Infectious waste

Management guidance for generators

What is infectious waste?

Infectious waste is waste that poses an environmental danger due to its *biological* risk. **Pathological** waste also poses a *biological* risk and is regulated the same as infectious waste. Both are different from **hazardous** waste, which poses an environmental danger due to its *chemical* risk.

Infectious, pathological, hazardous, and dual waste

In Minnesota, **infectious waste** includes the following wastes generated by a business or government entity:

- liquid blood or body fluids from humans or research animals
- wastes that will release blood or body fluids when compressed
- contaminated sharps from human or any animal use
- live or attenuated human vaccines
- infectious cultures and contaminated laboratory items used to manipulate those cultures

Pathological waste includes human body parts or tissue (except teeth) removed and intended for disposal. Pathological waste must be managed in Minnesota the same way as infectious waste.

Hazardous waste includes waste with chemical qualities that make it harmful to human health and the environment.

Some wastes can be both infectious and hazardous. The Minnesota Pollution Control Agency (MPCA) refers to such wastes by the term-of-convenience **dual waste**. When storing and treating dual waste, you must comply with both infectious and hazardous waste requirements.

Note: Placing pharmaceutical or laboratory wastes into infectious waste containers, including sharps containers, can inadvertently create a dual waste that may be difficult and costly to dispose of.

This document is intended to provide guidance only on requirements under Minnesota Infectious Waste Statutes and Rules found at Minn. Stat. § Ch. 116, and Minn. R. Ch. 7035, administered by the MPCA. Infectious waste may also be regulated concurrently as both:

- waste regulated under the Federal Bloodborne Pathogens standard (BBP) found at 29 CFR 1910.1030 and administered by the Minnesota Department of Labor and Industry, Occupational Safety and Health Division (MNOSHA)
- medical waste regulated under the Federal Hazardous Materials Regulations (HMR) found at 49 CFR 173.134, administered by the U.S. Department of Transportation (DOT).

The BBP and HMR may also regulate wastes that are not included in the definition of infectious waste as used in this document. For example, the HMR regulates all animal-generated veterinary waste, while infectious waste includes only veterinary sharps. Although this document does not discuss other regulations, generators of infectious waste must ensure they meet all applicable requirements.

Regulated body fluids – fluids that normally are not released from the body – are infectious wastes. Solids that, when compressed, will release these body fluids are also infectious wastes. Liquids that normally are released from the body are not infectious wastes unless overtly contaminated with regulated body fluids. You may manage wastes containing only non-infectious liquids with your normal solid waste. See Table 1 for a list of some regulated body fluids and unregulated non-infectious liquids.

Table 1: Regulated infectious body fluids and unregulated non-infectious liquids

Regulated body fluids	Non-infectious liquids
blood, including serum and plasma	tears
cerebrospinal fluid	mucus
synovial fluid	saliva
pleural fluid	vomit
pericardial fluid	urine
amniotic fluid	feces

Regulated **sharps** are any contaminated or potentially contaminated items from human or animal care that can induce sub-dermal inoculation, including, but not limited to needles, scalpel blades, pipettes, lancets, and glass or rigid vials that contained infectious agents. Unused needles, pipettes, and other items, or those used only in a sterile process are not regulated sharps in Minnesota.

Note: Sharps with engineered sharps injury protection (SESIPs) remain regulated sharps in Minnesota if contaminated or potentially contaminated. Manage infectious waste containing used SESIPs as any other infectious waste containing sharps.

What else is *not* infectious waste?

Blood-stained items that will not release blood or body fluids when compressed: Infectious waste does not include minor dressings, such as adhesive bandages, wraps or pads, nor bedding, such as sheets, pillows, or mattresses, that are blood-stained but will not reasonably release liquid blood or body fluids when compressed. You may manage these items as normal solid waste; however, many healthcare providers voluntarily choose to manage them as an infectious waste because of public perception or to minimize the need for employees to sort wastes.

Teeth: Teeth are not infectious waste in Minnesota as long as they are not dripping blood. Teeth that are returned to the patient or patient's family are also not waste regulated under the BBP. Both the Federal Occupational Safety & Health Administration (OSHA) and the American Dental Association (ADA) have clarified that dentists may return teeth to patients or patients' families without violating any of these requirements. Unless they are returned to the patient or family, teeth containing amalgam should be collected for recycling of the amalgam.

For more information about amalgam recycling, see MPCA hazardous waste fact sheet #w-hw4-62, Managing Universal Wastes, at http://www.pca.state.mn.us/publications/w-hw4-62.pdf.

Organs or body materials released to patients: Infectious waste in Minnesota does not include organs or other body materials returned to a patient or patient's family for cultural or religious reasons upon specific request. To protect the health of the patient, family, and public, the MPCA recommends that a healthcare provider ensure all of the following:

- The return is not prohibited by any superseding public health order or local ordinance.
- The patient has requested in writing to receiving the organ or body material.
- The patient is informed regarding any potential pathogen known or reasonably suspected to be carried in the organ or body material, including but not limited to chorioamnionitis, bacteremia, human immunodeficiency virus, hepatitis B, hepatitis C, hemorrhagic fever, and transmissible spongiform encephalopathy.

