



**PARAGRAPH 35(2)(b) FISHERIES ACT AUTHORIZATION (A DEEMED
PARAGRAPH 35(2)(B) FISHERIES ACT AUTHORIZATION ISSUED
UNDER THE AMENDED FISHERIES ACT)**

Authorization issued to

Canadian National Railway Company (*hereafter referred to as the "Proponent"*)

Attention to:

France Moreau

Manager, Environmental Impact Assessment

935 de La Gauchetière Street W

Montreal, QC H3B 2M9

Location of Proposed Project

Nearest community (city, town, village): Milton, Ontario

Municipality, district, township, county: Halton Region

Province: Ontario

Name of watercourse, waterbody: Indian Creek, Tributaries A and C (unnamed tributaries to Indian Creek)

Longitude and latitude, UTM Coordinates: 43.452870°, -79.833941°; 17T 594342.89 m E, 4811767.50 m N

Description of Proposed Project

The proposed project of which the work, undertaking or activity authorized is a part of involves:

The construction and operation of a satellite intermodal terminal and facility to meet growing operational and commercial needs of Canadian National Railway Company. The works include the realignment and extension of the existing mainline tracks in the Town of Milton, ON, as well as construction of an administration building, maintenance garage, acoustic berms and barriers, and a stormwater collection and drainage system. To accommodate the terminal construction and operation, realignment of portions of Indian Creek and Tributary A is required.

Description of Authorized work(s), undertaking(s) or activity(ies) likely to result in serious harm to fish

The work(s), undertaking(s), or activity(ies) associated with the proposed project described above, that are likely to result in serious harm to fish, are:

- The realignment of 1,075 linear metres of Indian Creek and replacement with a new 570 m channel designed using natural channel design principles.
- The realignment of a 735 metre reach of Tributary A and replacement with a new 513 m channel designed using natural channel design principles. This includes the removal of existing culverts

under the CN tracks and installation of new culverts beneath the Terminal (Culvert 2A, 2.3 m high x 4.0 m wide x 192 m long with low flow channel and resting pools incorporated into the design), the gate area (Culvert 2B, 2.3 m high x 4.0 m wide by 92 m long with low flow channel and resting pools incorporated into the design) and the access road at Britannia Road (Culvert 1, open bottom arch culvert).

- The alteration of 250 linear meters of Tributary C, due to a realignment, including a culvert replacement at Lower Base Line (Culvert 7, 2.4 m side x 75 m long), and a culvert installation at the acoustic barrier (Culvert 6, 30 m long).

The serious harm to fish likely to result from the proposed work(s), undertaking(s), or activity(ies), and covered by this authorization are

- Destruction of 11,503 m² of moderate quality, warm-water fish habitat in Indian Creek.
- Destruction of 2,594 m² of low quality intermittent fish habitat in Tributary A.
- Permanent alteration of 250 m² of low quality intermittent fish habitat in Tributary C.
- Incidental death of fish resulting from site isolation, dewatering, and fish relocation activities.

Conditions of Authorization

The above described work, undertaking or activity must be carried on in accordance with the following conditions.

1. Conditions that relate to the period during which the work, undertaking or activity can be carried on

The work, undertaking or activity is/are authorized to be carried on during the following period:

From Date of Issuance to December 31, 2027.

If the Proponent cannot complete the work, undertaking or activity during this period, Fisheries and Oceans Canada (DFO) must be notified in advance of the expiration of the above time period.

The periods during which other conditions of this authorization must be complied with are provided in their respective sections below.

2. Conditions that relate to measures and standards to avoid and mitigate impacts to fish and fish habitat

2.1 Sediment and erosion control: Sediment and erosion control measures must be in place and shall be upgraded and maintained, such that release of sediment is avoided at the location of the authorized work, undertaking, or activity.

2.1.1 Effective erosion and sediment control measures shall be in place prior to, during, and after construction activities and until revegetation or other mitigation measures are sufficient to control erosion.

2.1.2 Erosion and sediment control measures and structures shall be inspected and maintained on a daily basis during the course of construction by an experienced/qualified erosion and sediment control inspector.

