on October 6, 2023.

Display Boards

Display boards shared information about the Iona Island Wastewater Treatment Plant Projects, proposed barge berth locations, potential mitigation measures, and criteria for site selection. Printed copies were available for attendees to take home.

Frequently Asked Questions

A Frequently Asked Questions document specific to the barge berth and with responses to questions received to date through community inquiries.

Barge Berth Project Fact Sheet

Information about the barge berth, current project status, location selection process, and potential mitigation measures.



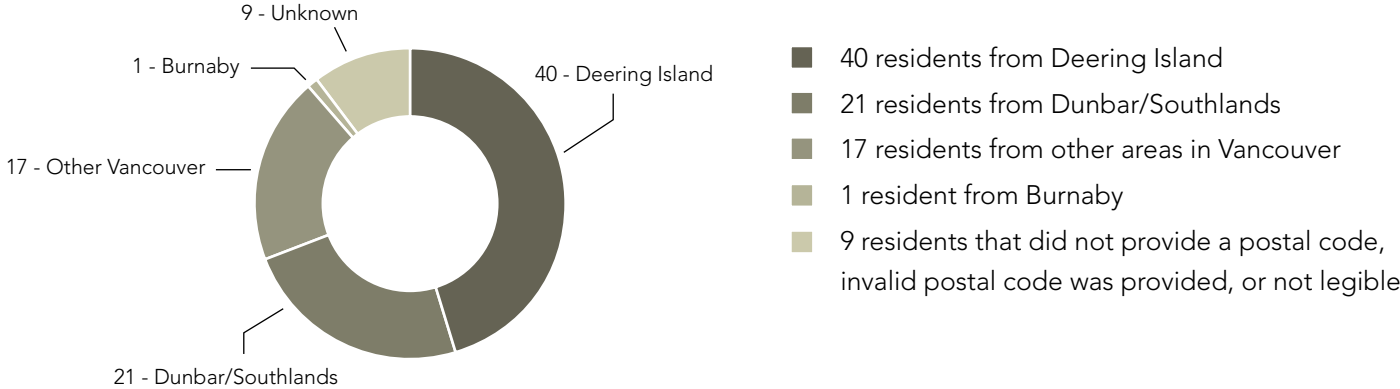
6. Engagement Participation

This report includes engagement specific to the October 5, 2023 Barge Berth Open House. Feedback forms were available at the event and online until midnight on October 6, 2023. Information received via email during this period is also included.

Activity	Participants/Responses
Open house	88
Feedback form (online and in person)	36
Emails with additional information	1

In-Person Attendees Demographic Information

Sign-in sheets gave attendees the option to provide their postal code for information purposes. The following is a summary of demographic information provided:



7. Themes

During the open house and engagement related to the event, several key themes emerged. Below is a summary of those themes. All comments received through feedback forms, written comments, display boards and emails received during the engagement period are available in Appendix A.

Theme	Summary	Response
<p>Strong Opposition to the Location Across from Deering Island (Location #2)</p>	<ul style="list-style-type: none"> • Strong opposition to the proposed berth location across from Deering Island, adjacent to the construction laydown area, was cited most frequently in feedback received. • Concerns raised about this location included noise, air quality, and health impacts to the community, and a strong perception that the barge berth project would significantly reduce peaceful enjoyment of the community, residences and nearby park. • Identification of Deering Island and Southlands community as unique (pastoral, farmland) and that any construction activity would be detrimental to the community and visitors of the community. • This is expropriation of air space and the value of this impact is not being considered. • Preference for other proposed locations, majority preference for location #1 or “as far west as possible.” • Multiple comments echoing Deering Island/ Southlands community concerns for Location #3 in McDonald Slough. • Some comments suggesting Location #3 as an opportunity to better dissipate noise. 	<ul style="list-style-type: none"> • Metro Vancouver recognizes the community concerns regarding this location. Potential community impacts will be considered in location selection. At this time more information from studies is required to provide more details about potential impacts and mitigations specific to this location. • As part of the site selection process, studies are taking place that consider public health, safety, and potential construction impacts. The results of these studies will be made available once complete and will be used to inform the barge berth location, design, and identify mitigations. • Location selection will consider community feedback and other stakeholders.
<p>Lack of Trust in Decision-Making Process</p>	<ul style="list-style-type: none"> • Wanting to speak directly to a decision maker. • Based on the boards, it would appear that Metro Vancouver has a clear preference for Location #2. • Proposal to put a barge berth next to a community makes it appear that the community's needs are being overlooked, or other's needs are more important. 	<ul style="list-style-type: none"> • Decision makers from the Iona Project Management Team and Engineering Team were at the open house. Metro Vancouver's Chief Administrative Officer also attended the event. • Metro Vancouver's Iona Project Management Team will review the studies being completed by a third-party consultant and community feedback received to select one location to progress design and construct a barge berth. Selection criteria include functionality, cost, schedule, x^wməθk^wəyəm (Musqueam) interests, community and stakeholder impacts, and ecological impacts.

