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March 8, 2023

Filed Electronically

Canada Energy Regulator
Suite 210, 517 Tenth Avenue SW
Calgary, AB T2R 0A8

Attention: Ms. Ramona Sladic, Secretary of the Commission

Dear Ms. Sladic:

**Re: NOVA Gas Transmission Ltd. (NGTL)
NGTL West Path Delivery 2023 Project (Project)
Certificate GC-134 (Certificate)
Condition 23: Authorizations under paragraph 35(2)(b) of the *Fisheries Act*
File: OF-Fac-Gas-N081-2020-07 02**

In accordance with Certificate Condition 23 part a),¹ NGTL confirms receipt of authorization for the Project pursuant to Paragraphs 34.4(2)(b) and 35(2)(b) of the *Fisheries Act*, and sections 73 and 74 of the *Species at Risk Act*, as attached, from Fisheries and Oceans Canada, which were provided to the Canada Energy Regulator (CER or Commission) on January 13, 2022.²

If the CER requires additional information with respect to this filing, please contact me by phone at (403) 920-5198, or by email at david_yee@tcenergy.com.

Yours truly,
NOVA Gas Transmission Ltd.

Original signed by

David Yee
Regulatory Project Manager
Regulatory Facilities, Canadian Natural Gas Pipelines

Enclosure

cc: Kevin Hill, Canada Energy Regulator

¹ Filing ID: C22329.

² Filing ID: C17186.



Paragraphs 34.4(2)(b) and 35(2)(b) *Fisheries Act* Authorization Also Acting as a Permit Under the *Species at Risk Act*

Authorization issued to

NOVA Gas Transmission Limited (*hereafter referred to as the "Proponent"*)

Attention to:

Craig Schell
450 – 1 Street SW
Calgary, AB
T2P 5H1

Dana Charlton
450 – 1 Street SW
Calgary, AB
T2P 5H1

Location of Proposed Project

Nearest communities (city, town, village): Lundbreck, Pekisko, Turner Valley

Municipality, district, township, county: Municipal District of Pincher Creek No.9, Foothills County

Province: Alberta

Name of watercourse, waterbody: Multiple watercourses including Threepoint Creek, Pekisko Creek, and Tributaries of Rock Creek

Turner Valley Section

- Threepoint Creek (WC-007.00): NE-4-21-33-W5M
- Unnamed Lake (WS-002 - water withdrawal location): NE 27-20-3 W5M
- Unnamed Lake (WS-003 - water withdrawal location): NE 27-20-3 W5M
- Threepoint Creek (WS-004 - water withdrawal location): NE 4-21-3 W5M
- Threepoint Creek (WS-004a - water withdrawal location): SE 3-21-3 W5M
- Unnamed Lake (WS-005 - water withdrawal location): NE 9-21-3 W5M
- Unnamed Lake (WS-009 - water withdrawal location): NE 4-22-3 W5M
- Priddis Creek (WS-012 - water withdrawal location): NE 20-22-3 W5M
- Unnamed Lake (WS-015 - water withdrawal location): NE 33-22-3 W5M
- Threepoint Creek (WS-019.00 - water withdrawal location): SE 3-21-3 W5M

Longview Section

- Pekisko Creek (WC-002.00): SW-17-17-2-W5M
- Stimson Creek (WS-001 - water withdrawal location): NW 33-16-2 W5M
- Unnamed Waterbody/Open Water 1 (WS-002 - water withdrawal location): NW 9-17-02 W5M
- Pekisko Creek (WS-004 - water withdrawal location): SE-17-17-2-W5M 333

- Chain Lakes Reservoir (WS-006 - water withdrawal location): SW 28-15-02 W5M

Lundbreck Valley Section

- Unnamed Tributary to Rock Creek (WC-002.00): SE-4-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-002.00-TC - vehicle crossing): SE-4-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-003.00): NW-3-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-004A.00/WC-004B.00/WC-004C.00): NW-3-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-004.TC - vehicle crossing): NW-3-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-005.00): NW-3-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-005.TC - vehicle crossing): NW-3-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-006.00): SE-10-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-006.PC - vehicle crossing): SE-10-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-007.00): SE-10-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-007.PC - vehicle crossing): SE-10-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-008.00): SE-10-8-3-W5M
- Unnamed Tributary to Rock Creek (WC-009.00): SE-10-8-3-W5M
- Crowsnest River (WS-004 - water withdrawal location): NE 36-07-04 W5M
- Gold Creek (WS-018 - water withdrawal location): SW 31-074-03 W5M

Valid Authorization Period

This Authorization remains in force from the **Date of Issuance** until **February 7, 2030**

Please note that this Authorization may contain more specific timing requirements and limitations. These are set out in the Conditions of Authorization section.

