

Waste Management Space Design Guidelines





Land acknowledgement

We acknowledge the many unceded, traditional and ancestral territories across B.C. where our health facilities are located.

Indigenous Peoples have been stewards and caretakers of the lands, waters and ice, and leaders in ecosystem conservation since time immemorial. We affirm that efforts toward reconciliation are directly tied to the environment.

By managing waste responsibly, we respect the lands, air and waterways where we provide care as uninvited guests.



Acknowledgements

This document was produced by the regional Energy and Environmental Sustainability team (EES) and the Island Health Utilization and Resource team, in partnership with specialists from the Provincial Waste Management Technical Services team in partnership with specialists from the Provincial Waste Management Technical Services team. It includes contributions from representatives of Fraser Health Authority, Interior Health Authority, Northern Health Authority, Provincial Health Services Authority, Providence Health Care, Vancouver Coastal Health and Island Health.

Additionally, expert insights were gathered from various departments, including Functional Planning, Infection Prevention and Control, Environmental Services, Workplace Health and Safety/Occupational Health, Pharmacy Quality Assurance, and Facility Planning.

Table of contents

Purpose.....	5
Regional considerations.....	6
Waste streams.....	7
Recycling waste streams.....	8
Garbage waste stream.....	12
Biomedical waste streams.....	13
Recycling container matrix.....	17
Recycling signage.....	18
Recycling container set-ups.....	19
Biomedical container matrix.....	20
Biomedical container set-ups.....	21
Container placement matrix.....	22
Loading dock requirements.....	25
Loading dock containers.....	26
Future considerations.....	28
Contact and feedback.....	30

Purpose

The Waste Management Space Design Guidelines provide recommendations for designing waste infrastructure in acute and long-term care facilities across British Columbia. Rooted in best practices, contract management and regulatory requirements, these guidelines support safe, sustainable and compliant waste management. They align with the Low Carbon Resilience and Environmental Sustainability Guidelines (LCRES) and reflect the health sector's responsibility to reduce its environmental impact – including its contribution to climate change and global waste. Designers and planners should consult relevant interest holders and integrate waste prevention strategies to meet operational, sustainability and planetary health goals.

Inappropriate waste management contributes to climate change, biodiversity loss, deforestation, land degradation, pharmaceutical contamination of waterways and microplastic pollution. These impacts create safety, financial and environmental consequences. Federal and provincial regulations guide waste management practices and help mitigate these risks. Health care facilities have a legal and moral responsibility to manage waste appropriately.

These guidelines should be used in conjunction with CSA standards Z8000-18, Z317.10:21 and Z317.11-17. They do not replace CSA standards.

Key teams to consult

- Waste Management
- Infection Prevention and Control
- Occupational Health & Safety/Safety & Well-being
- Environmental Services (EVS)
- Environmental Sustainability

Regional considerations

While these guidelines apply across the province, service availability and geography vary across British Columbia and should be considered when planning waste management systems. Some recycling options may not be available in rural and remote areas because of limited vendor access.

Key influencing factors

The following elements affect the services available across different regions at various times of the year:

- **Access:** Availability can vary significantly
- **Terrain:** Geographic features impact logistics
- **Climate:** Weather conditions influence service delivery
- **Climate events:** Occurrences such as wildfires, flooding, droughts, and earthquakes can disrupt services

Irregular pick-ups

Biomedical waste regulated services may be less consistent, requiring additional regulation-compliant on-site storage between pick-ups.

Labour considerations

When planning waste management, consider regional variation in waste stream availability. These variations affect both space allocation and the ability of Environmental Services (EVS) staff to effectively manage container pick-ups, liner changes and waste movement. If these considerations are not addressed during planning, significant labour challenges may arise once the facility is operational. Planning should also account for potential future waste streams to ensure infrastructure can accommodate evolving waste management practices.

Wildlife considerations

When storing garbage and food waste at health care facilities – especially in rural regions – consider wildlife risks and design storage areas to protect both staff and wildlife.

Waste streams

Waste produced by health care facilities varies depending on the facility type and specialty. Waste management infrastructure should reflect the types and volumes of waste generated. During planning, identify key waste streams and how waste will move through the facility. When evaluating space requirements for clinical areas and soiled utility rooms, consider all waste types and how they will be transported through the facility to ensure optimal waste management.

Waste stream categories

- Recycling
- Confidential shredding
- Organics
- Garbage
- Biomedical
- Chemical

Container types

Each waste stream must have its own designated container that complies with provincial standards, as outlined in the following section of this document.

