

The Department of National Defence (DND) is likely to be transiting and conducting navy exercises within the study area during the May to November 2011 to 2017 timeframe.

Unexploded Ordinates (UXO) data is available for the study area:

A search of the records was conducted to determine the possible presence of UXO within the Chevron Project Description survey area.

DND's records indicate that submarine wreck U-658 (Long -46.53333, Lat 50.00889, depth >2000 meters, see attached graphic) is situated in close proximity to the survey area. The position of this submarine wreck was provided by the aircraft which sank the submarine, circa 1942, and its accuracy has not been confirmed. Consequently, it is advisable to assume that the U-658 may potentially be within the survey area.

The U-658 was a German VIIC Class submarine which typically carried torpedoes and ammunition for deck guns. Consequently, it is possible that munitions may still be aboard.

Given the submarine wreck's recorded location, and understanding of the seismic and geohazard survey activities to be conducted, the associated UXO risk is assessed as low. Nonetheless, due to the inherent dangers associated with UXO and the fact that the Atlantic Ocean was exposed to many naval engagements during WWII, should suspected UXO be encountered during the course of your operations, do not disturb/manipulate it, mark the location, and immediately inform the Coast Guard. Additional information is available in the Notice to Mariners 37.

In the event of drilling and mooring activities, it is strongly advised that operational aids, such as remote operated vehicles, be used to conduct the seabed survey to minimize unintentional contact with harmful UXO items that may have gone unreported or undetected.

Further UXO general information is available at our website at <http://www.uxocanada.forces.gc.ca>

There may be some commercial fishing for shrimp, snow crab, Greenland halibut and redfish in this area. These fisheries need to be adequately addressed in the environmental assessment as to ensure limited disruption with any fishing activities.

### ***Regulatory Requirements***

Meeting the requirements of the federal *Fisheries Act* is mandatory. Subsection 36(3) of the *Act* specifies that unless authorized by federal regulation, no person shall deposit or permit the deposit 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.

Migratory birds, their nests, eggs, and young are protected under the *Migratory Birds Convention Act* (MBCA) and *Regulations*. It should be noted that "no person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area" as set out in the MBCA. Proponents should be reminded that they are expected to comply with the MBCA and *Regulations* during all project phases. Migratory birds include those species listed in the CWS Occasional Paper "*Birds protected in Canada under the Migratory Birds Convention Act*".

The proponent should also be aware of the potential applicability of the *Canadian Environmental Protection Act (CEPA)*. The *Canadian Environmental Protection Act* enables protection of the environment, and human life and health, through the establishment of environmental quality objectives, guidelines and codes of practice, and the regulation of toxic substances, emissions and discharges from federal facilities, international air pollution, and ocean dumping.

### ***Migratory Birds & Species at Risk***

In conducting the EA, the vulnerability of individual species/groups of migratory birds to seismic programs should reflect a consideration of the following basic factors:

- distribution and abundance of species during scheduled project activities
- impact pathways
- mitigation
- cumulative effects
- provisions for follow-up on assessment accuracy and mitigation effectiveness.

#### *Impact Pathways for Migratory Birds*

The following impact pathways influencing migratory birds should be considered in the analysis of any seismic survey:

- noise disturbance from seismic equipment including both direct effects (physiological), or indirect effects (foraging behaviour or prey species);
- physical displacement as a result of vessel presence (e.g., disruption of foraging activities);
- nocturnal disturbance from light (e.g., increased opportunities for predators, attraction to vessels and subsequent collision, disruption of incubation);
- exposure to contaminants from accidental spills (e.g., fuel, oils, streamer fluids) and operational discharges (e.g., deck drainage, gray water, black water); and
- attraction of, and increase in, predator species as a result of waste disposal practices (i.e., sanitary and food waste) and the presence of incapacitated/dead prey behind the vessel.

#### *Considerations Specific to Species at Risk*

If a wildlife species is listed under Schedule 1 of SARA or under provincial legislation (a listed wildlife species), and could be affected by seismic activities, certain steps must be taken to ensure compliance with both SARA and the *Canadian Environmental Assessment Act (CEAA)*. SARA amends the definition of “environmental effect” in subsection 2(1) of the CEAA to ensure that assessments always consider potential impacts on listed wildlife species; their critical habitat; or the residences of these species.

SARA requires that the responsible authority for a federal EA notifies in writing and without delay the competent minister(s), if the project being assessed is likely to affect a listed wildlife species, its residence, or its critical habitat. In addition, any adverse effects of the project on listed species, their residences, and their critical habitat must be identified. If a project under consideration is implemented, the responsible authority must ensure that

measures are taken to avoid or lessen the adverse effects on species at risk and, that these effects are monitored. Mitigation measures must be consistent with recovery strategies and action plans for species at risk. Furthermore, if such a project is being undertaken on federal land, or affects a listed migratory bird or aquatic species, the proponent will require a permit under Section 73 of SARA and permits under the Fisheries Act and Migratory Birds Convention Act.

