

# Improving Safety at Rural Transfer Stations

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## What is NEWMOA?

Northeast Waste Management Officials' Association

- Non-profit, non-partisan interstate association
- Solid waste, hazardous waste, waste site cleanup, & pollution prevention programs
- CT, ME, MA, NH, NJ, NY, RI, & VT
- Formally recognized by EPA in 1986
- [www.newmoa.org](http://www.newmoa.org)

**NEWMOA**

NORTHEAST WASTE MANAGEMENT OFFICIALS' ASSOCIATION

*Leading the Northeast to a Sustainable, Waste-Free Future*

# Improving Safety & Reducing Waste at Rural Transfer Stations

Funded by USDA Rural Utilities Services Solid  
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*Any opinions, findings, and conclusions or  
recommendations are solely the responsibility of the  
authors and do not necessarily represent the official views  
of the Rural Utilities Services.*

## Project Partners

### ● Vermont

- ❖ Northeast Kingdom Waste Management District
- ❖ Department of Environmental Conservation

### ● New Hampshire

- ❖ North Country Council
- ❖ Department of Environmental Services



## Project Outline

- **Consumer Handouts:**
  - ❖ Reducing Your Waste
  - ❖ The Benefits of Reuse...
  - ❖ WHY Recycle...
  - ❖ Recycle Right!
  - ❖ Don't Trash That!
- **Accompanying Posters**
- **Local Workshops**
- **Project Website:**  
[www.newmoa.org/solidwaste/projects/transferstations/](http://www.newmoa.org/solidwaste/projects/transferstations/)

## Today's Webinar

Raise awareness of safety issues at rural transfer station for workers & residents

- **Overview of transfer stations & recycling centers in NCC & NEKWMD**
- **Safety issues & improvements at rural transfer stations**
- **Summary of workshops & survey results**
- **Q&A**

# Overview

## Transfer Stations & Recycling Centers in NCC & NEKWMD

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### ● Northeast Kingdom Waste Management District

- Lyndonville, VT
- Provides recycling, HHW, & other services & helps towns comply with VT DEC requirements
- [www.nekwmd.org](http://www.nekwmd.org)

### ● North Country Council

- Littleton, NH
- Regional planning
- Economic development
- [www.nccouncil.org](http://www.nccouncil.org)



## Similarities

- Most rural towns operate their own transfer stations
  - Most co-located with drop-off recycling center
- Virtually all disposal facilities in the private sector
  - Only one landfill in all of VT (almost in Canada – but relatively close to NEKWMD towns)
  - More options in NH, including waste-to-energy
- Burning your trash is illegal in NH & VT (& all northeast)
- Most TSs charge fees for bulky wastes

## Differences

- Pay-as-you-throw
  - Mandated for all VT communities since 2015
  - Some NH communities have it – many don't
- Recycling
  - Mandated for all VT communities since 2015
  - Required by some towns (local ordinance)
- Training
  - Required for all NH transfer station staff (2.5 hours/year) – program facilitated by NH DES
  - No formal program in VT – trained “on the job”

## Similarities & Differences

- NEKWMD provides centralized services
  - Towns collect self-sorted recyclables in Gaylords & bags
  - NEKWMD trucks pick up recyclables & other collected materials & transports to NEKWMD facility
  - Recyclables baled & marketed from NEKWMD facility
  - NEKWMD arranges shipments of collected HHW, electronics, & other materials



## Similarities & Differences

- Most NCC towns bale & market their own recyclables



# Improving Safety

## Workshops

### Workshops held in each location

#### ● NCC:

- Department of Environmental Services
- Primex – NH's municipal insurer (was presenter)

#### ● NEKWMD:

- Department of Environmental Conservation
- Vermont OSHA
- Vermont League of Cities & Towns (VT's municipal insurer)

## Safety Topics

- Equipment safety
- Personal Protective Equipment (PPE)
- Weather & extreme temperatures
- Traffic safety
- Slip/Trip/Fall hazards
- Hazardous & Universal Waste
- Blood borne pathogens, sharps, first aid
- Ergonomics
- Fire & electrical safety
- Miscellaneous

