Regulatory consensus on health care waste issues

Where may this guidance be applied?

The hazardous waste programs of the Minnesota Pollution Control Agency (MPCA) and the Minneapolis-St. Paul metropolitan area counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington (Metro Counties) have reached consensus on the interpretations, guidance, and allowances discussed in this fact sheet. Generators of health care-related wastes may apply this guidance at any location in Minnesota.

This fact sheet incorporates changes to Minnesota requirements for pharmaceutical hazardous wastes. For a summary of the changing requirements, see MPCA fact sheet #w-hw3-33, Changes in pharmaceutical waste management in Minnesota, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw3-33.pdf</u>.

Contents

Abandoned pharmaceuticals	
Accumulation time2	
Acute pharmaceutical wastes	
Aerosol inhalers3	
Alcohol-based hand sanitizers	
<u>AldexTM</u> 3	
Amalgam separators	
Ambulance waste3	
Automated laboratory analyzers4	
Black containers 4	
<u>Cactus SmartSink™</u> 4	
Carbon dioxide absorbents4	
<u>ChemGon™</u> 4	
<u>Chemotherapy hood filters</u> 4	
Chemotherapy wastes4	
<u>Cidex™ OPA</u> 4	
<u>Clinitest™ tablets</u> 5	
Collecting household pharmaceuticals5	
<u>Container closure</u> 5	
Container labeling5	
Controlled substances6	
<u>Coroners</u> 6	
Cremated remains6	
Cuvettes, cartridges, and boats6	
<u>Dental amalgam</u> 6	
Dental wastewater 7	
Destruction versus disposal7	
<u>Deterra[™] Drug Deactivation System</u> 7	
<u>DisposeRx™</u> 7	
<u>Drug Buster™</u> 7	
<u>Drug Destructor™</u> 7	
<u>DrugDisposeAll™</u> 7	
<u>The Drug Shredder™</u> 7	
Dual waste7	
ECG & EKG electrodes7	
Electronic cigarettes8	
Electronics waste	

Element Medication Disposal System™.	8
Empty Containers	8
Epinephrine	8
Ethylene oxide sterilizer residues	9
Evaluation documentation	9
Excretions and suction waste	9
Federally-regulated pharmaceuticals	9
Formaldehyde and formalin	9
Free liquids and RCRA-dry sorbents	10
Glutaraldehyde	10
Group homes	10
Hazardous terms	10
<u>HemoCue™ cuvettes</u>	10
Home-based care waste	11
Household versus commercial wastes	11
Ictotest™ tablets	11
Implanted medical devices	11
Infectious waste	12
Intrauterine devices (IUDs)	12
Intravenous bags and attached tubing	12
Laboratory waste	12
Lethality	12
Listed hazardous wastes	13
Mail-back disposal	13
MaxPro Solidification Processing Unit [™]	13
Medical examiners	13
Needle-less syringe connectors	13
Nicotine	13
Nitroglycerin	14
Off-site care providers	14
On-site drug destruction products	14
OPA solutions	14
Packaging	14
Personal protective equipment (PPE)	14
Pharmaceutical waste assumption	15
Pharmacy hood filters	15
Pharma Lock™	15

Phentermine	.15
The PillCatcher [™]	.15
Pill Terminator [™]	.15
Prepackaged disinfectant wipes	.15
Publicly Owned Treatment Works	.15
Radioactive sources	.15
Radiological contrast media	.16
Radiology/radiation equipment	.16
Reverse distribution of pharmaceuticals	16
RxDestroyer [™]	.16
Scattering cremated remains	.16
School medications	.16
School sharps	.16
Security	.16
Septic systems	.17
Sewering wastes	.17
Shelters.	.17
Stains, fixatives, and reagents	.17
Sterilization indicators	.17
Suction waste	.17
Surgical/wound prep products	.17
Training	.18
Treating chemical waste at your site	.18
Treating infectious waste at your site	.18
Treating pharmaceutical waste	.18
Unsorted pharmaceuticals	.19
Vaccines.	. 19
Vaping liquid	. 19
Veterinary pharmaceuticals	.19
Vitamins.	. 19
Voluntarily surrendered drugs	.19
Waste in used syringes	.19
Wasting	.20
X-ray machines	.20
X-ray film & plates	.20
X-ray shielding and packaging	.20

Waste/Issue	Regulatory consensus
Abandoned pharmaceuticals	Pharmaceuticals voluntarily surrendered or abandoned at schools, temporary shelters, and detention facilities are considered household pharmaceutical waste. Except for controlled substances, any facility staff may transport abandoned pharmaceuticals to a licensed household pharmaceutical collection receptacle at a pharmacy or a law enforcement agency. Only law enforcement officers may transport abandoned controlled substances.
	Schools, shelters, and detention facilities are not considered the generators of the abandoned pharmaceuticals they transport to a licensed household pharmaceutical collection receptacle. No Hazardous Waste Identification Number is needed for this activity. Do not report these wastes to the MPCA or Metro Counties.
	Check with the licensed household pharmaceutical collection receptacle host before bringing wastes to them. Some hosts may choose to not accept pharmaceuticals from some sites. Find a collection receptacle through the MPCA at https://www.pca.state.mn.us/living-green/managing-unwanted-medications .
[• Contents]	See MPCA fact sheets #w-hhw2-06, Collecting Pharmaceuticals from Households and Schools: Requirements for Law Enforcement Agencies, at <u>https://www.pca.state.mn.us/sites/default/files/w-hhw2-06.pdf</u> ; and #w-hhw2-07, Collecting Pharmaceuticals from Households and Long Term Care Facilities, at <u>https://www.pca.state.mn.us/sites/default/files/w-hhw2-07.pdf</u> .
Accumulation time	Large quantity generators (LQGs) and Small quantity generators (SQGs) may accumulate any pharmaceutical hazardous wastes for up to one year from the date of generation. See <u>Container labeling</u> on page 5.
	Very small quantity generators may accumulate any pharmaceutical hazardous wastes indefinitely until they reach their maximum total hazardous waste accumulation. See MPCA fact sheet #w-hw1-05, Accumulate hazardous waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-05.pdf .
[+ Contonte]	Any generator may accumulate any amount of pharmaceutical hazardous wastes it reasonably may manage through reverse distribution indefinitely. Pharmaceuticals accumulated for reverse distribution must meet all return criteria for the reverse distributor to which it will be sent. See MPCA fact sheet #w-hw3-36b. Reverse distribution of pharmaceuticals, at
<u>• contents</u>	https://www.pca.state.mn.us/sites/default/files/w-hw3-36b.pdf.
Acute pharmaceutical wastes	Pharmaceuticals listed on the P List are acute hazardous wastes unless excepted. See <u>Epinephrine</u> on page 8, <u>Nicotine</u> on page 13, <u>Nitroglycerin</u> on page 14, and <u>Phentermine</u> on page 15 for exceptions.
	See MPCA fact sheet #w-hw2-02, P List of Acute Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf .
	Acute hazardous wastes may be comingled with other hazardous wastes in a common container if in solid form. If liquid, you must either ensure that the liquid will not mix with other wastes or count the entire mixture as an acute hazardous waste. Sites that generate one kilogram or more of acute hazardous waste in a month are LQGs.
	Stock and dispensing containers and packaging do not need to be managed as hazardous wastes after all the pharmaceutical has been removed by normal means. Triple-rinsing is no longer necessary. See <u>Empty containers</u> on page 8.
[• Contents]	Acute hazardous wastes do not require storage or disposal different than other hazardous wastes.

