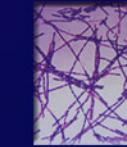
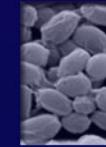


AAPM/ACMP
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Public Health Response to Radiation Emergencies and Potential Roles of Volunteer Radiation Professionals

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Our Focus

- Terrorist Incidents Impacting Large Populations
- Even “small” incidents present significant challenges
 - London Po-210 incident

November 2006, London Po-210 International Follow-Up



Issue

In the event of a radiation emergency that impacts a large population, we face serious challenges in meeting the radiological health needs of every affected community.

Scenario : Nuclear Detonation – 10-kiloton Improvised Nuclear Device

- Casualties
 - Hundreds of thousands
- Evacuations/Displaced Persons
 - 100,000 in affected area seek shelter in safe areas (decontamination needed)
 - 250,000 instructed to shelter-in-place as plume moves across region(s)
 - 1 million+ self-evacuate from major urban areas

Scenario : Radiological Attack – Radiological Dispersal Devices

- Casualties
 - 180 fatalities; 270 injuries; 20,000 detectible contaminations (at each site)
- Evacuations/Displaced Persons
 - 10,000 evacuated to shelters in safe areas (decontamination needed)
 - 25,000 in each city are given shelter-in-place instructions
 - Hundreds of thousands self-evacuate from major urban areas in anticipation of future attacks

Hurricane Katrina, 2005

- ~ 1,500 fatalities
- > 1 million people evacuated
 - ~ 800,000 people displaced
 - ~ 300,000 in evacuation centers
- ~ 100,000 people remained
 - Civil unrest
 - Health hazards
 - Infrastructure failure



Source: Louisiana Department of Health and Hospitals, Hurricane Katrina, Deceased Reports

Source: The Federal Response to Hurricane Katrina, Lessons Learned, February 2006

New Orleans 2005



Public Health Issues After Any Disaster

- **Assessment of Health and Medical Care Delivery**
- **Rapid Assessment of Community Health/Medical Needs**
- **Delivery of Health and Medical Care**
- **Pharmaceutical Supply**
- **Potable Water, Safe Food, and Sanitation and Hygiene**
- **Injury and illness Surveillance**
- **Vector Control**
- **Solid Waste**
- **Hazardous Materials**
- **Registry**
- **Mental Health**
- **Sheltering and Housing**
- **Mass Congregation**
- **Handling of the Deceased (humans and animals)**
- **Staffing**
- **Rumor Control**
- **Public Service Announcements/Media**

In a radiation emergency:

Public Health Physics

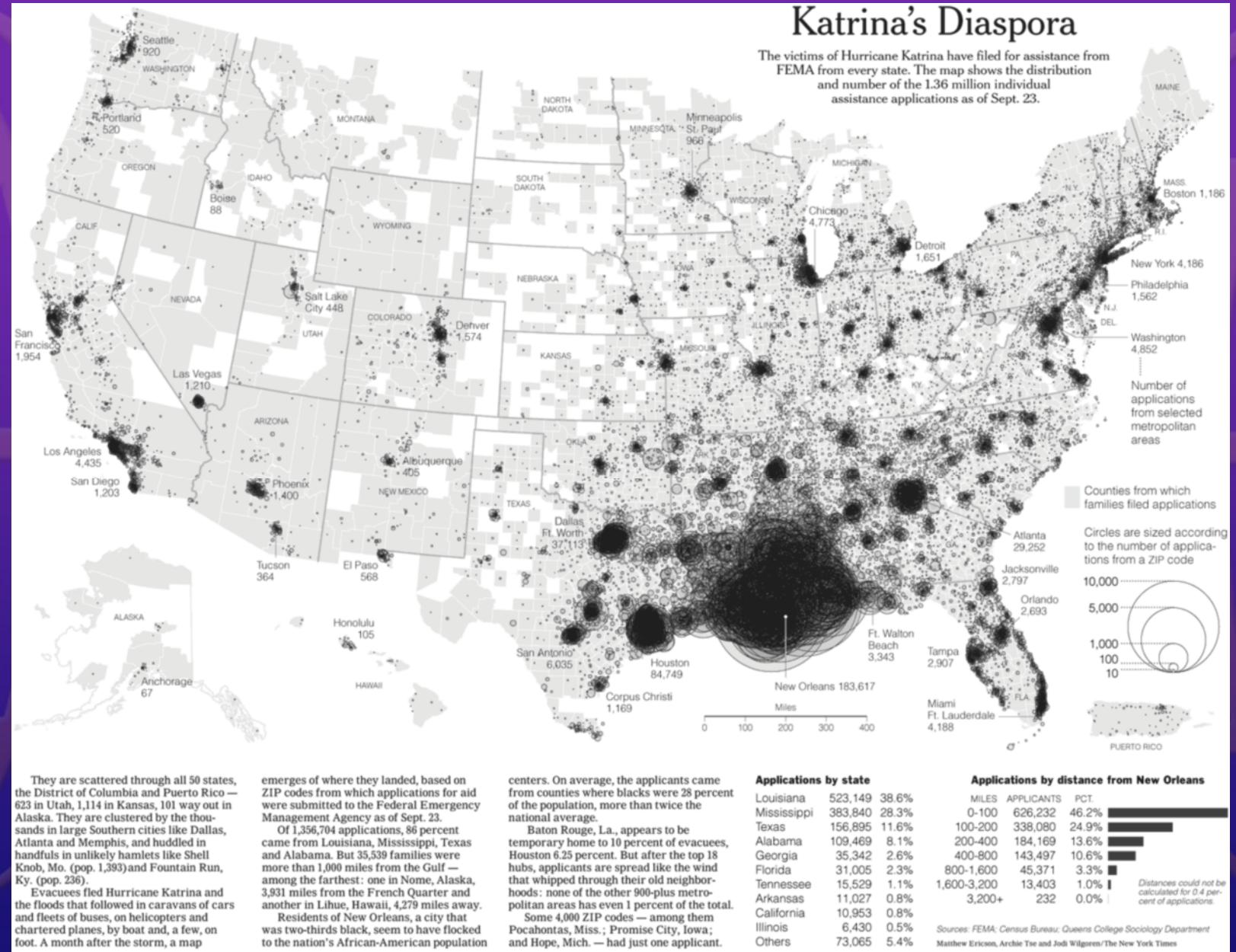
- Public Health needs to work together with emergency management and other organizations
 - State radiation control program is a key partner



**Could it ever impact my
community?**

Katrina's Diaspora

The victims of Hurricane Katrina have filed for assistance from FEMA from every state. The map shows the distribution and number of the 1.36 million individual assistance applications as of Sept. 23.



They are scattered through all 50 states, the District of Columbia and Puerto Rico — 623 in Utah, 1,114 in Kansas, 101 way out in Alaska. They are clustered by the thousands in large Southern cities like Dallas, Atlanta and Memphis, and huddled in handfuls in unlikely hamlets like Shell Knob, Mo. (pop. 1,393) and Fountain Run, Ky. (pop. 236).

Evacuees fled Hurricane Katrina and the floods that followed in caravans of cars and fleets of buses, on helicopters and chartered planes, by boat and, a few, on foot. A month after the storm, a map

emerges of where they landed, based on ZIP codes from which applications for aid were submitted to the Federal Emergency Management Agency as of Sept. 23.

Of 1,356,704 applications, 86 percent came from Louisiana, Mississippi, Texas and Alabama. But 35,539 families were more than 1,000 miles from the Gulf — among the farthest: one in Nome, Alaska, 3,931 miles from the French Quarter and another in Lihue, Hawaii, 4,279 miles away.

Residents of New Orleans, a city that was two-thirds black, seem to have flocked to the nation's African-American population

centers. On average, the applicants came from counties where blacks were 28 percent of the population, more than twice the national average.

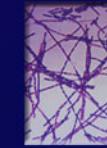
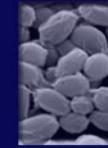
Baton Rouge, La., appears to be temporary home to 10 percent of evacuees, Houston 6.25 percent. But after the top 18 hubs, applicants are spread like the wind that whipped through their old neighborhoods: none of the other 900-plus metropolitan areas has even 1 percent of the total.

