

A Guide to Flood Prevention, Response, and Recovery

Part 1: Introduction

This guide provides:

- An overview of the ways to reduce the impacts of a flood before it happens
- Steps to take during a flood
- Tips and trick for cleaning up after a flood

If there is a potential for flooding, be sure to monitor local weather, conditions, and alerts for more information. Band social media pages, websites, and the band office will often have information for community members.

For more information check out:

Saskatoon Tribal Council www.sktc.sk.ca/emeregency

Canadian Red Cross www.redcross.ca

Water Security Agency www.wsask.ca

Saskatchewan Public Safety Agency www.saskpublicsafety.ca

Watch for hashtags **#SKflood** and **#SKstorm** on social media for updates and reports on current conditions.

Part 2: Before a Flood

Three main types of residential flooding can occur:

1. Overland Flooding
 - a. These flood waters are from rain and/or waterways and are typically clearer with little to no odor. They should still be considered contaminated.
2. Sewer Backup
 - a. These flood waters are from clogged or faulty sewage/septic systems and are usually grey or brown in colour with a strong odor.
3. A combination of both

Reduce the risk to flooding before it happens by:

- Making sure the ground slopes away from exterior walls of your home
- Rain water is directed at least two meters away from the home using downspouts
- Ensure sump pumps are working properly
- Regularly check for leaks in walls, floors, windows, and the foundation
- Clean leaves and debris from your eave's troughs and downspouts
- Install a backwater valve on your wastewater pipe

- Never pour grease, fats, or oils into your drains
- Don't wash solid, like bits of food, down the drain
- Never flush baby or other wipes down the toilet

Plan for flood emergencies

A flood can happen any time of year with little to no notice. Be sure to plan your home to mitigate the impacts.

- Never store important documents in the basement. Instead, keep them on upper levels in a water-tight container
- Keep floor drains clear of obstructions
- Consider having a professional elevate your furnace, water heater, and electrical panel
- Consider stocking your 72-Hour Emergency Kit with essential items to help during a flood such as:
 - Protective clothing such as a Tyvek suit
 - Hard hat
 - Gloves
 - N95 masks
 - Protective eyewear
 - CSA-rated rubber boots

Remember, just because your home or community has never faced a flood, doesn't mean it won't happen. Floods can impact anyone, anywhere.

Make a Family Emergency Plan

Use the Family Emergency Plan template available here [link to template from above] or visit www.getprepared.gc.ca for an interactive planning tool.

- Be sure to include everyone in the process so that they know what is in your plan and how to use it
- If you live alone, develop a plan that links with neighbours or family
- Keep a copy of your plan in you 72-Hour Emergency Kit

Flooding is one of the costliest disasters in Canada. Talk to your band about what insurance is held and consider looking into your own private insurance for the items in your home.

If flooding does occur, a Household Inventory List can save you thousand of dollars and dozens of hours of work. This can be as simple as video recording your home and all your possessions.

Part 3: During a Flood

If heavy rains are forecasted, take these measures to help mitigate the impacts:

- Clear drains, gutters, and downspouts of dead leaves and other debris
- Move furniture, electronic, and other valuable out of basements to upper floors
- If an item cannot be moved, consider elevating it

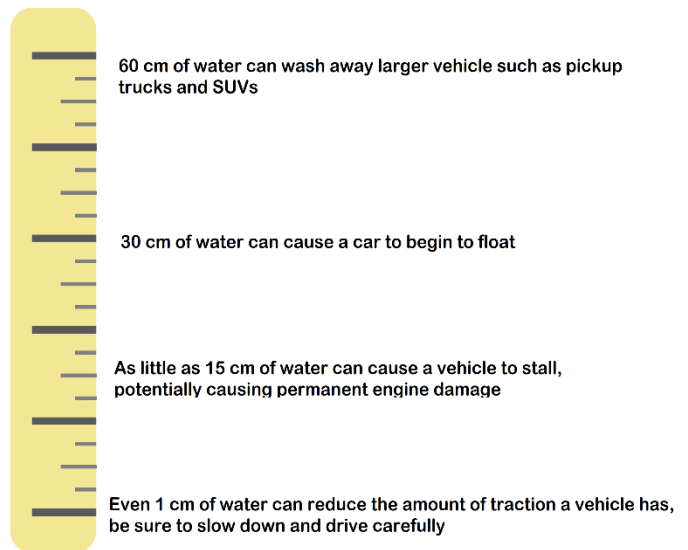
- Roll up rugs and store them on higher floors; they can trap moisture causing mould and further damage
- Ensure sump pumps and backwater valves are working properly; ensure sump pump backup batteries are working
- Ensure basement windows are closed and locked