Waste/Issue	Regulatory consensus
Aerosol inhalers	Empty inhalers that meet hazardous waste empty container standards, including having no remaining pressure, are exempt from hazardous waste regulation. Recycle them if possible or manage as an industrial solid waste. See <u>Empty containers</u> on page 8.
	Non-empty inhalers are hazardous wastes unless you evaluate them as non- hazardous. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-00.pdf.
[• Contents]	Hazardous waste aerosols may be managed equivalent to universal wastes in Minnesota, or through pharmaceutical reverse distribution. See MPCA fact sheet #w-hw4-00, Managing Waste Aerosols, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-00.pdf</u> .
Alcohol-based hand sanitizers	Many waterless hand sanitizer products are alcohol-based and are ignitable hazardous wastes when discarded. Manage alcohol-based hand sanitizer dispensers that do not meet the empty container requirements as hazardous waste. Use of these products as intended is not "disposal". See <u>Empty containers</u> on page 8.
Aldex TM	See <u>Treating chemical waste at your site</u> on page 18.
Amalgam separators	Dentists in a Metro County must install and use an amalgam separator approved by the MPCA unless they are connected to a publicly owned treatment works (POTW) other than Metropolitan Council Environmental Services. See <u>Publicly Owned Treatment Works (POTW)</u> on page 15.
	A list of MPCA-approved amalgam separators is available at <u>https://www.pca.state.mn.us/water/managing-mercury-dental-waste</u> .
	Dentists outside the Metro Counties must install and use an amalgam separator that meets requirements of the U.S. Environmental Protection Agency (EPA) under Title 40, Code of Federal Regulations (CFR), Part 441. Find more information on the EPA's website at <u>https://www.epa.gov/</u> .
	These requirements do not apply to orthodontists, periodontists, prosthodontists, or exclusive specialists in oral pathology, oral or maxillofacial surgery, or radiology.
[• Contents]	Reclaimed amalgam and sludge from amalgam separators may be managed equivalent to universal wastes in Minnesota. See <u>Dental amalgam</u> on page 6 and <u>Dental wastewater</u> on page 7.
Ambulance waste	Hospitals in Minnesota are required to accept properly packaged and labeled infectious waste from ambulance services. Hospitals are not required to accept infectious waste containers that include hazardous waste (dual waste), but may do so if properly labeled. Hospitals that choose to accept hazardous or dual wastes from one ambulance service must then accept such wastes from all ambulance services that serve their facility. Waste accepted from an ambulance service is considered to be the hospital's waste.
[• Contents]	Ambulance services may also consolidate their infectious and hazardous waste at their central business location and dispose of it from there. See MPCA fact sheet #w-sw4-30, Infectious Waste: Management guidance for generators, at https://www.pca.state.mn.us/sites/default/files/w-sw4-30.pdf .

Waste/Issue	Regulatory consensus
Automated laboratory analyzers	Assume all wastes from automated laboratory analyzers, including expired reagents, calibrators and all discharged or expelled wastes, are hazardous unless you evaluate them as non-hazardous.
	Evaluate a representative sample of each separate waste stream generated by an automated laboratory analyzer at the point it leaves the analyzer, before it is combined with other wastes. Each discharge pipe or container is considered a separate waste stream. Wastes from cuvettes and bubble tapes expelled from an analyzer at a common point may be considered a single waste stream.
[• Contents]	When collecting a representative sample of your analyzer's wastes, take into account calibrations, cleanings, and the number and types of tests specific to your analyzer and its use in your facility. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01 .
Black containers [<u>• Contents</u>]	Though some vendors encourage the use of black containers for pharmaceutical hazardous wastes, you are not required to use any particular color for hazardous waste containers. Regardless of color, pharmaceutical hazardous waste containers must be properly labeled. See <u>Container labeling</u> on page 5.
Cactus SmartSink [™]	See <u>On-site drug destruction products</u> on page 14.
Carbon dioxide absorbents	Assume carbon dioxide (CO ₂) absorbents used in gaseous anesthesia systems are hazardous waste when disposed unless you evaluate them as non-hazardous. CO ₂ absorbents may contain sufficient barium to render them D005 toxic hazardous wastes; may carry health warnings that render them MN01 lethal hazardous wastes; or, although initially solids, may absorb enough moisture during use, accumulation, or disposal to make them liquid D003 corrosive hazardous wastes. See MPCA fact sheet #w-hw1-01, Evaluate waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.
ChemGon™	See <u>Treating chemical waste at your site</u> on page 18.
Chemotherapy hood filters	See <u>Pharmacy hood filters</u> on page 15.
Chemotherapy wastes	Bulk chemotherapy waste: Though not defined in Minnesota law, <i>bulk</i> <i>chemotherapy waste</i> is considered to mean waste that is known to contain any chemotherapy agents. Examples include spill clean-up materials, contaminated personal protective equipment (PPE), and non-empty containers and infusion sets. Bulk chemotherapy waste does not include patient excretions or suction waste such as vomit or irrigation return flow. See <u>Excretions and suction waste</u> on page 9. Assume bulk chemotherapy waste is lethal hazardous waste unless you evaluate it as non-hazardous or empty. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at
	https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf. Safe work practices recommend that disposable chemotherapy infusion equipment be handled as little as possible after use to minimize occupational exposure. The MPCA therefore discourages opening or emptying infusion equipment to attempt to meet the empty container standards.
[• Contents]	Trace chemotherapy waste : Though not defined in Minnesota law, <i>trace chemotherapy waste</i> is considered to mean waste that could have come into contact with a chemotherapy agent, but is not known to contain chemotherapy agents. Examples include PPE that is not visibly contaminated, outer packaging, and empty containers and infusion sets. You may assume trace chemotherapy waste is non-hazardous and manage it as normal solid waste.
Cidex [™] OPA	See <u>OPA solutions</u> on page 14.

Waste/Issue		Regulatory consensus
Clinitest [™] tablets		Unreacted Clinitest [™] tablets are hazardous waste for both Reactivity and Lethality unless you evaluate them as non-hazardous.
		Reacted Clinitest[™] tablets remain hazardous waste for Lethality unless evaluated as non-hazardous.
[• Contents	See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf .
Collecting household pharmaceuticals		In Minnesota, only two types of sites may voluntarily collect household pharmaceuticals from households, schools, and temporary shelters:
		 Law enforcement agencies operated by government entities. See MPCA fact sheets #w-hhw2-06, Collecting pharmaceuticals from households and schools: requirements for law enforcement agencies, at <u>https://www.pca.state.mn.us/sites/default/files/w-hhw2-06.pdf</u>.
		 Pharmacies licensed by the Minnesota Board of Pharmacy and authorized by the U.S. Drug Enforcement Administration. See #w-hhw2-07, Collecting Pharmaceuticals from Households and Long Term Care Facilities, at <u>https://www.pca.state.mn.us/sites/default/files/w-hhw2-07.pdf</u>.
[[• Contents]	Collection of household medications is voluntary and will not change the collector's hazardous waste generator 'size' or increase its annual fees. See <u>Abandoned pharmaceuticals</u> on page 2.
Container closure		Containers of hazardous waste, including pharmaceutical hazardous wastes, must be closed at all times except when waste is actually being added to or removed from the container. If the container holds free liquid, the container and its closure must be liquid-tight. See <u>Free liquids and RCRA-dry sorbents</u> on page 10.
[• Contents]	Exception: Pharmaceutical hazardous waste containers may remain unclosed if they are precluded from being overturned by being physically attached to the facility structure and are movable only by designated staff, such as pharmaceutical waste containers enclosed in key-locked holders. This exception does not apply to containers of hazardous wastes that are not pharmaceuticals.
Container labeling		Pharmaceutical hazardous waste containers must be labeled with the words 'Hazardous Waste' and a description of the contents. The descriptive word 'Pharmaceuticals' is acceptable for this second requirement.
		Pharmaceutical hazardous waste containers do not need to be labeled with an Accumulation Start Date, however LQGs and SQGs must be able to document in some fashion that they have accumulated the pharmaceutical hazardous waste for less than one year from the date it was generated.
[• Contents]	Containers of any other hazardous wastes must be labeled as described in MPCA fact sheet #w-hw1-05, Accumulate hazardous waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-05.pdf .

