

Appendix H

Environmental Mitigation Measures for Harrow, Totten Farm Road Construction

The following summarize the mitigation measures that must be followed during the construction and operation of the **Harrow, Totten Farm Road Construction** project, and are intended to minimize environmental impacts associated with the above project. Alternative measures that will result in an equivalent or greater reduction of the effects of a proposed activity will also be acceptable.

General

- AAFC and Contractor are responsible for obtaining and complying with all applicable licenses, permits, approvals and authorizations, and for meeting all legislative requirements prior to the commencement of construction.
- AAFC and Contractor shall adhere to the mitigation measures outlined in Permits, Authorizations or Letters of Specialist Advice, as well as any other specialist advice from Provincial and Federal authorities.
- AAFC and Contractor is responsible for conforming with all federal and provincial legislation, with particular reference to the transport, storage, handling, accidental releases, and disposal of fuels or other hazardous materials, including Ontario Technical Standards and Safety Act, 2000 Ontario Regulation 217/01 Liquid Fuels
 - All hazardous materials, fuel and equipment at or near the construction site must be stored away from water bodies and in a manner that prevents contamination to any water bodies.
 - Keep an emergency spill kit on site to manage any potential leaks/spills related to project (e.g. 25 kg of suitable commercial absorbent, 30 m² of 6 mil polyethylene, shovel, empty fuel barrel for spill collection and disposal). Notify the proper authorities in the event of any spills.
 - Upon conclusion of the project, construction waste, fuel caches, oil and lubricating products, and any other surplus or hazardous materials shall be removed from the work site and disposed of at approved facilities and in accordance with Provincial Regulations.
 - Machinery is to arrive on site in a clean condition and is to be maintained free of fluid leaks.
 - Wash, refuel and service machinery and store fuel and other materials for the machinery away from water to prevent any deleterious substance from entering the water.
 - A spill response plan should be documented and communicated to on-site workers.
 - Impacted soils must not be used as backfill at the site and must be disposed of in accordance with applicable federal and provincial legislation.
 - A staging area should be used to store equipment, fuels, oils and lubricants when not in use.
 - Equipment and fuel storage tanks located in the staging area should be equipped with spill protection or secondary containment.
 - Undertake regular inspection of equipment and storage vessels for leaks or wear.
 - Ensure appropriate spill response plan and training for emergency situations. Also ensure necessary equipment is available on-site and near transfer and storage points, if emergencies arise.
 - Follow the usual measures which will be included in the contract with PSPC.

Aquifer Contamination and Surface Water Quality, Drainage

- Ensure that no deleterious substances, including suspended sediments, are permitted to enter municipal systems or water bodies.
- Impacted soils must be removed and handled in accordance with provincial legislation to prevent leaching into groundwater.

Vegetation

- Keep site clearing to a minimum (in project and riparian areas) and minimize disturbance to ground surface to maintain vegetative cover, wind breaks, and natural infiltration and runoff characteristics of project area.

- Movement of all construction equipment shall be restricted to the existing road right-of-way, and/or within designated construction areas. Damage to vegetation outside of these areas, including riparian areas, shall be avoided.
- Re-vegetate all disturbed areas and freshly backfilled areas with species that existed prior to construction or with other suitable perennial tame/native grass species. Re-vegetation mix must be pre-approved by AAFC.
- Vehicles and equipment entering the area will be inspected to ensure they are clean and free of debris.

Soils/Vegetation

- Construction activities should be avoided during adverse weather conditions such as high winds and excessive rain, to minimize the potential for soil erosion, compaction, and rutting.

Wildlife and Wildlife Habitat

- Project activities should avoid disturbance or destruction of rare or endangered species; in the event of encountering rare or endangered species or their habitats/nesting areas, species are observed within the work area, the work must stop and ensure passage at important wildlife crossing/movement points.
- Avoid fragmenting wildlife habitat.
- Site preparation, vegetation clearing and construction should not be conducted during the sensitive breeding and nesting periods until fledglings have left parental territories, to minimize impacts on migratory birds and help comply with the Migratory Birds Convention Act. Activities will take place in late summer or early fall, to avoid the nesting season of migratory birds.
- In areas of natural vegetation, construction should not be conducted during the sensitive breeding and nesting periods until fledglings have left parental territories, to minimize impacts on migratory birds and help comply with the Migratory Birds Convention Act. In these circumstances, plan activities to take place in late summer or early fall, to avoid nesting season of migratory birds.
- To minimize noise and vibration effects on wildlife, schedule construction activities during regular daytime hours.
- Keep disturbances outside of development area to a minimum.

Species at Risk

- If any SAR are found during construction, project must halt and the potential impact on the species at risk must be assessed and the next steps must be approved by ECCC prior to work resuming.
- Provide species specific information (identification photos, recovery strategy document) to staff to inform them on the Blanding's Turtle and other potential species that may be found in the surrounding area. This information would also be provided to the contractors on site.
- AAFC staff would monitor the site and work with the contractors to monitor for hatching turtles during construction.
- If any hatching turtles are observed, work would stop and ECCC would be contacted immediately to determine the next steps prior to construction resuming.

Air Quality

- Vehicles shall be properly serviced and maintained to prevent leaks and spills of fuels, lubricants, hydraulic fluids or coolants and shall adhere to appropriate regulatory agency emission standards.
- Ensure transport vehicles and equipment are well maintained, regularly inspected, and have working emissions control equipment.
- Idling times should be reduced on all vehicles.

Waste Disposal

- Ensure that hazardous and non-hazardous waste are separated and disposed of according to appropriate regulations.
- Upon conclusion of the project, construction waste, fuel caches, oil and lubricating products and all other hazardous and non-hazardous materials shall be removed from the work site and disposed of at approved facilities and in accordance with Provincial Regulations.

- Ensure that the construction site is cleaned up on a daily basis to reduce risks to workers.
- Ensure all waste is disposed of as per management plan, and all relevant Permits.

Land Use, Socio-Economics, Community Effects

- To minimize noise and vibration effects during construction, schedule activities during regular daytime hours.
- Minimize noise from construction equipment with the use of mufflers.
- Set and enforce low speed limits for vehicles.
- Inform workers about the hazards of extended high noise level exposure and provide personal protective equipment.
- Ensure workers are not exposed to levels of noise above those stipulated in provincial codes.
- Comply with provincial and federal labour codes.
- Typical noise during pre-construction, construction and operation should adhere to municipal noise by-laws (if these exist for the municipality) for daytime and night time activities. Have a system and contact in place in order to deal with noise complaints effectively.
- If the need arises, contractors will be required to provide noise suppression devices for equipment with excessive noise.

Safety and Health

- Comply with all federal, provincial and municipal legislation including the Canada Labour Code and provincial workplace safety regulations.
- Ensure there are accident and malfunctions plans and an emergency response plan in place at all times, and that these plans are trained and communicated to staff.
- All contractors and their employees will be required to be certified in appropriate first aid, safety and Hazardous Substances and Waste Dangerous Goods and WHMIS training programs.
- Ensure that safety standards at the facility meet the Occupational Health and Safety Act, 1993.
- Ensure the safety of workers and staff / visitors to the research center.

Heritage

- Work is being completed on previously disturbed areas of the research center. If heritage resources are discovered during construction, they will be reported to appropriate agency.