



Paragraphs 34.4(2)(b) and 35(2)(b) *Fisheries Act* Authorization

Authorization issued to

Pegasus Development Corporation (*hereafter referred to as the "Proponent"*)

Attention to: Andreas Foustanelas
1916 Merivale Road
Ottawa, ON
K2G 1E8

Location of Proposed Project

Nearest community (city, town, village): Carleton Place
Municipality, district, township, county: Lanark County
Province: Ontario
Name of watercourse, waterbody: Tributaries to Lavallee Creek
Longitude and latitude, UTM Coordinates: 45.136089, -76.117737, UTM 18, 412114, 4998676

Description of Proposed Project

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

The development of a new residential subdivision (Meadow Ridge Subdivision) in Carleton Place, ON. which will impose on three existing drainage features (Hooper, North and Central drains), an online storm water management (SWM) pond and a small marsh area, requiring reconfiguration of the features. These watercourses/bodies collectively contribute flow to Lavallee Creek.

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:

- The isolation of the existing channel and pond sections to be infilled and realigned using sandbag/impermeable membrane dams at either end and the rescuing and relocating of fish trapped within the isolated sections.

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:

- Realignment and decommissioning of the lower 375 m of Hooper Drain to the east, around the enlarged SWM pond.

- Realignment and decommissioning of 128 m of Central Drain.
- Removal of the western portion of the existing marsh and expansion to the north and south.

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

- Incidental death of fish resulting from the rescue and relocation of fish from within isolated areas.
- Destruction of 787 m² of drain habitat (537m² of Hooper Drain and 250m² of Central Drain) resulting from the infilling and realignment of the channel sections.
- Destruction of 3250m² of marsh habitat due to the infilling of the western section.

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: Date of Issuance

To: **March 14, 2022**

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.

- 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.
- 2.2. List of measures and standards to avoid and mitigate serious harm to fish:
 - 2.2.1. A qualified environmental professional shall be on-site to monitor all instream and shoreline activities.
 - 2.2.2. The project shall be designed and constructed in a manner that shall not result in impacts to fish passage or migration.
 - 2.2.3. 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.
 - 2.2.4. All in-water works shall be conducted outside of the prescribed restricted timing window of March 15th to July 1st of any given year.

- 2.2.5. When feasible, in-water works shall be conducted in low flow conditions and active construction shall be suspended during periods of heavy rain.
 - 2.2.6. The work area shall be isolated to prevent deleterious substances from migrating out of the isolated area and equipment shall operate from outside the wetted width or from within the isolated area and shall contain fluids that are non-toxic to aquatic life.
 - 2.2.7. Fish in isolated areas shall be rescued and relocated to an area of the Mississippi River system containing suitable habitat prior to any works commencing within the isolated area. Fish rescues shall include effective capture and handling procedures designed to minimize mortality (e.g. electrofishing, seine netting, minnow trapping).
 - 2.2.8. Should the need for dewatering arise, water shall be released into a well-vegetated area or settling basin and not directly into fish-frequented waters. Water returning to fish-frequented waters shall be of equal or better quality than the water in the fish-frequented waters.
 - 2.2.9. Where water is pumped from fish-frequented waters for any purpose, pump intakes shall be screened in accordance with DFO's "Freshwater Intake End-of-Pipe Fish Screen Guideline" (1995, <http://www.dfo-mpo.gc.ca/Library/223669.pdf>). The outlet shall have a diffuser or be placed in a location that is not subject to erosion from the outflow.
 - 2.2.10. Any water drainage systems shall be constructed in a way as to prevent erosion and release of sediment or sediment laden water into any fish bearing waterbodies and watercourses.
 - 2.2.11. Water released to the environment shall meet the Council of Ministers of the Environment (CCME) "Canadian Water Quality Guidelines for the Protection of Aquatic Life".
 - 2.2.12. Infill shall:
 - 2.2.12.1. Be free of contaminants and artificial debris prior to placement and, if applicable, be of sufficient size to resist displacement during design flood events
 - 2.2.12.2. Not be obtained from areas below the ordinary high water mark of any fish-frequented waters
 - 2.2.13. All spoil materials and debris from the project area shall be removed from the site and properly disposed of above the high water mark such that it does not enter any fish-frequented waters.
 - 2.2.14. Any disturbed banks shall be revegetated with native plant species.
 - 2.2.15. All new channel realignments shall be constructed and stabilized prior to the introduction flows and decommissioning of existing channels.
- 2.3. Contingency measures shall be put in place and DFO shall be notified immediately if monitoring required in condition 3 below indicates that the measures and standards to avoid and mitigate serious harm to fish are not successful. 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 the initiation of works, undertakings or activities and shall be maintained throughout the duration of the project.
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 condition 2 of this authorization and report to DFO after the completion of the construction works, by no later than **June 14, 2022**, indicating 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 inspection reports with a photo reference map, and dated and annotated photographs taken of the pre-construction, during construction and post construction periods, showing works completed

according to the approved plan and conditions of this authorization. Photographs shall be taken from the same vantage point(s), direction and angle of view for easy comparison. These photos must demonstrate effective implementation and functioning of mitigation measures and standards described above to limit impacts to fish and fish habitat to what is covered by this authorization.