Waste/Issue	Regulatory consensus
Controlled substances	 Controlled substance pharmaceutical wastes are exempt from hazardous waste requirements if they meet all three of these conditions: Not sewered for disposal. Stored under U.S. Drug Enforcement Administration (DEA) requirements. Destroyed by solid waste incineration at a permitted solid waste facility, hazardous waste incineration, or other method approved by DEA in writing.
	Many controlled substances may also be evaluated to be non-hazardous. See MPCA fact sheet #w-hw4-45a, Evaluating pharmaceutical wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-45a.pdf .
[• Contents]	<i>Destruction</i> of controlled substances regulated by the U.S. Drug Enforcement Administration (DEA) is different than <i>disposal</i> of pharmaceutical hazardous wastes regulated by the MPCA. See <u>Destruction versus disposal</u> on page 7, <u>On-site drug destruction products</u> on page 14, and <u>Treating pharmaceutical waste at your site</u> on page 18.
Coroners	See <u>Medical examiners</u> on page 13.
Cremated remains	Cremated human or animal remains are not infectious or pathological waste.
	Cremated human or animal remains may be individually scattered over any public water body in Minnesota, including lakes and rivers, without a permit or other authorization from the state or local government. However, approval may be required for water body access, group gatherings, or ceremonies on public land.
[• Contents]	Written permission from the property owner must be obtained before scattering cremated human or animal remains over public or private land in Minnesota. No other authorization from the state is required, however local county or city ordinances may restrict scattering to certain lands.
Cuvettes, cartridges, and boats	Many laboratory analyzers use liquid reagents, calibrators, and cleaners packaged in cuvettes, cartridges, or boats. Assume all such liquids are hazardous waste unless you evaluate them as non-hazardous separate from the cuvette, cartridge, or boat. See MPCA fact sheet #w-hw1-01, Evaluate Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf</u> .
[• Contents]	Some cuvette, cartridge, and boat manufacturers have published Safety Data Sheets showing the concentration of liquid hazardous constituents only as a percentage of the filled cuvette, cartridge, or boat, including the weight of the plastic or metal components, citing an allowance for 'articles' under the U.S. Occupational Safety & Health Administration (OSHA) Hazard Communication Standard. OSHA allowances do not exempt wastes from hazardous waste requirements. Applying these concentrations as published may result in an inaccurate evaluation of the liquids as non-hazardous.
Dental amalgam	Mercury-containing dental amalgam in any form that will be recycled may be managed equivalent to universal waste. See MPCA fact sheet #w-hw4-62, Universal Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-62.pdf</u> .
[* Contonte]	Mercury-containing amalgam that will not be recycled must be managed under the full hazardous waste requirements.
	See <u>Amalgam separators</u> on page 3.

Page 6 of 21

Waste/Issue	Regulatory consensus
Dental wastewater	 Mercury-containing wastewater that has been pretreated by an amalgam separator may be: Discharged to the sanitary sewer (connected to a publicly owned treatment works, or POTW). Notify the POTW operator first and comply with their conditions. See <u>Sewering wastes</u> on page 17 and <u>Publicly Owned Treatment Works</u> on page 15.
	 Collected and managed equivalent to a universal waste. See MPCA fact sheet #w-hw4-62, Universal Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-62.pdf</u>.
[• Contents]	Do not discharge mercury-containing wastewater, whether pretreated or not, to a septic system. See <u>Septic systems</u> on page 17.
	See <u>Amalgam separators</u> on page 3.
Destruction versus disposal	Controlled substances subject to DEA requirements must be <i>destroyed</i> by being rendered non-retrievable, meaning non-recoverable by reasonable means and unusable for practical purposes. <i>Destruction</i> prevents diversion of the controlled substance for illicit purposes, however it does not prevent release into the environment. The MPCA cannot provide any guidance on whether any particular method or product meets controlled substance destruction requirements; contact the DEA for destruction questions. See <u>More information</u> on page 21.
[• Contents]	Pharmaceutical hazardous wastes subject to MPCA requirements must be properly <i>disposed</i> , which means to permanently prevent the hazardous constituents of the waste from entering the environment or harming human health. Many methods of controlled substance destruction, including products for on-site treatment, do not meet hazardous waste disposal standards. See <u>On-site drug destruction products</u> on page 14 and <u>Treating pharmaceutical waste at your site</u> on page 18.
Deterra [™] Drug Deactivation System	See <u>On-site drug destruction products</u> on page 14.
DisposeRx™	See <u>On-site drug destruction products</u> on page 14.
Drug Buster™	See On-site drug destruction products on page 14.
Drug Destructor™	See <u>On-site drug destruction products</u> on page 14.
DrugDisposeAll™	See <u>On-site drug destruction products</u> on page 14.
The Drug Shredder™	See <u>On-site drug destruction products</u> on page 14.
Dual waste [• Contents]	The MPCA uses the term-of-convenience <i>dual waste</i> to describe waste that simultaneously meets the definitions of both hazardous waste and infectious waste. You must manage dual waste in compliance with both hazardous and infectious waste requirements. See MPCA fact sheets #w-hw1-00, Summary of Hazardous Waste Requirements, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw1-00.pdf</u> ; and #w-sw4-30, Infectious Waste, Requirements for Generators, at <u>https://www.pca.state.mn.us/sites/default/files/w-sw4-30.pdf</u> .
ECG & EKG electrodes	Many electroencephalograph (ECG) and electrocardiogram (EKG) electrodes contain silver in metallic or gel form. Assume waste ECG and EKG electrodes are D011 toxic hazardous wastes unless you evaluate them as non-hazardous. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf .

Waste/Issue		Regulatory consensus
Electronic cigarettes	Contents]	Assume the liquid in electronic cigarettes (e-cigarettes) and vaporizers contains nicotine and is a P075 acute hazardous waste unless you evaluate it as non-hazardous. See <u>Nicotine</u> on page 13 and MPCA fact sheet #w-hw4-65, Vaping Liquids, E-cigarettes, and Nicotine Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-65.pdf</u> .
Electronics waste	Contents]	Any medical equipment containing a circuit board is considered electronics waste (E-waste) in Minnesota. E-waste must be assumed to be D008, D011, and D006 toxic hazardous waste due to the lead, silver, and cadmium in most printed circuit boards and connectors unless evaluated as non-hazardous. Manage E-waste by recycling or as fully regulated hazardous waste. See MPCA fact sheet #w-hw4-15, Electronic Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-15.pdf.
Element Medication Disp System™ (MDS)	posal	See <u>On-site drug destruction products</u> on page 14.
Empty containers		Pharmaceutical stock and dispensing containers with a capacity of 10,000 tablets or 1 liter liquid or less may be considered empty for hazardous waste purposes (also known as <i>RCRA-empty</i>) after the contents have been fully removed by normal means. No further rinsing or cleansing or measurement of residual is required.
		Most other containers, such as from laboratory and cleaning products that previously held hazardous waste may be considered 'empty' only if <i>both</i> of these conditions are met:
		1. All material that can be removed by the method commonly used for that type of container has been removed; and
		 After the first condition has been met, no more than 3% of the container capacity remains. (Three percent applies to containers of 119 gallons or less. Larger containers have different standards.)
		However, if a container held an acute hazardous waste other than a pharmaceutical, such as sodium azide, or exceeds the 1 liter size above, it is not 'empty' until it has been triple-rinsed (rinsed three times) using a rinsing liquid that can dissolve the contents. The rinsing liquid is then an acute hazardous waste. See MPCA fact sheet #w-hw2-02, P List of Acute Hazardous Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf.
[•	Contents]	See MPCA fact sheet #w-hw4-16, Containers Used to Hold Hazardous Wastes & Products, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-16.pdf</u> .
Epinephrine		Epinephrine salts (such as hydrochloride, bitartrate, and borate), which comprise the majority of pharmaceutical forms of epinephrine, are not P042 acute hazardous wastes in Minnesota. Only waste that contains unused epinephrine base as its sole active ingredient is P042 acute hazardous waste.
		Epinephrine in any form, whether a salt or not, is an MN01 lethal hazardous waste in Minnesota whenever its concentration is 0.24 percent or higher (≥0.24%). Epinephrine at less than 0.24 percent (<0.24%) is not lethal hazardous waste.
[•]	Contents]	See MPCA fact sheet #w-hw2-02, P List of Acute Hazardous Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf</u> .

