Field Studies Information Sheet – April 2012

Port Metro Vancouver is conducting field studies in April as part of ongoing environmental and technical work for the proposed Roberts Bank Terminal 2 Project.

Roberts Bank Terminal 2 Project

The Roberts Bank Terminal 2 Project is a proposed new multi-berth container terminal which would provide more than two million TEUs (twenty-foot equivalent unit containers) of additional container capacity. The project is part of the Container Capacity Improvement Program, Port Metro Vancouver's long-term strategy to deliver projects to meet anticipated growth and demand for container capacity until 2030.

No decision has been made to proceed with the proposed Roberts Bank Terminal 2 Project. Port Metro Vancouver is undertaking a comprehensive multi-round, multi-year community, stakeholder and public consultation process regarding the project, which began in June 2011 with Pre-Consultation.

The proposed Roberts Bank Terminal 2 Project will be subject to a thorough and independent environmental assessment.

Field Studies – April 2012

An overview of field studies that will be taking place in April 2012 is below. These studies are focused on maximizing the early spring season when certain species are prevalent. There are no anticipated impacts to communities from noise or light due to any of these studies.

Overview
Marine Invertebrates
• Marine Invertebrate Study
Marine Fish
• Eelgrass Fish Community Study
• Juvenile Salmon Study
Marine Vegetation
• Biofilm Study
Coastal Seabirds
• Coastal Seabird Habitat Usage Study
• Migratory Connectivity Study
• Western Sandpiper Genetics Study
• Impacts of Overhead Transmission Wires and Vehicular Traffic on Coastal Seabirds Study
Freshwater Fish
• Freshwater Fish Study

Some field studies may require access to public and private land. Port Metro Vancouver will obtain permission before accessing private property. As part of the Adaptive Management Strategy developed as part of the Deltaport Third Berth Project, Port Metro Vancouver will continue to study activities at Roberts Bank in addition to those outlined in this information sheet.

Port Metro Vancouver will produce monthly Field Studies information sheets summarizing work to occur each month. These updates will be available at www.portmetrovancouver.com/CCIP.

Study Name	Summary
Marine Invertebrate Study	Purpose: The purpose of this study is to determine the density and diversity of small marine invertebrates (meiofauna and macrofauna) living in the sediment at Roberts Bank, Sturgeon Bank and Boundary Bay, as well as the role they play as food for coastal birds. Study Area: The study area includes: • Roberts Bank • Sturgeon Bank • Boundary Bay Methods: Invertebrate field samples will be collected from a total of 250 intertidal sampling locations. Sampling locations will be the same as those used for the biofilm sampling program. Samples will be collected using syringes during the day at low tide and will be sent to a laboratory for processing and analysis. Timing: The study will begin in mid-April and will run until early May to coincide with the migration of Western Sandpipers through the region.
Marine Fish – Eelgrass Fish Community Study	Purpose: The purpose of this study is to document the diversity and condition of the fish community living within eelgrass beds. The study will: • Identify potential trends in fish habitat use within the eelgrass beds in the area of the proposed Roberts Bank Terminal 2 Project; and • Draw linkages between eelgrass health, fish community composition and other parameters such as temperature and salinity. Study Area: The study area consists of the dense bed of eelgrass located to the north of the existing Deltaport terminal at Roberts Bank. Methods: Large nets will be deployed from a boat at four sites during high tide over the eelgrass bed. Fish will be identified, counted, measured and released. Timing: The study will run for approximately one week in late April to coincide with the timing of juvenile salmon migration. Studies will take place during the day and in the evening.

Study Name	Summary
Marine Fish – Juvenile Salmon Study	Purpose: The purpose of this study is to document the use of habitat by juvenile salmon along the Roberts Bank causeway. It is also to collect data on juvenile salmon movements. The study will assess the presence, abundance and condition of juvenile salmon, and assist in developing a long-term monitoring strategy. Study Area: The study area consists of the portion of Roberts Bank to the north and south side of the existing Deltaport terminal and Roberts Bank causeway. Methods: Two methodologies will be used to assess juvenile salmon habitat use and movement: • Deploying large nets at six sites representing different habitat types (such as sand, pocket beach, rip rap etc.) along the causeway. Fish will be identified, counted, measured and released. • Deploying directional nets at the same six sites along the causeway during different tides to document juvenile salmon movements. Timing: The study will run for approximately one week in late April to capture the spring migration of juvenile salmon. Studies will take place during the day and in the evening.
Marine Vegetation – Biofilm Study	Purpose: The purpose of this study is to: • Map the distribution of biofilm within the Fraser River estuary; • Identify the major groups of organisms that make up biofilm; and • Identify parameters that may influence biofilm growth and productivity. Study Area: The study area includes: • Roberts Bank • Sturgeon Bank • Boundary Bay Methods: Biofilm samples will be collected from a total of 250 intertidal sampling locations. Sampling locations will be the same as the marine invertebrates study. Samples will be collected using syringes during the day at low tides and will be sent to a laboratory for processing and analysis. Timing: The study will begin in mid-April and continue to the end of May 2012.

