



Shipyard Modernization Project – Environmental and Regulatory Considerations

EMA of BC Workshop
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Seaspan

- A privately-owned Canadian company, with roots that trace back to 1886
- Primarily involved in marine transportation, fuel bunkering, ship repair and shipbuilding services
- Facilities and operations throughout the West Coast
- 2200+ employees and growing.....



Company Overview Marine Services

- Ship Docking and Escort
- Tug and Barge Services
- Fuel Bunkering Services
- Ferries



Company Overview - Shipyards

- Victoria Shipyards
- Vancouver Drydock
- Vancouver Shipyards



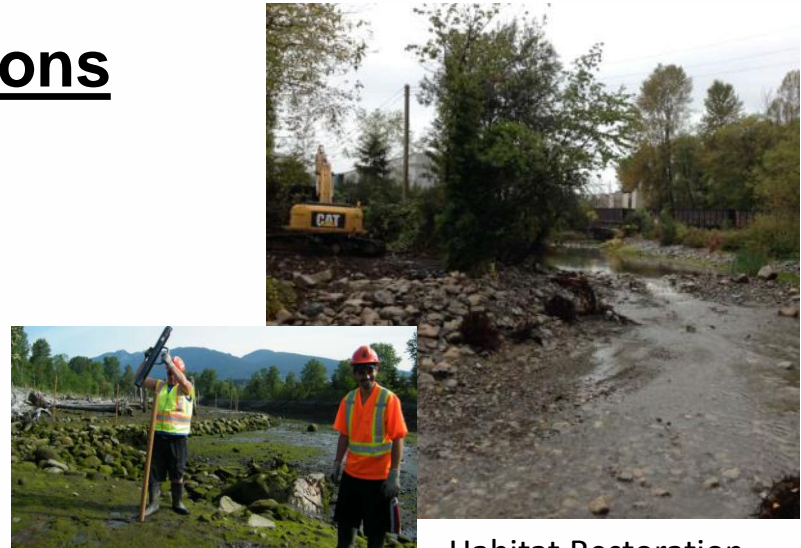
Infrastructure Requirements

- Docks and maintenance facilities
 - Maintenance dredging
 - Pile driving and replacement
 - Dock maintenance and shoreline projects
- Terminal maintenance and upgrades (Ferries)
- Seaspan shipyard upgrades and modernization

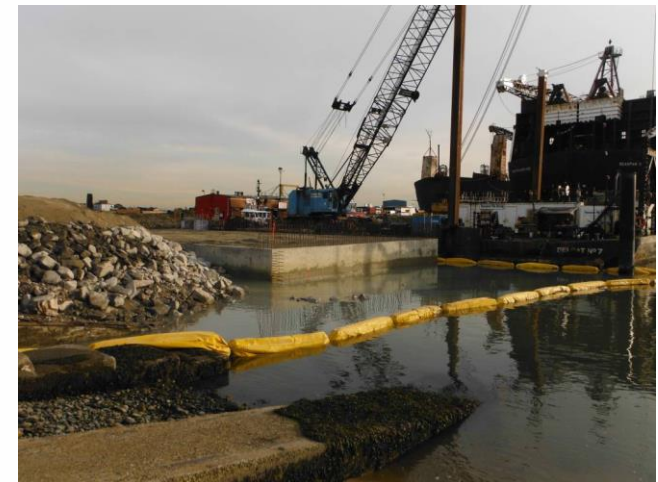


Foreshore Project Considerations

- Management of the evolving multi-jurisdictional regulatory requirements
 - Planning, approvals
 - Construction management
 - Habitat protection / compensation
 - Monitoring, reporting
- Understanding the needs and expectations of stakeholders including customers, partners, and communities.



Habitat Restoration



Pier Construction

In 2011, Seaspan was awarded the Non-Combat Package of the National Shipbuilding Procurement Strategy (NSPS)



Offshore Fisheries Science Vessels



Offshore Oceanographic Science Vessel



Joint Support Ships



Polar Ice Breakers

Since 2011, Vancouver Shipyards went from....



To the most modern shipyards of its kind in North America....



Vancouver Shipyards Modernization Project



Environmental Regulatory/Permitting Considerations (not all listed)

DFO Project Review – Load Out Pier

BC MOE – CSR
Release/approval - Shipyard

DNV Development and Building Permit- Shipyards

DFO Habitat Authorization – MacKay Creek

BC MOE – Hazardous Waste Facility Amendment Permit

DNV Development and Building Permits- Head Office

PMV Project Approval – Load Out Pier

BC MFLNRO – Wildlife permit (Osprey Nest Relocation) X 2

MV- Air Permit Amendments (paint/blast shops)

DFO Project Review – Head Office

BC MOE – CSR
Release/approval –New Office

MV – WWTP - Sewer Discharge Authorisation

PMV Project Approval – Parking Areas

BC MFLNRO – In stream Works Permit

DFO Fish Salvage Permit- Habitat Compensation

Vancouver Shipyards Modernization Project

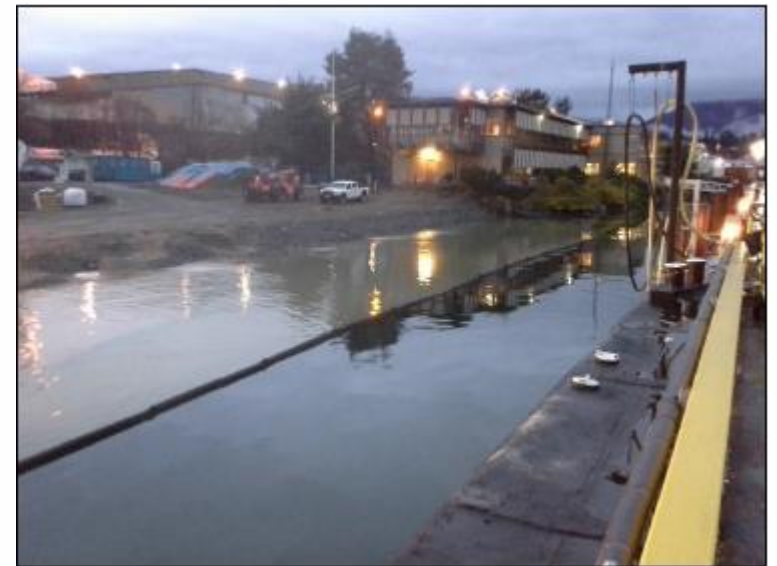
Construction Related Outcomes

- Environmental Management Plans implemented.
- Habitat protected and restored.
- Remediation of historical contamination conducted.



Design and Operational Considerations

- Advanced emission containment
- Improved wastewater treatment
- Upgraded stormwater management and infrastructure
- Energy efficiency - fixtures and planning
- Process efficiency - waste reduction



Thank You

