PROJECT AND ENVIRONMENTAL REVIEW REPORT

PER NO. 11-101-1
TWO SLIP SHARED RECREATIONAL DOCK

Prepared for:
Director, Environmental Programs

November 21, 2017

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PORT of vancouver	**VANCOUVER FRASER PORT AUTHORITY PROJECT AND ENVIRONMENTAL REVIEW REPORT**
PER No.:	**11-101-1**
Tenant:	**Untenanted**
Project:	**Two Slip Shared Recreational Dock**
Project Location	**3707 Dollarton Highway, North Vancouver**
VFPA SID No.:	**DNV085**
Land Use Designation:	**Port Water**
Applicant(s):	**Nick Ebrahim and Horace He**
Applicant Address:	**3707 Dollarton Highway, North Vancouver** **3715 Dollarton Highway, North Vancouver**
Category of Review:	**C**
Recommendation:	**That PER No. 11-101-1 for Two Slip Shared Recreational Dock be denied.**

1 INTRODUCTION

The Vancouver Fraser Port Authority (VFPA), a federal port authority, manages lands under the purview of the *Canada Marine Act*, which imparts responsibilities for environmental protection. VFPA accordingly conducts project and environmental reviews of works and activities undertaken on these lands to ensure that the works and activities will not likely cause significant adverse environmental effects. This project and environmental review report documents VFPA's project and environmental review of PER No. 11-101-1: Two Slip Shared Recreational Dock (the Project) proposed by Nick Ebrahim and Horace He (the Applicant).

This project and environmental review was carried out to address VFPA's responsibilities under the *Canada Marine Act*, and to meet the requirements of the *Canadian Environmental Assessment Act, 2012* (CEAA 2012), as applicable. The proposed Project is not a CEAA 2012 "designated project" and an environmental assessment as described in CEAA 2012 is not required. However, VFPA authorization is required for the proposed Project to proceed and in such circumstances, where applicable, Section 67 of CEAA 2012 requires federal authorities to assure themselves that projects will not likely cause significant adverse environmental effects. The project and environmental review process is designed to provide that assurance. In addition, VFPA considers other interests, impacts and mitigations through the project and environmental review.

The project and environmental review considered the application along with supporting studies, assessments and consultations carried out or commissioned by the Applicant, as well as other information provided by the Applicant. In addition, this project and environmental review considered other information available to VFPA and other consultations carried out by VFPA. A full list of information sources germane to the review is provided in Appendix B.

This project and environmental review report is NOT a project authorization. This project and environmental review report summarizes the review outcome, and provides the basis for approval or denial. Should the project be approved, the report is accompanied by a project permit (the Permit) and the conclusions described in this report require compliance with the conditions in the Permit.

2 PROJECT DESCRIPTION

The Applicant proposes to install a two slip shared recreational dock. It is anticipated the boats that will moor at the facility will be approximately 50 feet long.

The proposed location is in an environmentally sensitive area and approximately 30 meters from a First Nation reserve. It is also located adjacent to known archaeological site DhRr-8, the boundaries of which were expanded in 2012 to encompass the proposed Project location.

Proposed Works
The proposed two slip shared recreational dock would include the installation of the following components:

- 39.6 m long x 1.5 m wide aluminum approachway pier
- 18.2 m long x 1.2 m wide aluminum gangway ramp, installed in-line with the pier
- 18.2 m long x 2.4 m wide timber docking float, installed in-line with pier and gangway
- two timber moorage float fingers, installed perpendicular to the float, with the following dimensions:
    - 12.2 m x 2.4 m
    - 12.1 m x 1.5 m
- eleven steel pipe piles:
    - six 325 mm (12") piles to support the approachway and gangway, and
    - five 406 mm (16") piles to anchor the float

The proposed dock would be manufactured offsite, and would be delivered to the site by barge and tow boat, where it would be assembled using hand tools and pile driving equipment. The proposed piles would be installed using a vibratory or impact hammer from a floating rig. In the event that the two shallower intertidal pile locations do not have sufficient water depth to install from a floating rig, the vibratory or impact hammer will be delivered to the foreshore by a barge during a low tide of sufficient duration to install the piles while working in the dry.

The anticipated construction timeframe onsite is expected to take approximately one week.

3 VANCOUVER FRASER PORT AUTHORITY INTERNAL REVIEWS

The following VFPA departments have reviewed the application and have the following project considerations.

3.1 Planning

Planning has reviewed the application. The proposal meets Planning's requirements, based on the primary considerations of the land use designation and current land use policies.

3.1.1 Land Use Designation

The proposed two slip shared recreational dock use is Boat Moorage and thus, is a conditional use under the designation of "Port Water" in VFPA's Land Use Plan.

