HOW DID SEPTEMBER 11th AFFECT HAZMAT AND WMD RESPONSE?

Jeff Borkowski
HazMat Technician
FDNY
Outline

- What were the demands placed on FDNY?
  - On Sept. 11th / Post-incident / Today

- How did 9/11 change the way we respond to HazMat and WMD incidents?

- How did 9/11 change our training needs?
FDNY Personnel Killed

- Chief of Department
- 1st Deputy Comm.
- 2 Ass’t Chiefs
- 18 Battalion Chiefs
- 20 Captains
- 47 Lieutenants
- 250 Firefighters
- 1 Chaplain
- 2 Paramedics
- 1 Fire Marshall
- Total 343
Haz-Mat 1 was formed on September 22, 1984 to combat the growing number of hazardous materials incidents in the City of New York. From its humble beginning, it quickly became a dedicated and experienced group of individuals. In its relatively short existence, its members have been recognized a number of times for exceptional work at operations. The work of this company and its role in emergency response has been expanded to include Counter-Terrorist Operations and activities using advanced & sophisticated monitoring and detection equipment. This devotion to excellence is due in no small part to the commitment of the men: Colleen McArdle see before you who gave their lives on 9/11/01. May God bless them all.
The Fire Service Effect

• It can happen on our soil!

• “It’s not a question of **if**, but when” has been replaced by “**When** and **where** will it happen again”

• Increased requests for training, equipment and funding
The Fire Service Effect

- Role of fire fighters as first responders
- Lack of Federal support
- Hi-lighted the lack of coordination between federal agencies
FDNY Apparatus Destroyed

- 2 Rescue Trucks
- 3 Squad Engines
- 4 Haz-Mat Support
- 15 Ladder Trucks
- 15 Engines
- 6 Ambulances
- 23 Sedans
- 16 Suburbans
- 7 Support Vehicles
- 91 Total Vehicles
The Fire Service Effect

- HazMat Training is the key to WMD Training
- We need to link equipment and approaches used in HazMat to WMD
- Need for better cross-functional ICS training and practical exercises
The Fire Service Effect

- Level of PPE has changed
- Integration of Law Enforcement tactics in response
- Change in decontamination needs
- Lack of reliable bio detection field instruments
The Fire Service Effect

- Need to consider criminal intent during dispersion
- Fire Fighters need training + administrative support
- Analyze decontamination needs and capabilities
Positive HazMat/WMD Training Changes

- Students now know it can happen and are more attentive
- Increase in cross training
- Increase in cross training between inter-agencies in all levels, local-state-federal
- Federal recognition of need for backfill and administrative support
Positive HazMat/WMD Training Changes

• IAFF / NIEHS Projects
  – Rebuilding lost resources through training
    • Tech
    • CPC/Decon
    • First Responder
  – Administrative support / backfill
    • Without it, training would not be possible!
Training Changes Still Needed

- Faster more direct access to new technologies currently classified by the military and law enforcement for response
- Firefighters do not typically need secret clearance for their work, without it they cannot get access to new technologies
Training Changes Still Needed

- More Operations-level training for first responders to WMD events
- Unified Command training and exercises for interagency command staff members
- Additional training on PPE for responders that will protect them from the effects of WMD agents and materials
Training Changes Still Needed

- More HazMat Technicians
- More HazMat Team Support personnel (CPC/Decon)
- Increased training of medical personnel in WMD PPE for treatment of victims in contaminated zones
Training Changes Still Needed

- Critical Incident Stress
- Now and the future
  - Our recruits have seen things most firefighters will never see
  - How do you handle the rest of your career?
Protecting Emergency Responders

Lessons Learned from Terrorist Attacks

Conference on Personal Protective Technologies

New York City, December 2001
Sept. 11, 2001 - the day our world Changed forever
Why the NYC meeting?

One part of a three-legged approach

- IA with RAND to formulate technology development roadmap
- NYC meeting to hear “lessons learned”
- New IA to evaluate environmental data to support users guidelines
NYC Meeting

**Purpose**
- Document first-hand views on the protection of emergency workers in terrorist attack response
  - PPE performance, availability, and use
  - Training
  - Hazard assessment and communication

**Goals**
- Understand the post-attack environment
- Provide input to PPE research agenda
- Improve safety PPE education and training
Conference Format

Participants:

110+ Responders with first hand experience at the attack sites
- World Trade Center
- Pentagon
- Oklahoma City
- Anthrax incidents

Process:

Panel discussions by service
- Firefighters
- EMTs
- Law enforcement
- Construction & trade services
- Public health specialists
- Federal and state agencies

Plenary Sessions
- Protection Challenges
- Health and Safety Data
- Experience at the Sites
The scale of the terrorism events, their duration, and the dynamic range of hazards they presented required that many emergency responders also take on atypical tasks for which they were insufficiently equipped or trained.