Waste stations

Some health organizations use combined waste station containers that include sections for recycling, organics and garbage. To ensure the appropriate waste infrastructure is purchased, consult the waste management or equipment planning team of the health organization leading the project to confirm waste stream and waste station availability

Confidential waste

In British Columbia, staff and contractors of public health authorities have privacy obligations under the Freedom of Information and Protection of Privacy Act (FIPPA). Personal information must be protected and securely disposed of. Personal information includes recorded information about an identifiable individual, such as a person's name, personal health number, medical record number, medical information, photographs, and health or employment records. Confidential shredding containers should be provided where personal information is routinely handled or generated. Consult waste management services and the organization's privacy office to ensure bins are available in appropriate locations and considered during space planning.

Recycling waste streams

Mixed containers



Definition:

All hard plastic, aluminum, tin, refundable containers (if not separated for collection) and carton containers.

Dimensions:

Blue rigid container: 31" (H) x 16" (W) x 17" (D)

Placement:

Containers are to be placed with mixed paper and garbage.

Mixed paper



Definition:

A mix of clean non-confidential paper products such as newspapers, magazines, office paper and paperboard packaging.

Dimensions:

Blue rigid container: 31" (H) x 16" (W) x 17" (D)

Placement:

Containers are to be placed with mixed containers and garbage.

Recycling waste streams



Refundable beverage containers

Definition:

Bottles, cans and containers that have a deposit fee.

Dimensions:

Blue rigid container: 31" (H) x 16" (W) x 17" (D)

Placement:

This recycling stream is only recommended in areas where containers must be returned for a refund, such as food services.

Note: Availability may vary by site and region. Check with your waste management team.



Confidential shredding

Definition:

Paper containing confidential information, including patient identifiers. Media shredding consoles are also available for CDs, DVDs, USBs, and film.

Dimensions:

95-gallon tote: 48" (H) x 25" (W) x 34" (D)

Media console: 36" (H) x 20.5" (W) x 16" (D)

Placement:

Available to protect patient and staff data. Be aware of dimensions if planning under-counter storage.

Note: Some health care organizations have switched to a vendor with larger receptacles. Check with your waste management team.

Recycling waste streams



PPE recycling

Definition:

Single-use gowns, masks, gloves, shoe and hair covers, face shields, blue wrap and drapes that are not dripping with blood, or come in contact with cytotoxic agents and would otherwise be disposed of as garbage.

Dimensions:

Vitacore container: 31" (H) x 16" (W) x 17" (D)

Placement:

Points of care, main entrances and outside break rooms.

Note: Availability may vary by site and region. Check with your waste management team.



Organics

Definition:

Food waste, paper towels and compostable foodware collected for composting.

Dimensions:

32-gallon: 37" (H) x 19" (W) x 22" (D)

64-gallon: 42" (H) x 23" (W) x 29" (D)

96-gallon: 43" (H) x 24" (W) x 35" (D)

Placement:

Place larger totes in kitchens and cafeterias (if applicable).

Note: This may vary by site and region. Be mindful of pest and odour control. Check with your waste management team.

Recycling waste streams



Glass

Definition:

Clear glass not containing pharmaceutical residues.

Placement:

Refer to the bin matrix for applicable glass recycling.

Note: Availability may vary by site and region. Check with your waste management team. Consult workplace health and safety regarding container selection and double-bag requirements.



Cardboard

Definition:

Unsoiled corrugated cardboard.

Placement:

Cardboard to be broken down (flattened) and placed beside recycling bins.

Note: This may vary by site and region. Check with your waste management team.

Garbage waste stream



Garbage

Definition:

Materials that are not classified as biomedical waste or recycling.

Dimensions:

Black rigid container: 30" (H) x 11" (W) x 21" (D)

Placement:

Containers are to be placed with mixed containers and mixed paper.

Note: *This may vary by region depending on available recycling programs. Check with your waste management team.*

Recycling at Providence Health Care

- Providence Health Care (PHC) has established a partnership with the Binners' Project at St. Paul's Hospital as part of ongoing efforts to enhance community capacity and promote positive sustainability initiatives.
- By having a dedicated team of waste pickers on site to hand-sort recyclables, PHC can combine different materials such as paper, containers and glass before collection. The Binners' Project aims to foster social and economic inclusion and build community resilience and networks.

Biomedical waste streams

Non-anatomical



Definition:

Items saturated or dripping with blood or bloody bodily fluids.