Waste/Issue	Regulatory consensus
Ethylene oxide sterilizer residues	Unused ethylene oxide (EtO) is a U115 listed hazardous waste.
	Properly operated EtO sterilizers are designed to minimize the creation of harmful EtO residues, including ethylene chlorohydrin (ECH), that may be hazardous wastes. Waste containing ECH at 14 percent or more (≥14%) is an MN01 lethal hazardous waste.
[• Contents]	Sterilizer operators who are following the manufacturer's instructions, including load configuration, aeration, heating, and nitrogen washing, if applicable, may assume that used EtO sterilization wastes are non-hazardous.
Evaluation documentation	You must be able to readily access (physically or electronically) at your site all documentation from your waste evaluations, including wastes determined to be non-hazardous. If an evaluation was performed by a third party, such as a consultant or a transporter, you must have the documented rationale they used to evaluate the waste (e.g. references to the actual flashpoint, presence and concentration of any contaminants, median lethal dose, etc.); the final conclusion alone is not sufficient. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf .
Excretions and suction waste	Liquid and solids excreted by patients or evacuated from patients are not considered generated for hazardous waste purposes and are not required to be collected or subject to hazardous waste management. Examples include excreted or vomited barium-containing radiological contrast media, gastric suction waste from an oral poisoning patient, and chemotherapy instillation return flow.
[• Contents]	Implanted medical devices and equipment removed from a patient, such as insulin pumps, pacemakers, and intrauterine devices (IUDs), are considered potentially hazardous waste and are not exempt. See <u>Implanted medical devices</u> on page 11.
Federally-regulated pharmaceutical wastes [• Contents]	Pharmaceutical wastes commercially generated in Minnesota that have not been evaluated (and therefore must be assumed to be hazardous wastes) or that have been evaluated as P-listed, U-listed, Ignitable, Oxidizers, Corrosive, Reactive, or Toxicity Characteristic, are considered <i>federally-regulated</i> pharmaceutical hazardous wastes. Federally-regulated pharmaceutical hazardous wastes may not be sewered for disposal after August 21, 2019. See Lethality on page 12 and Sewering wastes on page 17, and MPCA fact sheet #w-hw4-45a, Evaluating pharmaceutical wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-45a.pdf.
Formaldehyde and formalin	Formalin is a solution of formaldehyde, methanol, and water.
	 Unused solutions containing formaldehyde as the sole active ingredient are U122 listed hazardous wastes at any concentration. See MPCA fact sheet #w-hw2-03, U List of Hazardous Waste, at https://www.pca.state.mn.us/sites/default/w-hw2-03.pdf. Used and unused solutions containing 20 percent or more (≥20%) formaldehyde are MN01 lethal hazardous wastes. See MPCA fact sheet #w-hw2-05, The Lethality Characteristic, at https://www.pca.state.mn.us/sites/default/w-hw2-03.pdf. Used solutions containing 20 percent or more (≥20%) formaldehyde are MN01 lethal hazardous wastes. See MPCA fact sheet #w-hw2-05, The Lethality Characteristic, at https://www.pca.state.mn.us/sites/default/w-hw2-03.pdf. Used solutions containing less than 20 percent (<20%) formaldehyde are considered non-hazardous.
[• Contents]	Notify your sewage treatment plant (publicly owned treatment works, or POTW) operator before you discharge any formaldehyde or formalin, regardless of its hazardous waste status. Never discharge waste formalin or formaldehyde to a septic system. See <u>Publicly Owned Treatment Works</u> on page 15.

Waste/Issue		Regulatory consensus
Free liquids and RCRA-dry sorbents		'Free liquids' are liquid wastes that may drip or be squeezed from disposed sorbents (such as swabs, towels, wipes, and rags). Sorbents with free liquid must be managed as the liquid itself would be. For example, swabs with free liquid ignitable ethanol must be managed as D001 ignitable hazardous waste. Free liquid hazardous wastes must be accumulated in closed, liquid-tight containers, except that certain pharmaceutical waste containers may remain unclosed if physically secured to the structure. See <u>Container closure</u> on page 5.
		Sorbents that do not contain free liquids are considered <i>RCRA-dry</i> . Sorbents may be considered RCRA-dry in Minnesota if no liquid drips from them when wrung or squeezed. See MPCA fact sheet #w-hw4-61, Managing Sorbents: Towels, Wipes, and Rags, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-61.pdf</u> .
		Assume all sorbents to which you add liquids, as well as all sorbents with attached liquid reservoirs such as applicators commonly used with surgical and wound prep solutions, contain free liquids until you show they are RCRA-dry. See <u>Surgical/wound prep products</u> on page 17.
	[• Contents]	Prepackaged disinfectant wipes to which you do not add liquid may be assumed to be RCRA-dry after use. See <u>Prepackaged disinfectant wipes</u> on page 15.
Glutaraldehyde		Cold sterilants with a glutaraldehyde concentration of 27 percent or more (≥27%) are MN01 lethal hazardous wastes. See MPCA fact sheet #w-hw2-05, The Lethality Characteristic, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-05.pdf</u> .
		Since glutaraldehyde is an aquatic toxicant, generators are encouraged to neutralize waste glutaraldehyde of any concentration with glycine before discharge to the sanitary sewer. If you intend to discharge waste glutaraldehyde of any concentration to the sanitary sewer, notify the system operator before discharge, whether or not the waste will be neutralized, and comply with any conditions they impose. See <u>Sewering wastes</u> on page 17.
	[• Contents]	Do not discharge glutaraldehyde, treated or not, to a septic system.
Group homes	[<u>• Contents]</u>	Group homes with a capacity of six residents or less may consider that their pharmaceutical, other hazardous wastes from care of residents, and infectious wastes are exempt household wastes regardless of any other factors.
		See <u>nome-based care waste</u> on page 11.
Hazardous terms	[• Contents]	Health care providers are subject to many laws with similar-sounding and sometimes-confused 'hazardous' terms. Different terms may apply to different items and trigger different legal requirements, even at the same facility. There are also several different simultaneous definitions for some hazardous terms. Which definition applies to a situation depends on which law is triggered by the situation. See MPCA fact sheet #w-hw0-15, 'Hazardous' Terms - What They Mean, at https://www.pca.state.mn.us/sites/default/files/w-hw0-15.pdf.
HemoCue [™] cuvette	s [• Contents]	Liquids from HemoCue [™] cuvettes must be assumed to be MN01 lethal hazardous wastes unless evaluated as non-hazardous, except for the HemoCue [™] Glucose 201 Microcuvette and Hb 201 Microcuvette, which may be assumed to be non-hazardous. Ensure you evaluate the liquids separate from the mass of the cuvette container. See <u>Cuvettes</u> , <u>cartridges</u> , <u>and boats</u> on page 6.

