Overview of Medical Waste Management in Virginia

Managed under **Virginia Regulated Medical Waste (RMW) Management Regulations 9VAC20-121 (formally 9VAC20-120)**.

Generators

- Any person or facility generating regulated medical waste (hospital, labs, clinics, etc.)

General Handling

- Segregate RMW at the point of origin.
- Use appropriate PPE when handling or packaging RMW.
- Maintain the integrity of the packaging at all times.

Packaging, Labeling, and Storage

Packaging & Labeling

- Use red bags for biohazardous waste, puncture resistant sharps containers, do not overfill.
- Containers must display the biohazard symbol, appropriate wording, and generator details

Storage

- Store RMW in secure areas, labeled, and away from public access.
- 45 days for less than 250 gallons; 10 days for more than 250 gallons

Treatment, Disposal, and Recordkeeping

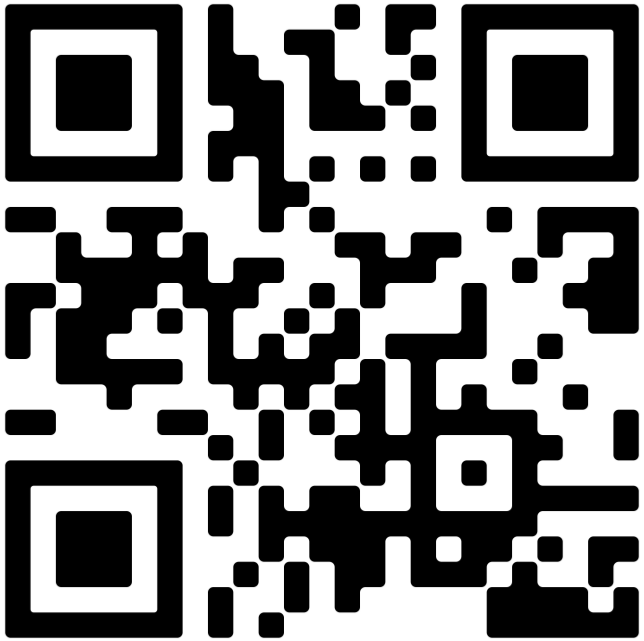
Treatment & Disposal

- RMV must be treated or transported to an authorized facility
- Untreated RMV cannot be disposed on in standard landfills

Recordkeeping

- Maintain records for at least 3 years
- Include shipment details and waste treatment facility information