2.1.3 Work that could result in sedimentation shall stop during periods of heavy or persistent rainfall.

2.1.4 All disturbed areas with potential for erosion or introduction of sediment into the watercourse shall be immediately stabilized using temporary erosion and sediment control measures that shall remain in place until vegetation or other long-term erosion and sediment control measures are fully established and functioning.

2.1.5 All temporary, non-biodegradable erosion and sediment control materials shall be removed once vegetation or other long-term erosion and sediment control measures are fully established and functioning.

2.2 List of measures and standards to avoid and mitigate impacts to fish and fish habitat:

- 2.2.1 To protect spawning fish, their incubating eggs and larval life stages, no in-water works shall occur during the restricted activity timing window of March 15 to June 30 of any given year, unless otherwise approved in writing by DFO and the Ontario Ministry of the Environment, Conservation and Parks (MECP).
- 2.2.2 All in-water activities shall be undertaken in isolation (i.e., cofferdam) of open or flowing water to avoid introducing sediment into the watercourse.
- 2.2.3 Temporary cofferdams shall consist of non-permeable material and only materials free of silt and other fine particles shall be used; earthen cofferdams shall not be used for this purpose.
- 2.2.4 The natural flow of water downstream shall be maintained in each watercourse for the duration of in-water construction activities.
- 2.2.5 Should the need for dewatering arise, the water shall be released into a well-vegetated area or settling basin and not directly into any fish-frequented waters. Water returned to fish-frequented waters shall be of equal or better quality than the receiving waters.
- 2.2.6 A qualified environmental professional shall be on site at the onset of in-water work activities and for the duration of the works, undertakings and activities, and shall keep a record of the days and times they are onsite.
- 2.2.7 Prior to any in-water works and/or dewatering activities, a fish rescue shall be completed within all isolated areas.
- 2.2.8 Fish relocation activities shall be undertaken by, or under the direct supervision of, a biologist qualified to identify fish species using appropriate and effective capture and handling procedures designed to minimize mortality and with a level of effort to effectively mitigate the death of fish by stranding. All fish shall be released unharmed to similar habitat within the watercourse outside of the isolation site.
- 2.2.9 Where water is pumped from the waterbody for any purpose, pump intakes shall be screened in accordance with DFO's Interim code of practice for end-of-pipe fish protection screens. The outlet shall have a diffuser to dissipate energy or shall be placed in a location that is not subject to erosion from the outflow.
- 2.2.10 Any excavated or stockpiled material shall be stored above the high water level, and located and stabilized so that it cannot enter the watercourse.
- 2.2.11 All spoil material and construction debris shall be removed from the site upon project completion and properly disposed of in a manner that it cannot enter the watercourse.
- 2.2.12 Appropriately-sized, clean rock shall be used to stabilize eroding or exposed areas, and shall be installed at a similar slope to maintain a uniform bank/shoreline and natural stream/shoreline alignment. Any rip rap, cobble and/or gravel used for the project must be clean and free of fine sediments and shall not be taken from below the normal high water line of any waterbody.
- 2.2.13 Equipment shall arrive on site in a clean condition and be maintained free of fluid leaks, invasive species, deleterious diseases to aquatic flora and fauna, and noxious weeds.
- 2.2.14 Equipment operating in or near fish-frequented waters shall be operated, refuelled, and serviced in a manner that prevents spills, leaks, or wash water from entering fish-frequented waters.
- 2.2.15 Activities near water shall be planned such that materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, poured concrete or other chemicals do not enter the watercourse.
- 2.2.16 Any building material used in the watercourse shall be handled and treated in a manner to prevent the release or leaching of substances into the water that may be deleterious to fish.
- 2.2.17 A response plan shall be in place in the event of a sediment release or spill of a deleterious substance. A spill kit and spill containment provisions shall be kept on site at all times. Appropriate personnel at the worksite shall be familiar with the location and use of the spill kit and spill response plan.

2.3 Contingency measures: DFO shall be notified immediately and contingency measures shall be put in place by the Proponent if monitoring required in section 3 below indicates that the measures and standards to avoid and mitigate impacts to fish and fish habitat are not successful. In the event that measures and standards to avoid and mitigate impacts to fish and fish habitat did not function as described, the Proponent shall develop and implement contingency measures in consultation with, and to the satisfaction of DFO to correct the situation and minimize impacts to fish and fish habitat. Monitoring and regular reporting of the corrective actions taken shall be provided to DFO until the contingency measures are successful and the Proponent is in compliance.

