

2021 BC Floods Response

DEBRIS WASTE MANAGEMENT GUIDANCE

Introduction

This document has been created in response to the atmospheric river event in British Columbia that started on November 15, 2021.

It is intended to supplement the [BC Flood Waste and Debris Management Plan](#) (2018) and provide guidance to local governments, Indigenous communities, and any member of the public who has flood debris to dispose of, or who wishes to provide assistance in debris clean up.

This guidance provides information on:

- Safety
- Working in a watercourse
- Creating a waste management plan
- Sorting debris
- Transporting debris
- How to get additional help

Types of waste this plan applies to includes:

- Green Waste/Vegetative Debris/Wood
- Construction/Demolition Debris
- Bulky Solid Waste
- White Goods
- Metals
- Household Hazardous Waste

These wastes are described in more detail below.

Flood related wastes not covered by this guidance include:

- Animal carcasses and manure
 - For on-farm disposal follow the [Code of Practice for Agricultural Environmental Management](#)
- Asbestos containing materials

- These materials may be immediately hazardous due to inhalation hazards and are not recommended to be handled by the public unless risks and mitigations are thoroughly understood
- The province is developing drywall disposal guidance which will be made available online

Safety

Conduct a scene assessment to ensure site safety prior to managing any debris. Removal of debris should only be done if it is safe to do so. Use extreme caution around debris. Do not put yourself or others at risk.

- Do not work alone. Work in teams and have a safety plan with your location, emergency contacts, frequent check ins with a safety person, and an exit plan should you need to leave the area quickly due to unsafe conditions or injury. Ensure you have a First Aid kit and someone on your team with First Aid knowledge.
- Upon arriving at a location for cleanup assess the potential hazards, discuss the risks and how to avoid hazards with all members of your team prior to commencing work.
- Wear protective clothing when handling debris including a long-sleeved clothing, work gloves, and sturdy, thick-soled shoes, and safety glasses.
- A mask is recommended to prevent possible exposure to chemicals, asbestos, mold and bacteria.
- Do not attempt to remove heavy debris by yourself.
- If you are unsure of what a substance is such as a liquid or powder either contained or on the ground, do not attempt to collect. Mark and record its location so it can be assessed for safety by hazard assessment.
- Only enter flood impacted buildings that have had a rapid damage assessment completed and have been deemed safe for entry.
- If you see a situation where debris could cause a threat to public health and safety call 911. If you see a spill or pollution occurring, report it to the [RAPP line](#).
- Riverbanks can be dangerous for slipping hazards and drowning hazard. When working around water, never work alone and ensure you are wearing a personal floatation device. Do not attempt to remove debris from a dangerous location.

Working in a watercourse

Flood debris can be removed from a watercourse, such as a stream, if it is safe to do so and if no equipment is required. Additionally, the [Water Sustainability Regulation](#) enables the following work to

be completed without an authorization or change approval, or prior notification, if all requirements in Part 3 of the regulation are met:

- The construction of erosion protection works, or flood protection works during an emergency declared under the Emergency Program Act by the Crown in right in BC, a municipality or a regional district or an agent of any of them;
- The clearing of an obstruction from a bridge or culvert during a flood if the obstruction is causing or has the potential to cause a significant risk of harm to public safety, the environment, land or other property by the Crown in right of British Columbia, a municipality, or a regional district;
- The installation or cleaning of drainage outlets;
- The repair or maintenance of the superstructure of a bridge, other than the bridge's foundation; and
- The installation, repair, maintenance or removal of a fence, if the fencing materials are not in the stream channel, do not block debris in the stream, and do not interfere with navigation of the stream.

These activities require a report to a habitat officer within 72 hours of making the change, which can be made through [FrontCounter BC](#).

Changes in and about a stream that do not meet the criteria in the Water Sustainability Regulation require an application for a change approval under Section 11 of the *Water Sustainability Act*. An application for a change approval can be made through [FrontCounter BC](#).

Create a temporary waste management plan

When managing disaster debris there are four primary methods of addressing the debris:

1. Reuse
2. Recycle
3. Energy recovery; and
4. Dispose

Debris will need to be sorted according to how it will be subsequently managed. Thinking about where the debris will go and/or how it will be used or disposed of will help you decide how to sort it.