9VAC20-121



hhmi | Howard Hughes Medical Institute

Let's Get Waste: Managing Biohazardous Waste

Monica Arevalo, MPH

Safety Specialist

Overview

- Introduction
- Problem
- Proposed Solution
- Testing
- Data and Results

HHMI Janelia Research Campus

Biohazardous Waste Stream

Overview

- Introduction
- Problem
- Proposed Solution
- Testing
- Data and Results

Problem

Concerns

- Bad odor caused by bins that were never replaced

Problem

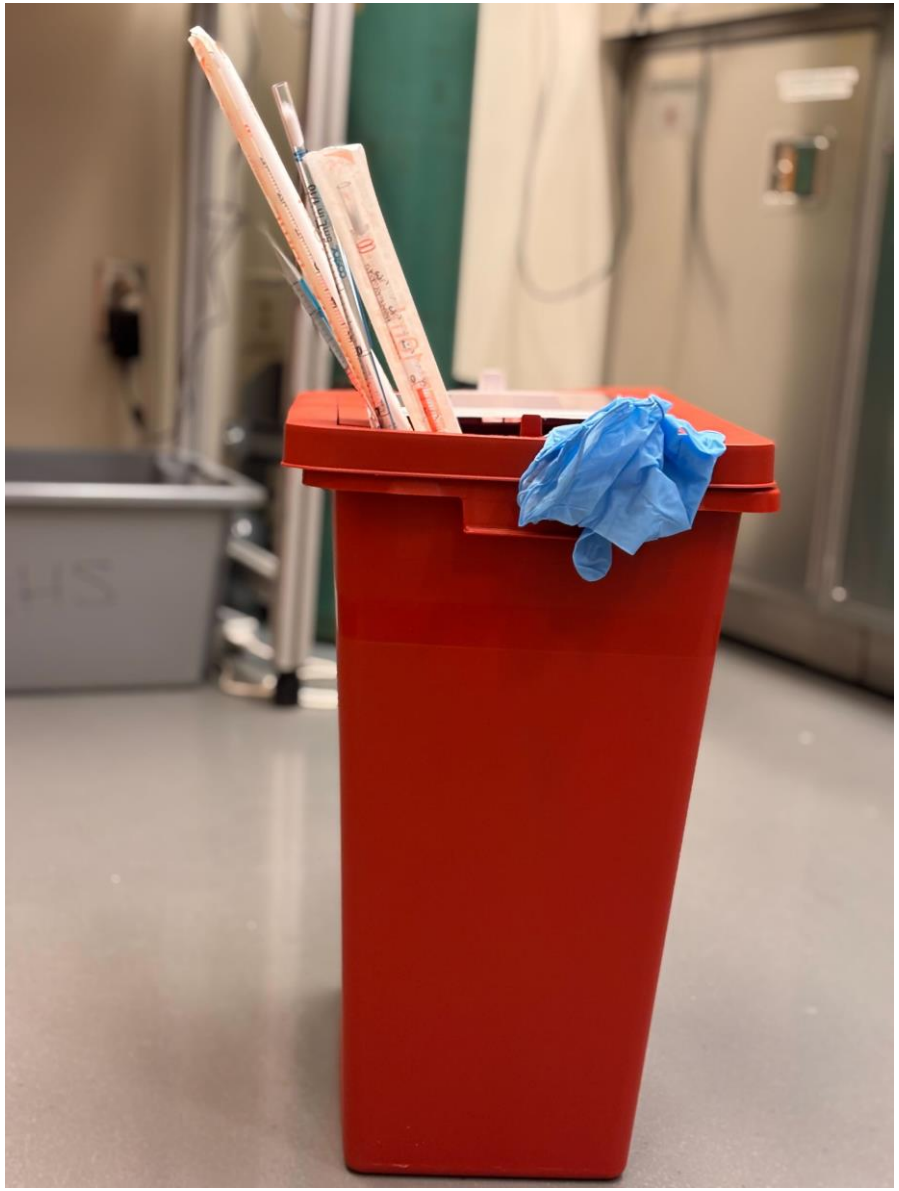
Concerns

- Bad odor caused by bins that were never replaced
- Risk of injury when removing the plastic liners from the step cans

