

As a shipbuilding, ship repair and marine transportation company, marine habitat protection is a priority for everyone at Seaspan. Marine wildlife and habitat protection is strictly controlled by Fisheries and Oceans Canada (DFO) and Seaspan follows all regulatory requirements.

### Proposed Project Habitat Assessment

In advance of applying for port authority permit approval for the proposed water lot project, existing studies from Burrard Inlet were reviewed and a dive-based habitat survey was conducted to assess the potential impacts of the project on the marine environment in the water lot area.

The **habitat assessment** concluded that the seabed in this area does not support marine vegetation (e.g., seaweed or eelgrass) because the sediment is composed of silt (which cannot support seaweeds) and the water is too deep to support eelgrass.

Specifically, the studies noted that fish habitat-forming algae, such as kelp, cannot grow on the seabed in this area because the sediment is too fine. Kelps need hard structures like cobble and rocks to grow on. The proposed structures will be installed in deeper waters, which are also not suitable for kelp or marine vegetation like eelgrass that might do well with fine sediments. Marine vegetation needs sunlight to photosynthesize; the seabed in this area is too deep for sufficient sunlight penetration through the water.

Organisms that were observed during the habitat assessment included sea anemones, sea stars, sea slugs, small fish, and crabs. These organisms will not be affected by shading from the new structures because they do not rely on sunlight for food.

The environmental consultant also noted that should the proposed project be approved, the addition of six piles would provide a surface for marine invertebrates (e.g., mussels, anemones) in a location where there is currently no hard surface to attach to, resulting in more marine habitat for these organisms.

This pre-work formed the basis of a Project Review document, which was submitted to DFO – a requirement for marine-based activities, such as pile driving. DFO agreed with the environmental consultant (Hatfield Consultants) who prepared the Project Review document, that, with mitigations in place for pile driving, negative effects of construction or operations on marine habitat are unlikely with the implementation of proposed mitigation measures.

### Habitat Enhancement

Along with community and First Nation partners and advisors, Seaspan has helped implement several habitat restoration projects in the Mackay Creek estuary over the last 10 years. Seaspan is currently building marine fish habitat east of its Vancouver Shipyards site, near the mouth of Mackay Creek. Seaspan also supports habitat restoration efforts in Mosquito Creek and is an ongoing supporter of the Pacific Salmon Foundation and local hatcheries such as at Mossom Creek. Seaspan also supports efforts to improve water and sediment quality through projects like the removal of abandoned creosote piles, in partnership with the Tsleil-Waututh Nation.

## Protection During Construction

As noted in the Project Construction fact sheet, and as recommended by DFO in their Letter of Advice, a professional third-party Environmental Monitor will be on site throughout the construction period to oversee all environmental aspects of the project, including measuring underwater noise and observing wildlife use of the area to ensure wildlife are protected.

If marine mammals get too close to the construction works and a condition arises which potentially threatens their safety, work will be halted until the safety of the marine mammals can be demonstrated.

## Vancouver Drydock Water Usage and Treatment

As with all of Seaspan's operations, water usage and disposal are carefully controlled. Water does not drain into the ocean, rather, when vessels are in the drydocks, the water used to wash vessels and stormwater are collected into on-site holding tanks within the on-site wastewater treatment facility. From the holding tanks, water is treated to remove potential contaminants through a two-step process where particulates are first filtered out using sand then metals are filtered using activated charcoal. The water is then discharged to the sanitary sewer, as permitted by Metro Vancouver.

The proposed new drydocks would be connected to this existing wastewater treatment system.

## Safe Vessel Operations

All vessels operating in the harbour are responsible for understanding and operating within **Transport Canada regulations** and local requirements. Prior to a vessel arriving at Vancouver Drydock, vessel owners or their representative(s) are advised of safety policies and procedures, environment and waste management regulations, and docking requirements.

## Marine Spill Response

Seaspan takes every precaution to avoid spills into the marine environment and has well-established preventative maintenance programs, fuel and oil handling procedures, and robust spill response plans, equipment, and training at all our facilities and vessels. For more information, please see the Spill Prevention & Emergency Response and Project Construction Fact Sheets.