



NYC Radiological Planning

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Outline

- ▶ **Risk of RDD in NYC**
- ▶ **NYC Radiological Response and Recovery Plan**
- ▶ **Innovations**
 - Radiological Advisory Committee (RAC)
 - 100 Minute Strategy
 - Removal of CS-137
- ▶ **Strengths/Successes**
- ▶ **Lessons Learned**
- ▶ **Challenges**
- ▶ **Future Initiatives**



Hazard Vulnerability Analysis: Where Does an RDD Fall?

PUBLIC HEALTH DISASTER SCENARIO NYC HMP Section	SEVERITY	PROBABILITY	IMPACT OF PLANNING	PRIORITY RANK
Coastal Storm* Coastal Storms	2	6	2	1
Pandemic Influenza* Disease Outbreaks	5	9	1	2
Extreme Heat* Extreme Temperatures	8	1	6	2
Flooding Flooding	6	4	7	4
Aerosolized Anthrax Chem, Bio, Rad, Nuke (CBRN)	4	10	3	5
Radiological Dispersal Device* Chem, Bio, Rad, Nuke (CBRN)	3	11	3	5
Improvised Explosive Device* Not included in HMP†	7	7	5	7
Improvised Nuclear Device Chem, Bio, Rad, Nuke (CBRN)	1	12	8	8
Winter Weather Winter Storms	9	3	10	9
Chlorine Release Chem, Bio, Rad, Nuke (CBRN)	10	5	9	10
Food Contamination Disease Outbreaks	12	2	11	11
Tornado Severe Weather	11	8	12	12

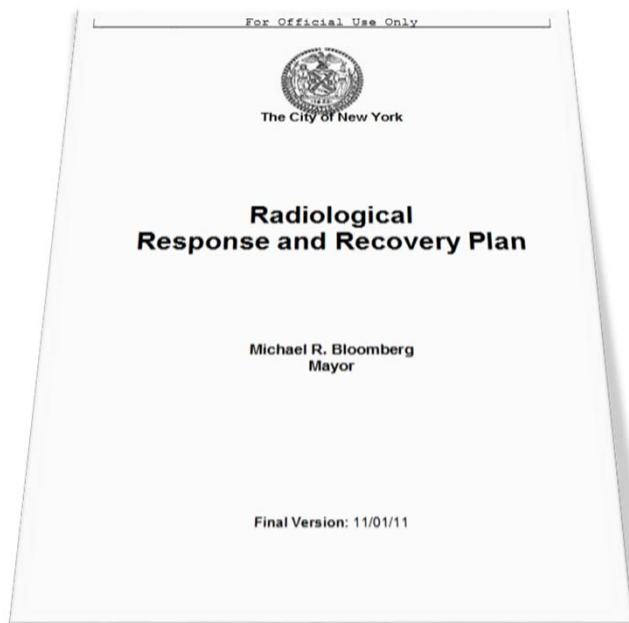


Development of Rad-Response in NYC

- ▶ **Early on, DOHMH was one of the only agencies with radiation measurement experience**
- ▶ **Developed a cache of vehicles and detection equipment**
- ▶ **Over years, NYPD & FDNY built capacity and trained personnel**
 - Have greater staffing than DOHMH
 - Have significant detection equipment on personnel & vehicles
- ▶ **DOHMH is now investing in capability to assess data and moving away from a field response to the affected area - an original response objective for DOHMH**



NYC Radiological Response and Recovery Plan



- ▶ New York City has a plan to respond to a terrorist incident involving radioactive material
- ▶ The primary first response agencies are:
 - NYPD: Criminal investigation, site security & radiation readings
 - FDNY: Life-saving, EMT service to hospitals, radiation readings and on-site decontamination of victims
 - DEP: air sampling, responder health & safety, advise on evac-routes, rad waste control at CRCs, environmental mitigation
 - DOHMH: (next page)



DOHMH Response Objectives

1. Human Health Assessments and Interventions

- Community Reception Center (CRC) registration & risk assessment
- Mental Health assessments and referrals at CRCs

