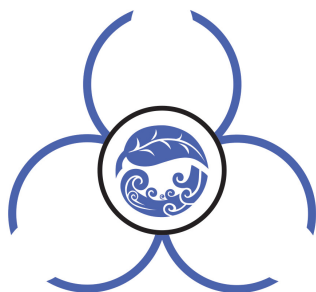


MEDICAL WASTE MANAGEMENT GUIDE



ENTECH

ALASKA'S PREMIER
MEDICAL WASTE
PROFESSIONALS

The following guide has been produced as an informational resource to describe requirements for the proper management of regulated medical wastes.

Contact Entech through the information below if you have questions or would like further support managing medical wastes at your practice.

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About Entech

Entech offers medical waste collection and disposal solutions across Alaska through compliant, cost effective, and environmentally focused medical waste services, USPS authorized mail back solutions, and healthcare compliance training.

On average, Entech saves practices 15-30% or more by comparison to their current service provider.

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Objectives of Medical Waste Management

The medical waste industry was created in 1980's in response to improper management and increasing trends of potentially infectious healthcare waste becoming exposed to the environment. Through regulations including the [Resource Conservation and Recovery Act](#) and [Medical Waste Tracking Act](#), medical waste has become a controlled waste stream requiring unique management, tracking, treatment, and disposal activities which are outlined in various federal, state, and local regulations.

Medical waste regulations have been established to protect public health including the individuals, animals, and the environment that may come in contact with these wastes from potential pathogens. Non-compliance with these regulations is enforced through various fines issued by the agencies responsible for ensuring certain activities are completed.

The purpose of this management guide is to describe requirements and best practices for the proper management of medical wastes in any particular facility which is generating medical waste.



1976
Resource
Conservation and
Recovery Act
(RCRA)



1988
Medical Waste
Tracking Act
(MWTA)



1996
Health Insurance
Portability and
Accountability Act
(HIPAA)



2000
Needlestick Safety
and Prevention
Act
(BBP Standard /
1991)

What is Medical Waste?

Medical waste is a subset of wastes generated at healthcare facilities, such as hospitals, physicians' offices, dental practices, blood banks, and veterinary clinics, as well as medical research facilities and laboratories. Medical waste generally refers to all solid wastes produced at a healthcare facility, whereas regulated medical wastes includes materials that require special management. Regulated medical waste is healthcare waste that may be contaminated by blood, body fluids, or other potentially infectious materials. Medical waste is frequently referred to as biohazardous waste, biomedical waste, clinical waste, other potentially infectious material (OPIM), potentially infectious medical waste (PIMW), or through its United Nations classification number, UN 3291.

Regulated Medical Wastes are segregated based on their characteristics and generally fall into the following categories:

Bio-Medical Waste (Red Bag Waste)

- Saturated or soiled disposables (bloody gauze, dressings, lap pads, OB and surgical peri-pads and gloves)
- Containers, catheters, or tubes with fluid blood or blood products not discarded or flushed
- Dialyzers and tubing
- Microbiology specimens, used culture plates, tubes, and bottles

Sharps

- Needles and syringes (including syringes without needles)
- Scalpel blades and lancets
- Broken contaminated glass

Chemotherapy Waste

- Bulk and trace materials require segregation and unique management requirements

Pathological Waste

- Detached tissues and organs

Pharmaceutical Waste (NON-RCRA / RCRA)

- Sub-classification, segregation, and management varies depending on toxicity and controlled status

OSHA's Definition of Regulated Medical Waste

The Occupational Safety and Health Administration (OSHA) through its [Bloodborne Pathogens Standard](#) (BBP) defines regulated medical waste in 29 CFR 1910.1030 as follows:

A liquid or semi-liquid or other potentially infectious material; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state if compressed; items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological waste containing blood or other potentially infectious materials.

Furthermore, other potentially infectious materials (OPIM), which also must be collected, treated, and disposed as regulated medical wastes is defined as:

The following human body fluids: semen, vaginal secretions, cerebrospinal fluid, synovial fluid, pleural fluid, pericardial fluid, peritoneal fluid, amniotic fluid, saliva in dental procedures, and body fluids that is visibly contaminated with blood, and all body fluids in situation where it is difficult or impossible to differentiate between body fluids; (2) Any unfixed tissue or organ (other than intact skin) from a human (living or dead); and (3) HIV-containing cell or tissue cultures, organ cultures, and HIV- or HBV-containing culture medium or other solutions; and blood, organs, or other tissues from experimental animals infected with HIV or HBV.