3.1.2 Existing Land Use Policies

The proposed Project predates the current moratorium on shared recreational docks, which has been in place since 2013. While the VFPA is not currently accepting applications for recreational docks in Burrard Inlet, the port authority agreed to review this project permit application because

the original permit application was received in 2011. Since 2011, the District of North Vancouver has undertaken an extended development review process related to the upland portion of the project. Because the upland development review process did not proceed as planned, the Applicant amended the proposal to VFPA from the original seven slip shared dock (submitted to VFPA in 2011) to the currently proposed two slip recreational dock.

In 2011, when the original permit application was received, VFPA reviewed recreational dock applications in accordance with the 2010 "VFPA Guidelines for Sustainable Recreational Waterfront Development". This application generally conforms to the 2010 VFPA Guidelines for Sustainable Recreational Waterfront Development, except that the proposed dock would exceed the maximum float area guideline (300 square foot per user).

3.2 Engineering

Engineering has reviewed the application and determined that the proposal meets its requirements.

VFPA notes that the engineering design of the recreational dock has only been completed to the port authority's jurisdictional border, and it does not demonstrate how the proposed dock will be connected to shore, which is in the District of North Vancouver. The Applicant would be required to work directly with the District of North Vancouver to design project components outside of VFPA jurisdiction.

3.3 Marine Operations

Marine Operations has reviewed the application and determined that the proposal meets its requirements.

The proposed dock extends the same length or less into the water as nearby docks (within 100 meters of the location), would be located more than 10 meters from adjacent recreational docks and other marine structures, and would be at least 30 meters away from the navigational channel.

The proposed dock structure has been designed to ensure sufficient clearance below the floating structure to prevent grounding, and the proposed recreational vessels that will use the facility would maintain the minimum 10% underkeel clearance.

4 STAKEHOLDER CONSULTATION

The proposed Project was assessed to have potential impacts to stakeholders and the local community and consultation activities were determined to be required. Section 4 describes the stakeholder and public consultation activities undertaken by the Applicant and VFPA as part of the project and environmental review.

4.1 Municipal Consultation

The proposed Project was assessed to have potential impacts to municipal interests. A referral letter was sent to the District of North Vancouver on July 7, 2017 notifying them of the proposed Project.

The District of North Vancouver responded with comments on the proposed Project. Below is a table summarizing the comments received and how they were considered as part of the project and environmental review.

Issue	Mitigations	Rationale
Expired upland easement agreement and change in upland ownership	The Applicant is working directly with the District of North Vancouver and the new upland owner on this item. Once the issues are resolved, a copy of the easement agreement, and a copy of the design for the works outside of VFPA jurisdiction would be provided to the VFPA.	While it is outside of VFPA jurisdiction, it is important for the port authority to be assured that the legal crossing agreements in the upland are in place.

4.2 Federal and Provincial Agency Consultation

The proposed Project was assessed to be of potential interest to the following Federal agencies:

- Transport Canada
- Fisheries and Oceans Canada

Transport Canada is reviewing the application through their responsibilities under the *Navigation Protection Act*. VFPA and Transport Canada agreed to coordinate their reviews of this application, and have been sharing information through the project and environmental review process.

The Applicant submitted a request for review to Fisheries and Oceans Canada on November 20, 2016. Fisheries and Oceans Canada reviewed the proposal (file 16-HPAC-01211) to determine if it is likely to result in serious harm to fish. Fisheries and Oceans Canada concluded there is no serious harm to fish, provided that all of the mitigation measures described in the application are applied.

4.3 Upland Owner Consultation

The owner of the dock must also be the owner or tenant of the upland property. The proposed Project was assessed by Real Estate. Based on this review, VFPA determined that ownership changes on the upland property had not been disclosed to VFPA within the permit application, and the Applicant (Mr. Ebrahim) was no longer the sole upland waterfront owner nor is he the owner of the lot immediately fronting the proposed Project location.

Consequently, VFPA required a letter from the current upland owner providing consent for the Project. The current upland owner, Mr. He, provided this letter on June 14, 2017, and was added as an Applicant.

4.4 North Shore Waterfront Liaison Committee

The proposed Project was assessed by Project Communications and Planning to not be of high interest to the North Shore Waterfront Liaison Committee.

5 PUBLIC CONSULTATION

The proposed Project was assessed by Project Communications to have minimal or no potential impacts to community interests upon completion of the Project. Therefore public consultation was not required to be conducted by the Applicant during the permit review.

The proposed Project was publically posted on VFPA's website during the application review period. No public comments or inquiries related to the proposed Project were received during this time.

6 ABORIGINAL CONSULTATION

Scope of Consultation

The proposed Project falls within the asserted traditional territory of the following Aboriginal groups:

- Tsleil-Waututh Nation
- Squamish Nation
- Musqueam Indian Band
- Sto:lo Nation, as represented by the People of the River Referrals Office (PRRO)
    - Sto:lo Tribal Council
    - Sto:lo Nation
- Hul'qumi'num Treaty Group:
    - Cowichan Tribes
    - Halalt First Nation
    - Stz'uminus First Nation
    - Penelakut Tribe
    - Lyackson First Nation
    - Lake Cowichan First Nation

All Aboriginal groups listed above were consulted on the proposed Project.