Waste/Issue	Regulatory consensus
Home-based care waste	Services providing care to patients in their own homes and group homes may manage hazardous and infectious waste generated in the home as exempt household wastes. See <u>Group homes</u> on page 10.
	Household pharmaceutical waste may be transported directly to a licensed household pharmaceutical collection receptacle (also known as a dropbox). Find a collection receptacle through the MPCA at
	https://www.pca.state.mn.us/living-green/managing-unwanted-medications.
	Other household hazardous wastes may be transported to a household hazardous waste collection program. Find a household hazardous waste collection program at https://www.pca.state.mn.us/waste/find-your-household-hazardous-waste-collection-site
[• Contents]	Home health care providers may also transport wastes back to their central business location and dispose of them as commercially-generated wastes. See <u>Off-site care providers</u> on page 14.
Household versus commercial wastes	Pharmaceutical and other hazardous wastes at long-term care facilities that provide skilled nursing care or that centrally store and control pharmaceutical distribution are considered commercially generated and regulated wastes. Regulated pharmaceutical hazardous wastes may not be discarded into the normal trash or transported to household pharmaceutical collection receptacles. Pharmaceutical hazardous wastes subject to federal regulation may not be sewered for disposal after August 21, 2019. See Federally-regulated pharmaceutical wastes on page 9.
	Pharmaceutical and other hazardous wastes at assisted living facilities that do not provide skilled nursing care and where pharmaceuticals are stored directly in resident rooms or unrestricted-access locations such as bathrooms are considered exempt household waste, even if the in-room cabinets or drawers are locked for safety. See <u>Home-based care waste</u> on page 11.
[• Contents]	Note: Pharmaceutical and infectious waste generated in home-based care facilities with a maximum capacity of six residents may be considered household waste regardless of the above. See <u>Group homes</u> on page 10.
Ictotest [™] tablets	Unreacted Ictotest TM tablets must be assumed to be D003 reactive hazardous waste. Reacted Ictotest TM tablets are not hazardous waste when a solid, but dissolving them in water may create a D002 corrosive liquid hazardous waste.
	Corrosive hazardous wastes may be neutralized on site and discharged to the sanitary sewer. If you intend to discharge lctotest TM waste to the sanitary sewer, notify the system operator before discharge, whether or not the waste will be neutralized, and comply with any conditions they impose. See <u>Sewering wastes</u> on page 17.
[<u>• Contents</u>]	Do not discharge Ictotest TM waste, treated or not, to a septic system.
Implanted medical devices [• Contents]	Implanted medical devices and equipment removed from a patient, such as insulin pumps, pacemakers, and IUDs, are considered potentially regulated waste and are not exempt. Devices containing circuit boards or batteries are electronic wastes. See <u>Electronics waste</u> on page 8 and <u>Intrauterine devices (IUDs)</u> on page 12.
Infectious waste	Infectious waste is the term in Minnesota for biologically-dangerous waste from health care providers. This waste may also be referred to as biohazardous waste, medical waste, or regulated medical waste (RMW). Any health care provider generating infectious waste, including just sharps, must prepare and follow an infectious waste management plan. Do not send your infectious waste management plan to the MPCA or Metro Counties unless specifically requested.
[• Contents]	See MPCA fact sheet #w-sw4-30, Infectious Waste for generators, at https://www.pca.state.mn.us/sites/default/files/w-sw4-30.pdf .

Waste/Issue	Regulatory consensus
Intrauterine devices (IUDs)	Some IUDs may contain barium for radiopacity purposes, and some may contain pharmaceutical hormones to increase their effectiveness. When removed by a health care provider and disposed, such IUDs may be D005 toxic hazardous wastes or MN01 lethal hazardous wastes. Manage all removed IUDs as hazardous waste unless you evaluate them as non-hazardous. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.
attached tubing	An intravenous (iV) bag and its attached tubing (also known as an administration set or infusion set) are together considered a container. When assessing whether an administration set is empty, you must consider residual liquid in the entire set, including the attached tubing, unless any portion of the set may be removed and is discarded separately. See <u>Empty containers</u> on page 8.
[• Contents]	Note: Administration sets containing pharmaceuticals often leak after disposal, so consider them hazardous waste free liquids unless you have evaluated them as non-hazardous. See Free liquids and RCRA-dry sorbents on page 10.
Laboratory waste	Assume all laboratory waste you dispose is hazardous unless you have evaluated it to be non-hazardous. See MPCA fact sheet #w-hw1-01, Evaluate waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01 .
	Rinsing laboratory stains, reagents, and fixatives into a sink or drain is disposal. Health care laboratories that dispose of any waste by discharging it to the sanitary sewer must notify the sewage treatment plant operator before discharge. See <u>Sewering waste</u> on page 17.
[<u>• Contents</u>]	See also Automated laboratory analyzers on page 4.
Lethality	In addition to the five federal hazardous waste characteristics (Ignitability, Oxidizers, Corrosivity, Reactivity, and Toxicity), Minnesota has an additional state- specific hazardous waste characteristic: Lethality. Lethality considers the toxicological effect of the waste; effectively, how poisonous the waste is through oral, dermal, and inhalation exposure.
	All pharmaceutical wastes in Minnesota must be assumed to be MN01 Lethal hazardous wastes unless evaluated as non-Lethal. See MPCA fact sheet #w-hw4-45b, Alternate method to evaluate pharmaceutical waste for the Lethality characteristic, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-45b.pdf</u> .
[• Contents]	Pharmaceutical wastes that have been evaluated as non-Lethal remain federally- regulated pharmaceutical wastes unless evaluated as non-hazardous. See <u>Federally-regulated pharmaceutical wastes</u> on page 9.
Listed hazardous wastes	In addition to the four federal hazardous waste lists (F, K, P, and U), Minnesota has an additional state-specific listed hazardous waste: polychlorinated biphenyls (PCBs). However, no K-listed wastes are normally found at healthcare facilities, and PCBs are usually found in healthcare facilities only in older lighting ballasts and older radiology and radiation therapy equipment. See MPCA fact sheets:
	 #w-Iw2-00, P List of Hazardous Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-00.pdf</u> #w-hw2-02, P List of Acute Hazardous Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf</u> #w-hw2-03, U List of Hazardous Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-03.pdf</u>
[• Contents]	 #w-hw4-48f, Managing PCBs in Ballasts and Small Capacitors, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-48f.pdf</u>

Waste/Issue	Regulatory consensus
Mail-back disposal	 You may use a 'mail-back' disposal service for pharmaceuticals only for: pharmaceutical reverse distribution. See MPCA fact sheet #w-hw3-36b, Pharmaceutical Reverse Distribution, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw3-36b.pdf</u>. household pharmaceutical wastes. See <u>Household versus commercial wastes</u> on page 11. pharmaceutical wastes evaluated as non-hazardous. See MPCA fact sheet #w-hw4-45a, Evaluating Pharmaceutical Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-45a.pdf</u>. You may use a 'mail-back' disposal service utilizing the U.S. Postal Service for
[<u>• Contents</u>]	infectious wastes from businesses or households. See MPCA fact sheet #w-sw4-30, Infectious waste for generators, at <u>https://www.pca.state.mn.us/sites/default/files/w-sw4-30.pdf</u> .
MaxPro Solidification Processing Unit (SPU)™	See <u>On-site drug destruction products</u> on page 14.
Medical examiners	Medical examiners not operating within a healthcare facility, such as a hospital or clinic, are considered fully regulated hazardous waste generators. Pharmaceuticals and other personal effects disposed by medical examiners are not household wastes and may not be transported to household pharmaceutical collection receptacles or household hazardous waste collection programs.
Needle-less syringe connectors	Needle-less syringe connectors of any size connected to a syringe with the plunger fully depressed may be considered part of the syringe and 'RCRA-empty' as long as the connector does not include any flow tubing. See <u>Waste in used syringes</u> on page 19 and <u>Empty containers</u> on page 8.
Nicotine	Over-the-counter (OTC), meaning non-prescription, nicotine replacement therapy pharmaceuticals approved by the U.S. Food & Drug Administration (FDA) are exempt from the P075 acute hazardous waste listing and may be assumed non-hazardous in Minnesota.
	Prescription nicotine pharmaceuticals and nicotine-containing e-cigarettes and vaping liquid pharmaceuticals remain P075 acute hazardous wastes. Stock and dispensing containers of nicotine pharmaceuticals may be considered empty once all of the pharmaceutical has been fully removed by normal means. See <u>Empty containers</u> on page 8.
[• Contents]	See MPCA fact sheet #w-hw2-02, P List of Acute Hazardous Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf</u> .
Nitroglycerin [• Contents]	Nitroglycerin in any final pharmaceutical form is not a P081 acute hazardous waste and may be assumed to be non-hazardous. See MPCA fact sheet #w-hw2-02, P List of Acute Hazardous Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf</u> .
Off-site care providers	Providers that care for patients at remote sites or in the patient's home may transport wastes generated at the remote site back to their primary place of business for consolidation and subsequent regulated management. See <u>Ambulance waste</u> on page 3, <u>Home-based care waste</u> on page 11, and MPCA fact sheet #w-hw3-11, Managing Hazardous Waste Generated by Construction and Service Contractors, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw3-11.pdf</u> .