Study Name	Summary
Coastal Seabirds – Habitat Use Study	Purpose: The purpose of this study is to determine locations of greatest use, food availability and habitat quality for Western Sandpipers in the Fraser River Estuary during their spring migration. Study Area: The study area includes: • Roberts Bank • Sturgeon Bank • Boundary Bay Methods: Examine the intensity and distribution of bird use by counting bird droppings at low tide to determine greatest use, food availability and habitat quality for Western Sandpipers. Timing: Counting will be conducted every other day from mid-April through peak Western Sandpiper migration to early May.
Coastal Seabirds – Migratory Connectivity Study	Purpose: The purpose of this study is to determine the significance of the Fraser River Estuary as a source for food and habitat for migratory birds. Study Area: The study area includes: • Roberts Bank • Sturgeon Bank • Boundary Bay Methods: Small feather samples will be collected. All field crews will include qualified and permitted personnel who specialize in handling wild bird species. The samples will be sent to a laboratory for trace element analysis, a method which assigns birds to specific wintering locations with a high degree of accuracy. Timing: This study will occur during the peak migratory period of the Western Sandpiper (mid-April to mid-May). Samples will be collected when peak high tides occur during daylight hours, weather permitting.

Study Name	Summary
Coastal Seabirds – Western Sandpiper Genetics Study	Purpose: Many migratory bird species can be divided into groups based on their genetic make-up. The objective of this study is to determine whether Western Sandpipers using the Fraser River Estuary form a genetically unique group. Study Area: The study area includes: • Roberts Bank • Sturgeon Bank • Boundary Bay Methods: Data, such as the colour, shape and length, as well as blood samples will be collected from each bird (using the same birds as the Migratory Connectivity study outlined above). All field crews will include qualified and permitted personnel who specialize in handling wild bird species. The samples will be sent to a laboratory for DNA extraction and processing, and patterns of genetic variation will then be examined. Timing: The study will occur during the peak migratory period of the Western Sandpiper (mid-April to mid-May). Samples will be collected when peak high tides occur during daylight hours, weather permitting.
Coastal Seabirds – Impacts of Overhead Transmission Wires and Vehicular Traffic on Coastal Seabirds Study	Purpose: Bird diverters, which are special units installed on power lines, help birds see power lines and avoid potentially fatal collisions. The purpose of the study is to calculate the effectiveness of existing bird diverters, while identifying opportunities to further reduce bird collisions with transmission wires and vehicular traffic. Methods: The study will examine flight patterns, distribution, abundance and behaviour of birds as they cross the Roberts Bank Transmission Corridor. Where bird collisions do occur within 20 metres of the transmission wire and road, birds will be collected and studied. Timing: Flight surveys will be undertaken every two weeks at each station. Assessments will occur during daylight hours, weather permitting and bird removal will occur every four days. This study will begin in mid-April and continue until the end of May 2012.

Study Name	Summary
Freshwater Fish – Freshwater Fish Study	Purpose: The purpose of the study is to provide a description of freshwater fish habitat and fish within the project study area. Study Area: The proposed study area includes freshwater ditches and streams along the 3.6 kilometre length of the rail corridor between 64th Avenue and 72nd Street, plus the turnouts at the east end of the Fisher Yard located immediately east of 72nd Street. Methods: Fish will be identified, counted, measured, and released at the site of capture. Any other aquatic organisms (e.g., amphibians) will be identified and released. In addition to undertaking field investigations of fish and fish habitats within the study area, the field crew will identify and characterize aquatic habitats. Timing: Sampling will occur over a two-week period starting mid-April. Assessments will occur during daylight hours, weather permitting.

For Further Information

For further information, please visit our website at www.portmetrovancouver.com/CCIP or contact us:

Phone: 604-665-9337
Fax: 1-866-284-4271
Email: container.improvement@portmetrovancouver.com