Overview of Consultation Activities

VFPA first communicated with Aboriginal groups about a proposed recreational dock in this location in February 2012, in reference to a preceding application from the Applicant. In October 2012, VFPA formally referred that Project for Aboriginal consultation, but the application was put on hold by the Applicant before the technical and environmental review and consultation efforts could conclude.

In March 2016, VFPA received an updated inquiry for the proposed Project, reducing the original seven slip proposal to two slips. In December 2016, VFPA deemed the application complete and proceeded to the technical review.

Upon receipt of a complete application, VFPA reviewed the proposed Project, and determined that the works may have the potential to adversely impact Aboriginal rights. On June 29, 2017, VFPA sent a referral package to Aboriginal groups that included the following:

- Project Application Form
- Engineering Drawings
- Archaeological Impact Assessment (2012)
- Archaeological Review (2016)
- Subtidal Surveys (2008, 2015)

- Site Overview Map
- Location Map
- Construction and Environmental Management Plan
- Environmental Effects Determination
- Environmental Noise Assessment
- Biota Drawing and Map
- Substrate Drawing and Map

Comments were requested from Aboriginal groups within 30 business days and by August 11, 2017. On July 24, 2017, VFPA sent a reminder email requesting that Aboriginal groups provide initial comments by August 11, 2017.

Aboriginal groups sent comments regarding the proposed Project by letter, phone call and email. VFPA responded to all comments from Aboriginal groups via email, phone call, face-to-face meeting and letter.

Issues Summary Table

Issue	VFPA Considerations	Action Required
Current use of lands and resources for traditional purposes		
Impacts to an ongoing contemporary cultural and spiritual use area Impacts to ability to practice contemporary cultural and spiritual practices	A concern was raised, through consultation with Aboriginal groups, that it is unacceptable to threaten the privacy required and respect for cultural activities undertaken around the proposed Project area. Should the proposed Project proceed in this location, the ability to engage in the right to practice a cultural activity, in the preferred manner and at the preferred time could cease for the duration of the existence and use of the proposed recreational dock. The eventual removal of the dock, at the conclusion of tenure or for some other reason, could result in the ability to practice the right again in the future. For more information, see Sections 7.2, Environmental Effects Summary.	Proceeding with this Project will result in a potential infringement on an Aboriginal right to practice cultural and spiritual activities. Additionally, the proposed Project would also represent an adverse impact on the environment as considered under subsection 5(1)(c) of the CEAA 2012 under Current Use of Lands and Resources for Traditional Purposes.
Potential limitation on Aboriginal access to fisheries and other resources	The dock is relatively small in size and is unlikely to result in a limitation on access to Aboriginal fisheries or other resources.	None

Issue	VFPA Considerations	Action Required
Impacts to fish, wildlife and marine vegetation, including impacts to sensitive eelgrass beds	The Applicant has committed to implementing a suite of mitigations within their Construction Environmental Management Plan to reduce potential impacts to the eelgrass bed and the surrounding environment.	VFPA requires a fish habitat compensation plan to enhance eelgrass and forage fish habitat. Upon receipt, VFPA will provide Aboriginal groups with adequate time to review and comment on the plan.
Potential for trespass on reserve lands	Concern that the Project would increase the potential for trespass onto Indian Reserve land, disrupting the privacy of residents.	VFPA will explore signage and fencing options to limit the potential for trespass.
Cumulative effects – increased industrialization in Burrard Inlet has prevented the safe harvesting of traditional foods	Formally assessing cumulative effects is not a requirement for projects reviewed under Section 67 of the CEAA, 2012. However, VFPA understands that cumulative effects on the environment are important to Aboriginal groups, and the public. VFPA currently takes into account cumulative effects by considering existing projects in the assessment, particularly for air and noise emissions, and including biophysical studies with a focus on species at risk and declining species which have been most affected by cumulative effects from past development.	VFPA continues to seek opportunities to work with Aboriginal groups and others to improve environmental management practices and to provide net environmental benefits through various initiatives. VFPA wishes to continue identifying shared interests and to focus on collaborative projects with Aboriginal groups that will result in net environmental gains within Burrard Inlet.
Potential for hazardous materials spills during construction and operations	Transport Canada's *Vessel Pollution and Dangerous Chemical Regulations* establish the requirements for recreational vessel discharges, and include restrictions on sewage and greywater discharge. The recreational vessels that would moor at this dock are not authorized to discharge sewage or greywater while at berth, and would be required to use a pump-out facility.	None

