

Appendix C

Environmental Regulatory Requirements Applicable to Operations, Maintenance and Rehabilitation

This appendix is intended to be a convenient resource for TI Corp's OMR Contractor and the latter's Appropriately Qualified Professional (AQP). The summary provided herein may contain errors or omissions, particularly as regulatory requirements are constantly changing and the summary may be outdated at any particular time (due to a lag between regulatory changes and the updating of this OEMP). TI Corp disclaims responsibility for all such errors and omissions. The OMR Contractor and its AQP are solely responsible for their own regulatory compliance and are advised to undertake their own due diligence in identifying regulatory requirements applicable to their OMR activities and for complying with them.

Key Agencies

Federal

- Fisheries and Oceans Canada (DFO)
- Environment and Climate Change Canada (ECCC)
- Vancouver Fraser Port Authority (VFPA)

Provincial

- Ministry of Forests, Lands, and Natural Resource Operations (FLNRO)
- Ministry of Environment (MOE)

Key Legislation / Regulation

Federal

- *Fisheries Act* (Canada 1985), which protects fish and fish habitat. Administrated by DFO except for Deleterious Substance provisions.
- *Species at Risk Act* (Canada 2002), which protects wildlife and wildlife habitat listed as threatened or endangered. Administrated by ECCC.
- *Migratory Birds Convention Act* (Canada 1994), which protects birds and their nests during the general bird breeding season. Administrated by ECCC.

Provincial

- The provincial *Water Sustainability Act* (BC 2016), Section 11, which governs changes in and about a stream. Administrated by FLNRO through Front Counter BC.

- The provincial *Wildlife Act* (BC 1996) Section 34, which protects birds and their nests during the bird breeding season as well as the nests, nest trees and eggs of certain species of birds all year. Adminstrated by MOE but related permitting administrated by FLNRO through Front Counter BC.
- The provincial *Wildlife Act* Designation and Exemption Regulation (BC 1996), which indicates exemptions from permitting required under the *Wildlife Act* for nuisance wildlife. Adminstrated by MOE but related permitting administrated by FLNRO through Front Counter BC.
- The provincial *Contaminated Sites Regulation* (BC 1996). Adminstrated by MOE.
- The provincial *Hazardous Waste Regulation* (BC 1988). Adminstrated by MOE.
- The provincial *Weed Control Act* (BC 1996) and Weed Control Regulation, which designates noxious weeds, and places a duty to control noxious weeds on landowners.

The provincial *Integrated Pest Management Act*, and the Integrated Pest Management Regulation, which regulates and permits the use of herbicides. Administered by MOE.

Summary Description of Key Legislation / Regulation

Federal

Fisheries Act

The *Fisheries Act* prohibits serious harm to fish unless authorized by the Minister of Fisheries and Oceans Canada. This applies to work being conducted in or near waterbodies that support fish that are part of or that indirectly support a commercial, recreational or Aboriginal fishery. To protect fish and fish habitat, efforts should be made to avoid, mitigate and/or offset harm. Following the measures to avoid harm will usually assure compliance with the *Act*.

Serious Harm to Fish (Section 35)

35. (1) No person shall carry on any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or to fish that support such a fishery.

DFO interprets serious harm to fish as:

- the death of fish;
- a permanent alteration to fish habitat of a spatial scale, duration or intensity that limits or diminishes the ability of fish to use such habitats as spawning grounds, or as nursery, rearing, or food supply areas, or as a migration corridor, or any other area in order to carry out one or more of their life processes;
- the destruction of fish habitat of a spatial scale, duration, or intensity that fish can no longer rely upon such habitats for use as spawning grounds, or as nursery, rearing, or food supply areas, or as a migration corridor, or any other area in order to carry out one or more of their life processes.

DFO provides [measures to avoid and mitigate harm](#) to guide compliance with the Act. This advice applies to all project types and replaces all “Operational Statements” previously produced by DFO for different project types in all regions.