Theme	Summary	Response
Disappointment in the Engagement Process	<ul style="list-style-type: none"> Disappointment that the event format had changed from a town hall with presentation to an open house. Open house format is confusing, hard to search for information on display boards. Questions on whether the community will be consulted prior to next steps. Questions on if the studies will be shared with the public. Deering Island and all relevant stakeholders need to be engaged for all aspects of the project, inclusive of the plant upgrades. Given the close proximity of the plant and proposed berth, residents should be considered and consulted first. Display boards do not include health information and studies gathered by residents. Community not adequately consulted to date. Barge affects residents, not Metro Vancouver's Board. The first time that the residents heard about the barge berth was from Vancouver City Council Meeting in April 2023 why did it take so long to engage residents? 	<ul style="list-style-type: none"> Metro Vancouver decided to host an open house, rather than a 'town hall'-style format, due to indicated high levels of participation and interest to create opportunities for the greatest number of participants to have one-on-one discussions with staff. Participants were able to review information at their own pace, provide comments privately or make them visible for all participants. Studies are being completed to assess environmental impacts, functionality, cost, and impacts to stakeholders and the community. This information will be shared once available. Engagement with other stakeholders and interested parties continues. Metro Vancouver engaged the Deering Island Homeowners Society on three occasions prior to the October 2023 open house. An online meeting was held on September 29, 2020 to introduce the initial design concept of the IWWTP Projects that included the proposed barge berth. On September 24, 2021, Metro Vancouver hosted a virtual engagement meeting to inform the Deering Island Homeowners Society of the project's revised design concept, which was followed by a virtual engagement meeting on February 24, 2022. Specific to the barge berth, we heard concerns about noise, light, visual, and dust impacts and proximity to residents. We will continue to share information about the project and the barge berth as it becomes available. Information about the project is regularly updated on the webpage and through email newsletters.
Missing Information/Follow Up Questions	<ul style="list-style-type: none"> Renderings are not accurate or to scale, and appear to be misleading. Some images exclude Deering Island. Where did the information that 20% of the province's logging is facilitated through McDonald Slough come from? Who is the third-party completing the studies? There is a lack of information and analysis about health impacts between barge and truck transportation. Links to online form did not appear to work. 	<ul style="list-style-type: none"> The renderings have a 2-D version of Deering Island, while the foreground and barge berth design is in 3-D. We have provided this feedback to the rendering developer and have made note of this for future materials. Based on discussions with the Ministry of Forests, the Vancouver Fraser Port Authority, and the Council of Marine Carriers, Metro Vancouver understands that approximately 20% of the province's logging is facilitated through McDonald Slough and recognizes it plays an important role in the logging sector. Metro Vancouver has engaged with businesses who use McDonald Slough and manage most of the logging in the area, who also emphasized the significance of

Theme	Summary	Response
		<p>this region to the logging industry.</p> <ul style="list-style-type: none"> • Advisian is completing the third-party site analysis studies. • We tested all the links and the online form to confirm it was working before the open house and received comments through the online form. There were multiple options to provide feedback based on attendee preference.
<p>Health Concerns Related to Construction and Operations</p>	<ul style="list-style-type: none"> • Shared peer-reviewed studies from health journals that indicate negative health impacts including increased risk of heart failure, stress, and mortality from exposure to noise and pollutants. • How can a barge berth be considered near a residential area (Option 2 or 3) when there is clear evidence of negative health impacts. • Concerns about particulate matter being released into the air (less than 2.5 parts per million) and health impacts. • 10 years of operation is not temporary. • Mental and physical risks to the community. • Cumulative effects of low-level noise is more detrimental than intermittent high-decibel noise. Mitigations identified are not effective. 	<ul style="list-style-type: none"> • Site analysis studies are underway, will consider noise, air quality and health impacts and be used to inform mitigation measures. Each location under consideration has different considerations for nearby communities and the environment. • We have received the studies that residents have provided, and are completing health studies as part of our location analysis. • Monitoring noise, air and environmental impacts is important for any construction project to ensure safe working conditions for workers and the community. • Noise from project-related construction would be regulated by the City of Richmond's Noise Bylaw (Bylaw 8856 - (2012) Noise Regulation) • The barge berth will create intermittent noise during operations, all work will be compliant with the City of Richmond's Noise Bylaws. If noise variances are required, notification to the community would be provided. • PM2.5 is primarily produced from the combustion of fuels, such as gasoline, diesel, and natural gas in engines and other equipment as noted in Metro Vancouver's Lower Fraser Valley Emission Inventory Forecast (pg. 10). For construction of the barge berth, this would include sources such as the combustion of diesel in non-road motorized equipment like front loaders. Through our green procurement policy, Metro Vancouver's on-site contractors would use equipment that meets or surpasses the requirements in the Metro Vancouver Regional District Non-Road Diesel Engine Emission Regulation Bylaw 1329. <p>Dust from sand and gravel handling typically contains various-sized particles. Metro Vancouver will establish mitigation measures for dust from</p>