2. Environmental Assessments & Characterization

- Field data interpretation by Environmental Division

3. Public Messaging RE: Rad-Health

- Post-NYCEM initial messaging re: health and safety from radioactive contamination & radiation exposure

4. Laboratory Testing

- If needed, bioassay samples of hospitalized patients will be necessary to calculate their total radiation dose; performed at CDC or NYSDOH
- Public Health Lab (PHL) can maintain associated records





Health Care Response & Countermeasures

- ▶ **Hospitals will receive injured, possibly contaminated patients**
 - DOHMH will provide clinical guidance to the healthcare community
 - DOHMH will collaborate with the federal asset coordination so resources are appropriately distributed and used
 - DOHMH will provide guidance for monitoring the facilities' contamination level as well as monitor potential radiation dose to the staff that will include the recruitment of the facilities' own radiation medical/safety professionals

- ▶ **Countermeasures**
 - DOHMH can request chelating agents that help speed the removal of some radionuclides from the body (generally not available in hospitals)



Community Reception Centers (CRCs)

- ▶ **Up to 6 will be established in NYC following a RDD**
 - The number and location will be tailored to the needs dictated by the incident
 - Goal is to screen 1000 individuals per hour
 - Will be located in DOE schools
- ▶ **Involves multiple agencies**
 - FDNY will provide screening and decontamination ops
 - NYPD will supply crowd control, security and investigation
 - DEP is responsible for waste management
 - DOHMH is responsible for registration, risk counseling, safety, rad control



Public Messaging

- ▶ **Message 1 – Something happened (~2 mins post incident)**
- ▶ **Message 2 – Radiological event; large area for shelter-in-place (~15 mins post incident)**
- ▶ **Message 3 – Area refined for shelter-in-place (~45 mins post incident)**
- ▶ **Message 4 – Phased evacuations (Several hours post incident)**



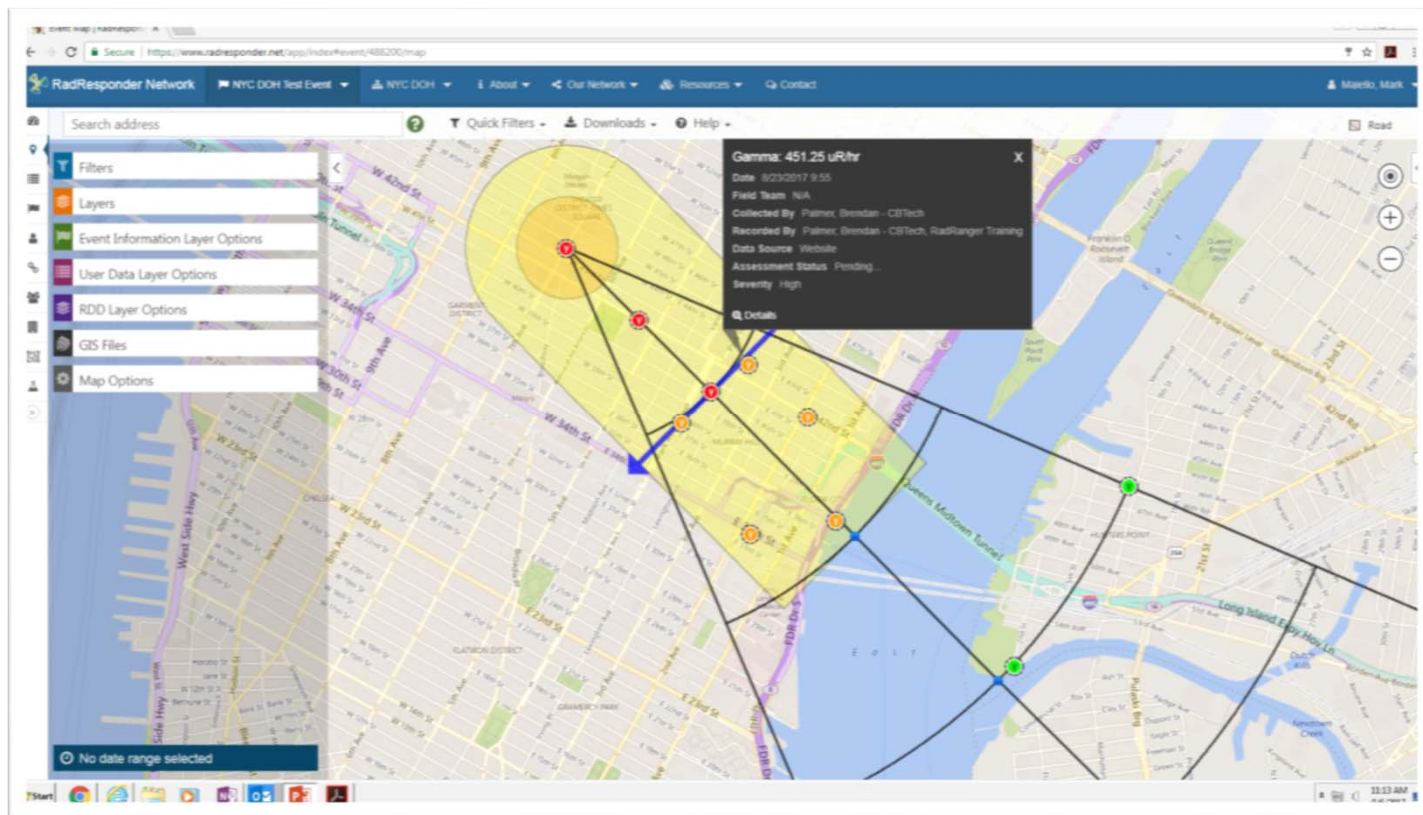
Radiological Advisory Committee (RAC)

