



# Flood Preparation & Response Plan

FOR PERSONAL USE AND REFERENCE ONLY

Municipal District of Lesser Slave River No. 124

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## PURPOSE

The Municipal District of Lesser Slave River has prepared this Flood Response and Preparation Plan template to help area citizens develop a plan to mitigate adverse consequences to their family and property before, during and after a Flood event.

This document focuses on the needs of your family and property protection in the event of a Flood Emergency through educating citizens on flood preparedness strategies, information on readily available resources and providing an emergency plan template that can be utilized to build personal emergency plans in event of a flood emergency.

## ROLES AND RESPONSIBILITIES

Identify key personnel and their responsibilities.

MD responsibilities:

- Ensuring safety of the travelling public and residents
- Follow the most recent approved Alberta Transportation Signage requirements in active work zones.
- Protecting Municipal (Public) infrastructure such as roads, water and wastewater treatment facilities, bridges and public buildings.
- Clean-up of above to ensure residents can return to their homes
- Ensure storm water management plans are followed and applicable infrastructure is well maintained and effective. (Note: storm water management plans are to ensure that water moves along established ditches, it is the landowners responsibility to ensure that water that falls on their property can flow to an appropriate drainage system).
- Ensure staff are trained and prepared to respond if the event escalates to an emergency

Landowner & Tenant responsibilities:

**Landowner:** As defined in the [Land Use Bylaw 2021-17](#) as the registered owner of the land.

**Tenant:** A person who occupies land or property rented from a landlord.

- <https://www.alberta.ca/emergency-preparedness-week#jumplinks-2>
- Stay up to date on the evolving situation by checking the Voyant Alert App, MD website and social media channels.
- Protection of private property such as residences, sheds, patios etc.
- Clean-up of above from damage due to natural disasters
- Protection of pets, livestock and improvements to land on private property.
- Maintenance and repair of sump pumps, weeping tile etc.
- Ensure lot grading maintains drainage to ditch, away from any improvements
- Follow Municipal development standards and guidelines when developing their land. Ensure that development does not have an adverse impact on their neighbors.

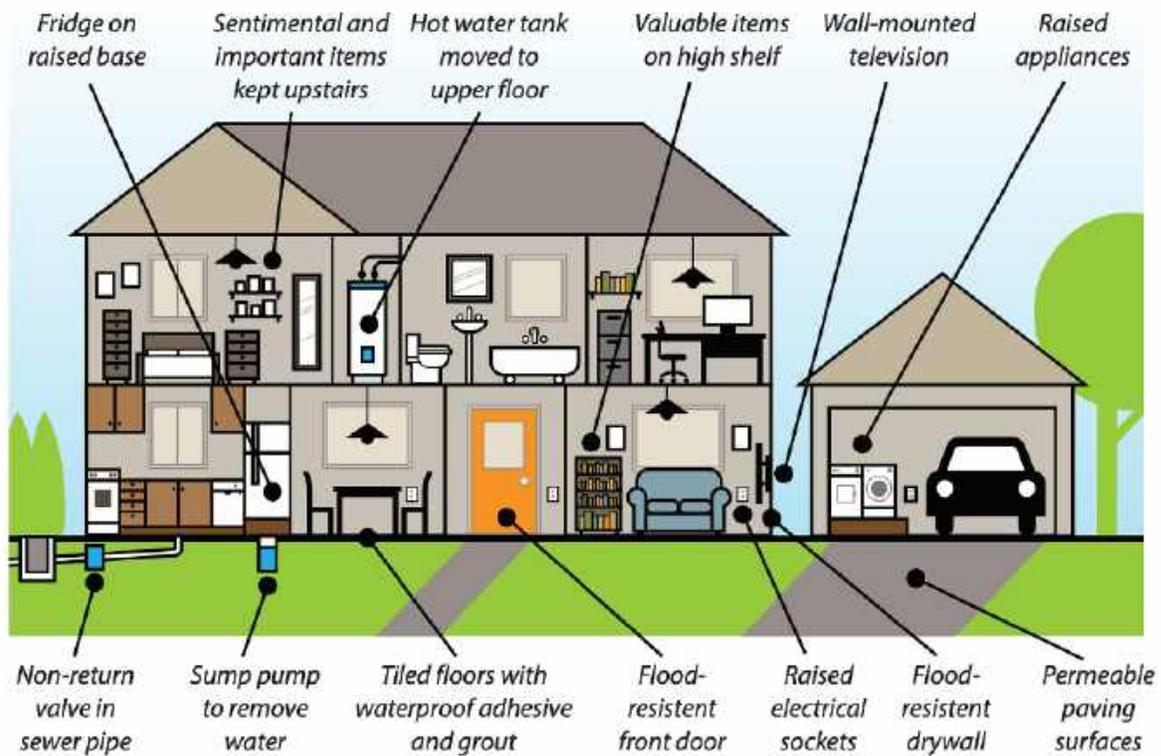
## PART A: PRE-FLOOD PREPAREDNESS

To protect your family and property during a flood in the Municipal District of Lesser Slave River it is important ensure access to government emergency communication platforms, create a flood response plan, including an emergency kit, family communication plan, and evacuation routes, and take proactive measures like securing valuables and understanding flood advisories.

## FLOOD MITIGATION

To prepare your property for the potential of flood, here are some tips as recommended by the [Canadian Red Cross Flood Guide - Be Prepared](#) (Appendix A)

This graphic from Prepared BC helps illustrate some of the steps you can take to prevent flood damage:



## EMERGENCY PLAN

Developing a Family Emergency plan is the first step to being prepared for a Flood Emergency. This section will walk you through completing a family emergency plan to prepare you to respond to a Flood emergency.

### HOUSEHOLD MEMBERS' INFORMATION

<b>NAME</b>		
	<b>Birthdate</b>	
	<b>Health Card</b>	
	<b>Drivers License</b>	
	<b>Cell Phone</b>	

<b>NAME</b>		
	<b>Birthdate</b>	
	<b>Health Card</b>	
	<b>Drivers License</b>	
	<b>Cell Phone</b>	

<b>NAME</b>		
	<b>Birthdate</b>	
	<b>Health Card</b>	
	<b>Drivers License</b>	
	<b>Cell Phone</b>	

<b>NAME</b>		
	<b>Birthdate</b>	
	<b>Health Card</b>	
	<b>Drivers License</b>	
	<b>Cell Phone</b>	

<b>NAME</b>		
	<b>Birthdate</b>	
	<b>Health Card</b>	
	<b>Drivers License</b>	
	<b>Cell Phone</b>	

## MEDICAL INFORMATION

As recommended by the Canadian Red Cross, when constructing the medical information portion of your emergency management plan, for each household member, you are encouraged to:

- Attach copies of health cards to this plan.
- Attach copies of third-party, private or other supplementary health insurance cards to this plan (such as insurance through your employer).
- Attach copies of prescriptions to this plan.
- Include a three-day supply of all medications in your kit or at least have such supplies in a safe location within your home that you are prepared to grab and leave your home with as needed.

<b>NAME</b>		
<b>Medication and Dosages</b>		
<b>Condition</b>		
<b>Allergies</b>		
<b>Blood Type</b>		
<b>Medical Aids</b>		
<b>Plan to manage in case of emergency</b>		

<b>NAME</b>	
<b>Medication and Dosages</b>	
<b>Condition</b>	
<b>Allergies</b>	
<b>Blood Type</b>	
<b>Medical Aids</b>	
<b>Plan to manage in case of emergency</b>	

<b>NAME</b>	
<b>Medication and Dosages</b>	
<b>Condition</b>	
<b>Allergies</b>	
<b>Blood Type</b>	
<b>Medical Aids</b>	
<b>Plan to manage in case of emergency</b>	

# COMMUNICATION PLAN

## Emergency Contact Information

Name	Relationship	Phone	Address	Local	Out of Town
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>

<b>Local RCMP Contact Name:</b>
<b>Number:</b>

## Support Resources

<b>Provincial emergency management:</b> AEMA // 1-888-671-1111 // <a href="http://www.alberta.ca/alberta-emergency-management-agency">www.alberta.ca/alberta-emergency-management-agency</a>
<b>Local municipal government:</b> MD of Lesser Slave River // 780-849-4888 // <a href="http://www.mdlsr.ca">www.mdlsr.ca</a>

**PLACES TO STAY IN AN EMERGENCY**

NAME		
	Phone	
	Address	

NAME		
	Phone	
	Address	

NAME		
	Phone	
	Address	

NAME		
	Phone	
	Address	

NAME		
	Phone	
	Address	

**HOUSEHOLD MEETING PLACE**

Close by	
Out of area	

SCHOOL EMERGENCY PLAN

School Name	Child Attending	School Number	Emergency Plan Details

**UTILITIES AND SERVICES**

Service Provider Information

	Company	Account Number	Contact Details
Electricity			
Gas			
Water			
Internet			
Phone			
Septic			
Other			

Utility Information

Utility	Location of Shut off/Override	How to Shut Off/override
Main Water Valve		
Electrical Pannel		

*\*Review manufacturer or supplier instructions\**

## INSURANCE

Here is an insurance preparation checklist:

- Schedule an annual meeting with an insurance agent or broker to review your coverage.
- Fully understand your insurance policy, including what it covers and what it excludes.
- Ensure that important insurance information is accessible in case of a flood emergency.
- Take updated photographs of your property and assets in their current condition from the same location every year, and securely store them with your insurance documents.