The **Ivory Gull** has been uplisted to Endangered on SARA's Schedule 1. This species may be found in the project area, and should be considered in the environmental assessment.

### *Cumulative Effects*

The discussion of cumulative effects should be shaped primarily by the valued ecosystem components under consideration. While an accounting of past, present and future projects and activities is a starting point in a cumulative effects assessment, the analysis should consider how impacts from the proposed project will combine with impacts from other projects and activities. In the context of marine birds, for example, the proponent should consider how the project will contribute to existing impacts (e.g., increase in predation, loss of foraging habitat) on birds from other activities (e.g., other oil and gas activities, fishing, shipping).

### *Information Sources*

The proponent should be aware of Environment Canada's Eastern Canadian Seabirds at Sea (ECSAS) program. This program has conducted over 4000 surveys covering 7800 km of ocean track in the Newfoundland and Labrador offshore area since 2006. The most up to date data for the study area should be included in the EA. This information is available by contacting Carina Gjerdrum at [Carina.Gjerdrum@ec.gc.ca](mailto:Carina.Gjerdrum@ec.gc.ca) or (902) 426-9641.

While proponents are also encouraged to employ peer-reviewed literature to support their conclusions, few studies on the interactions between birds and seismic survey activities have been conducted<sup>1</sup>, and none have been conclusive. It is important to recognize the limited applicability of available research findings in the discussion of impacts (i.e., conclusions likely do not apply to interactions with large concentrations of birds). It should also be noted that, while the Eastern Canadian Seabirds at Sea dataset contains the most recent seabird data available for the Newfoundland and Labrador offshore area, surveys have not been dedicated to determining impacts of seismic on seabirds, but rather are distribution data collection exercises.

While an EA may conclude that the overall impact of a seismic survey on seabirds is relatively small, it remains important that the opportunity for this activity to impact federally-protected avian species be properly acknowledged in the EA. Accordingly, it is also expected that the proponent commit to all reasonable measures to mitigate the potential for such impacts to occur. These measures are outlined below.

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<sup>1</sup> These studies include: Lacroix *et al* (2003), Stemp (1995), Turnpenny and Nedwell (1994), Evans *et al* (1993).

### *Mitigation*

Mitigation measures related to adverse effects, including cumulative effects, should be identified. Measures should be consistent with the *Migratory Bird Convention Act* and SARA and with applicable management plans, recovery strategies and action plans. Mitigation should reflect a clear priority on impact avoidance opportunities. The following specific measures should be among those which are considered in preparing a mitigation strategy:

- Should storm-petrels or other species become stranded on vessels, the proponent is expected to adhere to the protocol described in Williams and Chardine's brochure entitled, *The Leach's Storm Petrel: General Information and Handling Instructions* (to be provided directly). A permit is required to implement the Williams and Chardine protocol. **The proponent should be advised that it is required to complete a permit application form prior to proposed activities.** This form is available from Andrew Macfarlane at the Canadian Wildlife Service, who can be reached by phone at 506-364-5033 or email at [andrew.macfarlane@ec.gc.ca](mailto:andrew.macfarlane@ec.gc.ca).
- Ramping-up the air gun array over a 30-minute period - a procedure typically used for other animal groups - may encourage marine birds to leave the survey area and may reduce the potential for adverse interactions between the project and marine birds accordingly.
- It is expected that the proponent demonstrate how they will minimize or prevent the release of hazardous substances onboard the seismic vessel (e.g. streamer fluid, chemicals for streamer repairs, fuels, lubricants) into the marine environment. Attention should be paid to impact avoidance and pollution prevention opportunities and a contingency plan should be developed to enable a quick and effective response in the event of a spill. Other management practices and preventative maintenance plans should be outlined such as a protocol to prevent streamer-associated spill events. This protocol should describe conditions that will allow the seismic program to be conducted without spill incidents (e.g., the range of environmental conditions within which streamers can operate, monitoring to detect leaks or tears).

### *Data Collection*

The proponent could also take the opportunity to collect bird distribution data during proposed activities in anticipation of EA needs related to future activity in the area. As with the testing of impact predictions, a data collection effort should be designed in consultation with EC and be carried out by an individual who is appropriately trained and dedicated to recording marine bird observations. EC requests to review the results of a data collection program.

CWS has developed a pelagic seabird monitoring protocol that we are recommending for all offshore projects. Attached is a version of the protocol for experienced observers. This protocol is a work in progress and we would appreciate feedback from the observers using it in the field. A guide sheet to the pelagic seabirds of Atlantic Canada is available through CWS in Mount Pearl.

A report of the seabird monitoring program, together with any recommended changes, is to be submitted to CWS on a yearly basis.

In an effort to expedite the process of data exchange, the Canadian Wildlife Service would appreciate that the data (as it relate to migratory birds or species at risk) collected from these baseline surveys be forwarded in digital format to our office following completion of the study. These data will be centralized for our internal use to help ensure that the best possible natural resource management decisions are made for these species in Newfoundland and Labrador. Metadata will be retained to identify source of data and will not be used for the purpose of publication. The Canadian Wildlife Service will not copy, distribute, loan, lease, sell, or use of this data as part of a value added product or otherwise make the DATA available to any other party without the prior express written consent.