Dimensions:

Black 106 L reusable tub: 22.9" (H) x 18.9" (W) x 18.9" (D)

Yellow 23 L pail: 18" (H) x 12" (D)

Reusable 64 L: 28.6" (H) x 15.7" (W) x 13.9" (D)

Placement:

Stored in soiled utility rooms.

Sharps



Definition:

Items capable of cutting or puncturing the skin.

Dimensions:

Reusable sharps containers:

Yellow 14 L container: 11.2" (H) x 15.7" (W) x 8.3" (D)

Yellow 22 L container: 17.6" (H) x 15.7" (W) x 8.3" (D)

Yellow 32 L container: 24.3" (H) x 15.7" (W) x 8.3" (D)

Yellow 64 L container: 28.6" (H) x 15.7" (W) x 13.9" (D)

Placement:

Placed at points of care, medication rooms and soiled utility rooms.

Biomedical waste streams

Anatomical



Definition:

Human tissue, organs, bone and body parts.

Dimensions:

Red 23 L pail: 18" (H) x 12" (D)

Placement:

Stored in soiled utility rooms.

Note: For items that are too large to fit into the pail, double bag item in large red liners provided by EVS team.

Cytotoxic (Group 1 Hazardous Drugs)



Definition:

Items contaminated by Group 1 Hazardous Drugs, and items contaminated by the blood or bodily fluids of a patient during the precautionary period (48 hours).

Dimensions:

Red 23 L pail with Cytotoxic label: 18" (H) x 12" (D)

Placement:

Stored in soiled utility rooms or in the patient room until discharge.

Note: Cytotoxic pails and cytotoxic sharps are separate waste streams and cannot be combined.

Biomedical waste streams

Cytotoxic sharps (Group 1 Hazardous Drugs)



Definition:

Items capable of cutting or puncturing the skin that are contaminated by Group 1 Hazardous Drugs, or items contaminated by the blood or bodily fluids of a patient during the precautionary period (48 hours). Includes disposal of all Group 1 Hazardous Drugs.

Dimensions:

Red 14 L container: 11.2" (H) x 15.7" (W) x 8.3" (D)

Red 22 L container: 17.6" (H) x 15.7" (W) x 8.3" (D)

Red 32 L container: 24.3" (H) x 15.7" (W) x 8.3" (D)

Red 64 L container: 28.6" (H) x 15.7" (W) x 13.9" (D)

Placement:

Points of care, medication rooms and soiled utility rooms.

Pharmacy pail



Definition:

Group 2 hazardous drugs and non-controlled substances that are unused or partially used and medicines that are expired, contaminated, stored improperly or no longer required. Excludes Group 1 Hazardous Drugs.

Dimensions:

White 23 L pail: 18" (H) x 12" (D)

Placement:

Medication rooms (must be stored in a secured location at all times).

Biomedical waste streams

Controlled substances



Definition:

Liquids, pills and patches containing controlled substances.

Dimensions:

3.8 L CsRX: 8.5" (H) x 5" (D) x 9" (W)

11.4 L CsRX: 19.5" (H) x 5" (D) x 9" (W)

Cactus container: 12.5" (H) x 9.5" (D) x 15.5" (W)

Placement:

Near points of care and medication rooms. Containers must be secured in a locking bracket (not to be placed in soiled utility rooms).

Chemical waste



Definition:

Discarded materials that contain or are contaminated with hazardous chemicals listed in the Safety Data Sheet and that pose serious risks to human health and the environment if not properly managed.

Placement:

Refer to your health organization's policies and guidelines.

Garbage



Definition:

Items not appropriate for biomedical or recycling waste.

Dimensions:

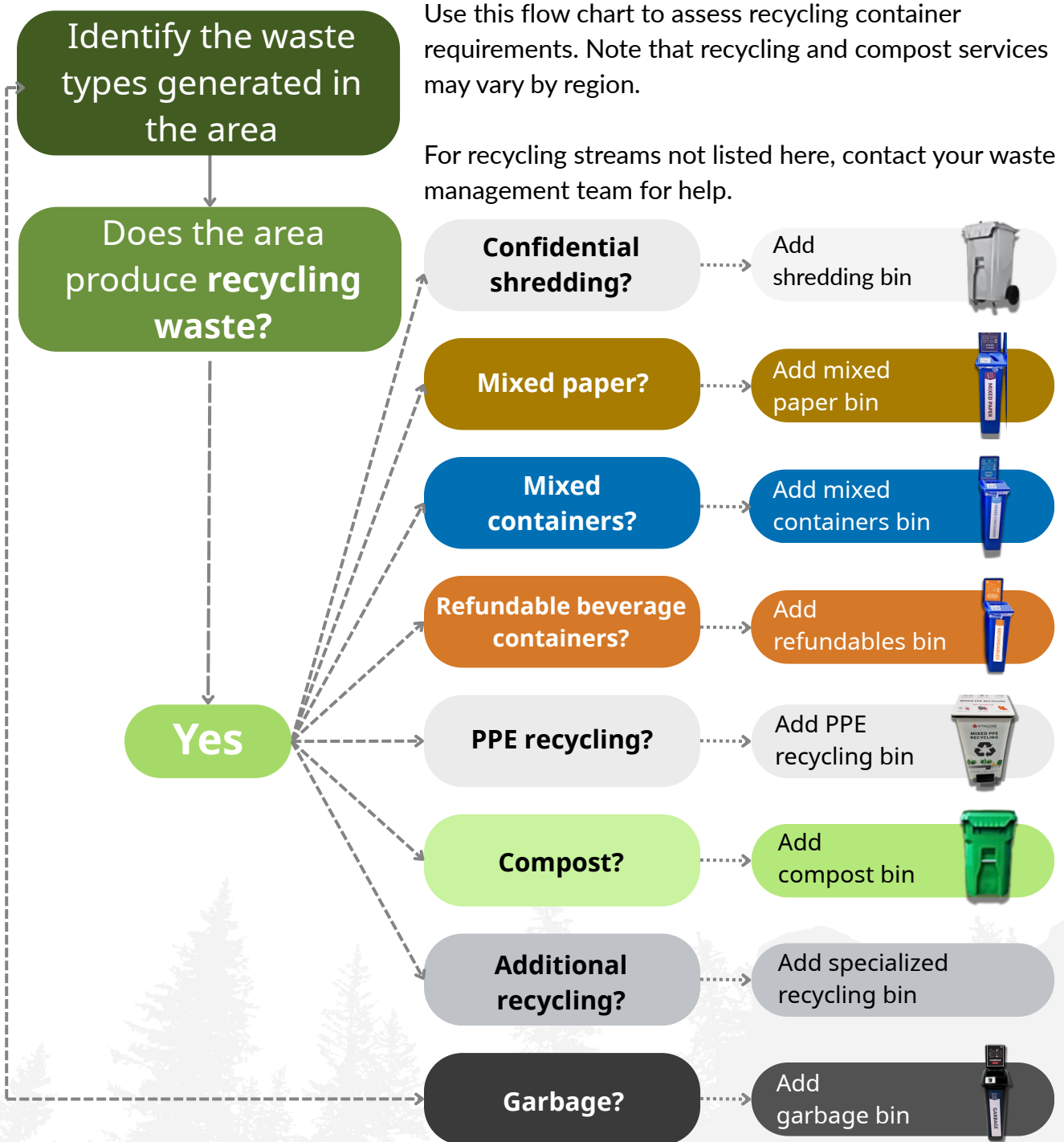
Varies.

Placement:

Soiled utility rooms.

Recycling container matrix

Determine your recycling bin needs



Recycling signage

- Each bin must be accompanied by clear signage with explanatory images showing what types of materials belong in that waste stream. Signage must include minimal text to increase inclusivity and reduce language or literacy barriers.
- The waste management team can advise on health organization-specific signage for waste and recycling.



Example: Island Health waste and recycling signage.



Example: Lower Mainland Recycling Renewal Program Signage 2012–2019, available on the Greencare website: [Recycling Equipment Purchasing Catalogues – Green Care](#)

Recycling container set-ups

Unit/public/cafeteria areas:

Island Health waste and recycling waste station example



Garbage **Mixed containers** **Mixed paper**

Lower Mainland waste and recycling waste station example



Garbage **Refundable beverages** **Mixed paper** **Mixed containers** **Compost**