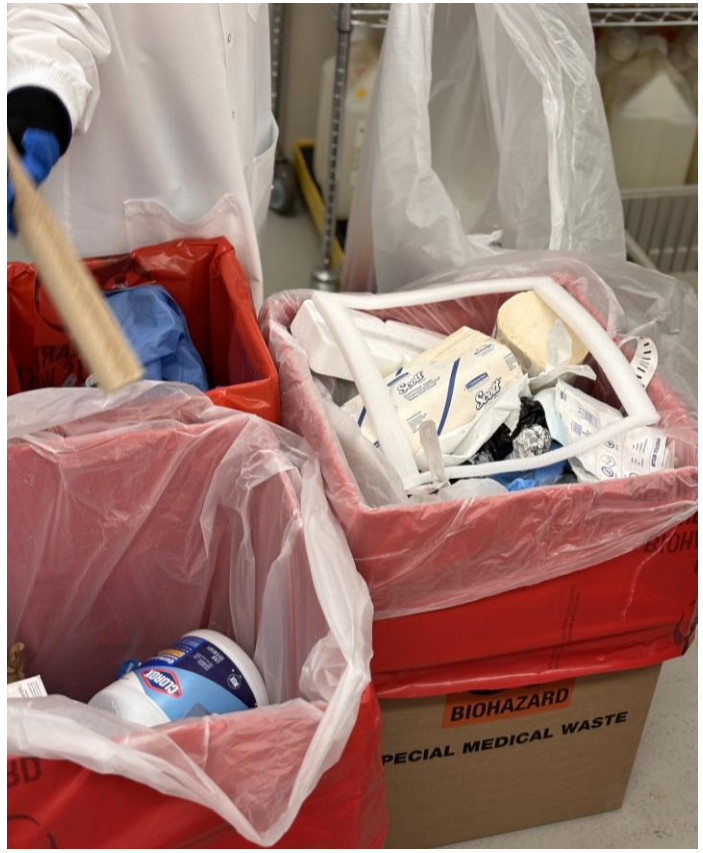
Problem

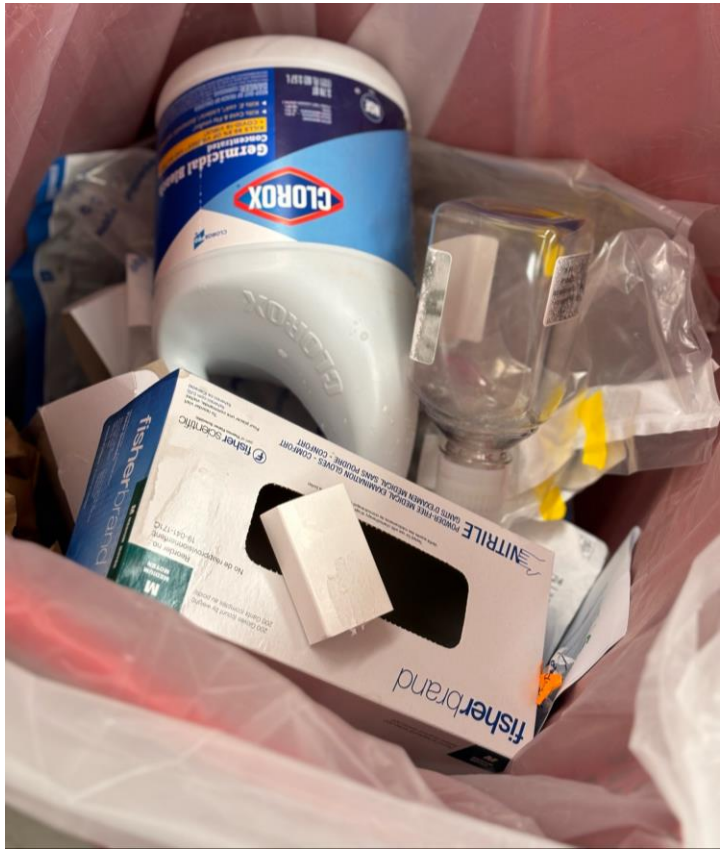
Concerns

- Bad odor caused by bins that were never replaced
- Risk of injury when removing the plastic liners from the step cans
- Improper use of sharps containers