If you lose power, food in your refrigerator and freezer may be at risk. Follow these tips to reduce the risk of food-borne illness:

- Avoid opening the refrigerator or freezer doors
- A refrigerator can keep food cold for 4 hours, a full freezer can keep food frozen for up to 2 days
- Add bags of ice or ice packs to extend these period of time
- Consider transferring items to coolers/ice chests with a supply of ice for longer-term solution
- Throw out any perishable foods that have been at temperatures of 4°C for longer than 2 hours
- Throw out foods that came into contact with raw meat juices

Flood waters can be super dangerous. Follow these tips to keep yourself safe during flood events:

- Standing water may be electrically charged by indoor electrical systems, underground or downed power lines
- Floodwaters can move quickly and pose a risk of drowning
- Buildings and other structures can be easily damaged and become unsafe; leave your home if the foundation, roof, or overhangs are showing any signs of structural damage
- Flood water will easily erode roads and walkways. Never drive through flood waters and be cautious when roads show signs of damage
- Assume anything touched by flood waters is contaminated. Never swim or play in these waters
- Flood waters can contain sewage, chemicals, broken glass and other debris, and much more. Be sure to always wear the proper personal protective equipment when entering flood waters
- Never drive through flood waters where you cannot see the bottom or when its fast moving



Evacuations

For your protection, you may decide it is necessary for you to evacuate your home. You may also be notified of an evacuation. For notification and details, you may hear via:

- SaskAlert
- Community Alerting System

- Website
- Telephone
- Social Media
- Officials going door-to-door

Most of the time multiple methods will be used to ensure everyone gets the message.

If you have time

- Take your 72-Hour Emergency Kit, Family Emergency Plan, and any other essential items
- If it is safe to do so, shut off water, gas, and electricity in your home
- Check with a neighbour to see if they require assistance

In many cases an Evacuation Centre, Reception Centre, or hotel may be arranged for you

- If you know where you are going, leave a note at your door saying where you are going and how to contact you
- Be sure to register once you arrive at the Reception Centre
- If you go anywhere other than the designated location, be sure to notify officials of your location

If you remain in your home

Remember that flooding can affect your safety and health. Be sure to take precautions to prevent illness and injury before you enter any area that has been flooded.

Part 4: After a Flood

If you have insurance, call them right away in order to start the claim process. Contact your band regarding band-held insurance.

Initial safety precautions

- Be sure to monitor local alerts, social media, and websites for information on when it is safe to return
- Never return alone, and always bring a cellphone with you
- Don't drive or walk through flood waters
- Stay away from downed power lines
- Assume that everyone touched by flood waters is contaminated
- Keep children and pets away from flooded areas and contaminated items

Before entering your home

If it is safe to do so, turn off electricity at the main breaker or fuse box outside your home using a dry piece of wood. If electricity cannot be shutoff, do not enter your home until officials can shut it off.

- Check for foundation and structural damage
- If you are unsure about the safety, do not enter
- Do not reconnect electricity, gas, telephone, or TV cable lines yourself; contact your service provider

General health considerations

Wear appropriate personal protective equipment, wash frequently with soap and clean water, and protect open sores with waterproof coverings.

Disease-causing bacteria, viruses, and other germs found in sewage can cause gastrointestinal illness. Ingestion occurs from eating contaminated foods, drinking contaminated water, or accidentally touching mouth with contaminated hands.

Skin contact with contaminated flood water can cause rashes and infect open sores.

Clean Up

Before starting to clean up, be sure to document all damage and retain records such as receipts and quotes.

Always wear the appropriate Personal Protective Equipment.