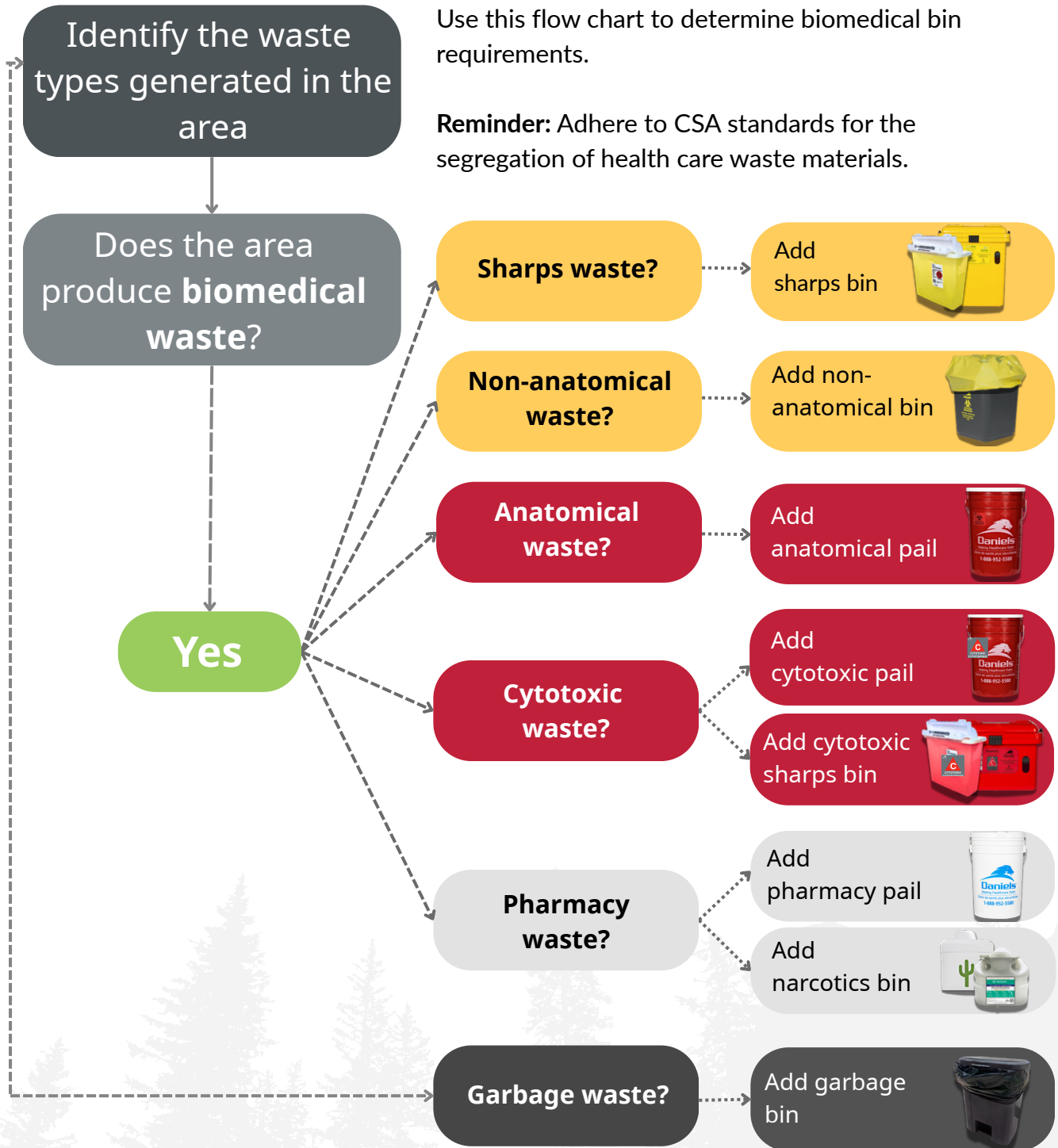
Set-up examples:

- All recycling containers should be paired with garbage containers.
- Create recycling stations that include both mixed paper and mixed containers rather than a single combined recycling container.
- In public, communal and administrative areas, aim for centralized waste stations with recycling, garbage and organics together (where organics collection is available in your region).
- Recycling containers must not be placed directly next to biomedical containers.
- All recycling and garbage containers require clear signage to promote proper segregation and reduce contamination.

Note: At PHC, paper, mixed containers and glass recycling are collected in one container and hand sorted.

Biomedical container matrix

Determine your biomedical container needs



Biomedical container set-ups

Set-up examples:

- All biomedical bins require clear signage to promote proper segregation and reduce contamination.
- Any biomedical bins must not be placed directly next to sinks or recycling containers (excluding PPE recycling).
- Pharmaceutical pails must be stored in a secure med room location at all times.
- Avoid placing garbage containers directly under wall-mounted sharps containers .
- Ensure that IPAC and Occupational health and safety has been consulted on the location of wall-mounted sharps containers so that they do not interfere with hand hygiene sanitizer dispensers.

