



Procedure to follow and information to the public

if blue-green algae blooms are detected

In 2008, the government introduced a number of changes to the procedure to follow when blue-green algae blooms are detected in a body of water; more specifically how and when the public will be informed about actual risks to health. These changes came about as a result of:

- › information gathered during government action in 2007, in particular the analysis of results of over 1,500 samples;
- › information that came forth during a conference of experts in March 2008.

Changes to the procedure the government will follow in the event blooms are detected include simplifying, among other things, general recommendations if blooms do occur and the process to justify upholding precautionary measures where growth of blue-green algae or blooms is excessive, especially if surface scum is present.

Photos : MDDEP

Results of analyses conducted in 2007 reveal that:

- in the vast majority of cases, there is no risk to health as long as direct contact with a bloom is avoided;
- in some exceptional circumstances, however, (a body of water is covered almost entirely, a bloom covers a large area, presence of surface scum), the public health department (Direction de santé publique (DSP)) may have to take action to prevent health risks.



Summary of the procedure to follow and levels of public information during outbreaks of blue-green algae in 2008

- › Individuals who detect blooms or surface scum on a body of water are urged to report their finding to the Ministère du Développement durable, de l'Environnement et des Parcs (MDDEP).
- › The MDDEP will confirm the presence of blue-green algae blooms when they are reported by the public or if a bloom is discovered during a response procedure. The MDDEP will then send this information in a message to the municipalities concerned, the individual(s) who reported the finding and the DSP.
- › The DSP will take action if blooms pose a public health risk. Information about the bodies of water affected and any bans that apply will be posted on the Québec government information portal.
- › A public relations and information campaign at the beginning of the 2008 summer season will outline general guidelines to follow if a body of water is affected by a blue-green algae bloom. The guidelines will be posted permanently on the Québec government information portal.
- › Any bodies of water that are inspected by the MDDEP and where the presence of a blue-green algae bloom is confirmed, will be the subject of a report in October 2008 and a final report in December 2008, which will be posted on the MDDEP Web site.

General procedure to follow if a blue-green algae bloom is present and how and when the public will be notified

Observations, analyses and MDDEP report

- Confirmation of the presence of blooms is based on visual observations and laboratory analyses.
- If the presence of blooms is confirmed, usually following a reported sighting, the MDDEP sends this information in a message to the municipalities concerned, the individual(s) who reported the finding and the DSP.
- All bodies of water where the presence of blooms has been confirmed according to recognized standards will be the subject of a report in October and a final report in December 2008. The reports will be posted on the MDDEP website.

Specific procedure, based on water use, following detection of blooms in a body of water

In the case of water supply intakes that are governed under the Regulation respecting the quality of drinking water (public or private water distribution systems that serve more than 20 individuals)

In the case of organized beaches (beaches that are regulated under the Regulation respecting safety in public baths, which comes under the Public Buildings Safety Act)

If an area of a body of water is closed or if access to an entire body of water is prohibited

- › In all cases, the MDDEP sends a message explaining that blue-green algae have been detected:
 - to the municipality or municipalities concerned;
 - to the DSP.
- › Depending on the results of analysis of cells, toxins and observational data, the DSP may be required to take action. If action is necessary, a detailed advisory will be issued to the public directly concerned, and information about the body of water affected and restrictions issued by the DSP will be posted on the Québec government information portal.

Specific procedure for water supply intakes

that are governed under the Regulation respecting the quality of drinking water

- ▮ In May 2008, the MDDEP will issue recommendations to all municipal stations that draw their water supply from surface water, to regularly monitor the source of their drinking water supply.
- ▮ The monitoring procedure will apply only if an algal bloom is found a specific **distance from a water intake** (within 200 metres) and if the concentration of cells is $\geq 20,000$ cells/ml. The monitoring procedure will consist of the following steps:
 - Inspection of how effective treatment of the drinking water supply system is against blue-green algae and potential toxins.
 - Introduction of a **preventive monitoring procedure** by the operator, which consists of drawing one sample each week from supply systems that have a treatment capacity that is considered partially adequate or inadequate.

Based on the data collected and established criteria for concentrations of cells and toxins in drinking water or raw water, a non-consumption advisory will be issued following a decision by the public health director. If an advisory is issued, information will be posted on the Québec government information portal.

- ▮ The DSP will lift a non-consumption advisory for drinking water when **two consecutive analyses** of samples collected within a 48-hour period show that concentrations of toxins or cells are below established thresholds to protect public health.
- ▮ After an advisory has been lifted, preventive monitoring will continue, based on the type of water supply treatment process.
- ▮ After a non-consumption advisory for drinking water has been lifted, information about the body of water affected and the DSP advisory will be removed from the government portal.

Procedure for organized beaches

(public beaches that come under regulations governed by the Régie du bâtiment and the Regulation respecting the quality of drinking water)

- ▮ Operators of organized beaches are required to monitor water transparency and quality continuously. They are also required to keep a record and allow the MDDEP to examine their records.

During monitoring procedures, operators must take the presence of blue-green algae blooms into account.

- ▮ Organized beach operators:
 - do not have to take action if water is clear, is normal in appearance and contains only plant particles, based on normal visual monitoring;
 - if operators notice **an obvious coloured appearance of water** that may be related to blue-green algae, they must notify the MDDEP and immediately post a sign warning users that blue-green algae is present. They must prohibit access to the sector affected by a bloom, but the rest of the beach can remain open. They must also prohibit access to the entire beach if a bloom extends most of the area of the beach;
 - if access to a beach is partially or entirely prohibited, operators must notify the MDDEP, DSP and regional tourism association (Association touristique régionale);
 - information about a beach where total access has been closed will be posted on the Québec government information portal.
- ▮ A number of variables must be examined before a beach is authorized to reopen, such as the size of the sector of beach affected, the presence of surface scum and how long blooms remain present.
 - If a bloom is present in one sector of a beach, an operator can authorize the sector to reopen 24 hours after the bloom has disappeared.
 - If a bloom is present along the entire length of a beach for more than three days (72 hours) or if a large amount of surface scum is present:
 - the operator will notify the regional public health department, which will examine the situation to determine if a beach should remain closed for longer than 24 hours after a bloom has disappeared;
 - the MDDEP will work in cooperation with the operator, if necessary, to monitor and collect samples on the beach at the request of the DSP;
 - the beach operator will follow DSP and MDDEP recommendations, continue to monitor water transparency and notify the regional tourism association (Association touristique régionale) of how the situation is progressing.



Procedure to close a section of water or prohibit access to an entire body of water

The procedure will be implemented:

if the results of analyses reveal that levels of toxins or cells exceed thresholds based on water use (drinking water, swimming)

AND

if a large amount of surface scum is present over a large area of water or if the entire body of water will become affected.

A closure or prohibition of use of the entire body of water may be lifted when analyses show that there is no longer a risk to public health.

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