Problem

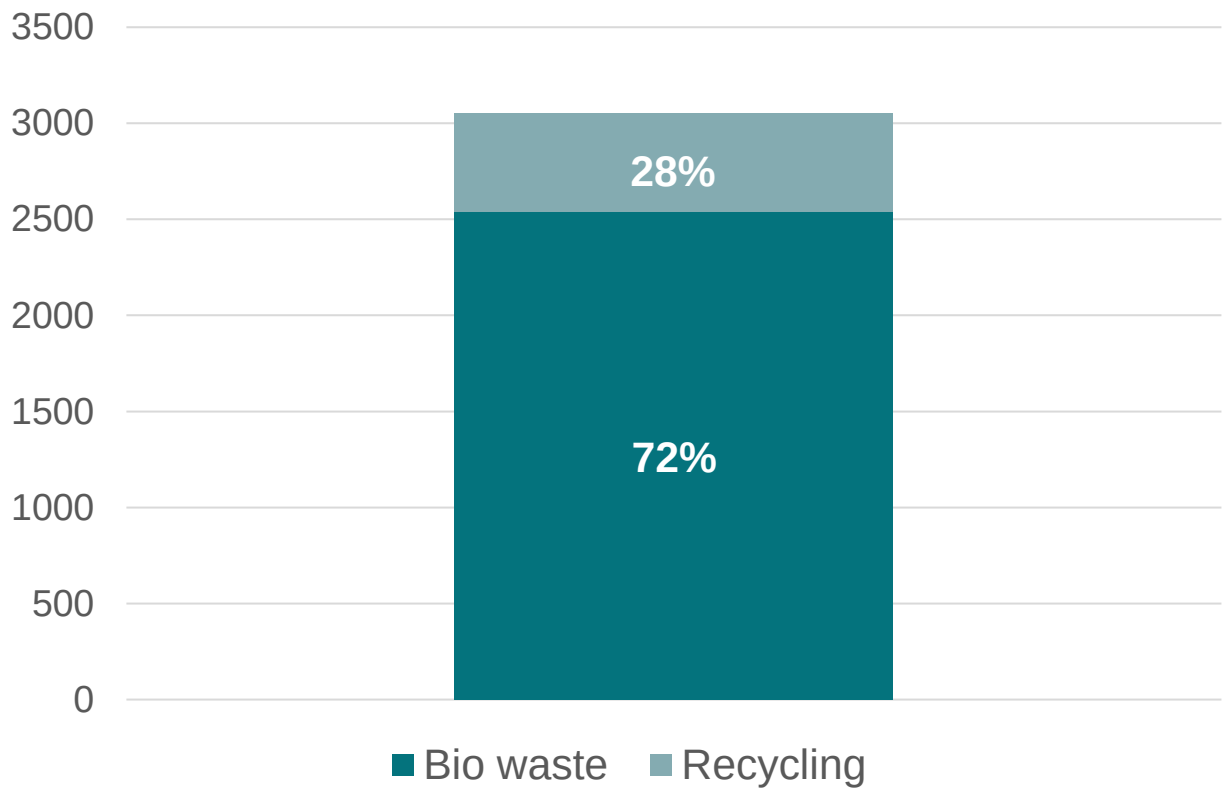

BIOHAZARD
PECIAL MEDICAL WASTE


CLOROX
fisherbrand
NITRILE


Environmental Management Services, Inc.
BIOHAZARD
SPECIAL MEDICAL WASTE
REGULATED MEDICAL WASTE, N.O.S.
6.2, UN3291, PGII
ERG# 158

Problem

28% of biowaste can be recycled



Recycling Collection and Storage System

- Color coded system with too many colors
- Located in random and inconvenient places
- Unclear to employees on what can and can’t be recycled.

Overview

- Introduction
- Problem
- Proposed Solution
- Testing
- Data and Results

Proposed Solution

Eliminate all steps cans

Eliminate all large sharps containers

Replace with MPW burn box

Proposed Solution

Pipette Tips

Serological Pipettes

MPW Box

Proposed Solution

Scalpels

Glass slides

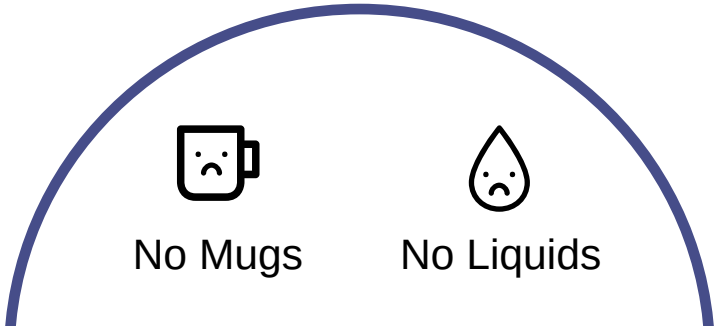
Needles

Razor blades

Sharps Container

Recycling Collection and Storage System

- Eliminate confusion by using Single-stream/commingled recycling
- Place containers in convenient locations that are easily accessible by the employees.
- Employees can make correct decisions because of the limit of a few choices: biowaste, general, or recycle.



Overview

- Introduction
- Problem
- Proposed Solution
- Testing
- Data and Results

Pilot Testing – Before

1

Selected the area based on the diversity of the labs

Pilot Testing – Before

1. Selected the area based on the diversity of the labs

2. Coordinated with the biowaste vendor

Pilot Testing – Before

1. Selected the area based on the diversity of the labs
2. Coordinated with the biowaste vendor
3. Communication with the researchers

Lab Waste Disposal Guide

2-Gallon Sharps Container

- Only "traditional sharps" (no gloves, liquids, chemical bottles, etc.).
- Dispose of Pasteur pipettes, razor blades, scalpels, and needles.