	Company	Contact Details	Policy Number
Home			
Third-party Health/ Supplementary Insurance			
Car			
Life			
Travel			

*\*Make sure to contact your provider to ensure that your policy covers flood risks. Insurance providers are privy to flood risk information and will be able to guide you in ensuring your assets are protected.\**

## PETS

NAME	
Breed	
Microchip/License Number	
Medical Conditions	
Vet Contact Details	
Kennel Contact Details	
Emergency Safe Place	
Plan to care for in emergency	
Other Information	

NAME	
Breed	
Microchip/License Number	
Medical Conditions	
Vet Contact Details	
Kennel Contact Details	
Emergency Safe Place	
Plan to care for in emergency	
Other Information	

<b>NAME</b>	
Breed	
Microchip/License Number	
Medical Conditions	
Vet Contact Details	
Kennel Contact Details	
Emergency Safe Place	
Plan to care for in emergency	
Other Information	

<b>NAME</b>	
Breed	
Microchip/License Number	
Medical Conditions	
Vet Contact Details	
Kennel Contact Details	
Emergency Safe Place	
Plan to care for in emergency	
Other Information	

## EVACUATION

### Map

Draw your home layout and evacuation plan below. Make sure to note where utilities are located, and emergency kits are.

**Legal Land Description:**

**Address:**

---



### Routes

Describe the routes in which you would evacuation, use road names and direction arrows (>) between each road.

**Route #1** \_\_\_\_\_

**Route #2** \_\_\_\_\_

## EMERGENCY KITS

It is recommended that you prepare your emergency to take care of you and your family for 72 hours. The Canadian Red Cross shares an great tool for building appropriate emergency ready kits, please use the following resource: [Canadian Red Cross - Build or Buy a Kit](#) (Appendix B).

## PART B: DURING A FLOOD

### Plan Activation and Evacuation:

1. Activate your Emergency Plan
2. Bring your emergency kit and Emergency Plan.
3. Stay informed on the situation by listening to updates from authorities. Be sure to follow all directions and instructions from authorities.
4. Evacuate routes established as safe by local authorities.
5. Check in to your assigned evacuation center.

### Safety Precautions:

1. Do not walk or drive in floodwaters.
2. Pay special attention to debris that could cause your harm.
3. Follow your area evacuation protocol.
4. If you are stranded, go to the highest ground

### First Aid and Medical Assistance:

1. Call 911 in emergency flood situations where you are stranded by floods.

### Utility and Services:

#### **ONLY, if it is safe to do so:**

1. If you have a pump system for your well turn off the power to your well pump
2. During a flood avoid using sewage systems (running taps and toilets) this could cause major damage to your sewer system buy potentially overloading the system or causing backups into your home.
3. Shut off all electrical power if it is safe to do so.

## PART C: POST-FLOOD RECOVERY

### Returning Home & Support Services

The MD recommends referring to the Canadian Red Cross Guide to Flood Recovery when beginning to return home after a flood: [Canadian Red Cross Guide To Flood Recovery](#) (Appendix C)

### Cleanup and Restoration:

*For information cleaning your home after a flood, please refer to:*

*Government of Alberta:* [Cleaning Your Home After a Flood](#)

*Alberta Health Services:* [Cleaning the Hours After a Flood](#) (Appendix D)

*Alberta Health Services:* [Disinfecting Private Water Supplies](#) (Appendix E)

*Alberta Health Services:* [Cistern Cleaning](#) (Appendix F)

## RESOURCES FOR YOU

### Government Emergency Communications Platforms

#### Municipal Resources

In the event of a flood, the Municipal District of Lesser Slave River will provide updates via Voyent Alert and the MD website:

1. Visit our website at [Municipal District of Lesser Slave River \(www.mdlsr.ca\)](http://www.mdlsr.ca)
2. Download Voyent Alert to your Mobile Device or register for email, text or voice calls on their website:



#### How to register

Registration for the service is FREE, simple and totally anonymous.

- For mobile app alerts download and install the *Voyent Alert!* app from the Apple or Google Play app stores.
- For email, text message or voice call alerts register online at <https://ca.voyent-alert.com/vras/client.html#!/registration>

#### Provincial Resources

The Alberta Government recommends Downloading Alberta Rivers Advisories App, the Alberta Rivers Website or the Alberta Emergency Alert app:

1. Alberta Rivers: Data and Advisories App  
[Download Alberta Rivers: Data and Advisories for Android Devices](#)  
[Download Alberta Rivers: Data and Advisories for Apple Devices](#)
2. Or visit [www.rivers.alberta.ca/](http://www.rivers.alberta.ca/) website for more information.
3. Download Alberta Emergency Alert  
[Download Alberta Emergency Alert for Android Devices](#)  
[Download Alberta Emergency Alert for Apple Devices](#)

#### Insurance

The Canadian Red Cross shares a great visual aid to ensuring your property is properly insured for flood. Please visit this resource here: [Flood Insurance Fundamentals](#) (Appendix G).

1. Check with your insurance representative to determine if sewer backup and/or residential flood insurance is available for your property. You can also contact the Insurance Bureau of Canada at 1-844-227-5422 for information regarding home insurance.

## **Animal Emergency Plan**

The Municipal District of Lesser Slave River recognizes the residents throughout the district may require a more robust Emergency Plan for their animals. Should this be required, you can access the Animal Emergency Plan on the website at: [Municipal District of Lesser Slave River](#) or you can contact the Agriculture Service Department at 780-681-3936 (toll-free 1.866.681.3929)

# APPENDIX A

Canadian Red Cross Flood Guide - Be Prepared

# FLOODS CAN HAPPEN ANYWHERE



**DON'T WORRY,  
BE READY**

Take steps today  
to help protect your  
home and family



**YOU CAN TAKE THESE STEPS TO HELP PROTECT YOUR HOME FROM FLOODING**



Obtain **home insurance** with flood coverage.



Talk to your insurance provider about your risk and additional steps you can take to **protect your home**.

**Protect your valuables** by storing them in waterproof containers on shelving above potential water levels or moving them to upper floors.

**Find your floor drain** and make sure nothing is covering it like boxes, furniture or carpet.

**Install a sump pump, backup pump and power supply.** Ensure all are in working order and test them regularly.

**Install a backwater valve.** Keep it in working order.

**Add window wells and covers to windows** that are near or below ground level.

**Keep eavestroughs clean** and downspouts directed well away from your home.

**Ensure your landscaping** is properly sloped away from your home.

**Clean leaves, garbage, ice** and other debris away from the storm drains near your home.

**Note:** Some of these actions may not be applicable in your home. These actions are intended to lower your risk, and do not guarantee the prevention of basement flooding.

## YOU CAN BE READY TO HELP PROTECT YOURSELF AND YOUR FAMILY FROM FLOODING.

### BEFORE

- **Know the risks** where you live, work and play. Monitor local weather and alerts. Talk to your municipality and insurer about your risks and what you can do.
  - **Have an emergency plan** and practice it with your family.
  - **Know what you would do during a flood – talk about it with your family** and neighbours.
  - **Know and practice** evacuation routes.
  - **Have an emergency kit.**
  - Download the **Red Cross Be Ready app** for alerts and information.
- 

### DURING

- **Listen to local radio, watch your local news channels** for possible flood warnings and reports of flooding in progress. Follow safety instructions.
  - **Be prepared to evacuate** at a moment's notice.
  - When a flood or flash flood warning is issued for your area, **head for higher ground** and stay there.
  - **Turn around – don't drown!** Avoid walking and driving through flood water. It could be deeper than you think. Be especially cautious at night when it is harder to recognize flood danger.
  - **Keep children and pets away from flood water.**
- 

### AFTER

- **Continue to take precautions and listen to and follow directions from local authorities.**
- **Notify your insurance company.** Visit [redcross.ca/ready](https://redcross.ca/ready) for further tips.
- **When returning to your home,** do so only when you are advised it is safe to do so.
- **Do not use food or water that may be contaminated.** When in doubt, throw it out!
- Consult the **Canadian Red Cross Guide To Flood Recovery** at [redcross.ca/ready](https://redcross.ca/ready) for step-by-step instructions, including:
  - **When cleaning your home, maintain good hygiene** by minimizing contact with flood water or anything that may have come in contact with it. **Wear protective clothing**, including rubber/sturdy boots, safety glasses, hard hat, rubber gloves and a dust mask.
  - **Do not use appliances, heating, pressure or sewage systems** until electrical components are dry and have been inspected by a qualified electrician.
  - **Check with local authorities or community leaders** on how to properly dispose of damaged and contaminated items from your home.
  - For further emergency planning tips and advice, visit [redcross.ca/ready](https://redcross.ca/ready) and download the **Red Cross Be Ready app**.

