Welcome and Opening Remarks

- Pledge of Allegiance

2

Ex. 5555-000045-CRK

Welcome and Opening Remarks

Sue Henderson, Ph.D.
President
New Jersey City University

Kevin S. Malley, MA
Assistant Dean, College of Professional Studies
Chairperson, Department of Fire Science
New Jersey City University

Thomas Von Essen
Commissioner FDNY (retired)
Professor, Department of Fire Science
New Jersey City University

Greg Kierce
Director
Jersey City Office of Emergency Management and Homeland Security

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New Jersey City University

DEPARTMENT OF FIRE SCIENCE

Sue Henderson, Ph.D.
President
New Jersey City University

Thomas Von Essen
* FDNY Commissioner (Ret.)
* NJCU Professor

Exercise Administration

- Registration
- Safety and Emergency Exits
- Restrooms
- Badges
- Materials
  - Situation Manual
  - Factsheets
  - Feedback Form

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Exercise Administration (Cont.)

- WiFi Network: NJCUConference
- Password: a20152015f

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Exercise Schedule

Registration	8:00 a.m.–8:30 a.m.
Administrative Remarks	8:30 a.m.–9:00 a.m.
Scenario Overview	9:00 a.m.–9:30 a.m.
Break	9:30 a.m.–9:45 a.m.
Workshop Table Discussions	9:45 a.m.–11:15 a.m.
Plenary Out-Brief Session	11:15 a.m.–12:00 p.m.
Lunch	12:00 p.m.–1:30 p.m.

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Exercise Schedule (Cont.)

Workshop Table Discussions	1:30 p.m.–3:30 p.m.
Plenary Out-Brief Session	3:30 p.m.–4:30 p.m.
Hotwash and Key Takeaways	4:30 p.m.–4:50 p.m.
Closing Remarks	4:50 p.m.–5:00 p.m.

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Exercise Overview and Purpose

- Jersey City Exercise is an element of the National Exercise Program Operation Safe Delivery Exercise Series.
- Supported by Jersey City and State of New Jersey.
- Designed to achieve the following:
  - Advance community preparedness and resilience.
  - Enhance community-based planning for transportation incidents, including those involving high vapor pressure/low flash point crude oil or other hazardous substances.
  - Help community examine core capabilities needed to mitigate, respond to, and recover from potential consequences of oil transportation incidents.

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Exercise Goal

- Support community preparedness and resilience by examining and validating capabilities needed to reduce risk, mitigate potential consequences from, and ensure capacity to respond to and recover from transportation incidents, including those involving hazardous substances.

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Exercise Objectives

1. Confirm or establish community-driven desired outcomes and priorities to inform resilience initiatives, prepare for disaster operations in the event of an incident, and guide planning efforts.
2. Confirm response and recovery priorities for this type of incident and identify mutual aid requirements.
3. Identify mitigation requirements and potential mitigation opportunities.
4. Examine opportunities to strengthen or develop coalitions between local, state, tribal, federal, and private sector partners to support community-based preparedness and resilience.

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Exercise Outcomes and Output

- Improved collaboration with and between whole community partners on mitigation, response, and recovery capabilities, particularly those related to rail transportation incidents, including those involving high vapor pressure/low flash point crude oil.
- Common understanding of desired outcomes, priorities, requirements, innovative solutions, and potential areas for improvement to mitigate, respond to, and recover from these types of incidents.
- Summary of Conclusions addressing key discussion points, noted strengths, smart practices and innovations, and potential areas for improvement.

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Exercise Format

- Full-day facilitated event tailored to specific requirements of Jersey City.
- Facilitator questions for each table prompt participants to discuss roles and responsibilities related to identified mission areas and are structured around four identified core capabilities.
- Morning table discussions and out-brief presentations will focus on desired outcomes, priorities, requirements, and potential challenges.
- Afternoon discussions and out-brief presentations will focus on areas for improvement, innovative solutions, and actionable next steps.

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National Preparedness Goal

- Released in September 2011, the Goal defines what it means for the whole community to be prepared for all types of disasters and emergencies.
- Identifies five mission areas—prevention, protection, mitigation, response, and recovery—in which it groups 31 core capabilities, which are the distinct critical elements needed to achieve the Goal.
- Exercise will examine mitigation, response, and recovery mission areas as well as the following four core capabilities: Community Resilience, Long-Term Vulnerability Reduction, Operational Coordination, and Planning.

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Exercise Break-Out Groups

- Table 1: Community Resilience
- Table 2: Community Resilience
- Table 3: Long-Term Vulnerability Reduction
- Table 4: Operational Coordination (Response)
- Table 5: Operational Coordination (Response)
- Table 6: Operational Coordination (Response)
- Table 7: Operational Coordination (Response)
- Table 8: Operational Coordination (Recovery)
- Table 9: Operational Coordination (Recovery)
- Table 10: Operational Coordination (Coalition Building)

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Overview of Morning Session

- Morning table sessions will focus on the following questions:
  - Based on scenario-driven projected consequences, what are Jersey City's desired outcomes?
  - What are the initial mitigation, response, and recovery priorities?
  - What community needs are anticipated?
  - What challenges will Jersey City, its residents and visitors, and economic partners face in achieving desired outcomes and meeting priorities?
- Each break-out group will develop an out-brief addressing the following four elements:
  - Community-Driven Desired Outcomes
  - Priorities
  - Requirements
  - Challenges

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Overview of Afternoon Session

- Afternoon discussions will focus on the following question:
  - What can we do now as a whole community to collaboratively and sustainably reduce potential effects to critical infrastructure and community resources—energy infrastructure and facilities, hospitals, schools, residential areas and public housing, local businesses, cultural and historic resources, etc.—and prepare the community to respond to and recover from this type of event?
- Each group will develop an out-brief addressing the following four elements:
  - Areas for Improvement
  - Innovative Solutions
  - Actionable Next Steps
  - Validating Capability and Capacity

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Scenario Overview

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Scenario Overview

- Scenario focuses on a catastrophic oil rail transportation incident in Jersey City, New Jersey.
- Train carrying **90 tanker cars** derails, spilling **hundreds of thousands of gallons** of high vapor pressure/low flash point crude oil.
- Derailment causes **pool fire and explosion** of tanker car in **densely populated urban area**.
- Residential, commercial, **educational, medical, communications, energy, and transportation infrastructure** affected by thermal radiation and blast overpressure.
- Oil spill and smoke from fire pose **environmental concerns.**

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Scenario Overview (Cont.)

- **Derailment Time:** Wednesday, March 18, 2015, 2:00 PM Eastern Daylight Time.
- **Derailment Site:** Elevated tracks near the intersection of Pacific Avenue and Barbara Place, Jersey City, NJ.
  - Adjacent to Interstate 78 and less than 2 miles from Holland Tunnel.

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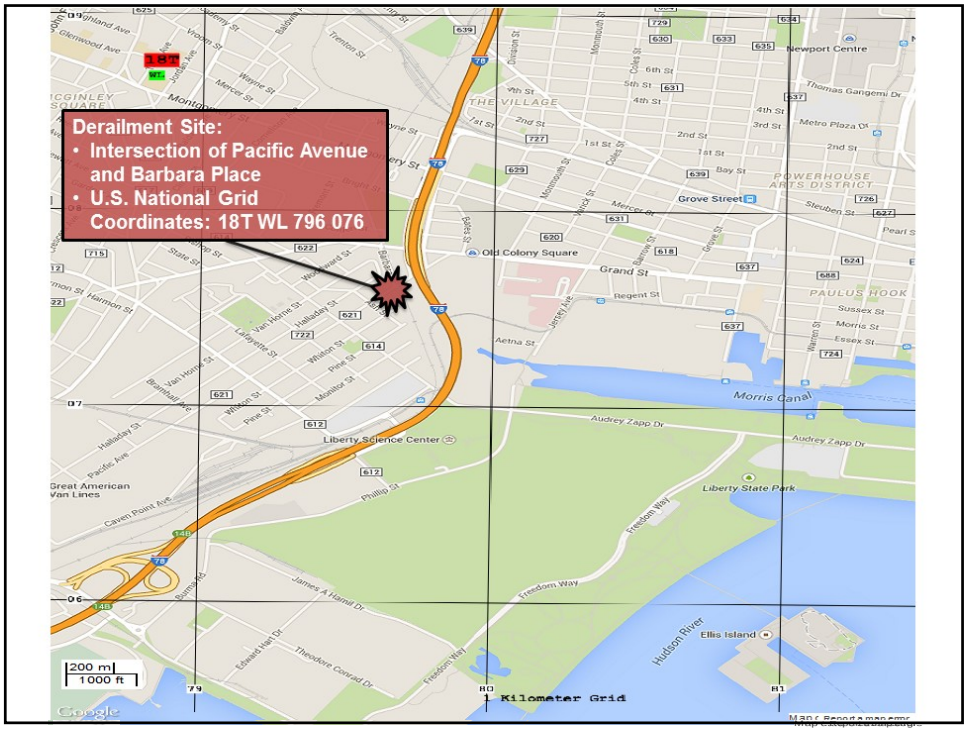

Scenario Overview (Cont.)

