

McKinsey & Company

# Improving NYPD Emergency Preparedness and Response



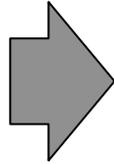
August 19, 2002

This report was prepared by McKinsey & Company based upon information provided by the New York Police Department.

# CONTEXT

- The attacks of September 11 were unprecedented. The response of the New York Police Department was remarkable and heroic and contributed to the saving of countless lives. 23 members of the NYPD gave their own lives on that day. Nothing in this report is intended to detract from the courageous actions of them, the Department, or other responders
- The extraordinary events of September 11 have caused a paradigm shift in the way U.S. and local law enforcement must contemplate emergency preparedness and response. We must now be ready for contingencies that seemed virtually impossible just months ago. It is within this context that we have undertaken this review
- The purpose of this review is to explore what lessons the NYPD can learn from the events of September 11. It is not a critique of the individual actions of NYPD personnel, but rather an attempt to identify potential improvement opportunities in order to better prepare the Department for future emergencies
- The NYPD asked McKinsey to facilitate this review as an objective fact gatherer and observer, *not* as an expert in emergency response. In the main, it is a synthesis of observations and opinions from within the Department, drawn from interviews, surveys, and documentary records

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- **Executive summary**
- Project description
- Findings
  - Review of NYPD objectives and how well they were achieved on 9/11
  - Assessment of NYPD's instruments of response and how well they were brought to bear
  - Improvement opportunities for the future
- Next steps
- Appendices
  - Appendix A: Chronology of key events
  - Appendix B: Survey findings

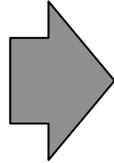
# EXECUTIVE SUMMARY

- **Focus.** This report is the result of a four-month collaboration between McKinsey & Co. and the New York Police Department. Our focus has been to conduct an internal review of the NYPD's response to the attacks of September 11, and to determine what lessons the department can learn to improve its disaster preparedness and response capabilities going forward
- **Sources of data.** Our findings are based on over 100 interviews conducted with members of the service of all ranks and virtually all commands, as well as a series of surveys administered to over 700 officers (including many who responded on the morning of September 11). In addition, we were granted access to documentation, including, for example, operational logs, precinct disaster plans, and tapes of radio transmissions
- We have examined the events of September 11 through two lenses:
  - **Objectives.** The first pertains to the objectives of the NYPD during a disaster, which we have defined as Rescue, Transportation, Site Security, Investigation, and Citywide Security. We further subdivide each of these categories into a total of 16 specific tasks on 9/11, such as the rescue of civilians prior to the collapse of the towers (part of Rescue), on-site traffic management (part of Transportation), and perimeter security (part of Site Security). We find that the Department performed 10 of the 16 tasks effectively, while six presented significant challenges

## EXECUTIVE SUMMARY (CONTINUED)

- **Instruments.** The second area relates to the “instruments” at the NYPD’s disposal to achieve these objectives. We have defined these instruments as Operational Command, Communications, Personnel, Logistics/equipment, Intelligence, Training, and Planning. Largely as a result of the unprecedented nature of the attacks, we found that each of these instruments posed challenges in the NYPD’s response capabilities to varying degrees. This review concentrates on those instruments that exhibited deficiencies in order to identify improvement opportunities and make the NYPD better prepared for future emergencies
- **Improvement opportunities.** Our assessment of response objectives and instruments led to a list of improvement opportunities. We have identified twenty such opportunities, six of which we believe to be critical and worthy of immediate attention:
  - A clearer delineation of roles and responsibilities of NYPD leaders
  - Better clarity in the chain of command
  - Radio communications protocols and procedures that optimize information flow
  - More effective mobilization of members of the service
  - More efficient provisioning and distribution of emergency and donated equipment
  - A comprehensive disaster response plan, with a significant counter-terrorism component
- **Next steps.** The Department will develop and implement specific action plans to address each of the areas outlined in this report through the creation of a series of task forces, which will turn the opportunities we have identified so far into actions. We further propose that, while these internal improvement opportunities are being addressed, the NYPD (and the City) must address the issue of coordination among the various federal, state, and local agencies in both planning for, and responding to, catastrophic emergencies

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# FOCUS OF STUDY

## Focus of study

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- Internal review of the NYPD's response on 9/11
- Assessment of the NYPD's primary objectives in responding to a large disaster
- Analysis of the various means of response available to the NYPD to achieve its objectives
- Identification of improvement opportunities worthy of action by the Department to improve its response to future emergencies

## Out of scope

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- Improvements the NYPD and various other federal, state, and local agencies should undertake to improve interagency coordination and collaboration in planning for and responding to emergencies (this must be addressed now that the necessary internal improvements are understood)
- Scenario planning, including predicting various types of terrorist incidents that could take place in New York
- Detailed, exhaustive, or investigative account of every aspect of 9/11
- Best practices or specific recommendations for NYPD actions (this will be addressed by NYPD task forces)

# INFORMATION SOURCES

## Interviews

## Surveys

## Documentary/ audiovisual records

### Ranks Covered

|                       |    |
|-----------------------|----|
| Civilian leadership   | 7  |
| Chiefs                | 31 |
| Inspectors            | 19 |
| Captains              | 19 |
| Lieutenants/Sergeants | 19 |
| Police Officers       | 14 |

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|              |            |
|--------------|------------|
| <b>Total</b> | <b>109</b> |
|--------------|------------|

### Commands Covered

|                       |    |
|-----------------------|----|
| Patrol Services       | 19 |
| SOD                   | 22 |
| Detectives            | 7  |
| OCCB                  | 13 |
| Housing               | 2  |
| Transit/TCD           | 8  |
| Operations Division   | 8  |
| Communications        | 4  |
| Intelligence          | 2  |
| JTTF                  | 3  |
| Disorder Control Unit | 4  |
| Other                 | 17 |

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|              |            |
|--------------|------------|
| <b>Total</b> | <b>109</b> |
|--------------|------------|

# INFORMATION SOURCES

Interviews

Surveys

Documentary/  
audiovisual  
records

## Survey group

## Objective

- | Survey group  | Objective  |
|---|--|
| <p><b>1. NYPD field personnel:</b><br/>Random sample of Police Officers through Lieutenants</p> | <ul style="list-style-type: none"> <li>• Acquire better understanding of location and movement of force on 9/11 and collect opinions on response and preparedness</li> </ul> |
| <p><b>2. First responders:</b><br/>MOS who responded to disaster area on 9/11</p>               | <ul style="list-style-type: none"> <li>• Supplement findings from field survey with observations from first responders</li> </ul>  |
| <p><b>3. Special Operations Division:</b> ESU, Harbor, and Aviation Units</p>                   | <ul style="list-style-type: none"> <li>• Gain insight into views of specialized disaster responders</li> </ul>   |

# INFORMATION SOURCES

## Interviews

## Surveys

## Documentary/ audiovisual records

### **Survey of NYPD documents relating to 9/11**

- Radio transcripts
- Operations log
- Deployment logs
- WTC briefings
- Criminal Justice Bureau report
- SWAMP site maps
- Incident reports by miscellaneous units

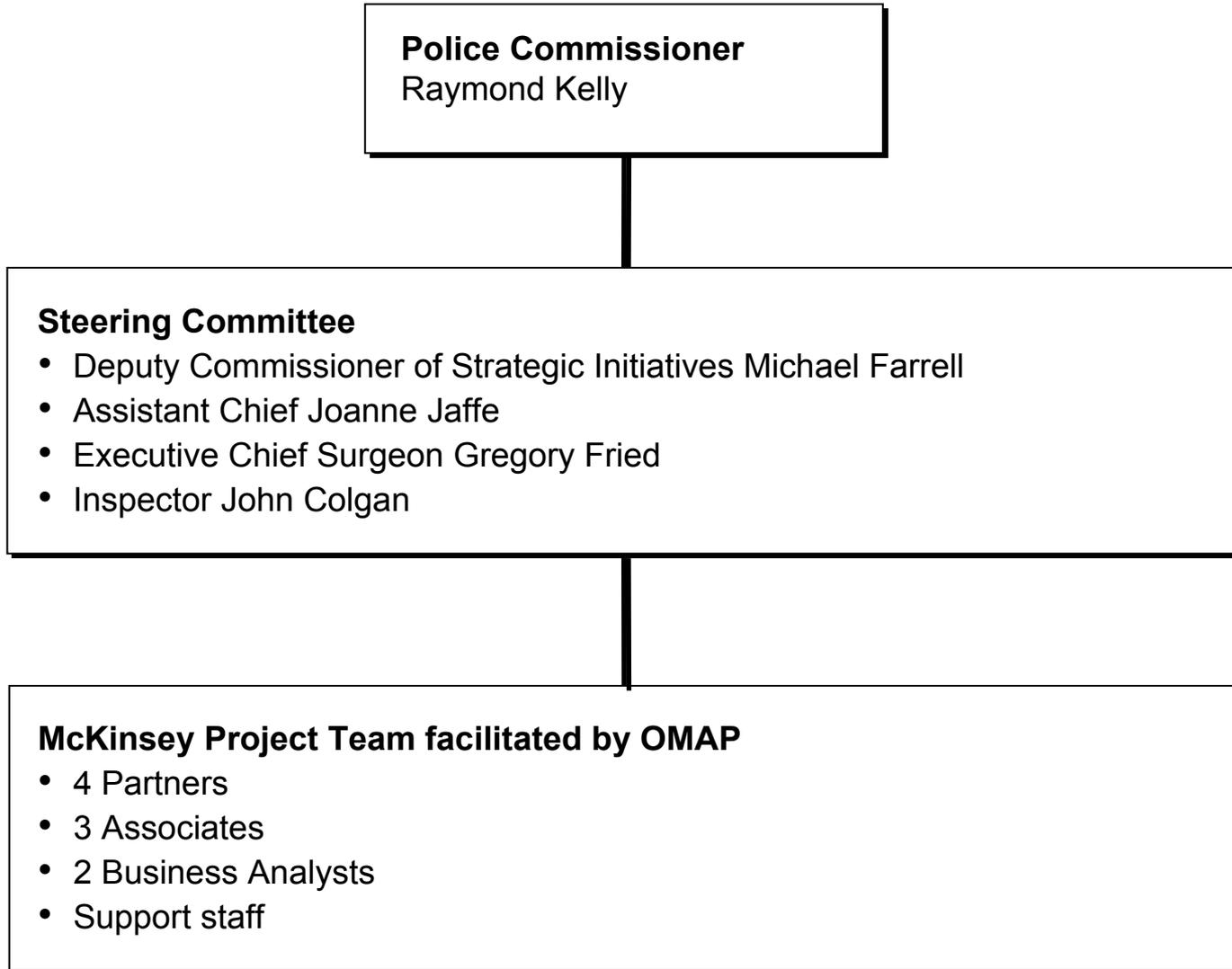
### **NYPD emergency response plans and procedures**

- Patrol Guide
- Disorder Control Guidelines
- Training manuals
- Precinct disaster plans
- Citywide Security Assessment Plan