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 new 1,219 mm (NPS 48) outside diameter natural gas pipeline and associated facilities. The new pipeline will be installed parallel or adjacent to the existing NOVA Gas Transmission Limited (NGTL) System, and runs through southwest Alberta from Millarville to Lundbreck. The new pipeline will cross several watercourses, including some that are designated as critical habitat for Bull Trout (*Salvelinus confluentus*), Saskatchewan - Nelson Rivers populations, listed as Threatened and Westslope Cutthroat Trout (*Oncorhynchus clarkii lewisi*), Saskatchewan-Nelson River population listed as Threatened under Schedule 1 of the *Species at Risk Act*, herein referred to as Bull Trout and Westslope Cutthroat Trout.

Works include:

- Installation of a new 1,219 mm diameter pipeline using trenched methods at 10 watercourse crossing sites, including isolation/dewatering and redirection of flows to allow for work to occur in the dry;
- Clearing of riparian vegetation from within the proposed right of way at 10 sites;
- Installation of temporary clear-span bridges at all watercourse crossings for access during construction;
- Upgrading existing access road at WC-006-PC and WC-007-PC on Unnamed Tributaries of Rock Creek with permanent culvert crossings;

- Water withdrawal activities at 16 locations along the right-of-way to support construction activities, and;
- Reclamation and clean up activities.

Description of Authorized work(s), undertaking(s) or activity(ies) likely to result in the death of fish by means other than fishing:

The work(s), undertaking(s), or activity(ies) associated with the proposed project described above, that are likely to result in the death of fish by means other than fishing, are:

- Isolation of in-water work areas using temporary cofferdams.
- Dewatering of in-water work areas using pumps.
- Fish relocation activities.

Description of Authorized work(s), undertaking(s) or activity(ies) likely to result in the harmful alteration, disruption or destruction of fish habitat:

The work(s), undertaking(s), or activity(ies) associated with the proposed project described above, that are likely to result in the harmful alteration, disruption or destruction of fish habitat, are:

- The temporary isolation, dewatering, and redirection of instream flows to allow works, undertakings and activities to occur in isolation of open or flowing water at watercourse crossing locations designated as critical habitat for Bull Trout and Westslope Cutthroat Trout.
- The installation of a new 1,219 mm outside diameter pipeline and upgrades to the existing access roads (including culverts and bridges) at watercourse crossing locations designated as critical habitat for Bull Trout and Westslope Cutthroat Trout using isolated trenched crossing methods.

Description of Authorized activity(ies) likely to result in prohibited impacts to aquatic species at risk, their critical habitat and/or the residences of their individuals:

The activity(ies) associated with the proposed project described above, that are likely to result in prohibited impacts to aquatic species at risk, their critical habitat and/or the residences of their individuals, are:

- The removal of riparian vegetation from within 30 m of the high water mark at watercourse crossing locations designated as critical habitat for Bull and Westslope Cutthroat Trout.
- The incidental capture and/or harm and harassment of Bull Trout and/or Westslope Cutthroat Trout, listed as Threatened, during site isolation, dewatering, water withdrawal and fish relocation activities.

The authorized work(s), undertaking(s), or activity(ies) are likely to result in the following impacts to fish and fish habitat:

- The harmful alteration, disruption or destruction of 2,138 m² (530 m² on Turner Valley Section, 660 m² on Longview section, and 948 m² on Lundbreck section) of fish habitat resulting from site isolation and dewatering activities, upgrades to existing access roads (including culverts and bridges), and the installation of a new 1,219 mm outside diameter natural gas pipeline using isolated trenched crossing methods at 10 watercourse crossing locations.
- The harmful alteration, disruption or destruction of 35,480 m² (2,150 m² on Turner Valley Section, 2,070 m² on Longview section, and 31,260 m² Lundbreck section) of critical habitat for

Bull Trout and/or Westslope Cutthroat Trout, resulting from removal of riparian vegetation from within 30 m of the high water mark at 10 watercourse crossing locations.

- The incidental death of fish resulting from site isolation, dewatering, water withdrawal and fish relocation activities.
- The killing, harming, harassing, capturing or taking of an individual of Bull Trout and/or Westslope Cutthroat Trout (resulting from site isolation, dewatering, water withdrawal 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 that is/are authorized to be carried on during the following period:

From Day of Issuance to March 31, 2024

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. An application for amendment, suspension or cancellation of the authorization should be submitted to DFO.

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, including impacts to aquatic species at risk, their critical habitat and/or the residences of their individuals.**

- 2.1 Erosion and sediment control: Erosion and sediment 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 regular basis during the course of construction, and during the post-construction reclamation phase. Inspections shall occur more frequently prior to and during periods of heavy or persistent precipitation. Inspections shall be conducted by an experienced/qualified environmental inspector or Qualified Aquatic Environmental Specialist. Structures shall be repaired or upgraded as required.
- 2.1.3 Work that could result in sedimentation shall stop during periods of heavy or persistent precipitation.
- 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 Upon watercourse crossing completion, rapid recovery techniques for revegetation shall be utilized where applicable and may include bioengineering (e.g., live planting) methods.