- 90 DOT-111 tank cars, each carrying approximately 30,000 gallons of high vapor pressure/low flash point crude oil.
- 5 tank cars derail, spilling approximately 100,000 gallons of high vapor pressure/low flash point crude oil into the surrounding area.
- Spilled oil ignites into a pool fire.

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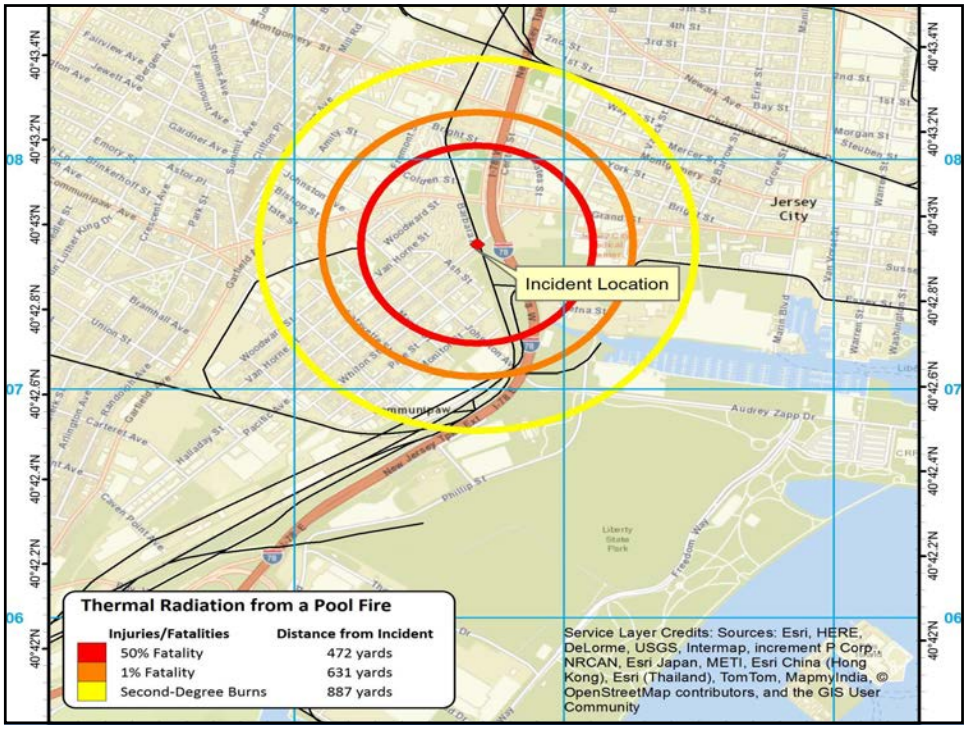

Scenario Overview (Cont.)

- Affected Population Estimates for Initial Pool Fire Damage Zones *(Based on 40-Second Exposure Time:)*
  - **1,923** individuals living within 472 yards could potentially receive second- and third-degree burns or fatal injuries (RED CIRCLE).
  - **3,954** individuals living within 631 yards could potentially receive second- and third-degree burns or fatal injuries (ORANGE CIRCLE).
  - **9,299** individuals living within 887 yards could potentially receive second-degree burns (YELLOW CIRCLE).

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Scenario Overview (Cont.)

- Pool fire causes tanker car explosion:
  - 300 foot fireball recorded and posted to social media by thousands.
  - Buildings up to 340 yards away severely damaged.
  - Individuals up to 340 yards away risk severe injury or death by blast overpressure.
  - Potential for burn-related fatalities up to 913 yards away.
  - Power outages up to a mile away from the blast site.

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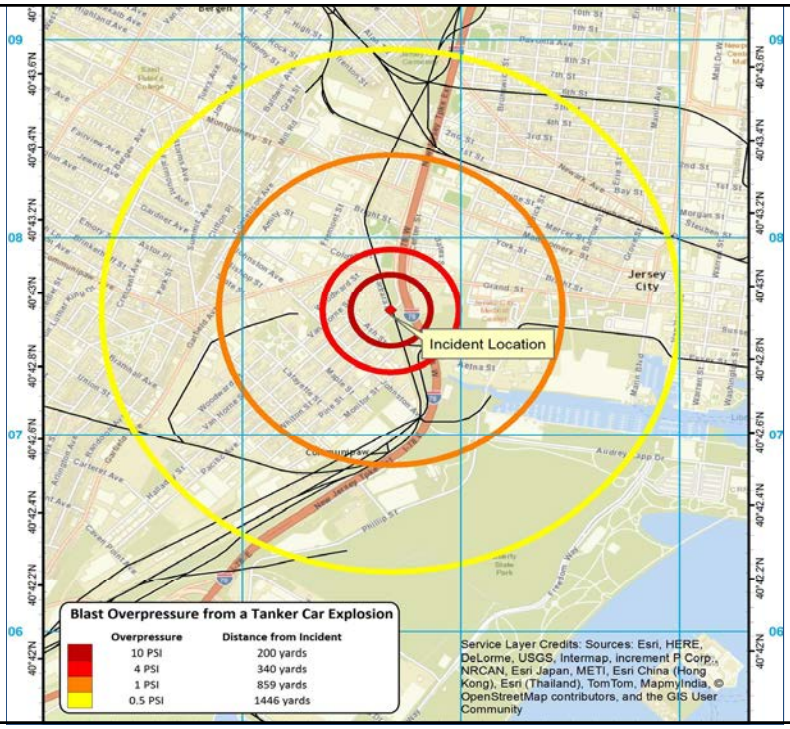

26

Scenario Overview (Cont.)

- Affected Population Estimates for Explosion Overpressure Blast Injury Zones:
  - **287** people living within 200 yards of explosion could potentially be killed by blast (RED CIRCLE).
  - **830** people living within 340 yards of explosion could be injured or killed by blast (DARK ORANGE CIRCLE).
  - **7,485** people living within 859 yards of explosion could suffer skin lacerations from blast debris (ORANGE CIRCLE).
  - **32,423** people living up to 1446 yards from explosion could suffer minor injuries from blast (YELLOW CIRCLE).

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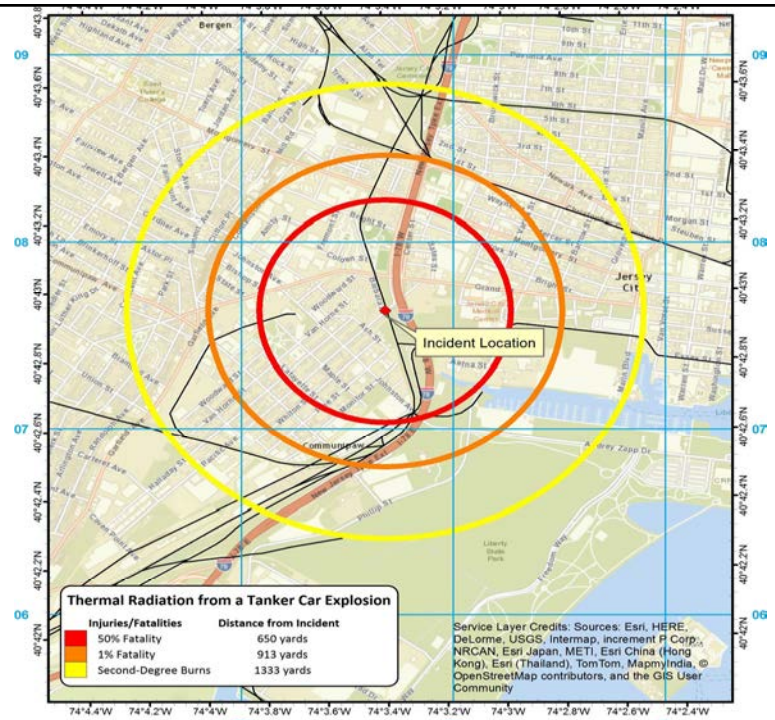

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Scenario Overview (Cont.)