2.4 Dates by which these measures and standards shall be implemented: Measures and standards to avoid and mitigate impacts to fish and fish habitat shall be implemented prior to, during, and following the initiation of works, undertakings or activities.

3. **Conditions that relate to monitoring and reporting of measures and standards to avoid and mitigate impacts to fish and fish habitat**

3.1 Monitoring of avoidance and mitigation measures: The Proponent shall monitor the implementation of avoidance and mitigation measures referred to in section 2 of this authorization and report to DFO, **by December 31** of the year in which construction monitoring is undertaken, and indicate whether the measures and standards to avoid and mitigate impacts to fish and fish habitat were conducted according to the conditions of this authorization. This shall be done, by:

3.1.1 Demonstration of effective implementation and functioning: Providing dated photographs and inspection reports to demonstrate effective implementation and functioning of mitigation measures and standards described above to limit the impacts to fish and fish to what is covered by this authorization.

3.1.2 Contingency measures and adaptive management measures: The Proponent shall provide details of any contingency measures or adaptive management measures that were followed, to prevent impacts greater than those covered by this authorization in the event that mitigation measures did not function as described.

4. **Conditions that relate to offsetting**

4.1 Letter of credit: DFO may draw upon funds available to DFO as the beneficiary of the letters of credit provided to DFO as part of the application for this authorization Letters of Credit Nos. S300205T (\$4,943,771.00) and S300206T (\$211,189.00) to cover the costs of implementing and maintaining the offsetting measures required to be implemented under this authorization, including the associated monitoring measures included in section 5 of this authorization, in instances where the Proponent fails to implement these required measures.

4.2 Scale and description of offsetting measures: Offsetting measures shall be undertaken adjacent to the existing channels of Indian Creek and Tributary A. The offsetting measures shall be carried out in accordance with the measures set out in the Proponent's offsetting plan *CN Milton Logistics Hub – Letter of Intent to Implement Offsetting Measures – FINAL REPORT* dated May 18, 2021 approved by DFO. Measures shall include:

4.2.1 Construction of a new 570 m long realigned channel providing 5,990 m² of habitat on Indian Creek that incorporates natural channel design principles to replace the section of the existing channel that will be infilled. An additional 6,670 m² of connected wetlands will be constructed on Indian Creek as well as a retained oxbow to provide additional seasonal fish habitat for spawning and rearing. The new channel will be built in the dry and will be allowed to stabilize prior to the diversion of flow into the new channel.

4.2.2 Construction of a new 513 m long realigned channel providing 1,760 m² of habitat in Tributary A that incorporates natural channel design principles to replace the section of the existing channel that will be infilled. An additional 1,950 m² of connected wetlands will be constructed