- 3.1.2 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 Authorization Holder shall conduct monitoring as per the proposed offsetting plan: "Meadow Ridge Subdivision Residential Subdivision: Fisheries Impact Assessment and Offsetting Plan in support of an Application for Authorization", prepared by Bowfin Environmental Consulting Inc. on behalf of Pegasus Development Corporation, dated August 30, 2019, including continual monitoring throughout the fish relocation operations, and weekly monitoring for risk of erosion and sedimentation downstream.

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 number OSB58500TOR), 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: The offsetting measures shall be carried out in accordance with the measures set out in the Proponent's offsetting plan: "Meadow Ridge Subdivision Residential Subdivision: Fisheries Impact Assessment and Offsetting Plan in support of an Application for Authorization" prepared by Bowfin Environmental Consulting Inc. on behalf of Pegasus Development Corporation, dated August 30, 2019 approved by DFO and summarized as follows:
- 4.2.1 Creation of marsh habitat: The existing marsh area shall be expanded to the north and south yielding 600 m² of new wetland habitat. The newly created marsh habitat shall:
- 4.2.1.1 Be planted with aquatic vegetation stock removed from the western marsh section;
- 4.2.1.2 Maintain its water levels in the northern portion through the installation of a 126.25m geodetic berm as requested by the Mississippi Valley Conservation Authority; and
- 4.2.1.3 Contain habitat enhancement features such as large woody debris.
- 4.2.2 The restoration of an unnamed tributary to Lavallee Creek: The degraded outlet channel to Lavallee Creek shall be reconstructed and enhanced resulting in 1,539 m² of higher quality fish habitat. The new channel section shall:
- 4.2.2.1 Have a natural meander and morphology including riffle, run and pool sequences, be of a 1:3 slope, have an average width of 6 m and an average depth of 0.30 m;
- 4.2.2.2 Have a 1 m wide low flow channel to increase connectivity to the marsh, pond and upper drain sections; and
- 4.2.2.3 Contain habitat enhancement features such as large woody debris.
- 4.2.3 Riparian buffer planting: A 15 m wide riparian buffer shall be created along both sides of 504 m of the existing Hooper Drain and 1,218 m of new realignment channel section. Along the entirety of the length of this buffer, a 3 m wide section shall be actively planted with native trees and shrubs resulting in 10,332 m² of enhanced riparian habitat.

- 4.2.4 Creation of new Hooper Drain channel habitat: A new realignment channel shall be created on Hooper Drain resulting in 1,218 m² of shallow, stream habitat. The channel section shall be of a 3H:1V slope and have an average width of 2 m.
- 4.2.5 Creation of new Central Drain channel habitat: A new realignment channel shall be created on Central Drain resulting in 678 m² of shallow stream habitat. The channel section shall be of a 5H:1V slope and have an average width of 3 m.
- 4.2.6 Expansion of the storm water management (SWM) pond: The existing SWM pond will be expanded by 14,505 m². The new pond shall:
 - 4.2.6.1 Remain assessable for fish usage; and
 - 4.2.6.2 Be of an average depth of no less than 0.9 m.
- 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 described in the Proponent's offsetting plan referred to in condition 4.2:
 - 4.3.1 All offsetting works shall be completed and functioning by **March 14, 2022**.
 - 4.3.2 Photographic Documentation: A digital photographic record of pre-construction, during construction and post-construction conditions shall be compiled using the same vantage points and direction to verify that each individual offsetting component has been constructed in accordance with the offsetting plan.
 - 4.3.3 As built drawings: An as-built survey shall verify that each individual offsetting component has been constructed in accordance with the requirements of the offsetting plan.
 - 4.3.4 Creation of marsh habitat: The marsh and berm shall retain their morphology as per the designed plans; the berm shall remain stable; water levels in the expanded marsh shall remain consistent across all sections verifying the effectiveness of the berm; aquatic vegetation planted stock shall achieve 80% survival; habitat enhancement features shall show no signs of destabilization or significant degradation outside of natural variation; and the newly created marsh habitat shall be actively utilized by fish similar to the existing marsh.
 - 4.3.5 The restoration of an unnamed tributary to Lavallee Creek: The restored outlet channel shall retain its naturalized morphology including stable banks, riffle, run and pool forms, sinuosity and low flow channel; shall maintain connectivity during relatively dry conditions; shall be actively utilized by fish; and shall contain stable habitat features.
 - 4.3.6 Riparian buffer planting: Vegetation plantings shall achieve 80% coverage of area and survival of planted stock.
 - 4.3.7 Creation of new Hooper Drain channel habitat: The new realignment channel shall be stable, retain its morphology, and be utilized by fish similar to the existing drain during periods of suitable flow.
 - 4.3.8 Creation of new Central Drain channel habitat: The new realignment channel shall be stable, retain its morphology, and be utilized by fish similar to the existing drain during periods of suitable flow.
 - 4.3.9 Expansion of the storm water management (SWM) pond: The SWM pond shall retain its morphology including an average depth of 0.9 m; retain stable banks; and be actively utilized by fish similar to the existing SWM pond.
- 4.4 Contingency measures: If the offsetting measures are not completed by the date specified, the Proponent shall give written notice to DFO immediately to implement contingency measures to the satisfaction of DFO. If the results of monitoring as required in section 5 indicate that the offsetting measures 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 approved offsetting plan referenced in section 4.2, and as set out in section 5