- 2.1.6 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 including impacts to aquatic species at risk, their critical habitat and/or the residences of their individuals:
- 2.2.1 All in-water activities, other than placement of bypass pumps, water intakes, and discharge diffusers, shall be undertaken in isolation (i.e., cofferdam) of open or flowing water to avoid introducing sediment into the watercourse.
- 2.2.2 Culverts installed along the permanent access road in the Lundbreck Section (WC-0006-PC and WC-007-PC) shall be installed to maintain aquatic habitat connectivity and surface flows to downstream watercourses.
- 2.2.3 Follow the DFO *Code of practice: Clear span bridges*, when constructing clear-span and free-span bridges for vehicle access.
- 2.2.4 Temporary cofferdams shall consist of non-permeable material and only materials free of erodible material shall be used; earthen cofferdams shall not be used for this purpose.
- 2.2.5 A water quality monitoring plan shall be implemented in accordance with the specifications and procedures outlined by the Proponent in their documents *NGTL WEST PATH DELIVERY 2023 PROJECT WATER QUALITY MONITORING PLAN* dated December 2, 2022, or any subsequent versions, and shall include response plans if inspections indicate sediment release above baseline has occurred. The plan shall include the following components:
- 2.2.5.1 All construction monitoring activities related to in-water works shall be coordinated by a Qualified Aquatic Environmental Specialist (QAES).
- 2.2.5.2 Water quality shall be monitored for the duration of in-water works to detect a sediment release and support the early implementation of a response plan if a sediment release occurs.
- 2.2.5.3 Visual monitoring shall be conducted to detect a sediment release or spill of a deleterious substance resulting from works, undertakings or activities.
- 2.2.5.4 Sediment releases shall be reported promptly to DFO and other relevant authorities.
- 2.2.6 The natural flow of water downstream shall be maintained in each watercourse for the duration of in-water construction activities.
- 2.2.7 Follow the DFO *Interim code of practice: Temporary cofferdams and diversion channels*.
- 2.2.8 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.
- 2.2.9 A QAES shall be on site during works, undertakings or activities occurring within riparian and aquatic critical habitat. The QAES shall determine when their presence is required on site throughout the authorized works, undertakings and activities.
- 2.2.10 Prior to any in-water works and/or dewatering activities, a fish rescue shall be completed within all isolated areas. Fish handling, relocation, and monitoring activities shall be undertaken by, or under the direct supervision of, a biologist qualified to identify and safely handle aquatic species at risk and who is certified as a QAES.
- 2.2.11 Fish rescue and relocation activities shall be conducted in a manner whereby any individuals of a fish, including a species at risk (SAR), shall be handled only in the circumstances authorized and with the least amount of harm.
- 2.2.12 SAR shall be sorted from the non-SAR and processed before all other species.
- 2.2.13 During processing, fishes shall be held in an aerated live well or multiple buckets/tubs to avoid overcrowding, and water in buckets/tubs shall be replaced as required to maintain dissolved oxygen levels and water temperatures.
- 2.2.14 All captured fish shall be relocated to an appropriate location within the same watercourse from which they were captured and in an area that prevents them from being further disturbed by the construction activities.
- 2.2.15 All suitable release areas for fish shall be predetermined using the NGTL fish and fish habitat assessments, completed as referenced in NGTL West Path Delivery 2023 Supplemental

Information in Support of a Fisheries Request for Review submitted on December 23, 2021 and Supplemental Information in Support of an Application for Fisheries Act Authorization submitted June 3, 2022, and holes shall be pre-emptively augured through the ice at suitable locations if works are occurring during winter conditions. All locations shall be field verified by a QAES prior to fish rescue activities.