### **Audiovisual sources relating to 9/11**

- Tapes of NYPD radio transmissions
- 911 calls
- Video footage of incident

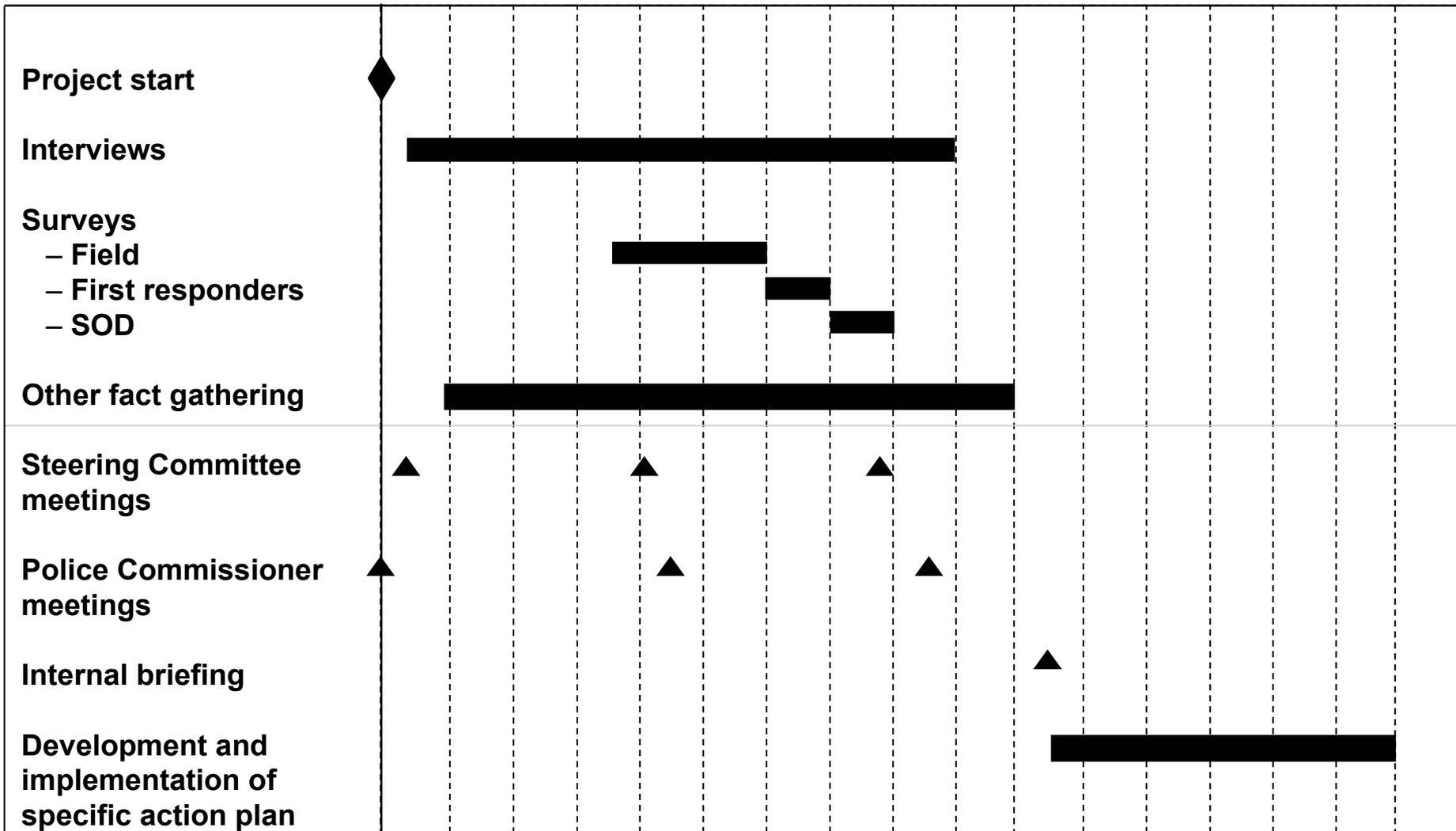
# PROJECT STRUCTURE



# TIMING

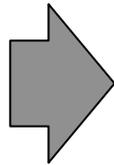
2002

| March | April |   | May |    | June |    | July | August |   | September |   |    |   |    |    |
|-------|-------|---|-----|----|------|----|------|--------|---|-----------|---|----|---|----|----|
| 4     | 18    | 1 | 15  | 29 | 13   | 27 | 10   | 24     | 8 | 22        | 5 | 19 | 2 | 16 | 30 |



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# FIVE KEY EMERGENCY OBJECTIVES

**Rescue**



**Transportation**



**Site Security**



**Investigation**



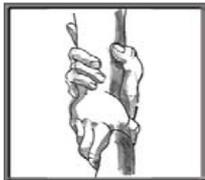
**Citywide Security**



- The NYPD has never before stated its objectives in a large-scale disaster. Many leaders of the Department indicated that they operate primarily on instinct and experience during an emergency rather than according to a prioritized or structured set of objectives
- However, we found that virtually all of the NYPD's activities during the response could be categorized according to five primary objectives: Rescue, Transportation, Site Security, Investigation, and Citywide Security (we define each of these areas on the following page)
- We further believe that using this framework could improve the efficiency of the Department's response in the future

# NYPD EMERGENCY OBJECTIVES

## Rescue

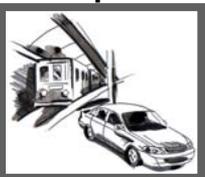


## Relevant tasks to September 11

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- Pre-collapse rescue of civilians in and around WTC
- Post-collapse search for and rescue of survivors
- Evacuation of all non-emergency personnel from southern Manhattan

## Transportation



- Maintenance of on-site traffic access for emergency vehicles
- Identification and clearance of off-site routes for emergency vehicles
- Management of citywide traffic flow
- Evacuating and securing subway system

## Site Security



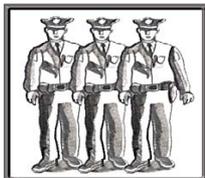
- Establishing and maintaining inner and outer perimeters
- Policing immediate area of disaster scene
- Assessing and managing risks of hazardous materials and secondary attacks at incident site

## Investigation



- Collecting evidence relevant to attack
- Identifying victims and compiling missing persons list
- Apprehending suspects connected to attack

## Citywide Security



- Protecting and evacuating sensitive locations around the city
- Assessing and preventing further terrorist threats to the city
- Maintaining basic police functions and reducing fear throughout the city

# RESCUE



*On 9/11, the NYPD rescue function consisted of three primary components: the rescue of civilians from inside the towers prior to the building collapses, the post-collapse search for survivors, and the evacuation of civilians from southern Manhattan. We found that the Department performed the pre-collapse rescue and evacuation of civilians effectively; however, the post-collapse search for survivors proved extremely risky given the lack of equipment, training, and supervision among the hundreds of responders.*

## Tasks

## Assessment

- | Tasks   | Assessment   |
|---|--|
| <ul style="list-style-type: none"> <li>• Pre-collapse rescue of civilians in and around WTC</li> </ul>                | <ul style="list-style-type: none"> <li>• ESU and other first responders responded to site at 0852 hours and effectively carried out rescue operations in WTC complex               <ul style="list-style-type: none"> <li>– 5 ESU teams deployed into buildings and plaza; sixth team prepared for helicopter rescue (which was ultimately deemed impossible)</li> <li>– 40 ESU personnel on site prior to collapse of WTC2</li> <li>– Many non-ESU MOS also assisted in pre-collapse rescue</li> </ul> </li> <li>• Department demonstrated strong discipline, evidenced by measured response</li> </ul> |
| <ul style="list-style-type: none"> <li>• Post-collapse search for and rescue of survivors</li> </ul>                  | <ul style="list-style-type: none"> <li>• Hundreds of untrained, under-equipped, and unsupervised MOS (both on- and off-duty) formed bucket brigades on site which, while admirable, exposed large numbers to high level of risk</li> <li>• Estimated 600-700 NYPD officers searched for survivors each day for several weeks following attacks</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Evacuation of all non-emergency personnel from southern Manhattan</li> </ul> | <ul style="list-style-type: none"> <li>• Thousands of civilians calmly and rapidly evacuated northwards, across bridges and by Harbor Unit boats and other vessels               <ul style="list-style-type: none"> <li>– As many as 5,000 civilians evacuated by Harbor Unit to New Jersey and Staten Island</li> </ul> </li> </ul>   |

# TRANSPORTATION



*The transportation function had four components on 9/11: the maintenance of on-site access for emergency vehicles, the clearance of off-site routes for emergency vehicles, the management of citywide traffic, and the protection of the subway system. The NYPD performed effectively in all but the first of these areas. Severe congestion around the incident site – particularly from emergency vehicles – could have severely hampered the rescue effort had more survivors been located.*

## Tasks

## Assessment

- | Tasks  | Assessment   |
|--|--|
| <ul style="list-style-type: none"> <li>• Maintenance of on-site traffic access for emergency vehicles</li> </ul>           | <ul style="list-style-type: none"> <li>• NYPD unable to prevent severe congestion caused by large number of emergency vehicles parked close to site               <ul style="list-style-type: none"> <li>– Debris and abandoned/destroyed vehicles severely hindered movement around scene</li> </ul> </li> <li>• Traffic personnel mobilized at Canal St. with 700-800 officers assigned daily to traffic control around disaster zone</li> </ul> |
| <ul style="list-style-type: none"> <li>• Identification and clearance of off-site routes for emergency vehicles</li> </ul> | <ul style="list-style-type: none"> <li>• Major routes, including bridges and tunnels, opened quickly to emergency vehicles leading both to WTC and area hospitals</li> <li>• Traffic Management Center worked effectively with Aviation Unit and Communications Division to notify responders of best routes to WTC and mobilization points</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Management of citywide traffic flow</li> </ul>                                    | <ul style="list-style-type: none"> <li>• Traffic around the city well managed under chaotic circumstances</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Evacuating and securing subway system</li> </ul>                                  | <ul style="list-style-type: none"> <li>• Subway system quickly emptied after attack and effectively used to assist evacuation of lower Manhattan</li> <li>• Transit Bureau rapidly deployed security personnel to subway to aid in evacuation and protect transit system from attack</li> </ul>  |

# SITE SECURITY



*The security of the incident site itself is critical to an effective response. On 9/11, this objective had three main components: the maintenance of inner and outer security perimeters, policing the disaster zone, and managing secondary attack risks and hazardous materials within the site itself. Each of these areas presented challenges – particularly the securing of perimeters around the site, which took days to accomplish, and the management of on-site risks, which were not made a priority as the rescue effort was pursued.*

## Tasks

## Assessment

- | Tasks  | Assessment   |
|--|--|
| <ul style="list-style-type: none"> <li>Establishing and maintaining inner and outer perimeters</li> </ul>                                    | <ul style="list-style-type: none"> <li>Due to inconsistent control of access and absence of effective credentialing system, perimeter security not adequately established, allowing large numbers of unnecessary personnel to enter site               <ul style="list-style-type: none"> <li>– Effective credentialing system and portable fencing not put into place until 9/16</li> </ul> </li> <li>Systematic search of buildings surrounding WTC site began 4-5 days after attack and was not complete until months later</li> </ul>  |
| <ul style="list-style-type: none"> <li>Policing immediate area of disaster scene</li> </ul>  | <ul style="list-style-type: none"> <li>NYPD unable to fully safeguard property around site. Six looting arrests made on 9/11; 54 arrests through 10/11</li> </ul>  |
| <ul style="list-style-type: none"> <li>Assessing and managing risks of hazardous materials and secondary attacks at incident site</li> </ul> | <ul style="list-style-type: none"> <li>Risk of secondary attack not made a priority as rescue effort vigorously pursued               <ul style="list-style-type: none"> <li>– Leadership unclear about how to acquire appropriate resources (e.g., U.S. military air support) to defend against additional attacks</li> <li>– ESU team prepared for tactical operation in event of subsequent ground attack</li> </ul> </li> <li>Heavy particulate asbestos found at site within hours; however, freon, cadmium, and other hazardous materials identified at landfill weeks later, posing some risks to responders</li> </ul> |

# INVESTIGATION



*The investigation itself consisted of three areas: evidence collection, victim and missing person identification, and the apprehension of suspects. In fact, the investigative aspect of the response was primarily given over to federal law enforcement, although where the NYPD did play a significant role (e.g., establishment of morgues, compilation of missing persons list), it performed effectively.*

## Tasks

## Assessment

- | Tasks  | Assessment   |
|--|--|
| <ul style="list-style-type: none"> <li>• Collecting evidence relevant to attack</li> </ul>                 | <ul style="list-style-type: none"> <li>• Evidence collection appropriately given low priority on 9/11 but vigorously pursued in the following days               <ul style="list-style-type: none"> <li>– FBI assumed jurisdiction over investigation when attacks determined to be terrorism (within minutes of second strike)</li> <li>– Evidence at WTC site collected and recorded by crime scene investigators, detectives, police officers, FBI and Medical Examiner personnel</li> <li>– Fresh Kills landfill designated as evidence collection site by 9/12</li> </ul> </li> </ul> |
| <ul style="list-style-type: none"> <li>• Identifying victims and compiling missing persons list</li> </ul> | <ul style="list-style-type: none"> <li>• Temporary morgue established at Pier 94 by 1252 hours, and identification of bodies well organized</li> <li>• Compilation of missing persons list complicated by involvement of multiple agencies, leading to over 16,000 missing person reports</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Apprehending suspects connected to attack</li> </ul>              | <ul style="list-style-type: none"> <li>• Intelligence Division and Detective Bureau ably assisted federal investigation into attack, although could have been given greater role</li> </ul>  |

# CITYWIDE SECURITY



*Maintaining order around the rest of the city is a critical aspect of the response to a large disaster, generally consisting of protecting sensitive locations, preventing further terrorism, and maintaining basic police functions around the city. In each of these areas the Department performed effectively, though plans called for coverage of an unrealistic number of sensitive locations, of which only 13% received additional protection.*