While it is always best practice to discard blood contaminated wastes as regulated medical wastes if uncertainly exists, OSHA considers saturation as the defining characteristic between regulated and non-regulated medical wastes. Examples of this are given in [BBP compliance directives](#) which detail how these determinations are to be made. An example of how the same, small amount of blood exposed to two different materials would and would not create regulated medical waste is below.



+



=

NON-REGULATED MEDICAL WASTE*



+



=

REGULATED MEDICAL WASTE

** Generators must still exercise universal precautions with any contaminated or potentially contaminated material*

What is Not Regulated Medical Waste?

For healthcare wastes to be considered regulated medical wastes, the most important consideration is the item's exposure to blood or other potentially infectious material. It is always best practice to segregate questionable items, however, the majority of medical wastes do not require special management. Specifically, these items should not be disposed as regulated medical waste:

- General trash, packaging, boxes, computer paper, and office waste
- Unused medical products and supplies
- PPE (worn, but not soiled)
- Food products, wrappers, and utensils
- Empty IV tubing without needles
- Empty urine cups, stool containers, and diapers
- Exam cleaning gloves
- Empty collection bottles and bags
- Sanitary napkins and personal feminine products
- Disposable paper drapes, lab coats, paper towels, and band aids
- Disposable basins, bedpans, and urinals
- Non-mercury batteries
- Empty aerosol pressure cans
- Some items contaminated with small amounts of blood, but not saturated

WHAT TO PLACE IN YOUR RED BAG

These items ***SHOULD*** go in the red bag:

CONTAMINATED GLOVES	CONTAMINATED GAUZE AND BANDAGES	CONTAMINATED PPE	BLOOD SATURATED ITEMS
BLOOD AND OIPM BODILY FLUIDS	SEALED SHARPS CONTAINERS	PATHOLOGICAL WASTE	TRACE-CHEMO WASTE

These items ***SHOULD NOT*** go in the red bag:

NON-INFECTIOUS GARBAGE	ANY TYPE OF MEDICATION	COMPRESSED GAS CONTAINERS	LOOSE SHARPS
HAZARDOUS / CHEMICAL WASTE	RADIOACTIVE WASTE	SOILED LINENS	



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POSTER FOR YOUR PRACTICE](#)

Medical Waste Compliance

Complying with medical waste regulations and standards is more than avoiding fines (which can be more than \$12,600 per instance per day). Primarily, medical waste regulations are in place to promote safety for the individuals who manage these wastes and the environment. Good management keeps everyone safe while minimizing exposure to potential pathogens. To remain compliant, all medical waste generators should remain mindful of and follow the regulations they remain responsible for in the areas listed below.

Containers



Regulated medical waste must be contained within rigid containers which meet certain performance standards and regulatory approvals. These containers are designed and must be prepared for shipment in a manner which limits the potential for exposure if involved in an accident. As possible, consider the use of [reuseable containers](#) to minimize environmental impacts and costs.

- Sharps waste must be discarded in a puncture resistant, OSHA approved container. As filled, sealed sharps containers may be placed into your medical waste container.
- Place any blood saturated or contaminated item into your red bag or medical waste container. NEVER PLACE LOOSE SHARPS INTO YOUR MEDICAL WASTE CONTAINER.
- If the medical waste is in liquid or semi-liquid form, it may be discarded through the sanitary sewer.
- Place pharmaceutical waste into a blue or black container prior to disposal. Do not discard pharmaceutical waste into the sanitary sewer.



Packaging and Labeling



[Red bag liners](#) used for the collection of medical wastes should meet DOT standards for strength testing (ASTM D 1709-01 and 165 gram dart test). As filled, bags and containers should be sealed and stored for collection by your service provider.

Proper labeling of generated medical wastes is also a requirement per DOT regulation. Prior to transport, all wastes must be identified and labeled by the generator to include the facility's name, address, phone number, and date. If multiple sharps containers or red bags are consolidated into a larger receptacle, placing generator information on this exterior packaging is sufficient to meet this requirement.

Any pathological, chemotherapy, or pharmaceutical wastes must also be packaged separately from general biomedical wastes (red bag and sharps waste) and clearly marked to support proper management and treatment requirements.

Collection and Storage



For the collection of medical wastes prior to transport, utilized containers must be properly marked per OSHA standards to include the universal biohazard symbol and "Biohazard" text to remain compliant as shown on the left or [linked here](#). As an alternative, medical wastes may also be collected without the use of a primary container so long as they are being collected in a red bag liner meeting strength tests and appropriately marked with the international biohazard label.