- 2.2.16 Where water is pumped from a waterbody for any purpose, pump intakes shall be screened in accordance with DFO's *Interim code of practice: End-of-pipe fish protection screens for small water intakes in freshwater*. 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.
 - 2.2.17 Water withdrawal activities shall be conducted in accordance with best practices and mitigation measures outlined in DFO's *Measures to Protect Fish and Fish Habitat*.
 - 2.2.18 Water withdrawal rates shall be limited to less than 10% of the instantaneous flow in watercourses to protect aquatic habitat.
 - 2.2.19 A QAES shall evaluate water withdrawal locations prior to the commencement of activities to ensure pumps and intakes are not located within active spawning areas.
 - 2.2.20 Where water sources overlap mapped critical habitat for SAR, existing cleared areas shall be utilized, and no new riparian clearing shall be undertaken.
 - 2.2.21 Any excavated or stockpiled material, including trees, debris and other spoil material, shall be stored above the ordinary high water mark and outside of the riparian critical habitat area, and located and stabilized in a manner that it cannot enter the watercourse.
 - 2.2.22 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.
 - 2.2.23 Equipment and machinery 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 provincially-listed weeds.
 - 2.2.24 Equipment operating in or near a waterbody or watercourse shall be operated, refueled, and serviced in a manner that prevents spills, leaks, or wash water from entering the water.
 - 2.2.25 Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water.
 - 2.2.26 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.
 - 2.2.27 Impacts on aquatic habitat and riparian vegetation shall be limited to the area required to carry out the works, undertakings and activities.
 - 2.2.28 Riparian vegetation shall be removed by pruning or topping instead of grubbing/uprooting to the greatest extent possible.
 - 2.2.29 Trees shall be felled away from watercourses where feasible.
 - 2.2.30 Stream banks and riparian vegetation affected by the works, undertakings and activities shall be restored to their natural state (i.e., profile, vegetation, etc.).
 - 2.2.31 Disturbed areas shall be revegetated with native species suitable for the site.
 - 2.2.32 Habitat structure (e.g., large woody debris, boulders, instream aquatic vegetation/substrate) shall be salvaged, reinstated and/or matched to its initial state.
 - 2.2.33 Stream geomorphology (i.e., the bed and banks, gradient and contour of the watercourse) shall be restored to its initial state.
 - 2.2.34 Any other disturbed habitat features shall be replaced and/or restored and any areas impacted by the works, undertakings and activities shall be remediated.
- 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 including impacts to aquatic species at risk, their critical habitat and/or the residences of their individuals are not successful. In the event that measures and standards to avoid and mitigate impacts to fish and fish habitat, including impacts to aquatic species at risk, 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, including impacts to aquatic species at risk. 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 including impacts to aquatic species at risk, their critical habitat and/or the residences of their individuals 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, including impacts to aquatic species at risk, their critical habitat and/or the residences of their individuals.**
- 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 **January 31** of the year following in which monitoring is undertaken, and indicate whether the measures and standards to avoid and mitigate impacts to fish and fish habitat, including impacts to aquatic species at risk, their critical habitat and/or the residences of their individuals, were conducted according to the conditions of this authorization. This shall be done, by:
- 3.1.1 Demonstration of effective implementation and functioning: The Proponent shall provide 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 habitat including impacts to aquatic species at risk, their critical habitat and/or the residences of their individuals to what is covered by this authorization.
- 3.1.2 All watercourse crossings shall be shown to be restored to their initial state, stable, and functioning as intended. The condition of watercourse crossings shall be verified using site-specific data collected during monitoring visits, including information on substrate composition, water depth, and water velocity.
- 3.1.3 The Proponent shall conduct monitoring to minimize the risk of injury or death of fish during water withdrawal and fish relocation operations. Such activities shall include monitoring for fish entrainment during water withdrawal and continual monitoring of fish health throughout the fish relocation operations.
- 3.1.4 Contingency measures: Providing details of any contingency 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.
- 3.2 Other monitoring and reporting conditions:
- 3.2.1 The injury or death of **any** individual(s) of Bull Trout and/or Westslope Cutthroat Trout and/or any other species at risk resulting from activities authorized herein shall be reported to DFO at the end of each day of the occurrence along with digital (photo) vouchers. Additional measures to avoid and mitigate harm and impacts to aquatic species at risk shall be developed and submitted to DFO (if requested) for approval prior to works recommencing.
- 3.2.2 Digital vouchers with distinguishing characteristics clearly photographed for each fish species caught (both species at risk and other species) during fish relocation activities shall be collected at every watercourse crossing. Photo vouchers shall be taken while SAR are fully submersed in a net or viewing box. The Proponent shall retain digital vouchers unless/until requested by DFO; if desired, vouchers may be discarded after one (1) year from the time of collection.
- 3.2.3 Using the spreadsheet provided, a data summary identifying all species (both species at risk and other species) caught during water withdrawal activities or watercourse crossing installations (including number caught, date of capture, latitude and longitude, etc.) shall be recorded and sent to Brittany Hesjedal (Brittany.Hesjedal@dfo-mpo.gc.ca) no later than **January 31st of each year following water withdrawals and/or fish relocations occur.**