Issue	VFPA Considerations	Action Required
Increase in marine traffic resulting in increased emissions and increased potential for marine-traffic-wildlife interactions	The recreational vessels that will operate from and moor at this facility will also result in a release of air emissions. Mitigation measures described in the Construction Environmental Management Plan will be implemented during the work. With the proposed mitigation measures in place, residual adverse effects of the Project on air quality are predicted to be not significant. The increase in recreational vessels is not expected to affect marine mammals.	VFPA would require the Applicant to adhere to the Construction and Environmental Management Plan.
Increased noise and lighting	During construction, there will be noise during pile driving activities. This is a temporary, short-term duration activity, and is anticipated to take approximately two days and occur during daytime hours. Regular use of the dock by recreational users would generate noise from the propellers and wake created. There are no lights to be installed in conjunction with the Project.	None
Increased potential for introduction of invasive species	VFPA is of the opinion that recreational vessels moored at this site are unlikely to introduce invasive species to Burrard Inlet.	None

Issue	VFPA Considerations	Action Required
Physical and cultural heritage, and any structure, site or thing that is of historical, archaeological, paleontological or architectural significance		
Potential impacts to archaeological resources: • Project area has high level of cultural heritage significance, including potential for ancestral remains • Project location: proximity to ancestral village site of *Whey-ah-Wichen* and adjacent to Burrard Inlet Indian Reserve 3. • Lack of appropriate depth testing during archaeological investigation • Lack of archaeological monitoring for project works	VFPA understands this area to be of significant cultural, historical and heritage importance to Aboriginal groups. VFPA understands that the boundaries of registered archaeological site DhRr-008 were expanded to encompass the project site, based on the archaeological findings during the 2012 site investigation. The Applicant's report found that the Project would have low potential to impact archaeological resources. Aboriginal groups disagreed and stated that culturally-sensitive materials have been uncovered during previous works in the area.	VFPA would be willing to explore additional archaeological studies and monitoring with Aboriginal groups.
Additional Issues		
Review of this project despite VFPA's moratorium on recreational docks	Over the past ten years, VFPA has twice placed a moratorium on applications for recreational docks. During the period between 2011 and 2013 when VFPA was accepting applications, the application for this proposed Project was submitted. Since then, this particular permit application has remained under review. Until the moratorium is lifted, VFPA will not process new applications for recreational docks in Burrard Inlet. In conjunction with any updates to VFPA's policy on recreational docks, appropriate consultation will be undertaken with Aboriginal groups.	None

Considerations

VFPA has engaged honorably and in good faith in Aboriginal consultation with potentially affected Aboriginal groups to support and inform the project and environmental review of the proposed Project, PP 11-101-1.

Due to the potential infringement on the right of Aboriginal groups to practice cultural activities, the adverse residual impact on the current use of the area for traditional purposes, and the fact no suitable mitigation measure is available, the Aboriginal consultation process for PP 11-101-1 has concluded that, should the Project proceed, it will result in a significant residual adverse effect under subsection 5(1)(c) of the CEAA 2012, Current Use of Lands and Resources for Traditional Purposes.

7 ENVIRONMENTAL REVIEW

To fulfill its responsibilities under the *Canada Marine Act* and CEAA 2012, VFPA must make a determination on the potential environmental effects of a proposed project on VFPA managed lands and waters prior to authorizing those works to proceed. To make that determination, VFPA considers the residual adverse effects of the Project, that is, the effects after mitigation measures have been taken into account.

This section of the project and environmental review report summarizes the environmental review conducted for the Project, and provides the environmental review decision in Section 7.3. The environmental review also considered the information provided in the previous sections of this report.

7.1 Scope of Environmental Review

The environmental review includes consideration of the potential environmental effects of the proposed Project, taking into account mitigation measures to avoid or reduce those effects. This review considered the Project components and physical activities described in Section 2.

The temporal scope of the review includes Project construction and operation.

The environmental review considered potential adverse environmental and social effects of the Project on 14 environmental components (e.g., species with special status, aquatic species and their habitat, recreational interests, etc.) and from accidents and malfunctions. These environmental components are aspects of the biophysical and socio-economic environment considered to have ecological, economic, social, cultural, archaeological, or historical importance.

The environmental components assessed by the VFPA are presented in Section 7.2 and include the environmental effects listed in section 5(1) and 5(2) of CEAA 2012.

Section 7.2 summarizes the results of the environmental review.

7.2 Environmental Effects Summary

The following table summarizes the potential environmental effects the Project could have on the identified environmental components.

