

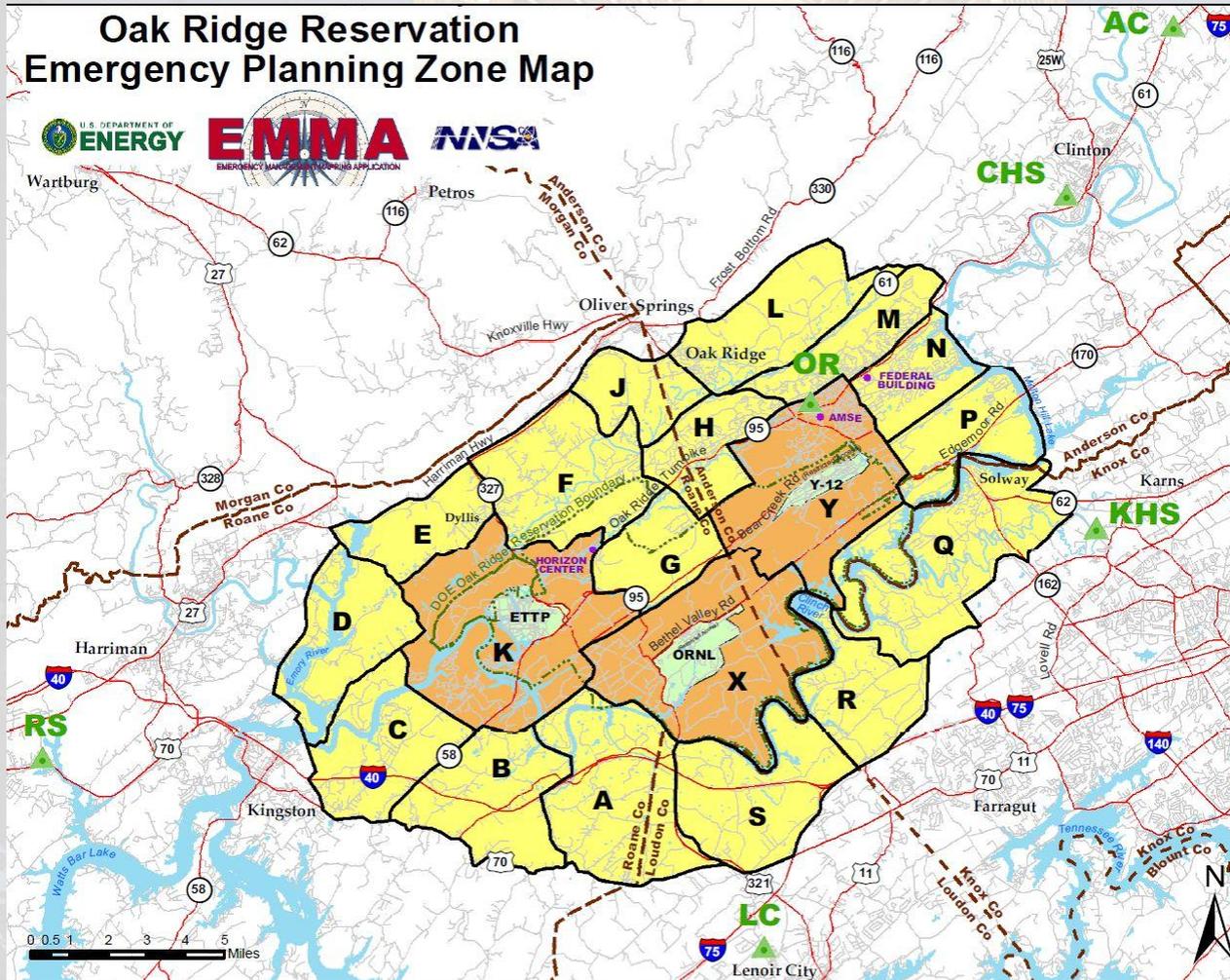
Lessons Learned from the Oak Ridge Reservation Beyond Design Basis Tabletop Drill

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Background

- Requirement
 - Safety Bulletin 2011-01 report w/letter on implementation dates passed on to ORNL
 - Required to conduct emergency drill by March 31
- Oak Ridge Reservation
 - Three sites plus DOE Oak Ridge Office
 - Any NPH BDBE would impact everyone
 - Decided to conduct ORR-wide drill

Background (continued)



Drill Conduct

- Conducted in two phases
- Each “group” met separately to discuss site-specific issues
 - Facilitator and recorder with each group
- After each phase, groups will report to the entire assembly

Drill Conduct (continued)

- Phase 1
 - Shift Superintendent and Incident Command actions
 - Potential categorization/classification of event
 - Protective actions
 - Prioritization and dispatch of first response assets
 - Response equipment/resource availability
 - Medical response and mass casualty protocol
 - EOC/TSC activation and location

Drill Conduct (continued)