4. Conditions that relate to offsetting

- 4.1 Letter of credit: DFO may draw upon funds available to DFO as the beneficiary of the letter of credit provided to DFO as part of the application for this authorization (Letter of Credit No. OSB267982GWS in the amount of \$813,422.00), 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 within the watercourses and within the new and existing NGTL pipeline right of way adjacent to watercourse crossing locations designated as critical habitat for Bull Trout and/or Westslope Cutthroat Trout. The offsetting measures shall be carried out in accordance with the measures set out in the Proponent's offsetting plans and supporting documentation dated June 3, 2022 or thereafter or any subsequent versions of these plans approved by DFO. Measures shall include:
- 4.2.1 Application of bank restoration treatments to increase structural integrity, cover and shading and reduce erosion potential. Bank restoration treatments shall include a combination of the following: willow staking, cribwalls, logwalls, vegetated geotextile, brush layering, and rooted stocks and/or other treatments approved by DFO.
- 4.2.2 Installation of tree revetments or large woody debris and boulder clusters to provide cover and other habitat functions within the new NGTL pipeline right of way adjacent to selected watercourse crossing locations. Tree revetments shall consist of multiple trees installed along the banks of the watercourse placed with branches facing instream. Large woody debris cover shall consist of trees placed and anchored over top of the watercourse from bank to bank and material shall be tagged to enable monitoring.
- 4.2.3 Planting of trees, shrubs and native grasses in riparian areas within 30 m of the high water mark to provide food, instream structure, and shade and to moderate water temperatures, promote infiltration, and limit the potential for erosion and sedimentation. Vegetation will be planted to restore cleared areas within the new right of way and to improve areas within the existing NGTL pipeline right of way adjacent to selected watercourse crossing locations. Trees and shrubs will be planted to match adjacent natural habitat types, including mature forest, wetland, and/or grassland habitat (e.g., density, species composition, etc. based on the Alberta Vegetation Inventory Standards indicated for each site).
- 4.2.4 Cattle exclusion fencing will be installed around riparian offsetting measures (e.g. vegetation plantings in areas of proposed riparian offsetting) to reduce the impacts of livestock on revegetated riparian areas.
- 4.2.5 Rehabilitation of existing livestock and off-highway vehicle (OHV) crossings at Rock Creek (downstream from WC-004) and at tributaries to Rock Creek (WC-002, 004, and 005) through the installation of permanent fords to reduce erosion of the bed and banks and to limit the potential for sediment and other deleterious substances from entering watercourses. Ford designs are subject to DFO review and approval.
- 4.2.6 Replacement of perched culverts located on tributaries to Rock Creek (WC-009-CV1, WC-009-CV3, and WC-009-CV4) to restore fish passage to upstream habitats and reduce fragmentation of fish habitat. A clear span bridge will be installed at WC-009-CV1, and either a clear span bridge or a culvert designed for fish passage will be installed at WC-009-CV3 and WC-009-CV4. Culvert designs are subject to DFO review and approval.
- 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 plans and supporting documentation dated June 3, 2022 or thereafter or any subsequent versions of these plans approved by DFO:
- 4.3.1 All bank restoration treatments shall be shown to be constructed as designed, and stable and functioning as intended. The condition of bank restoration treatments shall be verified using aerial imagery and site-specific data collected during monitoring visits, including information on bank stability, percent survival of planted vegetation, and species composition.

- 4.3.2 All tree revetments, large woody debris and boulder cluster installations shall be shown to be constructed as designed, and stable and functioning as intended. The condition of tree revetments, large woody debris and boulder cluster installations shall be verified using aerial imagery and site-specific data collected during monitoring visits, including information on the percentage/area of available cover, the stability of the installations. Anchored woody debris will be assessed to have no loss of woody debris cover with minimal evidence of erosion; unanchored will be assessed to ensure that 85% will remain functional within the watercourse and does not create a barrier.
- 4.3.3 All riparian vegetation shall be shown to be planted as per the offsetting plan, and successfully established as intended. The condition of planted vegetation shall be verified using aerial imagery and site-specific data collected at randomly selected representative sampling locations/plots during monitoring visits, including information on percent survival of planted vegetation, species composition and water temperature.
- 4.3.4 Livestock exclusion fencing is maintained through duration of offsetting and is effective at preventing cattle access into revegetated riparian areas.
- 4.3.5 All rehabilitation measures at existing livestock and/or OHV crossings, including ford installation, bank restoration treatments, and riparian plantings, shall be shown to be constructed as designed and/or planted as per the offsetting plan, and stable and functioning as intended. The condition of permanent fords shall be verified using site-specific data collected during monitoring visits, including information on bank stability, absence of rutting or erosion within the permanent ford footprint, and any other observations that either verify or dispute whether the fords are functioning as intended.
- 4.3.6 All bridges and/or culverts installed as part of the offsetting will be constructed as designed. The structures will be stable and functioning as intended with no erosion resulting from the bridge or culvert crossing. The condition of the bridges and/or culverts will be verified using site-specific data collected during monitoring visits, including the absence of erosion resulting from the bridge/culvert, and no fish passage concerns. Monitoring will also include incidental evidence or observations of fish presence in areas upstream of the replaced culvert crossings.
- 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 and associated monitoring measures, as contained within the Proponent's offsetting plans and supporting documentation dated June 3, 2022 or thereafter or any subsequent versions of these plans approved by DFO (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 measures 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.
- 4.4.1.3 Repair or replacement of structures including implementation of restorative measures of constructed habitat features that are missing, not constructed as designed, and/or not functional shall be completed after consultation with DFO prior to proceeding.
- 4.4.1.4 Dead or dying plant material shall be replaced to ensure 85% survival at each site at the end of the post-construction offsetting monitoring program. Adaptive

management may be considered if specific species of vegetation are challenging to maintain.