Environmental Component and Rationale for Selection	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Air quality Assessed as required under subsection 5(1) and 5(2) of CEAA 2012	■	□	During construction, there may be a temporary release of air emissions from motorized equipment. Mitigation measures described in the Construction Environmental Management Plan will be implemented during the work. The recreational vessels that will operate from and moor at this facility will also result in a release of air emissions. With the proposed mitigation measures in place, residual adverse effects of the Project on air quality are predicted to be not significant.	□	■
Lighting	□	■	There are no lights to be installed.	□	■
Noise Assessed as required under subsection 5(1) and 5(2) of CEAA 2012	■	□	During construction, there will be noise during pile driving activities. This is a temporary, short-term duration activity, and is anticipated to take approximately two days and occur during daytime hours. Residual adverse effects of the Project on noise are predicted to be not significant.	□	■
Soils	□	■	The Project is not expected to affect soils.	□	■
Sediments Assessed as required under subsection 5(1) and 5(2) of CEAA 2012	■	□	The Project is not expected to affect sediment quality. The floats are located in -5.5 to -6.5 m CD. At low tide, there will be a 5.5 m clearance, sufficient to prevent float and vessel grounding, and seabed disturbance caused by vessel propeller wash. Should the piles be installed at low tide from machinery operating on the foreshore, the temporary construction-related effects of the pile installation machinery will be mitigated by protecting the work area with plywood sheets or swamp pads (distributing the weight of the equipment and reducing potential effects on sediment), restricting the operation of the pile installation machinery to the protected area, and using a biodegradable oil and lubricant. With proposed mitigation measures in place, the residual effects of the Project on sediments, if they were to occur, are predicted to be not significant.	□	■

Environmental Component and Rationale for Selection	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Ground water	☐	■	The Project will not affect groundwater.	☐	■
Surface water and water bodies Assessed as required under subsection 5(1) and 5(2) of CEAA 2012	■	☐	Transport Canada's *Vessel Pollution and Dangerous Chemical Regulations* establish the requirements for recreational vessel discharges, and include restrictions on sewage and greywater discharge. The recreational vessels that would moor at this dock are not authorized to discharge sewage or greywater while at berth, and would be required to use a pump-out facility. The marine floats would be constructed using enclosed polyurethane floatation, and creosote treated timber, with above water elements being salt-treated timber. Creosote treated timber has the potential to leach low levels of contaminants into the marine environment over time. As such, to reduce potential adverse effects on surface water and water bodies, VFPA encouraged the applicant to consider alternatives to treated timber. With mitigation measures in place, the effect of the Project on surface water is predicted to be not significant.	☐	■
Species / habitat with special status	☐	■	The Project is not expected to affect species or habitats with special status, including federally listed species at risk or critical habitat.	☐	■
Terrestrial resources (e.g., vegetation, wildlife, etc.) Assessed as required under subsection 5(1) and 5(2) of CEAA 2012 Assessed under section 79 of the Species at Risk Act, as applicable	■	☐	A small area (approximately 4 m^2) of dune grass along the shoreline may be impacted by the pier alignment. The pier is comprised of aluminum with open grating to minimize potential effects of shading. Residual adverse effects of the Project on terrestrial resources are predicted to be not significant.	☐	■
Wetlands	☐	■	The Project is not expected to affect wetland resources.	☐	■

Environmental Component and Rationale for Selection	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Aquatic resources (e.g., aquatic plants, fish and fish habitat, waterbirds, marine mammals, etc.) Assessed as required under subsection 5(1) of CEAA 2012 Assessed under section 79 of the Species at Risk Act, as applicable	■	☐	The dock would be installed over the intertidal foreshore and subtidal seabed. The marine organisms identified in a biophysical survey include barnacles, shore crabs, amphipods, rockweed, Turkish towel seaweed, *ulva*, sea stars, clams, laminarian seaweed and eelgrass. Barnacles, cockles, butter clams and horse clams could be impacted by the pile installation. The Project has been designed to minimize potential impacts on aquatic resources. This includes installing an aluminum ramp with open grates for the approachway and gangway over intertidal habitat to reduce potential shading from the 82.5 m2 pier and gangway. An eelgrass bed runs parallel to shore between 0.1 and -1.5 m CD, with the greatest density of eelgrass shoots (averaging 25 shoots/m2) along the shallow, inshore edge. The floats will be anchored at -5 to -6 m CD, preventing direct impacts to the eelgrass bed. There are two piles that will likely be installed within the edge of the identified eelgrass bed. The marine floats would be constructed using enclosed polyurethane floatation, and creosote treated timber, with above water elements being salt-treated timber. The floats would be approximately 91 m2, and the shading may affect localized seaweed growth. The Applicant has committed to implementing a suite of mitigations within their Construction Environmental Management Plan to reduce potential impacts to the eelgrass bed and the surrounding environment. In addition, a fish habitat compensation plan would be required to enhance eelgrass and forage fish habitat. With the proposed mitigation measures and required habitat enhancement in place, residual adverse effects of the Project on aquatic resources are predicted to be not significant.	☐	■