The measures to avoid serious harm are available at:

<http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html>

Depending on the type and scale of OMR activities, some or all the measures applicable to a particular OMR activity or set of activities should be described in activity specific or location specific OMR environmental plans and implemented as necessary during the activity(ies) to prevent “serious harm”.

OMR Activities: Pathways of Effects

Pathways of Effects (POE) diagrams have been developed by DFO as a tool to help proponents determine potential effects of various activities on fish and fish habitat. DFO periodically updates these diagrams to describe new activities and stressors as required. The following links to POE diagrams are most relevant to OMR land-based activities:

- [Cleaning or maintenance of bridges or other structures](#)
- [Excavation](#)
- [Grading](#)
- [Riparian Planting](#)
- [Use of explosives](#)
- [Use of industrial equipment](#)
- [Vegetation Clearing](#)

POE diagrams most relevant to in-water OMR activities include:

- [Addition or removal of aquatic vegetation](#)
- [Change in timing, duration and frequency of flow](#)
- [Fish passage issues](#)
- [Marine seismic surveys](#)
- [Organic debris management](#)
- [Placement of material or structures in water](#)
- [Structure removal](#)
- [Use of industrial equipment](#)
- [Wastewater management](#)
- [Water extraction](#)

Request for DFO Review

The OMR Contractor and/or its AQP should do a self-assessment, as per DFO requirements, to identify whether or not a contemplated OMR activity(ies) may cause serious harm. When in doubt as to whether or not serious harm is likely to be caused, the OMR Contractor and/or its AQP should submit to DFO a request for review, subject to the following exceptions:

Types of Waterbodies Where DFO Review is NOT required

According to DFO guidance, it is not necessary to obtain DFO review if OMR activities will occur in or potentially affect the following **existing** waterbody types:

- Artificial waterbodies that are not connected to a waterbody that contains fish at any time during any given year, such as:
 - Stormwater management ponds

- Irrigation ponds or channels
- Agricultural drains and drainage ditches
- Roadside drainage ditches
- Quarries and aggregate pits
- Any other waterbody that does not contain fish at any time during any given year, and is not connected to a waterbody that contains fish at any time during any given year.

Types of Activity That Typically Would NOT require DFO Review

According to DFO guidance, it is not necessary to obtain DFO review of the following OMR activities

- **Bridges**
 - All maintenance activities including cleaning, removal and application of protective coatings, surface replacement, and removal of debris necessary to protect piers and abutments
 - Repairs
 - No temporary or permanent increase in existing footprint below the High Water Mark
 - No new temporary or permanent fill placed below the High Water Mark
 - Construction of ice bridges, snow fills and clear-span bridges
 - No new temporary or permanent fill placed below the High Water Mark (except temporary snow fill)
 - Any obstruction to fish passage will respect [timing windows](#)
 - All removal activities
- **Culverts**
 - Debris removal
 - Gradual removal such that flooding downstream, extreme flows downstream, release of suspended sediment and fish stranding can be avoided
 - Repairs or replacements
 - No temporary or permanent increase in existing footprint below the High Water Mark
 - No new temporary or permanent fill placed below the High Water Mark
 - Channel realignment is not required
 - No narrowing of the channel
 - Any obstruction to fish passage will respect [timing windows](#)
 - Provides for fish passage
 - Work can be done in isolation of flowing water
 - Removal
 - Work can be done in isolation of flowing water
 - Any obstruction to fish passage will respect [timing windows](#).
- **Stormwater Management Facilities/Basins**
 - Construction of new land-based stormwater management facilities, settling ponds and storage basins
 - No work occurring below the High Water Mark of a nearby waterbody
- **Tailings Impoundment Areas**
 - Construction of new land-based [Tailings Impoundment Areas](#)
 - No work occurring below the High Water Mark of a nearby waterbody
- **Water Outfalls**
 - Construction of, and repairs to, water outfalls