## Equipment Safety

- NEKWMD: most transfer stations have just a compactor
  - Some operated by a contractor that collects bags in a pick-up
  - If need to move bulky item – get DPW
- NCC: most transfer stations also have a baler & bobcat
  - Some have more/larger equipment
  - Some have less

## Equipment Safety

### Compactor

- Need adequate barrier to prevent fall in
- Need fail-proof control to prevent injury
  - Check drop-off area before you power on
  - Power requires active continuous pushing
  - Enough separation from power on to compactor opening that cannot reach hand in
- If feasible, operate only when transfer station closed (but another person present)

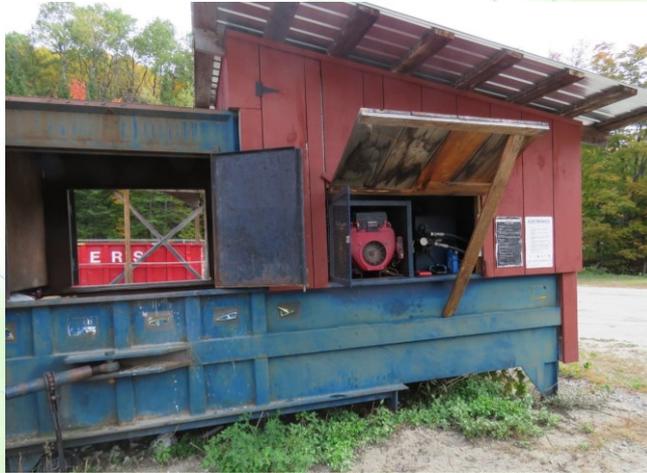
## Compactor Safety

Can they see?



## Compactor Safety

Several potential hazards



## Compactor Safety

Looks like a good set-up  
(except the concrete stairs)



# Compactor Safety

Not much of a barrier



# Compactor Safety

A better barrier system



## Equipment Safety

### Bobcats/Vehicles

- Biggest hazard: slip/trip getting on/off
  - Wear seatbelt!
- Sight lines – careful backing up
- Tip over: uneven terrain or overload
- Air quality – operate outdoors/ventilate



## Equipment Safety

### Baler

- Need fail-proof control to prevent injury
  - Closure required before power works
    - Don't circumvent!
  - If possible, operate when another person is present
- Careful loading
  - Steps/stairs
  - Lifting: back





**Primex**  
NH Public Risk Management Exchange



**Primex**  
NH Public Risk Management Exchange



**Primex**  
NH Public Risk Management Exchange

## Equipment Safety

All equipment

- Power off for repair/maintenance
- Lockout/tagout to prevent turning on by mistake



## What is Lockout/Tagout?

A **lockout** is a method of keeping equipment from being set in motion and endangering workers. In lockouts, a lock is attached so that the equipment can't be energized.



In a **tagout**, the energy-isolating device is placed in the "safe" position and a written warning is attached to it.



**Primex**  
NH Public Risk Management Exchange

## PPE

Proper clothing for conditions:

- Headwear (hard hat, sun hat, etc.)
- Footwear (steel toes, warm winter boots, ice creepers)
- Safety glasses
- Hearing protection (if loud equipment)
- Gloves
  - Thick leather protects from cuts & sharps
- High-visibility clothing (reflective vest)
  - Safer for you & also helpful to customers

## PPE

Only works if you wear it!

- Fits poorly
- It's too hot
- It looks unattractive

Should be personal

Store properly

Employer required to provide PPE (except boots – usually cost share)



## Weather: Heat

### ● Heat Exhaustion

- Normal body temperature - sweating
- Inadequate fluid intake leads to:
  - Fatigue
  - Weakness
  - Collapse
- Can occur in an inside environment

### ● Heat Stroke

- Serious medical emergency – call ambulance
- High body temperature
- Hot red, dry skin

## Weather: Heat

### Prevention:

- Appropriate, lightweight protective clothing
  - Still wear your gloves & vest!
- Sunscreen
- Access to shade
- Hydrate!
- Take breaks to cool off