Once sealed, medical wastes collected in red bags, medical waste containers or sharps containers should be stored for collection and not reopened. Storage areas should be restricted through the use of locks, signs, or location per OSHA requirements. In addition, medical wastes should be stored in approved medical waste transport containers.

Decontaminating Medical Waste Spills



If there is an accident that results in a spill of regulated medical wastes, the surface contaminated with spilled material can be safely decontaminated through the following procedure:

1. Block off the area and do not allow visitors or unprotected staff members access until disinfected
2. Put on disposable gloves and other personal protective equipment
3. Wipe up the spill as much as possible with absorbent material
4. Gently pour bleach solution (1 part bleach to 9 parts water) or sterile alcohol disinfectant onto all contaminated areas
5. Let bleach solution remain on contaminated area for 20 minutes and then wipe up solution
6. All non-disposable cleaning materials such as mops, brushes, and rags need to be disinfected by saturating with a bleach solution and then allowed to air dry
7. Remove gloves and place in a red bag with other soiled materials
8. Double bag, close, and discard into medical waste container
9. Thoroughly wash hands with soap and water

Waste Manifests



Every load of medical waste shipped off-site for destruction is tracked through a process generally referred to as “cradle to grave” manifestation. The manifest provides chain of custody information from generation, to transportation, to destruction. Every individual who takes possession of wastes, including someone from your facility, must sign the manifest. In addition, every individual involved with this process, including generators, are also subjected to hazardous waste classification training requirements (HM-181) which reviews basic disposal and transportation regulations established by the DOT.

As the waste generator, your facility remains responsible for waste until you receive the proof of destruction which is provided by your medical waste disposal company. Transportation and treatment records should be maintained for three years.

Facility Requirements

**The #1 Most
Common
OSHA Citation
at Healthcare
Facilities
Involves
Failure to
Meet the
Requirements
of the
Bloodborne
Pathogens
Standard**

Any commercial generator of medical wastes (essentially anyone other than individuals) must comply with all of the Occupational Safety and Health Administration's (OSHA) [Bloodborne Pathogens Standard](#) (BBP). The BBP has numerous requirements, including annual training requirements for employees. OSHA standards also communicate requirements for many other areas of medical waste management including labeling, storage, and containment. Among others, the BBP specifically requires any healthcare facility which may have risks of potential pathogen exposure to:

- Ensure all employees can safely perform their normal duties without undue health risks
- Ensure that Universal Precautions are observed
- Provide free Hepatitis-B vaccination series
- Provide all necessary PPE and ensure that it is used
- Provide BBP training at hire, and annually thereafter
- Maintain records of all training
- Maintain an Exposure Control Plan and update annually
 - Safety Data Sheet records accessible to staff
 - Global Harmonized Standard (GHS) training
- Maintain a Hazard Communication Program and update annually
- Record exposure incidents and follow-up activities
- Employers required to evaluate engineering controls to reduce or eliminate employee exposure risk

IS YOUR PRACTICE OSHA COMPLIANT?



Envirolaska offers a [world-class solution](#) for your healthcare compliance and regulatory needs including **compliance training, safety plans, incident reporting, SDS management, and OSHA safety audits**. For one low annual subscription, Envirolaska offers you access to all features available through any internet enabled device to meet all of your **OSHA, HIPAA, and DOT regulatory requirements**. Maintaining regulatory compliance has never been easier for Alaska medical waste generators. [Contact Entech](#) today to learn more!

Staff Requirements



As new employees are hired (or as existing employees change duties) that may have some interaction with medical waste at your practice, certain trainings must be completed per federal regulations. At a minimum, all employees with potential exposure to blood are required to complete Bloodborne Pathogens training per OSHA regulations. Additionally, Hazcom and Chemical Safety trainings are required for individuals with potential chemical exposure along with Hazardous Materials training per DOT regulations for any individual involved with the transportation of medical wastes. This DOT requirement would extend to any individual who may prepare wastes for shipment or signing off on manifests.

Renewal periods for individual certifications vary, however, training completion certificates should be kept on file for all employees at your practice. For a summary of applicable trainings and renewal periods, see the chart below.