# **APPENDIX B**

## Canadian Red Cross - Build or Buy a Kit

# BUILD OR BUY A KIT

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**Getting or making an emergency kit is a very important step in ensuring you are ready for emergencies. You should have an emergency preparedness kit in your home with enough supplies to meet the needs of your entire household for at least 3 days.**

Some disasters, such as floods, wildfires and major power outages, can create very unsafe conditions. If your safety is at risk, community officials may ask you to either take shelter at home, or evacuate to a safer place. If asked to evacuate, you may have only minutes to get what you need and leave. Having an emergency kit that you can either use at home or grab and take along will help you be prepared and get to the evacuation point quickly, if needed.

**Building a kit might seem expensive, but it doesn't need to be, and it is worth the effort! By taking the time now to store food, water and supplies, you can provide for yourself and your family in an emergency.**

## HERE ARE SOME TIPS TO GET YOU STARTED:

- Before you purchase anything, see what you already have in your home. You might already have some first aid supplies and non-perishable food items, which will save you time and money.  

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- Start with the essential items listed below first, then add additional items when you can.  

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- Keep a list of the things you need for your kit with you, in your phone, purse or wallet. When you are out doing regular shopping, check your list and purchase items when they are on sale.

- Purchase a couple of items from your list each week or month to help spread out the cost.  

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- Ask your family and friends if they have any spare items they are willing to give you that are on your list. You may want to consider checking out garage sales or reaching out on social media as well.  

---
- When you're buying food for your kit, consider these points:
  - Buy items with a long shelf life. Check the best before dates on cans, boxes and bags and look for items that will not expire quickly.  

---
  - Make sure larger food items you buy don't need to be refrigerated after they are opened. During a disaster, the power may be out for hours or even days, meaning leftovers would need to be thrown out.  

---
  - Regularly check the best before and expiry dates on the food in your kit. When the date is getting close, take it out of the kit and replace it with a new item. You can eat the items that were closer to expiry so that they don't get thrown out.

Taking small steps towards being prepared will make a big difference during a disaster or emergency. It will be time and money well spent.

## BUILD A KIT

### ESSENTIAL ITEMS

Water for drinking – at least 1L per person per day (2L if including pets) for at least 3 days.

Water for cleaning and hygiene: 2L per person/per day

Non-perishable food for each person for at least one day, such as:

- Ready-to-eat canned food (meats, fruits, vegetables)
- Protein, granola or fruit bars
- Dry cereal or granola
- Trail mix
- Peanut butter
- Dried fruit
- Dried meat
- Oatmeal
- Apple sauce
- Canned juices
- Non-perishable pasteurized milk
- Food for infants

**Tip**

Even non-perishable foods have expiry dates. Check your kit every year and replace the food as needed.

Manual can opener (if you include canned food items) and utensils

Items you cannot be without, such as medications (with copies of your prescriptions), extra eye glasses or contacts, baby supplies (diapers, formula, food, toys), hearing aids, dentures, diabetes supplies, walkers, pet foods and medications, etc., to last at least 3 days.

Important documents – consider including copies of:

- Birth and marriage certificates
- Passports, permanent resident cards, status cards, or any such important documents
- Health cards
- Licences
- Wills
- Land deeds
- Insurance

**Tip**

In addition to having paper copies of important documents in a safe location (consider a safe location other than your home), you may also want to consider saving electronic copies or photos of important documents in a safe location (such as an encrypted USB, or other secure device) or leaving with a trusted contact.

Copy of your emergency plan (see [redcross.ca/ready](http://redcross.ca/ready) for more information and to download a template)

Crank or battery-operated flashlight, with extra batteries

Crank or battery-operated radio, with extra batteries

Extra keys for your house and car

First aid kit

- Extra cash in small bills and coins
- Personal hygiene items
- Extra cell phone charger or battery pack
- Supplies for your pet, including:
  - Food
  - Medication
  - Vaccination records
- Paper and pens
- Whistle

### ADDITIONAL ITEMS TO CONSIDER

- Traditional medicines and/or easily portable ceremonial items that you use or want to have with you.
- Traditional foods that may be difficult to find in stores.
- Change of clothing and footwear for each person in your household
- Plastic sheeting
- Scissors and a pocket knife (not if evacuating by air or into a centre/shelter)
- Hand sanitizer
- Garbage bags and twist ties
- Toilet paper
- Multitool or basic tools (i.e. hammer, wrench, screwdriver, etc.)
- Duct tape
- Sleeping bag or warm blanket for each member of your household
- Toys, games, books, deck of cards
- Paper maps

### BUY A KIT

Would you prefer to buy a kit rather than build your own? You can purchase Red Cross emergency kits at <https://products.redcross.ca>. Kits are available in different sizes based on the number of people in your home. Once you receive your kit, be sure to add any items on the list above that are not included in the kit you purchased, including water and non-perishable food.

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### PACK YOUR KIT

We recommend storing these items all together in a sturdy and easy-to-carry bag, such as a backpack, that can be easily used and carried with you in an emergency.

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### STORE YOUR KIT

Once you have your kit put together, store it in a clean, dry place that's easy to access in case you must leave your home (evacuate) quickly. Make sure everyone in your family knows where it is.

Check your kit every year to ensure it is ready in case you need it.

➤ Be sure to resupply your kit after you use it.

See [redcross.ca/ready](https://redcross.ca/ready) for more tips on being prepared.

**DISCLAIMER:** Information made available on this document is for informational purposes only and should not be relied upon as professional advice. By accessing the information on this document, you agree that the Canadian Red Cross and its agents shall not be liable for any injury, loss, claim or damages of any kind arising from this information, or any other claim directly or indirectly related to the use of this information.



# **APPENDIX C**

Canadian Red Cross Guide To Flood Recovery

Guide to

# FLOOD RECOVERY





### Quick Checklist

- Do not enter your home until officials say it is safe.
- Use caution when entering flooded areas as hazards may still exist.
- Avoid damaged or fallen power lines, poles and downed wires.
- Watch animals closely and keep them under your direct control.
- Follow public health guidance on safe cleanup.
- Wear leather gloves and heavy soled shoes to protect hands and feet.
- Cleaning products, paint, batteries and damaged fuel containers need to be disposed of properly to avoid risk.

#### **Ensure your food and water are safe.**

- Discard any food that has been exposed to flood water.
- Do NOT ever use water that you think may be contaminated to wash dishes, brush teeth, prepare food, wash hands, make ice or make baby formula.

## Introduction

Following an evacuation, there are a number of practical and emotional things you can consider when you're ready or allowed to return home.

This guide provides information on what to do after you have been evacuated from your community following flooding. It provides tips and suggestions for the next steps in your return journey home.

The government will provide information on when your community will be considered safe. Please do not return to your communities until your local authorities, band leadership or Chief and Council have given permission to do so.

## Anticipate what it will be like

### *The physical environment:*

It helps to think ahead about what the environment will look, feel, and smell like when you return. There may be delays in returning home due to the area being unsafe, and your community may have dramatically changed, including:

- Road signs, and familiar landmarks missing
- Spoiled food in fridges and freezers
- Signs painted on remaining houses

### *Preparing to return to your home and community:*

When it is safe to return, think about:

- Are the roads open and safe? Do you know what route to use to get to your home?
- Do you have fuel, food, and water? There may be limited amounts available to you in your community.
- Are your cell phones charged? There may be interruptions or lack of electricity in your community.
- Who will you inform that you're returning home?
- Do you have a radio, a flashlight and an emergency preparedness kit?
- Do you have appropriate clothing, boots with heavy soles, thick rubber gloves, hat, long pants and long-sleeved shirt?
- If you anticipate clean-up do you have personal protective equipment, including masks? Do you know where to get these items?
- Do you and your returning family members have your tetanus booster and other vaccinations up to date?
- Do you have all medications that you will need?
- Will you take your children and pets on the first visit?