- Affected Population Estimates for Explosion Pool Fire Injury Zones *(Based on 40-Second Exposure Time):*
  - **4,327** individuals living within 650 yards could potentially receive second- and third-degree burns or fatal injuries (RED CIRCLE).
  - **10,081** individuals living within 913 yards could potentially receive second- and third-degree burns or fatal injuries (ORANGE CIRCLE).
  - **27,143** individuals living within 1,333 yards could potentially receive second-degree burns (YELLOW CIRCLE).

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Scenario Overview (Cont.)

- Located inside the affected area:
  - Numerous housing developments (including a development for the elderly)
  - Schools
  - Jersey City Medical Center
  - Jersey City Medical Center Emergency Management Services headquarters
  - PSE&G electricity transfer station
  - Texas Eastern Transmission LP (Spectra Energy Corp) 30" above ground natural gas pipeline valve
  - Verizon Wireless transfer station
  - Jersey City Fire Department Engine 10 and Engine 5
  - Jersey City Police Department Emergency Services Unit
  - Several Hudson-Bergen Light Rail stations

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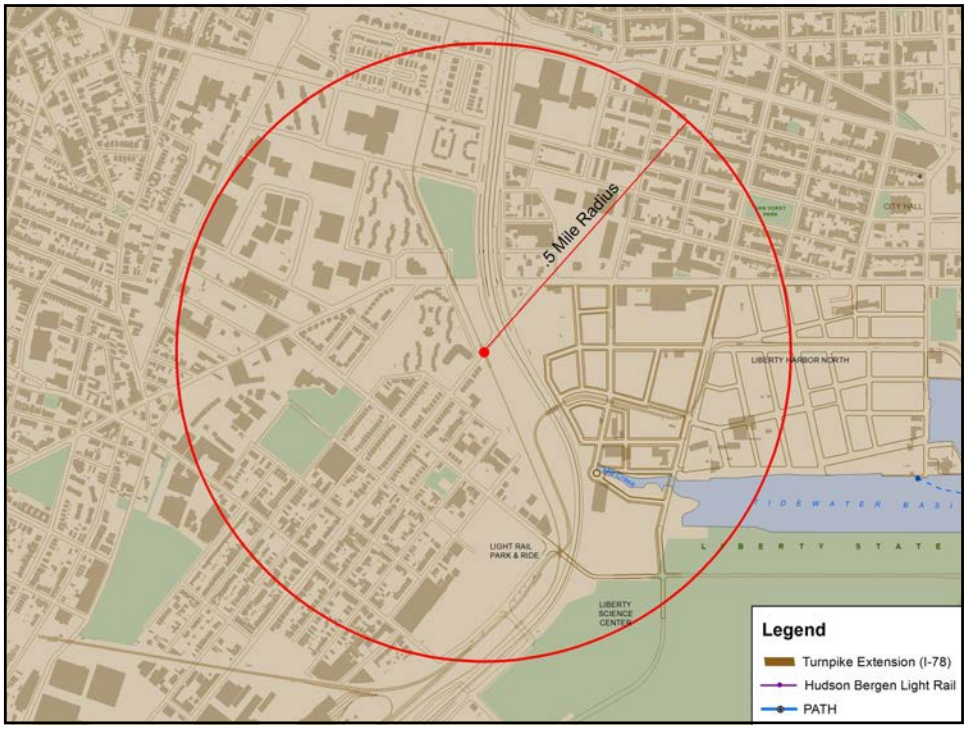
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LIGHT RAIL PARK & RIDE
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Legend
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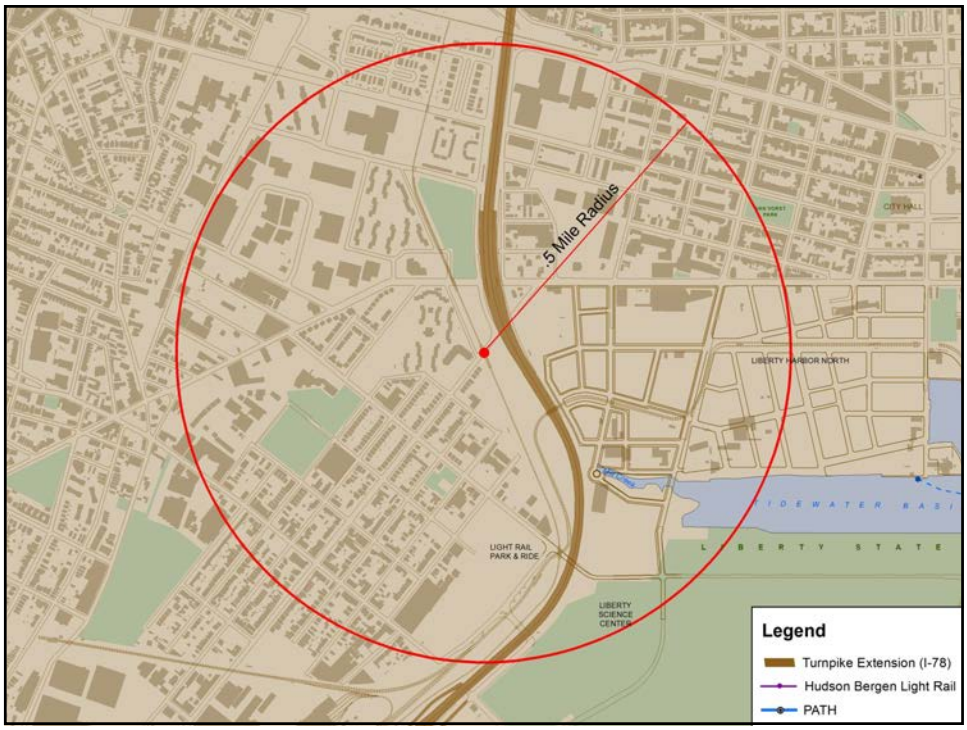
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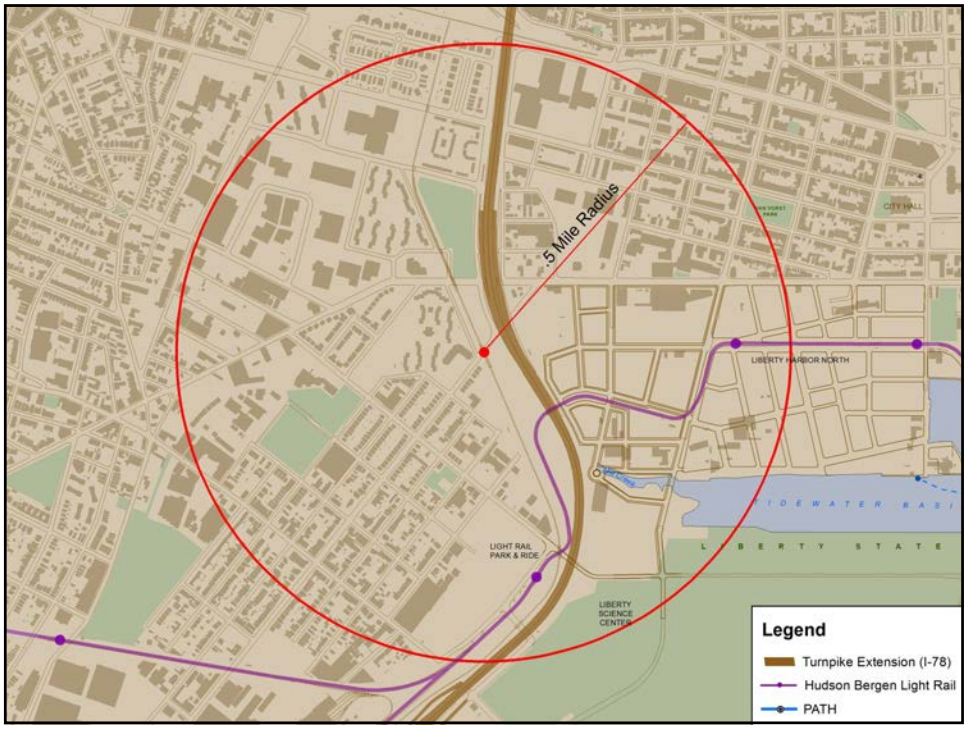
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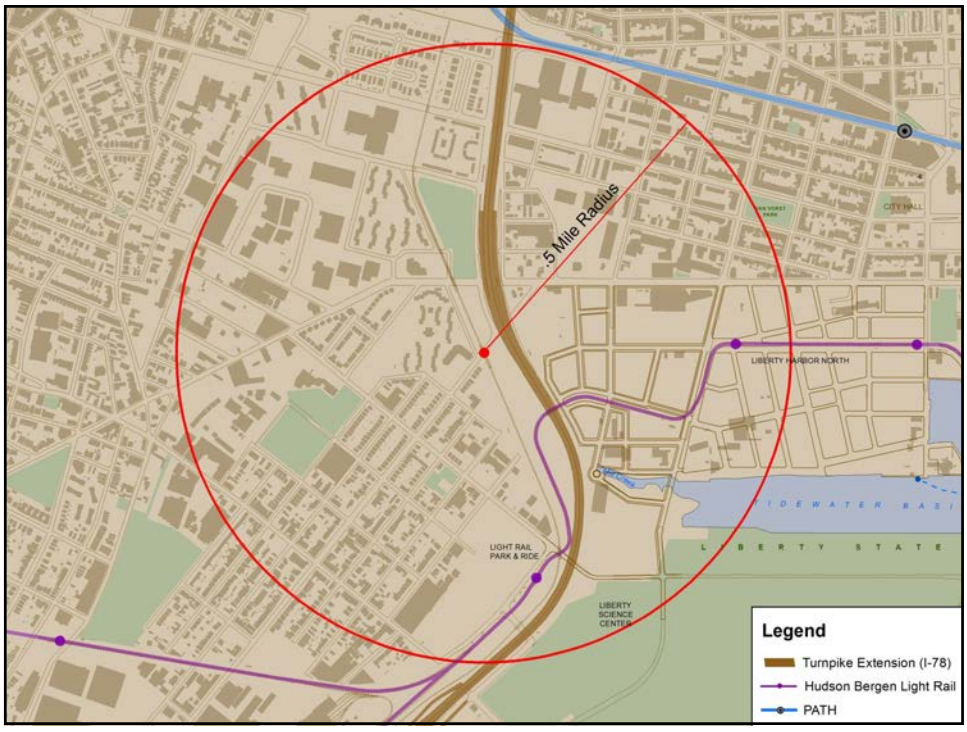
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Hudson Bergen Light Rail
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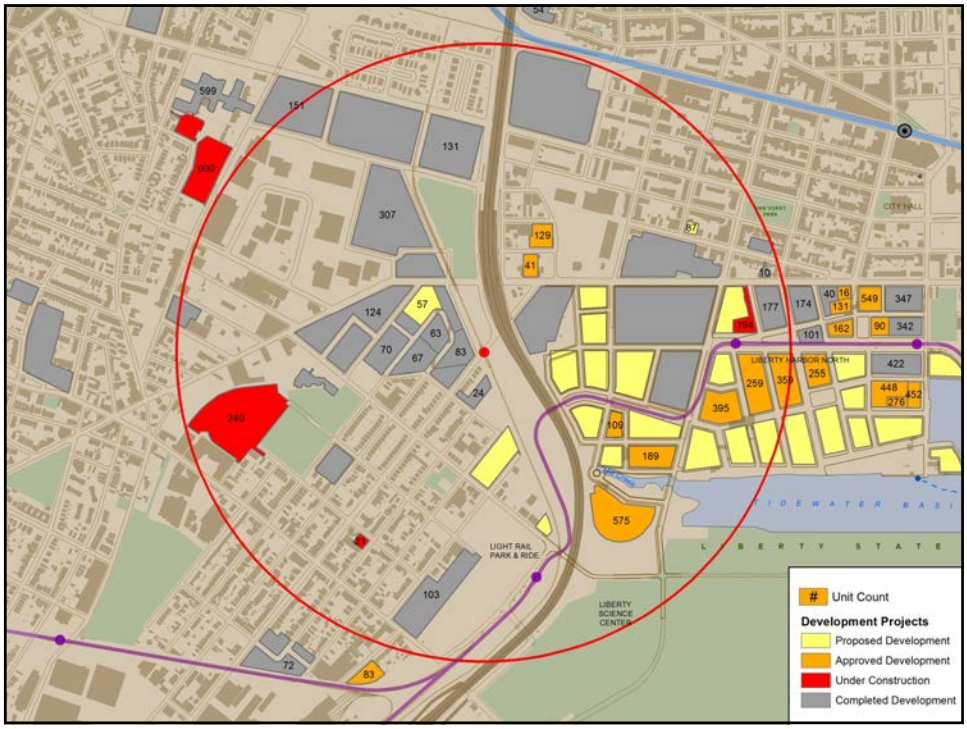
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CITY HALL
LIGHT RAIL PARK & RIDE
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Unit Count
Development Projects
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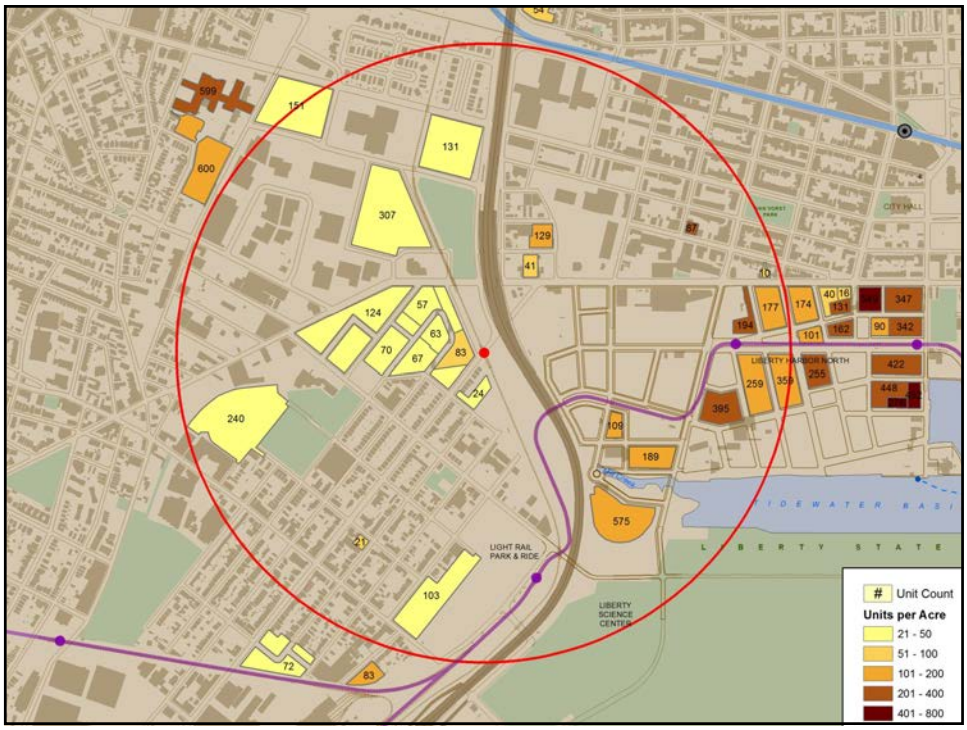
Approved Development
Under Construction
Completed Development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CITY HALL
LIGHT RAIL PARK & RIDE
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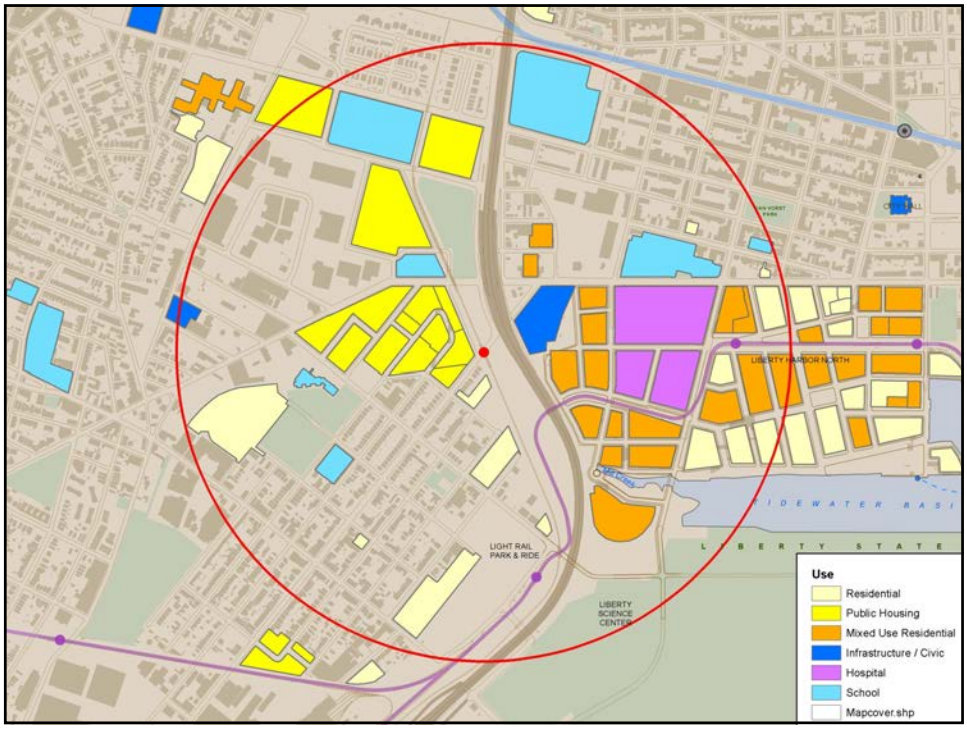
51 - 100
101 - 200
201 - 400
401 - 800