Theme	Summary	Response
		<p>berth operations incorporating industry best practices and community input to reduce impacts. Metro Vancouver has identified preliminary dust mitigation measures that were presented at the open house and will share updates about the project and mitigation measures as they become available.</p> <ul style="list-style-type: none"> • Mitigations to manage dust from construction materials will be implemented. Location studies will consider dust mitigations. • Metro Vancouver has engaged with Transport Canada, the Vancouver Fraser Port Authority, and the Council of Marine Carriers about all three location options. After a location is selected, the project will be reviewed from a navigational safety perspective during this study, and we will work with Transport Canada through their permitting process, which will inform navigational requirements. Any barge berth location will require all structures, including barges, to be outside of the navigational channel or safety zones. • Environmental considerations are being reviewed as part of our location studies and will be further progressed following site selection.
Community Impacts from Berth Operations	<ul style="list-style-type: none"> • Potential impacts to the right to “peaceful enjoyment of property.” • The project will introduce noise to a quiet community. • Impacts to Deering Island Park users. • 10 years is not temporary. • Perceived impacts to property value. • Visual impacts for residents and park users. 	<ul style="list-style-type: none"> • Mitigation measures for construction and operations are being developed with the location assessment studies that are underway and considered in the design. Operational needs and mitigation measures will be confirmed following design, and we will provide updates to the community.
Water Safety Concerns from Barge Operations	<ul style="list-style-type: none"> • There is a history of barge strikes and accidents on Deering Island. • The narrowest place is the location across from Deering Island. Location #1 allows for more space to navigate on the water. • Busy waterway with commercial and recreational users. 	<ul style="list-style-type: none"> • Any barge berth facility including structures and barges, would be located outside of the navigation channel and corresponding safety zones. Site analysis studies will consider the navigational requirements of each proposed location, the results of these studies will be shared once available. • Metro Vancouver has engaged with Transport Canada, the Vancouver Fraser Port Authority and the Council of Marine Carriers about all three location options. Following location selection,

Theme	Summary	Response
		<p>Metro Vancouver will engage Transport Canada to determine regulations for the selected location and engage users of the waterway.</p> <ul style="list-style-type: none"> • Barge transportation was identified as a safe and efficient means of transporting materials, and considers the safety of all road users.
Environmental Concerns	<ul style="list-style-type: none"> • All options threaten pristine bird, fish and mammal environments. • Any increase in barge traffic is bad for marine life. • Recommended speeds for water use need to be enforced. 	<ul style="list-style-type: none"> • Environmental considerations are included in the selection criteria. The studies being completed will review environmental considerations and potential impacts at each location. • Metro Vancouver will work with Transport Canada following site selection to review navigational requirements and considerations for the project. • The barge berth will require permits from the Provincial Ministry of Forests and Fisheries and Oceans Canada. These permits will require evaluation of environmental impacts.
Suggestions to Adapt Other Locations to Reduce Impact to Deering Island and Southlands	<ul style="list-style-type: none"> • Adapt Location #1 and remove some of the negatives for additional truck use identified by using a conveyor system to transport materials to site, and/or adapting the road and parking lot for the park. 	<ul style="list-style-type: none"> • This suggestion has been shared with the project team.
Distribution of Impacts and Overall Project Benefit	<ul style="list-style-type: none"> • The project is on land that is on Iona Island, so most impacts should be concentrated there. • Barge proposal severely impacts a small community, there should be a wider distribution of impacts for a project that services multiple communities. 	<ul style="list-style-type: none"> • Metro Vancouver recognizes that the barge berth option at Location #2 is close to nearby residences. • The new plant is one of the largest infrastructure projects in the region and construction and transportation impacts will have a wider reach than just Iona Island. • Construction of the new plant will require a significant amount of sand and construction materials. The project site is currently only accessible via one two-lane road that is also used by major industries, businesses and 370,000 annual recreational users to Iona Beach Regional Park. The project needs to consider alternate transportation methods to bring materials to the site to improve transportation efficiency and safety for road users on Sea Island and throughout the region.

Theme	Summary	Response
Clarification of Weighting of Selection Criteria	<ul style="list-style-type: none"> • Does Musqueam have more say than the community? • Health impacts need to be more heavily weighted. • How is the selection criteria weighted? • How is the cost of health considered compared to cost of project? 	<ul style="list-style-type: none"> • Selection criteria include functionality, cost, schedule, x̣ṃəθḳʷəỵəm (Musqueam) interests, community and stakeholder impacts, and ecological impacts. The studies being completed will consider each of these criteria. • Minimizing and reducing impacts on community and key stakeholders is an important consideration for the site selection process. We will share the results of the location analysis once available. • Engagement with other stakeholders and parties are ongoing.
Suggestions and Preference for Road Transportation	<ul style="list-style-type: none"> • Existing roadways should be able to service construction. • There is no good barge berth option, all will have impacts to environment, community or Musqueam. 	<ul style="list-style-type: none"> • The site location is currently only accessible by one two-way road and as one of the largest projects in the Lower Mainland, project construction requires a significant volume of materials. The road is an essential artery for major transportation hubs including the airport, cargo and logistics businesses, local businesses, and recreational access to Iona Island. Given the access constraints and high volume of users who rely on Ferguson Road, identifying alternate transportation options was essential for transportation efficiencies, and the safety of other road users. • We are completing location analysis studies which will also inform mitigation measures.
Use of Terminal vs. Berth	<ul style="list-style-type: none"> • All comments received referred to the project as a terminal. 	<ul style="list-style-type: none"> • The main difference between a barge berth and a barge terminal is their size and usage. Berths are smaller and used specifically as a docking point to load and unload materials. Terminals are larger, more complex facilities and include storage of materials and cargo, often including multiple berths, connections to road and rail infrastructure and offices. • The proposed barge berth for IWWTP construction will be used to load and unload materials for construction. The design will consist of a dock and in-river piles to securely anchor the barges and a conveyor system to move materials between the barge and the shore.

