Request for Review

Please note that Guidance on Submitting a Request for Review is available at the end of this form. This guidance explains the requirements for a Request for Review by DFO under the fish and fish habitat protection provisions of the *Fisheries Act*. All information requested must be provided. If you attach documents to your application with additional information, you must still provide appropriate summaries in the spaces provided on the application document or your application will be considered incomplete.

A) Contact information

Name of Business/Company:

Ministry of Transportation and Infrastructure

Name of Proponent:

Krista Englund, MRM, RP Bio
A/Regional Manager Environmental Services Coast Region

Mailing address:

310 – 1500 Woolridge Street

City/Town:

310 – 1500 Woolridge Street

Province/Territory:

British Columbia

Postal Code:

V3K 0B8

Tel. No. :

236-468-1959

Fax No.:

NA

Email:

Krista.Englund@gov.bc.ca

Select additional contact:
Contractor/Agency/Consultant *(if applicable):*

Patty Burt, RP Bio, AQP
McElhanney Ltd.

Mailing address:

Suite 100 8837 201 Street

City/Town:

Langley

Province/Territory:

British Columbia

Postal Code:

V2Y 0C8

Tel. No. :

604-424-4838

Fax No.:

NA

Email:

pburt@mcelhanney.com

Is the Proponent the main/primary contact? ○ Yes ◉ No

**All definitions are provided in Section G of the Guidance on Submitting a Request for Review*

If no, please enter information for the primary contact or any additional contact.

Patty Burt, B.Sc.H, R.P. Bio., P.Biol
McElhanney Ltd.
E-mail: pburt@mcelhanney.com
Phone: 604 424 4838

B) Description of Project

If your project has a title, please provide it.

Dewdney Bridge Replacement-specifc to the temporary work trestle.

Is the project in response to an emergency circumstance*? ○ Yes ◉ No

Does your project involve work in water? ◉ Yes ○ No

If yes, is the work below the High Water Mark*? ◉ Yes ○ No

What are you planning to do? Briefly describe all project components you are proposing in or near water.

The work will require a temporary work trestle for the Contractor to install the new bridge piles and superstructure, to be located upstream of the new bridge location.

How are you planning to do it? Briefly describe the construction materials, methods and equipment that you plan to use.

Due to the vulnerabilities with the existing bridge girders and timber substructure, as well as the impacts to traffic, the existing structure cannot be used to install the pier piles and a temporary work platform will be required for construction of the new bridges in-water piers. In drawing 596-326 we have provided 2 Options, one that can be used only during the reduced risk work window and one that can be left in for the duration of the works, both allow for fish passage for all species, life histories for all seasons. It will be up to the Contractor on which Option they prefer.

Potential methods, materials and equipment used for installation are:
- The work trestle is most commonly comprised of timber decking/stringers spanning between rows of driven steel/timber piles.
- The trestle is constructed starting from the west bank and working out towards the middle of the slough. The built portions of the trestle are used as the working platforms for each sequential span of trestle that is installed.
- The piles are typically driven with an excavator with a pile driving attachment. The first segment is built out from the slough west bank at the desired elevation, and the excavator will use this first segment off of which it will reach out to drive the next set of timber piles (the excavator works from the deck of the first segment).
- The trestle is then extended out into the slough by the excavator continually working from the deck of the end segment in order to install the piles for the next segment, and then the steel/timber stringers and decking are installed (likely lifted onto the piles by the same excavator). The excavator then shuffles forward and repeats this sequence until the trestle is installed to the desired length.
- For removal/decommissioning the timber deck and stringers are lifted back out of place, and the timber piles are either removed (pulled) or cut below mudline and abandoned in the ground.

Include a site plan (figure/drawing) showing all project components in and near water.

Are details attached? ◉ Yes ○ No

Identify which work categories apply to your project.

- ☐ Aquaculture Operations
- ☐ Aquatic Vegetation Removal
- ☐ Beaches
- ☐ Berms
- ☐ Log Handling / Dumps
- ☐ Log Removal
- ☐ Moorings
- ☐ Open Water Disposal

All definitions are provided in Section G of the Guidance on Submitting a Request for Review

