

Improving Safety at Rural Transfer Stations

Jennifer Griffith & Rachel Smith
September 19, 2017



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

Funded by USDA Rural Utilities Services Solid
Waste Management Grant

*This material is based on work supported by the Rural
Utilities Service, United States Department of Agriculture.*

*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/

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

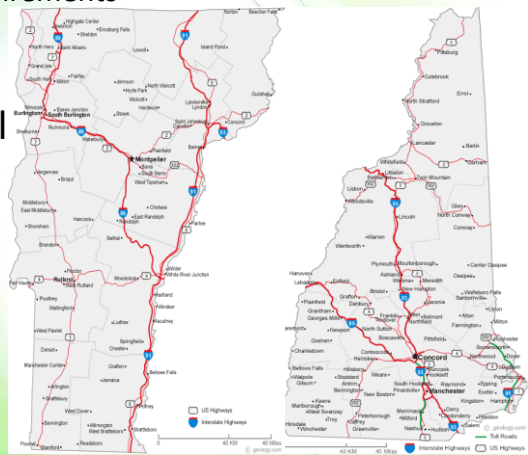
8

● 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 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



Primex
NH Public Risk Management Exchange

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

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?

Jennifer Griffith
jgriffith@newmoa.org
(617) 367-8558, ext. 303

Rachel Smith
rsmith@newmoa.org
(617) 367-8558, ext. 304

NEWMOA
89 South Street, Suite 600
Boston, MA 02111
www.newmoa.org