Cardboard Biohazard Box

- Dispose of all solid hazardous waste along with pipette tips and serological tips.
- Not for uncontaminated waste.

Bio-bins *Only for labs with high use of serological pipettes*

- Dispose of serological pipettes only.

Have any questions? Contact Safety.

safety
Safety, Health & Security

Pilot Testing – Before

1. Selected the area based on the diversity of the labs
2. Coordinated with the biowaste vendor
3. Communication with the researchers
4. Tracked the generation of waste 2 months prior

Pilot Testing – During

1. Placed the cardboard boxes in the same location as the step-cans

Pilot Testing – During

2

Discontinued the 8-gallon sharps containers

Pilot Testing – During

3

Tracked the waste generation and the consumption of sharp containers

	# of Boxes (18 gal)	# of 2 gal Sharps
Pilot Test		

Overview

- Introduction
- Problem
- Proposed Solution
- Testing
- Data and Results

Pilot Testing Waste Metrics

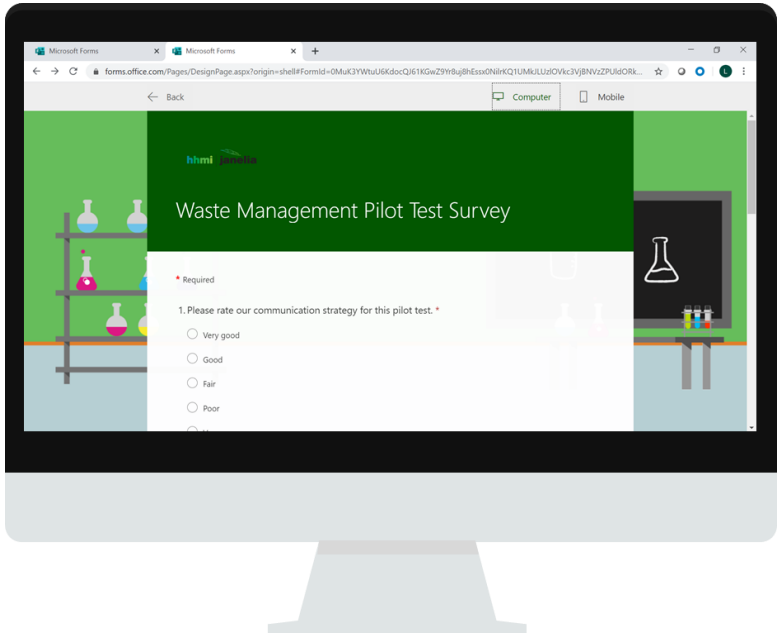
~$300 savings in waste disposal during the pilot test

Pre-pilot test	# of Boxes	# of 8 gal Sharps	# of 2 gal Sharps
	20.5	16	6

Pilot test	# of Boxes	# of 8 gal Sharps	# of 2 gal Sharps
	28	0	4

Pilot Test Feedback Request

- We created questions and sent them as a survey to the users of that area.
- We used the same questions to interview some key people in that area.



Survey Results

- 84% felt confident when disposing bio-hazardous waste
- 40% said we should improve our communication strategy to scale the plan to the rest of the building
- 60% of the people who answered the survey were very satisfied