8. How Feedback Will Be Used

Feedback provided by the community as part of this open house will be used by the Metro Vancouver project management team as part of their evaluation process to determine a location for the barge berth

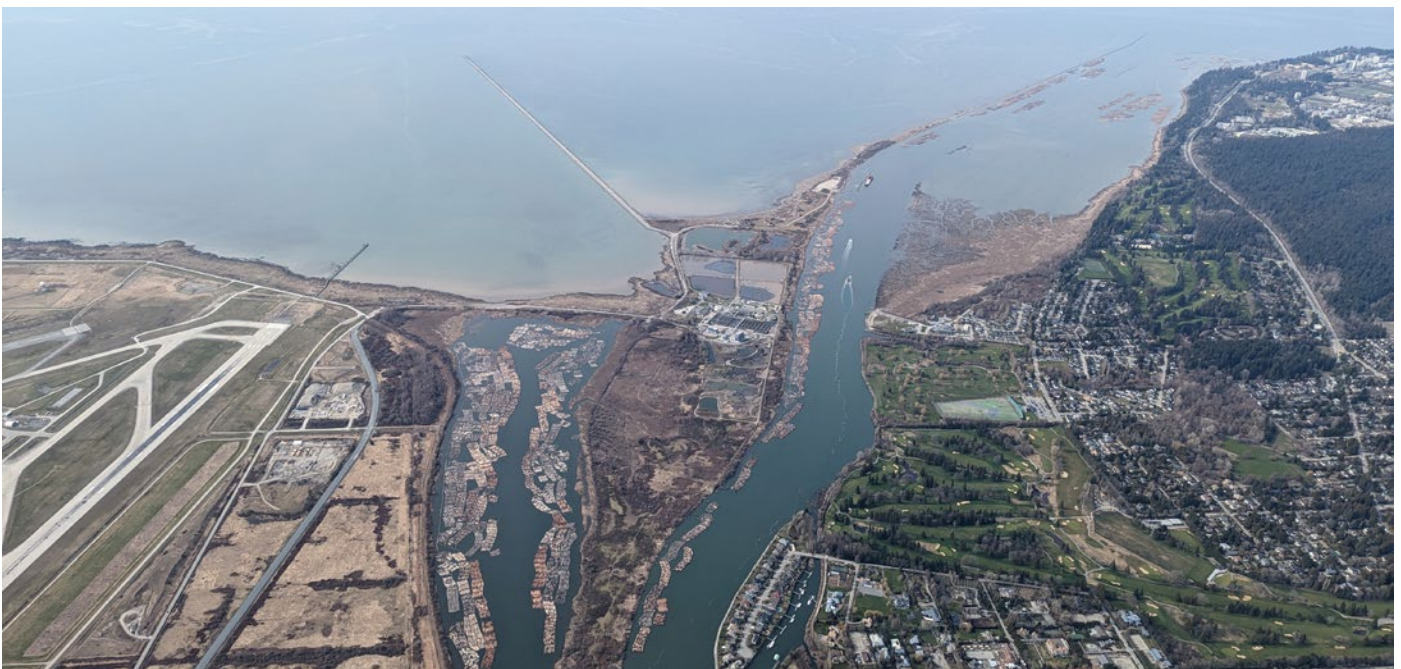
9. Next Steps

This engagement summary report is available for the public to view and has been delivered to the project management team to be considered as part of their decision-making process about the proposed site locations. This report will also be presented to the Liquid Waste Committee and Board.

Metro Vancouver has also engaged a third party to conduct a site analysis and determine which of the proposed site locations is the most optimal for the barge berth. At the time of the open house, this study was ongoing.

Metro Vancouver is conducting ongoing engagement with Musqueam, local businesses, regulatory agencies, and other interested groups specific to the barge berth location selection. Feedback received as part of this process will also be considered in project planning.

Metro Vancouver will host an online engagement session in the near future and will share the results of the site selection study by a third-party consultant once completed.



10. Appendix A: Verbatim Responses

Below is a table with all feedback forms, comments and sticky notes received during the open house engagement. Personal information has been removed from these comments.

Comment Type	Verbatim Comment
Feedback Form	None
Feedback Form	I would have strongly preferred a presentation and opportunity to ask questions. Trying to piece together info from various poster boards is challenging. I am concerned about shipping traffic and its impact on the Southlands community - a place of nature, wildlife, habitat etc. This is a neighbourhood enjoyed by many. Please select a site that impacts this community the least. I.e. likely site 1.
Feedback Form	There are 3 options to locate the barge terminals. We object to build it close to the residential area when you have other options! Today's meeting made me very disappointed. Our concerns and worries are not answered.
Feedback Form	How do you justify considering exposing homes, park goers, and the environment to barge facilities which are proposed to be in operation 13 hrs a day 6 days a week x 10 years! We accept that the construction site will be noisy but strongly object to adding noise from barge terminals. We want to put our concerns to the decision makers and not have 3rd party reporting.
Feedback Form	1. Which firm has done the impact studies on pollution? 2. How can you justify considering a Barge Terminal at site 2 or 3 given the medical evidence of serious health outcome with long term noise and air pollution? 3. As you are 200 yards from homes your community consultation process seems flawed. We would like to give feedback first hand to the decision makers. 4. Site 2 is at the narrow part of a busy working river where there have already been multi strikes on Deering Island by barges. How do you justify adding to safety risks?
Feedback Form	1. Why across from the residential area? 2. Who did the impact survey? 3. You have/have not decided on a contractor? I have both YES and NO from your staff. 4. Says Monday to Friday but online includes Saturday. 5. Noise across water CARRIES 6. The site is or is not decided? I heard both yes and no from your staff. 7. POOR format - missing health and pollution info collected by residents. This is not complete info. Where are the COV people who make decisions? Not here tonight? Staff not well versed in some of the info, whether "i don't know" or "go look at the board over there" 8. The number of trucks is huge working 13 hours a day 6 days a week (Richmond By-law) We already have noise probs from YVR construction this will be much larger generation for much longer 10 years! 9. I don't believe there is ONE resident who believes this to be a good idea serving Burnaby, Richmond, not only impacts Southlands we only natural river community. YOUR WEBSITE LINK DOES NOT WORK. You have disregarded vital info by changing the FORMAT of this event.
Feedback Form	Only Southlands residents had awareness of the projects. Meeting did not make attempt to notify Deering Park users. Artist renderings of site 2 do not look to scale.
Feedback Form	Thank you for the detailed information, reading materials. It is clear that the decision to use option 2 has been decided. I believe the health and quality of life of local residents should have a much higher weighting in this decision. Option 1 clearly is the best for residents in the area. But I assume decisions makers fear Musqueam. Please consider the families living here and choose option 1 or road.