Some 4,000 ZIP codes — among them Pocahontas, Miss.; Promise City, Iowa; and Hope, Mich. — had just one applicant.

Need for Radiation Professionals in a large scale radiation emergency

- Monitoring environment and workplace
- Monitoring people
- Supporting operations at:
 - Hospitals
 - Public and special needs shelters
 - Emergency operations centers
 - Community reception centers
 - Etc.
- Communications

What is population monitoring?



Population Monitoring

The process of identifying, screening, and monitoring people for exposure to radiation or contamination with radioactive materials.

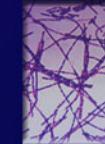
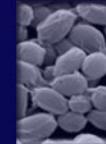


Population Monitoring



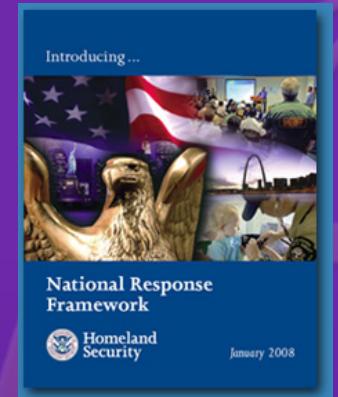
- **Evaluate potentially-affected population for:**
 - Immediate need for medical treatment (both rad and non-rad related)
 - Presence of contamination on body or clothing
 - Intake of radioactive materials
 - Removal of external or internal contamination (decontamination)
 - Radiation dose received and risk of health effects
 - Long-term health effects (needs registry)

Who will conduct population monitoring?



National Response Framework

Nuclear/Radiological Incident Annex



- Decontamination of possibly affected victims is accomplished locally and is the responsibility of State, tribal, and local governments.
- DHHS, through ESF #8 and in consultation with the coordinating agency, coordinates Federal support for external monitoring of people and for population decontamination.
- DHHS assists and supports State, tribal, and local governments in performing monitoring for internal contamination and administering available pharmaceuticals for internal decontamination, as deemed necessary by State health officials.
- DHHS assists local and State health departments in establishing a registry of potentially exposed individuals, performing dose reconstruction, and conducting long-term monitoring of this population for potential long-term health effects.

Population Monitoring

- Local community response effort
 - Public health
 - Emergency management
 - Radiation control
 - Others (e.g., media)
- Federal assistance available but not immediately

Where Does Radiation Expertise Come From?

- State?
- Federal?
- Mutual Aid?
- All Emergencies
Are Local!

Volunteer Radiation Professionals (VRPs)

- Potential pool of tens of thousands who can volunteer in their local communities.
- After a radiation emergency, many are likely to volunteer.
 - Spontaneous Unaffiliated Volunteers (SUVs)
- We need trained affiliated volunteers