# BEFORE YOU START

**We know that your home is not just a house and it holds memories and aspirations for the future. Acknowledging your loss and taking time to grieve is an important step.**

# 2

## PREPARING TO RETURN HOME

If you cannot live in your home:

- Do not enter the area where your home is located unless officials say it is safe to do so.
- Use caution if entering the area as hazards may still exist.
- Recognize that there may be many tasks associated with relocating and resettling your family. Take small steps.
- Get your family settled – if your home is unlivable, you will need to arrange temporary housing. The government may have this set up. Try to keep the family together.
- Take care of your pets – if possible, take your pets with you and ensure they have plenty of food and water. Ask your vet or SPCA for some options to board your animals, if you cannot take the pets with you.
- Notify people of your temporary address – give your new address to your employer, family/friends, post office, bank, school, credit cards, utility companies, insurance companies, and if applicable, update your information with the Red Cross.

If there is no apparent damage to your home:

- Do not enter your home until officials say it's safe to do so.
- If you are unsure if it is safe, ASK! Reach out to your local authorities as they are there to help you.
- Use caution when entering the area as hazards may still exist.
- Work out what you need to do FIRST. Take small steps at a time: check the status of your power, water, gas, phone, and sewer. You may need to call utility services for assistance.
- Once you are feeling settled, reach out to your neighbours. It is important to re-establish relationships and be a helping hand to one another.

## Important documents to recover

### ITEM DESTROYED OR MISSING

### WHO TO CONTACT FOR REPLACEMENT

Animal registration papers	Municipal office
Bank books	Bank branch
Birth certificates – Marriage certificates – Death certificates – Status cards	Provincial/Territorial Registrar General or Ministry of Vital Statistics
Bonds (completely destroyed)	Write to: Canada Savings Bonds P.O. Box 2770, Station D Ottawa, ON K1P 1J7 Include names and addresses that appeared on bonds, approximate date when purchased, and denominations. Gather all pieces and keep them for further reference.
Bonds (partially destroyed)	Gather up remaining pieces, put them in a package and write a letter explaining what happened. Send to Canada Savings Bond address (above).
Children's Services and Social Assistance identification cards, medical assistance or social assistance cheques	Your case worker
Immigration documents	Immigration, Refugee and Citizenship Canada
Credit cards	Issuing credit card company
Divorce papers	Supreme Court where decree was filed or divorce lawyer
Driver's licences and vehicle registration title cards	Provincial/Territorial transportation ministry
Income tax records	Revenue Canada
Insurance policies	Insurance agent
Land titles	Local provincial/territorial land title office
Medical records	Family doctor or specialist
Military discharge papers	Veterans Affairs Canada
Money (partially or completely destroyed)	Nearest Bank of Canada branch
Passports	Your Consulate General
Provincial/Territorial health insurance card	Provincial/Territorial health ministry
Social Insurance Number (SIN) cards – Canada Pension Plan documents – Employment Insurance documents	Service Canada
Stocks	Issuing company or lawyer
Titles to deeds	City hall or local municipal office
Wills	Family lawyer or estate lawyer

**Before moving back into your home ensure that the water supply has been inspected and officially declared safe for use, that every room that was affected has been cleaned, disinfected and dried, that all affected dishes, utensils and glasses have been thoroughly washed and disinfected and that adequate toilet facilities are available.**

### **Entering Your Home and Cleaning Up**

**Ensure your home is secured against further damage. Check for damaged trees or external buildings that may have become unstable. If you rent, the landlord or property manager should do this. If you own the home, you should board up broken windows and smashed doors, and cover holes in walls and in the roof. You can also call a contractor to do this. See the Yellow Pages under “Contractors – General” or “Fire & Water”**

**Here is a list of recommended items that will help you in the recovery process:**

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Camera or video camera
Notebook and pen to record damage
Buckets, mops and sponges
All-purpose cleaner or unscented detergent
Large containers for soaking bedding and clothing, and lines to hang them to dry
Flashlight
First aid kit
Tools such as hammer, pliers, screwdriver
Trash bags
<b>Protective equipment:</b> a two-strap dust particulate mask with nose clip (N-95), coveralls, leather and rubber gloves and sturdy boots
<b>Drinking Water</b>
<b>Do NOT consume food left in the house or drink water from the tap until you know it is safe. Bring 4 litres of water per day per person - and food that does not require cooking. Appliances may be unsafe to use.</b>

**If you are insured, contact your insurance company. Your policy may cover house cleaning by a restoration specialist. As you go through your possessions, keep ruined furniture, appliances, books, etc. for insurance purposes. You can put them outside or in a shed temporarily.**

Household items often take several cleanings to rid them of odours. In some cases, they will never come clean or lose their smell. If you can, consult a restoration specialist to help you determine what is worth saving and what isn't.

### **Hazardous materials**

Contact your municipality or provincial ministry to find out how to dispose of hazardous materials such as solvents, garden chemicals and home cleaning products that have been soaked or that show signs of water damage.

Perishable foods, foods packaged in cardboard or plastic, or any foods or medicines directly exposed to flood water should be discarded.

### **Tap water**

Flood water can be heavily contaminated with sewage and other pollutants. Do not use your tap water for drinking, cooking and washing dishes until it has been tested and/or confirmed safe for use by local authorities.

### **Standing water**

Remove water from your flooded home slowly. Drain it in stages - about one third of the volume daily. If the ground is still saturated and water is removed too quickly, the walls or floors could buckle. Use pumps or pails to remove standing water, then a wet/dry shop vacuum to mop up the rest.

# 3

# INSPECTING YOUR HOME & STARTING TO CLEAN UP

## Heating, appliances and utilities

(Please check the Yellow Pages or phonebook to find the professionals listed below.)

Do not use flooded appliances, electrical outlets, switch boxes or fuse-breaker panels until they have been checked by a qualified electrician.

Have your central heating system checked by a qualified technician before use. Replace any parts that have been damaged or soaked.

Replace filters and insulation inside furnaces, water heaters, refrigerators and freezers if they have been wet.

You may need to consider replacing all your appliances depending on severity of damage. Consult with a professional electrician or with the manufacturer.

Replace any telephones that have been exposed to floodwaters as they may be a safety hazard.

Contact the appropriate utility or service company to have your service restored (i.e. electricity, gas, cable, phone, etc.) when you are ready to return home.

## Foundation, floors and walls

Clean or replace footing drains outside the foundation when clogged. Consult a professional plumber for advice. Check the Yellow Pages or phonebook for listings.

Flush and disinfect floor drains with an all-purpose cleaner or unscented detergent and water.

Rinse and clean all floors after consulting with a professional cleaner. You may need to replace flooring that has been heavily soaked. Dry carpets within the first two days.

Hire a qualified professional for large carpeted areas. Throw out carpets soaked by sewage, as they are unsalvageable.

Clean all affected interior walls with all-purpose cleaner or unscented detergent and water.

## Furniture

Remove residual mud and soil from furniture and dry it off. If you suspect any mould on any furniture that has been wet, contact a professional for advice. Check the Yellow Pages or phonebook for listings.

Consult a furniture restoration professional to see if any upholstered furniture can be salvaged. Check the Yellow Pages or phonebook for listings.

You may need to replace furniture entirely if it has been severely damaged.

Scrub wooden surfaces (furniture, kitchen cabinets, railings, etc.) with a stiff brush and a cleaning solution such as Murphy's Oil Soap.

Get professional advice for cleaning antiques and fine reproductions.



You will need to provide a list of lost or damaged items as part of your insurance claim. Review your insurance policy so you understand what items to list. If you had a household inventory before the flood, retrieve it for the insurance adjuster. If you didn't, or if it was destroyed, ask your insurance agent for a blank inventory form; it will jog your memory. Record serial numbers of appliances and household equipment, if possible. Note the approximate cost or value of each item. If possible, take close-up photos or video footage of damaged rooms, furnishings and property.

Once the inventory is complete, contact your insurance company for details on how to submit it to them. Keep all receipts related to living expenses and repairs, permits, inspection forms and any other papers in one place. Your insurance company may request them.

## **Notify your bank or mortgage company**

**You should notify your mortgage company about the flood and to keep them informed about what is being done to restore the property. They may have forms for you to fill out, and they may want to inspect the property.**

For more information on cleaning up after a flood, please refer to the Canada Mortgage and Housing Corporation's website.

# 4 TAKE AN INVENTORY

## Have your home inspected.

Take photographs of damage, both of the building and its contents for insurance purposes

## Books, photographs and papers

Most photographs can be air-dried, face up. If they were frozen, thaw and then air-dry photos.

To salvage important documents, put them in the freezer immediately. Later, allow them to thaw and lift off each page as it thaws. Consult your lawyer to determine if the actual documents are important to save, or just the information on the documents.

For advice on salvaging books, photographs or paintings damaged by water, contact the Canadian Conservation Institute toll free at 1-866-998-3721.