LIBERTY HARBOR NORTH
LIGHT RAIL PARK & RIDE
LIBERTY SCIENCE CENTER
Use
Residential
Public Housing
Mixed Use Residential
Infrastructure / Civic
Hospital
School
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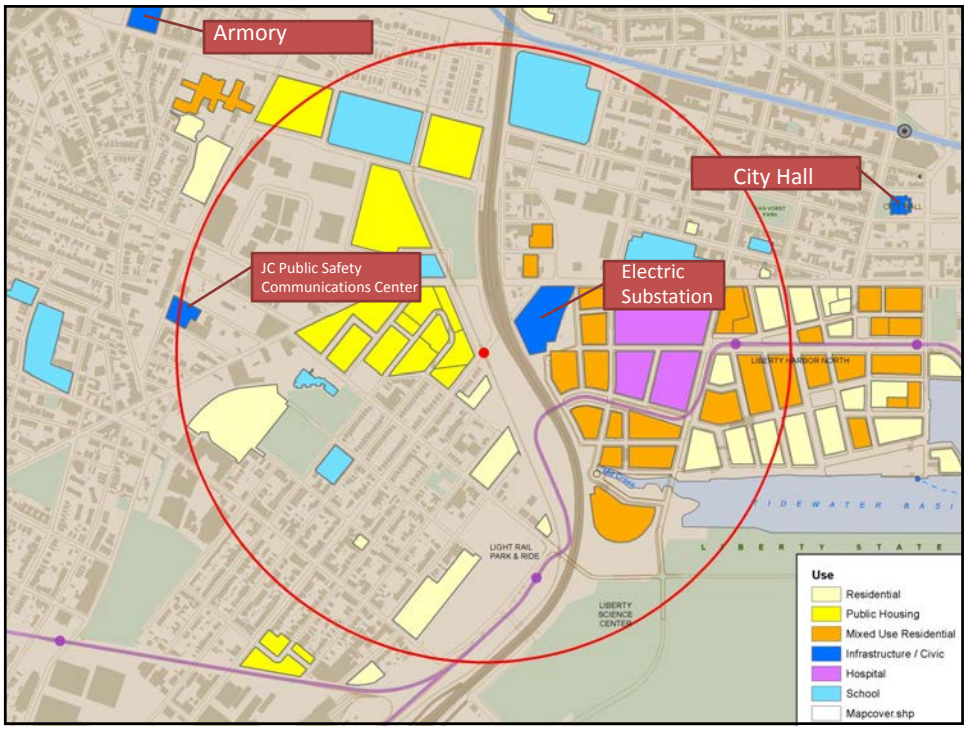
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City Hall
JC Public Safety Communications Center
Electric Substation
LIBERTY HARBOR NORTH
LIGHT RAIL PARK & RIDE
LIBERTY SCIENCE CENTER
Use
Residential
Public Housing
Mixed Use Residential
Infrastructure / Civic
Hospital
School
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Scenario Overview (Cont.)

- **1,323** total casualties from pool fire and tanker car explosion.
  - **87** Immediate fatalities.
  - **513** Triage Level I–III burn, penetration, and blunt force trauma injuries requiring Immediate, emergent, or urgent care.
  - **723** Triage Level IV–V injuries requiring less urgent or non-urgent care.
- **1,393** Jersey City residents displaced from their homes by the incident.

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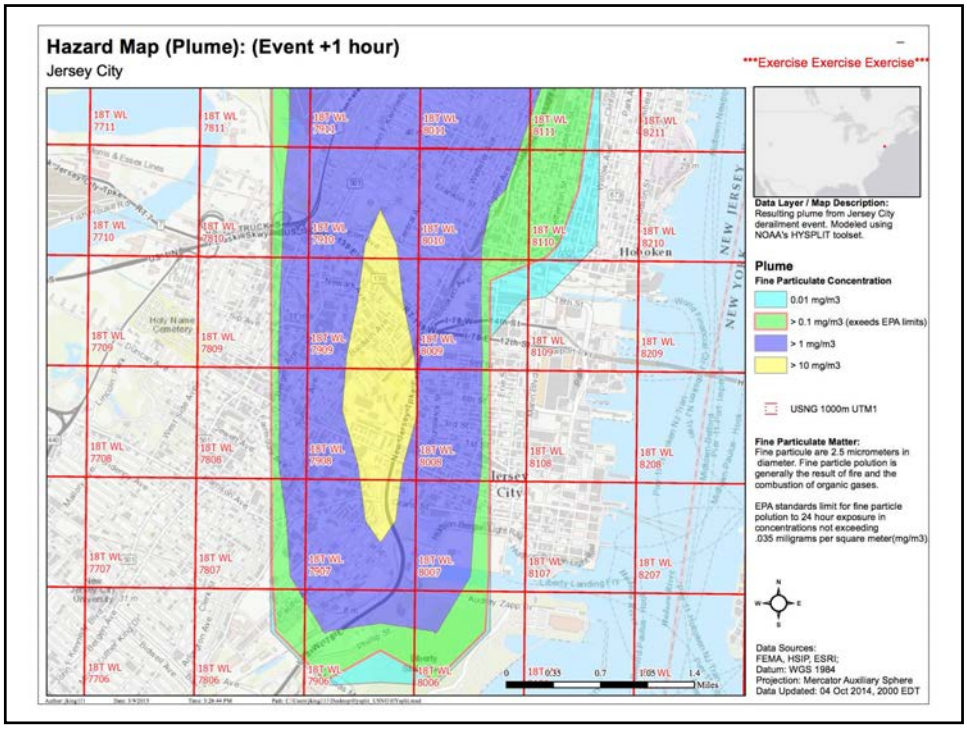
Scenario Overview (Cont.)

- Approximately 450,000 gallons of crude oil spill from 20 cars.
  - 225,000 gallons consumed in flames, 225,000 gallons left on the ground.
- The resulting smoke plume can bee seen for miles.
  - Contains carbon dioxide, carbon monoxide, sulfur dioxide, and polycyclic aromatic hydrocarbons.
- Morris Canal Basin located less than 820 yards from the derailment site, raising concerns about watershed contamination.