## Weather: Cold

- Hypothermia
  - Shivering – first sign of danger
  - Incoherent – stumbles, mumbles, grumbles
- Prevention:
  - Appropriate, warm, & protective clothing
    - Have spare set at work (or in car)
  - Protection from wind & precipitation
  - Access to warm areas
  - Limit exposure
  - Hydrate!
  - Take breaks to warm up

## Traffic

- One-way is preferred, if possible
- Avoid need to back-up
- Clear signs, lane marking or orange cones
- Lighting for evening hours (& winter afternoons)
- Curbing or other barriers near drop-off containers, grade changes, fuel tanks, equipment, etc.
- **High visibility clothing for staff** is safer & also helpful to customers

## Traffic Safety

Some haphazard parking  
(different directions of vehicles & need to walk across traffic - also backing-up likely)



## Traffic Safety

Good one-way traffic flow



## Slips/Trips/Falls

- Keep walkways, stairs, & ladders clear of debris and spills
- Physical or visual barriers near hazards such as grade changes, machinery, or traffic areas
- Watch for oil leaks, spills, etc.
- Use curbing or other wheel stops to keep vehicles away from edges
- Proper grading & drainage can help prevent water & ice accumulation

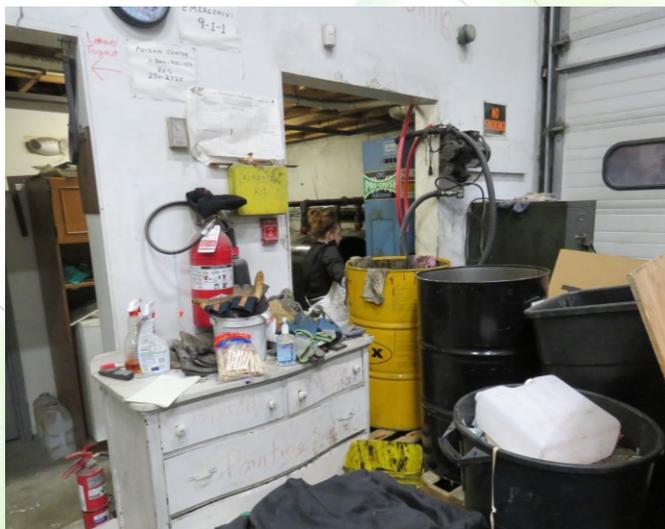
## Slips, Trips, and Falls

Clutter = slip/trip/fall hazard  
(and other hazards!)



## Slips/Trips/Falls

Clutter is common!



## Slips/Trips/Falls

Any corner or flat surface can become clutter  
(and improper universal waste storage!)



## Slips/Trips/Falls

ponded water = ice!



## Slips/Trips/Falls

### Metal & Bulky Collection

- Clear signage
- Good barriers to keep vehicles & people from falling
  - Reduce clutter
  - Drops of 4 feet or more require railing
- BMPs = Cover bulky/C&D bin
  - Limits getting wet – disposal cost is by weight: wet wallboard, or a wet couch, mattress, or rug is much heavier!

## Metal & Bulky Collection

Example of exactly what not to do



# Metal & Bulky Collection

Help? What is going on here?



# Metal & Bulky Collection

Some confusion: bulky in the metal bin



## Metal & Bulky Bins

When bins get full – and a big gap hazard



## Metal & Bulky Collection

Looks pretty good, until you look to the left side



Someone can just fall (or drive) off the edge!

## Metal & Bulky Collection

Bulky collection: nice roof & barrier on the sides



## Metal & Bulky Collection

Metal bin looks good – any issues?



## Metal & Bulky Collection

And  
Mind the Gap!



## Metal & Bulky Collection

No scavenging in the metal bin/pile!



## Metal & Bulky Collection

A good set-up: the backside



## Metal & Bulky Collection

A good set-up: drop-off area



## Metal & Bulky Collection

Another Drop-off Barrier System:



## Hazardous & Universal Waste

- Hazardous wastes:
  - Get training to recognize & help avoid exposure
  - Use PPE: gloves, aprons, safety glasses or goggles
    - Do you have these? Use them?
    - How about if you are exposed? Water & first aid?
  - Set up an exclusion zone for temporary storage – don't use it for anything else!
- Universal waste collection:
  - Provide good ventilation for UW storage area
  - Store waste in proper, labeled containers
  - Keep a spill kit on hand for clean up of UW breakage – don't vacuum!

