

FACT SHEET #1: DRINKING WATER

BACKGROUND

This fact sheet provides guidance for event organizers on providing drinking water to reduce the risk of dehydration and heat-related illness, and minimize the risk of waterborne illnesses. It is part of *Public Health Guidelines: Major Planned Events* (See “Resources,” below, for details.)

Clean drinking water is essential for human life. We constantly lose water through bodily processes such as urination and sweating. If we do not replenish that lost water, we are at risk for serious conditions (e.g., dehydration and heat exhaustion) that can lead to hospitalization or even death. Unfortunately, these conditions are commonly associated with major planned events because people do not always drink enough water when engaging in activities and/or experiencing circumstances, such as:

- Hot weather during outdoor events.
- Confined spaces.
- Crowding.
- Aerobic activities (e.g., sports and dancing).
- Alcohol and other drug use.

REDUCE THE RISK

Event organizers can reduce the risk of dehydration and heat-related illnesses by increasing access to potable¹ water with one or a combination of the following options:

- Provide free and easily accessible drinking water during events, particularly at all-day and multi-day events, and encourage attendees to bring refillable water containers/bottles.
- Allow attendees to bring their own water into events (event organizers could require the water to be in factory-sealed plastic bottles upon admission).
- Sell bottled water at prices that reflect cost recovery rather than making a profit, to make it an accessible option for all attendees.

As well as being easily accessible at major planned events, drinking water should be safe. If drinking water is being provided by a water supply system (e.g., local municipal supply, vehicle water tanks and tank trucks), the water supply system will be subject to the *Drinking Water Protection Act* and Drinking Water Protection Regulation.

Drinking water sources and equipment used for delivery can easily become contaminated with human and animal feces containing disease-causing pathogens and other contaminants.² Drinking water supply systems must be designed, installed, operated and maintained to ensure water potability, and approved by the local health authority. This includes carrying out the following actions:

- Contact the local health authority to determine if your plan includes a water supply system, and if you need a construction permit and operating permit.³

¹ Section 1 of the *Drinking Water Protection Act* defines “potable water” as water provided by a domestic water system that meets the standards prescribed by regulation. It is safe to drink and fit for domestic purposes without further treatment.

² See HealthLinkBC’s files related to waterborne illnesses for more information: <http://www.healthlinkbc.ca/healthfiles/hfile49a.stm>

³ These must be issued before the event, so event organizers should make this connection early in their planning.

- Obtain a water licence if you plan to use a new water source (i.e., surface water or aquifer) for which you do not already have a water licence. Contact the local office of the Ministry of Forests, Lands and Natural Resources Operations to find out if this is necessary.⁴ For contact information, see: <http://www.env.gov.bc.ca/wsd/contacts.html>.
- Provide an adequate supply of drinking water and water to support food vendor requirements. This should be determined during the risk assessment, considering the event type, duration and location, and ambient temperature. An event that is considered to be at high risk for dehydration incidents may need to provide enough drinking water for 500 mL/person/hour or up to 5 L/day.
- Provide an appropriate number of drinking water stations and outlets. This should be determined through the risk assessment. It could range from one outlet for every 500 individuals for a high-risk event to one outlet for every 3,000 individuals for a low-risk event. Outlets should be clearly marked and well lit, and located in areas that are easily accessible.
- Provide an appropriate number of outlets/connections for vendors and caterers.
- Provide adequate water pressure for normal and peak use.
- Provide clean, well maintained and suitable water-dispensing equipment.
- Install backflow-prevention devices at all available water connections.
- Ensure adequate drainage by providing self-closing taps.
- Make sure the ground surrounding the outlets has a nonslip surface and adequate drainage.
- Secure all equipment (e.g., supply lines and holding tanks) in order to:
 - Prevent access by unauthorized people.
 - Prevent accidental or deliberate equipment damage.
 - Prevent water contamination.