## Tasks

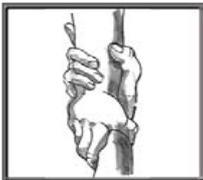
## Assessment

- | Tasks  | Assessment   |
|--|--|
| <ul style="list-style-type: none"> <li>• Protecting and evacuating sensitive locations around the city</li> </ul>            | <ul style="list-style-type: none"> <li>• Emergency plans called for coverage of unrealistic number of sensitive locations (2,600+) but key locations (approximately 350) were quickly protected and/or evacuated               <ul style="list-style-type: none"> <li>– Key sites quickly evacuated including City Hall (0905 hours), United Nations (0915 hours), and Empire State Building (0918 hours)</li> </ul> </li> <li>• Checkpoints quickly established at all bridges and tunnels</li> </ul> |
| <ul style="list-style-type: none"> <li>• Assessing and preventing further terrorist threats to the city</li> </ul>           | <ul style="list-style-type: none"> <li>• NYPD lacked systematic intelligence and threat assessment function and had difficulty assessing risk of further terrorist attack in weeks after 9/11               <ul style="list-style-type: none"> <li>– Heightened threat level maintained for several months following attack</li> </ul> </li> </ul>   |
| <ul style="list-style-type: none"> <li>• Maintaining basic police functions and reducing fear throughout the city</li> </ul> | <ul style="list-style-type: none"> <li>• No significant problems with basic police functions across city (e.g., crime levels fell sharply after 9/11)</li> <li>• NY State Police and other jurisdictions were used to supplement citywide coverage</li> <li>• 911 operations at Metrotech able to handle 75% increase in call volume on 9/11</li> </ul>  |

# SUMMARY OF EMERGENCY OBJECTIVES

Response shortfalls in bold

## Rescue



### Relevant tasks to September 11

- Pre-collapse rescue of civilians in and around WTC
- **Post-collapse search for and rescue of survivors**
- Evacuation of all non-emergency personnel from southern Manhattan

## Transportation



- **Maintenance of on-site traffic access for emergency vehicles**
- Identification and clearance of off-site routes for emergency vehicles
- Management of citywide traffic flow
- Evacuating and securing subway system

## Site Security



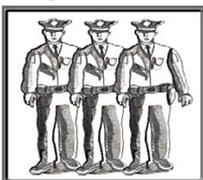
- **Establishing and maintaining inner and outer perimeters**
- **Policing immediate area of disaster scene**
- **Assessing and managing risks of hazardous materials and secondary attacks at incident site**

## Investigation



- Collecting evidence relevant to attack
- Identifying victims and compiling missing persons list
- Apprehending suspects connected to attack

## Citywide Security

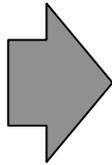


- Protecting and evacuating sensitive locations around the city
- **Assessing and preventing further terrorist threats to the city**
- Maintaining basic police functions and reducing fear throughout the city

- The NYPD performed 10 out of the 16 tasks effectively
- There were some shortfalls, primarily in the areas of:
  - Post-collapse rescue
  - On-site traffic
  - Perimeter security
  - Policing the disaster scene
  - Secondary attack/hazard management
  - Citywide threat assessment

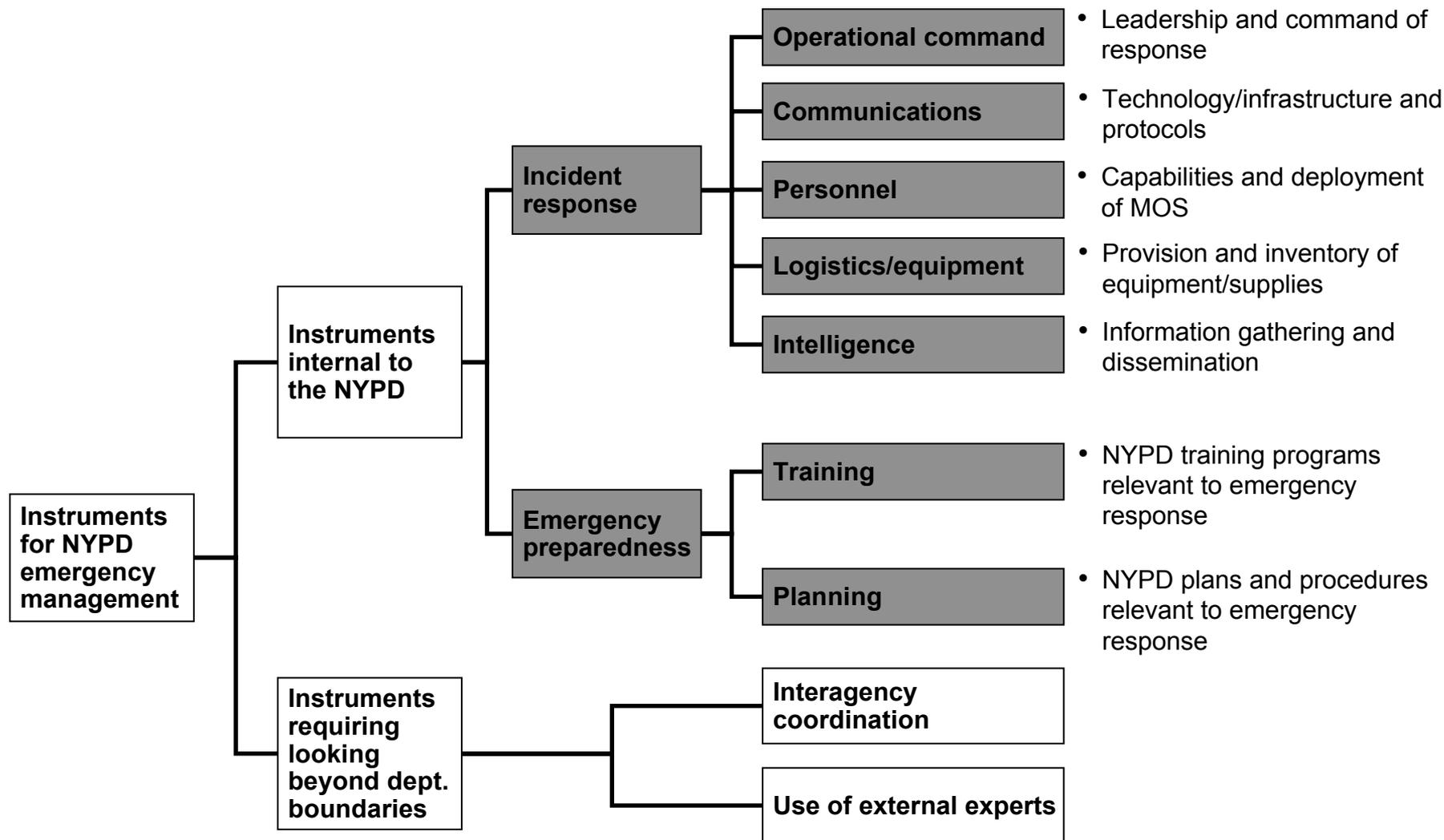
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# INSTRUMENTS AVAILABLE TO THE NYPD TO PREPARE FOR AND RESPOND TO EMERGENCIES

 Focus of study



# ALL OF THESE INSTRUMENTS HAD SUCCESSES AND FAILURES ON 9/11

- The extraordinary events of September 11 almost certainly would have pushed the limits of any conceivable set of response instruments at the NYPD's disposal. Given that, it is perhaps not surprising that almost every one of the response instruments faced challenges
- Many of the deficiencies were due to the unprecedented nature and scale of the events of 9/11; some were clearly unavoidable and some highlighted potential areas for improvement
- While there were a number of successes, this review concentrates on those instruments that exhibited shortfalls in order to identify improvement opportunities and make the NYPD better prepared for the future

# INSTRUMENTS FOR EMERGENCY MANAGEMENT – OPERATIONAL COMMAND

## NYPD emergency instruments

| Operational Command  | Components  | Performance on 9/11  |
|----------------------|---|--|
| Communications       | <ul style="list-style-type: none"> <li>• Strategic direction</li> </ul> | <ul style="list-style-type: none"> <li>• Perceived lack of a single strong operational leader commanding response</li> <li>• Unclear roles and responsibilities among some senior leadership</li> <li>• Large proportion of NYPD leadership responded to incident site and were therefore at risk</li> </ul>   |
| Personnel            | <ul style="list-style-type: none"> <li>• Chain of command</li> </ul>    | <ul style="list-style-type: none"> <li>• Absence of clear command structure and direction on 9/11 and days after, leading to inadequate control of NYPD response (over 25% of MOS unsatisfied with supervision on 9/11)</li> <li>• Many field commanders operated independently of one another and of higher levels of command</li> </ul>  |
| Logistics/ Equipment |   |  |
| Intelligence         | <ul style="list-style-type: none"> <li>• Command Center</li> </ul>      | <ul style="list-style-type: none"> <li>• Command Center at 1PP was underused by field commanders and could not effectively track and deploy NYPD resources</li> </ul>  |
| Training             | <ul style="list-style-type: none"> <li>• Command posts</li> </ul>       | <ul style="list-style-type: none"> <li>• Confusion caused by number and continual movement of command posts on morning of 9/11</li> <li>• Several ad hoc forward command posts set up on site, but no clearly identifiable, main command post established and maintained at a single location to control NYPD response</li> <li>• Command post staff roles not systematically fulfilled</li> </ul> |
| Planning             |   |  |

# INSTRUMENTS FOR EMERGENCY MANAGEMENT – COMMUNICATIONS

## NYPD emergency instruments

Operational Command

**Communications**

Personnel

Logistics/ Equipment

Intelligence

Training

Planning

### Components

### Performance on 9/11

- 
- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Radio infrastructure</li> </ul>             | <ul style="list-style-type: none"> <li>• Radio technology did not fail</li> <li>• Less than 15% of MOS experienced radio communications failure (dead air) on 9/11</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Radio usage protocols</li> </ul>            | <ul style="list-style-type: none"> <li>• Radios suffered from clutter in early phase of incident, and only 42% of MOS could clearly decipher traffic</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Landlines and cellular equipment</li> </ul> | <ul style="list-style-type: none"> <li>• MOS highly reliant on cell phones, which were mostly inoperable because of system overload and infrastructure damage</li> <li>• NYPD communications severely hampered by failure of landlines around site and at 1PP</li> </ul> |

# INSTRUMENTS FOR EMERGENCY MANAGEMENT – PERSONNEL

## NYPD emergency instruments

### Components

### Performance on 9/11

**Operational Command**

- Mobilization levels

- Appropriate mobilization levels called within minutes of first attack, with sufficient MOS available to carry out necessary tasks

**Communications**

- Mobilization points

- Significant number of MOS (10% of survey respondents) went directly to site rather than mobilization points or permanent command
- Multiple mobilization points in early stages caused confusion and some duplication of effort
- MOS not always properly rostered and tasked at mobilization points

**Personnel**

- Off-duty mobilization and personnel management

- Contrary to procedures, all tours responded to off-duty mobilization, leading to insufficient reserves
- Long tours in weeks after 9/11 may have hampered individual effectiveness, especially among leadership

**Logistics/ Equipment**

**Intelligence**

**Training**

**Planning**

# INSTRUMENTS FOR EMERGENCY MANAGEMENT – LOGISTICS/EQUIPMENT

## NYPD emergency instruments

| Operational Command  | Components   | Performance on 9/11  |
|----------------------|--|--|
| Communications       | <ul style="list-style-type: none"> <li>• Procurement and distribution</li> </ul> | <ul style="list-style-type: none"> <li>• Available equipment deployed quickly to site but many MOS did not know where to locate it</li> <li>• Donated equipment not well coordinated, leading to distribution and warehousing challenges</li> </ul>  |
| Personnel            | <ul style="list-style-type: none"> <li>• NYPD equipment inventory</li> </ul>     | <ul style="list-style-type: none"> <li>• Specialized rescue equipment generally in good supply</li> <li>• NYPD shorthanded on some personal protective equipment (e.g., gloves, goggles, respirators)</li> <li>• Low confidence among MOS (11%) that NYPD requires them to carry right equipment to deal with large disaster</li> <li>• Sufficient barriers and perimeter fencing not in inventory and not procured for several days</li> <li>• Majority of NYPD responders (82%) unaware of decontamination facilities</li> </ul> |
| Logistics/ Equipment |  |  |
| Intelligence         |  |  |
| Training             |  |  |
| Planning             |  |  |