Environmental Component and Rationale for Selection	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Health and socio-economic conditions Assessed as required under subsection 5(1) and 5(2) of CEAA 2012	☐	■	Based on the very low magnitude of residual effects on air and noise, the Project is not expected to cause adverse effects on health of people, including Aboriginal people. The Project is not expected to result in adverse effects on socio-economic conditions because public access to the foreshore would be maintained.	☐	■
Archaeological, physical, and cultural heritage resources Assessed as required under subsection 5(1) and 5(2) of CEAA 2012	■	☐	The Project has the potential to impact archaeological, physical and cultural heritage resources. The proposed Project is located directly adjacent to known archaeological site DhRr-008. During the original archaeological investigation for the Project, archaeological material was found and resulted in the expansion of the registered archaeological site to its current boundaries. Aboriginal groups have identified the site as highly important from an archaeological perspective, as it lies between the ancestral village of Whey-Ah-Wichen and the current Tsleil-Waututh Nation Indian Reserve 3 (Burrard Inlet). The Applicant's two archaeological investigations (completed in 2012 and 2016) concluded that the Project's potential impact on archaeological resources was low and did not recommend any additional mitigation measures. Aboriginal groups disagreed with this view and underscored that the area is of significant cultural, historical and archaeological significance. In addition, VFPA would work with Aboriginal groups to undertake additional investigations, and develop and implement additional mitigations, including archaeological monitoring, as required. With the proposed mitigation measures and additional investigations and monitoring in place, residual adverse effects of the Project on archaeological, physical, and cultural heritage resources are predicted to be not significant.	☐	■

Environmental Component and Rationale for Selection	Potential Adverse Effects?		Overview of Potential Adverse Effects, Mitigation Measures, and Residual Adverse Effects	Significant Residual Adverse Effects?	
	Yes	No		Yes	No
Current use of lands and resources for traditional purposes by Aboriginal peoples Assessed as required under subsection 5(1) of CEAA 2012	■	☐	There are potential effects from the Project on the current use of lands and resources for traditional purposes since the Project would create an impact to a known area of cultural and spiritual use, and would affect the cultural and spiritual use of the area. The dock would result in an increase in recreational users and could potentially limit the privacy of the area, which is integral to the known cultural and spiritual use of the area. As well, increased noise and visual impacts could impact both the area of importance as well as the use of the area for cultural and spiritual purposes. Should the proposed Project proceed there is the potential for Aboriginal people to abandon engaging in the cultural practice in this area altogether. VFPA and Aboriginal groups were not able to identify any technically or economically feasible measures that could effectively mitigate the infringement or the adverse effect on the current use of lands and resources for traditional purposes. Due to the magnitude, duration, and frequency of the effect of the Project, and the lack of technically or economically feasible mitigation measures that could avoid or reduce the effect, the residual adverse effect of the Project on the current use of lands and resources for traditional purposes is predicted to be significant.	■	☐
Accidents and malfunctions Assessed as required by the *Canada Marine Act*	■	☐	There is potential for adverse effects on surface water from accidental equipment leaks or spills. Mitigation measures will be in place to reduce potential for adverse, project-related effects due to accidents, by implementing the measures outlined in the Construction Environmental Management Plan. With mitigation measures in place, the effect of an accident or malfunction on the environment, if it were to occur, is predicted to be not significant.	☐	■

Residual adverse effects (i.e., effects that remain with mitigation in place) were identified for the following environmental components:

- Air quality;
- Noise;
- Sediments
- Surface water and water bodies;
- Terrestrial resources
- Aquatic resources;
- Archaeological, physical, and cultural heritage resources; and
- Current use of lands and resources for traditional purposes by Aboriginal peoples.

Overall, the residual adverse effects of the Project on all of the environmental components are characterized as:

- High in magnitude due to impacts on the current use of lands and resources for traditional purposes by Aboriginal peoples and that the cultural and spiritual use of the area may be eliminated;
- Local in geographic extent;
- Long-term in duration because the recreational dock would likely be in place for decades and would result in ongoing operational effects on air quality, surface water and water bodies, terrestrial resources, and archaeological, physical and cultural heritage resources. Furthermore the Project may prevent the cultural and spiritual use from occurring in this location;
- Continuous in frequency because the recreational dock would be present, and likely used, on a daily basis, resulting in ongoing effects on air quality and surface water. Furthermore, the cultural and spiritual use, which typically occurs on a daily basis, would be prevented from occurring throughout the life of the Project; and
- Most of the residual adverse effects of the Project would be reversible once the Project is decommissioned, but as the Project is unlikely to be decommissioned in the foreseeable future, it may be irreversible if the cultural and spiritual use ceases to occur and the practice is lost over time.

In conclusion, based on the characterization above, the residual adverse effects of the Project on the current use of lands and resources for traditional purposes by Aboriginal peoples are predicted to be significant. This is because the effects are predicted to be high in magnitude, long term in duration, continuous/daily in frequency, and may be irreversible if the cultural and spiritual use ceases to occur and the practice is lost over time.

Taking into consideration all of the above, and due to the lack of measures to mitigate the potential effect of the project on the current use of lands and resources for traditional purposes, the residual adverse effects from the Project are predicted to be significant.

7.3 Environmental Review Decision

In completing the environmental review, VFPA has reviewed and taken into account relevant information available on the proposed Project, has considered the information, proposed mitigations provided by the Applicant, and additional technically and economically feasible mitigation measures. In accordance with section 67 of CEAA 2012, VFPA concludes that even with the implementation of proposed mitigation measures, the Project is likely to cause significant adverse environmental effects.