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.

4.4.2.1 Should the offsetting measures be deemed unstable or deficient, a minimum of three (3) additional years of inspection, monitoring and reporting shall be required by DFO to ensure the intended functioning of the offsetting measures 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.

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 following implementation of the offsetting measures, as per Condition 5.2 below.

5.1.1.1 Monitoring of offsetting measures shall occur on an annual basis over a five (5) year period. A minimum of three (3) monitoring site visits (i.e., spring, summer and fall) shall be conducted in Year 1 to coincide with post-construction monitoring commitments. A minimum of two (2) monitoring site visits (i.e., spring and fall) shall be conducted in Years 2 and 3, the frequency of which may increase subject to the results of the effectiveness monitoring program in previous monitoring years. A minimum of one (1) monitoring site visit shall be conducted in Years 4 and 5, subject to the results of the effectiveness monitoring program in previous monitoring years.

5.1.1.2 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 offsetting plans and supporting documentation dated June 3, 2022 or thereafter or any subsequent versions of these plans approved by DFO. This information shall be provided to DFO as part of the post-construction monitoring reports due **on or before January 31, 2024 (Year 0) and January 31, 2025 (Year 1)**.

5.1.1.3 An as-built survey of the constructed offsetting measures shall be provided as part of the post-construction monitoring report due **on or before January 31, 2024 (Year 0)**. In the event all plantings are not completed in 2023, an as-built survey of plantings will be provided in the Year 1 monitoring report, **due on or before January 31, 2025**.

5.1.1.4 The success of the offsetting measures shall be assessed in accordance with the Proponent's offsetting plans and supporting documentation dated June 3, 2022 or thereafter or any subsequent versions of these plans approved by DFO, and shall include the following:

5.1.1.4.1 Assessment of post-construction watercourse conditions: Site visits will be conducted on an annual basis during the monitoring period to assess stream geomorphology and to document the overall stability of the watercourse bed and banks. A fish habitat assessment will be completed using quantitative and qualitative metrics to verify that habitat suitability (i.e., spawning, rearing, and overwintering) is consistent with pre-construction conditions

- and that water depths and velocities allow for the unimpeded passage of fish through the new and existing NGTL pipeline right of way.
- 5.1.1.4.2 Assessment of bank restoration treatments: Site visits will be conducted on an annual basis during the monitoring period to assess the condition and stability of bank restoration treatments. An assessment of bank stability will be completed using qualitative metrics to document any signs of erosion and/or sloughing along the banks, and a vegetation assessment will be completed using quantitative and qualitative metrics to document establishment, survival, and growth of vegetation within the banks of the watercourse. An interim success rate shall be determined after the third growing season to confirm successful establishment of planted vegetation. A minimum annual target of 85% survival of plantings at each site will be adopted by the proponent, with replacement of all dead or dying planted material to ensure 85% survival at each site at the end of the post-construction offsetting monitoring program.
- 5.1.1.4.3 Tree revetments and large woody debris: Site visits will be conducted on an annual basis during the monitoring period to assess the condition of tree revetments and large woody debris installations. An assessment of area of cover in comparison to pre-construction conditions will be completed using quantitative metrics to confirm that there has been no loss of trees/woody debris placed or anchored along the bank or across the top of the channel, undercutting or flanking, barrier formation, or induced riparian flooding, that banks and/or anchor points remain stable with minimal signs of erosion, and to ensure stable coverage of instream habitat within the wetted channel.
- 5.1.1.4.4 Boulder clusters: Site visits will be conducted on an annual basis during the monitoring period to assess the condition of the installed boulder clusters. An assessment of cover in comparison to pre-construction conditions will be completed using quantitative measures to confirm stable coverage of instream habitat within the wetted width and that there is no loss of boulder clusters.
- 5.1.1.4.5 Survival of riparian plantings: Site visits will be conducted on an annual basis during the monitoring period to assess the condition of planted areas. A vegetation assessment will be completed using quantitative and qualitative metrics to document establishment, survival, and growth of vegetation within the banks of the watercourse. As indicated in the Post-Construction Vegetation Monitoring Plan or any subsequent versions approved by DFO, riparian monitoring shall follow the sampling methods of reconnaissance and intensive surveys indicated in the Reforestation Standard of Alberta Establishment Monitoring survey standard. An interim success rate shall be determined after the third growing season to confirm successful establishment of planted vegetation. A minimum annual target of 85% survival of plantings at each site will be adopted by the proponent, with replacement of all dead or dying planted material to ensure 85% survival at each site at the end of the post-construction offsetting monitoring program. Comparison of the offset riparian area to the adjacent or nearby mature riparian habitat (including density, species composition, etc.) shall also include assessment based on the Alberta Vegetation Inventory Standards for the adjacent or nearby mature vegetation at each site.
- 5.1.1.4.6 Livestock fencing: Site visits will be conducted on an annual basis during the monitoring period to assess condition of fencing to ensure it is intact with no damage or breaches. An assessment of the effectiveness of the