# INSTRUMENTS FOR EMERGENCY MANAGEMENT – INTELLIGENCE

## NYPD emergency instruments

| NYPD emergency instruments | Components  | Performance on 9/11  |
|----------------------------|---|--|
| Operational Command        | <ul style="list-style-type: none"> <li>Information collection</li> </ul>    | <ul style="list-style-type: none"> <li>NYPD could not have been expected to have information predicting WTC attack or structural building failures</li> <li>Aviation units, Intelligence, and Detective personnel quickly deployed to site to assess situation but efforts not well coordinated</li> <li>Minimal intelligence sharing with federal agencies</li> </ul> |
| Communications             | <ul style="list-style-type: none"> <li>Information analysis</li> </ul>      | <ul style="list-style-type: none"> <li>Significant lack of incident reporting and documentation</li> <li>No central point for collation and systematic analysis of information regarding incident, with leaders acting largely on personal observations</li> </ul>   |
| Personnel                  | <ul style="list-style-type: none"> <li>Information dissemination</li> </ul> | <ul style="list-style-type: none"> <li>No clearinghouse for distilling, correcting, and disseminating accurate information to responders</li> <li>Field commanders and MOS throughout city not regularly briefed about situation and NYPD strategy</li> </ul>  |
| Logistics/ Equipment       |   |  |
| Intelligence               |   |  |
| Training                   |   |  |
| Planning                   |   |  |

# INSTRUMENTS FOR EMERGENCY MANAGEMENT – TRAINING

## NYPD emergency instruments

### Components

### Performance on 9/11

| Operational Command  | <ul style="list-style-type: none"> <li>• Frequency and format of emergency training</li> </ul> | <ul style="list-style-type: none"> <li>• Limited use and frequency of large-scale drills and simulations</li> </ul>   |
|----------------------|--|---|
| Communications       | <ul style="list-style-type: none"> <li>• Counter-terrorism training</li> </ul>                 | <ul style="list-style-type: none"> <li>• Little command or disaster response training for NYPD leaders after Captain school</li> </ul>                              |
| Personnel            | <ul style="list-style-type: none"> <li>• Rescue training</li> </ul>                            | <ul style="list-style-type: none"> <li>• Minimal focus on counter-terrorism before 9/11 (about 85% of MOS received none) led to low awareness of threats</li> </ul> |
| Logistics/ Equipment |  | <ul style="list-style-type: none"> <li>• Specialized training of ESU personnel resulted in efficient operations on 9/11</li> </ul>                                  |
| Intelligence         |  |   |
| Training             |  |   |
| Planning             |  |   |

# INSTRUMENTS FOR EMERGENCY MANAGEMENT – PLANNING

**NYPD emergency instruments**

**Operational Command**

**Communications**

**Personnel**

**Logistics/ Equipment**

**Intelligence**

**Training**

**Planning**

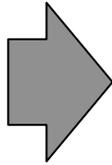
**Components**

**Performance on 9/11**

- | Components  | Performance on 9/11  |
|---|--|
| <ul style="list-style-type: none"> <li>• Terrorist incident response</li> </ul>       | <ul style="list-style-type: none"> <li>• NYPD plans (e.g., Patrol Guide, precinct disaster plans) largely excluded terrorist response</li> </ul>   |
| <ul style="list-style-type: none"> <li>• Protection of sensitive locations</li> </ul> | <ul style="list-style-type: none"> <li>• Precinct disaster plans contained impractical number (approx. 2,600) of sensitive locations that were not prioritized according to strategic importance or vulnerability to terrorist attack</li> </ul> |
| <ul style="list-style-type: none"> <li>• Post-incident analysis</li> </ul>            | <ul style="list-style-type: none"> <li>• No formal systems/procedures for post-incident analysis meant that Department did not maximize learnings immediately after 9/11</li> </ul>  |
| <ul style="list-style-type: none"> <li>• Specialized plans</li> </ul>                 | <ul style="list-style-type: none"> <li>• Traffic Division and Transit Bureau had highly developed emergency plans that were well understood and effectively implemented on 9/11</li> </ul>   |

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- Executive summary
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  - **Improvement opportunities for the future**
- Next steps
- Appendices
  - Appendix A: Chronology of key events
  - Appendix B: Survey findings



# THERE ARE A NUMBER OF SIGNIFICANT IMPROVEMENT OPPORTUNITIES

- We have used 3 criteria to prioritize the improvement opportunities for the NYPD:
  - The degree to which there was an **actual deficiency** on 9/11
  - The degree to which the area is **important** to fulfilling the disaster response objectives of the NYPD in future emergencies
  - The **ease** (cost and effort) of making the necessary improvements
- We have identified 20 improvement opportunities that require attention, and we regard six of these as highest priority
- While immediate priority should be given to these six critical areas, we believe that all 20 improvement opportunities are sufficiently important and interconnected to be addressed as well

# IMPROVEMENT OPPORTUNITIES

Critical opportunities in bold

## NYPD emergency instruments

|                            | Improvement opportunity   | Desired outcomes  |
|----------------------------|---|---|
| <b>Operational Command</b> | <b>1. Clearer delineation of roles and responsibilities of key NYPD leaders</b> | <ul style="list-style-type: none"> <li>• Pre-assigned roles for NYPD leaders</li> <li>• Strategic distribution of leadership across incident site, headquarters, and other locations</li> <li>• Balance between planning and flexibility</li> </ul>                                   |
| Communications             | <b>2. Better clarity in the chain of command</b>                                | <ul style="list-style-type: none"> <li>• Visible operational leader identified early and clearly to command NYPD response</li> <li>• Clear reporting lines with no gaps or duplication of activities</li> <li>• Field commanders operating in unison rather than isolation</li> </ul> |
| Personnel                  | 3. Improved utilization of Command Center                                       | <ul style="list-style-type: none"> <li>• High level of awareness of location and movement of virtually all NYPD resources at all times</li> <li>• Routine coordination of activities of field commanders through Command Center</li> </ul>  |
| Logistics/ Equipment       | 4. More effective command post operations                                       | <ul style="list-style-type: none"> <li>• Sensible location of command posts near incident site but away from danger zone</li> <li>• Frequent field updates on command post locations</li> <li>• Effective coordination of activities between posts</li> </ul>                         |
| Intelligence               |   |   |
| Training                   |   |   |
| Planning                   |   |   |

# IMPROVEMENT OPPORTUNITIES

Critical opportunities in bold

## NYPD emergency instruments

Operational Command

**Communications**

Personnel

Logistics/ Equipment

Intelligence

Training

Planning

### Improvement opportunity

### Desired outcomes

**5. Radio communications protocols and procedures that optimize information flow**

- Excellent radio discipline by all MOS
- Minimal clutter
- Override capability for critical information

6. More effective landline communications

- Sufficient redundancy built into Command Center, Metrotech, 1 Police Plaza, and other key NYPD locations
- Contingency plans in case of landline failures

7. Improved robustness of mobile communications

- Emergency responders able to successfully utilize cellular and satellite phones despite potential citywide surges in usage
- Alternative mobile technologies employed

8. Improved robustness and integrity of radio infrastructure and 911 system

- Sufficient redundancy built into radio system and Metrotech to handle large-scale disaster
- Operational backup site for Metrotech

# IMPROVEMENT OPPORTUNITIES

Critical opportunities in bold

## NYPD emergency instruments

Operational  
Command

Communications

Personnel

Logistics/  
Equipment

Intelligence

Training

Planning

### Improvement opportunity

### Desired outcomes

#### **9. More effective mobilization of MOS**

- Immediate response to mobilization points – not incident site
- Only one or two mobilization points
- Quick notification of mobilization point routes and locations
- Immediate accounting and tasking of MOS

#### 10. More efficient personnel management with respect to off-duty mobilizations and 12-hour tours

- Sufficient reserves held to respond 18-24 hours into disaster
- Mobilization guidelines regarding off-duty recall carefully followed

# IMPROVEMENT OPPORTUNITIES

Critical opportunities in bold

## NYPD emergency instruments

Operational Command

Communications

Personnel

**Logistics/ Equipment**

Intelligence

Training

Planning

### Improvement opportunity

### Desired outcomes

**11. More efficient provisioning and distribution of emergency/donated equipment**

- Seamless vendor relationships to ensure fast procurement of emergency equipment
- Suitable staging areas and distribution sites designated in each patrol borough
- Predetermined locations for and distribution of donated equipment
- Better communication to public regarding needed equipment
- Improved resource tracking system

12. Adequate emergency equipment for response in NYPD inventory

- Personal protective equipment including goggles, respirators, and gloves readily available to responders
- Specialized equipment (e.g., thermal imaging, portable fencing) immediately available

# IMPROVEMENT OPPORTUNITIES

Critical opportunities in bold

## NYPD emergency instruments

Operational  
Command

Communications

Personnel

Logistics/  
Equipment

**Intelligence**

Training

Planning

### Improvement opportunity

### Desired outcomes

13. Intelligence shared more fluidly with other law enforcement agencies

- Rapid prioritization and dissemination of critical information to initial responders
- Regular briefings for MOS at incident site on situation, NYPD objectives, and strategy
- MOS rank and file throughout city kept informed about incident, NYPD strategy and terrorist threat levels

14. Information disseminated better to those who need it

- Capability in place to filter, verify and broadcast critical information over all NYPD radio frequencies instantaneously
- Information assessment function built into response plan

15. Incident documentation and analysis conducted as event unfolds

- Incident information centrally collected, analyzed, and utilized to improve real time response

# IMPROVEMENT OPPORTUNITIES

Critical opportunities in bold

## NYPD emergency instruments

Operational  
Command

Communications

Personnel

Logistics/  
Equipment

Intelligence

Training

Planning

### Improvement opportunity

### Desired outcomes

16. Counter-terrorism training provided regularly across Department

- MOS across all ranks well-versed in terrorist tactics and operations (e.g., false documentation, bomb materials)
- Counter-terrorism knowledge codified and disseminated regularly throughout NYPD
- Innovative methods used to train MOS

17. Frequency and format of training better suited to disaster response situations

- Live simulations, interactive drills utilized regularly across all ranks
- Various modes of training studied, with less effective forms of training phased out

# IMPROVEMENT OPPORTUNITIES

Critical opportunities in bold

## NYPD emergency instruments

Operational Command

Communications

Personnel

Logistics/ Equipment

Intelligence

Training

Planning

### Improvement opportunity

### Desired outcomes

**18. Comprehensive disaster response plan, with significant terrorism component**

- Anti-terrorism objectives clearly laid out and prioritized
- NYPD response procedures codified in terms of command, personnel, communications, equipment and intelligence

19. Post-incident analysis conducted

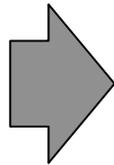
- Comprehensive assessment conducted within first weeks of incident as a matter of course
- Lessons from incident quickly integrated

20. Workable plans in effect for protection of sensitive locations

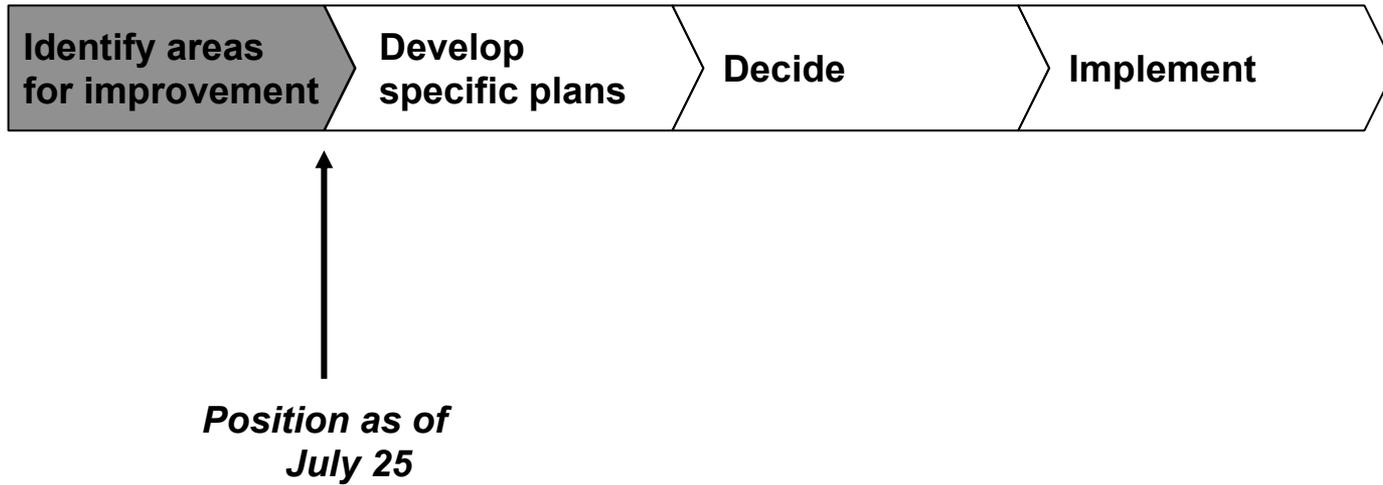
- Plans calling for short, prioritized list of sensitive locations
- Assessments conducted for actual security benefits of maintaining fixed posts at each location