of this authorization, in consultation with DFO, 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 in consultation with and to the satisfaction of DFO, should the offsetting plan not meet the requirements for offsetting associated with this Authorization.

4.4.2 Monitoring measures to ensure offsetting contingency is completed and/or functioning as required: The Proponent shall conduct monitoring to document the success of any contingency offsetting habitat to the satisfaction of DFO, to ensure the offsetting 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 disturb or 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 and dated December 10, 2018 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 above in section 4):

5.1 Schedule(s) and criteria: The Proponent shall conduct monitoring of the implementation of offsetting measures according to the approved offsetting plan, as summarized in the timeline and criteria below. Monitoring shall occur in years 1, 2, 3 and 5 (2022, 2023, 2024 and 2026, respectively), unless otherwise noted.

5.1.1 Photographic Documentation: A digital photographic record of pre-construction, during construction and post-construction conditions shall be compiled using the same vantage points and direction (all years).

5.1.2 As-built drawings: An as-built survey shall be conducted within 3 months of completion of the offsetting construction, and reported on in year 1 (2022).

5.1.3 Creation of marsh habitat: The dimensions and stability of the marsh habitat and its associated berm shall be assessed. Fish sampling shall be conducted to confirm utilization and species composition. Habitat enhancement features shall be visually inspected to confirm stability (monitored during years 1, 3 and 5).

5.1.4 The restoration of an unnamed tributary to Lavallee Creek: Channel dimensions and morphology, including each of its mesohabitat structures, shall be assessed. Connectivity during relatively low flow conditions shall be verified. Fish sampling shall be conducted to confirm utilization and species composition with specific focus on the habitat enhancement features to confirm they are providing adequate cover. Habitat enhancement features shall be visually inspected to confirm stability (monitored during years 1, 3 and 5).

5.1.5 Riparian buffer planting: Percent ground cover and percent survival of planted stock shall be assessed (monitored during years, 1 and 2).

5.1.6 Creation of new Hooper Drain channel habitat: Channel dimensions and morphology of the realigned channel shall be assessed. Fish sampling shall be conducted during suitable flow

- conditions to confirm utilization and species composition (monitored during years 1, 3 and 5).
- 5.1.7 Creation of new Central Drain channel habitat: Channel dimensions and morphology of the realigned channel shall be assessed. Fish sampling shall be conducted during suitable flow conditions to confirm utilization and species composition (monitored during years 1, 3 and 5).
- 5.1.8 Expansion of the storm water management (SWM) pond: The dimensions and morphology of the SWM pond shall be assessed. Stability of the banks shall be assessed. Fish sampling shall be conducted to confirm utilization and species composition (monitored during years 1, 3 and 5).
- 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 A post-construction monitoring report shall be submitted to DFO on or before **June 14, 2022**.
- 5.2.2 Annual monitoring reports as per condition 5.1. shall be submitted to DFO prior to the end of each monitoring year, on or before **December 31, 2022, December 31, 2023, December 31, 2024, and December 31, 2026**.

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.

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.


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 40(3)(a) of the *Fisheries Act* and may result in charges being laid under said 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.

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: Feb 07/2020

Approved by: 
David Nanang
Regional Director General
Central and Arctic Region
Fisheries and Oceans Canada