Feedback Form	Honestly, I feel like this event wasn't an opportunity for open and transparent communication. It is quite clear that the location has been determined - unfairly and without due consideration of the residents and community. I feel angry and dismissed and this is not the good neighbourly practice that Vancouver prides itself on. This is a charade and I honestly thought there was a chance that we could have input. I'm raising three young kids who will only know debris and unacceptable working noises and hours for most of their formative years. DO BETTER.
Feedback Form	Residents and users of Deering Island and it's park have concerns (see Questions for Metro on back of Fraserriver.org hand out) Please address these questions to those attendees at today's open house that left their email addresses on the sign in list. Once the "study" to look into the three options has been completed. Will "we" be consulted prior to next steps? Will results be shared with "us"? Proximity of plant to residential areas should be the #1 concern and reason to consider given scientific evidence base surrounding effects of prolonged exposure to various pollutants (air, noise, light, etc.) being readily available. Don't let cost be the determinant. We don't feel adequately consulted to date...("We" acknowledge the importance of the new plant, but want to ensure resident concerns are heard and taken into consideration. Please inform, consult and engage all relevant stakeholders, including Deering Island residents, at all stages of the project decision-making moving forward. We need to all work together to find a solution (re: the location of the barge terminal) that will be acceptable to all parties involved. Please don't let residents/users' wellbeing be sacrificed in this process. Thx!
Feedback Form	Where is the INFO justifying the barge option decision? Measuring the impact on health and the rucks (road option vs. barge option). Measuring the environmental impacts of barge vs. road?
Feedback Form	Your photo of option 2 does NOT even show Deering Island and Southlands; and how close it is to the Barge Terminal. Why?
Feedback Form	Why is the health of Musqueam considered but not the health of other residents?
Feedback Form	Thanks for the presentation. Very helpful. Photo of site 1 does not put the site in context of the surroundings.
Feedback Form	1. Option 2 closest to residential population with all life of adverse health effects. 2. Option 2 - narrowest stretch of N. Arm of Fraser River. Deering residents 2 years ago spent \$900,000 on repairs to rip-rap from Barge Strikes. 3. College of Physicians BC have provided 65 scientific published papers on the adverse effects of chronic exposure to atmospheric pollution and noise. 4. Option 2 involves destruction of a large stretch of green space between barge terminal and plant.
Feedback Form	I prefer site #1. We can move the material and waste by truck. I know we have a concern that it will affect the Iona Island park but we can modify the parking lot and road around the Iona Island part which I believe will NOT cost a lot of money. If true it could save money for the project also no residences near site 1. So Site 1 could be a win-win for the waste water treatment project and Deering Island residence. Thank you!
Feedback Form	There is little disagreement that the plant must be brought to an acceptable standard to deal with the growing population/ecological concerns. - the method is the issue. The decision to use barges as a opposed to the existing road was made WITHOUT community input. This is undemocratic on such an important question. Only the CEO and one councillor are present - where are the other decision makers who choose the barge option? They should be here to engagement with the members of the public. It seems unfair and insulting to download this on staff who don't know the reasoning behind the decision.
Feedback Form	I don't believe all aspects of what damage barges will cause has been thought out. To expand the plant (and I do not agree) is one thing, but to expose the residents of Southlands to the noise/dust/pollutions and eye sore of the barges. Health issues will arise from the dust particles. Eagles, seals and wildlife will all be effected.