# CONTENTS

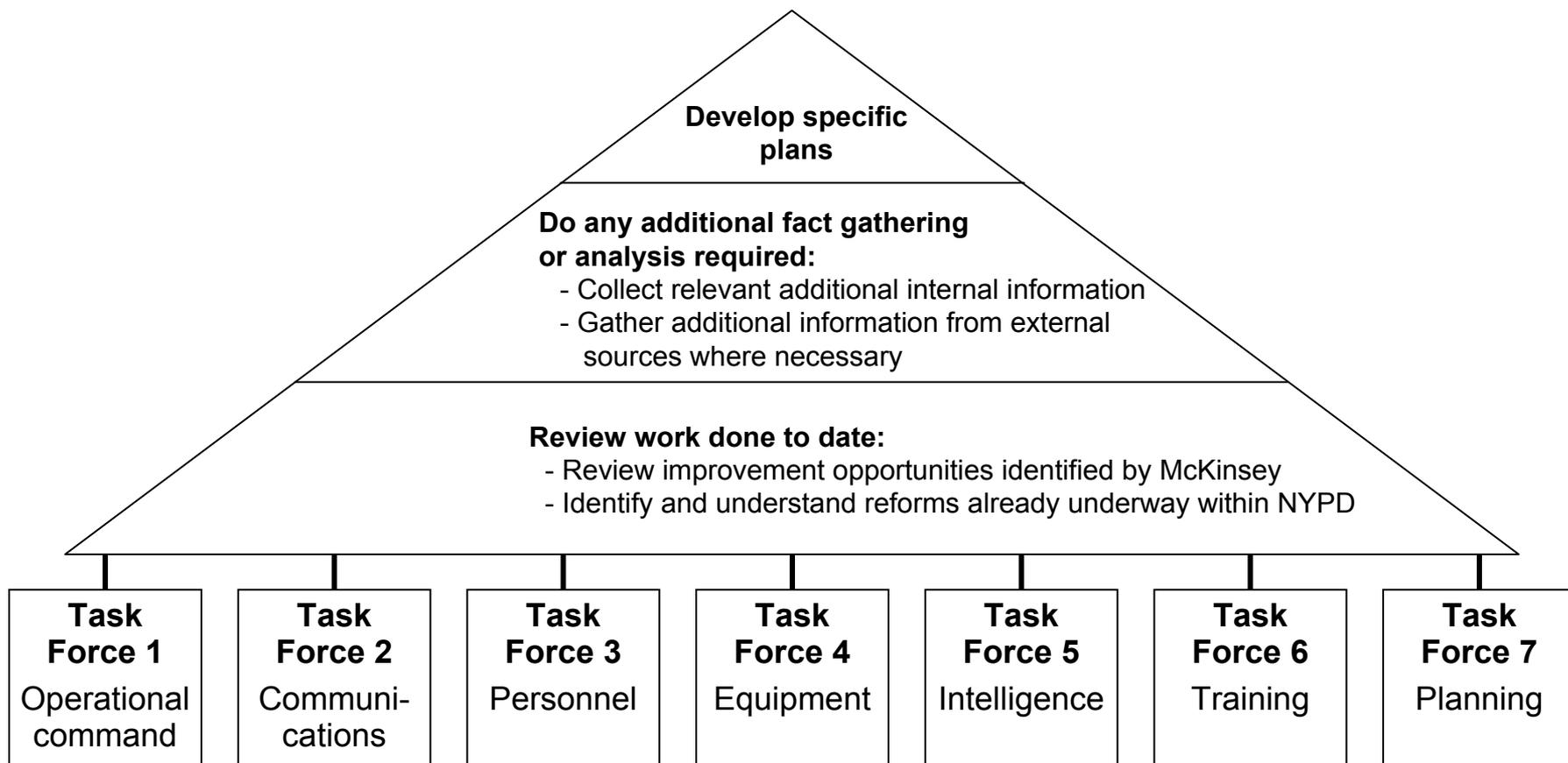
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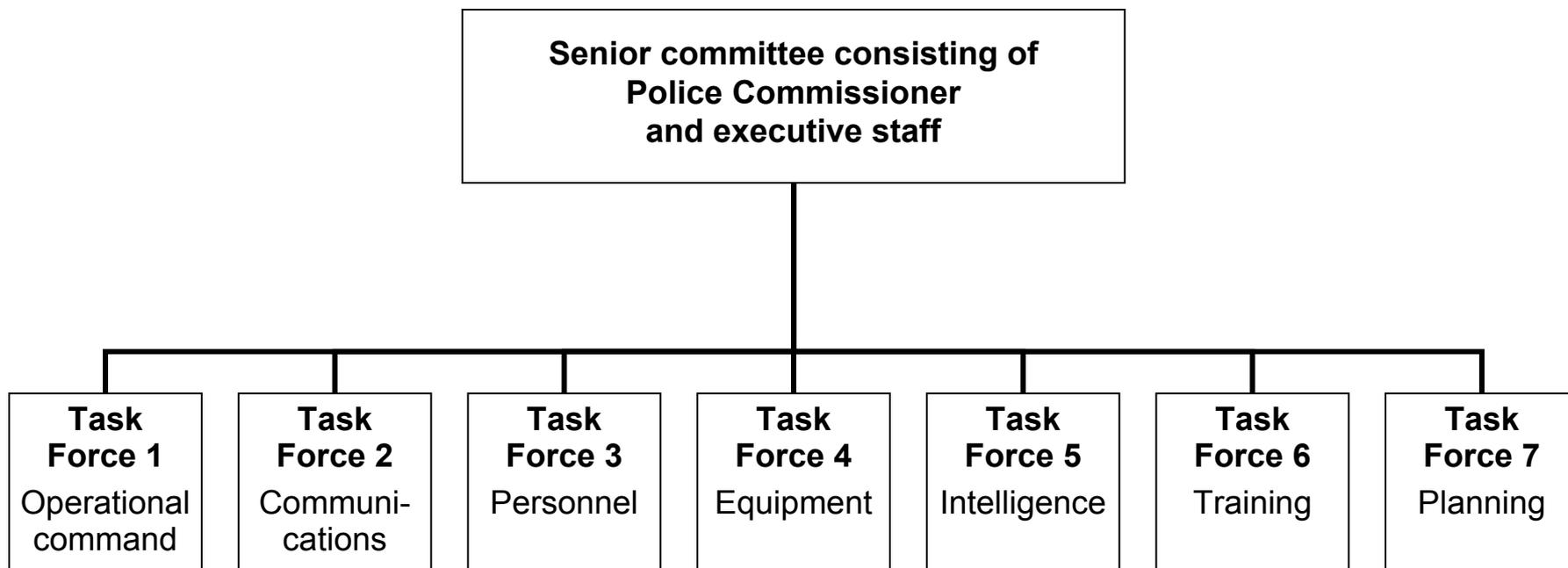
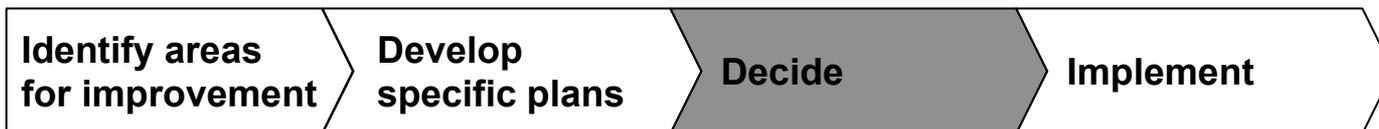
# MORE WORK IS REQUIRED TO CONVERT IMPROVEMENT OPPORTUNITIES INTO ACTION



# TASK FORCES WILL BE CREATED FOR EACH AREA OF IMPROVEMENT TO FORMULATE RECOMMENDATIONS



# EXECUTIVE STAFF WILL EXAMINE AND DECIDE ON RECOMMENDATIONS

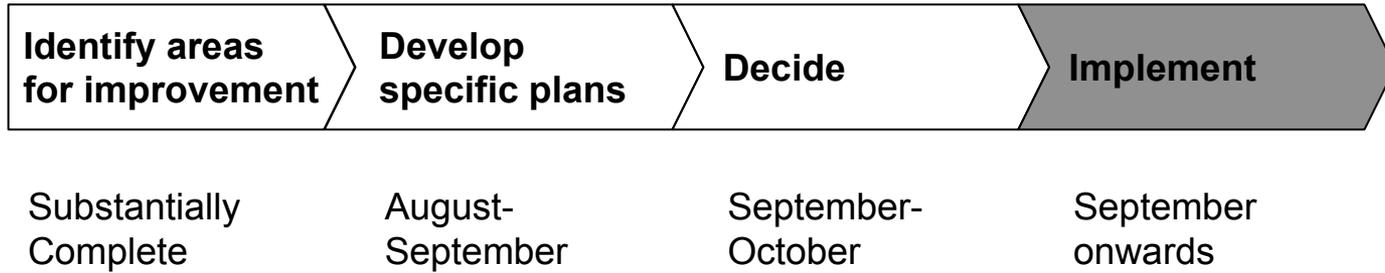


# DECISIONS WILL BE IMPLEMENTED



- Communicate decisions to MOS
- Assign implementation of decisions to operational units with ongoing responsibility
- Consult with operational units and collect feedback on recommendations
- Create procedures for continual review of implementation

# TIMING



# INTERAGENCY COORDINATION IS A SECOND IMPORTANT NEXT STEP

**Next  
step #1**



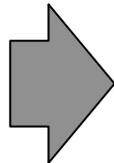
**Next  
step #2**

**Interagency coordination and collaboration**

- The focus of our review has been to analyze the internal challenges to the NYPD in achieving an effective disaster response
- However, solving all internal improvement opportunities will not, by itself, be enough
- Interagency coordination will necessarily play a vital role in any effective response of the NYPD and the city

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# CHRONOLOGY (1)

|                             | 08:46  | 08:55  | 09:02   |
|-----------------------------|--|--|---|
| <b>Events</b>               | <ul style="list-style-type: none"> <li>08:46 Flight AA11 crashes into WTC1 between 85th and 90th floors</li> </ul>                                   |  |   |
| <b>Rescue</b>               | <ul style="list-style-type: none"> <li>08:52 Aviation 14 arrives at scene and examines possibility of roof rescue</li> </ul>                         | <ul style="list-style-type: none"> <li>NYPD begins evacuating civilians from WTC area</li> </ul>                       | <ul style="list-style-type: none"> <li>08:56 ESU sends team to meet helicopters for possible roof rescue</li> <li>08:59 First ESU team enters WTC1</li> </ul>                     |
| <b>Transportation</b>       |  | <ul style="list-style-type: none"> <li>Main highways in lower Manhattan closed except to emergency vehicles</li> </ul> | <ul style="list-style-type: none"> <li>HOV lanes of major routes to lower Manhattan designated emergency vehicles only</li> </ul>   |
| <b>Site security</b>        |  |  |   |
| <b>Investigation</b>        |  |  |   |
| <b>Citywide security</b>    | <ul style="list-style-type: none"> <li>08:54 PAPD notified to shut down all PATH tunnels and trains</li> </ul>                                       |  |   |
| <b>Operational command</b>  | <ul style="list-style-type: none"> <li>08:52 Truck 1 establishes ESU CP at Church/Vesey</li> </ul>   | <ul style="list-style-type: none"> <li>Chief of Dept. (CoD) arrives at Church/Vesey</li> </ul>                         | <ul style="list-style-type: none"> <li>First Deputy Comm. (FDC) arrives at Church/Vesey</li> </ul>  |
| <b>Communications</b>       | <ul style="list-style-type: none"> <li>30 extra Metrotech staff assigned to 911 calls. Many calls are received from people trapped in WTC</li> </ul> |  | <ul style="list-style-type: none"> <li>09:00 ESU ordered to go to Tactical Channel 'G'</li> </ul>   |
| <b>Personnel</b>            | <ul style="list-style-type: none"> <li>08:47 Level 1 mobilization called; Level 3 mobilization called 8 seconds later</li> </ul>                     | <ul style="list-style-type: none"> <li>08:54 All ESU units advised to respond to Church/Vesey</li> </ul>               | <ul style="list-style-type: none"> <li>08:58 CoD calls Level 4 mobilization</li> <li>09:01 1st and 5<sup>th</sup> Pct. XOs advise new mobilization point at Vesey/West</li> </ul> |
| <b>Logistics/ equipment</b> | <ul style="list-style-type: none"> <li>Responding ESU units bring rescue equipment to WTC</li> </ul>   |  |   |
| <b>Intelligence</b>         |  |  |   |