Soiled utility room waste bin requirements



Medication room waste bin requirements



Container placement matrix

Set-up examples:

Recommended locations for waste containers in health care facilities:

- **X icon:** Indicates the recommended container placement for a high-level overview of health care areas. Consult with the waste management team for review.
- **Space planning:** Consult the health organization’s waste management team to identify any additional recycling streams outside the standard program that will require space during the planning phase.
- **Confidential shredding:** Place confidential shredding consoles wherever private and confidential patient, staff or organizational information is generated. See additional information on page 7.

Recommended Locations for Waste Containers														
The X signifies the recommended containers for units/sub-units														
Waste Streams	Garbage	Recycling					Biomedical					Pharmaceuticals		Hazardous
Waste Type	Garbage	Mixed Containers	Mixed Paper	PPE Recycling	Glass Only Region Availability	Organics	Sharps	Non-anatomical	Anatomical	Cytotoxic Sharps (Group 1)	Cytotoxic Pall (Group 1)	Pharmaceutical	Controlled Substances	Chemical
Designated Container	Black, Brown or Grey Bin	Blue Bin	Blue Bin	Approved White Vitacore Bin	Designated rigid container	Green	Approved Yellow Bin	Approved Yellow Bin	Approved Red Pall	Approved Red Bin	Approved Red Pall	Approved White Pall	Approved White single-use container	Approved Container
Units/Sub-Units														
Ambulatory Care	X	X	X	X			X	X	X	X	X	X	X	
Cafeteria	X	X	X			X								
Cardiac Catheterization Lab	X	X	X	X			X	X		X	X	X	X	
Cardiology/Nuclear Medicine/Echo	X	X	X	X			X	X		X		X	X	
Emergency Department	X	X	X	X			X	X	X	X	X	X	X	
Trauma Room	X			X			X	X	X	X	X	X	X	
Food Services Kitchen	X	X	X		X	X								
Intensive Care Unit	X	X	X	X			X	X		X	X	X	X	X
Labs	X	X	X	X			X	X		X	X			X
Library	X	X	X											

Container placement matrix

Recommended Locations for Waste Containers

The X signifies the recommended containers for units/sub-units

Waste Streams	Garbage	Recycling					Biomedical					Pharmaceuticals		Hazardous
Waste Type	Garbage	Mixed Containers	Mixed Paper	PPE Recycling	Glass Only Region Availability	Organics	Sharps	Non-anatomical	Anatomical	Cytotoxic Sharps (Group 1)	Cytotoxic Pall (Group 1)	Pharmaceutical	Controlled Substances	Chemical
Designated Container	Black, Brown or Grey Bin	Blue Bin	Blue Bin	Approved White Vitacore Bin	Designated rigid container	Green	Approved Yellow Bin	Approved Yellow Bin	Approved Red Pall	Approved Red Bin	Approved Red Pall	Approved White Pall	Approved White single-use container	Approved Container
Units/Sub-Units														
Long Term Care	X	X	X			X	X	X		X	X	X	X	
Maternity	X	X	X	X			X	X	X	X	X	X	X	
MDRD														
Clean Sterile Processing	X	X	X	X			X			X				X
Dirty Sterile Processing	X			X			X	X	X	X		X		X
Medical Imaging	X	X	X	X	X		X	X		X		X		X
Med/Surg	X	X	X	X			X	X	X	X	X	X	X	
Mental Health	X	X	X				X		X	X	X	X	X	
Morgue	X			X			X	X	X	X	X	X		X
Operating Room	X	X	X	X			X	X	X	X	X	X	X	X
Pharmacy	X	X	X	X			X		X	X	X	X	X	
Plant Services	X	X	X		X		X		X	X				X
Renal Dialysis	X	X	X	X			X	X	X	X	X	X	X	X
Stores/Receiving	X	X	X				X		X	X				
Surgical Services	X	X	X	X			X	X	X	X	X	X	X	
Common Areas														
Nurse Station	X	X	X				X							
Reception Desk	X	X	X											
Public Waiting Areas	X	X	X											
Change/Locker Room	X													
Examination/Procedure/Treatment Room	X	optional	optional	X			X	X		X			X	
Hand Hygiene Sink	X													
Isolation Room	X						X			X			X	