- The patient is informed whether the organ or body material has been chemically treated or preserved before its return.
- The patient is counseled that chemically treated organs or body materials should not be consumed and may require special handling precautions.
- The patient is informed regarding safe handling (similar to raw meat) of the organ or body material, such as handwashing, and refrigeration if it will be consumed.
- The organ or body material is packaged in an appropriate leak-proof container.
- The packaged organ or body material is clearly labeled with its contents and the patient's identification but is not labeled as an infectious or pathological waste.

Who is an infectious waste generator?

Any business or government entity whose activities generate an infectious waste or a pathological waste is an infectious/pathological waste generator, unless exempted. Businesses that provide sharps collection containers on their premises for employee or customer use, such as offices, hotels, and gas stations, are generators.

Households, farms, and agricultural businesses are exempt from the infectious waste requirements and are not generators of infectious waste. However, households, farms, and agricultural businesses may still be regulated under the BBP or HMR. Minnesota residential care facilities with a maximum capacity of six residents may consider their waste to be exempt household waste.

Licensed ambulance services, public school health services, and eligible boards of health, community health boards, and public health nursing agencies may be partially exempt but are still subject to specific Minnesota requirements, discussed on page five of this fact sheet. They also may be regulated under the BBP or HMR.

Managing infectious waste

Planning

If you are an infectious waste generator, prepare and maintain an **Infectious Waste Management Plan** and update it at least every two years. Ensure your plan includes or describes the:

- name and address of the generating facility
- types of infectious or pathological wastes generated
- collection, storage, transport, and disposal methods used for the waste describe, including how infectious waste is segregated from hazardous waste and how dual waste is managed
- packaging and labeling of the waste
- transporters and disposal facilities used for the waste, including contact information for the named recipient if sharps are mailed for disposal
- steps taken to minimize potential employee exposure (An exposure control plan prepared to meet the BBP may meet this item)
- name of the individual responsible for implementation of the management plan
- amount of infectious and pathological waste generated in the previous two years

Keep a printed or electronic copy of your plan at each generating facility if you have multiple locations. Do not submit a copy of your plan to the MPCA except in response to an explicit request. The Minnesota Department of Health (MDH) no longer reviews plans or issues acknowledgment cards.

On-site storage

In general, storage requirements at the site of generation are regulated under the BBP; however, the MPCA requires that the storage methods used, including packaging and labeling, are described in your infectious waste management plan. Comply with your management plan.

Disposal

The following four allowable disposal methods are discussed in detail below:

1. Decontaminate your own infectious waste on site
2. Discharge liquid infectious waste to a sanitary sewer or subsurface treatment system
3. Transport your own infectious waste to another site for decontamination
4. Ship your infectious waste to another site for decontamination using a Commercial Infectious Waste Transporter registered with the MPCA or mail it with the U.S. Postal Service

1. Decontaminate your own infectious waste

Decontaminate means to treat an infectious or pathological waste that does not contain sharps in a way that will make it safe to manage as an industrial solid waste. Decontamination must be verified by standard biological indicators. Ensure the standards are equivalent in resiliency to any infectious agents that reasonably might be expected in your infectious waste. Simply enclosing an infectious waste within a container or binding it into a matrix is not decontamination. You may decontaminate your own infectious waste without MPCA approval as long as the waste does not contain sharps.

Only use a system approved by the MPCA to decontaminate or treat infectious waste containing sharps. If you treat dual waste on site, comply with all hazardous waste treatment requirements.

For more information regarding on-site treatment, see MPCA solid waste fact sheet #w-sw4-33, Infectious Waste – Management guidance for on-site treatment, at http://www.pca.state.mn.us/publications/w-sw4-33.pdf.

2. Discharge liquid waste to a sanitary sewer or subsurface treatment system

You may discharge liquid infectious and dual waste to a sanitary sewer system provided you:

- Notify the operator of the receiving Publicly Owned Treatment Works (POTW)
- Comply with any discharge limits or prohibitions set by the POTW operator

You may discharge liquid infectious waste (but not dual waste) to a subsurface treatment (septic) system provided you:

- Notify the U.S. Environmental Protection Agency (EPA) you are operating a Class V injection well
- Comply with all EPA discharge limits and prohibitions for Class V injection wells.

You may not discharge dual wastes, including unevaluated or hazardous pharmaceutical or laboratory wastes, to a septic system.

3. Transport your own infectious waste to another site

You may transport your own infectious waste to another site for consolidation or decontamination without registering with the MPCA as a commercial transporter; however, you must still comply with the infectious waste transporter and HMR requirements.