# CHRONOLOGY (2)

|                             | 09:03   | 09:16  | 09:29  |  |  |
|-----------------------------|---|--|--|--|--|
| <b>Events</b>               | <ul style="list-style-type: none"> <li>09:03 Flight UA175 crashes into WTC2 between 80th &amp; 85th floors</li> </ul>   |  |  |  |  |
| <b>Rescue</b>               | <ul style="list-style-type: none"> <li>09:06 CoD orders that no aerial rescue is to be attempted</li> </ul>   |  | <ul style="list-style-type: none"> <li>09:26 ESU units set up at Vesey/West and prepare to enter towers</li> </ul>                 |  |  |
| <b>Transportation</b>       | <ul style="list-style-type: none"> <li>Subways closed within first few minutes of second strike</li> </ul>  |  | <ul style="list-style-type: none"> <li>09:21 All bridges and tunnels into NYC closed for emergency vehicles only</li> </ul>        |  |  |
| <b>Site Security</b>        | <ul style="list-style-type: none"> <li>Manhattan South begins to establish perimeter 2 blocks around WTC</li> </ul>   |  |  |  |  |
| <b>Investigation</b>        |   |  |  |  |  |
| <b>Citywide security</b>    | <ul style="list-style-type: none"> <li>09:05 CoD issues Condition Omega alert &amp; puts security plan for 1 Police Plaza into effect</li> </ul>                                      | <ul style="list-style-type: none"> <li>09:09 NY airports suspend operations</li> </ul>   | <ul style="list-style-type: none"> <li>Chief of IAB musters MOS from 1PP and assigns them to perimeter and traffic duty</li> </ul> | <ul style="list-style-type: none"> <li>09:18 Evacuation of Empire State &amp; gov't. buildings begins</li> </ul> | <ul style="list-style-type: none"> <li>Omega sites around city receive special protection</li> </ul> |
| <b>Operational Command</b>  | <ul style="list-style-type: none"> <li>Mayor and PC go to 75 Barclay Street</li> </ul>  | <ul style="list-style-type: none"> <li>09:07 PC orders command post to be set up at Barclay Street</li> </ul>                  | <ul style="list-style-type: none"> <li>09:09 CoD updates Mayor &amp; PC at Barclay Street</li> </ul>                               | <ul style="list-style-type: none"> <li>Chief of Patrol begins to set up command post at Vesey/West</li> </ul>    |  |
| <b>Communications</b>       | <ul style="list-style-type: none"> <li>09:11 Back-up transmitter for Citywide channel put in service in anticipation of potential problem with primary transmitter on WTC1</li> </ul> |  |  |  |  |
| <b>Personnel</b>            | <ul style="list-style-type: none"> <li>09:03 Level 4 mobilization transmitted on Citywide 1</li> </ul>  | <ul style="list-style-type: none"> <li>09:05 Operations Unit sets South/Pike as mobilization point for Patrol Units</li> </ul> | <ul style="list-style-type: none"> <li>09:22 ESU requests mobilization of off-duty personnel</li> </ul>                            |  |  |
| <b>Logistics/ equipment</b> | <ul style="list-style-type: none"> <li>Command post vehicles arrive at site</li> </ul>  |  |  |  |  |
| <b>Intelligence</b>         | <ul style="list-style-type: none"> <li>FDC and CoD receive briefing from FBI officer at Church/Vesey</li> </ul>   |  |  |  |  |

# CHRONOLOGY (3)

|                             | 09:30  | 09:59  | 10:28  |
|-----------------------------|--|--|--|
| <b>Events</b>               | <ul style="list-style-type: none"> <li>09:44 Flight AA77 crashes into Pentagon</li> </ul>  | <ul style="list-style-type: none"> <li>09:45 White House and Capitol evacuated</li> </ul>  | <ul style="list-style-type: none"> <li>09:59 WTC2 collapses</li> <li>10:10 Flight UA93 crashes 80 miles east of Pittsburgh</li> </ul>  |
| <b>Rescue</b>               | <ul style="list-style-type: none"> <li>09:32 FDNY chief orders evacuation of WTC1</li> </ul>   | <ul style="list-style-type: none"> <li>09:35 FDC orders no roof rescue to be attempted</li> </ul>  | <ul style="list-style-type: none"> <li>40 ESU officers at CP; 2 teams in WTC1, 2 in WTC2, 5<sup>th</sup> in plaza</li> <li>10:00 All ESU personnel ordered out of buildings</li> </ul>   |
| <b>Transportation</b>       |  |  | <ul style="list-style-type: none"> <li>10:08 CoD orders absolutely no traffic into Manhattan</li> </ul>  |
| <b>Site Security</b>        |  |  |  |
| <b>Investigation</b>        |  |  | <ul style="list-style-type: none"> <li>Bomb Squad investigates suspicious packages</li> </ul>  |
| <b>Citywide security</b>    | <ul style="list-style-type: none"> <li>09:34 Military aircraft arrive to enforce no-fly zone</li> </ul>  | <ul style="list-style-type: none"> <li>09:40 FAA halts all flight operations at U.S. airports</li> </ul>   | <ul style="list-style-type: none"> <li>09:47 First report of suspicious package (96 reports of suspicious packages and 92 bomb threats received during day)</li> </ul>   |
| <b>Operational Command</b>  |  | <ul style="list-style-type: none"> <li>09:45 Command and Control Center at 1PP activated</li> </ul>  | <ul style="list-style-type: none"> <li>10:19 Dispatcher advises new CP at Stuyvesant High School. Chief of Patrol and his XO arrive</li> <li>10:25 Command post set up at 222 Broadway</li> </ul>  |
| <b>Communications</b>       | <ul style="list-style-type: none"> <li>Telephone system at 1PP begins to fail. Technicians drop phone lines from windows to link with nearby building</li> </ul> |  |  |
| <b>Personnel</b>            | <ul style="list-style-type: none"> <li>09:33 Mobilization point for Highway Units set on Chambers St.</li> </ul>   | <ul style="list-style-type: none"> <li>09:37 Dispatcher orders Man/Brx units to respond to Park Pl/Church; Q/BK/SI to respond to South/Pike</li> </ul> | <ul style="list-style-type: none"> <li>09:53 Task Force CO orders all TFs to Vesey/West</li> <li>10:12 All emergency vehicles ordered to pull back to Vesey/West</li> <li>10:24 Dispatcher advises new MP at Park Row/City Hall</li> </ul> |
| <b>Logistics/ equipment</b> |  |  |  |
| <b>Intelligence</b>         |  |  | <ul style="list-style-type: none"> <li>10:07 Aviation 6 warns that WTC1 collapse likely. Advises immediate evacuation</li> <li>10:20 Aviation 14 states that WTC1 is leaning</li> </ul>  |

# CHRONOLOGY (4)

|                             | 10:29  | 11:15   | 12:00  |
|-----------------------------|--|---|--|
| <b>Events</b>               | <ul style="list-style-type: none"> <li>10:29 WTC1 collapses</li> </ul>                                   | <ul style="list-style-type: none"> <li>10:45 All federal buildings in Washington DC evacuated</li> </ul>                      |  |
| <b>Rescue</b>               | <ul style="list-style-type: none"> <li>10:30 Injured taken to west side harbor for evacuation</li> </ul> | <ul style="list-style-type: none"> <li>ESU sets up command post at Stuyvesant High School and deploy teams to site</li> </ul> | <ul style="list-style-type: none"> <li>11:02 Mayor orders full evacuation of area below Canal</li> <li>11:50 ESU establishes command post at Woolworth building</li> </ul>                             |
| <b>Transportation</b>       |  |   |  |
| <b>Site security</b>        |  |   | <ul style="list-style-type: none"> <li>Outer perimeters established at Canal &amp; Houston</li> </ul>  |
| <b>Investigation</b>        |  |   | <ul style="list-style-type: none"> <li>IAB begins compiling list of missing persons</li> </ul>   |
| <b>Citywide security</b>    |  |   |  |
| <b>Operational command</b>  | <ul style="list-style-type: none"> <li>CoD returns to 1PP</li> </ul>                                     | <ul style="list-style-type: none"> <li>Mayor and PC go to Houston St. firehouse</li> </ul>                                    | <ul style="list-style-type: none"> <li>FDC arrives at 1PP Command &amp; Control Center</li> <li>10:50 Command post set up at Liberty Street</li> </ul>   |
| <b>Communications</b>       |  | <ul style="list-style-type: none"> <li>11:00 911 calls rerouted through backup emergency call network</li> </ul>              |  |
| <b>Personnel</b>            |  | <ul style="list-style-type: none"> <li>10:43 ESU ordered to North Cove</li> </ul>   | <ul style="list-style-type: none"> <li>Move from 8-hour to 12-hour tours</li> <li>Pier 40 set up as staging area. 1,500+ MOS assemble by 12:00</li> <li>Off-duty mobilization called by FDC</li> </ul> |
| <b>Logistics/ equipment</b> |  |   |  |
| <b>Intelligence</b>         |  |   |  |

# CHRONOLOGY (5)

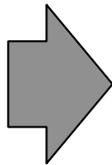
|                             | 12:00   | 13:30   | 15:00  |
|-----------------------------|---|---|--|
| <b>Events</b>               | <ul style="list-style-type: none"> <li>12:10 National Guard mobilized by Governor of New York</li> </ul>                          | <ul style="list-style-type: none"> <li>Pentagon deploys 5 battleships and 2 aircraft carriers to patrol East coast</li> </ul>         | <ul style="list-style-type: none"> <li>14:48 Mayor makes public announcement on state of NYC emergency response</li> </ul>             |
| <b>Rescue</b>               | <ul style="list-style-type: none"> <li>ESU establishes main command post at Stuyvesant High School</li> </ul>                     | <ul style="list-style-type: none"> <li>13:30 ESU begins to search rubble pile</li> </ul>  |  |
| <b>Transportation</b>       | <ul style="list-style-type: none"> <li>Subway reopened north of Canal at 12:00 to assist evacuation of lower Manhattan</li> </ul> |   |  |
| <b>Site security</b>        |   | <ul style="list-style-type: none"> <li>MOS deployed from MPs to secure site perimeter. National Guard assists with patrols</li> </ul> | <ul style="list-style-type: none"> <li>Site divided into sectors and patrol duties assigned to MOS</li> </ul>                          |
| <b>Investigation</b>        |   | <ul style="list-style-type: none"> <li>12:52 Temporary morgue set up at Pier 40</li> </ul>  | <ul style="list-style-type: none"> <li>Fresh Kills landfill designated as debris site</li> </ul>                                       |
| <b>Citywide security</b>    |   | <ul style="list-style-type: none"> <li>Sanitation trucks deployed to protect sensitive city locations</li> </ul>                      |  |
| <b>Operational command</b>  | <ul style="list-style-type: none"> <li>Pier 40 established as main command post</li> </ul>  | <ul style="list-style-type: none"> <li>13:30 ESU sets up forward command post at Trinity Place</li> </ul>                             |  |
| <b>Communications</b>       | <ul style="list-style-type: none"> <li>12:05 Verizon building at 140 West Street flooded</li> </ul>                               | <ul style="list-style-type: none"> <li>13:30 Communications Division switches to emergency control stations</li> </ul>                | <ul style="list-style-type: none"> <li>Military provides satellite phones</li> <li>Verizon provides portable cellular units</li> </ul> |
| <b>Personnel</b>            |   | <ul style="list-style-type: none"> <li>ESU roll call finalized</li> </ul>   |  |
| <b>Logistics/ equipment</b> | <ul style="list-style-type: none"> <li>Donated equipment begins arriving at site in large quantity</li> </ul>                     | <ul style="list-style-type: none"> <li>ESU equipment cache established on Chambers and North End</li> </ul>                           |  |
| <b>Intelligence</b>         |   |   |  |

# CHRONOLOGY (6)

|                             | 15:00  | 19:30   | 24:00   |
|-----------------------------|--|---|---|
| <b>Events</b>               |  | <ul style="list-style-type: none"> <li>17:21 WTC7 collapses</li> </ul>  |   |
| <b>Rescue</b>               |  | <ul style="list-style-type: none"> <li>19:02 Two trapped PAPD officers located</li> </ul>                                 | <ul style="list-style-type: none"> <li>1st PAPD officer is rescued. 2<sup>nd</sup> officer rescued at 07:00 next day</li> </ul> |
| <b>Transportation</b>       | <ul style="list-style-type: none"> <li>Check points set-up at all river crossings</li> </ul>               |   |   |
| <b>Site security</b>        |  |   |   |
| <b>Investigation</b>        |  |   |   |
| <b>Citywide security</b>    |  | <ul style="list-style-type: none"> <li>17:35 George Washington Bridge closed due to bomb threat</li> </ul>                |   |
| <b>Operational command</b>  |  |   |   |
| <b>Communications</b>       |  | <ul style="list-style-type: none"> <li>16:00 Verizon facility at 140 West Street fails due to flooding</li> </ul>         |   |
| <b>Personnel</b>            | <ul style="list-style-type: none"> <li>Large numbers of MOS mobilized and ready at MPs</li> </ul>          |   |   |
| <b>Logistics/ equipment</b> | <ul style="list-style-type: none"> <li>Pumps brought in to control flooding at Verizon building</li> </ul> |   |   |
| <b>Intelligence</b>         |  | <ul style="list-style-type: none"> <li>18:00 Executive briefing at 1PP with representatives from city agencies</li> </ul> |   |