Container placement matrix

Recommended Locations for Waste Containers

The X signifies the recommended containers for units/sub-units

Waste Streams	Garbage	Recycling					Biomedical					Pharmaceuticals		Hazardous
Waste Type	Garbage	Mixed Containers	Mixed Paper	PPE Recycling	Glass Only Region Availability	Organics	Sharps	Non-anatomical	Anatomical	Cytotoxic Sharps (Group 1)	Cytotoxic Pall (Group 1)	Pharmaceutical	Controlled Substances	Chemical
Designated Container	Black, Brown or Grey Bin	Blue Bin	Blue Bin	Approved White Vitacore Bin	Designated rigid container	Green	Approved Yellow Bin	Approved Yellow Bin	Approved Red Pail	Approved Red Bin	Approved Red Pail	Approved White Pail	Approved White single-use container	Approved Container
Common Areas														
Medication Room	X	X	X				X			X		X	X	
Washroom	X						X			X				
Soiled Utility Rooms*	X						X	X	X	X	X			X
Storage areas*														
Biomedical Waste Final storage area							X	X	X	X	X	X	X	
Chemical Waste Final Storage Area														X
Important: confidential consoles, batteries, furniture and electronics bins are not included in this table. For more information about waste collection of these waste types please consult the Support Services Manager.														

Loading dock requirements

The loading dock should facilitate the movement of carts, dollies and personnel between ground level and the dock via a lift, which is preferred over ramps and stairs. Clear pathways must be maintained to ensure efficient material flow and minimize congestion and tripping hazards.

Access to the building from the dock must be controlled to allow only authorized personnel and deliveries. This should be managed through the building's access control system, intercom or other secure methods to ensure that:

- Delivery drivers can contact authorized personnel for entry
- Access points remain secure when not in use

Surveillance cameras are required at entry points to monitor personnel and track deliveries. Personnel should also be able to view exterior areas before opening doors using cameras, windows or door viewers.

Dock management factors for waste handling operations

- Space required for compactors and containers
- Ergonomic and functional use of the space and equipment
- Clearance for disposal truck lift arms and for the ergonomic movement of containers
- Electrical requirements for waste handling equipment
- Water supply and drainage for cleaning

Excerpt from Fraser Health Authority (2021), Design Requirements for Loading Docks V1

Additional dock considerations

- Provide dock space or an adjacent area for social governance waste-sorting initiatives.
- Ensure adequate space for multiple waste streams to be stored for coordinated pick-ups.
- Ensure compliance with fire safety and pest control regulations.
- Provide safe storage for chemical or volatile waste. Consult Health and Safety.

Further details should be sourced from waste managers to determine the facility's operational requirements.

In regions with extreme temperature fluctuations, consider the impact on waste infrastructure. For example, in Northern Health, compactors require heating to safeguard hydraulic components.

Loading dock containers

This list is including but not limited to the following loading dock containers. Please consult the waste management/EVS team for additional streams to consider.

TYPE	DIMENSIONS	CONTAINER
<p>Mixed paper/ mixed container totes</p>	<p>Commonly 96 gallons</p>	
<p>Front end load containers</p>	<p>2-yard, 4-yard, 6-yard or 8-yard containers</p>	
<p>Roll off containers (stand-alone)</p>	<p>20/30/40 yard</p>	
<p>Roll off containers (stand-alone)</p>	<p>20/30/40 yard</p>	

Loading dock containers

This list is including but not limited to the following loading dock containers. Please consult the waste management/EVS team for additional streams to consider.