- Phase 2
 - EOC actions
 - Infrastructure availability, distribution, sustainability, and/or repair
 - Consequence assessment and field monitoring
 - Resource acquisition and allocation
 - Emergency public information and/or internal site communications
 - Recovery planning

Scenario

- Multiple tornadoes touching down at each of the three sites on the ORR
- Damage to surrounding areas and some local roads impassible
- Mutual aid not available for four or more hours

THIS IS AN EXERCISE

NOAA's National Weather Service
Storm Prediction Center

Particularly Dangerous Situation (PDS) Tornado Watch 238

< Previous VWV Next VWV >

Public (Test) | Counties | Probabilities | Aviation | Warnings | Initial RADAR | Related MD



Tornado Watch # 238 - Valid from 820 AM until 1200 PM CDT

Hazard	Tornadoes	EF+ Tornadoes	Severe Wind	65 kt+ Wind	Severe Hail	2"+ Hail
Likelihood	High	High	High	High	High	High

URGENT - IMMEDIATE BROADCAST REQUESTED
TORNADO WATCH NUMBER 238
NWS STORM PREDICTION CENTER NORMAN OK
820 AM CDT WED FEB 29 2012

THE NWS STORM PREDICTION CENTER HAS ISSUED A TORNADO WATCH FOR PORTIONS OF MIDDLE AND EASTERN TENNESSEE

EFFECTIVE THIS WEDNESDAY MORNING FROM 820 AM UNTIL NOON CDT. ...THIS IS A PARTICULARLY DANGEROUS SITUATION... DESTRUCTIVE TORNADOES... LARGE HAIL TO 3 INCHES IN DIAMETER... THUNDERSTORM WIND GUSTS TO 80 MPH... AND DANGEROUS LIGHTNING ARE POSSIBLE IN THESE AREAS.

THE TORNADO WATCH AREA IS APPROXIMATELY ALONG AND 50 STATUTE MILES NORTH AND SOUTH OF A LINE FROM 70 MILES WEST SOUTHWEST OF NASHVILLE TENNESSEE TO 28 MILES EAST OF KNOXVILLE TENNESSEE. FOR A COMPLETE DEFINITION OF THE WATCH SEE THE ASSOCIATED WATCH OUTLINE UPDATE (W00564 KNIN W005).

REMEMBER... A TORNADO WATCH MEANS CONDITIONS ARE FAVORABLE FOR TORNADOES AND SEVERE THUNDERSTORMS IN AND CLOSE TO THE WATCH AREA. PERSONS IN THESE AREAS SHOULD BE ON THE LOOKOUT FOR THREATENING WEATHER CONDITIONS AND LISTEN FOR LATER STATEMENTS AND POSSIBLE WARNINGS.

OTHER WATCH INFORMATION... CONTINUE... NN 232... NN 233... NN 234... NN 235... NN 236...

DISCUSSION... A VERY UNSTABLE AIRMASS IS EXPECTED TO GRADUALLY DEVELOP NORTHWARD INTO TN THIS EVENING IN THE WAKE OF A MORNING MCS. WITHIN AN INCREASINGLY SHEARED ENVIRONMENT... ACCENTUATED BY LONG/CURVING LOW LEVEL BODOGRAPHS... SUPERCELLS CAPABLE OF TORNADOES / SOME STORMS WILL BE AN INCREASING/MORE WIDESPREAD CONCERN INTO THIS MORNING.

AVIATION... TORNADOES AND A FEW SEVERE THUNDERSTORMS WITH HAIL SURFACE AND ALOFT TO 3 INCHES. EXTREME TURBULENCE AND SURFACE WIND GUSTS TO 70 KNOTS. A FEW COMINGLANDS WITH MAXIMUM TOSS TO 550. NEARLY STORM MOTION VECTOR 24040.

THIS IS AN EXERCISE



Hartman Hwy
State 222 (Par Rd)

E

F

J

H

Y

CAPCA Hwy Rd

G

Berthel Valley Rd

98

96

K

X

R

Goffinger Rd

B

A

S

Scenario (continued)

- East Tennessee Technology Park
 - Hazardous Material facility damaged with fire
 - Classified as a Site Area Emergency (SAE)
 - Fuel truck breached
 - Site-wide power outage
 - Four people injured

Scenario (continued)

- Oak Ridge National Laboratory
 - Damage to three Hazardous Material facilities
 - One severely damaged – classified as a SAE
 - Minor damage to Category 1 Nuclear Facility (no hazardous material release)
 - Four other facilities damaged
 - Eleven total injuries
 - Downed power lines and damage to substation

Scenario (continued)

- Y-12 National Security Complex
 - Damage to two Hazardous Material facilities
 - One with hazardous materials release – classified as a SAE
 - Six total injuries
 - Primary routes to EOC blocked with debris