Office of the Civilian Volunteer
MEDICAL RESERVE CORPS

Sponsored by: Office of the U.S. Surgeon General

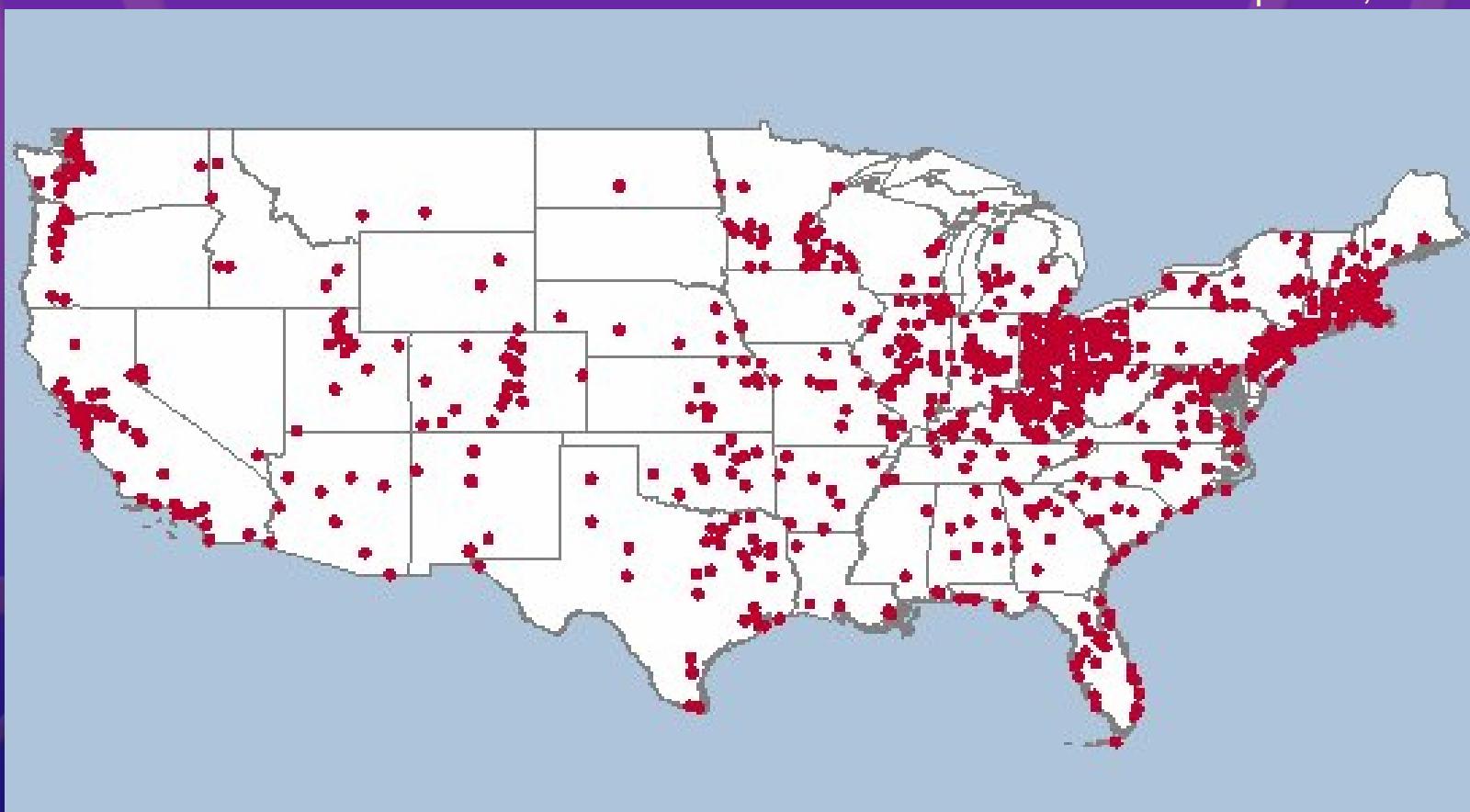
Volunteers Building Strong, Healthy,
and Prepared Communities

Search:

MRC Info	
MRC Units	Volunteers
805	175,226

[Find MRC Units](#) [Learn about Volunteering](#)

As of April 23, 2009



www.medicalreserv корпус.gov

Volunteer Before the Emergency!

- Radiation professionals can join locally-sponsored volunteer programs and state-wide health volunteer registries.
- These volunteers will not be first responders.
- State radiation control program can target volunteer radiation professionals for specialized training and coordination.
- The volunteer experience is rewarding!

“Planners should identify radiation protection professionals in their community and encourage them to volunteer and register in any one of the Citizen Corps or similar programs in their community.”

Planning Guidance for Response to a Nuclear Detonation

**First Edition
January 16, 2009**

**Developed by the Homeland Security Council
Interagency Policy Coordination Subcommittee
for Preparedness & Response to
Radiological and Nuclear Threats**