- [ ] Blasting / Explosives
- [ ] Boat Houses
- [ ] Boat Launches / Ramps
- [ ] Breakwaters
- [x] Bridges
- [ ] Cable Crossings
- [ ] Causeways
- [ ] Culverts
- [ ] Dams
- [ ] Dewatering / Pumping
- [ ] Docks
- [ ] Dredging / Excavation
- [ ] Dykes
- [ ] Fishways / Ladders
- [ ] Flow Modification (hydro)
- [ ] Groundwater Extraction
- [ ] Groynes
- [ ] Habitat Restoration
- [ ] Ice Bridges
- [ ] Piers
- [ ] Riparian Vegetation Removal
- [ ] Seismic Work
- [ ] Shoreline Protection
- [ ] Stormwater Management Facilities
- [ ] Surface Water Taking
- [ ] Tailings Impoundment Areas
- [x] Temporary Structures
- [ ] Turbines
- [ ] Water Control Structures
- [ ] Water Intakes / Fish Screens
- [ ] Water Outfalls
- [ ] Watercourse Realignment
- [ ] Weirs
- [ ] Wharves
- [ ] Wind Power Structures

☐ Other Please Specify

Was your project submitted for review to another federal or provincial department or agency? ◉ Yes ○ No

If yes, indicate to whom and associated file number(s).

Ministry of Forests: Tracking Number: 100393483, Approval File: 2010185.

C) Location of the Project

Coordinates of the proposed project Latitude 49.163050 N Longitude -122.193419 W

OR UTM zone ; Easting

Northing

Include a map clearly indicating the location of the project as well as surrounding features.

Name of Nearest Community (City, Town, Village): Dewdney

Municipality, District, Township, County, Province: British Columbia

Name of watershed (if applicable): Fraser

Name of watercourse(s) or waterbody(ies) near the proposed project: Nicomen Slough

Provide detailed directions to access the project site:

From Langley BC, head southwest on 203 St toward 203 St, at the roundabout, take the 3rd exit onto 53 Ave, continue onto 51b Ave before turning left onto 208 St. Continue onto Langley Bypass, turn right onto 56 Ave and at the roundabout, take the 2nd exit and stay on 56 Ave. Turn left onto 264 St/Aldergrove-Bellingham Hwy/BC-13 N. Turn right onto 56 Ave and continue onto 58 Ave/Harris Rd. Follow 58 Ave till you

**All definitions are provided in Section G of the Guidance on Submitting a Request for Review*

come to Ross Rd by taking a right and then a left onto Harris Rd. Turn left onto BC-11 N (signs for Mission) and take the exit toward BC-7 E/ Mission/City Centre/Agassiz. Turn left onto Horne St (signs for City Centre/Industrial Pk).Turn right onto Glasgow Ave/Murray St and right again onto 1 Ave/Lougheed Hwy./BC-7 E (signs for Agassiz/Harrison). Continue to follow Lougheed Hwy./BC-7 E and the bridge is at the intersection of Hwy 7 and Hawkins Pickle Rd.

D) Description of the Aquatic Environment

Identify the predominant type of aquatic habitat where the project will take place.

- (•) Estuary (Estuarine)
- ( ) Lake (Lacustrine)
- ( ) On the bank/shore at the interface between land and water (Riparian)
- ( ) River or stream (Riverine)
- ( ) Salt water (Marine)
- ( ) Wetlands (Palustrine)

Provide a detailed description of biological and physical characteristics of the proposed project site. This description should include information on aquatic species at risk* (https://www.canada.ca/en/environment-climate-change/services/species-risk-public-registry.html), their residence* and critical habitat* if found in the area. An overview of the distribution of aquatic species at risk and the presence of their critical habitat within Canadian waters can be found here http://dfo-mpo.gc.ca/species-especes/sara-lep/map-carte/index-eng.html

When the existing bridge was constructed, the Nicomen Slough was still a braid of the Fraser River; however, it has since been isolated at the upstream extent by a series of dikes. Flows are largely sourced from Norrish Creek (and to a lesser extent other smaller tributaries); however, it is still intimately influenced by the Fraser River. Although the Mission Bridge is recognized as being the definitive boundary of tidal influence for the Fraser River, the Nicomen Slough varies daily with the ebbs and flows of the Pacific Ocean. The Nicomen Slough also fluctuates on a seasonal basis, resembling a lake when flows are backed from the Fraser River during the spring freshet. At other times throughout the year, flows are marginal, revealing the underlying substrate. The channel substrate consisted primarily of river sands and fine organic sediments, which can be attributed to the strong influence of the Fraser River, historical flow regime, and low gradient of approximately 0.03%, which promotes settlement. Some small quantities of cobbles, gravels, and fugitive riprap that appear to have eroded from the banks were observed near the existing bridge abutments. This material appears to have been introduced during the construction of the bridge and maintenance of the diking system. Overall, this section of the Nicomen Slough exhibited no indication of suitable spawning habitat due to the amount of sediment and fines present. In addition, this substrate is likely highly mobile and egg deposits would be at risk of smothering. Although the Nicomen Slough does not appear to provide suitable spawning habitat, it serves as a vital travel corridor for migratory salmon and other fish. Nicomen Slough provides direct (and exclusive) access to Norrish Creek and Inch Creek, which provide high quality spawning gravels. Rearing and overwintering habitat in the Nicomen Slough is of moderate value. Although flows within the slough fluctuate daily with the tides (as well as seasonally) there is typically residual water. Generally, flows were visibly turbid (which is not considered atypical given the influence of the Fraser River) which impeded observations of the underlying channel. In addition, attempts to physically walk the channel were hindered due to the soft sediment, which presented a significant safety risk. Nonetheless, there are definitive areas of deeper water, particularly near the east bridge abutment where there is a designated underpass for watercraft. It is unclear whether any portions of this channel are dredged to facilitate boat traffic. Although there was limited instream cover, flow velocities in the slough were relatively slow with variable movements based on tidal conditions.