Feedback Form	If the parking lot in option 1 is a concern for Iona Park, the cheapest solution is change the road. It is simple, its cheap, and less people are exposed to long term air and noise pollution. I cycle these I have choice on length of time spent there. Residents do not!
Feedback Form	1. Electric equipment if available. 2. Widest section of river to avoid log booms 3. Dust remediation 4. Barges should be offloaded at construction site. 4. If dredging required it would be advantageous to dredge around Deering Island.
Feedback Form	There is a concern that the berth across from Deering Island will make life intolerable - that people will be working on weekends - early am and late at night for 10 years. If this is not true then Metro should enter into a MOU with community to address fears.
Feedback Form	See issues with all 3 options. Option 1 probably most suitable, but not for the people of Musqueam Nation. - all options threaten pristine bird, fish, mammal environments. - option 2+3 threaten the pastoral beauty of Southlands and create noise/light problems for residents. - tugboat speeds/underwater noise deadly for whales - no proper EA about all wildlife impacts and the human health and mental and physical risks.
Feedback Form	I understand the need to upgrade the water treatment plant. However, I think there are existing roadways which could service construction. Users of the roads involved have other routes that could be used but the residents of the area that will be affected and have no choice but to be subjected to noise, air and light pollution. Priority needs to be given those who will be living in the product of construction. Use roads, not build a barge terminal.
Feedback Form	Canadian Bill of Rights #1 Entitled to "enjoyment of property" unless denied by due process. No due process. Enjoyment denied. Outrages!!!
Feedback Form	You have 3 options and 1 is across from residential area. It's a no brainer to not even consider that. It's crazy to subject a whole community to constant noise, light and dust pollution for 10 years. Make no sense! This open house is a scam, no presentation, no Q's and A's so everybody can hear at the same time (of the concerns and how you are going to address them). No Barge Terminal across Deering Island!
Feedback Form	I am very disappointed that I can't express my concerns. We are very interested in why the Deering Island Barge terminal location is chosen as there is other much better location on the west end of Iona Island.
Feedback Form	1. I live in Southlands 1/2 block from Celtic Ave. 2. I came expecting a regular public meeting expecting speakers and the attendees opportunity to speak and be heard and minutes to be taken. I understand this was the original plan but it changes to this walkabout format to me, from me, is useless! 3. If it must go forward barges should be kept on far west as possible preferably out of the river all together. 4. When the north runway was constructed there was much community disruption. We were told that would not hear runway the would stop at 10pm and nof lights in or out 11pm-7am. That was proven to be a total fallacy. All residents near and adjacent to the river would be negatively impacted if the location across from Deering Island goes through. The river will be impacted environmentally and its transcentrale berth will be maximized the chances of accident the residents will be seriously impacted. This format is a does not adequately address public opinions and questions.
Feedback Form	I am sorry to say that this open house is a waste of time as we cannot express our concerns. Sounds like Metro Vancouver has already decided on the location to build the barge berths. We strongly urge the decision makes to reconsider and move the proposed barge berth to the location identify at the west end of Iona Island to minimise the health and safety concerns of the residences in the area.

Feedback Form	I live in Deering Island. If the barge terminal was built across the island it will be a disaster of my life. Due to 1. an industrial terminal in my backyard 2. Works long hours a day 3. The project will be used for 15 years plus it's a very long time. 3. The traffic on the river is very busy already. I heard noise fo the big boat hitting the island often. 4. Van airport is getting busier and busier. 5. How can the city put a barge terminal across the residential area all of a sudden. 6. city should be more concerned about the local residents.
Feedback Form	I vote for site 3 for the construction of the barge berth. Based on the three sites offered it seems the least obtrusive and impact on the community. Also it would be helpful that once the third party consultant report is completed, it should be released to all the stakeholders to allow them to read and understand the considerations the consultant's used to select the site.
Feedback Form	Lots of good information but from what I saw, sites 1 and 3 look best. Pros and cons for all but at least site 3 keeps the barges out of the main channel and keeps the noise closer to the airport.
Feedback Form	The explanation that I received change my mind on the project. I think it is a necessary improvement and the planning has been well done. Thank you.
Feedback Form	Prefer Site #1 then #3. NOT SITE 2
Feedback Form	Do you really want to hear from us? I'm not convinced it's true. This is paying lip service to legitimate concerns. The potential health hazards, respiratory, cardiac, noise pollution. This is not acceptable. You have sent these polite young women to sugar coat an unpalatable pill. Who are providing euphemistic answers to all questions. Put on a real public forum truly allow people's voices to be heard. Typical municipal bureaucracy, you don't care!
Sticky Note	Preference for #1 move material by truck, midfy park parking lot or road to allow for park access to be maintained. Won't cost lots of money
Sticky Note	We want clarity, transparency, fairness, real consultation, #1 best
Sticky Note	Local residents already impacted by YVR (noise). Boat accidents in channel near Deering Island.
Sticky Note	Concerns for site 2 - nightmare for residents - dust, noise, lighting - 15 years 10 hrs a day.
Sticky Note	What about the rest of us?
Sticky Note	What is the source of data for 20% McDonald Slough facilitates for province?
Sticky Note	Long term resident of Southlands have NEVER been consulted or informed by Metro!
Sticky Note	Site 3: Deering Island conveniently obscured by photo rendering
Sticky Note	We want access/understanding of fact base re: air pollution, light pollution, noise pollution.
Sticky Note	Residents living in the area should be more strongly considered. Option 2 is detrimental to the wellbeing of families, not just a bullet point on a pro/con list
Sticky Note	Location 1 is best. Vast \$ being spent on infrastructure. Lowest harm spread over most.
Sticky Note	Location 2 - are you kidding
Sticky Note	Transparency please. Least disruptive existing road in place #1
Flip Chart	Concerns about Site 2: across from backyard, noise, light, smell.
Flip Chart	Medical evidence concludes that long-term exposure of even low levels of air and noise pollutants results in serious health outcomes.