See MPCA solid waste fact sheet #w-sw4-31, Infectious Waste: Management Guidance for Transporters, at http://www.pca.state.mn.us/publications/w-sw4-31.pdf for more information on infectious waste transport requirements.

4. Ship or mail your infectious waste

If you ship your infectious waste off site, ensure:

- All transporters you use, including courier and parcel services, are registered with the MPCA
- All employees who prepare infectious waste for shipment have been trained in accordance with the HMR
- Your infectious waste is packaged and labeled in compliance with the HMR

If you mail sharps or other infectious waste with the U.S. Postal Service:

- Document the contact information for the named recipient of the waste
- Package and label the infectious waste in compliance with U.S. Postal Regulations

Specific generator requirements

Hospitals

Hospitals must accept infectious waste, properly packaged to the hospital's own standards, from:

- Licensed ambulance services
- Public school health services
- Eligible boards of health
- Eligible community health boards
- Eligible public health nursing agencies

Hospitals may also, but are not required to, accept:

- Properly packaged infectious waste from private school health services
- Properly labeled and packaged dual waste from licensed ambulance services

Hospitals voluntarily accepting the above two waste streams are not considered off-site commercial storage facilities and may manage such waste as their own; however, they must accept or reject these wastes from all similar entities equally.

Licensed ambulance services

Ambulance services may dispose of their infectious and dual waste at the receiving hospital or transport the waste back to their operations base for consolidation and disposal as a generator from that location.

Public school health services

Public school health services are exempt from regulation as infectious waste generators if they dispose of their properly packaged infectious waste at a hospital; however, they may be subject to the BBP.

Eligible boards of health, community health boards and public health nursing agencies

These public entities are eligible for exemption from regulation as infectious waste generators if they are located in a county with a population less than 40,000 and they dispose of their properly packaged infectious waste at a hospital.

Home health care services

Residential health care services with six residents or less, and all visiting in-home services may dispose of infectious and dual waste generated in the residence as exempt household waste with the approval of the resident. Alternatively, they may transport the waste back to their operations base for consolidation and disposal as a regulated generator from that location. In both cases, home health care and residential services must prepare and maintain an infectious waste management plan.

For information on disposal options for household sharps, see MPCA household hazardous waste fact sheet #w-hhw4-67, Safe Disposal Options for Needles and Syringes, at http://www.pca.state.mn.us/publications/w-hhw4-67.pdf.

Household sharps collection

Any business or government agency may collect household sharps for proper disposal without being considered an off-site infectious waste storage facility. In addition, the MPCA will consider you exempt from any potential hazardous waste liability or requirements from pharmaceuticals or other wastes inadvertently collected with such sharps, provided you do all of the following:

- Do not accept sharps from other businesses or government agencies, unless you are a hospital accepting sharps from the entities listed in the 'Hospitals' section above
- Notify customers through posting at the collection site or by another reasonable method that accepted containers must hold only household sharps and no waste pharmaceuticals
- Segregate collected household sharps from your other waste until the wastes are shipped off site

Note: Many counties now accept household waste pharmaceuticals for proper disposal through their Sheriff's Department or designated drop-boxes. Contact your county environmental department.

Waste minimization

You can reduce both your business costs and your regulatory burden by reducing the amount of infectious and dual wastes you generate. The Minnesota Technical Assistance Program (MnTAP) has staff and resources to assist you in identifying and implementing waste reduction strategies for your business. For assistance, contact MnTAP using the information below.

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Statutes, Chapter §116, and Minnesota Rules, Chapter 7035, and incorporates regulatory interpretation decisions made by the MPCA on May 21, 2010; September 20, 2010; April 15, 2011; May 3, 2011; and March 8, 2012. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review statutes and rules.

For more information on hazardous and dual waste, see the Minnesota Pollution Control Agency (MPCA) hazardous waste publications website at http://www.pca.state.mn.us/waste/pubs/business.html.

Address questions regarding the Bloodborne Pathogens standard (BBP) to MNOSHA.

Address questions regarding the Federal Hazardous Materials Regulations (HMR) to the U.S. DOT or Minnesota DOT.

Minnesota Pollution Control Agency

Toll free (outstate only)..... 1-800-657-3864
Metro..... 651-296-6300
Website .....http://www.pca.state.mn.us

Minnesota Technical Assistance Program

Toll free (outstate only)..... 1-800-247-0015
Metro..... 612-624-1300
Website.....
http://www.mntap.umn.edu/healthcarehw/index.html

Minnesota OSHA

Toll free (statewide) 1-800-342-5354
Metro 612-284-5005
Website http://www.dli.mn.gov/mnosha.asp

Minnesota Department of Transportation

Hazardous materials.....651-215-6330
Website .....
. http://www.dot.state.mn.us/cvo/hazmat.html

U.S. Department of Transportation

Hazardous materials..... 1-800-467-4922
Website http://www.phmsa.dot.gov/hazmat