Riparian vegetation was exceedingly limited due to the high level of anthropogenic disturbance. Dikes had been established on both banks to protect the interests of the agricultural and other rural land uses that have been historically subject to flooding. The west bank of the slough was fully armored with riprap that supported limited riparian vegetation through interstitial spaces. Vegetative growth was further hindered as the banks are routinely mowed by the Diking District. The east bank was in a slightly more natural state and appears to provide more riparian value than the west bank. Mature trees were sparse and generally consisted of a narrow strip of black cottonwood.

White Sturgeon: Information gleaned from iMapBC indicates that the 2004 population estimate was approximately 60,000 between 40 cm and 220 cm (distribution between the mouth of the Fraser River and Hell's Gate). Although relatively shallow, the Nicomen Slough may provide suitable habitat for white sturgeon, particularly juveniles, which prefer the lower reaches of tributaries, large backwaters, side channels and sloughs. Although the accounts are unverified, interviews with local anglers and online fishing forums indicate that white sturgeon are frequently caught in the Nicomen Slough. This anecdotal information is supported by documented occurrences on Habitat Wizard, iMapBC, and other provincial publications such as the Rare Freshwater Fish of British Columbia (Cannings & Ptolemy,

1998). As works will occur below the high-water mark there is the potential to encounter or otherwise temporarily impact white sturgeon or their habitat.

Include representative photos of affected area (including upstream and downstream area) and clearly identify the location of the project.

E) Potential Effects of the Proposed Project

Have you reviewed the Pathways of Effects (PoE) diagrams (http://www.dfo-mpo.gc.ca/pnw-ppe/pathways-sequences/index-eng.html) that describe the type of cause-effect relationships that apply to your project?

◉ Yes ○ No

If yes, select the PoEs that apply to your project.

- ☐ Addition or removal of aquatic vegetation
- ☐ Change in timing, duration and frequency of flow
- ☐ Cleaning or maintenance of bridges or other structures
- ☐ Dredging
- ☐ Excavation
- ☐ Fish passage issues
- ☐ Grading
- ☐ Marine seismic surveys
- ☐ Organic debris management
- ☐ Placement of marine finfish aquaculture site
- ☒ Placement of material or structures in water
- ☐ Riparian Planting
- ☐ Streamside livestock grazing
- ☒ Structure removal
- ☐ Use of explosives
- ☒ Use of industrial equipment
- ☐ Vegetation Clearing
- ☐ Wastewater management
- ☐ Water extraction

Will there be changes (i.e., alteration) in the fish habitat*? ○ Yes ◉ No ○ Unknown

If yes, provide a description.

There will be a temporary work trestle for the bridge installation.

Is there likely to be a harmful alteration, disruption or destruction of habitat used by fish? ○ Yes ◉ No ○ Unknown

Is there likely to be destruction or loss of habitat used by fish? ○ Yes ◉ No ○ Unknown

What is the footprint (area in square meters) of your project that will take place below the high water mark*?

Temporary impacts are directly related to the number of piles required for the installation of the temporary work trestle. The drawing provided is a schematic where the Contractor maybe required to install more or less piles, which is undetermined at this time. Based on the diameter of each temporary pile, likely 0.3 m, the area temporarily impacting the channel bottom would be ~ 13.8 m (based on the schematic).

Is your project likely to change water flows or water levels? ○ Yes ◉ No ○ Unknown

If your project includes withdrawing water, provide source, volume, rate and duration.

NA

If your project includes a water control structure, provide the % of flow reduction.

NA

If your project includes discharge of water, provide source, volume and rate.

NA

Will your project cause death of fish? ○ Yes ◉ No ○ Unknown

All definitions are provided in Section G of the Guidance on Submitting a Request for Review

If yes, how many fish will be killed (for multi-year project, provide average)? What species and lifestages?

NA

What is the time frame of your project?