Waste/Issue	Regulatory consensus
On-site drug destruction products	Most products marketed for on-site drug destruction are intended to meet DEA requirements for controlled substances destruction and Minnesota Board of Pharmacy (Board) requirements for legend (prescription) drugs destruction. On-site drug destruction products may not be assumed to render unevaluated or hazardous waste pharmaceuticals non-hazardous under MPCA requirements nor allow you to throw them into the normal trash without evaluation. See <u>Destruction versus disposal</u> on page 7 and <u>Treating pharmaceutical waste at your site</u> on page 18. The MPCA can provide no guidance on whether these products meet DEA or Board standards or are approved for use by the DEA or Board. Only the DEA and Board can answer these questions. See <u>More information</u> on page 21.
[<u>• Contents</u>]	If you use an on-site drug destruction products to destroy your controlled substance or legend drug wastes for on-site safety reasons, you must manage the resulting mixture as a fully regulated hazardous waste unless you have evaluated it as non-hazardous. A marketing claim that the product renders pharmaceuticals 'inert' or 'safe' is insufficient and may not take the place of evaluation.
OPA solutions [• Contents]	Ortho-phthalaldehyde (OPA) cold sterilants are not hazardous waste in Minnesota, but are aquatic toxicants. The MPCA encourages OPA sterilant to neutralize the OPA with glycine before discharging it to the sanitary sewer. If you intend to discharge waste OPA to the sanitary sewer, notify the sewage system operator before discharge, whether or not the waste will be neutralized, and comply with any conditions they impose. See <u>Sewering wastes</u> on page 17. Do not discharge OPA, treated or not, to a septic system.
Packaging [• Contents]	<i>Inner packaging</i> includes wrappers, adhesive backing from patches, and foil that were in direct contact with a pharmaceutical. Inner packaging is considered a segment of a container that held the pharmaceutical and is subject to the hazardous waste container requirements. See <u>Empty containers</u> on page 8. <i>Outer packaging</i> is any packaging outside of the inner packaging and that was not in direct contact with a pharmaceutical. Outer packaging may be managed as normal solid waste without evaluation.
Personal protective equipment (PPE)	Personal protective equipment (PPE) potentially contaminated with solid pharmaceutical hazardous wastes, such as tablets, or with other solid hazardous wastes may be visually inspected for contamination. Any dusts or particles adhered to the PPE remain regulated wastes. PPE not visibly contaminated may be assumed to be non-hazardous and managed as normal solid waste.
[<u>• Contents</u>]	Manage PPE potentially contaminated with liquid pharmaceuticals or other liquid hazardous wastes as discussed in <u>Chemotherapy wastes</u> on page 4. Manage radiology PPE as discussed in <u>X-ray shielding and packaging</u> on page 20.

Waste/Issue	Regulatory consensus
Pharmaceutical waste assumption	Pharmaceutical waste includes any drug or dietary supplement for use by humans or other animals, including prescription drugs, OTC drugs, homeopathic drugs, compounded drugs, dietary supplements, vitamins, e-cigarettes, vaping liquids, and PPE contaminated with these wastes that is discarded, intended to be discarded, managed in a manner reasonably resulting in being ultimately discarded, or that is unusable for its intended purpose. Pharmaceutical wastes include pharmaceuticals accumulated for management by reverse distribution. See <u>Reverse distribution of pharmaceuticals</u> on page 16.
	Assume all pharmaceutical waste in Minnesota is hazardous unless you evaluate it as non-hazardous. See MPCA fact sheet #w-hw4-45a, Evaluating Pharmaceutical Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-45a.pdf .
[• Contents]	Unless evaluated as non-Lethal, you may assign hazardous waste code MN01 to pharmaceutical hazardous wastes in Minnesota. See <u>Lethality</u> on page 12.
Pharmacy hood filters [• Contents]	Filters from pharmacy preparation hoods may become listed, toxic, or lethal hazardous waste if contaminated by the pharmaceuticals prepared under them. Evaluate pharmacy hood filters for any potential listed or characteristic hazardous waste or manage them as hazardous waste. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mp.us/sites/default/files/w-hw1-01.pdf
Pharma Lock TM	See On-site drug destruction products on page 14
Phentermine	Phentermine hydrochloride is not P046 acute hazardous waste in Minnesota and may be assumed to be non-hazardous. Only waste that contains unused phentermine base as its sole active ingredient is a P046 acute hazardous waste.
[• Contents]	Phentermine hydrochloride is a Schedule IV controlled substance. See <u>Controlled substances</u> on page 6.
The PillCatcher [™]	See <u>On-site drug destruction products</u> on page 14.
Pill Terminator [™]	See <u>On-site drug destruction products</u> on page 14.
Prepackaged disinfectant wipes	Packaged disinfectant wipes that are pre-moistened only with an alcohol or povidone/iodine solution may be assumed to be RCRA-dry and non-hazardous after use if you did not add any liquid to the wipe.
	If you add alcohol to a wipe or swab, you must show it does not contain free liquids when disposed or manage it as a hazardous waste. See <u>Free liquids and RCRA-dry sorbents</u> on page 10.
[. Contente]	If the wipes contain other disinfectant agents or you add other liquids, assume they are hazardous waste unless you evaluate them as non-hazardous. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at
[• Contents]	https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.
Publicly Owned Treatment Works (POTW)	If your facility is connected to a public sanitary sewer, your Publicly Owned Treatment Works (POTW) is the governmental authority that operates the sanitary sewage treatment plant. The easiest way to identify your POTW operator is to contact whomever bills your facility for sewer service. You must notify your POTW operator prior to discharging any chemical wastes to the sewer, including dental, laboratory, and maintenance wastes, and comply with any conditions they apply to your proposed discharge. See <u>Sewering wastes</u> on page 17.
[<u>• Contents</u>]	If your facility is not connected to a POTW, see <u>Septic systems</u> on page 17.
Radioactive sources [• Contents]	Manage radioactive sources, such as cesium-137, cobalt-60, and iridium-192, under the requirements of the Minnesota Department of Health Radiation Control Rules. See <u>More information</u> on page 21.