# CONTENTS

- Executive summary
- Project description
- Findings
  - Review of NYPD objectives and how well they were achieved on 9/11
  - Assessment of NYPD's instruments of response and how well they were brought to bear
  - Improvement opportunities for the future
- Next steps
- **Appendices**
  - Appendix A: Chronology of key events
  - **Appendix B: Survey findings**



# SURVEY METHODOLOGY AND GOALS

## Process

- *Field survey*: Random sampling of POs/Detectives through Lieutenants at outdoor range conducted May 14-17, 2002
- *First responder survey*: Eight visits to the morning roll calls at the 1<sup>st</sup>, 6<sup>th</sup>, 7<sup>th</sup>, 9<sup>th</sup>, 13<sup>th</sup>, TCD, Midtown South, and the Manhattan South Task Force
- *SOD survey*: Additional surveys administered to ESU, Aviation, and Harbor
  
- 746 total surveys

## Contents

- Survey constructed to target 7 critical areas
  - Background information
  - Operational command
  - Deployment
  - Communications
  - Equipment
  - Training
  - Planning

## Objectives

- Acquire a better understanding of the location and movement of the force throughout the day of 9/11
- Support or call into question anecdotal evidence collected from interviews of higher ranking MOs
- Incorporate opinions of larger segment of NYPD into final report

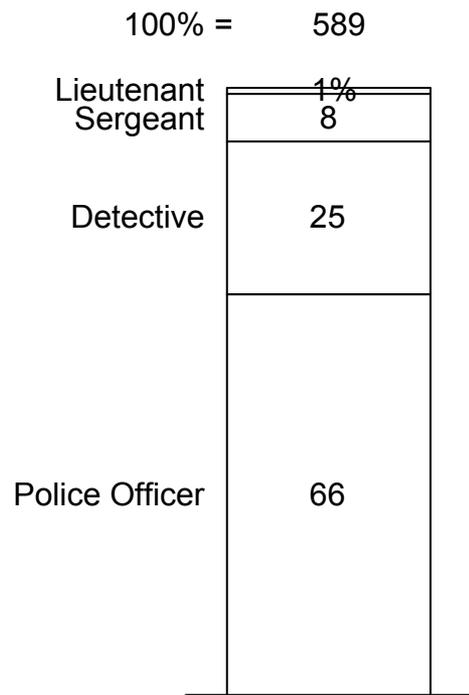
Note: This appendix primarily includes results from the field survey, which had 594 respondents. We have noted significant differences in the first responder and SOD surveys where they exist.

# BACKGROUND INFORMATION

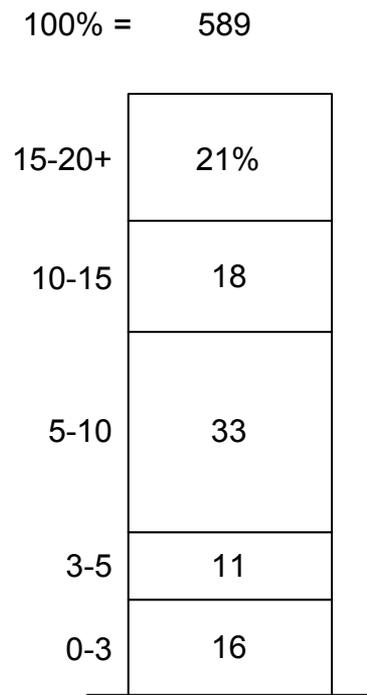
Percent, number of respondents

SURVEY  
DEMOGRAPHICS

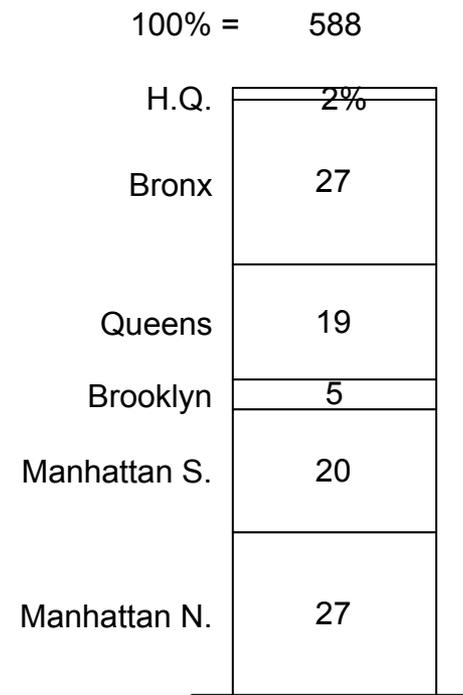
**Respondent rank**



**Years on force**



**Borough assignment on 9/11\***

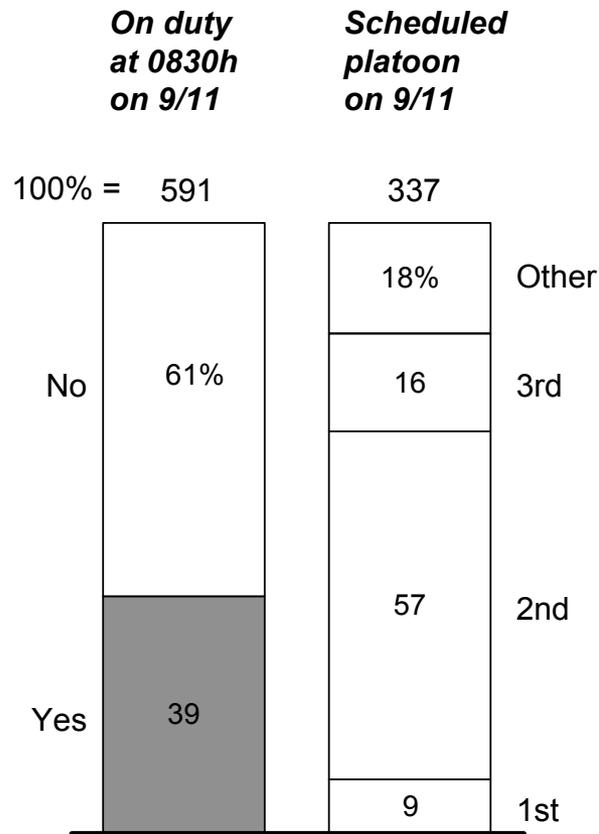
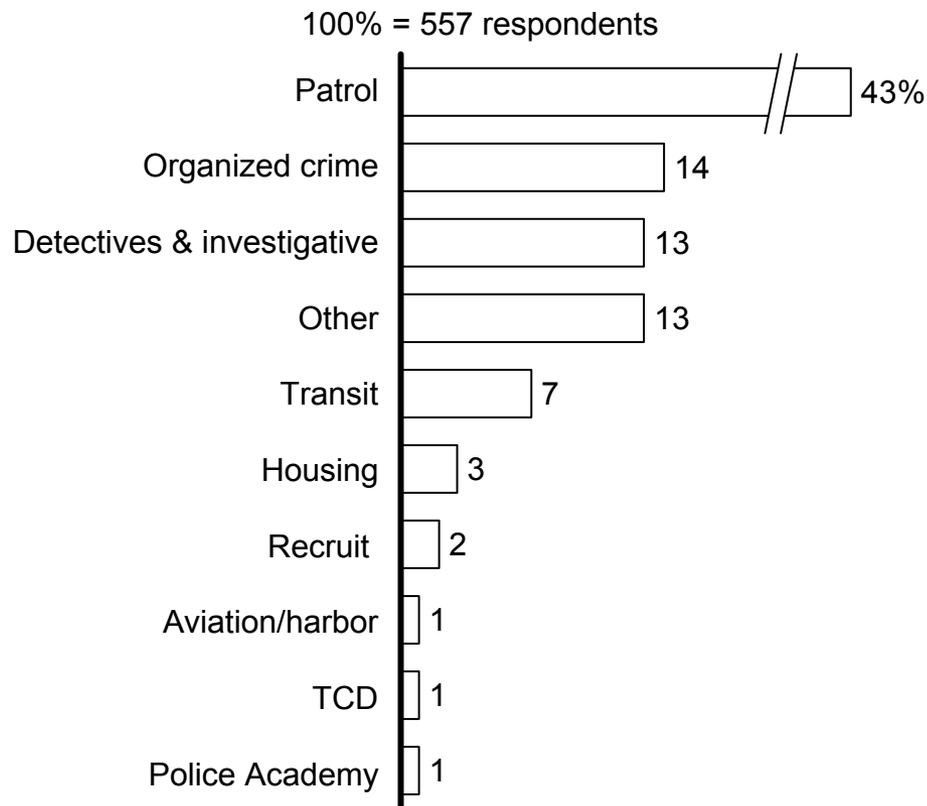


\* Staten Island less than 0.1%

# BUREAU AND COMMAND ASSIGNMENTS ON 9/11

Percent, number of respondents

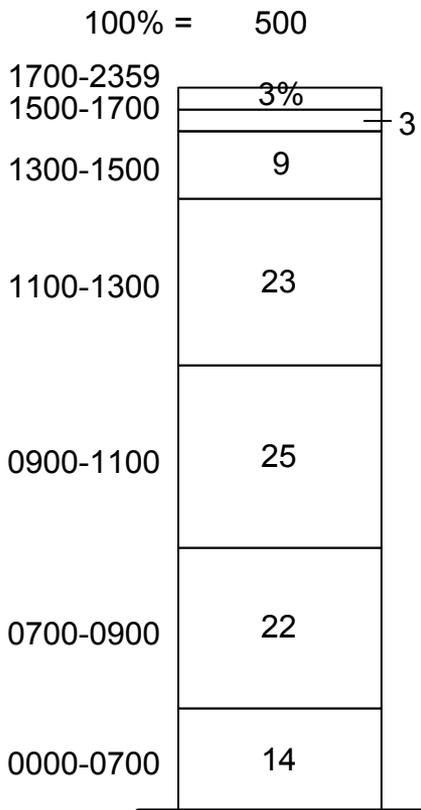
## Bureau assignments



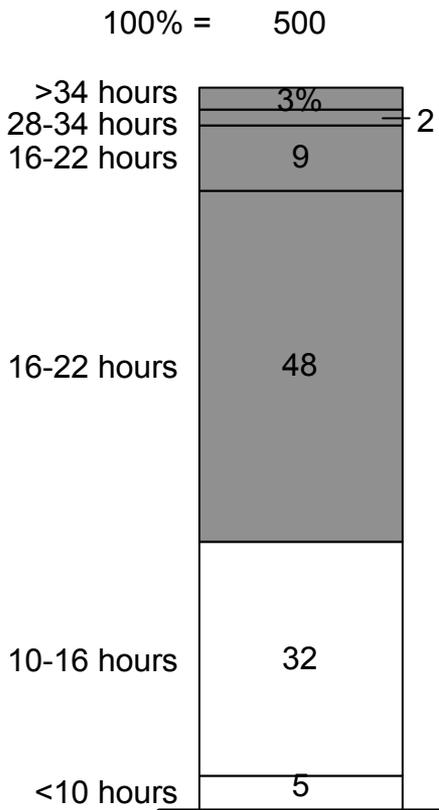
# TOUR DURATIONS ON 9/11

Percent, number of respondents

***“When did you start working on 9/11”***



***Tour duration on 9/11***

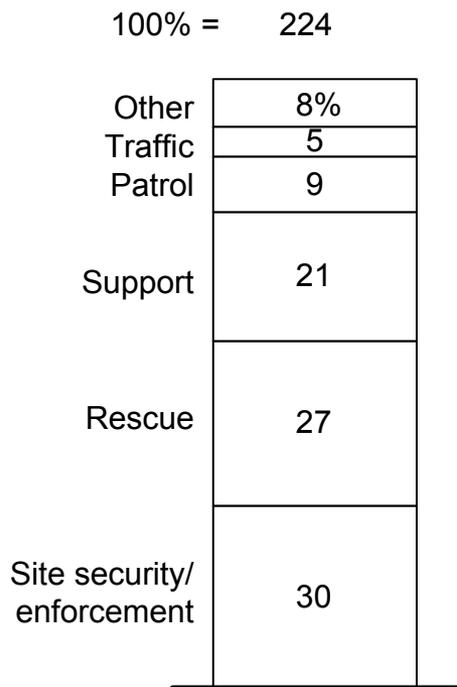


- Average tour length on 9/11 was 18 hours, with 62% working at least 16 hours
- Lengthy tours continued for months in many cases following the attack