The construction will start on 08/01/2023 and end by 12/31/2024

If applicable, the operation will start on MM/DD/YYYY and end by MM/DD/YYYY

If applicable, provide schedule for the maintenance

NA

If applicable, provide schedule for decommissioning

The demolition of the existing bridge and the temporary work trestle will be in the least risk window for fish in 2025.

Are there additional effects to fish and fish habitat that will occur outside of the time periods identified above? ○ Yes ◉ No

(If yes, provide details)

Can you follow appropriate Timing Windows (http://www.dfo-mpo.gc.ca/pnw-ppe/timing-periodes/index-eng.html) for all your project activities below the High Water Mark*? ◉ Yes ○ No

(If no, provide explanations.)

Provincially the regional timing window is: August 1 to September 1. Winter low flows based on hydrological data and DFO Area : February 1 to April 1, ultimately the works would be better suited for the winter season and the project would like to use both windows.

Have you considered and incorporated all options for redesigning and relocating your project to avoid negative effects to fish and fish habitat?

◉ Yes ○ No

If yes, describe.

The bridge location could not be moved as it aligns with a Provincial Highway system #7.

Have you consulted DFO's Fish and Fish Habitat Protection Measures Habitat (https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures-eng.html) to determine which measures apply to your project? ◉ Yes ○ No

Will you be incorporating applicable measures into your project? ◉ Yes ○ No

If yes, identify which ones. If No, identify which ones and provide reasons.

The project team consulted the following Protection Measures:
-Prevent the death of fish
-Maintain fish passage
-Ensure proper sediment control
-Prevent entry of deleterious substances in water

Measures Identified and unable to incorporate include:
-Maintain riparian vegetation
-Carry out works on land, specifically: placing temporary structures below the high water mark and disturbing or removing materials from the banks, shoreline or waterbody bed.

**All definitions are provided in Section G of the Guidance on Submitting a Request for Review*

Have you considered whether DFO standards and codes of practice apply to your project? ○ No ◉ Yes

If Yes, include a list.

The Standards and Codes of Practice were reviewed and the following 1 Code will be used to provide fish and fish habitat protections:
-Temporary stream crossings

Have you considered other avoidance and mitigation measures? ○ No ◉ Yes

If Yes, include a list.

1) Prevent the Death of Fish - Timing Windows
Instream components of proposed Project temporary activities will only occur during the pile driving of the steel or timber piles. This activity should be planned for low water. Fish passage will be maintained through the Slough during all proposed construction activities, with >25% of the wetted width of the river remaining fully open for fish passage and the piles will provide for passage in and around the work trestle. An AQP Environmental Monitor will be retained by the Contractor to provide onsite expertise regarding the protection of fish and fish habitat and have the authority to stop work and implement field measures to mitigate any potential impacts. Other measures to prevent the death of fish are to work within the specified reduced window of August 1 to September 15 for the summer and the hydrological optimum timing window / winter low flow of February 1 to April 1.

2) Maintain Riparian Vegetation
It is not anticipated that any or minimal area of riparian vegetation could be removed during the proposed construction works to allow equipment unobstructed access to the location where proposed Project activities are to occur. This loss of riparian vegetation for site access will be temporary.

3) Carry Out Works, Undertakings and Activities on Land
All staging and preparatory elements of proposed works will be completed from the top of bank. The installation of the temporary work trestle will require the drilling of piles and the placement of a temporary truss, with no heavy equipment required to be instream. All works will be above the channel bottom with only the area where the temporary piles need to be driven.

4) Ensure Proper Sediment Control
The Contractor will develop and implement an Erosion and Sediment Control (ESC) Plan for the site that minimizes risk of sedimentation of the waterbody during this phase of the project. ESC measures will be maintained until all disturbed ground has been permanently stabilized. The ESC plan should, where applicable, include:
• When possible, minimize vegetation clearing and avoid clearing and grubbing areas with sensitive soils.
• Installation of effective ESC control measures prior to onset of work, especially within 30 m of a waterbody.
• Utilize ESC products that correspond with the nature and duration of the project. When possible, consider the use of biodegradable products. Select products that are not potential wildlife attractants and do not contain invasive species.
• Measures for containing and stabilizing waste material (e.g., dredging spoils, construction waste and materials, uprooted or cut aquatic plants, accumulated debris) above the high-water mark of nearby waterbodies to prevent re-entry.
• Regular inspection and maintenance of ESC structures during all phases of the project and modify as necessary.
• Removal of non-biodegradable ESC materials once site is stabilized.
• Riparian re-vegetation will follow the proposed planting plan.