- No temporary or permanent increase in existing footprint below the High Water Mark
 - No new temporary or permanent fill placed below the High Water Mark
 - All removal activities
- **Drainage Channels**
 - Construction and routine clean-out of drainage channels
 - Clean-out has occurred in the past 10 years
 - Work can be done in the dry or under frozen conditions
- **Bank Stabilization**
 - Bank stabilization using rock protection, plantings or bioengineering
 - No temporary or permanent increase in existing footprint below the High Water Mark
 - No new temporary or permanent fill placed below the High Water Mark
- **Aquatic Vegetation Removal**
 - Removal of aquatic vegetation by hand or mechanical cutting for flood control
- **Dykes**
 - Repairs to existing dykes
 - No temporary or permanent increase in existing footprint below the High Water Mark
 - No new temporary or permanent fill placed below the High Water Mark
- **Berms**
 - Repairs to existing berms
 - No temporary or permanent increase in existing footprint below the High Water Mark
 - No new temporary or permanent fill placed below the High Water Mark

DFO Authorization

In the unlikely event that an OMR activity is unable to completely avoid or mitigate serious harm to fish, the activity will typically require authorization from DFO under Subsection 35(2)(b) of the *Fisheries Act* before it can proceed. Habitat offsetting (compensation) would normally be required to obtain such an authorization. The authorization process (including prescribed timelines) and information requirements pursuant to the Fisheries Act Regulations (SOR/2013-191) are described at:

<http://laws-lois.justice.gc.ca/eng/regulations/SOR-2013-191/index.html>

Emergency Works

Also pursuant to the Fisheries Act Regulations (SOR/2013-191), the information requirements for DFO Authorization are reduced in the event an authorization is necessary to conduct emergency works, such as to address an emergency that poses a risk to public health or safety or to the environment or property. See the following link describing the contents of Schedule 2 of the Fisheries Act Regulations (SOR/2013-191):

<http://laws-lois.justice.gc.ca/eng/regulations/SOR-2013-191/page-3.html#h-10>

SCHEDULE 2 (Subsection 4(1)) of Emergency Circumstances — Information to be provided to DFO:

Contact Information

1 The applicant's name, address, telephone number and, if applicable, the name, address and telephone number of their duly authorized representative.

Nature of the Matter of National Security, National Emergency or Emergency

2 A description of the nature of the matter of national security, national emergency or emergency and the reasons why the proposed work, undertaking or activity needs to be carried on without delay.

Proposed Work, Undertaking or Activity

3 A description of the proposed work, undertaking or activity and how it relates to the matter of national security, national emergency or emergency.

Timeline

4 The timeline for carrying on the proposed work, undertaking or activity.

Location

5 A description of the location of the proposed work, undertaking or activity, including its geographic coordinates and the name of any water sources and water bodies that are likely to be affected.

Serious Harm

6 A description of the serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or to fish that support such a fishery, that is likely to result from the proposed work, undertaking or activity.

Migratory Birds Convention Act

The *Migratory Birds Convention Act* (MBCA) prohibits the disturbance, destruction, or possession of migratory birds, their nests, or eggs. Also the Act protects migratory bird habitat in that it prohibits the deposit of oil, oily waters, or other substances harmful to migratory birds in any areas that they frequent. This Act is applicable to this project as migratory birds may be encountered within the project area and compliance to this Act is required. Application of appropriate mitigation measures should be sufficient to avoid contravention of this Act by the project.

The purpose of the MBCA is to protect and conserve migratory bird populations and individuals and their nests. Environment and Climate Change Canada (ECCC) administers the MBCA and the *Migratory Birds Regulations*, 1994, through the regional Canadian Wildlife Service (CWS) offices. Migratory birds covered under the MBCA in Canada, include (refer to Environment Canada 1991 for full list):

- waterfowl (e.g., ducks and geese)
- cranes (e.g., sandhill cranes)
- shorebirds (e.g., plovers and sandpipers)
- most songbirds (e.g., robins)

Birds not included under federal jurisdiction in Canada include upland game birds (e.g. grouse, quail, pheasants, and ptarmigan), birds of prey (e.g., hawks, owls, eagles, and falcons), cormorants, pelicans, kingfishers, crows, jays and some blackbirds. Most birds excluded from this list are protected under provincial law (e.g., provincial *Wildlife Act*).