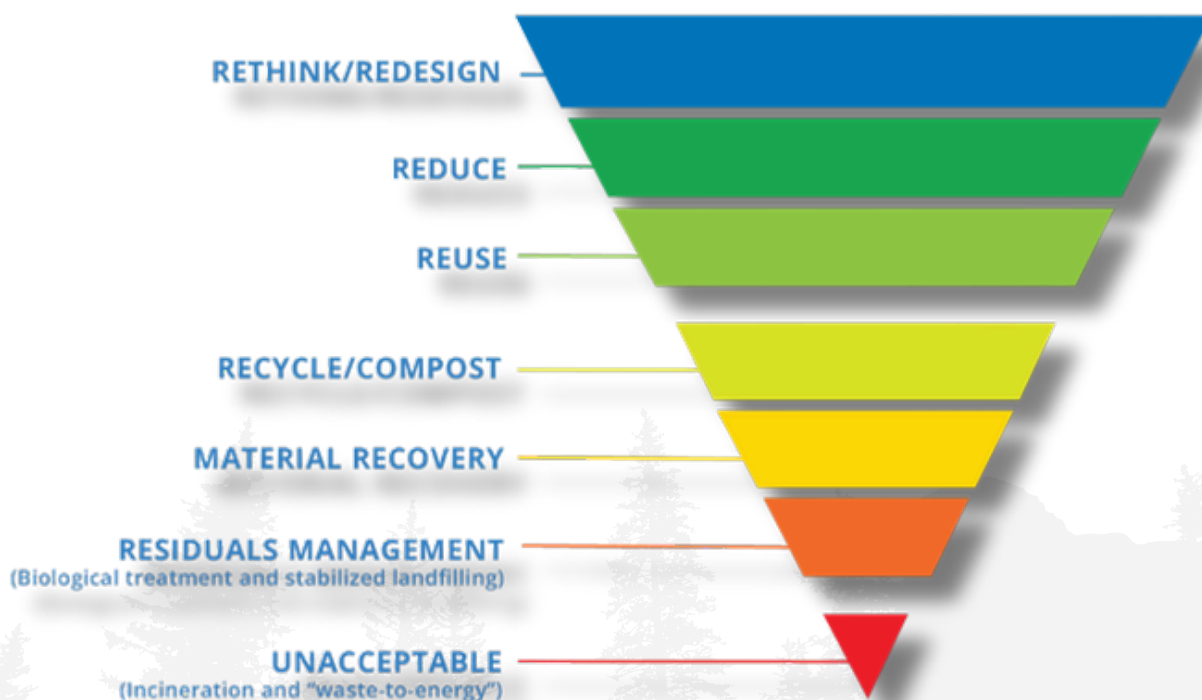
TYPE	DESCRIPTION	CONTAINER
Ground mounted	A permanent, fixed-to-the-ground machine that compresses large volumes of dry waste, like cardboard and plastic, into a separate, detachable receiving container.	
Stationary or break away compactors	Best for large volume of waste material in a limited amount of space.	
Vertical compactors	Not ground mounted. Can be serviced by a roll off truck.	
Self-contained compactors	A compactor for waste is a single, mobile unit that combines the trash bin and the compacting mechanism, designed primarily for wet waste.	
Biodigesters	Varies significantly with make, model and capacity.	

Future considerations

Space for sustainable initiatives

Each health organization, through its planetary health and sustainability goals, commits to reducing waste. The international framework supporting this work is the Zero Waste Hierarchy. To support a circular economy in health care, these guidelines emphasize the importance of reusing, repairing, ethically donating and recycling medical equipment and furniture. To enable this, facilities must have designated storage spaces for both temporary and long-term needs.

- Temporary storage is necessary for holding items before they are redeployed, repaired or recycled.
- Long-term storage is essential for items kept for emergency response or awaiting a suitable reuse opportunity.
- Permanent on-unit storage is also required for reusable consumables.
- Repair shops should also be considered during the planning stages.



Future considerations

Reusables

One effective method for reducing waste in the health care system is to replace single-use items with reusable alternatives where it is clinically safe and appropriate to do so. Implementing reusable items may require extra storage space and increased capacity in the Medical Device Reprocessing Department (MDRD).

Reusable case example

Reusable gowns: The introduction of reusable gowns in the operating rooms at Peace Arch Hospital (Fraser Health) highlighted the need for additional space and containers to store gowns before laundering. The following departments took these considerations into account:

MDRD sterile storage area:

- Minimum 21" (D) x 48" (W) x 69" (H)
- 3 wired carts to accommodate:
 - Gowns or set-up packs
 - Drapes and other reusable products (e.g. receiving blankets)

MDRD assembly area:

- Minimum 21" (D) x 48" (W) x 69" (H)
- 2 wired carts to house reusable wrappers

Sterile core:

- Minimum 21" (D) x 48" (W) x 69" (H)
- 1 wired cart to accommodate:
 - House gowns or set-up packs
 - Drapes and other reusable products

Each Operating Room (O.R):

- Minimum 19" (L) X 19.5" (W) X 38" (H)
- 2 standard-size laundry bins



Contact and feedback

Questions about this provincial guide?

This guide aims to ensure consistent waste management planning throughout the province. If you have questions, need clarification, or want to report an error, please reach out to the provincial waste planning team. Your feedback is invaluable in supporting ongoing improvements and helps ensure this guide remains practical, clear, and responsive to the needs of healthcare teams across the province.

Provincial waste planning team:

 info@bcgreencare.ca

For questions specific to your site, like layout, regional availability, or operations, please contact your regional waste management team.

Thank you for supporting consistent and effective waste management practices across the province.