If it is safe to do so, turn off the electricity at the main breaker or fuse box using a dry piece of wood. If you cannot, do not enter the space and contact your hydro company for assistance.

- Do not use electrical appliances that are wet or may have been affected by flood water until a qualified electrician has inspected them
- Do not use anything requiring water in your home (e.g., toilets, showers, washing machine and sinks) until the flood water from your house has been removed
- Cleaning up a home that has experienced extensive water damage or has been flooded with sewage-contaminated waters may require a qualified flood damage restoration company
- Dust created during clean-up activities can become airborne. Close off the flooded areas during clean-up and repair to prevent dust spreading to other rooms in the house
- Use of cleaners and disinfectants can release vapours. Keep rooms well ventilated. Wear protective clothing such as gloves and N95 masks and keep children away from the area when using these cleaning solutions

First Steps

Remove standing water

Remove standing water with pumps or pails, a wet/dry vacuum and rags and/or towels. If the water in your basement is deep, contact a professional damage restoration company to help drain the water slowly to prevent structural damage.

Make decisions about what to keep and what to throw away

Remove as much as you can out of the rooms that were flooded as quickly as possible to help prevent water damage and mould. Some belongings, especially those that are contaminated with sewage, or those that cannot be quickly dried and effectively cleaned, may not be salvageable.

Removed soaked and dirty building materials and debris

This includes wet insulation and drywall.

Quickly and thoroughly dry and dehumidify your home

Ventilating the area with outdoor air and fans will help. A dehumidifier will work to remove moisture from the home.

Surface cleaning

If mould has already grown, do not use bleach or other disinfectants to clean mould as this will cause dangerous off-gases

- Clean and disinfect surfaces as soon as possible to prevent the growth of bacteria, viruses and mould
- If mould has already started to grow, read the section “Cleaning up Mould” and note that you should never use disinfectants, like bleach, to clean up mould. Otherwise, follow the directions below for cleaning.
- Clean non-porous surfaces (i.e. glass/plastic/metal) and belongings using an unscented detergent and water solution and a cleaning brush. After cleaning with detergent, the next step is to disinfect using a disinfectant, such as a bleach and water solution and carefully follow the directions for use on the product label. Be sure to wear appropriate personal protective equipment and ventilate the area
- Items that are wet may need to be thrown out if they are porous (e.g., unsealed wood/drywall) or unable to be cleaned.
- If the affected area is extensive, consult with a professional cleaning company for cleaning

To prepare a mild bleach solution for surface disinfection mix 1 teaspoon of bleach with 3 cups of water. Make sure the bleach is not expired.

DANGER!!

Never mix different cleaning products together! This may cause dangerous reactions and off-gases.

Household items

Items that have been contaminated by sewage or that have been wet for a long time should be thrown out.

Carpets and upholstered furniture that can be salvaged may need to be professionally cleaned and dried. If these items are sewage-soaked, they should be thrown out.

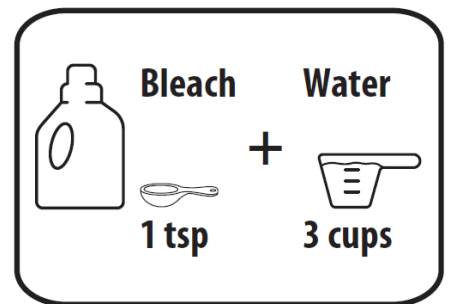
Wet drywall and insulation should be removed to allow studding to dry.

Appliances

- A qualified service technician should verify the safety of any appliance that has been affected by flood water before it is used
- Thoroughly clean and disinfect appliances if you will be keeping them
- Appliances that cannot be salvaged should be discarded

Medicines, cosmetics and other toiletries

Discard these items if they have been in contact with flood water. Prescription and over-the-counter medications can be disposed of at your local pharmacy.



Food safety

If in doubt, throw it out.

Frequently wash your hands with soap and clean water, especially after being in contact with flood water, sewage or items that have been contaminated by either.

