Canadian National Railway Derailment and Fire
Cherry Valley, IL.
June 19, 2009
Cherry Valley Fire Protection District

• CVFPD is small combination Career/POC department Located 70 miles northwest of Chicago, IL. in a primarily suburban area covering approximately 25 sq. miles with a population of 30,000.
The Derailment

• At 20:38 hours Friday June 19, 2009 Cherry Valley was dispatched for a derailment with explosions at Mulford and Sandy Hollow Rd.
• Due to multiple 911 calls with varying locations Rockford Fire was also dispatched and responding.
Mulford Rd., North side of Derailment
Goals Established Early (Initial Action Plan)

• Immediately rescue those persons who could be saved.
• Evacuate those persons most in danger, get them to a safe area.
• ERG book was referenced to expand the evacuation zone to include everyone within ½ mile of the incident.
• Get ALL emergency personnel on the scene back to a safe location.
• Learn what we were dealing with!
Incident and Evacuation Map

- Derailment Location
  Site of derailment.
- Staging
  Cherryvale Mall Staging Area.
- Evacuation Center 1
  Faith Wesleyan Church-evacuation center.
- Primary Evacuation
- Secondary Evacuation
- Command Post
  North Side Sector & Incident Command
  S Mulford at Valley Knolls
- South Side Command
  South Side Sector location
  S Mulford at Bypass 20
Decision To Let Burn

- Fire Department units had 400 gallons of AFFF (AR) foam on scene and the railroad had 900 gallons en route.
- It was determined that there was not enough foam available nor could firefighters get close enough to the fire to safely apply it.
- Incident Command made the decision to let the fires burn down.
- Decided to take a defensive position, cool adjacent tank cars to prevent the fire from spreading.
Cooling Uninvolved Cars

Rockford Ladder 2 was setup for unmanned aerial master stream operations to put water on a line of uninvolved tank cars to keep the fire from spreading.
Incident Timeline

• 8:38pm **June 19**th, Time of Call to CVFPD
• 8:58pm MABAS Box 11, 2nd Alarm requested
• 9:10pm Police begin ½ mile evacuation
• 10:00pm MABAS Box 11, 6th Alarm requested
• 10:20pm Train crew was located
• 2:30am **June 20**th, Evacuations Complete
• 10:00am East side fires burn down and are extinguished
• 12:00pm Deceased victim’s body removed from south side
• 5:00pm Remaining fires are all extinguished
• 5:30pm Evacuees permitted to return
• 6:00pm All remaining mutual aid companies released
• 4:00pm **June 21**st, CVFPD Command is terminated
NIMS Organization Chart
Lessons Learned - Operations

• The decision to “Let the Fires Burn Down” was instrumental in preventing additional loss of life or injury.

• Alcohol base fires require enormous amount of AR foam which was not available.

• Closed Air Space - At 04:00 hrs. on June 20th the air space over the incident was “closed” which prevented the flood of media helicopters at day break.
Lessons Learned - Logistics

- Large scale evacuations require significant staffing and are time consuming.
- Bring in additional ambulances for evacuations. We did not anticipate the number of invalids who could not self evacuate.
- Personnel needs require strong logistics (Drinking water, food, toilets, shuttling crews, ATV’s, rehab, shelters, etc.)
Lessons Learned - Communications

• Reverse 911 failed to work for over an hour due to a software problem and was not effective.
• Only two of six radio channels used were recorded.
• Assign a “Scribe” at Command to record important activities and times. Accurate time lines for report purposes were difficult.
• Command relied heavily on cell phones. Dead batteries, chargers and power cords became a problem. Most conversations were not recorded and not available for later reference.
Favorable Circumstances

Many circumstances worked in our favor by chance:

- Weather cleared up just before the derailment.
- No pressurized cars in the derailment.
- Set of tracks derailment was on. South vs. North set.
- Speed of the train, 34 mph instead of normal 50 mph.
- 12 in. high pressure natural gas line did not fail, kept casualties low.
- Heavy first alarm dispatch, Cherry Valley and Rockford.
- First arriving F.D. companies were evenly split between North and South sides.
- Rockford’s EOC was open due to flooding.
Successes

- All persons who could be rescued were rescued.
- No injuries or loss of life to civilians after FD arrival.
- No injuries to firefighters.
- No additional property loss after FD arrival.
- Effective use of the NIMS System
- Use of MABAS brought in the needed resources quickly, easily and afforded sustainability.
- Incident would not have had the level of success without MABAS.
Thank You.
Supplemental Slides
# The CN Derailment Initial Response

Due to multiple calls to 911, at 20:38 hours Friday June 19, 2009 Cherry Valley and Rockford Fire were both dispatched for a train derailment with explosions to the area of Mulford and Sandy Hollow Roads.