SUBJECT	INITIAL TRAINING	RENEWAL PERIOD	REQUIRED BY STATUTE OR BEST PRACTICE
BLOODBORNE PATHOGEN TRAINING	Within 10 days of new hire or change of job duties	Annual recertification	Statute (OSHA)
HAZCOM AND CHEMICAL SAFETY	With new hire or change in job duties	Undefined	Statute (OSHA)
HIPAA PRIVACY AND SECURITY TRAINING	Within a "reasonable period" of new hire or after "material" changes in policy and procedure	Annual recertification considered best practice	Statute (HHS)
DOT HAZARDOUS MATERIALS TRANSPORTATION	With new hire or change in job duties. Requirement of manifest process	Every three years	Statute (DOT)
BIOMEDICAL WASTE HANDLING	With new hire or change in job duties	Annually or as needed	Best Practice
PERSONAL PROTECTIVE EQUIPMENT	With new hire or change in job duties	Annually or as needed	Best Practice
PHARMACEUTICAL WASTE IDENTIFICATION, SEGREGATION, AND DISPOSAL	With new hire or change in job duties	Annually or as needed	Best Practice

For further reference, links to compliance regulations involving medical wastes, specific regulatory code, and general industry information are included below:

- Department of Labor (OSHA): [29 CFR 1910.1030](#) (Bloodborne Pathogens Standard) [29 CFR 1904](#) (Record Keeping Requirements)
- Department of Transportation (DOT): [49 CFR Parts 171, 172, 173, 175 and 261](#) (Regulated Medical Waste Transportation)
- Department of Health and Human Services (HHS): [42 CFR Parts 72 and 73](#) (Interstate Shipment of Etiologic Agents and Toxins)
- Alaska Department of Environmental Conservation (AKDEC): [18 AAC 60](#) (State of Alaska Solid Waste Policy)
- Municipality of Anchorage: [Medical Waste Disposal Policy](#)



[Occupational Safety and Health Administration \(OSHA\)](#)

Bloodborne infectious disease resources including prevention and post-exposure procedures.



[Center for Disease Control and Prevention \(CDC\)](#)

Information regarding healthcare associated infections including post-exposure guidelines.



[United States Environmental Protection Agency \(EPA\)](#)

General industry information regarding medical waste and the agency's involvement.



[Food and Drug Administration \(FDA\)](#)

Information regarding the safe use of sharps in the home, at work, or during travel.



[Department of Transportation \(DOT\)](#)

Information regarding training requirements for medical waste generators.



[United States Postal Service \(USPS\)](#)

Regulations involving the requirements of shipping hazardous materials through US mail.

Reducing Waste and Disposal Costs at Your Practice

Considering the difference in cost between solid waste disposal and medical waste disposal, reducing the amount of infectious materials requiring treatment can be a money saver for any practice. Nonetheless, medical waste reduction has little to do with limiting the amount of infectious materials that are generated. It has more to do with proper segregation and helping your staff better understand the difference between infectious waste and non-infectious refuse. Proper segregation is the key to this strategy.

In developing plans to minimize medical waste disposal costs for your practice it is important to remember that changes which may have an impact on the safety of your staff and the service providers who support your practice should never be considered. When in doubt, it is always best to err on the side of caution.

Follow the steps below to identify medical waste reduction opportunities at your practice:

1. **Perform a medical waste audit** to review current practices, patterns, and disposal activities. Start by determining a good estimate on the annual volume of medical wastes being discarded at your facility that can be used as a comparison to other locations. Progress made to reduce your medical volumes will be limited and often short lived if the results can't be quantified.

Generally, regulated medical wastes at larger generators such as hospitals are not more than 15% of the total volume of wastes generated at these facilities. For smaller generators such as independent practitioners or dentists, the average percentage of regulated medical wastes to total generated wastes should be between 1-5%. Many [on-line resources](#) are available to support tracking efforts such as the template linked [here](#).

Part of the audit process should also include a review of past charges from your current service provider to determine historic volumes, prices paid, and collection frequencies. This will help to identify opportunities to prevent unnecessary charges along with cost reducing opportunities.