A Construction Environmental Management Plan (CEMP) will be prepared to specifically address measures to prevent sediment control issues (i.e. offsite conveyance of sediment laded water and resulting adverse effects to aquatic habitat and biota) for the installation of the temporary work trestle. An AQP will regularly inspect the Project Location to assess measures to ensure proper sediment control. Environmental monitoring reports will be prepared by the Construction Contractor's AQP and distributed to the Ministry Representative. The AQP will be onsite full time during this activity, which has the potential to temporarily impact fish and fish habitat during its installation.

5) Works in and Around Water
BMPs outlined in 'Measures to avoid causing harm to fish and fish habitat' (DFO 2018), and 'Requirements and Best Management Practices for Making Changes In and About A Stream in British Columbia (January 2022) can be employed to protect fish habitat and water quality. BMP guidelines listed in the 'Terms and Conditions for Changes in and about a Stream' (FLNRO 2011) should be considered to assist in adhering to the Fisheries Act. The following mitigation measures are relevant to protecting water including:
• Once instream works have commenced, works should continue until completion as quickly as possible.
• The removal of material must not lead to shoreline instability or increase the risk of sedimentation into the waterbody.
• Any spoil materials must be placed in a location which prevents sediment or debris entering the water.
• Equipment used near a watercourse must be free of deleterious material (e.g. hydrocarbons) and in good mechanical condition (no fuel

or hydraulic leaks).
• Machinery must be stored, maintained and refueled on a flat surface a minimum of 30 m from waterbodies, as measured from the high-water mark. Refueling must take place on a tarp or portable berm, or on compacted ground.
• Measures must be taken to ensure that no harmful material (e.g. fuel and other hydrocarbons, soil, or sediment), which could adversely impact water quality, fish and other aquatic life, and / or fish habitat, can enter the water as a result of the project activities.

6) Bird Nest Surveys and Timing Windows
Birds and their active nests are protected in Canada by the federal MBCA and in the Province of British Columbia (BC) most birds are protected while nesting under Section 34 of the BC Wildlife Act. BMPs outlined in 'Develop with Care' (MOE 2014) recommend tree and vegetation clearing outside the bird breeding period. While the breeding season for bird species varies by species, the bird breeding period is considered provincially to be March 1st to August 30th (MOE 2014). Federal construction timing windows for the general bird breeding period begins mid-March and may extend until late August (Canada 2016). It is recommended that vegetation clearing be completed outside of the general federal bird breeding period. If vegetation clearing is required during the bird breeding period, an AQP would be be engaged to survey the site for active nests and flag no-go buffer zones around an active nest until the nest has fledged. Clearing outside the bird breeding season does not require a pre-clearing survey.

7) Operation of Machinery
The following BMPs should be employed for the general protection of the environment:
• Ensure that machinery arrives on site in a clean condition and is maintained free of fluid leaks, invasive species and noxious weeds.
• Whenever possible, operate machinery on land above the high-water mark, in a manner that minimizes disturbance to the banks and bed of the waterbody.
• Use temporary crossing structures or other practices to cross areas with steep and highly erodible (e.g. dominated by organic materials and silts) banks.
• Wash, refuel and service machinery and store fuel and other materials for the machinery at a minimum of 30m away from waterbodies and in such a way as to prevent any deleterious substances from entering the water.

8) Construction Materials, Practices and Waste
The following are BMPs used to control and mitigate the effects of construction materials:
• Use natural material and environmentally friendly products whenever possible.
• Contain and stabilize waste material (e.g. dredging spoils, construction waste and materials, vegetation) above the high-water mark to prevent them from entering any waterbody.
• All construction materials must be removed from the site on project completion (e.g. refuse material, waste petroleum, construction material).
• Contain waste and transport to an approved waste landfill site.

9) Contaminant and Spill Management
The following are BMPs used to control and mitigate the effects of potential spills:
• Plan activities near water such that hazardous materials do not enter the water.
• Develop a response plan that is to be implemented immediately in the event of a sediment release or spill of a deleterious substance and keep an emergency spill kit on site.
• Make sure that building material used in a watercourse has been handled and treated in a manner to prevent the release or leaching of substances into the water that may be deleterious to fish.

10) Prevent entry of deleterious substances in water
A CEMP will be prepared to specifically address measures to prevent entry of deleterious substances in water (i.e. fuel spill prevention) within the Project Location throughout proposed Project activities. An AQP will regularly inspect the Project Location to assess measures to prevent entry of deleterious substances in water. Environmental monitoring reports will be prepared by the Construction Contractor's AQP and distributed to the Ministry Representative. The AQP will be onsite full time for the duration of the installation of the temporary work trestle. High risk activities that have the potential to adversely impact fish and fish habitat include, but are not limited to: temporary work trestle placement in channel, that same structure removal from watercourse and decommissioning.