## Mattresses and pillows

Mattresses and pillows are usually not worth saving. If you must use a mattress temporarily, let it dry in the sun and then cover it with plastic sheeting.

## Clothing

If affected by flood, use your washer and dryer only once they have been checked by a qualified electrician.

Scrape all heavy dirt from clothes, rinse and wash several times with detergent and dry immediately to prevent mould from forming.

Never use water you think may be contaminated to wash dishes, brush teeth, prepare food, wash hands, make ice, or prepare baby formula.

## Medications

Dispose of all medicines, cosmetics and toiletries that have been exposed to flood water. Medications that are required to be refrigerated should be safely disposed off and replaced to ensure they are still effective. Ensure you have enough medication (prescription and over the counter) to sustain for a two week period.

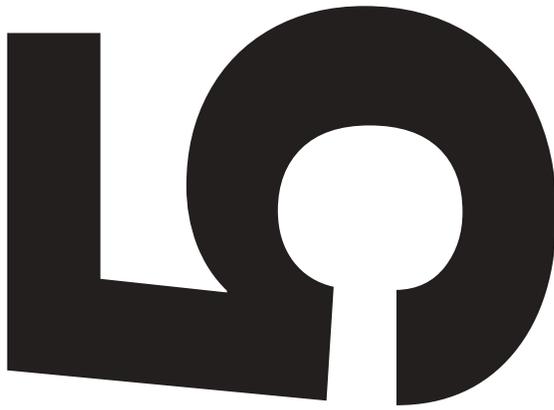
## Food

Undamaged canned goods can be kept. Wash thoroughly and use antibacterial soap to disinfect the outside of can.

Dispose of the following items if they have been exposed to flood water:

- Contents of the freezer or fridge (including all meat and produce (fresh or frozen).
- All boxed foods.
- All bottled drinks and products in jars (area under seal cannot be properly disinfected).
- Cans with large dents or with any external damage.

# BASIC NEEDS FOOD, WATER AND MEDICINE



## You've been through a lot. Don't expect to just take it in stride.

It is normal to experience conflicting emotions as a result of returning home. Allowing yourself to admit your feelings, such as helplessness, confusion, anger and worry, and expressing them to someone you trust will help you to cope. Try to anticipate what conditions you may be confronted with and how you may react. Thinking through this will help you feel more in control of the situation and less distressed.

- Relief returning home – being able to start to get your home, community, and life back in order.
- Uncertainty about what it may be like in the coming days, weeks and months.
- Distress about the losses you have experienced – your home, personal/ceremonial possessions, garden, maybe even pets; your community.
- Relief at what did survive and remain after the flood.
- Upset about the changes you have to deal with.
- Enthusiasm and motivation to begin to rebuild.
- Overwhelmed and worried about how you're going to get through it all – the hard work ahead, and the disruption to your daily life and the impacts on the surrounding community.
- Replaying of the frightening moments of the approaching disaster before you left, or the process of evacuating.
- Hope for the future.

# TAKING CARE OF YOURSELF AND OTHERS

### What you can do:

Identify the feelings and thoughts. Notice them, and label them. Are you feeling anxious feeling of anger or sadness?

Some individuals notice feelings of worry or distress and may experience having a tight chest, gritted teeth, tense jaw, butterflies in their stomach, heart palpitations, sweaty palms, or shortness of breath.

Recognise what these feelings and sensations are by putting them into words and speaking to someone you trust.

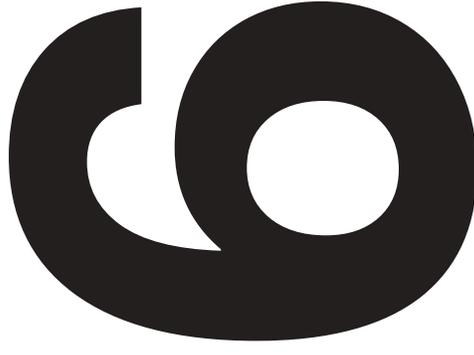
The next step is to find ways of managing your feelings. These are some useful techniques that you may find helpful.

### There are practical things that also will help you to manage:

1. Avoid isolation. Individuals who seek out support, involve themselves in their community, and use the services available recover faster and better.
2. Get enough rest. Sleep as much as your body needs for a few days.
3. Stay hydrated, eat nutritiously and regularly.
4. When ever possible, take time away to do something that you find enjoyable.
5. Get as much realistic physical activity as possible.
6. Accept help from others.
7. Find a support network.
8. Keep a record of your thoughts and feelings.
9. Give someone a hug. Physical touch is important to feel connected.
10. Make plans for the future.

### If you are feeling anxious or upset, try to:

1. Slow down your breathing.
2. Challenge the negative thoughts and replace them with helpful ones.
3. Only do what you can and take small steps.
4. Try not to take anger out on others.
5. Be patient with yourself and those close to you – it takes time to manage feelings. You and those around you are taking this journey together.



## Words of Encouragement...

No one knows your children as well as you do.

Family is the most important support network for children.

Getting help early can be a good idea.



# TAKING CARE OF YOUR CHILDREN

## Children have many different types of reactions to disaster and evacuation.

They may be coping well. They may become clingy or fearful, have aches and pains, have nightmares, or revert to thumb-sucking and bed-wetting. They may fight more with their siblings. They may try to act brave when they really need reassurance. All these responses are expected.

Here are some things that may be helpful as you help your children to cope:

- Encourage your children to express their feelings, fears, and experiences. This could include conversations, drawing, play or songs.
- Continue to love and support your child/children encourage them to talk about their feelings, fears, and experiences. Listen to them. Admit that you also feel sad, afraid, worried, but that you will be there and will work it out together.
- Provide your children age-appropriate but factual information about what happened. When the time is right, discuss what they can do to keep the family safe.
- Provide reassurance to your children that the family is safe. Repeat this as often as possible!

- Keep close to them, and hold them. Touch provides extra reassurance that someone is there for them. Spend extra time with them at bedtime.
- Be tolerant of regressive behaviour. It is usually temporary.
- Allow your children to help by giving them jobs to do, even if it slows you down or even if you will have to do the job over again later. Praise them for what they accomplished.
- Return to a normal schedule, but relax rules for a while.
- Work with family, teachers, childcare providers, babysitters, and others who will need to understand how the evacuation have affected your children.

## Special considerations for caregivers:

For people who depend on caregivers, there may be debris on the streets that could prevent caregivers from being able to reach you. This could leave you isolated.

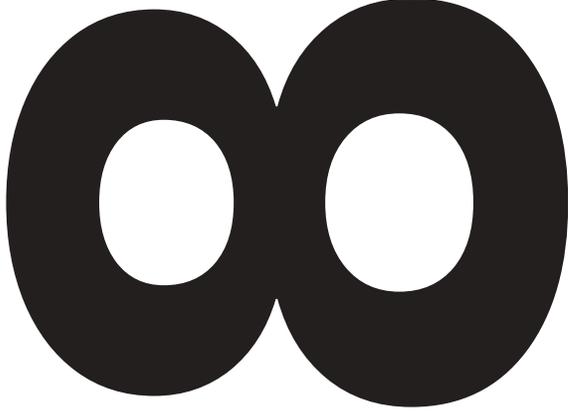
If you have a service animal, the animal also needs time and care to recover. They may be hurt or too frightened to work after a disaster.

You usual access to health services, such as your family doctor, physiotherapist, home care, and other health supports may be limited.

If you have a condition that requires a reliable electrical supply i.e. home dialysis, home oxygen, CPAP or other assistive devices such as an electric bed or lift, or motorized wheelchair that requires please check to ensure that your devices can operate consistently.

Noisy surroundings, like a shelter, may interfere with how well your hearing aid functions. Also, the vibratory cues you are used to may be disturbed. A noisy environment can be very disorienting for people with visual impairments, as well.

Familiar landmarks you use to help guide you may move or be destroyed, both indoors and out.



