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

Leading the Northeast to a Sustainable, Waste-Free Future
Improving Safety & Reducing Waste at Rural Transfer Stations

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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/

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**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

Northeast Kingdom Waste Management District
- Lyndonville, VT
- Provides recycling, HHW, & other services & helps towns comply with VT DEC requirements
- www.nekwmd.org

North Country Council
- Littleton, NH
- Regional planning
- Economic development
- 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 NEK WMD 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”
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

Most NCC towns bale & market their own recyclables
Improving Safety

Workshops held in each location

- **NCC:**
  - Department of Environmental Services
  - Primex – NH’s municipal insurer (was presenter)

- **NEKWMMD:**
  - Department of Environmental Conservation
  - Vermont OSHA
  - Vermont League of Cities & Towns (VT’s municipal insurer)
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?
Several potential hazards

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

Not much of a barrier

Compactor Safety

A better barrier system
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
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.

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

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!
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!

Example of exactly what not to do
Help? What is going on here?

Some confusion: bulky in the metal bin
Metal & Bulky Bins

When bins get full – and a big gap hazard

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!

No scavenging in the metal bin/pile!
A good set-up: the backside

A good set-up: drop-off area
Another Drop-off Barrier System:

- 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
Personal safety - handling cash
- Cash collected for bulky waste drop-off?
  PAYT bags? Other?

Vector Control
- Collecting trash & food scraps

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 28th
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
Questions?

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