



Environment Environnement  
Canada Canada

Environmental Protection Operations  
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Our file: 4105 006 154  
Your file: 1BR-DYE0409

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**Re: NWB 1BR-DYE0409 – Renewal – Defence Construction Canada –DYE-M Project**

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities arising from *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

Environment Canada recommends that in addition to the comments and recommendations submitted by Colette Meloche on behalf of Environment Canada for the initial application, the following conditions also be applied throughout all stages of the project:

1. The proponent shall not deposit, nor permit the deposit of any fuel, chemicals, wastes, or sediment into any water body. According to the *Fisheries Act*, Section 36(3), the deposition of deleterious substances of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water, is prohibited.
2. The spill contingency plan for the site should clearly indicate that all spills are to be documented and reported to the 24 hour Spill Line at (867) 920-8130.
3. The *Canada Wide Standards for Petroleum Hydrocarbons in Soil* and *The Canadian Environmental Guidelines for PCB's* have been modified and republished in 2008. The proponent is advised to consult the guidelines for the soil type, land use, etc. that would apply to this site and use those criteria to clean up any PHC and PCB contamination associated with historical activities at this site.
4. Monitoring sewage/grey water effluent for total phosphorus should be considered. Contributing excess phosphorus to an aquatic environment may lead to (i) decrease in biodiversity and changes in dominant biota; (ii) decline in ecologically sensitive species and increase in tolerant species; (iii) increase in plant and animal biomass; (iv) increase in turbidity; (v) increase in organic matter, leading to high sedimentation; and (vi) anoxic conditions lead to eutrophication (Phosphorus: Canadian Guidance Framework for the Management of Freshwater Systems). There is no CCME guideline; however, the Canadian Guidance Framework for Phosphorus provides trigger ranges. Alternatively, there is an Alberta Surface Water Quality Guideline for the Protection of Aquatic Life (50 µg·L<sup>-1</sup>) that may be used as a reference as well.

Canadian Trigger Ranges (µg·L<sup>-1</sup>)

Ultra-oligotrophic: < 4

Oligotrophic: 4-10

Mesotrophic: 10-20

Meso-eutrophic: 20-35

Eutrophic: 35-100  
Hyper-eutrophic: > 100

5. Section 6 (a) of the *Migratory Birds Regulations* states that no one shall disturb or destroy the nests or eggs of migratory birds. Therefore, Environment Canada recommends that all activities in which there is a risk of disturbing or destroying nests or eggs be conducted outside the migratory bird breeding season, which extends from approximately May 15 to July 31. These dates are approximate, and if nests containing eggs or young are encountered outside of these dates the proponent should avoid the area until nesting is complete (i.e., the young have left the vicinity of the nest).

For activities permitted to occur during the breeding season, Environment Canada recommends that the proponent confirm there are no active nests (i.e., nests containing eggs or young) in the vicinity of their operations before activities commence. If active nests of migratory birds are discovered, the proponent should halt all activities in the nesting area until nesting is completed (i.e., the young have left the vicinity of the nest).

6. Implementation of these measures may help to reduce or eliminate some effects of the project on migratory birds and Species at Risk, but will not necessarily ensure that the proponent remains in compliance with the *Migratory Birds Convention Act*, *Migratory Birds Regulations*, and the *Species at Risk Act*. The proponent must ensure they remain in compliance during all phases and in all undertakings related to the project.
7. Environment Canada recommends that food, domestic wastes, and petroleum-based chemicals (e.g., greases, gasoline, glycol-based antifreeze) be made inaccessible to wildlife at all times. Such items can attract predators of migratory birds such as foxes, ravens, gulls, and bears. Although these animals may initially be attracted to the novel food sources, they often will also eat eggs and young birds in the area. These predators can have significant negative effects on the local bird populations.
8. Section 5.1 of the *Migratory Birds Convention Act* prohibits persons from depositing substances harmful to migratory birds in waters or areas frequented by migratory birds or in a place from which the substance may enter such waters or such an area.
9. In order to reduce aircraft disturbance to migratory birds, Environment Canada recommends the following:
  - a. Fly at times when few birds are present (e.g., early spring, late fall, winter)
  - b. If flights cannot be scheduled when few birds are present, plan flight paths that minimize flights over habitat likely to have birds and maintain a minimum flight altitude of 650 m (2100 feet).
  - c. Minimize flights during periods when birds are particularly sensitive to disturbance such as migration, nesting, and moulting.
  - d. Plan flight paths to avoid known concentrations of birds (e.g., bird colonies, moulting areas) by a lateral distance of at least 1.5 km. If avoidance is not possible, maintain a minimum flight altitude of 1100 m (3500 feet) over areas where birds are known to concentrate.
  - e. Avoid the seaward side of seabird colonies and areas used by flocks of migrating waterfowl by 3 km.
  - f. Avoid excessive hovering or circling over areas likely to have birds.
  - g. Inform pilots of these recommendations and areas known to have birds.
10. All mitigation measures identified by the proponent, and the additional measures suggested herein, should be strictly adhered to in conducting project activities. This will require awareness on the part of the proponents' representatives (including contractors) conducting operations in the field. Environment Canada recommends that all field operations staff be made aware of the proponents' commitments to these mitigation measures and provided with appropriate advice / training on how to implement these measures.

Environmental Protection Operations (EPO) should be notified of changes in the proposed or permitted activities associated with this application. Please do not hesitate to contact me at (867) 669-4746 or [jane.fitzgerald@ec.gc.ca](mailto:jane.fitzgerald@ec.gc.ca) with any questions or comments.

Yours truly,

Jane Fitzgerald  
Environmental Assessment Coordinator

cc: Carey Ogilvie (Head, Assessment & Monitoring, EPO, EC)  
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Michelle Gray (Contaminated Sites Officer, EC)