Are there any relevant measures that you are unable to incorporate? ○ Yes ◉ No

(If yes, identify which ones.)

All relevant environmental protection measures will be incorporated.

What harmful effects to fish and fish habitat do you foresee after taking into account the avoidance and mitigation measures described above?

Over all, after mitigation measures have been incorporated the Project will result in a benefit of 842.2 m2 of usable instream substrate. The temporary trestle works will result in an area of temporary disturbance of 13.8 m2 which will revert to a net 0 m2 once the structure has been removed.

Do these include effects on aquatic species at risk*? ○ Yes ◉ No

If yes, please describe, including how many individuals will be harmed, harassed, or otherwise affected by the project, and how?

Based on a search of the DFO Aquatics Species at Risk mapping tool, there are no results for SARA listed species or their critical habitat in close proximity to the bridge location. Further communication with C. Carl from DFO based on the March 28, 2023 letter states: 'As your proposal is not likely to result in prohibited effects on listed aquatic species at risk, no permit will be required under the Species at Risk Act'.

Do these include effects on areas identified as their residence or critical habitat? ○ Yes ◉ No

If yes, please describe

Based on a search of the DFO Aquatics Species at Risk mapping tool, there are no results for SARA listed species or their critical habitat in close proximity to the bridge location. Further communication with C. Carl from DFO on March 28, 2023 -the letter states: 'As your proposal is not likely to result in prohibited effects on listed aquatic species at risk, no permit will be required under the Species at Risk Act'.

Are there any aquatic invasive species in the vicinity of your project area? ○ Yes ◉ No

(If yes, identify which ones.)

NA

Does your project aim to, or will it be likely to, effect any of these aquatic invasive species? ○ Yes ◉ No

If yes, how?

NA

All definitions are provided in Section G of the Guidance on Submitting a Request for Review

F) Signature

I, Krista Englund (print name) certify that the information given on this form is to the best of my knowledge, correct and completed.

Krista Englund

Digitally signed by Krista Englund
Date: 2023.03.31 15:46:56 -07'00'

Signature

MM/DD/YYYY 03/31/2023

Date

Information about the above-noted proposed work or undertaking is collected by DFO under the authority of the *Fisheries Act* for the purpose of administering the Fish and Fish Habitat protection provisions of the *Fisheries Act*. Personal information will be protected under the provisions of the *Privacy Act* and will be stored in the Personal Information Bank DFO-PPU-680. Under the *Privacy Act*, Individuals have a right to, and on request shall be given access to any personal information about them contained in a personal information bank. Instructions for obtaining personal information are contained in the Government of Canada's Info Source publications available at www.infosource.gc.ca or in Government of Canada offices. Information other than "personal" information may be accessible or protected as required by the provision of the *Access to Information Act*.

**All definitions are provided in Section G of the Guidance on Submitting a Request for Review*

Guidance on Submitting a Request for Review

This document explains the requirements for a Request for Review by DFO under the fish and fish habitat protection provisions of the *Fisheries Act*. To determine whether you should request a review, visit DFO's Projects Near Water webpage (http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html).

Incomplete Requests for Review will be returned to the applicant without review by DFO. All information requested must be provided. If you attach documents to your application with additional information, you must still provide appropriate summaries in the spaces provided on the application document or your application will be considered incomplete.

Section A: Contact Information

Provide the full legal name of the proponent and primary mailing address for the proponent. When the proponent is a company, identify the full legal registered name of the company.

If applicable, also provide the contact information of the duly authorized representative of the proponent. Please note that a copy of correspondence to Contractor/Agency/Consultant will also be sent to the Proponent.

Section B: Description of Project

This information is meant to provide background about the proposed project. All components of the proposed project in or near water, must be described.

Proponents should provide information about all appropriate phases of the project, i.e., the construction, operation, maintenance and closure phases for the proposed project.

All details about the construction methods to be used, associated infrastructure, permanent and temporary structure, structure type (e.g. corrugated steel pipe vs box culvert), structures dimension, building materials to be used, machinery and equipment to be used must also be provided. For example, the construction of p**ermanent structures** may require the construction of temporary structures such as temporary dikes, in conjunction with other associated activities like the withdrawal of water, land clearing, excavation, grading, infilling, blasting, dredging, installing structures, draining or removing debris from water. Similarly, the equipment and materials to be used may include hand tools, backhoes, gravel, blocks or armor stone (provide the average diameter), concrete (indicate if pre-cast or poured in-water), steel beams or wood.

When physical structures in or near water are proposed, provide the plan and specifications of those works which would require a review.

Section C: Location of the Project

The purpose for this information is to describe and illustrate the location of the proposed project, and to provide geographical and spatial context. The information should also facilitate an understanding of how the project will be situated in relation to existing structures.

