

# Taking a New Defensive Striving Course in the Crescent City:

## *Enhanced Preparation for Chemical Disasters N'Awlins Style*

Jeffrey M. Elder MD FAAEM, FACEP  
Director | Medical Director, New Orleans EMS  
Clinical Assistant Professor, LSU Emergency Medicine





What scares you the most in your community?











# RAILROADS THROUGH NEW ORLEANS

The Public Belt owns and operates nearly 100 miles of track along about 25 miles of right of way, mostly along the Mississippi River waterfront. Private carriers may use the Belt's track and pay for the service, or go around it by using the "back belt," which is owned by Norfolk Southern.



THE TIMES-PICAYUNE













# Chemical Defense Program

- The Chemical Defense Program seeks to build preparedness for chemical terrorism and accidents at the Federal, State, and Local levels with the ultimate goal of protecting the health and safety of the American people.
- **Scope:**
- Comprehensive program to address Federal, State and Local risk awareness, planning and response mechanisms in the event of a chemical incident.
- Most importantly, the program works directly with communities to understand their capabilities, limitations, and needs. The program facilitates interagency efforts to better guide local officials and responders to make informed decisions and take appropriate actions in the immediate aftermath of a chemical event.
- The program is led by a medical toxicologist and a Public Health Service Corps industrial hygienist.





# Chemical Defense Demonstration Project

- 2013 – City of New Orleans submitted application to U.S. DHS Office of Health Affairs (OHA)
- 2014 – City of New Orleans selected as one of four “phase two” CDDP cities
  - Nassau County, Boise, and Houston
  - Baltimore Phase 1



**Are you ready?** get informed. get prepared. get ready



# New Orleans CDDP

- **Purpose:** Support community-based efforts to plan for and respond to a large-scale chemical incident, and identify best practices that may be shared with and adaptable to other communities
- **Scope:** Immediate response phase (first few hours) following the detection of a chemical agent release
- **Project Outcomes:** Critical decision support architecture; concept of operations to complement city and regional crisis management framework



**Are you ready?** get informed. get prepared. get ready



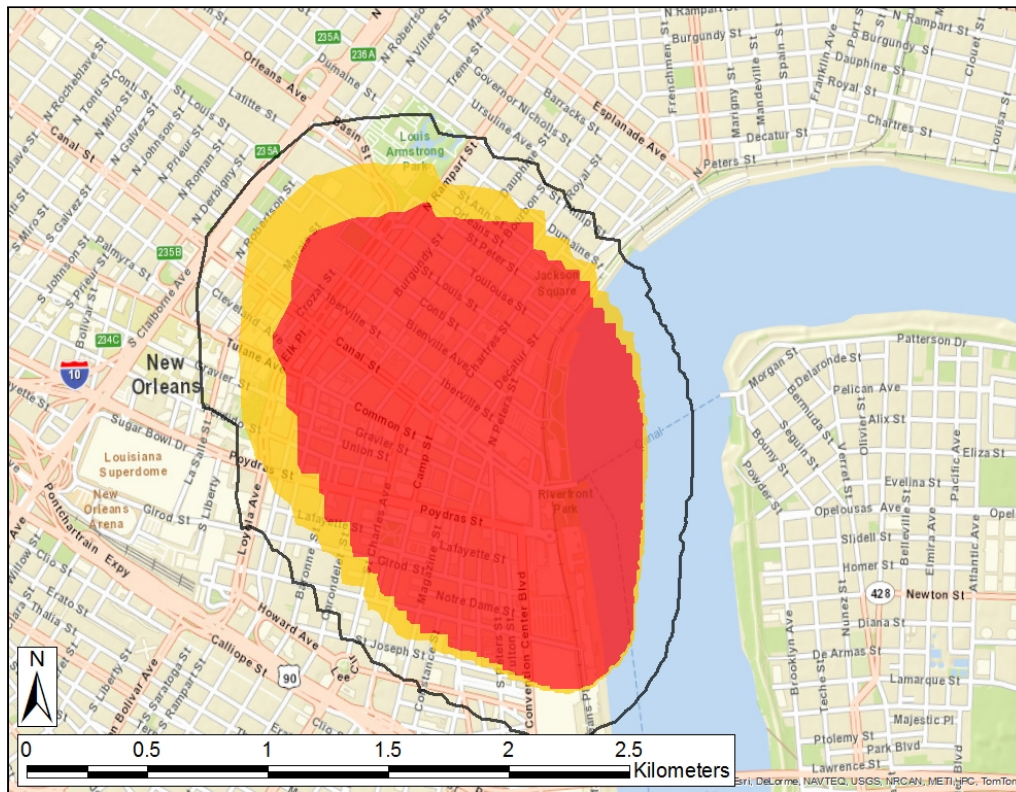


# Crescent Shield

- Two scenarios:
  - Hydrogen Fluoride release via barge on river
  - Organophosphate release via railcar on riverfront
- 150+ participants from all levels of government
- Held at NASA Michoud Facility in New Orleans East