The possession of, purchasing, selling, exchanging or giving a migratory bird or nest are prohibited without authorization, as stated in Section 5 of the MBCA. In 2005, the MBCA was amended to expand the purpose of the *Act* to include conserving migratory birds; specifically that birds are to be protected and conserved as populations and as individual birds, in addition to incorporating habitat and ecosystem concepts (Government of Canada 2005). The MBCA is the enabling statute for the *Migratory Birds Regulations*, 1994.

In the *Migratory Birds Regulations*, 1994, Section 6 states that without the authorization of a permit, the disturbance, destruction, taking of a nest, egg, nest shelter, eider duck shelter or duck box of a migratory bird; possessing a migratory bird, carcass, skin, nest or egg of a migratory bird are prohibited. In addition, Section 35 (1) of the *Migratory Birds Regulations*, 1994, has been repealed and replaced with Section 5(1) of the MBCA which prohibits the deposition of substances harmful to migratory birds in waters or areas frequented by migratory birds or in a place from which the substance may enter such waters or such an area.

5.1 (1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.

Species at Risk Act

Federal lands and waters and lands are subject to the protection of species listed under Schedule 1 of the *Species at Risk Act (SARA)* as extirpated, endangered or threatened. It is an offence to kill, harm, harass, capture or take a protected individual. *SARA* also protects the residence and critical habitat of Schedule 1 species on federal lands and waters.

The purpose of *SARA* is to prevent the extirpation or extinction of plant and wildlife species; to provide recovery strategies for species that are extirpated, endangered and threatened due to human activity; and to manage species of special concern so they do not become threatened or endangered.

Listed species of most relevance to OMR activities fall into the following three *SARA* Schedule 1 categories:

- Endangered: A species facing imminent extirpation or extinction;
- Threatened: A species that is likely to become endangered if limiting factors are not reversed;
- Special concern: A species of special concern because of characteristics that make it particularly sensitive to human activities or natural events.

On this Project, at least the following *SARA* listed species could potentially be affected by OMR activities:

Endangered:

- Nooksack dace (*Rhinichthys cataractae*) – presence confirmed in the Brunette River both at and downstream of the Project alignment
- Pacific water shrew (*Sorex bendirii*) – PWS have been caught in various locations along the corridor including near the Kensington overpass; Hjorth Creek may be designated as critical habitat at some time in the future
- Western painted turtle (*Chrysemys picta*) – has been observed in various locations along the corridor including near Burnaby Lake and in Coquitlam
- Oregon Forestsnail (*Allogona townsendiana*) – has been observed in various locations along the corridor

Threatened:

- None

Special Concern:

- Peregrine falcon (*Falco peregrinus*) – observed on the old Port Mann Bridge
- Great Blue Heron (*Ardea Herodias fannini*) – observed primarily in Coquitlam; a heron colony (periodically active) exists in the provincial Wildlife Management Area located near the Mary Hill Bypass
- Barn owl (*Tyto alba*) – observed in Colony Farm in Coquitlam
- Western screech owl (*Megascops kennicottii*) – suspected but not confirmed
- Short-eared owl (*Asio flammeus*) – suspected east of Port Mann Bridge but not confirmed
- Rubber boa (*Charina bottae*) – suspected but unconfirmed
- Northern red legged frog (*Rana aurora*) – confirmed in various locations along the alignment
- Western toad (*Anaxyrus boreas*) – suspected but not confirmed

Application of appropriate mitigation measures, such as avoidance of work activities during periods of high risk when individuals could be near the work area and precautionary salvage/relocation of individuals such as Nooksack dace (if working instream at Brunette River) and Pacific water shrew (if undertaking major OMR works requiring clearing of riparian areas), should be sufficient to avoid contravention of SARA by OMR activities. However, note that for some listed species there may be no window of least risk. A SARA permit is required for salvage/relocation of SARA listed species.