Waste/Issue	Regulatory consensus
Radiological contrast media	Manage unused barium-containing radiological contrast media as D005 toxic hazardous waste unless you evaluate it as non-hazardous. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.
[• Contents]	Food residuals from patient ingestion of contrast media, such as bowl scrapings, used eating utensils, and napkins, and used contrast media, such as excretions and suction waste, are not considered generated or subject to hazardous waste regulation in Minnesota. See <u>Excretions and suction waste</u> on page 9.
Radiology/radiation equipment	Medical radiology machines and radiation therapy equipment project electromagnetic radiation (such as X-rays and gamma rays) or particle beam radiation (such as protons and neutrons) when in use. Radiation and particle beams can be produced either electrically, through high-voltage tubes, magnetrons, and particle accelerators, or emitted directly from radioactive sources.
	Once power is disconnected from equipment that produces radiation or particle beams electrically, the components are not radioactive but may be chemically hazardous waste. Equipment manufactured before 1979 may contain oil-filled components, such as transformers or capacitors, that contain polychlorinated biphenyls (PCBs). Manage these wastes as MN03 PCB hazardous wastes unless you evaluate them as non-hazardous. See MPCA fact sheet #w-hw4-48a, Identifying, Using, and Managing PCBs, at https://www.pca.state.mn.us/sites/default/files/w-hw4-48a.pdf.
	The radioactive material inside equipment that emits radiation or particle beams directly from radioactive sources remains radioactive after the power is disconnected. See <u>Radioactive sources</u> on page 15.
[• Contents]	Electronic control systems of any equipment are electronics wastes (E-waste) when discarded. See MPCA fact sheet #w-hw4-15, Managing Electronic Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-15 .
Reverse distribution of pharmaceuticals	You may manage pharmaceuticals you do not need through reverse distribution if you follow all the conditions discussed in MPCA fact sheet #w-hw3-36b, Pharmaceutical Reverse Distribution, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw3-36b.pdf</u> .
[• Contents]	Regardless of whether they are eligible for a rebate or credit, reverse-distributed pharmaceuticals are considered regulated wastes in Minnesota unless they are used for their intended purpose. See <u>Pharmaceutical waste assumption</u> on page 15.
RxDestroyer™	See <u>On-site drug destruction products</u> on page 14.
Scattering cremated remains	See <u>Cremated remains</u> on page 6.
School medications	See <u>Abandoned pharmaceuticals</u> on page 2.
School sharps [• Contents]	Hospitals in Minnesota must accept properly packaged infectious waste, including sharps, from public schools. Hospitals may charge a reasonable fee to accept the waste. See MPCA fact sheet #w-sw4-30, Infectious Waste for Generators, at https://www.pca.state.mn.us/sites/default/files/w-sw4-30.pdf .
Security [• Contents]	Expected to begin in 2022, pharmaceutical hazardous waste containers will be required to be secured to prevent unauthorized access. Security measures may include placement in locked cabinets or rooms or in restricted access areas, such as nursing desks, or key-securing of individual containers. Infectious waste containers are not required to be secured.

Waste/Issue	Regulatory consensus
Septic systems	Septic systems are also known as subsurface sewage treatment systems, individual sewage treatment systems, and community septic systems. If your facility is not connected to a public sanitary sewer, assume it is connected to a septic system. No pharmaceuticals, laboratory, dental, or maintenance wastes may be discharged to a septic system, regardless if first filtered, treated, or neutralized. Only normal toilet, washing, and food preparation waste may be discharged to a septic system.
[• Contents]	If your facility is connected to a septic system, you must separately collect all other liquid wastes and transport them off-site to a POTW, liquid industrial waste facility, or hazardous waste facility, as appropriate for the waste, for disposal. See MPCA fact sheet #w-hw1-06, Treat or dispose of hazardous waste at https://www.pca.state.mn.us/sites/default/files/w-hw1-06.pdf .
Sewering wastes	Federally-regulated pharmaceutical hazardous wastes may not be sewered for disposal after August 21, 2019. See <u>Federally-regulated pharmaceutical wastes</u> on page 9.
	You may discharge other hazardous wastes to a public sanitary sewer for disposal in Minnesota if you:
	First notify the POTW operator.
	 Comply with any limits, conditions, or prohibitions they apply. See <u>Publicly Owned Treatment Works</u> on page 15.
	Assume any waste you discharge to the sewer is hazardous unless you have evaluated it as non-hazardous. Wastes must be evaluated individually prior to sewering; you may not evaluate your combined wastewater. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at
	https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.
[• Contents]	Do not discharge any waste except normal toilet and sink waste to a septic system. See <u>Septic systems</u> on page 17.
Shelters	See <u>Abandoned pharmaceuticals</u> on page 2.
Stains, fixatives, and reagents	Assume all stains, fixatives, reagents, and rinsewater from cleaning those products are hazardous unless you evaluate each separately before combining with other wastes. Rinsing slides or equipment into a drain is regulated disposal subject to the
[• Contents]	requirements for sewered wastes. See <u>Sewering wastes</u> on page 17.
Sterilization indicators	Some sterilization indicator products still contain lead or barium and are D008 or D005 toxic hazardous wastes. Assume your sterilization indicator wastes are hazardous unless you have evaluated them as non-hazardous. If your sterilization indicator is a tape adhered to a sheet of sterilization wrap, commonly known as 'blue wrap', you may evaluate the combined adhered mass of tape and wrap as a single waste stream. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf.
Suction waste	See Excretions and suction waste on page 9.
Surgical/wound prep products	Many surgical and wound prep products consist of a sorbent pad attached to a liquid reservoir. The most common disinfection agents used in these products, such as DuraPrep [™] and ChloraPrep [™] , are alcohol-based and D001 ignitable hazardous wastes when disposed.
[• Contents]	Manage these products as hazardous wastes unless the sorbent pad is RCRA-dry and the reservoir meets the empty container standard, or unless you have evaluated the waste as non-hazardous. See <u>Free liquids and RCRA-dry sorbents</u> on page 10 and <u>Empty containers</u> on page 8.

Waste/Issue	Regulatory consensus
Training	Expected to begin in 2022, LQGs and SQGs generating pharmaceutical hazardous waste will be required to train any employees handling those wastes in hazardous waste management at least once within six months of beginning duties. The current exception for employees handling pharmaceutical wastes only in satellite accumulation containers will no longer apply.
	Employees at LQGs handling only pharmaceutical wastes will not be required to receive annual refresher training, though the MPCA still recommends all generators periodically ensure their staff remain 'fresh' in their hazardous waste knowledge.
	Employees handling any other hazardous wastes will remain subject to the standard hazardous waste training requirements. See MPCA fact sheets:
	 #w-hw1-09a, Employee Training for Very Small Quantity Generators, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw1-09a.pdf</u>
	#w-hw1-09b, Employee Training for Small Quantity Generators, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw1-09b.pdf</u> #w bw1-00a_Employee_Training for Large Quantity Concretence at
	#w-nw1-09c, Employee Training for Large Quantity Generators, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw1-09c.pdf</u>
[• Contents]	To determine your hazardous waste generator size, see MPCA fact sheet #w-hw1-02, Determine Generator Size, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw1-02.pdf</u> .
Treating chemical waste at your site	You may use products such as Aldex [™] , ChemGon [™] , or others to treat your dental, laboratory, maintenance, and other chemical wastes at your site without approval, but you must manage the resulting mixture as a fully regulated hazardous waste unless you have evaluated the resulting mixture as non-hazardous. Do not place it in your normal trash without evaluation. See MPCA fact sheet #w-hw1-01, Evaluate Waste, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw1-01.pdf</u> .
[• Contents]	All treatment must be performed in a closed container. Count all hazardous waste treated on site toward your hazardous waste generator size and include it in your annual hazardous waste license application.
Treating infectious waste at your site	You may treat your infectious waste at your site without approval if the waste does not contain sharps. Verify it is no longer infectious before placing it in normal trash.
	 If your infectious waste contains sharps, you may treat it on-site but must either: Use a treatment system approved by the MPCA. See MPCA fact sheet #w-sw4-34, Infectious Waste: Approved Waste Management Vendors and Systems in Minnesota, at <u>https://www.pca.state.mn.us/sites/default/files/w-sw4-34.pdf</u>; or
[• Contents]	 Continue to manage the waste after treatment under the full infectious waste requirements. See MPCA fact sheet #w-sw4-30, Infectious Waste for Generators, at <u>https://www.pca.state.mn.us/sites/default/files/w-sw4-30.pdf</u>.
Treating pharmaceutical waste at your site	You may treat your pharmaceutical waste at your site without approval, but you must manage the resulting mixture as a fully regulated hazardous waste unless you have evaluated it as non-hazardous. Do not place it in your normal trash without evaluation. See <u>Destruction versus disposal</u> on page 7, <u>On-site drug destruction products</u> on page 14, and MPCA fact sheet #w-hw4-45a, Evaluating Pharmaceutical Waste, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-45a.pdf</u> .
[• Contents]	All treatment must be performed in a closed container. Count all hazardous waste treated on site towards your hazardous waste generator size and include it in your annual hazardous waste license application.