PROVIDE INFORMATION

- Use signage, announcements and other kinds of communication to encourage people to drink water.
- Provide people with information about the signs and symptoms of dehydration, as well as heat-related illnesses such as heat exhaustion. This should include advice about steps a person should take if experiencing symptoms of dehydration and heat-related illnesses.
- See the following HealthLinkBC Files for more information, including information about the signs and symptoms:
 - *Dehydration*: <http://www.healthlinkbc.ca/healthtopics/content.asp?hwid=dehyd>
 - *Heat-related Illness*: <http://www.healthlinkbc.ca/healthfiles/hfile35.stm>.

MONITOR HEALTH RISKS

- Ensure the water is potable, which means it is safe to drink and fit for domestic purposes without further treatment. The person(s) responsible for the water supply system will be required to sample and test (at a laboratory) the bacteriological safety of the water.
- Keep open communication with first aid and onsite medical staff with regard to incidents of dehydration or heat-related illnesses, as well as gastrointestinal illnesses.

⁴ This must be issued before water can be drawn from the source.

CHECKLIST

Each event is unique, with different requirements. Checklist items may or may not be applicable to your event.

TO DO:

- Contact the local health authority (construction and operating permits).
- Obtain a water licence, if necessary.
- Determine the amount of water needed per person.
- Determine the number of outlets and locations needed for attendees.
- Determine the number of outlets needed for vendors and caterers.
- Arrange water-hauling service contract, if necessary.
- Provide adequate lighting in areas around outlets.
- Sample and test water for bacteriological quality as required by the health authority.
- Ensure all equipment is appropriate for use and secure it.
- Check equipment and outlets regularly during the event to ensure they are working.
- Check outlets, drainage basins and surrounding areas regularly during the event to ensure they are clean and the ground is dry.
- Provide information to attendees about the signs and symptoms of heat-related illnesses, and make plans for encouraging people to drink water.

(For solid waste disposal, please see Fact Sheet #4: *Solid and Liquid Waste Disposal*.)

BRITISH COLUMBIA'S HEALTH AUTHORITIES

First Nations Health Authority
<http://www.fnha.ca/>
1-866-913-0033

Fraser Health
<http://www.fraserhealth.ca/>
1-877-935-5669

Interior Health
<http://www.interiorhealth.ca/>
250-862-4200

Island Health
<http://www.viha.ca/>
1-877-370-8699

Northern Health
<https://northernhealth.ca/>
250-565-2649

Vancouver Coastal Health
<http://www.vch.ca/>
1-866-884-0888

Provincial Health Services Authority
www.phsa.ca/
604-675-7400

LEGISLATION

Drinking Water Protection Act

http://www.bclaws.ca/Recon/document/ID/freeside/00_01009_01

Drinking Water Protection Regulation

http://www.bclaws.ca/civix/document/id/complete/statreg/200_2003

Water Sustainability Act

<https://engage.gov.bc.ca/watersustainabilityact/act/>

RESOURCES

HealthLinkBC. (2014). *Dehydration*.

<http://www.healthlinkbc.ca/healthtopics/content.asp?hwid=dehyd>

HealthLinkBC. (2013). *Heat-Related Illnesses*.

<http://www.healthlinkbc.ca/healthfiles/hfile35.stm>

Province of British Columbia. *Public Health Guidelines: Major Planned Events*.

<http://www2.gov.bc.ca/gov/content/health/keeping-bc-healthy-safe/pses-mpes/major-planned-events>

This site also includes the following fact sheets:

- *Fact Sheet #1: Drinking Water*
- *Fact Sheet #2: Safe Food*
- *Fact Sheet #3: Sanitation:*
- *Fact Sheet #4: Solid and Liquid Waste Management*
- *Fact Sheet #5: Harm Reduction*

Province of British Columbia. (2013). *Small Water System Guidebook*.

<http://www2.gov.bc.ca/assets/gov/environment/air-land-water/small-water-system-guidebook.pdf>

Province of British Columbia. (N.D.). *Water Licences and Approvals*.

http://www.env.gov.bc.ca/wsd/water_rights/licence_application/