- The consensus among several panels was that unless practices are ingrained before a major incident and the use of equipment and procedures is part of preparedness, responders are unlikely to absorb training fully in the heat of the battle to save lives or to be predisposed to wear PPE as prescribed.
What did we learn?

1. Resources unavailable or used ineffectively
   - Large physical area
   - Multiple & dynamically changing hazards
   - Multiple simultaneous incidents
   - Many responding agencies
   - Acquisition and management of back-up supplies impeded by transportation systems shutdown
   - Communications systems overloaded
   - 1000’s of anthrax calls
   - Potential secondary incidents/devices
What did we learn?

2. Responders abandoned/modified PPE during long duration campaign.

Productivity Diminished

- Equipment is designed for short intervals
- SCBA air bottles lasted for only minutes
- Respirator cartridges clogged
- Batteries need recharging
- Turnout gear heavy, hot, and uncomfortable
- Extended wear caused blisters and fatigue
- Disposable garments tear
- Sustained high physiologic demands
3. Multi-Threat Events

- Large scale scene with diverse response activities
  - Intense fire, falling debris, structure collapse
  - Search, rescue & recovery; security & crime scene;
  - Site stabilization & restoration; employee assistance programs; mortuary; etc.
- Responders faced many additional risks
  - Jet fuel, rubble, dust, toxins,
  - Body parts/fluids, hazardous materials
- Unknowns associated with terrorism
- Risks exacerbated by stress and fatigue
What did we learn?

4. New Roles, New Responders

- Firefighters engaged in non-traditional tasks
- Trades workers thrown onto the front-lines
  - Equipment operators, iron-workers, sanitation, food service
- Off-duty personnel and citizen volunteers on scene

Few agencies sufficiently prepared for “refined” anthrax

- Disaster sites were crime scenes - extensive law enforcement activity
  - PPE supply and training for law enforcement very limited
What are we doing?

- SCBA standards for CBRN completed
- PAPR and APR (full face) standards
- Guidelines with a twist
- Identifying/analyzing databases (RAND)
- End-of-Service-Life research
- Changing standards to promote interchangeable of parts
- Biological protection
What are we doing?

- Decon procedures and guidance
- PAPR and APR (full face) standards
- Guidelines with a twist
- Identifying/analyzing databases (RAND)
- End-of-Service-Life research
- Changing standards to promote interchangeable of parts
- Biological protection
What’s it all mean to you?

- Lighter, more comfortable PPE for long duration operations
- Interchangeable parts
- Cooling systems
- PPE with hydration capabilities
- Combination SCBA/APR units
- Effective eye protection
- PPE as an ensemble
- Multifunctional ensembles (eye, ear, head protection, communication capabilities, sensor readouts)
What’s it all mean to you?

- Integrated PPT technologies
- Responder tracking systems
- Enhanced communications
- Displays
- Size selection to include female and multicultural responders
- Emergency re-supply logistics
- On-site training/materials
- Abrasion resistant, flexible, and bio-proof ensembles
Concluding Observations

- Responders believe they lack the necessary personal protection information, training, and equipment for major disaster responses.
- Strategies for effectively providing needed equipment & training must be explored.
- PPE must provide appropriate balance between responder safety and mission effectiveness.
- Having coordinated personal protection policies, practices, and training are essential for effective successful responses.
- R&D and technology transfer could provide ways to address the problems and trade-offs identified.
Critical Incident Response

Marilyn Knight, M.S.W.
Incident Management Team
Southfield, Michigan

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Critical Incidents
Historical Sources of CISD

- Military Science
- Police and Fire Fighters
- Emergency Medical Services
**Critical Incident**

- an event outside of the range of normal human experience which would be distressing to almost anyone

- any situation where a person feels:
  - overwhelmed by a sense of vulnerability
  - lack of control over the situation

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Critical Incident Situations

- sudden and unexpected
- disrupts one’s sense of control
- shatters assumptions about how the world works
- perception of a life-damaging threat
- distressing to anyone
Types of Critical Incidents

- Natural Phenomena
- Technological (Omission)
- Man-Induced (Commission)
Natural Phenomena