## Initial Cherry Valley Response:
- 2 Engines
- 1 Ladder
- 1 Heavy Rescue
- 1 Technical Rescue
- 2 ALS Ambulances
- 1 Chief, 1 Deputy Chief, and 1 Battalion Chief

## Initial Rockford Response:
- 2 Engines
- 1 Ladder
- 2 Quints
- 1 Haz-Mat Unit
- 2 Airport ARFF Trucks
- 2 ALS Ambulances
- 2 District Chiefs.
Statistics

• 160 firefighters on scene
• 28 Engines
• 9 Ladder Trucks
• 7 Squads
• 6 Ambulances
• 2 ARFF Trucks
• 12 Chiefs with Command Units
• MABAS 8 Decon Truck & ATV
• MABAS 8 Rehab Trailer
• Illinois Unified Command Unit
• 35 Police Agencies
• Red Cross & Salvation Army Units

• Used approximately 789,000 gallons of water
• 600 feet of 5 inch hose
• 800 feet of 2 ½ inch hose
• Estimated damages in excess of 1.5 million dollars
• 323,963 gallons of ethanol burned
• 107,745 gallons were recovered

Cherry Valley Fire Protection District MABAS Division 8
Canadian National Railway Derailment June 19, 2009
MABAS Statistics

- **Mutual Aid Box Alarm System** – MABAS is a statewide, all hazard, all risk preplanned mutual aid system including specialized operational teams.
- MABAS-IL includes 69 Divisions covering all 102 Counties in Illinois and includes approximately 37,000 of Illinois’ 40,000 firefighters.
- MABAS Div. 8 Includes Cherry Valley and all other Fire Departments in Winnebago & Boone Counties (20 Departments).
- MABAS is now used in Wisconsin, Indiana, Iowa, Michigan, Ohio, Minnesota & Kentucky, with others showing interest.
MABAS-IL Capabilities

MABAS-IL Equipment Assets and specially trained teams are strategically located throughout the state providing numerous capabilities, some of which are:

• Tech Rescue Teams, trench, confined space, high angle
• Water Rescue, boats, divers, sonar
• US&R, Urban Search & Rescue
• Haz-Mat
• Mass Casualty
• Mobile “Tent Cities” to support large deployments of personnel
### MABAS BOX 11, 2nd alarm, Card used June 19, 2009

**Cherry Valley Fire Protection District MABAS Division 8**

#### Canadian National Railway Derailment June 19, 2009

<table>
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<tr>
<th>Department Name: Cherry Valley</th>
<th>Box Alarm Type: Structure Fire - Commercial</th>
<th>Effective Date: 8/11/2006</th>
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#### Local Disp. Area: Entire City

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<tr>
<th>Type</th>
<th>Level</th>
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<th>SQUADS</th>
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#### Interdivisionsal Request

- 1st Choice: 6 Engines, 2 Squads, 4 Chiefs
- 2nd Choice: 1 Ambulance
- 3rd Choice: 2 Trucks

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Cherry Valley Fire Protection District MABAS Division 8
Canadian National Railway Derailment June 19, 2009

MABAS BOX 11 Called at 20:58
Decision To Extinguish West Side Tank Cars

- By 10:00 A.M. on Saturday, the fires on the west side began to burn down to where they could be extinguished safely.
- Engine 503 on a hydrant 300 feet north, supplied two unmanned monitors each flowing 750 gallons per minute.
- Fire was extinguished and water flow was maintained for one hour for cooling of the tank cars.
Decision To Extinguish
East Side Tank Cars

- East side cars continued to burn with relief valves operating until 3:00 P.M. when the fire started to burn down.
- Two monitors were placed on the north side and two on the south each flowing 750 gallons per minute.
- Water flow was maintained for two hours to cool the tanks.
- All fires were extinguished at 5:00 P.M. on Saturday, 20 ½ hours after the initial dispatch.
NTSB Begins Investigation

The NTSB arrived at approximately 1:00 P.M. on Saturday the 20th and began their investigation. As they progressed they began allowing the railroad to begin removing the wreckage.
CVFPD Training Requirements & Opportunities

- We require all firefighters to be NFPA-472 compliant.
- All full-time firefighters train 2-3 hours per day. Haz-Mat training is now done quarterly using rail tank car provided by CN Railroad. Our team trains with the MABAS Div. 8 Haz-Mat Team twice a month.
- Since the 2009 derailment CVFPD trained with Union Pacific Railroad on one occasion.
Cherry Valley FPD Regional Training Site
Successes, cont.

• Our experience working with Canadian National during this incident was exceptional.
  • Timely response
  • Assistance and expertise in determining location and number of rail cars and products involved.
  • C.N. personnel assisted in the N.I.M.S. process and in the Incident Action Plan which enabled us to mitigate the incident safely.
Info. Re: Haz-Mat Shipments

• Currently railroads provide no information to emergency response agencies regarding Haz-Mat shipments through their jurisdictions.

• Commercial and industrial businesses are required to provide SARA Title III, Tier 1 and Tier 2 reports detailing the types and quantities of Haz-Mat products used and maintained in their facilities, which greatly enhances the emergency responders ability to preplan an incident.
Other Large-Scale Incidents

- Other large scale incidents CVFPD and MABAS prepares for include:
  - Natural Disasters, floods, tornados, earth quakes, etc.
  - Mass casualty incidents, natural disasters and man made
  - Interstate commerce/transportation, road, rail, air, and pipeline
  - Terrorism
  - Hazardous Materials, Tech-Rescue
  - Large retail, commercial, and industrial occupancies
  - Large multi-unit residential occupancies
Improve Your Preparedness

• How Communities can improve their preparedness:
  • Identify and preplan transportation routes for all modes.
  • Know your hazards, communicate, learn what products are used and transported in your jurisdiction.
  • Develop pre-plans, train to your preplans, then do it again and again!
  • Establish Mutual Aid agreements such as MABAS so that help is readily available and prepared when needed.
  • Coordinate plans with your LEPC’s