The details to be provided must include:

- Coordinates of the project (e.g., Latitude and Longitude or Universal Transverse Mercator Grid coordinates);
- A map(s), site plan, or diagrams indicating the high water mark and the location, size and nature of proposed and existing structures (e.g., floating or fixed), landmarks and proposed activities. In a marine setting, it may be helpful to depict the approximate location of the proposed development on a nautical chart or showing the relation of the site to sea marks or other navigational aids. These plans, maps or diagrams should be at an appropriate scale to help determine the relative size of the proposed structures and activities, the proximity to the watercourse or waterbody and the distance from existing structures;
- The community nearest to the location of the proposal as means to provide a general reference point. When possible, proponents should use geographical names recognized by the Geographical Names Board of Canada (http://www.nrcan.gc.ca/earth-sciences/geography-boundary/geographical-name/11680).
- If available, provide aerial photographs or satellite imagery of the water source(s) and waterbody(ies);
- Names of the watershed(s), water source(s) and/or waterbody(ies) likely to be affected by the proposal; and
- Brief directions to access the proposed project site.

**All definitions are provided in Section G of the Guidance on Submitting a Request for Review*

Section D: Description of the Aquatic Environment

Proponents must describe the environmental context and aquatic resources present at the proposed site. The information must identify the current state of the fish and fish habitat prior to the carrying on of the project.

It is important to include information about the fish species present, the biological, chemical, physical features present (habitat characteristics), and the fish life-cycle functions (fish characteristics).

The spatial scope for assessing fish and fish habitat should encompass the direct physical footprint of the project, and the upstream and downstream areas affected.

As an example, the following is a non-exhaustive and non-prescriptive list of some common attributes which may characterize the aquatic environment:

- Type of water source or watercourse (groundwater, river, lake, marine, estuary, etc.);
- Characteristics of the water source or waterbody could include:
  - Substrate characterization - describe the types of substrate (e.g., bedrock, boulder, cobble, gravel etc.), identify the predominant substrate type (e.g., 80% cobble, 20% gravel etc.) and provide maps of the substrate;
  - Aquatic and riparian vegetation characterization - identify the prevalent types of vegetation (e.g. rooted, submerged, emergent, etc.), identify the relative abundance of the vegetation (e.g., 10% cattails, 80% grass, 10% sedge) , indicate the predominant vegetation (e.g., by species or types) and identify the vegetation densities (e.g., type of vegetation/ area);
  - Flow characterization - specify if the flow is controlled or if it is natural, identify if the flow is permanent or intermittent, identify the current and tide (marine environment) etc.;
  - Physical waterbody characterization - identify the average depth of water for water bodies, identify bathymetry of water bodies, provide bathymetric maps where available, channel width (determine the width of the channel from the high water mark), slope ;
  - Water quality characterization - (e.g., annual or average pH, salinity, alkalinity, total dissolved solids, turbidity, temperature etc.);
  - Biological water quality characterization - (e.g., benthic macro-invertebrates, zooplankton, phytoplankton, etc.)
- Fish species characterization - identify the fish species (including molluscs, crustaceans, etc.) known or suspected to be in the area, predator prey relationships etc. Identify what source of information was used to determine the presence of fish in that area; and
- Estimate the fish abundance - estimate the number of fish present, estimate the year class for each species etc.

There are many different methods and attributes available to characterize fish and fish habitat. Proponents must describe all sources of information used, all fish and environment sampling techniques used, all modelling techniques used and all other approaches used to define the fish and fish habitat. Proponents are encouraged to use recognized fisheries inventory methods such as those approved by DFO or provinces and territories, and/or scientifically defensible methodologies and techniques whenever possible.

Whenever possible, proponents should support descriptions of the aquatic environment with the use of detailed drawings, such as plans or maps and photographs of the habitat features. In an offshore marine setting, photos may not be useful to depict the proposed development site. Instead describe and/or sketch the specific features of the sea floor which may include the presence of submarine features such as canyons, cliffs, caverns, etc.

Section E: Potential Effects of the Proposed Project

The objective of this section is to identify all anticipated effects on fish and fish habitat likely to be caused by the project. Proponents should consider all mitigation or avoidance techniques.

The description must include qualitative and/or quantitative information about the predicted/potential effects to fish species and fish habitat. Some examples of likely effects may include mortality to fish, area of habitat loss, change to flow, changes to habitat function, reduction in prey availability etc.

**All definitions are provided in Section G of the Guidance on Submitting a Request for Review*

The spatial scope of the aquatic effects assessment would include the direct physical "footprint" of the proposed project, and any areas indirectly affected, such as downstream or upstream areas. The footprint of each component of the project below the higher water mark should be provided individually. This may also include areas in or on the water, on the shoreline, coast or bank(s) (i.e., in the riparian zone).