Other Federal Legislation

The Port Mann Bridge crosses lands and waters under jurisdiction of the Vancouver Fraser Port Authority (VFPA). An approval from the VFPA was obtained by TI Corp to allow construction and operation of the bridge. The approval includes conditions that pertain to the operational phase of the Project and OMR activities must therefore comply with applicable conditions of the approval.

As of 2015, VFPA has a Project and Environmental Review (PER) Process in place to support review and permitting of works or activities proposed within VFPA jurisdiction. It is possible but highly unlikely that some OMR activities may occur on the Port Mann Bridge substructure that would require a Project Permit from the VFPA. Information on the PER process can be found at:

<http://www.portvancouver.com/development-and-permits/project-and-environmental-reviews/>

In addition, construction and operation of the Port Mann Bridge required an approval from Transport Canada's Navigation Protection Program pursuant to the *Navigation Protection Act* (formerly the *Navigable Waters Protection Act*). The approval includes conditions that pertain to the operational phase of the Project and OMR activities must therefore comply with applicable conditions of the approval.

Federal Guidelines and Environmental Protection Standards

Federal environmental protection standards and guidelines include those published by the Canadian Council of Ministers of the Environment (CCME). The CCME have developed air, water, and soil quality standards to be met or exceeded in the protection of human and environmental health. As applicable, OMR activities must comply with the guidelines, best practices, and standards set out by the CCME.

Provincial

- The provincial *Water Sustainability Act* (BC 2016), Section 11, which governs changes in and about a stream.
- The provincial *Wildlife Act* (BC 1996) Section 34, which protects birds and their nests during the bird breeding season as well as the nests, nest trees and eggs of certain species of birds all year; also protects wildlife in general including provincially listed species at risk.
- The provincial *Wildlife Act* Designation and Exemption Regulation (BC 1996), which indicates exemptions from permitting required under the *Wildlife Act* for nuisance wildlife.
- The provincial *Contaminated Sites Regulation* (BC 1996) and the 2001 Memorandum of Understanding between Ministry of Transportation and Infrastructure and Ministry of Environment regarding reuse/relocation of soils excavated from highway rights-of-way.
- The provincial *Hazardous Waste Regulation* (BC 1988).
- The provincial *Weed Control Act* and Weed Control Regulation
- Provincial programs and plans pertaining to management of invasive species on Crown Lands, including the Integrated Pest Management Regulation.

Water Sustainability Act

The new *Water Sustainability Act* (WSA) came into force on February 29, 2016 and replaced the previously existing *Water Act*. An [initial set of regulations](#) also came into effect on February 29, 2016. Due to the number of proposed regulations and policies, government is taking a phased approach to their development and work in this area continues.

OMR activities relate mainly to provisions of the Act dealing with "Changes in and about a stream" (formerly captured in Section 9 of the *Water Act* but now addressed in Section 11 of the WSA) and provisions for temporary use of water (surface and groundwater). Depending on their type and extent, changes in and about a stream require either a "Change Approval" or a "Notification".

The WSA states,

11. (1) On application in accordance with section 12, the comptroller, a water manager or an engineer may issue an approval authorizing any of the following persons to make changes in and about a stream:

- (a) the government of British Columbia or Canada;
- (b) another person.

(2) Changes in and about a stream may only be made in accordance with

- (a) the terms and conditions of a change approval,
- (b) the regulations,
- (c) the terms and conditions of an authorization, or
- (d) an order.

Under the WSA "changes in and about a stream" means:

Any modification to the nature of the stream, including any modification of the land, vegetation and natural environment of a stream or the flow of water in a stream, or

Any activity or construction within a stream channel that has or may have an impact on a stream or stream channel.