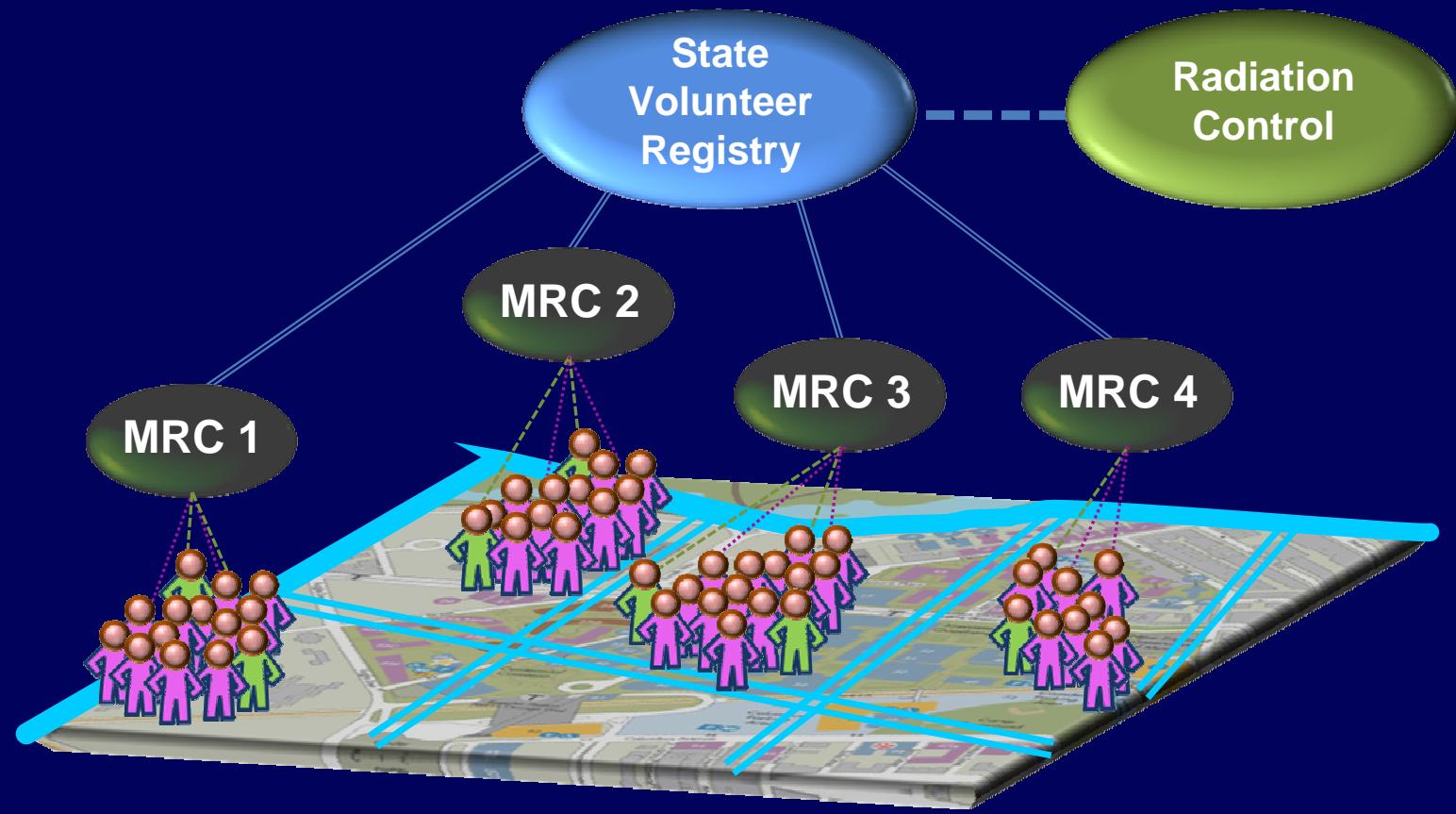


Volunteer Radiation Professionals Roundtable, Atlanta, GA, February 10-11, 2009

Radiation Volunteer Roundtable

Discussion Topics

- What roles and functions can be expected of radiation volunteers?
- Which technical/professional groups should be reached?
- How should radiation volunteers be organized?
- What are the training needs?
- What type of credentialing is necessary?



State boundary

MRC Jurisdiction



Radiation Volunteers



General/Public Health/Medical Volunteers

Current Status

- Resource typing
- Training needs and credentialing
- Funding
- Etc.
- You don't have to wait for volunteering!

www.medicalreservencorps.gov

Thank You!

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