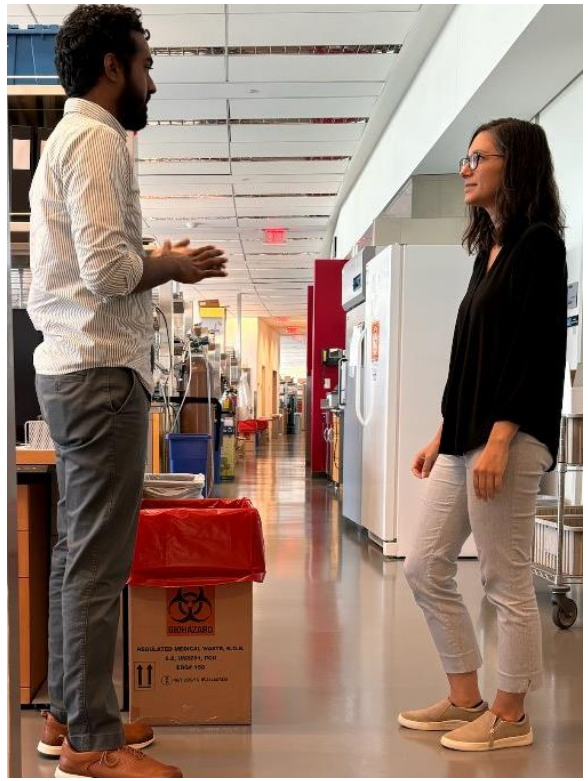
Some comments

- "New system. The open-top biohazard bins are so much easier to use in cell culture settings."
- "We use sharps containers for pipettes and tips in cell culture and this box doesn't fit well in our space."
- "The open box can produce unpleasant odors"

Improvements Based on Feedback

Lids & Base

Stand

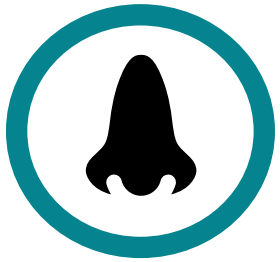


Communication

What We Noticed…

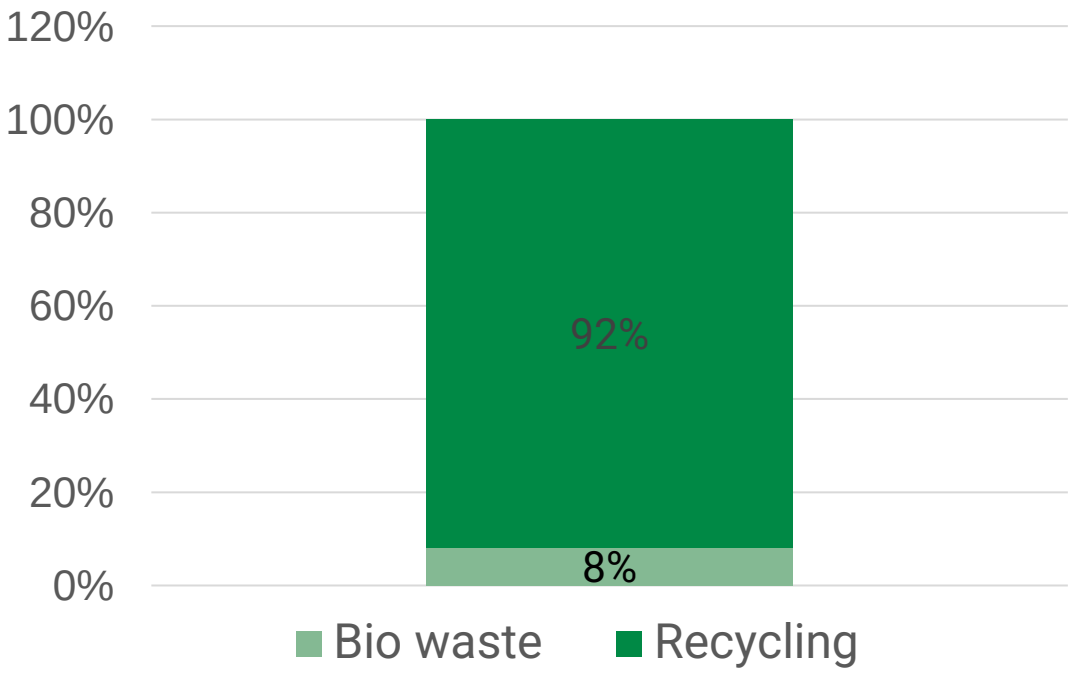
NO risk of injury

Reduction of plastic consumption and cost



Odor elimination

Current State



Results from the 2024 Waste Sort

Improvement strategy

- Conduct regular checks to ensure that bins are correctly labeled and placed in accessible locations.
- Conduct regular training sessions for staff and researchers on proper waste segregation practices.
- Provide feedback to the relevant departments or individuals based on audit findings to correct disposal habits

Thank you

hhmi | Howard Hughes Medical Institute

Monica Arevalo

Safety Specialist
Environmental Health & Safety
arevalom@hhmi.org | 571-209-4244