# SPECIAL CONSIDERATIONS

- Your usual ways of getting groceries, medications, and medical supplies may be disrupted. It may take several days before stores reopen, so you may not be able to readily replace even basic items related to your health, including possible disabilities, like hearing aid batteries and prescription medications.
- You may not be able to carry out your daily activities as you did before the disaster.
- You may have a hard time reaching or getting help from police and fire departments, ambulance services, doctors, hospitals, pharmacies, veterinarians, markets, personal assistants, and other home health providers.
- Ensure you have an adequate supply (minimum of two weeks) of any other health supplies you may need, i.e. incontinence products, wound care supplies, barrier creams etc. Access to these products may be limited or certain products not available.
- Public transportation may not be working. Routes and schedules may be changed. Public and private wheelchair transport services or paratransits may not be operating. Roads may be damaged or blocked. Road signs may be down. Traffic lights and walking signals used to cross the street may not be working properly, or at all. This can disrupt cues used to cross the street. Travel time may be longer because of detours and added traffic.
- For many people with Alzheimer's or other dementias changes in routine can be extremely upsetting resulting in new or increased challenging behaviors, angry outbursts, increase in wandering frequency, disruption in sleeping, eating and toileting patterns may also occur.
- When you return home it is important to remember that for the person with Alzheimer's and/or other dementias there may be lingering effects.
- Landmarks may be changed or gone entirely, home may look, feel and smell different. Routines may be new or old routines renewed, both resulting in the potential to disorient. Re-establish a routine as soon as possible, reassurance and distraction when agitated will help to make the person feel safe and comforted.
- Caregivers while feeling relieved to a return home and a return to normal will likely still face some challenging behaviors as they provide care in the "new normal".
- Organizations like the Alzheimer's Society have excellent resources to help and may have support groups in your area to help you in the transition.

## The period after a disaster can often feel overwhelming, lonely and difficult. Some people find it helpful to:

1. Get back into a routine. It will probably look different from the one you had pre-disaster, but familiar patterns of mealtimes (with familiar food), school or work, and bedtimes are important for adults as well as children.
2. Break tasks into small steps that are manageable and can be accomplished. Work through them one at a time.
3. Think about what you have achieved at the end of each day.

Individuals often find themselves reliving their experience of the disaster and evacuation, thinking about it, trying to put some sense of order into the events, and answering the question of “why?”

It's natural to try to understand what has happened, but it's important to also recognise that many things that occurred were outside of your control.

If you continue to feel overwhelmed, can't shake the feelings of despair or have any of the following signs, seek help through your family doctor, clergy or a community organization. Asking for help is a sign of strength.

- Frequent arguments or short temper
- Increased consumption of alcohol or drugs
- Difficulty sleeping, bad dreams
- Depression
- Panic attacks or general anxiety
- Feelings of intense sadness and hopelessness



# MOVING BEYOND



## THE CANADIAN RED CROSS SOCIETY

### Acknowledgements

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# **APPENDIX D**

## Cleaning the Hours After a Flood

# Cleaning the House After a Flood

## **PERSONAL PROTECTION EQUIPMENT**

Flood waters may contain risks that can affect your health, including raw sewage and chemical contaminants. Items and surfaces that come into contact with flood waters can become contaminated. When working with flood water-contaminated material it is recommended that you protect yourself from these risks by using personal protection equipment.

Use appropriate personal protective equipment for all flood clean-up activities, including:

- Puncture-proof and water-proof boots, particularly if water is present in the house.
- Rubber gloves, as well as sturdy work gloves for cleaning and removing flood-damaged items.
- A tool, such as a shovel, to dislodge or move any debris. Avoid using your hands to recover submerged items.
- Face masks, including a N95 respirator mask (available at hardware stores), if cleaning areas that could contain mould, asbestos or heavy dust.
- A first aid kit (including supplies to clean and cover any cut or wound before commencing clean-up).

Remember to bathe or shower using soap and warm water when you finish any cleaning activities. Also be sure to wash your hands and any exposed skin regularly, using soap and warm water, during cleaning activities. Avoid touching any exposed skin with contaminated gloves or items. Wash your clothes.

## **FOOD**

Flood waters carry harmful germs from raw sewage, so the only safe flood-exposed foods are those sealed in metal cans. Any damaged or blown (bulged) cans should be discarded.

- Clean cans using warm water and soap. Scrub the rim and caps using a firm brush.
- Then, sanitize metal cans using a mild bleach solution (one tablespoon of bleach to four litres of water).
- Dry metal cans quickly to avoid rusting.
- You must dispose of the following if they have come into contact with flood waters:
  - all meats, fresh fruits and vegetables;
  - all boxed foods;
  - all products in jars, including home preserves, and all bottled drinks (the area under the seal of jars and bottles cannot be adequately disinfected);
  - all medicines, cosmetics and other toiletries.
- Discard the contents of your fridge if the power was off for more than 12 hours.
- Discard the contents of your freezer if the power was off for more than 48 hours.
- Discard food that was in contact with flood waters.
- **If in doubt, throw it out.**

## **FLOORS**

Floors are badly soiled during a flood.

To clean and sanitize floors, you must:

- Move furniture and all removable floor coverings outdoors.
- Remove wet carpets and wet carpet underlay as soon as possible, so that the floor does not start to distort or delaminate.
- Drag carpets out on a plastic sheet instead of carrying them. Carrying wet carpets may harm your back.
- Clean floor using warm water and soap.
- Then, sanitize all surfaces using a mild bleach solution (one tablespoon bleach to four litres water).
- Dry floors completely.
- Clean all floors in a flooded house, even those that are on floors above the water line, since they will have been exposed to excessive humidity for long enough to start mould growth.

### **Carpets**

- Remove and discard flooded carpets and carpet underpads. You may need to dry the carpets slightly so they can be dragged out. Carpet underpads may fall apart while being removed. Be sure to remove all remaining bits.
- To save expensive carpets and/or area rugs, you will need to send to professional cleaners. Contact a cleaning company quickly to reduce damage to these carpets.

### **Vinyl, Linoleum and Other Sheet Floor Coverings**

Vinyl, linoleum and other floor coverings can trap dirt and water. Remove the flooring if:

- The wooden subfloor underneath is wet.
- Dirt and water is trapped underneath the flooring.

Removing the flooring will allow the wooden subfloor to dry rapidly. Drying the wooden subfloor with the flooring still intact may cause the floor to be damaged further.

### **Inside Floor Cavities**

The space between the floor and ceiling should be inspected to see if the cavities have become wet. Soon after the main floodwater is removed:

- Whenever wet material is found in these cavities, open the cavities to allow cleaning and drying.
- Empty the cavity of any insulation, debris, or dirt, and dry all interior materials.
- Remove and discard any wet insulation, clean and then sanitize the surfaces.
- If wood structural members have become saturated, it may take days or weeks for them to dry completely, before the cavity can be closed again.

## **WALLS**

**Before starting any remediation or construction work on walls, be sure you know which are load-bearing, and consult a contractor for guidance on structural safety.**

- Remove drywall that has been soaked or absorbed water.
- Clean remaining drywall using warm water and soap. Then, sanitize using a mild bleach solution (one tablespoon bleach to four litres of water). Clean all walls in a flooded house, even those that are on floors above the water line, since they will have been exposed to excessive humidity for long enough to start mould growth.

### **Inside Wall Cavities**

- Whenever wet material is found in these cavities, open the cavities to allow cleaning and drying.
- Remove and discard any wet insulation, clean and then sanitize the surfaces.
- If wood structural components are saturated, it may take days or weeks for them to dry completely, before the cavity can be closed again.
- Clean, sanitize and dry all cavities before completing your renovations.
- Consider using de-humidifiers to speed up drying of structural components.

The more quickly hidden spaces are opened, the less water saturation will take place and the quicker materials can be dried to safe levels.

### **Wet Insulation**

Fibrous insulation, like glass fibre, mineral wool and cellulose insulation materials, even those not wetted in the flood should be removed.

- They collect contamination even without being wetted in a flood.
- Large amounts of contamination remain after material is dry.
- If they stay wet for extended periods of time, moulds and other microbes can grow.
- They also lose their insulation capabilities, even after drying.

Board insulation, such as styrofoam and urethane, can also become saturated. Insulation materials will continue to absorb water up above the high-water mark. That rising damp region can reach half a metre (1 to 2 feet) in a few days under some conditions.

For these reasons,

- Remove all fibrous insulation above the obvious high-water mark and replace it with new material once the cavity materials dry sufficiently.
- Remove board insulation that is saturated.

### **CEILINGS**

Ceilings above the high-water mark may be reasonably dry and undamaged, but they still require checking and cleaning. Moisture can be absorbed upward along walls and wet ceiling materials.

- Replace ceiling drywall or plaster that was submerged in flood waters.
- Check ceiling materials above the high water mark to sure they are dry. If they are wet, replace them.
- Carefully clean salvaged using warm water and soap.
- Then, sanitize using a mild bleach solution (one tablespoon of bleach to four litres of water).
- Dry surfaces quickly.

### **ELECTRICAL EQUIPMENT, LIGHTS, FIXTURES, AND WIRING**

- ◆ Do not use flooded electrical equipment (such as outlets and switch boxes or fuse/breaker panels) until they have been inspected and passed by the electrical utility or an electrician approved by the utility. **They are not safe when they are wet and dirty!** Wet dirt is an excellent conductor of electricity and could either short out the power or leave some surfaces electrically “live” and dangerous to touch.