The assessment must include the following attributes:

- Identification of all fish species affected by the proposed project as well as their life stages (e.g., juvenile, yearling, adult, etc.);
- Identification of the type of fish habitat affected (e.g., spawning habitat - gravel and cobble, feeding and rearing areas - side channel slough, small tributaries, etc.), estimate of the affected area (e.g., square meters or hectares);
- Description of the effect (e.g., mortality to fish from entrapment, delayed migration of spawning adults, reduction in prey availability, etc.)
- Probability of the effect - this is the likelihood of the effect occurring (e.g., probability of fish strike from turbines for specific fish sizes, probability of sediment plume within a distance from source, etc., or qualitative assessment: low, medium, high)
- Magnitude of the effect - this is the intensity or severity of the effect (e.g., total number of fish affected, or qualitatively assessment: low, medium, high).
- Geographic extent of the effect - this is the spatial range of the effect (e.g., localized to 100m from the work, channel reach or lake region, entire watershed etc.); and
- Duration of the effect - this is the temporal period for which the effect will persist (e.g., duration of delay to fish migration in hours, days, months or years).

The information to be provided must also describe the methods and techniques used to conduct the assessment. As much as possible, methods and techniques used should be scientifically defensible.

The schedule should, at minimum, identify the proposed start and end dates for carrying out each proposed activity, and where applicable, identify the respective phase of the proposal; i.e., the construction, operation, maintenance and closure phases. In some cases, in order to provide additional context, it may be relevant to identify other information such as the expected life span of permanent and temporary structures.

Proponents must provide comprehensive information about all available measures that are proposed to avoid or mitigate potential harmful alteration, disruption or destruction of fish habitat, or death of fish (e.g., in standards or codes of practice).

Residual harmful impacts that remain after the application of such measures.

It is important to clearly describe and quantify harmful impacts because DFO will use this information as part of its decision making on whether harmful alteration, disruption or destruction of fish habitat or death of fish is likely and an authorization is required under subsection 35(2)(*b*) or 34.4(2)(b) of the *Fisheries Act*.

Section F: Submission and Signature

The proponent must sign their application. A signed original of the Request for Review must be provided to the regional DFO office (http://www.dfo-mpo.gc.ca/pnw-ppe/contact-eng.html), even if an electronic copy was sent by email. Should the review of your project indicate that harmful alteration, disruption or destruction of fish habitat or death of fish is likely, the information provided in the Request for Review document can be referred to in the subsequent application for an authorization under Paragraphs 35(2)(*b*) or 34.4 of the *Fisheries Act*.

Section G: Definitions

Aquatic Species at Risk: an extirpated, endangered, threatened species, or a species of special concern. A non-exhaustive list of aquatic species at risk found in Canadian waters can be found here (http://www.dfo-mpo.gc.ca/species-especes/sara-lep/identify-eng.html).

Aquatic Species at Risk Critical Habitat
the habitat that is necessary for the survival or recovery of a listed wildlife species and that is identified as the species critical habitat in the recovery strategy or in an action plan for the species.

**All definitions are provided in Section G of the Guidance on Submitting a Request for Review*

Aquatic Species at Risk Residence: the specific dwelling place, such as a den, nest or other similar area or a place that is occupied or habitually occupied by one or more individuals during all or part of their life cycles, including breeding, rearing, staging, wintering, feeding, or hibernating.

Aquatic invasive species: are fish, invertebrate or plant species that have been introduced into a new aquatic environment, outside of their natural range. Once introduced, aquatic invasive species populations can grow quickly because they don't have natural predators in their new environment. As a result, they can outcompete and harm native species. They can even alter habitats to make them inhospitable for the native species. A non-exhaustive list of aquatic invasive species can be found here (http://www.dfo-mpo.gc.ca/species-especes/ais-eae/identify-eng.html).

Emergency circumstance: If your project must be conducted in response to an emergency, you may apply for an Emergency Authorization. The emergency situations are:

- The project is required as a matter of national security
- The project is being conducted in response to a national emergency where special temporary measures are being taken under the federal *Emergencies Act*
- The project is required to address an emergency that poses a risk to public health or safety or to the environment or property.

Fish habitat: means habitat that can directly or indirectly support life processes. This includes but is not limited to: spawning grounds, nursery, rearing, food supply and migration areas.

Harmful alteration, disruption or destruction means any temporary or permanent change to fish habitat that directly or indirectly impairs the habitat's capacity to support one or more life processes of fish.

High Water Mark: The usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to leave a mark on the land.