- hurricanes
- earthquakes
- floods
- windstorms
- tornadoes
Work Environment

- fires
- chemical releases
- explosions
- electrocutions
Work Environment

- falls / falling objects
- nuclear
- machinery accidents
- vehicle accidents
Work Trauma

- fatalities
- serious injuries
  - crushing
  - maiming
  - burns
- car or plane wrecks
Threats and Violence

- verbal threats
- assaults
- robbery
- rape
- attempted / actual kidnapping

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Threats and Violence

- bomb threats
- hostage situations
- suicide
- murder
Organizational

- downsizing / layoffs
- plant closings
- criminal indictments
- death of “key” worker or executive
- embezzlement
- mergers
- product tampering

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Crisis Reactions

The Impact of Trauma on Individuals

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Crisis Reactions - Physiological

- Shock
- Numbness
- “Frozen Fright”
- “Fight of Flight” survival response
Crisis Reactions - Physiological

- Body pumps adrenaline
- Body relieves itself of excess fluids
  - perspiration
  - urination / defecation
  - nausea / vomiting
Crisis Reactions - Physiological

- Senses may become “acute”
- Heart rate increases
- Hyperventilation
- Heightened arousal may lead to exhaustion
Crisis Reactions - Emotional

Stage One:

- Shock
- Disbelief
- Denial
- Numbness
Crisis Reactions - Emotional

Stage Two: Impact Stage

Cataclysms of emotions:

- Anger / Rage
- Fear
- Terror
- Grief
Crisis Reactions - Emotional

- Stage Two: Impact Stage
  - Confusion
  - Sorrow
  - Frustration
  - Self-Blame / Guilt
  - Alienation / Withdrawal

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Crisis Reactions - Emotional

Stage Three: Reconstruction of Equilibrium

Emotional “roller-coaster” that eventually becomes balanced
How Traumatic Events may be Re-Experienced:

- Intrusive images or thoughts
- Nightmares
- Flashbacks
- Painful memories
- Intense reactions to “trigger events”
“Trigger Events”

- Sensing something similar that one was acutely aware of during the traumatic event:
  - seeing
  - hearing
  - touching
  - smelling
  - tasting
“Trigger Events”

- Returning to the Worksite where the incident occurred
- “Anniversaries” of the event
- Media articles about similar events
“Trigger Events”

- Proximity of holidays or significant “life events”
- Phases of Criminal Justice Proceedings
  - hearings
  - trials
  - appeals
  - depositions
- identification of assailant

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Recovery Pitfalls

- Need to keep “brave” front
- Suppression of feelings
- Concerns for job security
- Lack of organizational support
- Skepticism about mental health
Signs of Post Traumatic Stress Disorder

- Painful memories of incident
- Nightmares
- Continuously re-experiencing the event
- Numbing of one’s emotions
- Avoiding thoughts or activities associated with the event
- Feeling detached or “apart” from others

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PTSD

- Loss of emotional control
- Intense irritability
- Startle reflexes
- Sleep difficulties
- Loss of sense of
  - safety and security
  - immortality and invulnerability
  - identity

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Issues with Post Traumatic Stress (PTSD)

- Fear of repetition
- Rage at the source
- Self-blame and guilt
- Bereavement and grief
- Fear of symptoms
Psychological Issues

- Conflicts with aggression and alienation
- Embarrassment and shame
- Challenge to self-esteem
- Fear of scrutiny
“The second best decision, quickly made, is better than the best decision never made.”

General Douglas MacArthur
Cost of Delaying Intervention

Thousands of Dollars

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<th>Late Detection</th>
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Friedman, Framer, and Shenker: "Early Response to Posttraumatic Stress." EAP Digest, Sept./Oct
Immediate help may be more effective than extended help at a later time.
CIS Assumptions

- “Normal people” reacting to an abnormal event
- Event is sudden, unpredictable and overwhelming
- Crisis intervention is:
  - rapid
  - active
  - temporary
  - incident specific

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Benefits of On-Site Crisis Team

- Immediate Response to Re-establish Control of Situation
- Sets Expectancy of Recovery
- Shows Loyalty to Employees
- Assesses Severity of Impact on Employees, Company, Customers

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On-Site Crisis Goals

- Provide safety and support
- Ventilation and validation
- Explore personal impact of trauma
- “Normalize” stress reactions
- Predict and prepare
- Suggest coping strategies
On-Site Crisis Goals

- Establish follow-up plan
- Assure that problems are being addressed
- Mobilize peer / group support
- Reduce assumption of uniqueness and abnormality
- Accelerate recovery process
On-Site Crisis Activities