## **Electrical Outlets and Switchboxes**

When the power is off,:

- Wash electrical outlet and switch boxes. Then, rinse.
- **Be VERY sure the power is off, and be sure that all electrical supply materials and equipment are perfectly clean and dry before power is turned on again.**

## **Lighting Fixtures**

Once the power is off, or after you have disconnected and removed your light fixtures

- Take ceiling fixtures and lamps apart to check for dirt and wetness.
- Clean and dry thoroughly before use.
- Expect some burnt-out bulbs and cracked or broken bulb glass. Good bulbs may shatter the first time they are turned on, so get a shade between you and the bulb for that first trial.

## **APPLIANCES**

### **Large Appliances**

- Do not use larger appliances, like washing machines and dryers, that were submerged in flood waters. Dirt in motors and switches can cause severe damage and electrical shock.
- Contact a repair company to have these appliances inspected and repaired before use.
- Repair the washer and dryer first, as you could then use them to salvage clothes.

### **Small Appliances**

It may be best to replace flooded small appliances. Old equipment may cost more to repair than to buy new equipment. If you decide to save any small appliances:

- Get an estimate of the possible repair costs.
- Rinse and clean small appliances with warm water and detergent.
- Send them to a repair shop.

## **FURNACES AND WATER HEATERS**

- Don't use flooded furnaces and water heaters until they have been inspected and serviced by a trained repair person.
- Flood and sewage waters contain harmful microorganisms that can grow on surfaces inside your heating and ventilation ((HVAC) systems, even in ducting that was not submerged in water.
- The professional hired should:
  - ◇ Isolate sections of HVAC systems that are being cleaned using plastic sheeting or other vapour barriers.
  - ◇ Replace all flood damaged materials, like insulation and filters.
  - ◇ Vacuum, clean and sanitize all surfaces, including air ducts. All components must be dried as quickly as possible.
  - ◇ Test that the HVAC system is operating properly.

## **PLUMBING**

During a flood, water may well up through flood drains and sump holes, bringing materials into the house that should never be there. As the water subsides, indoor materials may be sucked or washed into drainage systems and partly block them or just sit there and rot.

- Flush all plumbing lines in your house, including any water treatment devices.
- Carefully flush and disinfect floor drains and sump pits.
- Scrub away any greasy dirt and grime off surfaces.
- Check for priming of the floor drains, meaning water stays in these drains, so that sewer gasses cannot move up into the house when the drains dry out.
- If you do not have a flush line installed, be sure to check the drains regularly, pouring some water and chlorine bleach into them to keep them primed and disinfected.

The footing drains outside your foundations may have seen more water and dirt than they could cope with during the flood.

- Have them checked out by a person trained in plumbing and drains. They can often be cleaned out through special clean-out pipes, or from the connection to the storm sewer.
- If they cannot, you should be ready for problems in the spring or very rainy periods, when they will not drain as well and may allow water to enter your basement. Keep stored materials away from basement walls and off basement floors. This will reduce future damage, but remain alert for problems.

## **WHAT TO DISCARD**

Many materials cannot be reasonably cleaned and dried once they have been soaked with floodwater.

Remove and discard the following items, in sealed plastic bags, whenever possible.

- Inexpensive possessions that have been soaked.
- Particleboard (fibreboard) furniture.
- Inexpensive plush furniture, Furniture may be difficult or almost impossible to clean if it is upholstered or if sewage and other organic materials are involved.
- Magazines and books.
- Mattresses and box springs.
- Fluffy bedding (such as duvets, comforters and pillows), unless they can be laundered in hot water and dried in a hot dryer.
- Electrical equipment that has been inundated and water-filled.
- Well-worn clothes may not warrant the time and effort to salvage.
- Papers and paper products that are not valuable.
- Paper that was wet for days.

## **WHAT TO SAVE**

Assess items that might be safe to salvage and repair, including:

- Surfaces that do not absorb water
- Fabrics that can be laundered and bleached
- Surfaces not affected by the flood water, such as items in the upper floors of your home.

### ***Furniture***

- Antique furniture may warrant the expensive treatment that is required to repair flood water damage. Contact professional restorers quickly and follow their instructions precisely
- Salvage good quality wood furniture and particleboard furniture if dunking was short and no swelling is apparent.
  - Clean furniture with warm water and soap.
  - Then, sanitize using a mild bleach solution (one tablespoon of bleach in four litres of water).
  - Dry quickly, but not in the sun or with direct heat. Open drawers to speed drying, but not to fully disassemble them, because of possible distortion.

### ***Linens, Bedding and Clothing***

Salvage flood-damaged fabrics that can be laundered.

- Scrape off heavy dirt.
- Rinse.
- Wash fabrics in hot water.
- Dry in a hot dryer.

Send non-washable fabrics such as silks and woolens professional dry cleaners.

### ***Paper and Paper Goods***

To salvage important papers, such as legal, financial or sentiments documents:

- Remove most water from the paper by blotting with blank paper or thin blotting materials. Some recommend using a light sprinkle of baking soda to help change surface chemistry and deter mould growth. However, any such chemical makes it possible that the inks will be affected, and that the chemistry of the paper will change. Test a spot to see if there are any dramatic effects before you use a chemical generally on your valuable paper goods.
- Open books to the breeze and the sun to speed drying. Remember to close and press them at night, or more often if wrinkling starts to appear. Too rapid drying may be hard on bindings, so be cautious about drying them in full sun.
- Wrap and freeze wet paper goods if you cannot begin drying them within a day.
  - Rinse off as much of the dirt as possible and towel dry by blotting, not rubbing.
  - Wrap materials carefully in freezer bags and clean off the outside of the bags before freezing. Because of the high risk of contamination, never mix these bags with food bags. When a freezer can be used only for wet papers, it may be best to leave items unwrapped or lightly wrapped, as they will dry slightly during storage. This technique is used, in combination with a vacuum, to remove water from extremely valuable documents.
    - Later, remove items one or two at a time and carefully thaw and dry.
    - Once dried, clean with warm water and soap. Then, sanitize using a mild bleach solution.

If it becomes clear that mould damage has occurred or that distortion is going to be severe, focus on saving the information, not the paper.

- Check with a lawyer to determine if any notarized copies of your documents are available.
- Check with local government offices to determine if birth records, passports, and other government certificate-type documents, can be replaced.
- Certain large documents can be substantially preserved if pressed through hot rollers at a copy house that makes blueprints. This could be worthwhile for maps or other large documents that are worth keeping for sentimental or historical reasons. The cost may not be as high as you thought, but the paper will have to be roll pressed before it has dried, so act quickly.

***For more information, please contact your nearest Environmental Public Health office.***

*Edmonton Main Office  
Calgary Main Office  
Lethbridge Main Office*

*780-735-1800  
403-943-2295  
403-388-6689*

*Grande Prairie Main Office  
Red Deer Main Office  
[www.albertahealthservices.ca/eph.asp](http://www.albertahealthservices.ca/eph.asp)*

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403-356-6366*

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Revised: Jul05/13  
5:17 pm

# **APPENDIX E**

## Disinfecting Private Water Supplies

# Disinfecting Private Water Supplies After Flooding

Avoid drinking untreated well water that have become flooded, or if contamination is suspected. Private wells that have been affected by flooding or heavy rains must be disinfected and tested after flood waters recede before they are considered safe for using.

**If you suspect or have been advised that your water is unsafe, use bottled, boiled, or distilled water for drinking, cooking, preparation of any foods, washing your hands, bathing, or brushing your teeth.**

## *WHAT CAN I DO TO MAKE MY PRIVATE WATER SUPPLY SAFE?*

There are several treatment options to temporarily treat your water supply until the well can be disinfected and tested. If your water supply has been contaminated by chemicals or you suspect chemical contamination, please note that the following disinfection methods may not make the water safe to drink. You must get water from another safe source, such as bottled water.

### *Boiling:*

1. Place water in a clean cooking container. If the water is cloudy, strain it using a coffee filter.
2. Bring the water to a **rolling boil** for at least **1 minute**.
3. Prepare the water ahead of time, cool in the refrigerator overnight.

### *Chlorination:*

- For **clear water** add **2 drops** of **unscented 5.25%** household bleach to **1 litre** of water, **mix thoroughly** and let stand for **30 minutes**. If there is a slight chlorine smell and the water looks clear, the water is safe to drink.
- For **cloudy water** add **4 drops** of unscented **5.25%** household bleach to **1 litre** of water, **mix thoroughly** and let stand for **30 minutes**. If there is no chlorine smell, add **4 more drops** of bleach and let stand for another **30 minutes**.
- Water purification tablets can also be purchased from most outdoor supply stores or camping stores. Follow manufacturer's instructions.

### ***Iodine Crystals:***

These crystals are available in outdoor supply stores or camping stores. Iodine use is recommended for no more than 3 weeks per season because of potential thyroid problems or iodine sensitivity.