Original Copy Signed	November 21, 2017
ANDREA MACLEOD **MANAGER, ENVIRONMENTAL PROGRAMS**	**DATE OF DECISION**

8 CONCLUSION

In completing the project and environmental review, VFPA concludes that with the implementation of proposed mitigation measures, the Project is likely to cause significant adverse environmental effects. There is no technically or economically feasible measure to mitigate the residual adverse effects on the current use of lands and resources for traditional purposes. In accordance with section 67 of CEAA 2012, VFPA concludes that this Project on federal lands and waters must not be carried out.

PROJECT AND ENVIRONMENTAL REVIEW DECISION

Project Permit PER No. 11-101-1 is denied by:

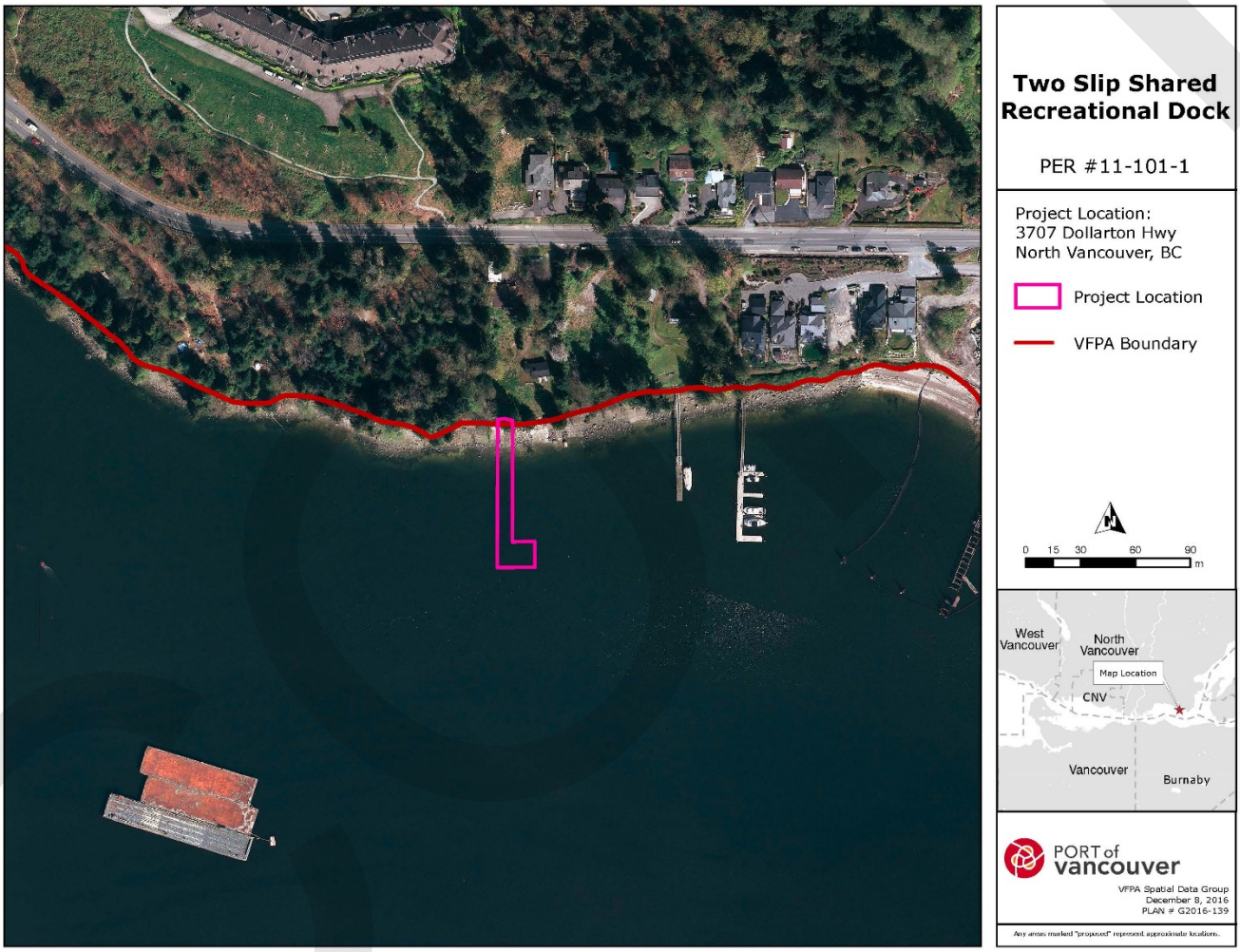
Original Copy Signed	November 22, 2017
CARRIE BROWN **DIRECTOR, ENVIRONMENTAL PROGRAMS**	**DATE OF DECISION**

CONTACT INFORMATION

Vancouver Fraser Port Authority (VFPA)
100 The Pointe, 999 Canada Place
Vancouver BC V6C 3T4 Canada