- fencing at excluding livestock from the revegetated riparian areas will be recorded and provided to DFO in annual monitoring reports.
- 5.1.1.4.7 Permanent fords/crossing enhancements: Site visits will be conducted on an annual basis during the monitoring period to assess the condition of the fords and ensure no erosion or rutting is occurring within the permanent ford footprint. An assessment of bank stability will be completed using qualitative metrics to document any signs of erosion and/or sloughing along the banks. Replacement or repair will be completed to the fords as needed to ensure meeting of monitoring conditions.
- 5.1.1.4.8 Culverts Replacements and/or Clear Span Bridge(s): Site visits will be conducted on an annual basis during the monitoring period to assess the condition of the culverts and/or clear span bridges. Monitoring will also be completed to ensure that fish passage is maintained at the watercourse crossings. Observation and/or evidence of SAR species during the monitoring period through non-invasive, incidental observation will be recorded and provided to DFO.
- 5.1.1.4.9 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.
- 5.1.1.5 If one or more of the success criteria (as described in Condition 5.1.1.4 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 Condition 5.1.1.4 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 **January 31, 2024**;
- 5.2.1.2 Year 1 as-built/offsetting construction monitoring report due on or before **January 31, 2025**, includes the as-built for riparian plantings completed in 2024;
- 5.2.1.3 Year 3 post-construction offsetting monitoring report due on or before **January 31, 2027**;
- 5.2.1.4 Year 5 post-construction offsetting monitoring report due on or before **January 31, 2029**;
- 5.2.1.5 Year 6 final post-construction offsetting monitoring report due on or before **January 31, 2030**.
- 5.2.2 The post-construction offsetting monitoring reports for Years 0, 1, and 3 shall consist of a summary of field observations from each respective year. 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. Data collected as part of the post-construction offsetting monitoring program shall be provided to DFO with each offsetting monitoring report in an electronic format.
- 5.2.3 Upon review of the Final Year 5 post-construction offsetting monitoring report, if the offsetting measures are deemed unstable or deficient, a minimum of three (3) additional years of inspection, monitoring and reporting shall be required by DFO to ensure the intended functioning of the offsetting measures as required by this authorization.
- 5.2.4 Monitoring reports provided to DFO shall also be provided by NGTL to interested Indigenous communities.

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 Paragraphs 34.4(2)(b) and 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 impacts to fish and fish habitat as described herein.

The holder of this authorization is also authorized under the authority of subsections 73(1) and 74 of the *Species at Risk Act* S.C. 2002, c. 29 to carry on the works, undertakings and/or activities that are likely to kill, harm, harass, capture or take Bull Trout (*Salvelinus confluentus*), Saskatchewan - Nelson Rivers populations and /or Westslope Cutthroat Trout (*Oncorhynchus clarkia lewisi*), Saskatchewan – Nelson River populations and/or destroy the critical habitat of Bull Trout (*Salvelinus confluentus*), Saskatchewan - Nelson Rivers populations and /or Westslope Cutthroat Trout (*Oncorhynchus clarkia lewisi*), Saskatchewan – Nelson River populations as described herein.

This authorization may be revoked or amended to ensure the survival or recovery of the above aquatic species at risk. Without limiting the generality of the foregoing, DFO may:

- suspend any authorized activities to avoid or mitigate additional adverse direct or indirect effects to the above aquatic species at risk;
- amend or revoke this authorization; and
- direct the Proponent to carry out at the Proponent's expense any modifications or actions deemed necessary by DFO to avoid or mitigate existing impacts or to avoid further adverse direct and indirect impacts to the above aquatic species at risk.

This authorization does not purport to release the Proponent from any obligation to obtain permission from any private landowner 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.

This authorization does not permit the damage or destruction of residence of individuals of any aquatic species listed under the *Species at Risk Act* (SARA) (s. 33 of the SARA).

It is also your *Duty to Notify* DFO if you have caused, or are about to cause, the unauthorized death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to <http://www.dfo-mpo.gc.ca/pnw-ppe/CONTACT-eng.html>.

The failure to comply with any condition of this authorization constitutes an offence under Paragraph(s) 40(3)(a) of the *Fisheries Act* and 97(1)(c) of the *Species at Risk Act*, and may result in charges being laid under said Acts.