A stream is defined in the WSA as a natural watercourse, including a natural glacier course or natural body of water. Bodies of water described by the term "stream" can include a lake, pond, river, creek, spring, ravine, gulch, wetland features with open standing water, or glacier (whether or not the glacier usually contains water or ice).

A stream channel, in relation to a stream, means the bed of the stream and the banks of a stream, both above and below the natural boundary and whether or not the channel has been modified, and includes side channels of the stream.

Change Approvals

A change approval is a written authorization to make changes in and about a stream. Change approvals are granted with terms and conditions attached. The terms and conditions may relate to the time of year in which you may undertake the work, or undertake other measures that protect the aquatic ecosystem, the hydraulic integrity of the stream channel and the rights of water users and landowners downstream.

OMR activities that must be effected through an Approval:

- Bank erosion protection
- Bridge (other than clear span) – construction, maintenance, removal
- Stream diversion
- Large debris removal by machine – plan required
- Gravel removal

Notifications

Notifications are used for low risk changes in and about a stream, specified in Part 3 of the Water Sustainability Regulation, that have minimal impact on the environment or third parties. The work must meet the requirements of the Water Sustainability Regulation, and comply with any conditions set out by a habitat officer in response to a notification.

A proponent must submit notification of proposed work to FrontCounter BC a minimum of 45 days before beginning work. Submitting more than 45 days ahead of time is recommended. If you have not heard back from a habitat officer with Ministry of Forests, Lands and Natural Resource Operations within 45 days (or by the proposed start date, if you submitted more than 45 days in advance), you must make sure that your work meets the terms and conditions described in Part 3 of the [Water Sustainability Regulation](#) and any [terms and conditions](#) specific to the region in which you are working, and you may proceed with the changes.

Part 3 of the Water Sustainability Regulation provides the activities that can be performed through Notification.

http://www.bclaws.ca/civix/document/id/complete/statreg/36_2016

OMR activities that can be effected through a Notification:

- Road crossing culvert – construction, maintenance, removal
- Clear span bridge – construction, maintenance, removal
- Cutting of annual vegetation in a stream channel
- Dike or erosion protection works – Repair and maintenance
- Control of Eurasian watermilfoil or other invasive species aquatic vegetation
- Repair or maintenance of the superstructure of a bridge other than its foundation
- Installation, repair, maintenance or removal of fences
- Removal of a beaver dam (as authorized under the *Wildlife Act*)
- Construction of temporary diversion around a worksite

Some highway maintenance activities relevant to PMH1 can also be done under Notification by the Crown (e.g., MOT) in right of British Columbia:

- Fish habitat – restoration, maintenance
- Stream channel – restoration, maintenance
- Clearing of an obstruction from a bridge or culvert during a flood emergency
- Construction or placement of erosion protection works or flood protection works during a flood emergency

Regional Terms and Conditions and Timing Windows

If granted a change approval, terms and conditions will be specified as part of the approval.

If submitting notification of instream work, a proponent must comply with the terms and conditions in the region, as well as any terms and conditions specified by the habitat officer.

Lower Mainland Timing Windows: See the following link:

http://www2.gov.bc.ca/assets/gov/environment/air-land-water/water/working-around-water/work_windows_low_main.pdf

Wildlife Act

The BC *Wildlife Act* Section 34 prohibits injury, disturbance or destruction of birds or their eggs. Active nests are protected during the bird breeding season. Nests of eagles, peregrine falcon, gyrfalcon, osprey, heron, or burrowing owl are protected year-round. If vegetation clearing is required during the bird breeding season, bird surveys must be conducted in advance of vegetation clearing by an appropriately qualified professional (AQP) to comply with the federal *Migratory Birds Convention Act* and the BC *Wildlife Act*. The general bird breeding season is usually considered to be between March 1 to August 30 of any year. However, the window begins as early as January of any given year for raptors (this category includes eagles, hawks and owls). The general least risk timing window for construction activities outside the bird breeding window is from September 1 to February 28.