# Parathion – 4 hr AEGL



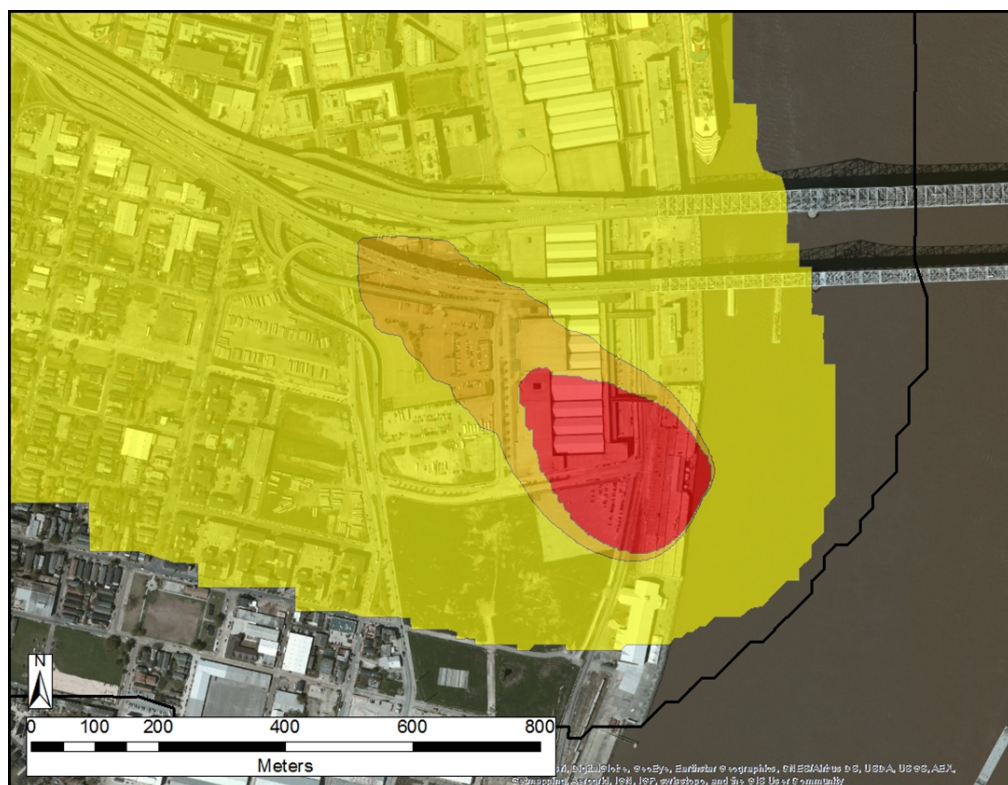
Parathion : Acute Exposure Guideline Levels (INTERIM)		
06-Jun-15 19:34:00Z (4.000 hr)		
Mean Area		
	Value	In contour population
AEGL-3 Death Possible	3.0	19,649
AEGL-2 Injury Possible	2.0	23,697
AEGL-1 not defined		
Area of Concern		
	Value	In contour population
AEGL-2 Injury Possible	2.0	29,954

## FACTS

New Orleans, LA  
Location (ending):  
29.943784°N 90.062484°W  
Incident Time: 1534Z 06JUN2015  
Type: Parathion  
Amount: 19,000 gallons  
Incident: Railcar puncture  
Weather: 6 mph winds from SE,  
81°F, 73% humidity  
Model: HPAC 5.3  
Static Population Estimates:  
LandScan 2013



# Hydrogen Fluoride – 30 min AEGL



## Extended Hydrogen Fluoride : Acute Exposure Guideline Levels (FINAL) 06-Jun-15 16:04:00Z (30.000 min)

Mean Area		
	Value	In contour population
AEGL-3 Death Possible	3.0	54
AEGL-2 Injury Possible	2.0	126
AEGL-1 Threshold	1.0	48,621
Area of Concern		
	Value	In contour population
AEGL-1 Threshold	1.0	82,739

### FACTS

New Orleans, LA

Location:

29.93472°N 90.06111°W

Incident Time: 1534Z 06JUN2015

Type: Hydrogen Fluoride

Amount: 2400 gallons

Incident: Tank punctures

Weather: 8 mph winds from SE,

81°F, 73% humidity

Model: HPAC 5.3

Static Population Estimates:

LandScan 2013





# Functional Exercise

- Systematically approached issues that would arise in the immediate aftermath of a catastrophic chemical incident:
  - Response (operations, logistics, command/control, etc.)
  - Protective action messaging/public information
  - Tactical communications / interoperability
  - Medical/public health surge capacity

among others...



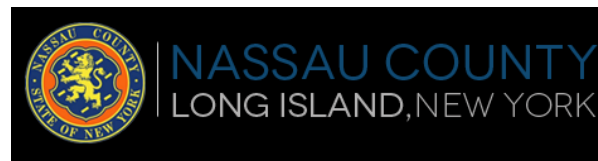
# Participants

- Public Safety
- Hospitals
- DEQ
- TSA
- Federal Railroad Administration
- NOAA
- NWS
- Port of N.O.
- Universities
- USCG
- National Guard
- Hotel/Lodging Association
- School District
- Red Cross
- Poison Control
- Health Department
- Convention / Visitors Bureau



# Moving Forward

- 2016 CDDP Five Cities Reunification Meeting





# Results/Products

- Robust Concept of Operations (CONOPS) for the City which will complement the Hazardous Materials Release Management Plan
- Decision matrices and toolsets for use by first responders
- Hazardous commodities flow study – Roads
  - Port/Rail available
- EMS protocols / HAZMAT paramedic training