Waste/Issue	Regulatory consensus
Unsorted pharmaceuticals	You may co-mingle potential product and waste pharmaceuticals in a common container for later sorting. The entire contents of the container are considered waste until the products and wastes are sorted back out. Common containers must meet all hazardous waste container requirements unless you have evaluated the wastes as non-hazardous. See <u>Container labeling</u> on page 5 and MPCA fact sheet #w-hw1-05, Accumulate Hazardous Waste, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw1-05.pdf</u> .
Vaccines	Vaccines are subject to the same hazardous waste requirements and eligible for the same allowances as all other pharmaceuticals, including reverse distribution. See <u>Pharmaceutical waste assumption</u> on page 15, <u>Empty containers</u> on page 8 and <u>Reverse distribution of pharmaceuticals</u> on page 16.
	Vaccines are most commonly hazardous waste due to toxic preservatives, including D026 cresol and D009 mercury.
[• Contents]	Live and attenuated vaccines may also be infectious wastes or dual waste. See <u>Infectious waste</u> on page 12 and <u>Dual waste</u> on page 7.
Vaping liquid [• Contents]	Vaping liquid, the solution used in electronic cigarettes, is also known as e-liquid, e-juice, e-fluid, or liquid nicotine. Assume vaping liquid contains nicotine and is a P075 acute hazardous waste unless you have evaluated it as non-hazardous. See MPCA fact sheet #w-hw4-65, Vaping Liquids, E-cigarettes, and Nicotine Wastes, at https://www.pca.state.mn.us/sites/default/files/w-hw4-65.pdf.
Veterinary pharmaceuticals	Veterinary pharmaceuticals are subject to the same hazardous waste requirements and eligible for the same allowances as human pharmaceuticals, including reverse distribution. See <u>Pharmaceutical waste assumption</u> on page 15, <u>Empty containers</u> on page 8 and <u>Reverse distribution of pharmaceuticals</u> on page 16.
Vitamins	Vitamins are subject to the same hazardous waste requirements and eligible for the same allowances as all other pharmaceuticals, including reverse distribution. See <u>Pharmaceutical waste assumption</u> on page 15, <u>Empty containers</u> on page 8 and <u>Reverse distribution of pharmaceuticals</u> on page 16.
[• Contents]	Vitamins are most commonly hazardous waste due to toxic nutrients or contaminants, including D007 chromium and D010 selenium.
Voluntarily surrendered drugs	See <u>Abandoned pharmaceuticals</u> on page 2.
Waste in used syringes	 Pharmaceuticals remaining in a used syringe are considered used and therefore not P-Listed or U-Listed wastes. Pharmaceuticals remaining in a used syringe must be assumed to be characteristic hazardous wastes unless evaluated as non-hazardous. See MPCA fact sheets: #w-hw2-02, P List of Acute Hazardous Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-02.pdf</u> #w-hw2-03, U List of Hazardous Wastes, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-03.pdf</u> #w-hw2-04, Hazardous Waste Characteristics, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw2-04.pdf</u>
[• Contents]	Used syringes are considered empty containers and not regulated as hazardous wastes if the plunger is fully depressed, regardless of any fluid in the needle or hub. See <u>Empty containers</u> on page 8.

Waste/Issue	Regulatory consensus
Wasting	Squirting or pouring pharmaceuticals into a drain or into sorbents disposed into normal trash or infectious waste, called wasting, is regulated disposal.
	Federally-regulated pharmaceutical hazardous wastes may not be wasted into the sewer for disposal after August 21, 2019. See <u>Federally-regulated pharmaceutical wastes</u> on page 9 and <u>Sewering wastes</u> on page 17.
[• Contents]	Wasting into sorbents disposed into normal trash or infectious waste is allowed only if the pharmaceuticals have been evaluated as non-hazardous. See MPCA fact sheet #w-hw4-45a, Evaluating Pharmaceutical Waste, at <u>https://www.pca.state.mn.us/sites/default/files/w-hw4-45a.pdf</u> .
X-ray machines	See <u>Radiology/radiation equipment</u> on page 16.
X-ray film & plates	Film: You may assume X-ray film manufactured after 1976 is non-hazardous for silver, but are still encouraged to recycle all waste X-ray film. See MPCA fact sheet #w-hw4-46, Managing Photographic and X-ray Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw4-46.pdf .
[• Contents]	Reusable plates: Many reusable X-ray plates used with digital or computed radiography systems, known as photostimulable phosphor (PSP) plates, contain barium. Assume your PSP plates are D005 toxic hazardous waste when disposed, unless you evaluate them as non-hazardous. If you ship them to the manufacturer for refurbishment instead of disposal, do not count them towards your hazardous waste generator size or report them to the MPCA or Metro County.
X-ray shielding and packaging	X-ray shielding, personal protective equipment (PPE), and film packaging commonly contain lead, either in foil or powder form.
	Lead metal sheets and foil are exempt from hazardous waste regulation if they are recycled as scrap metal. See MPCA fact sheet #w-hw4-27, Hazardous Scrap Metal, at https://www.pca.state.mn.us/sites/default/files/w-hw4-27 .
[• Contents]	Glass, rubber, plastic, and other materials impregnated with lead powder or lead compounds are not scrap metal and are D008 toxic hazardous wastes when recycled or discarded. If recycled, ship them to the recycling facility using a Uniform Hazardous Waste Manifest. See MPCA fact sheet #w-hw2-42, Recycling Hazardous Waste, at https://www.pca.state.mn.us/sites/default/files/w-hw2-42 .

More information

Guidance and requirements in this fact sheet were compiled from Minnesota Statutes, Chapters §115A and §116, and Minnesota Rules, Chapters 7035 and 7045, and incorporate regulatory interpretation decisions made by the MPCA on July 2, 2004; October 17, 2007; October 18, 2007; September 9, 2008; October 27, 2008; November 28, 2008; May 21, 2010; April 13, 2011; May 6, 2011; August 9, 2011; and January 25, 2012; May 8, 2015; May 9, 2016; October 12, 2016; and December 14, 2016; April 10, 2019; and May 17, 2019. Visit the Office of the Revisor of Statutes at https://www.revisor.mn.gov/pubs to review the Minnesota Statutes and Rules.

Contact your Metro County or the MPCA with your questions. The MPCA's Small Business Environmental Assistance Program can also provide free, confidential regulatory compliance assistance. The Minnesota Technical Assistance Program (MnTAP) can help you reduce your waste generation and risk. Report all hazardous waste incidents such as spills to the Minnesota Duty Officer immediately.

Metro County Hazardous Waste Offices

Anoka	
	<u>https://www.anokacounty.us/</u>
Carver	
	<u>http://www.co.carver.mn.us/</u>
Dakota	
	https://www.co.dakota.mn.us/
Hennepin	
	<u>http://www.hennepin.us/</u>
Ramsey	
	<u>https://www.ramseycounty.us/</u>
Scott	
	<u>http://www.scottcountymn.gov/</u>
Washington	
	. <u>https://www.co.washington.mn.us/</u>

U.S. Drug Enforcement Administration

Toll free	1-800-882-9539
Minneapolis Field Office	612-344-4143
<u>https://www.dead</u>	<u>diversion.usdoj.gov/</u>

Minnesota Pollution Control Agency

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I oll free (all offices)	
All offices	
	<u>https://www.pca.state.mn.us/</u>
Minnesota Duty Officer	
Toll free	
Metro	
Small Business Environmen	tal Assistance Program
Toll free	
Metro	
<u>https:</u>	//www.pca.state.mn.us/sbeap/
Minnesota Technical Assist	ance Program
Toll free	
Metro	
	http://www.mntap.umn.edu
Minnesota Board of Pharma	acy
Statewide	
<u>htt</u>	os://mn.gov/boards/pharmacy/
Minnesota Department of H	Health
Toll free	
Metro	
h	http://www.health.state.mn.us/