- Establish Crisis Center
- Identify Crisis Team
- Define “At-Risk” Groups
- Organize Debriefing Groups
- Establish Family Support
On-Site Crisis Activities

- Develop Follow-up Plan
- Define Internal / External Resources
- Educate Supervisors, Union on Immediate and Delayed Reactions
- Document Activities
Crisis Communications

- Identify Media Liaison
- Release Statement of Facts
- Establish Rumor Control Hotline
- List Crisis Team Location
- Distribute Stress Handouts

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Crisis Communications

- Publish Schedule of Employee Debriefing Groups
- Release Updates of Injured Employees
- Memorial Biographies
- Define Interim Continuity Plans
Critical Incident Response Formats
Critical Incident Stress Formats

- On-Scene Support
- Defusing
- Demobilization
- Critical Incident Stress Debriefing
- Individual Consults
- Follow-Up Services
The Critical Incident Response Program

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POST INCIDENT RECOVERY

Critical Incident

Criticality Assessment
Incident Notification
Matching and Deployment of Resources
Comprehensive Impact Assessment
Investigations
Containment and Recovery
Follow-up

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# POST-INCIDENT RECOVERY COMPONENT

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<td>Victims Observers</td>
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Worker Re-Entry
Facilitating Worker Re-Entry

- Explore contractual options for re-entry:
  - less-demanding assignments
  - phases-in return schedules
- Identify resources for assisting the worker
- Monitor job performance
- Reasonable accommodation

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Supervisor’s / Employee Representative’s Role During Re-Entry

- Be model for empathy and tolerance
- Be understanding about possible limitations
- Be sensitive to needs and concerns of co-workers and organization
- Monitor for problem indicators
Supervisor’s / Representative’s Role During Re-Entry

- On-going Family Involvement
  - invitations to social functions
  - have supervisors / union members maintain supportive calls, visits with spouse and children
Problem Cases
Problem Cases

- Individual who “causes” injury / death to others
- Traumatized family members
- Supervisor / representative from incident scene
- Severely injured / disabled worker

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The Cost of Caring
“The best deed in the world after creating a human life, is saving a human life.”

Abraham Lincoln
Remember!!

It wasn’t raining when Noah built the Ark.
Thank You

Marilyn Knight, M.S.W.
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Response to Destructive Incidents

OSHA’s experience at the World Trade Center

Richard Mendelson
Area Director
OSHA – Manhattan Area Office
Planning for emergencies

- Conduct a comprehensive assessment

- Consider accidents, fires, medical emergencies, chemicals, severe weather, transportation, utilities, deliberate acts
  - Most likely scenarios
  - Worst-case scenarios

- Implement an **Emergency Action Plan**
Employee training

- Roles & responsibilities
- Threats, hazards, and protective actions
- Notification, warning, and communication
- Proper response
- Train employees:
  - Initially
  - New hires
  - Changes to process, facility, or plan
Important considerations

- Evacuation routes
  - Alternatives
- Muster point
  - Alternatives
- Accountability
- Handicapped individuals
- Visitors and contractors
- Coordination with other tenants
- Practice drills
Contingency plans

- Who’s in charge?
- Call-up lists (kept current? available offsite?)
- Staff morale
- Temporary space
- Resumption of operations
- Telecommunication & information technology
- Administrative functions & files
- Permanent relocation
OSHA’s response role

- Providing technical assistance & support
  - Advice and consultation as safety & health professionals

- Federal Response Plan

- CPL 2.94 - OSHA Response to Significant Events of Potentially Catastrophic Consequences (7/22/91)
OSHA activities at WTC

- Health risk assessment & sampling
- Safety monitoring & PPE compliance
- Respiratory protection & PPE distribution
- Emergency Operations Center staffing
Safety and health hazards

- Hazards associated with initial response
- Hazards associated with long-term recovery operation
- Prediction and identification
- Control and abatement
Challenges

- Operating under incident-command structure
  - FDNY / DDC co-incident commanders
- Uniform services
- Law-enforcement considerations
  - Crime scene
- Coordination and logistics
- Volunteers, bereaved, sightseers, celebrities
  - Perimeter security
  - Access control
Special considerations

- Risk communication
- Critical incident stress
- Weather
- Fatigue
- Unknowns
Safety and health management

- Partnership agreements
- Environmental Safety & Health Plan
- Site safety & health infrastructure
- Safety and health meetings
- Standing and ad-hoc committees
- Employee involvement
Success story: Joint Crane Inspection Task Force