## Propane Tanks

Store outside or in well-ventilated **out** building  
Never store inside! Never remove valves!



## Used Oil Collection

See anything wrong here?



## Fluorescent Bulbs

What's wrong here?



## Fluorescent Bulbs

And here?



# Fluorescent Bulbs

Good Storage Area:



# Universal Waste

Clean Storage Area:



## Fire & Electrical

- **Obtain & adhere to permit guidelines** if open burning yard waste
- **Maintain** proper fire extinguishers
- Make sure your fire department is familiar with your facility & has easy access
- Use care with space heaters
- Extension cords should be temporary & adequate for load
- Frayed or damaged cords addressed ASAP – **by a qualified person**
- Proper grounding

## Fire Hazards

Avoid storage near heat sources



## Fire Safety

Fire extinguishers (in relatively uncluttered offices!)



## Biohazards

- Use care handling bagged waste
  - Sharps & other body fluids: transmission of hepatitis, HIV
  - **PPE such as sturdy leather gloves** can protect
- Offer guidance on proper disposal of used needles
  - Collection container at transfer station?
  - Make their own container at home
    - Heavy plastic container, label "SHARPS", close securely
    - Put in their trash
- Wash
  - Do you have water or other first aid on-site?

## Other Biohazards

### Speaking of biohazards...

If open more than 4 hours at a time:

- If don't have a bathroom with running water, need to have a way to wash hands
- Also need drinking water supply
- If solution is to go off-site, need to keep a staff person on-site



## Ergonomics

- What is it?
  - Designing and arranging things people use so that the people & things interact most efficiently & safely
- Watch body positions and lift carefully
  - Especially E-waste, bulky items
- Store heavy items on shelves near waist height to minimize the need to bend
- Avoid repetitive motions & static postures
- Training is helpful
- Encourage exercise & fitness

## Miscellaneous

- Personal safety - handling cash
  - Cash collected for bulky waste drop-off?  
PAYT bags? Other?
- Vector Control
  - Collecting trash & food scraps

## Personal Safety

### Video surveillance



## Food Scrap Collection

Required at all trash collection locations in VT:

- Use sawdust to control vectors
- Partner with local woodworker for sawdust
- Partner with local farmer to manage containers



## Vector Control

Trash collection without compactor – electrified!



# Workshop Summaries

## From the Insurers

### Top issues:

- Slips/trips/falls
  - Rural = less pavement = more uneven
  - Sand & salt ice!
- Ergonomics – staff often older & part-time
  - Moving e-waste & reaching into Gaylords
- Climbing on roll offs & unprotected platforms
- Cuts (glass)
- Closing doors (overhead) & stacking items
- Traffic patterns

**\$1.4 million in claims over 2½ years in VT**

## From the Insurers

- Workers comp (& citizen) claims
  - Raise premiums for town = less \$ for things the transfer station wants
- Signs – put them up!
  - Even if ignored - can help in a lawsuit
- Plan for emergencies
  - Need to know what to do when it happens
- Just because you've always done something & haven't had an accident ≠ that it's safe!
  - Constantly re-evaluate your facility/practices

## Workshop Summaries

- NCC: 21 transfer station workers from 16 towns – 19 survey responses
- NEKWMD: 10 transfer station workers from 5 towns – 9 survey responses
- Increased concerns about:
  - Handling & storing special wastes (esp. propane tanks)
  - Traffic/vehicles
  - Barriers to prevent falls at bulky/metal bins \*
  - Other slip/fall hazards (ice & clutter)
  - Provision of PPE

# Reducing Waste Disposal

NEWMOA Webinar September 28<sup>th</sup>

<https://attendee.gotowebinar.com/register/1178009445850594306>

## Other NEWMOA Projects

USDA-funded & focused on rural areas:

- Pay-as-you-throw
- Bulky waste
  - Mattresses
  - Furniture
  - Carpet
  - Large Rigid Plastics
- Waste Paint

All publications have template versions you can use: [www.newmoa.org/solidwaste/projects](http://www.newmoa.org/solidwaste/projects)

## Questions?

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