Project & Environmental Review
Tel.: 604-665-9047
Fax: 1-866-284-4271
Email: PER@portvancouver.com
Website: www.portvancouver.com

APPENDIX A
Location Plan



Canada

APPENDIX B
List of Information Sources

VFPA has relied on the following sources of information in the project and environmental review of the Project:

- Application form submitted by Randy Hoffman (Ocean-Tech) on behalf of Nick Ebrahim on March 18, 2016.
- All Project correspondence from November 20, 2016 to October 31, 2017.
- All plans and drawings:
    - "Two Berth Residential Dock Location Plan", DWG No. 5706-D-01.1, prepared by Balanced Environmental, August 18, 2016.
    - "Two Berth Residential Dock Substrates", DWG No. 5706-D-02.1, prepared by Balanced Environmental, September 16, 2016.
    - "Two Berth Residential Dock Biota", DWG No. 5706-D-03.1, prepared by Balanced Environmental, September 16, 2016.
    - "Dollarton Estates", Engineering Drawing Sheets 1 to 17, prepared by KLA Engineering Ltd., September 2016.
- "A Subtidal Marine Plant Community Survey Seaward of 3707 Dollarton Highway, North Vancouver, April 2015", prepared by Douglas Swanston, Seacology, in April 2015.
- "Eelgrass Survey Seaward of 3707 Dollarton Highway, North Vancouver, February 2008", prepared by Douglas Swanston, Seacology, and Cynthia Durance, Precision Identification, in February 2008.
- "Phase 1 Environmental Site Investigation: 3707, 3715, and 3739 Dollarton Highway North Vancouver, BC", prepared by Kathleen Minehan and Duncan Macdonald, Pottinger Gaherty Environmental Consultants Ltd., in January 2008.
- Letter titled "Addendum to January 2008 Phase 1 Environmental Site Investigation, 3707, 3715, and 3739 Dollarton Highway, North Vancouver, BC", prepared by Pottinger Gaherty Environmental Consultants Ltd., July 3, 2014.
- "Site Alteration Permit 2012-0161: Archaeological Testing and Surface Examination at 3707 Dollarton Highway, North Vancouver Associated with the Installation of a New Dock within the Boundaries of Site DhRr-0008, Final Permit Report", prepared by Jon Sheppard and Dave Hall, Arrowstone Archaeological Research and Consulting Limited., July 19, 2012.
- Letter titled "Archaeological Review of the Revised Proposed Dock Development at 3707 Dollarton Highway, North Vancouver within the Boundaries of Site DhRr-0008", prepared by Dave Hall, Arrowstone Archaeological Research and Consulting Ltd., November 9, 2016.
- "Environmental Effect Determination: Dollarton Waterfront Estates & Development Inc., Proposed Two Slip Shared Recreational Dock, Burrard Inlet, North Vancouver, British Columbia", prepared by Balanced Environmental Services Inc., October 7, 2016.
- "Construction Environmental Management Plan: Dollarton Waterfront Estates & Development Inc., Proposed Two Slip Shared Recreational Dock, Burrard Inlet, North Vancouver, British Columbia", prepared by Balanced Environmental Services Inc., November 14, 2016.
- "Environmental Noise Assessment: Dollarton Waterfront Estates & Development Inc., Proposed Two Slip Shared Recreational Dock, Burrard Inlet, North Vancouver, British Columbia", prepared by Balanced Environmental Services Inc., November 2, 2016.
- Completed *Navigation Protection Act* (NPA) Notice of Works Form, prepared by Bruce A. Clark, Balanced Environmental Services Inc., November 1, 2016.
- Completed Request for Review Form to Fisheries and Oceans Canada, prepared by Bruce Clark, Balanced Environmental Services Inc., November 20, 2016.
- Letter titled "Implementation of mitigation measures to avoid and mitigate serious harm to fish (file: 16-HPAC-01211)", prepared by Brenda Rotinsky, Fisheries and Oceans Canada, no date.
- Letter from Horace He, owner of 3715 Dollarton Hwy., (no subject line), June 13, 2017.
- "Guidelines for Sustainable Recreational Waterfront Development", prepared by Port Metro Vancouver, 2010.
- "2015 Summary Report: Burrard Inlet-Indian Arm Eelgrass Mapping", prepared by SeaChange Marine Conservation Society and Tsleil-Waututh Nation, August 2015.

- Caltrans 2015. “Technical Guidance for the Assessment and Mitigation of the Hydroacoustic Effects of Pile Driving on Fish.” California Department of Transportation.
- NOOA 2015. “Guidance for Assessing the Effects of Anthropogenic Sound on Marine Mammal Hearing – Underwater Acoustic Threshold Levels for Onset of Permanent and Temporary Threshold Shifts.” National Oceanic and Atmospheric Administration.
- Therriault, T.W., McDiarmid A.N., Wulff W., Hay D.E., 2002. “Review of Surf Smelt biology and fisheries, with suggested management options for British Columbia.” CSAS 2002/115.