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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