Flip Chart	Health Canada reports long-term exposure as anything over one year.
Flip Chart	Concerns about location 2: noise in quiet neighbourhood, country, quiet gem (leaf blower noise), light, disturbing horses, mistrust of process where EA is ignored, legislation of speed of barges for marine mammals and active water users, marsh birds.
Flip Chart	Move the barge as west as possible.
Flip Chart	The Fraser River needs to be dredged, why not do both at the same time? The barge location effects residents, not the board. There are other locations.
Flip Chart	Seals, blue heron, eagles, snow geese, beavers, woodpeckers, coyotes.
Flip Chart	Water path between Deering Island and Richmond are narrow. Water traffic is already busy and loud. Big boats ban on the Island, this increases sound and damage to Island. YVR is also very busy, adding to the noise. Especially during the summer. Residents of Deering Island are affected, if construction 1-2 years, that is fine. Not long term 10+ years is not ok. 14 hour long days per day.
Flip Chart	The light, noise, dust, will affect residents of Deering Island and their health. Building a barge that close on the narrow river is dangerous. A lot of people like to use park and trail will be affected.
Flip Chart	MacDonald slough could be a better location as opposed to the location closest to Deering Island and Southlands. The noise will be better distributed.
Flip Chart	Narrow channel, potential for vessel collisions/collisions with Deering Island (retaining wall)
Flip Chart	A pro for Site 2 being the historical location of a barge berth (but prior to residential homes being presented)
Flip Chart	Given you bought land on Iona Island the largest % of negative impacts should be on that property.
Flip Chart	Putting in on a barge near residents is de facto expropriation of air space. This has a value.
Flip Chart	Residents are lawfully guaranteed the right to quiet enjoyment of their property.
Flip Chart	We live on a working river across from an airport and have happily tolerated expansion of both but this additional "barge" puts an onerous burden on a small group of people
Flip Chart	The cumulative effects of low level noise are shown to be more detrimental than intermittent high decibel noise, so noise reducing claims on the presentation boards are meaningless.
Flip Chart	Site 2 Consideration - narrow channel and previous barge accidents. Cost of health vs \$
Flip Chart	Community members don't see a difference between 2 and 3 in terms of impacts on residents.
Flip Chart	Site 1 preferred: least impact on residential area, closest to salt water (shorter distance for barges to travel), wider water space for barges to turn around, closer to mooring location outside of the barge berth, opportunity for maintenance and operation of plant.
Flip Chart	Location on the North Arm Jetty would be best for everyone.
Flip Chart	Widening the road would be a better option than using a barge. There was no meaningful public output prior to the decision to use a barge. This event appears designed to justify improvements to the wastewater treatment plant. Very few people would disagree with that objective. However, the method of bringing materials to the projected is being imposed without community input. That is undemocratic.
Flip Chart	Thought this event would have a presentation

Flip Chart	On the boards it says that there were public consultations done. With who? Didn't receive any mail outs or interaction.
Flip Chart	What is the criteria for selecting the location of the berth? Why is Ferguson Road not being considered? TIME IS NEEDED WITH COMMITTEE MEMBERS. Face to face time.
Flip Chart	Rendering for the barges of MacDonald Slough is not correct. The spacing does not look accurate.
Flip Chart	We want more transparency.
Flip Chart	Site 1 - why can't the park parking lot not be changed to protect Iona Park, thus not expose a large residential area?
Flip Chart	Site 1 - Why can't a conveyor belt be used to transport to site to avoid park parking lot? This would address the first two concerns and last bullets re: trucking from berth to site.
Flip Chart	Human health risk assessment: looking at duration of exposure (e.g.) noise effects; available mitigation measures -> noise
Flip Chart	Property value (impact to residential properties)
Flip Chart	Visual blocking/mitigations
Flip Chart	Proximity to residential areas
Flip Chart	How will noise be reduced?
Flip Chart	Noise travelling faster on water (consideration)
Flip Chart	Wake effects, wave action from vessels
Flip Chart	Lights (industrial) being on 24/7
Flip Chart	Who is regulating noise (dba)
Flip Chart	There is no new information on these boards. This is frustrating and not okay. We have been asking the same questions about health risk will be assessed (air) for two years.
Flip Chart	What happens if an adverse effect arises mid-project, how is it mitigated. Will there be thresholds for impacts?
Flip Chart	Why is Metro Van not concerned at adverse health impacts in adjacent residential populations? WHY ARE THEY EXPENDABLE?
Flip Chart	Different options not just where barge "berth" terminal is what it is based on definition of what it is 'materials going in out including road, rail boat'
Flip Chart	Massive \$ being spent on infrastructure
Flip Chart	How are you spreading impacts so they are felt minimally across the largest group vs smallest group that are being ignored.
Flip Chart	10 years is not temporary
Flip Chart	This meeting is all about barge, we have always asked all information about construction materials will be moved in and out - we did not come to hear about choosing the worst of the three bad options.
Flip Chart	Misleading renderings of site location (to properly show channel width)
Flip Chart	Hoping for an open debate format
Flip Chart	Want to be continually informed/engaged and part of decision making process, community next steps to participants.