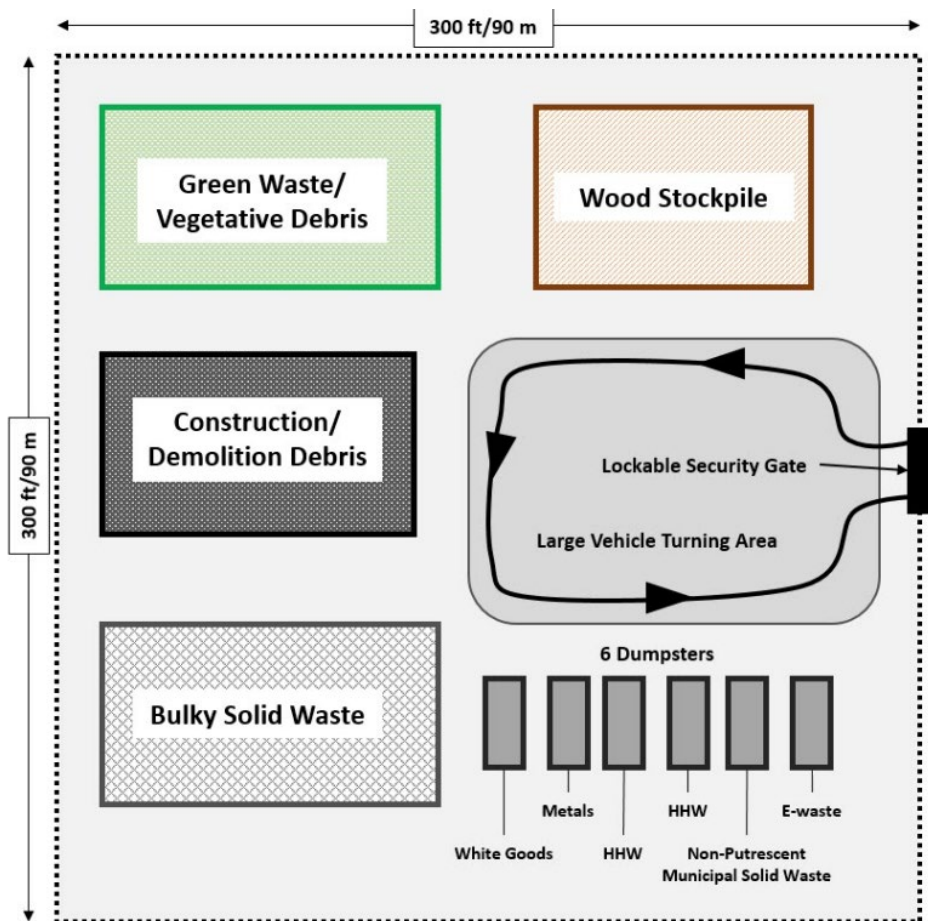
Before gathering materials, make a plan on how to handle and sort debris:

1. Create a temporary waste management site for the materials to be gathered.
2. Layout zones on site for material types so that debris can be collected into appropriate areas. Consider using tarps on the ground or flagging to clearly mark zones for collection. See the section below on sorting debris materials for examples.
3. Identify final destination after debris has been collected and sorted. Depending on the type of waste collected debris may be sent to:

- a. Landfills or transfer stations
 - b. Compost facilities
 - c. Recycling facilities
 - d. Hazardous waste facilities
4. Be aware of what you will need to do if you encounter any hazardous materials and ensure you are properly equipped to manage them safely.

Sorting debris materials

This is an example of how debris materials may be sorted. Descriptions of the wastes that could be included in each area is provided below.



From: Joint Municipal Regional Disaster Debris Management Operational Plan for Metro Vancouver region and members: [2017JMRDDMPlan.pdf \(metrovancouver.org\)](https://www.metrovancouver.org/files/2017/12/JMRDDMPlan.pdf)

Green Waste/Vegetative Debris includes organic materials such as small tree branches (<30cm diameter) and animal feed – destined for composting

Wood Stockpile includes untreated wood such as tree trunks, lumber, pallets etc. - destined for chipping and composting or incineration for energy.

Construction/Demolition Debris includes treated wood, drywall, insulations, etc. (do not include asbestos containing material) - destined for landfill

Bulky Solid Waste includes objects that do not fit the other categories, such as mattresses, etc. – destined for re-use, recycling or refuse depending on object.

White Goods include appliances such as fridges and freezers - destined for reuse if still in good working order or recycling after ozone depleting substances have been removed

Metals includes vehicles, miscellaneous metals - destined for recycling

Household Hazardous Waste (HHW) is hazardous waste that originates from residences and will require special disposal. Examples of HHW include flammable liquids, pool chemicals, paint, propane cylinders, and other material banned from disposal in municipal landfills. Do not collect hazardous waste unless you are knowledgeable about this material. Instead, record the location and report it to the [RAPP line](#). This waste will be destined for a HW management company, local Return Collection Facility, and/or temporary HHW transfer station.

Non-Putrescent Municipal Solid Waste – is all other small non-organic waste that does not fall into these other categories. e.g. old toys, spoiled clothing, etc. – destined for re-use, recycling or refuse depending on object.

E-waste includes computers, tablets, phones, etc. – destined for recycling.

References and Resources

Province of BC (2018) Provincial Flood Response – Flood Waste and Debris Management Plan. https://www2.gov.bc.ca/assets/gov/public-safety-and-emergency-services/emergency-preparedness-response-recovery/embc/flooding/flood_waste_and_debris_management_plan.pdf

Integrated Partnership for Regional Emergency management in Metro Vancouver (2017). Joint Municipal Regional Disaster Debris Management Operational Plan for Metro Vancouver region and members - <http://www.metrovancouver.org/services/emergency-preparedness/Documents/2017JMRDDMPlan.pdf>