40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Jersey City
Exercise Exercise Exercise
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Resulting plume from Jersey City derailment event. Modeled using NOAA's HYSPLIT toolset.
Plume
Fine Particulate Concentration
0.01 mg/m3
> 0.1 mg/m3 (exeeds EPA limits)
> 1 mg/m3
> 10 mg/m3
USNG 1000m UTM1
Fine Particulate Matter:
Fine particule are 2.5 micrometers in diameter. Fine particle polution is generally the result of fire and the combustion of organic gases.
EPA standards limit for fine particle polution to 24 hour exposure in concentrations not exceeding .035 miligrams per square meter(mg/m3)
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FEMA, HSIP, ESRI;
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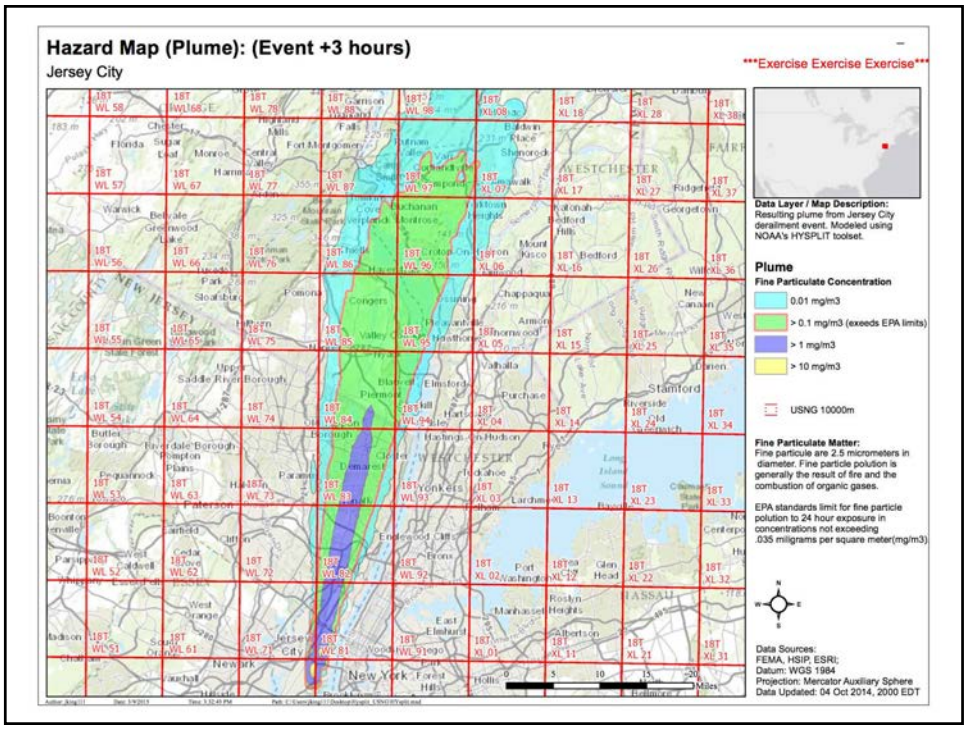
NEW JERSEY
NEW YORK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Datum: WGS 1984
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NASSAU
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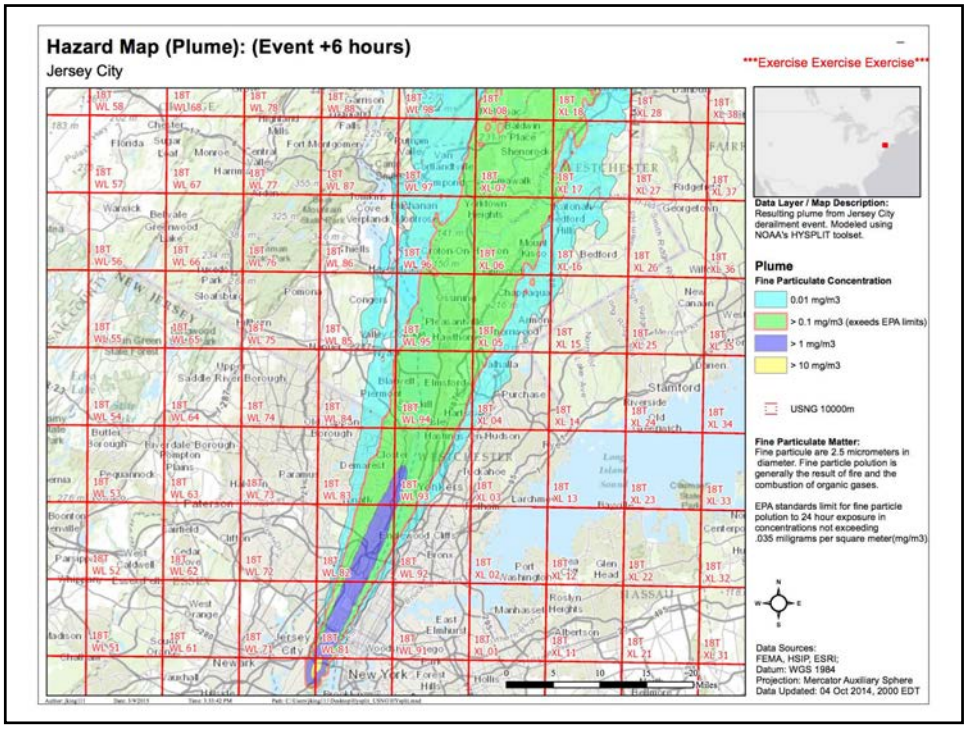
Yonkers
New York
Newark


Hazard Map (Plume): (Event +6 hours)
Jersey City
Exercise Exercise Exercise
Data Layer / Map Description:
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Plume
Fine Particulate Concentration
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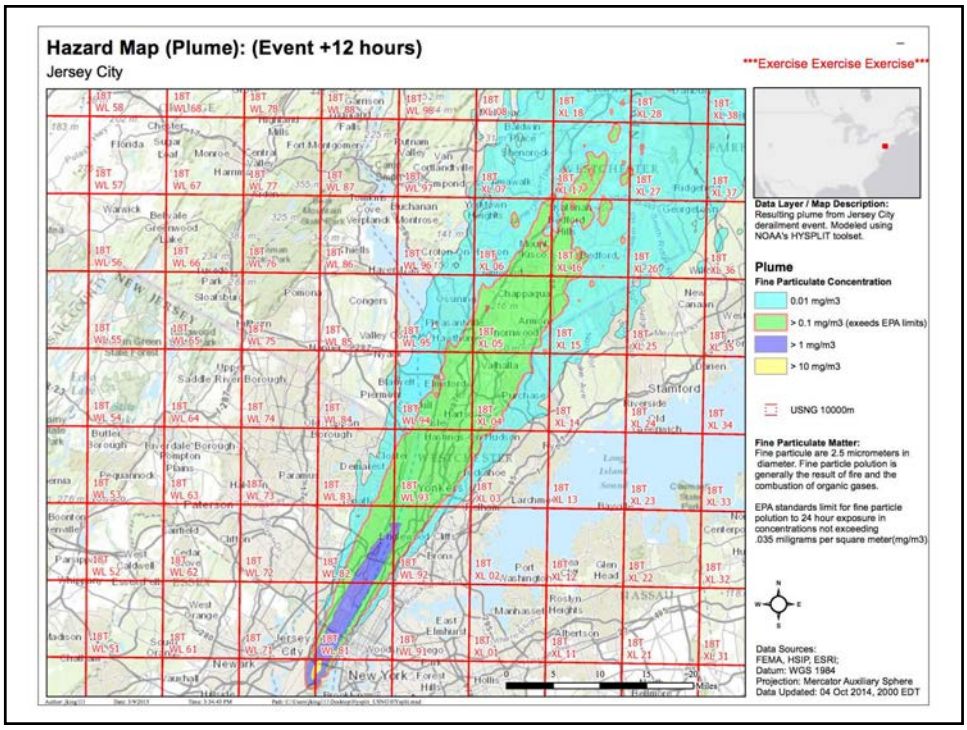
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Jersey City
Exercise Exercise Exercise
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Data Sources:
FEMA, HSIP, ESRI;
Datum: WGS 1984
Projection: Mercator Auxiliary Sphere
Data Updated: 04 Oct 2014, 2000 EDT

Break

45

Workshop Table Discussions

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Plenary Out-Brief Session

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Tables 1–3: Mitigation

- Community-Driven Desired Outcomes:
  - Better informed public on this threat/hazard (guide appropriate actions).
  - Enhanced community awareness and engagement with broad range of community leaders/partners.
  - Development/redevelopment assessed with this particular threat/hazard in mind.
  - Engagement with commercial/business community to support economic resiliency.
- Priorities:
  - Enhancing our community awareness and conducting community engagement and planning activities.
  - Supporting on-going training for the responder community.

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Tables 1–3: Mitigation (Cont.)