A copy of this authorization should be kept on site while the work is in progress and upon request be provided to relevant federal or provincial officials. The authorization holder is responsible for ensuring work crews are familiar with, and able to adhere to, the conditions.

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: January 20, 2023

Approved by: _____
Michelle Langan
Regional Director General
Ontario & Prairie Region
Fisheries and Oceans Canada



Fisheries and Oceans
Canada

Fish and Fish Habitat Protection Program
Ontario and Prairie Region
501 University Crescent
Winnipeg, MB, R3T 2N6

Pêches et Océans
Canada

Programme de protection du poisson et de son habitat
Région de l'Ontario et des Prairies
501 University Crescent
Winnipeg, MB, R3T 2N6

Your file *Votre référence*
21-HCAA-02758

Our file *Notre référence*
21-HCAA-02758

January 20, 2023

TC Energy Corporation
Attention: Dana Charlton and Craig Schell
450 – 1 Street SW
Calgary, AB T2P 5H1

Subject: CER-NGTL West Path Delivery 2023 – Fisheries Act Authorization also acting as a permit under the *Species At Risk Act*

Dear Dana Charlton and Craig Schell:

Pursuant to Paragraphs 34.4(2)(b) and 35(2)(b) of the *Fisheries Act*, and sections 73 and 74 of the *Species at Risk Act*, Fisheries and Oceans Canada (DFO) authorizes the carrying on of your proposed work, undertaking or activity that results in:

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat which are prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*; and
- effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the *Species at Risk Act*.

The project involves construction and operation of a new 1,219 mm (NPS 48) outside diameter natural gas pipeline and associated facilities. The new pipeline will be installed parallel or adjacent to the existing NOVA Gas Transmission Limited (NGTL) System, and runs through southwest Alberta from Millarville to Lundbreck. The new pipeline will withdraw water and cross several watercourses, including designated critical habitat for Bull Trout (*Salvelinus confluentus*), Saskatchewan – Nelson Rivers populations, listed as Threatened and/or Westslope Cutthroat Trout (*Oncorhynchus clarkii lewisi*), Saskatchewan Nelson River population listed as Threatened under Schedule 1 of the *Species at Risk Act*. The authorization under paragraphs 34.4(b) and 35(2)(b) of the *Fisheries Act* and sections 32, 33, and subsection 58(1) of the *Species at Risk Act* is attached.

Canada

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Failure to comply with any of the terms or conditions of the attached authorization may lead to prosecution under the *Fisheries Act* and the *Species at Risk Act*.

A copy of this authorization should be kept on site while the work is in progress and, upon request, be provided to relevant federal or provincial officials. The authorization holder is responsible for ensuring work crews are familiar with, and able to adhere to, the conditions.

As you are aware, Bill C-68 included new provisions (sections 42.2 to 42.5) in the *Fisheries Act* that require the Minister of Fisheries and Oceans to establish a public registry to facilitate public access to certain records, including amongst other items, authorizations issued pursuant to paragraphs 34.4(2)(b) and 35(2)(b) of the *Fisheries Act*. While the public registry provisions of the *Fisheries Act* are not yet in force, the Department has begun to post a list of authorizations issued since August 28, 2019, when amendments to the fish and fish habitat protection provisions of the Act came into force.

Information pertaining to this authorization will be posted to the *Fisheries Act* Registry and accessible from the Department's website at <https://www.dfo-mpo.gc.ca/pnw-ppe/registry-registre-eng.html> as well as from the Open Government Portal at <https://open.canada.ca/data/en/dataset/2c09d2fd-9a8e-4d8c-b5af-95747e36eaac> and the Common Project Search at <https://common-project-search.canada.ca/>. Information and data will be updated as the Department continues to develop the *Fisheries Act* Registry.

Any disclosure of information will be conducted in accordance with the *Access to Information Act* and the *Privacy Act*. Should you have any documents that contain sensitive or proprietary information that you believe should be protected from public disclosure, please contact us to discuss whether and how the information may be protected.

Be aware that DFO will continue consultation with Indigenous communities regarding the offsetting and offsetting monitoring plans for this project.

If you or anyone conducting work on your behalf have any questions please contact Brittany Hesjedal at 306-201-9069 or by email at Brittany.Hesjedal@dfo-mpo.gc.ca.

Yours sincerely,

Michelle Langan
Regional Director General
Ontario and Prairie Region
Fisheries and Oceans Canada

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ATTACHMENT: *Fisheries Act* AUTHORIZATION

cc: Brianna Wyn (DFO)
Tara Schweitzer (DFO)
Brittany Hesjedal (DFO)
Sheeva Johnson (TC Energy)
Greg Schatz (Stantec Consulting Ltd.)