- Early October:
  - Dozens of cranes on site
  - Numerous hazard interventions
- Task force launched 10/12, on-site for 3 weeks
  - 17 cranes inspected in first three days
  - 222 pieces of rigging inspected in next four days
- Follow-up: three additional one-week inspections (November, December, March)
- Incidence of crane-related hazards greatly reduced
Success story: Confined space entry #1

- Area below 6WTC designated a “permit-required confined space”
- Stewards raised concerns
- Meeting held with all parties
- Joint walk-through of space before work began
- Management adopted all suggestions
Success story: Confined space entry #2

- Alleged CO overexposure reported under 5WTC
- Ad-hoc committee reviewed situation, brainstormed possible hazards and controls
- Committee conducted walk-through of entire area
- CO determined not to be a cause
- General safety & health improvements suggested
- Suggestions implemented
Success story: Evacuation drill

- Suggested by shop-stewards
- Committee formed to work out logistics
- Two drills held:
  - 6WTC confined space
  - Southern portion of pit
- Deficiencies were noted for correction
- Overall, drills were successful
Purpose

Provide a framework

Lessons learned

Spark discussion

Help set the stage for breakouts
Topics

"Thinking about the (formerly) unthinkable"

Similarities

Differences

Military experience

Lessons learned lately
The Unthinkable

"History: of very limited use"

First responders v. skilled support personnel

Who is in charge, and when?

Who has the knowledge?

Who has the equipment?

Who has the skills?

When is the job done?
Similarities: Biological v. Chemical Weapons

- Often very limited in area first affected
- More effective inside structures
- Personal protective equipment
- Poor real time monitoring capability
Military Experience

Hard to obtain

Of limited use in attacks on civilians

Need continuing access (with safeguards)
Lessons Recently Learned

“...No single reliable comprehensive source of either authoritative expertise or wisdom...”

Uncertainties abound

“...Inherently multi-disciplinary...”

Create/maintain your network
Suggestions for Next Steps

Recommendations from the breakout groups should be as specific as possible.

- Actions/activities of awardees
- Actions/activities of Clearinghouse
- Actions/activities of NIEHS WETP
- Other actions/activities
National Contingency Plan (NCP)

- National Oil and Hazardous Substances Pollution Contingency Plan
- 1968 – Clean Water Act
  1967 Oil Spill – Torrey Canyon – 37 million gallons of crude oil
  (Alaska Exxon Valdez - 11 million gallons of crude oil)
- First comprehensive system of accident reporting, spill containment, and cleanup
- Established a response headquarters, national reaction team, and regional reaction teams
  - precursors to today’s NRT and RRTs.
NCP Members

- Plus state and local representatives

Six of these agencies were designated as key Federal CT agencies – DOJ/FBI, FEMA, EPA, DOD, HHS, DOE
Agencies

- Environmental Protection Agency
- U.S. Coast Guard
- Department of State
- Department of Health and Human Services
- Department of Defense
- General Services Administration
- Department of Energy
- Department of Agriculture
- Department of Labor/Occupational Safety and Health Administration

Six of these agencies were designated as key Federal CT agencies – DOJ/FBI, FEMA, EPA, DOD, HHS, DOE
Agencies, cont’d.

- Department of Transportation
- Department of the Interior
- Department of Justice
- Department of Commerce/National Oceanic and Atmospheric Administration
- Federal Emergency Management Agency
- Department of the Treasury
- Nuclear Regulatory Commission

Six of these agencies were designated as key Federal CT agencies – DOJ/FBI, FEMA, EPA, DOD, HHS, DOE
National Response Team (NRT)

- NRT does NCP planning and coordination
- NRT Chair: USEPA
- NRT Vice Chair: USCG
Regional Response Teams (RRTs)

- Established by NCP to ensure regional response actions
- Made up of same Federal agencies as NRT but at a regional level
- Coordinates assistance and advice to the Federal On-Scene Coordinator (OSC)
National Response Team

Regional Response Teams
Response Assets

- Federal On-Scene Coordinators
- Regional Response Teams
- EPA Removal Managers
- Response contractor support
- Special Forces
Special Forces

- EPA’s Environmental Response Team (ERT)
- EPA’s Radiological Environmental Response Team (RERT)
- NOAA and EPA Scientific Support Coordinator (SSC)
- USCG National Strike Force (NSF)
- USCG District Response Groups (DRG)
- USCG Public Information Assist Team (PIAT)
- Navy Supervisor of Salvage (SUPSALV)
- Radiological Assistance Teams (RATs)
Federal OSC’s Role

- Federal OSCs play a pivotal role in a response. They ensure:
  a. that the responsible party (RP) cleans up the spill or release.
  b. immediate access to technical assistance and cleanup contractors if the RP does not adequately respond.
Federal OSC’s Role, cont’d.