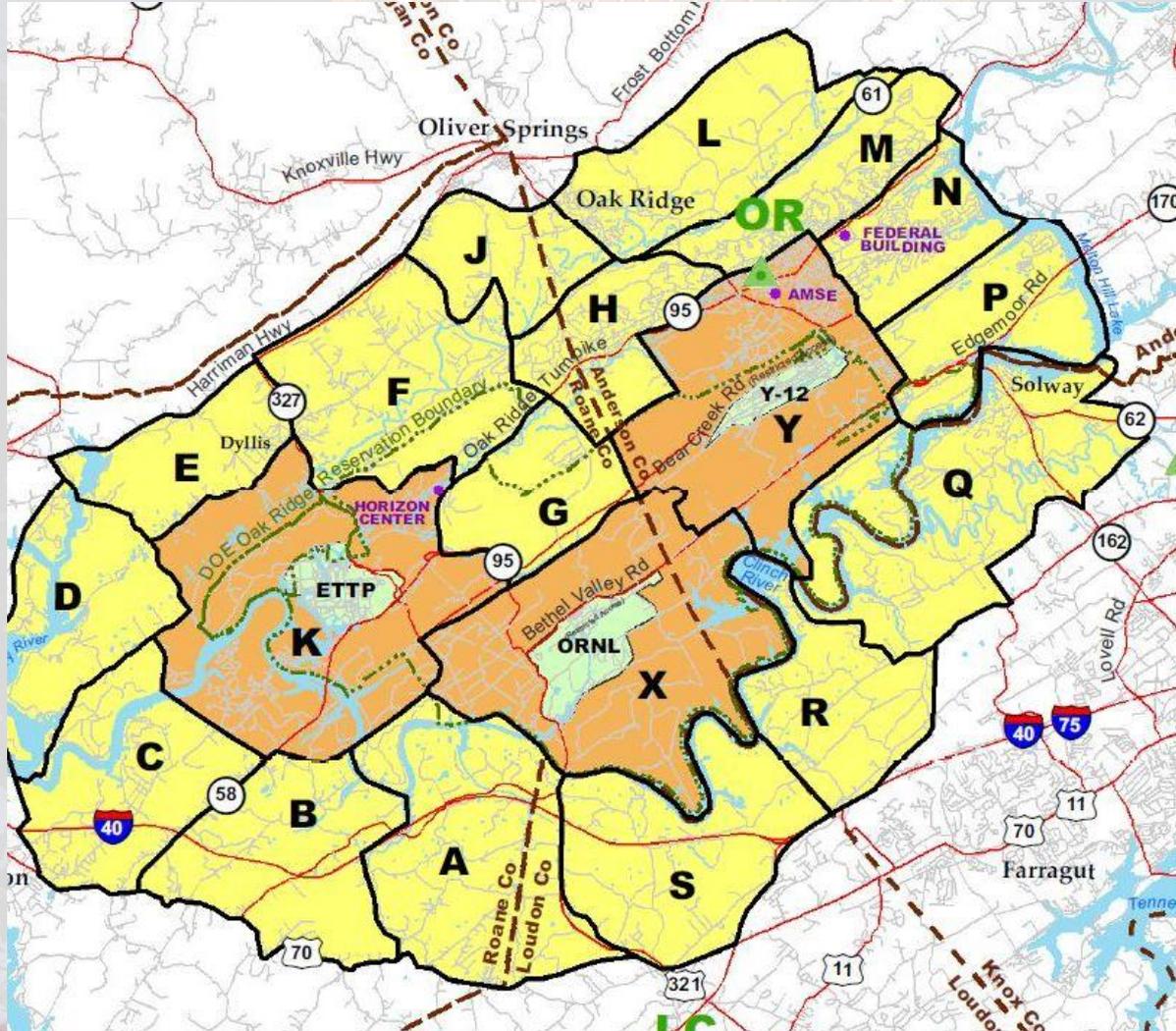
Overall Results

- Our processes work
- Some improvement items identified
- Good first step

ORNL Specific Improvement Items

1. Document requirements and procedures for use of volunteers
2. Methods for getting information to employees and employee's families
3. Familiarity with Area Command structure
4. Improve coordination with surrounding areas for large scale evacuations

ORNL Improvement Items (continued)



Exercise Planning Lessons Learned

- What *IS* a Beyond Design Basis Event?
 - How far “beyond” do you need to go?
 - Start “small”
 - Challenge but don’t make it impossible
 - Critics will never be completely happy

Exercise Planning Lessons Learned (continued)

- Don't underestimate the amount of interest there is in Beyond Design Basis Events.
 - Use a facility that will allow for detailed discussions
 - Allow adequate time

Exercise Planning Lessons Learned (continued)

- Don't underestimate your Emergency Response Organization!
 - They may be more prepared than you thought
 - Come to the exercise prepared to carry the event further than you anticipate



QUESTIONS?