



Interior Health

February 16, 2009

Dear Sir or Madam:

Re: Upcoming 2009 Turbidity Season

Since 2006, and the creation of the Turbidity Education & Notification Campaign, Interior Health (IH) has partnered with water suppliers to educate the public about turbidity and notify them of elevated turbidity levels. The campaign was designed to help customers, particularly those most at risk from waterborne illness. Although this had not been routinely done in many parts of BC, we expected water suppliers to provide health risk information to consumers when turbidity levels exceeded 1.0 NTU.

Within the past year the Ombudsman released the report *Fit to Drink: Challenges in Providing Safe Drinking Water in British Columbia* with a series of recommendations towards achieving the Provinces' goal of "leading the world in sustainable environmental management, with the best air and water quality, and the best fisheries management, bar none." One of the report recommendations directed to the Ministry of Healthy Living and Sport and the regional health authorities is to establish a process for issuing turbidity advisories that is consistent across the province.

IH-Public Health Protection is committed to the following:

1. A continued expectation that the public has a fundamental right to be informed of potential risks to their health. This means providing information on who may be at risk and why, and how those risks may best be mitigated.
2. Revising our existing "Turbidity Education and Notification Campaign" by including the Ministry of Healthy Living and Sport's process for making public notification with respect to turbidity. Although a finalized provincial tool is not yet available, efforts should begin now between IH staff and water suppliers to prepare for the 2009 freshet. Preparation can occur based on some general principles consistent with the proposed provincial process.
3. A general expectation for those water suppliers who may be affected by elevated turbidity to have a developed response plan to such events, prepared in advance and in a form acceptable to the Drinking Water Officer.
4. To leave the Turbidity Education and Notification Campaign public notification information available on the Interior Health website as material for water suppliers who may choose to use them as part of their response plans

The Ministry of Healthy Living and Sport in collaboration with the regional health authorities has developed a draft decision tree and supporting document that is currently undergoing a review process. In anticipation of the finalized document being made publicly accessible, we would like to provide water suppliers within the Interior Health region with the expectation to prepare for the upcoming 2009 freshet based on the following general principles:

- Water suppliers utilizing unfiltered surface sources or shallow groundwater without disinfection develop a response plan acceptable to the Drinking Water Officer that identifies instances of increased risk with turbidity events.
- Acknowledgment that a water system affected by turbidity events may be considered at increased risk unless specific risk mitigation information is provided by individual water supplier.
- Response planning, based on individual water system risk factors, occurs in advance and identifies what information would be considered in making a decision during a turbidity event. A draft list of risk factors is attached.
- Recognition within the response plan that an increased monitoring regime may be required on the part of the water supplier in response to turbidity or as part of the risk assessment process.

We look forward to the continued cooperation and partnership that has been developed between water suppliers and Interior Health in our mutual recognition that safe, clean and reliable tap water is valuable. Sustainable drinking water for the residents of the Interior Health is critical to the future of ensuring healthy communities.

If you have any questions regarding this letter and to initiate your planning process in preparation for the 2009 turbidity season, please contact your Drinking Water Officer at your local Health Centre.

Yours truly,



Elizabeth Sigalet
Assistant Director Health Protection (Water Quality)

ES/ljb

cc: Tim Lambert, Executive Director of Health Protection, Ministry for Healthy Living & Sport
Att.

Factors that Increase the Risk of Human Disease with Rising Turbidity

Physical Risk Factors Associated with Turbidity:

1. Turbidity increasing above normal average.
2. Spills (e.g. sewage, agricultural, chemical).
3. Sources of fecal material, such as the presence and number of wild or domestic animals, e.g. cows, horses, deer, geese, etc.
4. Changes in hydrological characteristics, e.g. human development.
5. Organic vs. inorganic source event.
6. Precipitation intensity and anomalies, e.g. the amount and timing of rain, snow, or snow melt.
7. Existing treatment outcomes cannot be maintained, e.g. loss of chlorine residual, if chemically disinfected; a decrease in UV dose; lamp failure when disinfected by UF; or a decrease in transmittance.
8. Treatment risk factors associated with turbidity:
 - a. Existing treatment cannot be maintained;
 - b. A single disinfection method (e.g. chlorination only) is less effective and may result in higher risk than multiple treatments (e.g. UV + chlorination); and
 - c. Chlorination or UV does not disinfect pathogens individually.

Other Risk Factors That Should be Considered:

1. Lack of evidence of the absence of drinking water related illness;
2. Lack of evidence of the absence of pathogens in distribution system; and
3. Past history of health concerns