- Requirements:
  - Develop and conduct public education campaign (capacity building).
  - Support individual and household awareness (understanding needs of community—example of access and functional needs).
  - Engage whole community to integrate and synchronize planning activities.
    - Situational awareness of what is in your community (location of critical facilities; location of potential threats/hazards) and development of facility based plans.
  - Examine requirements to strengthen critical facilities (windows/positive pressure).
- Challenges:
  - Public inured to threats/hazards.
  - Development/re-development will occur (market forces).
  - Land use/zoning will not change.
  - Balance transparency of information with security considerations.

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Table 4: Response

- Community-Driven Desired Outcomes:
  - Define the problem (Assess the damaged area, Establish exclusion areas).
  - Establish Unified Command within 30 minutes.
  - Messaging and communication, Public announcement (As soon as possible).
- Priorities:
  - Life Safety: Search and Rescue.
  - Containment of the problem.
  - Evacuation, transportation, sheltering.

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Table 4: Response (Cont.)

- Requirements:
  - State wide and interstate Mutual Aid.
  - Short and Long term housing plan.
  - Activation of NJICS.
- Challenges:
  - Compatibility of communications and equipment.
  - Shelter capacity.
  - Public Transportation in and out of effected area.
  - Water supply.

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Table 5: Response

- Community-Driven Desired Outcomes:
  - Complete Fire Suppression in four hours.
  - Triage, treat and transport pt. within 12 hours.
  - Evacuating hospital within 12 hours (trauma center in blast zone and field hospital would take 48 to 72 hours to set up) and establish Urban Search and Rescue.
- Priorities:
  - Site management and control communication, Public information) and coordination of resources.
  - Continuously ensure safety and well-being of responders (PPE, air quality, runoff, etc.).
  - Establishing Unified Command.

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Table 5: Response (Cont.)

- Challenges:
  - Interdisciplinary knowledge of resources.
  - Transportation routes hampered.
  - Water supplies.
- Requirements:
  - More understanding of Interdisciplinary plans.
  - Prioritization of missions.
  - Activation of MOUs.

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Table 6: Response

- Community-Driven Desired Outcomes:
  - Life safety; Incident stabilization; Property and environmental conservation.
- Priorities:
  - Evacuation and transportation.
  - Contain the rail fire and spill.
  - Identify weakened structures; secure streets; minimize. environmental impact.
- Requirements:
  - Mass Care; MSI; transportation.
  - Multiple alarms; 10,000 gallons of foam capacity.
  - USAR teams; HazMat; Air Monitoring.
- Challenges:
  - Access; Situational awareness; Resources in necessary timeframe.

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Table 7: Response

- Community-Driven Desired Outcomes:
  - Ensure safety and health of all first responders throughout the response.
  - Save as many lives as possible and protect property within acceptable level of risk.
  - Establish full accountability of all residents in the affected area.
- Priorities:
  - Save lives and protect property (within acceptable levels of first responder risk).
  - Stabilize incident to prevent further consequences (fire/vapor suppression).
  - Establish unified command structure including relevant whole community stakeholders.
  - Business recovery and resilience; conservation of environment (Recovery-focused).

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Table 7: Response (Cont.)

- Requirements:
  - Prompt resource requests via NEPTUNE (foam, sand, etc.).
  - Industrial firefighting.
  - Air monitoring.
  - Urban search and rescue/EMS/law enforcement.
- Challenges:
  - Manpower/medical surge.
  - Information management/sharing (of the incident).
  - Public messaging/managing misinformation.
  - Situational Awareness/span of control.
  - Public/private sector coordination.
  - Communications.

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Table 8: Recovery

- Community-Driven Desired Outcomes:
  - Determine incident command structure for community recovery.
  - Mitigate environmental damage.
  - Restore critical infrastructure.
- Priorities:
  - Evacuate affected people and find temporary shelter within 12–24 hours.
  - Get people the appropriate level of medical care to local and surrounding facilities.
  - Railroad logistics contractors on site within 90 minutes from incident to begin monitoring.

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Table 8: Recovery (Cont.)

- Requirements:
  - Joint damage assessments for IA/PA.
  - Mutual aid agreements.
  - Challenges:
    - Major thoroughfares closed (Holland Tunnel, NJ Turnpike, Light Rail).
    - Exhausting mutual aid agreements.
    - Logistics/staffing for emergency and medical personnel.
    - Wind direction and duration of plume affecting additional populations.

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Table 9: Recovery

- Community-Driven Desired Outcomes:
  - Getting everyone home.
  - Return to normalcy.
    - Infrastructure
    - Commerce
    - Traffic
    - Communications
    - Wrap-Around Services
- Priorities:
  - Environmental clean up.
  - Restore power, communications, utilities.
  - Expedite restoration and rebuilding of structures—make them resilient.
  - Interim housing—population needs to be safely housed.
  - Return schools population to normalcy.
  - Ensuring commerce is back.

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Table 9: Recovery (Cont.)

- Requirements:
  - Some school solution.
  - Get tax base back.
  - Situational awareness of the access and functional needs community.
  - Ensure Whole Community is at the table.
- Challenges:
  - Is this a major disaster and is individual assistance applicable?
  - The clean up problem is highly dependent upon decisions made during response (e.g., did they contain the run-off?).

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Table 10: Coalition Building

- Community-Driven Desired Outcomes:
  - Life Safety.
  - Evacuation from affected area.
    - Elderly (will take approx. 24-48 hrs).
- Priorities:
  - Containment of Overall Incident.
  - Containment of Fire.
  - Containment of Product Travel.
  - Evacuation of Injured.

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Table 10: Coalition Building (Cont.)

- Requirements:
  - Transportation Assets for Evacuations.
  - Transitional Housing.
  - Mutual Aid/ Law Enforcement/State and Federal Assets.
  - Fire Mutual Aid, foam requirements, UASI.
  - Booming Diking Materials.
- Challenges:
  - Training and Experience.
  - Environmental Effects.
  - Recovery Issues—Infrastructure.

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Lunch

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Overview of Afternoon Session

- Afternoon discussions will focus on the following question:
  - What can we do now as a whole community to collaboratively and sustainably reduce potential effects to critical infrastructure and community resources—energy infrastructure and facilities, hospitals, schools, residential areas and public housing, local businesses, cultural and historic resources, etc.—and prepare the community to respond to and recover from this type of event?
- Each group will develop an out-brief addressing the following four elements:
  - Areas for Improvement.
  - Innovative Solutions.
  - Actionable Next Steps.
  - Validating Capability and Capacity.

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Workshop Table Discussions

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Plenary Out-Brief Session

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Tables 1–3: Mitigation

- Practical/Innovative Solutions:
  - Establish possible incentives (such as tax abatement or expedited approval) for developers to take actions to strengthen buildings/facilities/infrastructure.
  - Coordinate with rail industry (CSX or others) to do advertising, not to benefit company per se, but to be done as professional PSA/video we can take into schools regarding preparedness activities (strengthen partnership between rail industry and the community.)
  - Coordinate with federal government to establishment requirements/funding for mitigation activities (similar to noise attenuation) in public housing.
  - Establish requirement for new developments to bring in "big water" to help us defend against fire.
  - Discuss regulatory requirement from DOT/FRA regarding track maintenance; may require Congressional action.
  - Build capacity/knowledge/action through people since funding is limited.

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Tables 1–3: Mitigation (Cont.)

- Actionable Next Steps:
  - Craft coordinated/synchronized public messaging campaign.
    - Provide visuals that speak to individuals/households.
    - Use social media to reach members of the community.
    - Identify something similar to "stop; drop; roll" (awareness not fear).
    - Address messaging requirements for access and functional needs.
  - Schedule meetings (or go to scheduled meetings of existing groups, working through trusted community leaders) to present campaign.
  - Request meeting with DOT/FRA Region I Administrator to share. concerns and seek assistance.
  - Examine pipelines versus rail.

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Tables 1–3: Mitigation (Cont.)

- Actionable Next Steps (Cont.):
  - Establish a community task force specific to this threat/hazard.
  - Advocate any gas tax increase support oil hazard preparedness.
  - Utilize higher education institutions/academic partners to support preparedness and training specific to this threat/hazard and raise awareness of existing federally funded National Domestic Preparedness Consortium (NDPC) training opportunities.
  - Strengthen existing information sharing capabilities and capacity specific to this threat/hazard (what can versus what should be shared).