- ▶ **Interagency committee comprised of both local NYC participants supplemented with national expertise from state, federal, and unaffiliated (private) partners with specialized radiological training or knowledge**
- ▶ **Can be leveraged during emergencies to provide subject matter expertise and also in non-emergency to weigh in on policy issues**
 - During responses, reports into Citywide Planning Section in NYC EOC
 - Example: Policy Recommendation on Potassium Iodide (KI)



First 100 Minutes Strategy

Rad-Responder: A data display platform developed by FEMA for free use by response agencies nationwide. Used by FDNY & DOHMH.





Removal of CS-137

- ▶ **Joint collaboration with Department of Energy (DOE) and Nuclear Threat Initiative (NTI) launched in 2014**
 - First-of-its-kind collaborative model between the federal government, municipal health departments and law enforcement to be replicated to reduce terror threat in cities across the United States

- ▶ **Assists academic and medical institutions to replace devices that contain radiologic material powerful enough to be used in a "dirty bomb" terror attack**
 - Will be replaced by machines that use alternative x-ray technologies
 - DOE to pay 100% of removal cost and 50% for replacement device
 - 12 institutions have committed
 - 30 devices in city – two have already been removed and remaining will be replaced by 2023



Strengths/Successes

- ▶ **Rad Response and Recovery Plan (RRRP)**
 - FDNY, NYPD, DEP and DOHMH agreed on strategies for responding to a RDD – not easily accomplished across agencies
 - RRRP Committee

- ▶ **Radiological Advisory Committee**
 - Best practice for expanding technical and scientific expertise
 - Weighs in on policy issues and provides expertise during responses



Lessons Learned

- ▶ **Shift our role from direct monitoring to analyzing data**
- ▶ **Need for defined roles and responsibilities for agencies**
- ▶ **Leverage external expertise for both preparedness and response**



Challenges

- ▶ **Lack of unified data collection system makes unified data analysis difficult**
- ▶ **Staffing for CRC operations**
- ▶ **Messaging**



Future Initiatives

- ▶ **DOHMH Rad Functional Exercise – Nov 2017**
- ▶ **Rad health and safety plan annex to the Citywide Health and Safety Plan (CHASP)**
- ▶ **Remediation plan**
- ▶ **Leverage Rad Responder Program to create unified data analysis**
- ▶ **Align CRC planning with POD planning**



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