



September 10, 2013

Village of Belcarra  
4084 Bedwell Bay Road  
Belcarra, BC V3H 4P8

Attention: Ralph Drew,  
Mayor, Village of Belcarra

Dear Mayor Drew,

Thank you for your letter dated August 29th, 2013 providing reference to a variety of unique aspects of the Burrard Inlet Marine Environment. We are in the process of writing the Environmental and Socio-economic Assessment (ESA) that will form part of our Section 52 Facilities Application to the National Energy Board. The ESA will provide a great deal of information on the local setting, as well as assess potential project effects. No doubt you will be interested in the ESA as you have a wealth of knowledge on the local environment. I can assure you that we will be considering the aspects you have listed as well as a number of others listed in the Trans Mountain Expansion Plan (TMEP) Project Description, Tables 6-1, 6-2 and 6-3. Below is a response to the information you provided.

### **Rockfish Conservation**

Kinder Morgan Canada (KMC) is aware that the proposed Westridge Marine Terminal expansion will be located within the Eastern Burrard Inlet Rockfish Conservation Area (RCA), one of three RCAs in Burrard Inlet. In September 2012, KMC undertook a subtidal survey of the study area using a Remotely Operated Vehicle (ROV). The survey revealed that seafloor habitats are dominated by soft sediment, which has limited value for most inshore rockfish species (e.g. copper rockfish, quillback rockfish). Only one area of suitable rockfish habitat was identified, and this was a rip rap (boulder) slope engineered to stabilize the shoreline adjacent to the existing loading berth. Although no rockfish were observed during the survey, KMC has elected to include rockfish as an indicator for the assessment of potential Project effects on marine fish (see TMEP Project Description, Table 6-1, page 82).

Should the Project proceed, KMC plans to compensate for any unavoidable losses of marine fish habitat as required by section 35(2) of the *Fisheries Act*. The current preferred option for compensation is the creation of a subtidal rock reef within or directly adjacent to the Eastern Burrard Inlet RCA. This reef would provide complex rearing and foraging habitat for juvenile and

adult rockfish. The hard surfaces of the rock reef would be colonized by a diverse assemblage of algal and invertebrate species, leading to enhanced primary productivity and increased prey availability, benefitting rockfish, juvenile salmon, herring, Dungeness crab, and a variety of other ecologically, culturally and economically valuable species.

### **New Species**

KMC is aware that Burrard Inlet supports a high diversity of marine life and has undertaken detailed intertidal and subtidal surveys in the vicinity of the proposed Westridge Marine Terminal to characterize those species and habitats that could be affected by the Project. The results of these surveys will be presented in the Marine Resources Technical Report for the Westridge Marine Terminal, which will be submitted as part of the Environmental and Socioeconomic Assessment (ESA).

### **Unique Discovery**

KMC is aware of the large pink sea star (*Pisaster brevispinus*) discovered by Ruth Foster and Rod MacVicar at Reed Point in 2006. This species is common on sand and mud substrates where it preys on clams and other invertebrates. Several *P. brevispinus* were observed during the subtidal ROV survey of the proposed Westridge Marine Terminal area, and this species is thought to be widespread in Burrard Inlet.

### **Undocumented Species**

KMC is aware that a snailfish (*Careprocus* sp.) was observed at the Mossom Creek Hatchery in March 2013. Numerous species of snailfish occur along the coast of British Columbia, some of which are rare and/or poorly studied. The specimen found at the Mossom Creek Hatchery was not identified to the species level.

### **Squid Spawn**

Opal squid (*Loligo opalescens*) are common in inshore waters along the coast of British Columbia. During spawning, mature individuals form large aggregations in sheltered bays and inlets where they attach elongated egg masses to solid objects (e.g., rocks, pilings, etc.). KMC is not aware of the recent squid spawn in eastern Burrard Inlet and would be pleased if you were able to provide a reference for this information. Based on their habitat requirements for spawning (i.e., hard substrate), it is unlikely that *L. opalescens* would spawn in the vicinity of the proposed Westridge Marine Terminal. However, if the Project proceeds, the in-water infrastructure and proposed subtidal rock reef would increase the availability of suitable spawning habitat in the area.

## Herring Spawn

KMC is aware of the herring (*Clupea pallasii*) spawn that occurred in False Creek in 2009. This spawn was the first in many decades and was attributed, in part, to the shoreline habitat restoration that was undertaken as part of the Olympic Village development. KMC is also aware that the Howe Sound Herring Recovery team has partnered with the Northshore Wetlands Partnership to enhance herring runs in False Creek and Burrard Inlet.

Although no herring spawn has been documented in the vicinity of the proposed Westridge Marine Terminal, it is possible that this area was historically used for spawning. If the Project proceeds, the in-water infrastructure (e.g., steel piles, rip-rap) and potential subtidal rock reef would increase the availability of suitable spawning habitat for herring. Thus, the Project could promote the recovery of herring populations in Burrard Inlet.

## Eelgrass Beds

KMC is aware that there are numerous eelgrass beds (*Zostera marina*) located throughout Burrard Inlet and understands the tremendous ecological value of these habitats. Eelgrass beds in British Columbia have been mapped by Fisheries and Oceans Canada (DFO) and KMC is in possession of this data. No eelgrass beds have been previously identified within the proposed Project footprint. The intertidal and subtidal surveys conducted at the Westridge Marine Terminal confirmed that no eelgrass beds would be affected by Project construction.

## Invasive Species

KMC is aware of Norah Brown's research on how the interaction between ocean acidification and invasive species affects the development and structure of marine fouling communities. KMC also understands the concern regarding the introduction of marine invasive species and will be assessing the potential effects of ballast water releases in the ESA (see TMEP Project Description, Table 6-1, pg. 82).

## Research Station

KMC is aware of the University of British Columbia's Open Water Steller Sea Lion Research Station located at Reed Point Marina and is familiar with the research being conducted at this facility. KMC is committed to ensuring that water quality in Burrard Inlet is not adversely affected by Project construction, operation or decommissioning and is undertaking a detailed assessment of marine sediment and water quality as part of the ESA (see TMEP Project Description, Table 6-1, pg. 82). KMC is also undertaking a comprehensive assessment of potential effects of accidents and malfunctions, including an ecological risk assessment (ERA) for the accidental release of hydrocarbons during loading operations at the Westridge Marine Terminal (see TMEP Project Description, Table 6-1, pg. 81).

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Trans Mountain Expansion Project

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If you have further questions or concerns please do not hesitate to contact me to discuss further at your convenience.

Sincerely,

**Trans Mountain Pipeline L. P.**



Margaret Mears

*Trans Mountain Expansion Project Environment Lead*

cc; Ian Anderson, President, Kinder Morgan Canada  
Mike Davies, Director, Marine Development, Kinder Morgan Canada  
Lexa Hobenshield, Manager, External Relations, Kinder Morgan Canada