A permit is required to engage in wildlife salvage activities should a salvage need to be conducted prior to undertaking OMR activities. Wildlife salvage permits, if needed, are issued under the *Wildlife Act* within the jurisdiction of the Ministry of Environment (MOE). Permit applications must also address animal care provisions.

Listed Species

The *Wildlife Act* and other regulatory mechanisms provide general protection of wildlife including red listed and blue listed species. Refer to the BC Species and Ecosystems Explorer for red and blue listed species in BC, including wildlife and plant species and ecosystems that may be present along the corridor.

<http://a100.gov.bc.ca/pub/eswp/>

The presence of the following wildlife and plant species has been confirmed along the corridor:

Red Listed:

- Peregrine falcon (*Falco peregrinus*) – observed on the old Port Mann Bridge
- Northern goshawk (*Accipiter gentilis*) – observed near Tynehead Drive
- Pacific water shrew (*Sorex bendirii*) – caught in various locations along the corridor including near the Kensington overpass; Hjorth Creek may be designated as critical habitat under SARA at some time in the future
- Snowshoe hare (*Lepus americanus*) – confirmed in Burnaby Lake area
- Anderson's waterboatman (*Cenocoriza andersoni*) – observed in Bon Accord Creek area

Blue Listed:

- Great Blue Heron (*Ardea herodias*) – observed primarily in Coquitlam; a heron colony (periodically active) exists in the provincial Wildlife Management Area located near the Mary Hill Bypass
- Barn owl (*Tyto alba*) – observed in Colony Farm in Coquitlam
- Northern red legged frog (*Rana aurora*) – observed in various locations along the alignment
- Western painted turtle (*Chrysemys picta*) – observed in various locations along the corridor including near Burnaby Lake and in Coquitlam
- Autumn meadowhawk (*Sympetrum vicinum*) – observed near Fraser Glen Park in Surrey
- Nuttall's waterweed (*Elodea nuttallii*) – observed near Schoolhouse Creek in Coquitlam

In addition, the following listed plant communities have been identified along the right-of-way:

- Blue-listed native forest at the Grandview Interchange
- Blue-listed native forest at the Gaglardi Interchange
- Red and blue-listed native forest on the east side of Port Mann bridge
- Red and blue-listed native forest at 192nd Street
- Blue-listed native forest at the 216th Interchange

Environmental Management Act

The provincial *Environmental Management Act* (BC 2003) and supporting regulations govern the matters of contaminated sites, hazardous wastes and products. Regulations include the *Contaminated Sites Regulation* (CSR) (BC 1996) and the *Hazardous Waste Regulation* (HWR) (BC 1988).

Bridge rehabilitation activities involving management of groundwater or soil excavation, reuse and/or relocation must comply with the provisions of the CSR. A MOU (2001) between the Ministry of Transportation and Infrastructure and the Ministry of Environment also governs soil management on the Project right-of-way.

The requirements of the HWR may also be relevant to certain OMR activities, for example of OMR activities entail excavation or removal of substances specified in the HWR. For example, OMR activities could involve removal of lead based paint or other construction or building materials deemed to be hazardous under the HWR or disturbance of contaminated soils around the bridge that may be subject to these provincial regulations.

Weed Control Act

The *Weed Control Act* and *Weed Control Regulation* are two of a number of regulatory mechanisms applicable to management and control of invasive species along the Project corridor. Refer to the following link for general information on invasive species requirements that are potentially relevant to OMR:

<https://www.for.gov.bc.ca/HRA/Plants/legislation.htm>

TI Corp and the Ministry of Transportation and Infrastructure have a program in place to manage invasive species along the corridor. Invasive species control measures undertaken by the OMR Contractor must be consistent with this more general program.

Provincial Guidelines

Water quality protection during instream works with need to comply with the BC Water Quality Guidelines (BC 2006) as well as the *Fisheries Act*. Provincial standard best management practices (BMPs) for construction works in and around water are outlined in their web based document 'General BMPs and Standard Project Considerations' (MOE 2014b).