- to provide additional seasonal fish habitat. The new channel will be built in the dry and will be allowed to stabilize prior to the diversion of flow into the new channel.
- 4.2.3 An additional 59,390 m² area of riparian and floodplain enhancements will also be constructed along Indian Creek and a further 13,420 m² of riparian and floodplain enhancements will be constructed along Tributary A. These enhancements will reduce erosion potential and improve water quality and habitat quality throughout the area. This includes diverse vegetation plantings to increase riparian cover, and increase bank stability along the watercourses.
- 4.3 Offsetting criteria to assess the implementation and effectiveness of the offsetting measures: All fish habitat offsetting measures shall be completed and functioning according to the criteria below and as set out in the Proponent's offsetting plan *CN Milton Logistics Hub – Letter of Intent to Implement Offsetting Measures – FINAL REPORT* dated May 18, 2021.
- 4.3.1 All instream habitat features shall be shown to be constructed as designed and stable as assessed by visual inspection, detailed cross-section profile survey, pebble counts and longitudinal profile survey.
- 4.3.2 All instream habitat features shall be available to fish immediately following diversion of flow into the new channel and shall be assessed for fish presence in the offsetting area using in-water visual inspection or appropriate sampling methods.
- 4.3.3 All riparian habitat features shall be shown to be planted as per the Proponent's riparian and floodplain enhancement plan and stable as assessed by visual inspection.
- 4.4 Contingency measures: If the results of monitoring as required in section 5 indicate that the offsetting measures are not completed by the date specified and/or are not functioning according to the above criteria in 4.3, the Proponent shall give written notice to DFO and shall implement the contingency measures, adaptive management measures and associated monitoring measures, as contained within the approved offsetting plan (referenced in section 4.2), and as set out in section 5 of this authorization, to ensure the implementation of the offsetting measures is completed and/or functioning as required by this authorization.
- 4.4.1 Scale and description of contingency measures: The Proponent shall conduct necessary works, undertakings, or activities to ensure the structural stability and ongoing functionality of any contingency offsetting habitat to the satisfaction of DFO to ensure the offsetting is completed and/or functioning as required by this authorization.
- 4.4.1.1 Should the offsetting measures be deemed unstable or deficient following the first year of monitoring, adjustments to or replacements of the offsetting measures shall be implemented by the Proponent within one (1) year to ensure the intended functioning of the offsetting measures as required by this authorization.
- 4.4.1.2 Should the offsetting measures not meet the predicted results in terms of the intended functioning of the habitat, additional contingency offsets shall be determined through consultation with DFO.
- 4.4.2 Monitoring measures to ensure offsetting contingency is completed and/or functioning as required: The Proponent shall implement monitoring measures to the satisfaction of DFO to ensure the offsetting contingency measures are completed and/or functioning as required by this authorization.
- 4.5 The Proponent shall not carry on any work, undertaking or activity that will adversely impact the offsetting measures.
- 4.6 The Proponent shall obtain written permission for the Proponent, DFO, and anyone authorized to act on behalf of DFO, to access lands, water sources, or water bodies that are not owned by or under the care, control, or administration of the Proponent that must be accessed in order to implement the offsetting measures in this section and the monitoring of said measures.
- 4.7 The Proponent shall provide the written permission to DFO prior to the commencement of the Authorized work(s), undertakings(s) or activity(ies) that are likely to result in impacts to fish and fish

habitat described herein, and prior to the commencement of the implementation of the Proponent's offsetting plan referred to in condition 4.2 that is to take place on lands or in water sources or water bodies not owned by or under the care, control, or administration of the Proponent.

5. **Conditions that relate to monitoring and reporting of implementation of offsetting measures (described in section 4):**

5.1 Schedule(s) and criteria: The Proponent shall conduct monitoring of the implementation of offsetting measures according to the timeline and criteria below:

5.1.1 List of timeline(s) and monitoring and reporting criteria: The Proponent shall provide annual reports to DFO prior to the end of each post-construction monitoring year for five years following implementation of the offsetting measures, as per Condition 5.2 below.

5.1.1.1 A digital photographic record of pre-construction, during construction and post construction conditions shall be compiled using the same vantage points and direction to show that the approved works have been completed in accordance with the Proponent's application for a *Fisheries Act* authorization dated December 24, 2019, approved by DFO. This information shall be provided to DFO as part of the final construction monitoring report due **on or before December 31, 2022 (Year 0)**.

5.1.1.2 An as-built survey of the constructed offsetting measures shall be conducted according to the Proponent's application for a *Fisheries Act* authorization dated December 24, 2019, approved by DFO. The as-built survey shall be provided to DFO as part of the final construction monitoring report due **on or before December 31, 2022 (Year 0)**.

5.1.1.3 The success of the offsetting measures shall be assessed as per *Section 5.0 Monitoring* of the Proponent's *CN Milton Logistics Hub – Letter of Intent to Implement Offsetting Measures – FINAL REPORT* dated May 18, 2021 approved by DFO, and shall include the following:

- Assessment of post-construction channel conditions: Geomorphic monitoring of the new channel will be undertaken to document overall stability and to identify any potential areas of concern for subsequent monitoring. Should areas of concern requiring corrective action be identified during the course of the monitoring program, the Proponent shall develop and implement contingency measures to the satisfaction of DFO.
- Assessment of fish habitat utilization: Monitoring of the new channel will be undertaken twice annually in the late spring/early summer and fall to document fish presence in the offsetting area; protocols will include in-water visual inspection and standard sampling methods.
- Vegetation/landscape monitoring: Revegetation efforts shall be monitored annually in the fall for survival in each year of the monitoring period. A minimum annual target of 80% survival of plantings shall be adopted by the Proponent, with replacement of all planted material to ensure a minimum of 80% survival at the end of Year 5.
- Photo inventory: Photographs will be collected from fixed vantage points to record overall channel corridor conditions and specific habitat components (e.g., channel stability, success of vegetative growth, etc.) throughout the monitoring period and to document conditions within the area of detailed monitoring sites.

