BeRailSafe Training Handout



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BeRailSafe:

 A NCDOT safety outreach program created to prevent rail-related deaths and injuries in North Carolina.

NC DOT Responsibilities:

 Authorize Amtrak to operate the *Piedmont* rail service between Raleigh and Charlotte.

1. Rail Pre-Planning

- Types of Rail Emergencies:
- Pre-planning: Do you have a plan?
 - Prepare for the worst case situation
 - Emergency response

Direction and control, Assignments and responsibility, Communication

Unified command

Fire, Police, EMS, Emergency Management, Red Cross, Public Works, Rail Carrier, NTSB, FRA

- Further Considerations:
- GIS Capabilities:

2. Rail Nomenclature

- Key Terms People
 - Conductor-

- Engineer-
- Train Operation Roles
 - The conductor is in charge of:
 - The engineer operates the train, but:
- Key Terms Tracks
 - Right-of-Way-
 - Gauge-
 - Fouling the Track/Fouling the Gauge/On the Foul-
- Key Terms Equipment
 - Grade Crossing-
 - (Crossing) Gate-
 - Emergency Notification Sign (ENS)-
 - Crossing ID (6 numbers & 1 alpha)-
 - Signal Mast-
 - Crossbuck-
- Crossing Equipment Responsibility:
- Highway-Rail Grade Crossing
- Freight Types:

3. Crossing ID & Train Movement

- Emergency Notification System
 - Every grade crossing has a sign that displays the railroad telephone number, the location and mile post, and the U.S. DOT (crossing identification) number.
 - Notes:
- U.S. DOT (Crossing Identification) Number
 - 6 numbers followed by an alphabetic letter

Example: 628815P

- Unique identifier, located at every crossing that doesn't exist anywhere else in the country.
- Alternate names: DOT Number, Crossing Number, ID Number, Crossing ID
 Number, Number, #
- Notes:
- Mile Posts:
- Train Movement
 - Know which railroads control the tracks in your community and how to contact them in emergency situations.
 - Notes:

4. First Responder Safety

- Train Movement
 - Expect movement on any track at any time.
 - Never place equipment on the track or between the rails unless required by a specific task with railroad oversight.
 - Notes:

•	Drawbar Safety:
•	Hazards on, along, and under the tracks:
•	Electrical Hazards - Multiple-Unit Cables: - 480 Volt Cables: - Grades Crossings:
•	Train Electrical Systems
•	Window Removal Outside of train: Emergency window removal:
•	Passenger Train Rescue:
•	If Communication Fails:
5. Rail Mechanics	
•	Grade Crossing Equipment - How it works:
•	Rail Signal Equipment

• Couplers:

• Drawbar (Coupler Shank):

Starting & Stopping:

6. Train Physics

- Train Stopping Distance
 - Comparison:
 - From a speed of 55 miles per hour it takes a train one mile or more to stop.
 Equivalent to 18 football fields
- Train Weight
 - Average passenger train = 1,270,000 pounds or 635 tons
 Equivalent to 20 tractor trailers
 - Average freight car (100 cars of coal) = 22,000,000 pounds or 11,000 tons
 Equivalent to 275 tractor trailers
- Passenger Train vs. Freight Train:

7. Hazardous Commodity Transportation

- Hazmat Material Safety
 - Safest mode of transportation for hazardous material.
 - Notes:
- Identification:
- Tank Cars
 - General Service Low-Pressure Tank Cars:
 - High-Pressure Tank Cars:
 - Shelf Coupler:

- Detection Clues:
- Tank Specification Stencils:
- Tonnage Graphs:

After Effects of a Derailment

• Mebane: May 13, 2010:

Additional Resources

- Emergency Contact Numbers
 - CSX 1-800-232-0144
 - Norfolk Southern 1-800-946-4744
 - NC Shortlines http://www.ncrailways.org/railroads
- BeRailSafe E-911 Class
 - National Emergency Number Association: Railroad & PSAP Interaction OID http://www.nena.org/
- Contact Information:
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