2. **Implement procedures which support proper segregation** of all wastes generated at your facility. The easiest way to reduce medical waste volumes is to ensure that your wastes are properly distributed between potentially infectious and non-infectious materials. Support with staff education and training. Strategies to consider include:

- Use color coded containers to properly segregate infectious and non-infectious wastes

- Post appropriate [signage](#) where medical waste containers are located to communicate what should be discarded into each container type
 - Use lids on your medical waste containers to prevent solid wastes from being tossed into red bags
 - Track progress and educate staff on the goals you expect to accomplish while reporting on progress and rewarding staff for their contributions
3. Consider the impacts of container size and placement of your medical waste containers in your practice. **Make sure you are using the right size container for your requirements** and that placement does not encourage others to dispose of non-infectious materials with regulated medical wastes simply due to convenience. Strategies to consider include:
- Limit your placement of medical waste containers in areas where infectious waste is not generated
 - Determine waste generation estimates and container sizes to ensure that containers appropriately match your requirements and collection schedules
4. **Ensure that your practice and service provider are working in tandem to support regulatory compliance.** This would include compliant containers, labels, manifests, storage signage, and required training to reduce potential financial, environmental, and reputational liabilities. OSHA compliance violations regarding any number of medical waste management activities, including failure to provide training or maintain required OSHA safety plans, can be up to \$12,600 per instance. Considering the potential costs of fines, maintaining full compliance should be a priority in limiting the costs associated with medical wastes as the costs of compliance violations can easily exceed savings that could be realized through waste minimization strategies.
5. **Identify multiple options for medical waste disposal service** to ensure that you are receiving good value and competitive rates from your chosen service provider. Depending on your locations and the specific type of wastes generated, there may be community resources, such as those linked [here](#) for pharmaceuticals, that could be options to consider.

If your practice is located outside of the Alaska road system, consider the use of authorized [mail back solutions](#) to ensure that your wastes can be disposed compliantly and cost effectively. As the generator of medical waste and shipper, your practice remains liable for any waste that may be transported. Utilization of any non-authorized mail back solution subjects your practice to significant fines and liabilities due to the risks non-authorized mail back solutions present to public health.



Putting It All Together

There is a lot to consider regarding medical waste management at any practice and, for generators of any size, there are likely some very real opportunities to reduce disposal costs and environmental impacts from medical wastes generated at your practice. Don't get overwhelmed and work to make incremental changes however best supports your requirements.

If you are interested in improving medical waste management at your practice, start by focusing on compliance. From there, consider the waste minimization strategies that have been suggested in this guide as they pertain to your specific operations. There are numerous considerations to look at and Envirolaska is available to support your efforts as needed.

If you are interested in additional opportunities to further reduce your disposal costs by 15-30% or more, [contact Entech](#) for a no-obligation service quote.

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ENTECH vs THE COMPETITION

Everything Alaska healthcare practices have come to expect from their medical waste service provider except...

ENTECH OTHER OPTION

Guaranteed Lower Costs	✓	✗	We guarantee savings of 15-30% or more while concurrently providing better medical waste disposal services for your practice.
No Price Increases	✓	✗	Enjoy peace of mind that your service costs will not be increased during your service term.
Electronic Account Management	✓	✗	We make all manifest and billing records available to customers through a secure customer portal which is accessible 24/7. No longer will you have to organize and manage paper based manifest forms and invoices. We are the only provider in Alaska to offer this capability.
Compliance Training	✓	✗	We offer a world-class, cloud-based training solution that is a quality product, easy to use, and one that you and your staff can rely on to maintain OSHA, HIPAA, and DOT training requirements at your practice. We are the only service provider in Alaska to offer this resource.
Satisfaction Guarantee	✓	✗	We offer a 100% satisfaction guarantee. If you are not satisfied with our service to you, we make it right or refund your money.
Licensed, Insured, and Fully Compliant	✓	✓	Our operations exceed all federal, state, and local regulations regarding medical waste and are fully insured.
Locally Operated	✓	✗	Buy local to support the economy your own business relies on by working with an Alaskan Operated provider. If you'd like to prevent a monopoly with services you rely on, consider supporting alternatives to help keep our market competitive.
Ability to Opt Out of Service Agreement	✓	✗	We want our customers to work with a provider that they believe offers the best value for their practice. Customers are able to opt out of our offered agreements without penalty.
Environmentally Focused Operations	✓	✗	Our treatment technology guarantees sterilization while reducing waste volume by more than 80% through an energy efficient process which emits no harmful emissions (incineration) or overpowering odors (steam sterilization).
Waste Audits and Management Support	✓	✗	All customers receive complementary medical waste management plans to support best practice and safe operations. We offer waste audits to support customer's efforts to maintain compliant operations and minimize environmental impacts.
Flat Rate Pricing	✓	✗	Simple, easy to understand, and flat rate pricing structure utilized based on a per container collected model. No additional, confusing, or variable rate service charges.
Customer Incentives	✓	✗	Further reduce your disposal costs through auto-pay discounts, referral bonuses, complementary compliance resources, and more!

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