### *Regulations*

Migratory birds, their eggs, nests, and young are protected under the *Migratory Birds Convention Act* (MBCA). Migratory birds protected by the MBCA generally include all seabirds except cormorants and pelicans, all waterfowl, all shorebirds, and most landbirds (birds with principally terrestrial life cycles). Most of these birds are specifically named in the Environment Canada (EC) publication, *Birds Protected in Canada under the Migratory Birds Convention Act*, Canadian Wildlife Service Occasional Paper No. 1.

Under Section 6 of the Migratory Birds Regulations (MBR), it is forbidden to disturb, destroy or take a nest or egg of a migratory bird; or to be in possession of a live migratory bird, or its carcass, skin, nest or egg, except under authority of a permit. It is important to note that under the current MBR, no permits can be issued for the incidental take of migratory birds caused by development projects or other economic activities.

Furthermore, Section 5.1 of the MBCA describes prohibitions related to deposit of substances harmful to migratory birds:

“5.1 (1) No person or vessel shall deposit a substance that is harmful to migratory birds, or permit such a substance to be deposited, in waters or an area frequented by migratory birds or in a place from which the substance may enter such waters or such an area.

(2) No person or vessel shall deposit a substance or permit a substance to be deposited in any place if the substance, in combination with one or more substances, results in a substance — in waters or an area frequented by migratory birds or in a place from which it may enter such waters or such an area — that is harmful to migratory birds.”

It is the responsibility of the proponent to ensure that activities are managed so as to ensure compliance with the MBCA and associated regulations. In fulfilling its responsibility to comply with the MBCA, the proponent should take the following points into consideration: (include further comments)

The Responsible Authority should be reminded that the Species at Risk Act (SARA) amends the definition of “environmental effect” in subsection 2(1) of the Canadian Environmental Assessment Act (CEAA) to clarify, for greater certainty, that EAs must always consider impacts on a listed wildlife species, its critical habitat or the residences of individuals of that species.

SARA also requires that the person responsible for a federal EA must, without delay, notify the competent minister(s) in writing if the project being assessed is likely to affect a listed wildlife species or its critical habitat. Notification is required for all effects, including adverse and beneficial effects, and the requirement to notify is independent of the significance of the

likely effect. The person must also identify adverse effects of the project on listed species and their critical habitat. And if the project is implemented, the person must ensure that measures are taken to avoid or lessen adverse effects and that effects are monitored. Mitigation measures must be consistent with recovery strategies and action plans for the species.

The complete text of SARA, including prohibitions, is available at [www.sararegistry.gc.ca](http://www.sararegistry.gc.ca). For guidance on SARA and EA, the proponents may wish to make use of the *Environmental Assessment Best Practice Guide for Wildlife at Risk in Canada* available at: [http://www.sararegistry.gc.ca/virtual\\_sara/files/policies/EA%20Best%20Practices%202004.pdf](http://www.sararegistry.gc.ca/virtual_sara/files/policies/EA%20Best%20Practices%202004.pdf)

### ***Effects of the Environment on the Project***

Seismic operations will be somewhat sensitive to environmental conditions (e.g., wind, waves, ice). The EA should focus on how such conditions acting on the project could have consequences for the environment (e.g., increased risk of spills and impacts on valued ecosystem components).

### ***Effects of Accidents and Malfunctions***

The mandatory assessment of environmental effects which could result from accidents and malfunctions should include a consideration of potential spill events, such as spills from damaged seismic streamers. The assessment should be guided by the need to ensure compliance with the general prohibitions against the deposit of a deleterious substance into waters frequented by fish (Section 36, *Fisheries Act*) and against the deposit of oil, oil wastes or any other substance harmful to migratory birds in any waters or any area frequented by migratory birds (Section 35, *Migratory Birds Regulations*). In addition, it should be focused on potential worst-case scenarios (e.g., concentrations of marine birds, presence of wildlife at risk). Based on this analysis, the EA should describe the precautions that will be taken and the contingency measures that will be implemented to avoid or reduce the identified impacts.

In developing a contingency plan that would support the assessment of accidents and malfunctions, and a determination that impacts could be avoided or reduced, it is recommended that the Canadian Standards Association publication, *Emergency Planning for Industry* CAN/CSA-Z731-95 (Reaffirmed 2002), be consulted as a useful reference. All spills or leaks, including those from machinery, fuel tanks or streamers, should be promptly contained, cleaned-up and reported to the 24-hour environmental emergencies reporting system (1-800-563-9089 for NL).

**The proponent should report any spills of petroleum or other hazardous materials to the Environmental Emergencies 24 Hour Report Line (St. John's 709-772-2083; Other areas 1-800-563-9089).**

Chevron Canada Resources – North Grand Banks Regional Offshore Seismic Program, 2011 - 2017  
 Draft Scoping Document Review Comments