The following foods should be considered unsafe and thrown out:

1. Food in boxes, bags, paper, and plastic wrap
2. Food and drinks in bottle, plastic containers, and jars
 - a. The area beneath the lid cannot be properly cleaned and disinfected
3. Fresh foods such as meats, fruits, vegetables and eggs

Commercially canned food in metal cans without dents, leaks or bulges are considered safe if properly cleaned and disinfected. Clean metal cans by washing them in a strong dish soap solution and then soaking them in a mild bleach and water solution for two minutes to prevent potential contamination when the can is opened.

Thoroughly clean and then disinfect dishes, eating and cooking utensils, and food contact surfaces.

Throw out any eating utensils, cutting boards and other food contact surfaces that cannot be properly cleaned and disinfected.

Drinking water safety

Band water supply

Look out for water advisories in your area. Follow instructions given by local authorities. Instructions might be to use boiled water (rolling boil for at least 1 minute) or alternate water supply such as bottled water for cooking or preparing food, making baby formula, washing dishes, cleaning, brushing your teeth, washing your hands, making ice and bathing.

Private wells and septic systems

Your well water supply may be contaminated by flood waters. Use an alternate source of drinking water until you can obtain test results indicating that your well water is safe for drinking. Contact your band office for information on having your water tested.

If flooding on your property was severe, consider having your septic system inspected by a licensed contractor before using it again.

Discarding materials

- Bag items that are considered regular waste and place at the curb on your regularly scheduled waste collection day.
- Contaminated boxes, cans, bottles and paper should be placed in garbage. Do not place these items in recycling as they no longer meet recycling standards
- Check local requirements for collection of large items, like flooring, including carpet and under padding

The following items are not accepted as regular waste:

- Electronics
- Household hazardous waste (e.g. solvents, garden chemicals, home cleaning products)
- Metal and appliances

Getting rid of mould

The size of the affected area will determine whether you should clean and remove mould from the area yourself or hire a professional:

- **Yourself:** small areas no more than one square meter in overall size
- **Professional:** large areas greater than one square meter in size, or smaller areas where mould keeps coming back after cleaning

Never use disinfectants, like bleach, to clean mould. Always use water and dish detergent to clean mould.

Protect yourself and others when cleaning mould

- Wear a disposable particulate mask (N95 mask), unvented safety goggles and household rubber gloves.
- Close off the room from the rest of the house and turn on any exhaust fans that vent to the outside to help prevent contaminating other areas of the house, as well as to provide ventilation.

Cleaning mould from building materials, furnishings and other items

Washable surfaces, such as tile or glass

- Wipe or scrub surfaces using a damp cloth and a solution of water and dish detergent
- Sponge with a clean damp cloth
- Dry quickly and thoroughly
- If you have a HEPA (high-efficiency particulate air) vacuum cleaner, vacuum the cleaned surfaces as well as surrounding surfaces
- Do not use a regular vacuum cleaner

Drywall

- Wipe the surface of the wall using a damp cloth and a solution of water and unscented detergent
- Dry quickly
- If you have a HEPA (high-efficiency particulate air) vacuum cleaner, vacuum the cleaned surface
- If you are unable to wipe away the mould, it is best to replace the drywall

Carpets and upholstered furniture

If these materials were affected by flood water and mould is visible, they will likely need to be professionally cleaned or thrown out.

Any mouldy material or item that cannot be effectively cleaned should be sealed in plastic and thrown out.

Mould and your health

- Most types of mould are not a health concern for healthy individuals, but some individuals may experience respiratory symptoms such as asthma, sore throat and allergy-like symptoms
- Some people are more vulnerable to the effects of mould than others. This may include children, the elderly and those with a weakened immune system or other medical condition(s), such as asthma, severe allergies or other respiratory conditions
- When mould growth occurs, it is recommended to clean up the mould and eliminate the source of the moisture to prevent further mould growth
- Indoor air testing for mould is generally not recommended as results can be difficult to interpret

During clean-up and over time, indoor air quality can be affected.

- Dust created during clean-up activities can become airborne. Close off the flooded areas during clean-up and repair to prevent dust spreading to other rooms in the house
- Use of cleaners and disinfectants can release vapours. Keep rooms well ventilated. Wear protective clothing such as gloves and N95 masks and keep children away from the area when using these cleaning solutions