

Department of Environment and Local Government (DELG) **Algae Bloom Response Protocol Overview**

“Algae Blooms” are defined as a rapid increase in the population of algae in an aquatic system and are often the result of excess nutrients, specifically phosphorus and nitrogen. They have become increasingly common in lakes across Canada and in recent years, there have been a number of reports of algae blooms in New Brunswick.

The information below outlines the process in which Department of Environment and Local Government (DELG) and Department of Health (DH) follow when addressing reports of algae blooms:

Phase 1: Report of Potential Bloom

- When a report of a potential algae bloom is received by central or regional DELG staff a screening [questionnaire](#) is used to gather information relating to the incident. The appropriate Regional Office is notified (if original report comes to Central Office) and the completed form is reviewed by the Regional Water Planning Officer (RWPO) or inspector who determines if an inspection is necessary. If the lake has had algae blooms in the past a site visit is not required but the information regarding the potential bloom is sent to DH for their information.

Phase 2: Inspection Required

- If it is determined that an inspection is required, the RWPO/inspector notifies the appropriate regional Health Protection Office so that a public health inspector may accompany DELG staff on the inspection. DELG will carry out related field inspections and/or sampling and make their findings known to their Regional Director. To aid with the site inspection, a photo guide of aquatic phenomenon in New Brunswick is [available](#).
- During the site inspection, water samples of the algae bloom are collected and a determination will be made as to whether the samples will be sent to a third party laboratory for confirmation of the presence of blue green algae.

- If an algae bloom is confirmed, by means of a visual assessment and/or analytical algae identification results, then the appropriate Regional Medical Officer of Health is notified and DH will include this information as part of a risk assessment conducted to determine if an advisory will be issued. Advisories will be posted at various public access points on the affected lake.

Phase 3: Assessment by DELG's State of Environment Branch

- State of Environment Branch staff will determine if a more detailed site assessment is necessary based on the information provided by the regional staff. If a site assessment is necessary then sampling locations will be determined based on the distribution of the algae bloom and the locations of potential nutrient sources.
- The RWPO, along with State of Environment branch staff will assemble an inventory of land and water use and point sources of nutrients which are located within the affected lake's watershed.
- Water quality samples will be collected at various locations/depths and will include parameters such as, chlorophyll a, nutrients and metals along with measurements of dissolved oxygen, temperature and secchi depth.

Phase 4: On-going assessment and action planning

- If the algae bloom continues to occur additional sampling may be required and an action plan may need to be developed to further evaluate the bloom and to determine what further actions may be needed in order to improve the water quality of the lake.