- Direct/coordinate, and/or provide technical assistance to all response efforts at site
- Maintain final decision-making authority for protecting health and safety
- Ensure access to information by other interested relevant parties
What is the NCP’s Involvement in Counter Terrorism?

Response to Chemical Terrorism

Response to Radiological Terrorism

Response to Biological Terrorism

National Response System

NBC Domestic Preparedness Training Program
Federal Response Plan

• Issued in 1992, the FRP describes the mechanism and structure by which the Federal Government mobilizes to address the consequences of any major disaster or emergency that overwhelms the capabilities of State and local governments.

• Federal assistance is available to:
  1. save lives
  2. protect public health, safety, and property
  3. alleviate damage and hardship
  4. reduce future vulnerability
Letter of Agreement

• By signing this letter of agreement, Federal departments and agencies commit to:
  * Support the FRP concept of operations and carry out their assigned functional responsibilities.
  * Cooperate with the Federal Coordinating Officer appointed by the President.
  * Make maximum use of existing authorities to reduce disaster relief costs.
  * Form partnerships with counterpart State agencies, voluntary organizations, and the private sector to take advantage of all existing resources.
  * Develop headquarters and regional planning, exercise, and training activities.
Signatories to the Federal Response Plan

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<td>James A. Witt</td>
<td>Director Federal Emergency Management Agency</td>
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<tr>
<td>Lawrence A. Davison</td>
<td>Deputy Administrator General Services Administration</td>
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<tr>
<td>Alcee L. C. Jong</td>
<td>Deputy Secretaty General Administration and Management Department of Labor</td>
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<td>James E. McElroy</td>
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<td>Shelley Stallman</td>
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FRP Actions

- State and local responders *handle* most disasters and emergencies
- Federal Government is asked for assistance to assist when disaster *exceeds* state or local capabilities
- It employs a multi-agency incident command system (ICS) --- based on fire and rescue ICS
- Provides for other Federal emergency operations, such as the NCP
- It subdivides major disasters/emergencies into twelve emergency support functions (ESFs)
## Emergency Support Functions (ESF)

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<thead>
<tr>
<th>ESF</th>
<th>Primary Agency</th>
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<td>1. Transportation</td>
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<td>4. Firefighting</td>
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<td>7. Resource support</td>
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## Emergency Support Function Designation Matrix

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**Key:**
- **P** = Primary Agency: Responsible for Coordination of the ESF
- **S** = Support Agency: Responsible for Supporting the Primary Agency
Signatories to the Federal Response Plan

- NCP & ESF Primary
- ESF Primary only
- NCP only
Emergency Support Function #9
(Urban Search & Rescue Annex)

Participating agencies: FEMA is the primary agency with the following as the supporting agencies:

- Dept. of Agriculture
- Dept. of Health & Human Services
- Agency for International Development
- Dept. of Defense
- Dept. of Justice
- Dept. of Labor
- National Aeronautics & Space Administration
ESF #9  Purpose & Scope

- Deploy National Urban Search & Rescue (US&R) Response Units.
- Provide lifesaving assistance such as:
  * Locating and extracting victims
  * Providing on-site medical treatment
<table>
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ESF #10  Purpose & Scope

- Provide Federal support to releases of hazardous materials
  
  * Hazardous materials is defined to include:
    - Oil
    - CERCLA hazardous materials
    - Weapons of mass destructions

- The ESF #10 response is carried out under the NCP
Conclusions

• Title is misleading

• Until September 11, 2001, FRP response activities fit nicely into ESF activities’ rules of engagement:
  - floods
  - hurricanes
  - oil spills
  - chemical spills
  - etc.
Conclusions, cont’d.

• The September 11, 2001 attacks on the Pentagon and the World Trade Center showed that the unimaginable is possible – more than one or two ESF may be involved.
Conclusions, cont’d.

• As the NCP has been refined since 1968, so will the FRP.

  September 11, 2001 has demonstrated the need for:

* Better communication
* Well established chain of command
* Good inter-agency coordination
For more information:

WWW.NRT.ORG
WWW.EPA.GOV/CEPPO
WWW.ERT.ORG