5.1.1.4 If one or more of the success criteria (as described in Condition 5.1.1.3 above) are not met following the monitoring period, a contingency work plan shall be developed and implemented by the Proponent. This work plan shall be reviewed and approved by DFO prior to implementation.

5.2 List of reports to be provided to DFO: The Proponent shall report to DFO on whether the offsetting measures were conducted according to the conditions of this authorization by providing the following:

- 5.2.1 The results of post-construction offsetting monitoring (as described in 5.1.1.3 above) shall be submitted in an annual report due to DFO in each year in which monitoring is conducted:
- 5.2.1.1 Year 0 as-built/construction monitoring report due on or before **December 31, 2022**;
 - 5.2.1.2 Year 1 post-construction offsetting monitoring report due on or before **December 31, 2023**;
 - 5.2.1.3 Year 2 post-construction offsetting monitoring report due on or before **December 31, 2024**;
 - 5.2.1.4 Year 3 post-construction offsetting monitoring report due on or before **December 31, 2025**;
 - 5.2.1.5 Year 4 post-construction offsetting monitoring report due on or before **December 31, 2026**;
 - and,
 - 5.2.1.6 Year 5 final post-construction offsetting monitoring report due on or before **December 31, 2027**.
- 5.2.2 The post-construction offsetting monitoring reports for Years 0-4 shall consist of a summary of field observations from each respective year, as well as the as-built survey. The final Year 5 post-construction offsetting monitoring report shall consist of a detailed analysis report summarizing the effectiveness of the offsetting measures implemented as part of this Authorization and shall also include a compiled summary of the monitoring efforts completed over the monitoring period.
- 5.3 Other monitoring and reporting conditions for offsetting: Not applicable

Authorization Limitations and Application Conditions

The Proponent is solely responsible for plans and specifications relating to this authorization and for all design, safety and workmanship aspects of all the works associated with this authorization.

The holder of this authorization is hereby authorized under the authority of Paragraph 35(2)(b) of the *Fisheries Act*, R.S.C., 1985, c.F-14, to carry on the work(s), undertaking(s) and/or activity(ies) that are likely to result in serious harm to fish as described herein.

This authorization does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

This authorization does not permit the deposit of a deleterious substance in water frequented by fish. Subsection 36(3) of the *Fisheries Act* prohibits the deposit of any deleterious substances into waters frequented by fish unless authorized by regulations made by Governor in Council.

At the date of issuance of this authorization, no individuals of aquatic species listed under the *Species at Risk Act* (SARA) were identified in the vicinity of the authorized works, undertakings or activities.

In accordance with *An Act to amend the Fisheries Act and other Acts in consequence*, this authorization is deemed to have been issued under the authority of paragraph 35(2)(b) of the *Fisheries Act* as those paragraphs read after the day on which section 22 of *An Act to amend the Fisheries Act and other Acts in consequence* came into force, on August 28, 2019.

The failure to comply with any condition of this authorization constitutes an offence under Paragraph 40(3)(a) of the *Fisheries Act*, and may result in charges being laid under said Act.

This authorization must be held on site and work crews must be made familiar with the conditions attached.

This authorization cannot be transferred or assigned to another party. If the work(s), undertaking(s) or activity(ies) authorized to be conducted pursuant to this authorization are expected to be sold or transferred, or other circumstances arise that are expected to result in a new Proponent taking over the work(s), undertaking(s) or activity(ies), the Proponent named in this authorization shall advise DFO in advance.

Date of Issuance: July 23, 2021

<Original signed by>

Approved by:

C. Thomas Hoggarth
A/Regional Director General
Ontario and Prairie Region
Fisheries and Oceans Canada