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Table 4: Response

- Areas for Improvement:
  - Sheltering Capacity.
  - Communications and Equipment Interoperability.
  - Mutual Aid TTPs need greater detail.
  - Expanding capacity to more mass casualties.
  - Transportation and access by responders.
  - Mass public emergency communication.
  - Aging Infrastructure.

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Table 4: Response (Cont.)

- Innovative Solutions:
  - Mass Care
    - Transportation
      - Expanding the capability to transport mass casualties.
      - Increase the capacity of mobile ambulance buses.
  - Shelter
    - Develop regional sheltering plan.
    - Repurpose sites tor short term sheltering.
  - Public Communication
    - Developing a comprehensive communication strategy.
    - Fostering public awareness and education.
  - Communications Compatibility
    - Provide funding and mandate standardized equipment statewide.
    - Conduct a communication exercise with multiple agencies in the region.

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Table 4: Response (Cont.)

- Actionable Next Steps:
  - Continue communication and dialogue with all stakeholders.
  - More regional planning.
- Validating Capability and Capacity:
  - Increase frequency of training and exercises (Senior Leaders).
  - Eliminate complacency.

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Table 5: Response

- Areas for Improvement:
  - IC information pack with what resources are available and contact information, and who is in the unified command to include standardized Template/flowchart for responses.
  - Have railroads supply state and local communities real time information on when high risk cargo trains will be coming through—regulate times to lower risk (committees flow study).
  - Mass Sheltering.
- Innovative Solutions:
  - OEM has money allocated to put together resource plan to include private sectors/contractors; DPE working on GIS maps of stored HAZMAT in fixed facilities to include railways on a secure site.
  - Out of state agreement for mass sheltering of survivors.
  - Centralized information to include other state/communities plans for Bakken oil.

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Table 5: Response (Cont.)

- Actionable Next Steps:
  - More training and Exercises of plans.
  - Obtain funding (railroads?) for equipment, storage, planning, and training to include railroad pay for interoperability center for up-to-date information.
  - Safer railcars.
- Validating Capability and Capacity:
  - Establish Educational program/requirements.

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Table 6: Response

- Areas for Improvement:
  - Revisit assumptions of fire plans.
  - Alternate care sites.
  - Cross-disciplinary planning.
  - Need funding flexibility.
- Innovative Solutions:
  - Having foam cars travel with trains.
  - Slow down trains; limit the numbers of cars; fund engineering solutions.
  - Incorporating federal resources into the planning element.
  - Inform the public on how to react using community groups.

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Table 6: Response (Cont.)

- Actionable Next Steps:
  - Get disciplines together at the county-level.
    - Compare plans.
    - Review/validate existing mutual aid plans.
- Validating Capability and Capacity:
  - Conduct a Full-scale exercise (funding issues).

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Table 7: Response

- Areas for Improvement:
  - Silos of excellence.
  - Greater adherence to principles of ICS and Unified Command.
  - More pre-incident planning required for specific hazard.
- Innovative Solutions:
  - Leverage private sector (particularly financial services industry) resources for response.
  - Develop pre-determined Unified Command composition for the incident.
  - Multiagency all-hazards Incident Management Team.

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Table 7: Response (Cont.)

- Actionable Next Steps:
  - Develop canned public messaging that provide unique evacuation/shelter-in-place messages (what/where) by grid (who) while identifying vulnerable populations for consideration.
  - Develop a more formalized, pre-set communications plan.
  - Further networking, training and exercise for incident command organization.
  - Add addendums to existing plans operations plans for flammable material stemming from rail incidents.
  - Disseminate outcomes of workshop to operators.
  - Leverage healthcare coalitions.
  - Encourage elected official participation in future networking, training, and exercise events.

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Table 8: Recovery

- Areas for Improvement:
  - Improve training for first responders on responding to these types of incidents—the private sector trains first responders but how do we train people at hospitals and schools?
  - Patient tracking and family reunification for mass casualty events.
  - Notifying residents without phones of evacuation, non-potable water, etc.
- Innovative Solutions:
  - Add real time GPS tracking to each rail car—this is already happening in trucking/EMS—policing agencies can monitor location of the rail cars.
  - Identify critical locations for generators (work with state/ office of homeland security) and pre-wire for connections; install fixed generators at fire houses.

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Table 8: Recovery (Cont.)

- Actionable Next Steps:
  - The railroad has an app called **Ask Rail**; you can input a car initial/number and know what is in that specific rail car—this app will be provided to the Fire Chief and other local first responders - will need to reach out to Neil Ferrone—only applicable to hazmat shipments. Class One railways sponsor these notifications.
  - Develop a public information/education program that is similar to the Radiological Emergency Preparedness Program Federal program—any town within 1 mile of a rail line carrying hazardous materials to build resiliency among residents.
- Validating Capability and Capacity:
  - Establish a disaster recovery coordinator in the local community prior to disaster that can coordinate with the response incident commander—pre-orchestrate the capability to recover using the recovery support functions (critical infrastructure, housing, health and social services, economic recovery, natural/cultural resources, community planning and capacity building)—refer to National Disaster Recovery Framework.

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Table 9: Recovery

- Areas for Improvement:
  - Plans—If they exist, have they been socialized? And are they in common language?
  - Whole Community engagement.
  - Public/Private partnership—especially engage the utilities to determine:
    - What are your strengths and weaknesses?
    - Note we have these partnerships in response, but it is harder in preparedness.
  - State and local planning mechanism for recovery.
    - Engage the philanthropic community—ascertain how they can help before the disaster.
    - Get NJ State Housing Task Force stood up (again).
    - More planning with the "right" entities at the table.

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Table 9: Recovery (Cont.)

- Areas for Improvement (Cont.):
  - Situational awareness among state and local partners—ascertain who is in charge of what.
  - Ascertain what the railway is responsible for in recovery.
  - Inspections of railways—both the rails and the rolling stock; the state has no rights.
  - Mutual aid among police forces.

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Table 9: Recovery (Cont.)

- Innovative Solutions:
  - Review authorities with an eye towards potential issues/waivers—note that many of these issues will be in the local level and there is a moral hazard.
  - The grant process encourages cooperation and improved planning.
    - Also, use grants for expanding your resource base for planning, policies, and procedures.
  - Reach out to academic institutions.
  - Use the UASI model—looks at problems on a regional basis.
  - State and local business incubators—the sooner we get businesses up and running.

Table 9: Recovery (Cont.)

- Actionable Next Steps:
  - Use the grant process.
  - Plan for critical lifelines—what is the impact of opening and closing major highways, tunnels, bridges?
  - Review all authorities for mutual aid—especially police.
  - Work with businesses to develop, train, and validate COOP plans.
  - Provide support to business community for recovery—state and local incubators.
- Validating Capability and Capacity:
  - Planning, training, and exercises.
  - THIRA works.

Table 10: Coalition Building

- Areas for Improvement :
  - Dissemination of information to the public.
  - Coordination with outside agencies/partners.
  - Accommodations for Pets (Evacuations/Shelters).
- Innovative Solutions:
  - Neptune System Developed—white paper on the benefits of new system shared with partners.
  - Medical Needs Shelter.

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Table 10: Coalition Building (Cont.)

- Actionable Next Steps:
  - Improved Training for Communities & First Responders—Free training resource from CSX (http://csxhazmat.kor-tx.com/).
  - Improved messaging and PSAs for communities—Public Education Seminars, Preparation Checklist for the public.
  - Revision of current plans to include appropriate partners.
  - Pre-Identify specialized care facilities for special needs patients (dialysis patients, etc).
  - Develop GIS mapping with utilities and water lines.
  - Dye testing water and storm drain systems to see where product runoff would go.
- Validating Capability and Capacity:
  - Exercise with outside agencies/partners.
    - Evaluate the drill.
  - Exercising Neptune system with Port Authority and NCSX.

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Hotwash and Key Takeaways

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Closing Remarks

Greg Kierce
Director
Jersey City Office of Emergency Management and Homeland Security

Carla J. Boyce
Director, National Exercise Division
Federal Emergency Management Agency
Department of Homeland Security

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Point of Contact

Duane Keel
Exercise Program Specialist
National Exercise Division
Phone: 202-786-0839
Email: roy.keel@fema.dhs.gov

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