Flip Chart	Differentially ranking impact (eg human health above cost)
Flip Chart	Would like exact timeline of barge berth use (# of years)
Flip Chart	Considering southwest winds.
Flip Chart	15 years of moving dirt. What is it for? That is a lot of dirt.
Flip Chart	The renderings are misleading.
Written Note	Wants to hear back from a decision maker. Feels community input wasn't taken into consideration about there being a barge in general.
Written Note	How strong is Musqueam priority/voice to sway the decision of moving to Deering Island
Online Feedback Form	Site two is a bad idea. Why not use site 3, remediate site two to its pre-1950 condition, and then remediate site 3. Please do not use site 2
Email	<p>Dear Members of the Metro Vancouver Liquid Waste Management Committee:</p> <p>Thank you for organizing the Open House on Thursday 07 October 2023 at the Dunbar Community Centre. There appeared the Open House attracted quite a few concerned citizens like myself. Most attendees I have talked to are not happy with the format of this Open House, as we thought that it was a Town Hall meeting that people can listen and express their concerns "en masse". We were told by the Metro Vancouver staffs that the original Town Hall meeting was changed to the Open House format for whatever reasons.</p> <p>The first impression we got with the Open House format was that a decision has already been made in choosing the location of the proposed barge berths. We were very very happy to hear from your staff that this was not the case and selection is still pending.</p> <p>I have spent some time talking to your staff Amanda, who was very polite and professional, and diligently wrote down all my concerns and comments on a flip chart, and promised to post them for records.</p> <p>Following are some observations and comments after a brief review of the information available from your website online:</p> <ol style="list-style-type: none"> 1. From a pure construction point of view, this proposed barge berth location across from Deering Island (identified as Location 2) makes sense logistically as it is in proximity to the proposed construction staging and laydown area, which is next to the proposed new facilities east of the existing facilities. However, it does not make sense as the air and dust pollution, noise pollution, light pollution, as well as marine traffic congestions and other issues, will greatly impact the short & long terms health and safety, visual, and quality of life of the residences in the surrounding areas. 2. A second laydown area has been identified west of the existing facilities not far from the new construction areas. It makes good sense to have the proposed barge berths to be located at the west end of Iona Island (identified as Location 1) where there should have much lesser impacts to the health and safety of humans and closer to the west laydown area. It was mentioned in your report that additional off site laydown areas should be considered if required. A huge benefit and future cost savings is that the barge berths at Location 1 can be used permanently if necessary. 3. It is believed that the choice of location is greatly governed by the costs. We understand that this project may be under pressure to cut costs and has been trying to find ways to reduces capital costs with value engineering. We are sure that all agree that there should be no debate when it comes to human health and safety versus costs.

4. The Barge Berths were designed to transport construction materials to and from Iona Island. It did not mention transporting big heavy construction equipment which could be very noisy. In most cases, transporting by barges normally is the least expensive option compared to by road and other modes, depending on where they can be procured. Hence site selection is extremely important.

5. In the available online reading materials, it was said that anticipated barge berth operations is one barge per day at peak construction will be limited to 12 hours a day. Noted that in the Open House, one display indicated that it may be up to two per day. It is not unusual that when project falls behind schedule, additional days and overtime after hours will be worked trying to bring project back on schedule. Hence it will further impact the health and safety of the residences in the surrounding areas.

6. Barge berth construction (stage 1) is currently scheduled to start Q3 2024, with stage 2 in Q4 2025. Each stage is expected to take about 3 months. During construction, it is expected that there will be pile-driving into the river beds (and on land) and will be quite noisy with large mobile pile driving barges and hence congestions on the river ways. The constant loud noises associated with pile driving up to 13 hours a day, 6 days a week, will be unbearable to residences living close to the area.

7. After the barge berth is in operation, we expect noise and dust pollutions to continue as heavy equipment like cranes, dump trucks, front-end loaders, backhoes, bulldozers, and the likes will operate 13 hours a day at and near the barge berth, staging and laydown area, according to the report, so proper selection of site is extremely important.

8. Noted that an onsite concrete batch plant was proposed which will be noisy and dusty. It is not unusual to have the batch plant operating long hours and after hours when there are major concrete pours, which will further impact the health and safety of the residences in the surrounding areas. We request that the concrete batch plant to be located as far away as possible from the residential areas.

9. We are extremely concerned that these so called temporary barge berths will become permanent after 10 years of construction, as the new facilities will benefit from an existing barge terminal for maintenance works and future expansions. There is no guarantee that this will not happen.

10. We strongly urge the Metro Vancouver Liquid Waste Management Committee to select Location 1 for the proposed Barge Berths based on the following:

Barge Berth at:

Location 2, East end of Iona Island (across from Deering Island)

Location 3, MacDonald Slough (most pros and cons apply similar to Location 1)

Pros:

1. Logical spot for proximity to construction eastern staging and laydown area, likely can save cost and schedule

Cons:

1. Hazardous and detrimental to near term and long term health and safety to nearby residential areas due to air, dust, light, noise pollutions

2. Create congestions to marine traffic at this already narrow passage, hence safety concerns. There were already accidents over the years that tug boats towing log piles and barges hit the shores of Deering Island. If any barge that carries flammable or hazardous materials has an accident at this bottleneck, it may catch fire and may have explosions close to the houses at Deering Island. Should there be a major accident on the water, it will block the frequently used passage for commercial marine and recreational traffic, and the alternate route to go out to sea is via the South Arm of the Fraser, which is a long long way away.

3. The temporary barge berths have to be demolished when project is complete, which will add to the capital cost

Barge Berth at:

Location 1, West end of Iona Island

Pros:

1. Away from residential areas which will greatly eliminate concerns of the nearby residents
2. Closer to the west staging and laydown area identified in the report
3. There is already a road linking this location and the existing plant area
4. Barges take less time to travel up river when coming from the downstream from the sea
5. Barges have more room to turn around as this location provides wider channel
6. There is a body of water across from this site for temporary mooring and staging of barges, which will take some pressure off for shortage of on land staging and laydown areas
7. The temporary facilities can be left for permanent use, which save costs in the future if required

Cons:

1. A little further away from the construction site, which may have cost, schedule, and environmental impacts. As a suggestion, which your engineering consultant may have considered, is one or more overland (or overwater) conveyors can be built to transport materials from Location 1 to the staging, laydown area, and the construction site, which could minimize environmental, wildlife, and park goers concerns by bypassing the sensitive and congested areas, and reducing trucks traffic.

We would greatly appreciate before a selection is finalized so we can have a chance to review and comment. Trust that a right choice and decision will be made to address the health and safety concerns of the nearby residences.



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