1. Place **4-8 grams** of elemental iodine crystals in a 30ml (1 ounce) clear glass bottle. Fill the bottle with water, shake, and let settle.
2. Add **15ml** (3 teaspoons) of the iodine solution from the bottle to **1 litre** of water that is already in another storage container. Solid crystals remaining in the clear glass bottle must not be transferred to the water in the storage container.
3. Let the water stand for **15 minutes**.
4. As long as there are iodine crystals remaining in the clear glass bottle, the procedure can be repeated.

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# APPENDIX F

## Cistern Cleaning

## Cistern Cleaning

Water in a cistern may not necessarily be clean and potable. Hauled water may already be contaminated and even if the water has been treated, it can deteriorate during storage. Over time, the loss of chlorine residual can lead to microbial re-growth; sediments/sludge can accumulate in the cistern or animals or insects can fall in.

Water from a cistern should be sampled semi-annually for bacteriological quality. If test results show the presence of coliform bacteria both the cistern and distribution system should be disinfected with chlorine<sup>2</sup>. Cisterns should also be pumped clean and chlorinated at least once per year to prevent sludge build up or biological fouling. This frequency may increase if water quality problems develop. Water testing and cistern cleaning should also follow any contamination incident (e.g. flooding, repairs) or following changes in water clarity, colour, odour or taste.

### Confined Space Safety Precautions

A cistern must not be entered until you are sure the cistern's air quality is safe. No cistern should be entered unless the person entering the tank has been trained in confined space entry and follows the appropriate safety procedures as per Part 5 of the Province of Alberta Occupational Health and Safety Code. If you have any questions regarding confined space entry safety practices, refer to the Province of Alberta Occupational Health and Safety Code at [www.whs.gov.ab.ca](http://www.whs.gov.ab.ca) or call toll-free 1-866-415-8690. If in doubt, contact a professional trained in confined space entry for information regarding cistern cleaning.

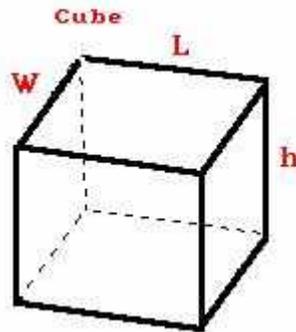
### Procedure for Cleaning the Cistern

- Make sure that confined space entry precautions are followed.
- Drain the cistern.
- Use a pressure washer or stiff brush to clean debris and sediment from all surfaces. Remove bottom sludge using a wet-dry vacuum.
- After washing and pumping out the sludge begin refilling the cistern.
- During the filling add household bleach<sup>2</sup> to make up a disinfection solution of 50 mg/L. Follow the procedures below for cistern disinfection.

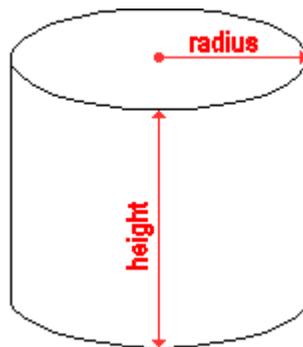
## Cistern Disinfection

### Procedure for Cistern Disinfection

Calculate how much water is in the cistern. For a box cistern, multiply the length (L) by the width (W) by the height (h), where height equals the depth of water.



For a cylindrical cistern, use  $\pi r^2 h$  where  $\pi = 3.14$ ,  $r^2 = \text{radius} \times \text{radius}$ , and  $h = \text{depth of water}$ .



- Measurements in cm divided by 1000 gives volume in litres
- Measurements in feet x 6.2 gives volume in imperial gallons

Water treatment devices should be bypassed during the disinfection procedure and the hot water heater power (or gas feed) shut off.

1. Add 1 L of bleach to every 1000 L of water in the cistern (adding while filling the cistern will ensure good mixing). This will provide approximately 50 mg/L of chlorine.
2. Run individual taps connected to the plumbing system until a chlorine odour is detected then close the tap.
3. Allow the chlorinated water to sit in the cistern and plumbing system for at least 6 hours.
4. After 6 hours, the chlorinated water can be dumped to waste in accordance with safe practices. Flush cistern by filling and draining using water from a potable source taking care not to contaminate the cistern.

Highly chlorinated water is unsafe for drinking, unsuitable for domestic or livestock use, and will cause problems if discarded into septic fields.

5. Run each tap for at least five minutes to flush the lines.

6. If the cistern is constructed from concrete, it may be desirable to use at least 3 loads of water prior to drinking the water. The water may still have a 'chalky' appearance and have a slight 'cement taste'
7. The cistern should now be ready for use and can be refilled with potable water from an approved source.
8. Restore power to the hot water system. Service any water treatment devices according to the supplier recommendations prior to bringing them back into service.
9. Resample if cistern was disinfected due to a failed water test. If the lab report indicates the water is still unsafe, the cistern should be emptied and cleaned.

**Flooding:**

Cisterns that have been contaminated by floodwaters need to be properly cleaned and disinfected. Follow the above 'procedure for cleaning the cistern' and 'procedure for cistern disinfection' prior to bringing it back into service.

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*Technical Advisory Committee on Safe Drinking Water, Environmental Public Health*

# **APPENDIX G**

## Flood Insurance Fundamentals

## MAIN TYPES OF INSURANCE POLICY COVERAGE IN CANADA

### COVERAGE A

#### Coverage for your Dwelling

- The house itself
  - Roof
  - Windows
  - Walls
  - Foundation
  - Flooring
  - Doors
- Attached structures
  - Attached garage
  - Deck / porch
- Outdoor Permanent Equipment
  - Pools
  - Hot tubs
  - Children's play structures
  - Sprinkler systems

### COVERAGE B

#### Coverage for Detached Structures

- Detached Garages
- Sheds
- Gazebos

### COVERAGE C

#### Home Contents

- Coverage for your physical belongings
- Usually a dollar limit to this coverage
- Usually sub-limits for high value items such as jewellery, fur coats, etc., and coverage for these items will be added in the Endorsements section.
- Contents coverage can differ widely per policy.

### COVERAGE D

#### Additional Living Expenses (ALE)

- Coverage for additional costs incurred, above and beyond your normal costs, while your home is uninhabitable:
  - Hotel
  - Food
  - Boarding pets
  - Laundry
  - Rent
  - Storage
- Usually a dollar limit and time limit associated with this coverage.
- Usually ALE is activated when an insured peril leaves your home uninhabitable or where an evacuation order has been made by the authorities.

COVERAGE EVENT AKA INSURED PERIL	A-COVERAGE TYPICALLY INCLUDED	B-ENHANCEMENT PURCHASE	IF A OR B, THEN TYPICALLY, THE BELOW IS AVAILABLE FOR THE COVERAGE EVENT PURCHASED
Overland Flood		✗	Additional Living Expenses (ALE) Contents Replacement Clean-up Debris Removal Roof, Foundation, Walls and Flooring Repair Appliances Replacement Mold Prevention Black Water Disinfection
Sudden/Accidental Burst Pipe (not frozen)	✗		
Sewer Backup		✗	
Groundwater Seepage		✗	
Hail/Wind/Flying Debris, Water entering through sudden openings	✗		

The Coverage Events applicable to your policy can usually be found in the Declarations or Endorsements Section of your policy

Be sure to know whether you have an Actual Cash Value (ACV) or Replacement Cost Policy. See CRC's Understanding Your Insurance Policy - Homeowner for more information.

Be sure to read the Exclusions applicable to your insurance policy. Contact your insurance agent for further information

# FLOOD INSURANCE FUNDAMENTALS

**DWELLING BUILDING - COVERAGE A**

- Ask your insurer whether any flood prevention actions could result in a discounted insurance premium.
- Damage due to maintenance issues or neglect is typically excluded from your insurance claim.
- Consider completing a detailed home inventory list to assist with insurance claims and other funding assistance programs. See CRC's Home Inventory Checklist.
- Be aware of hazardous substances and ensure they are professionally remediated.

**DETACHED STRUCTURES - COVERAGE B**

- If you do some of the cleanup yourself be sure to track your hours as your time might be reimbursable under your insurance coverage.
- Auto damage is usually covered if you have purchased a Comprehensive or All Perils insurance policy.

**CONTENTS REPLACEMENT - COVERAGE C**

- See our Flood Event Checklist and Tips fact sheet for more information.

**ADDITIONAL LIVING EXPENSES - COVERAGE D**

- Damage caused by hail or wind is usually covered without the need to purchase optional coverage. Damage caused by flying debris or damage water entering through sudden openings caused by wind or hail is usually covered.
- Be sure to check whether there is a time limit or dollar amount on your ALE coverage.
- Flood mitigation/prevention activities are typically not covered under insurance as they are viewed as enhancements to a property.

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