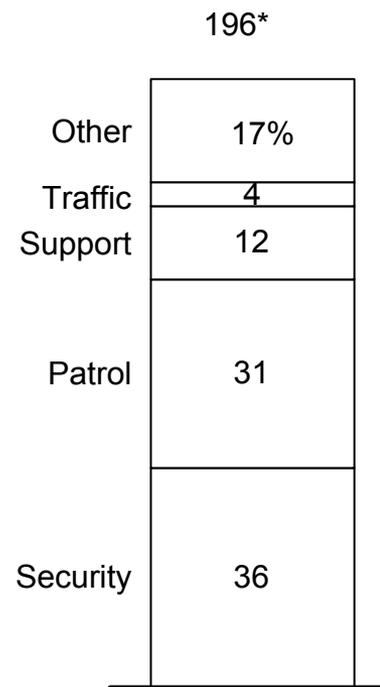
# PRIMARY ROLE ON 9/11

Percent, number of respondents

**If below Canal Street . . .**



**If above Canal Street . . .**



\* Note: Response taken from surveys indicating individual was below/above Canal Street from demographics section of survey

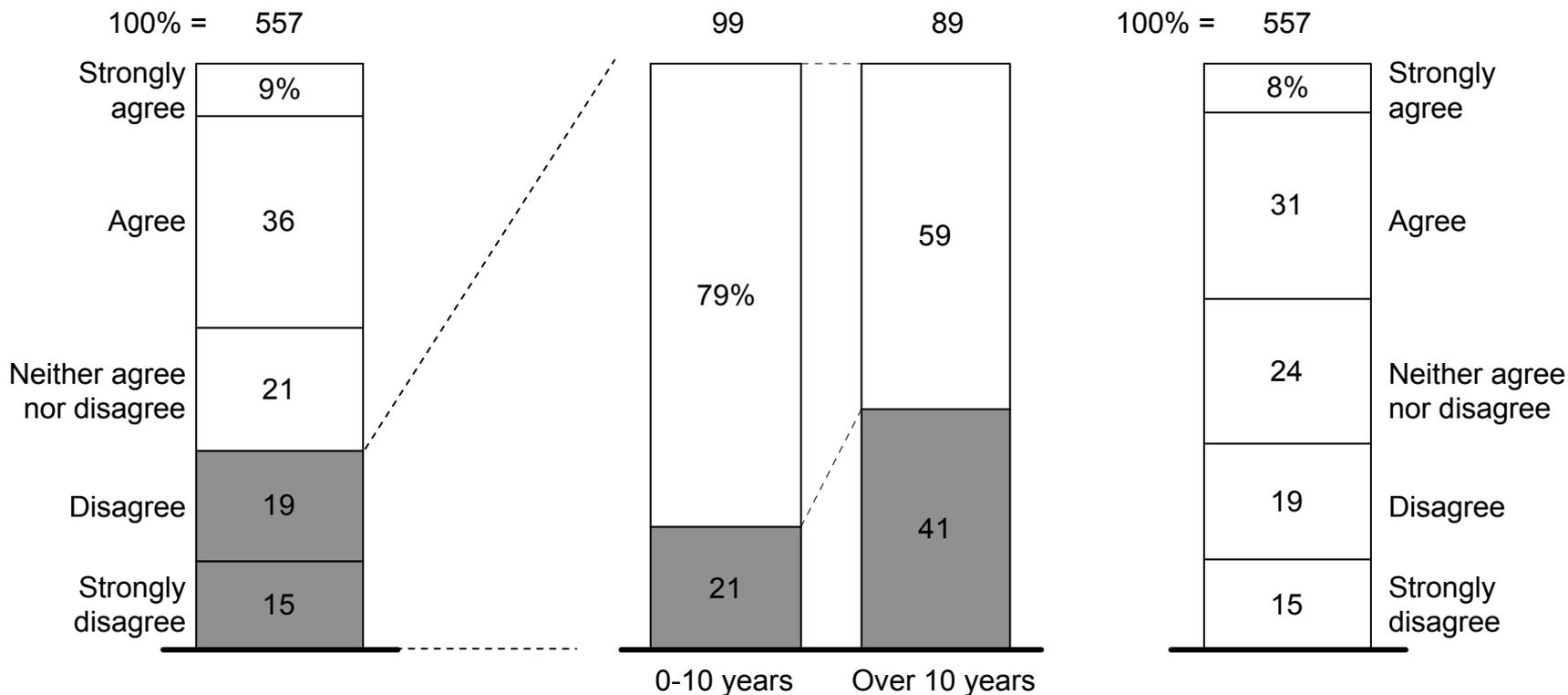
# ROLES ON 9/11

Percent, number of respondents

*"I received clear instructions regarding my role on 9/11"*

*Tenure of respondents answering "Disagree" or "Strongly disagree"*

*"I think that my role on 9/11 was appropriate, given my training, experience, and the nature of the crisis"*

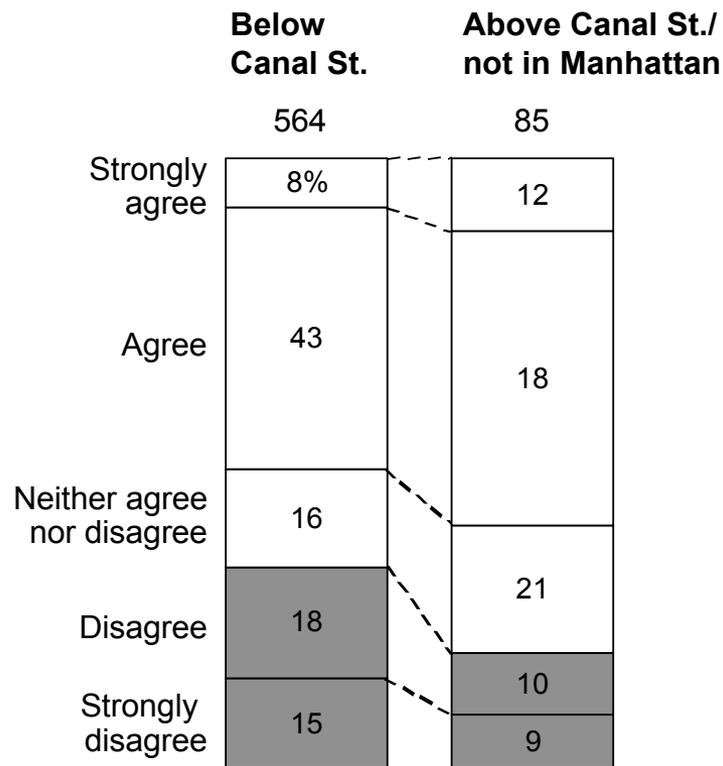
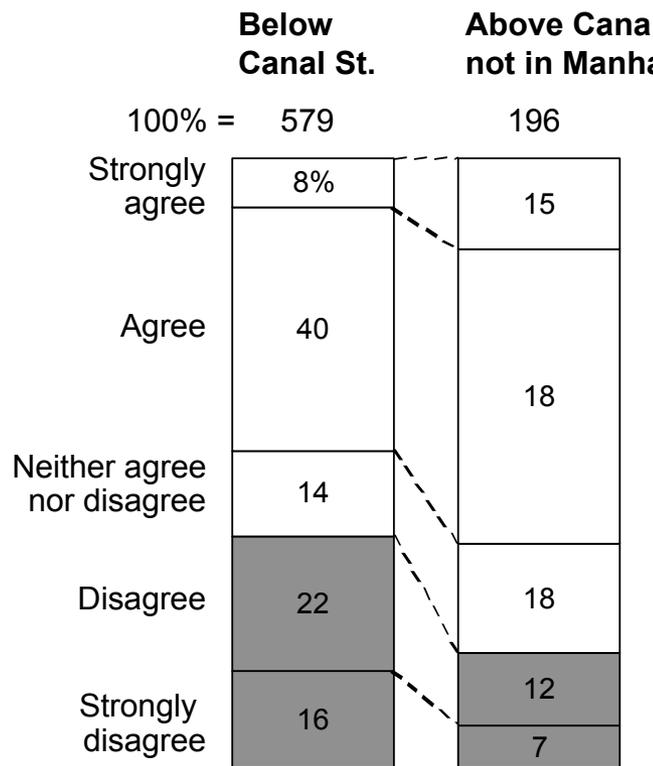


# RESPONDENTS BELIEVE SUPERVISION WAS POORER IN THE DISASTER VICINITY THAN ELSEWHERE

Percent, number of respondents

*"I was clear about who I was reporting to on 9/11"*

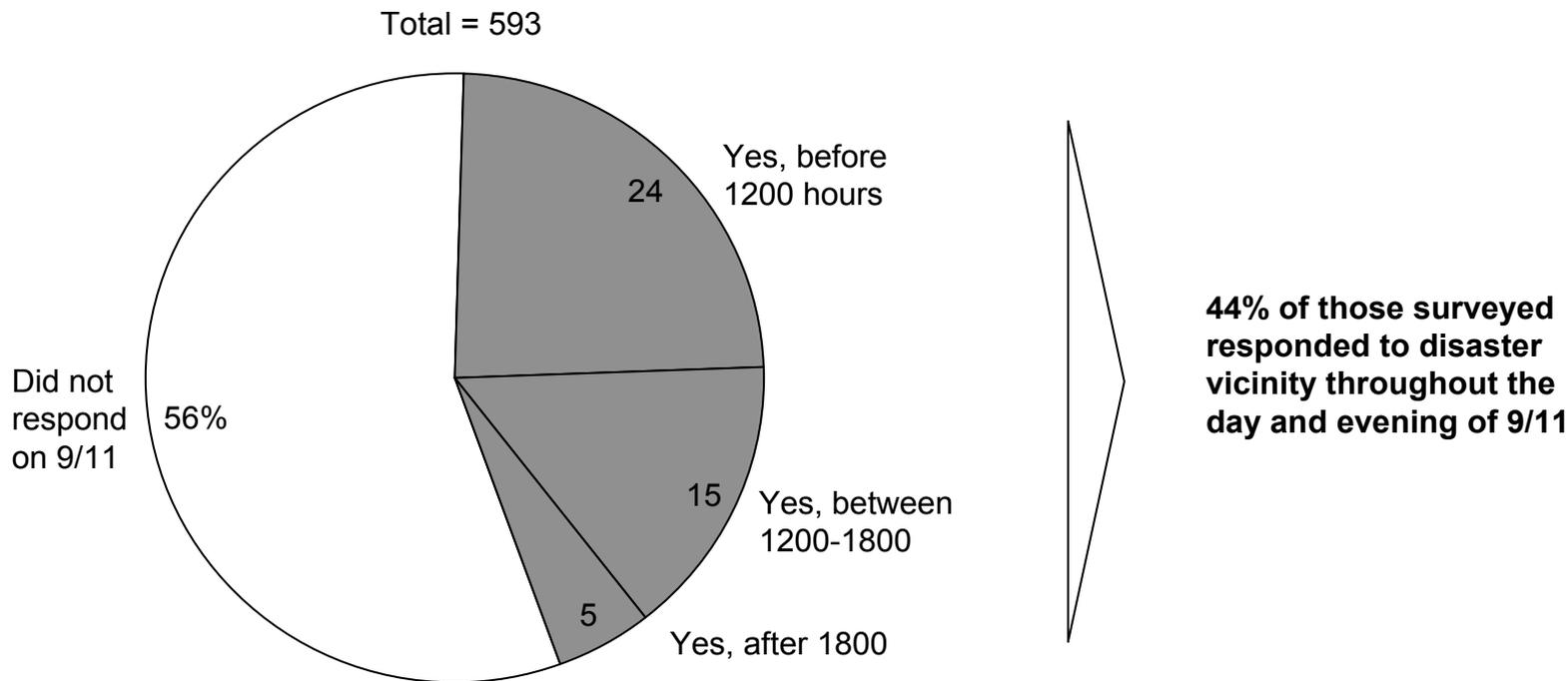
*"I felt that my supervisor knew my location and role on 9/11"*



# RESPONDERS TO DISASTER SITE ON 9/11

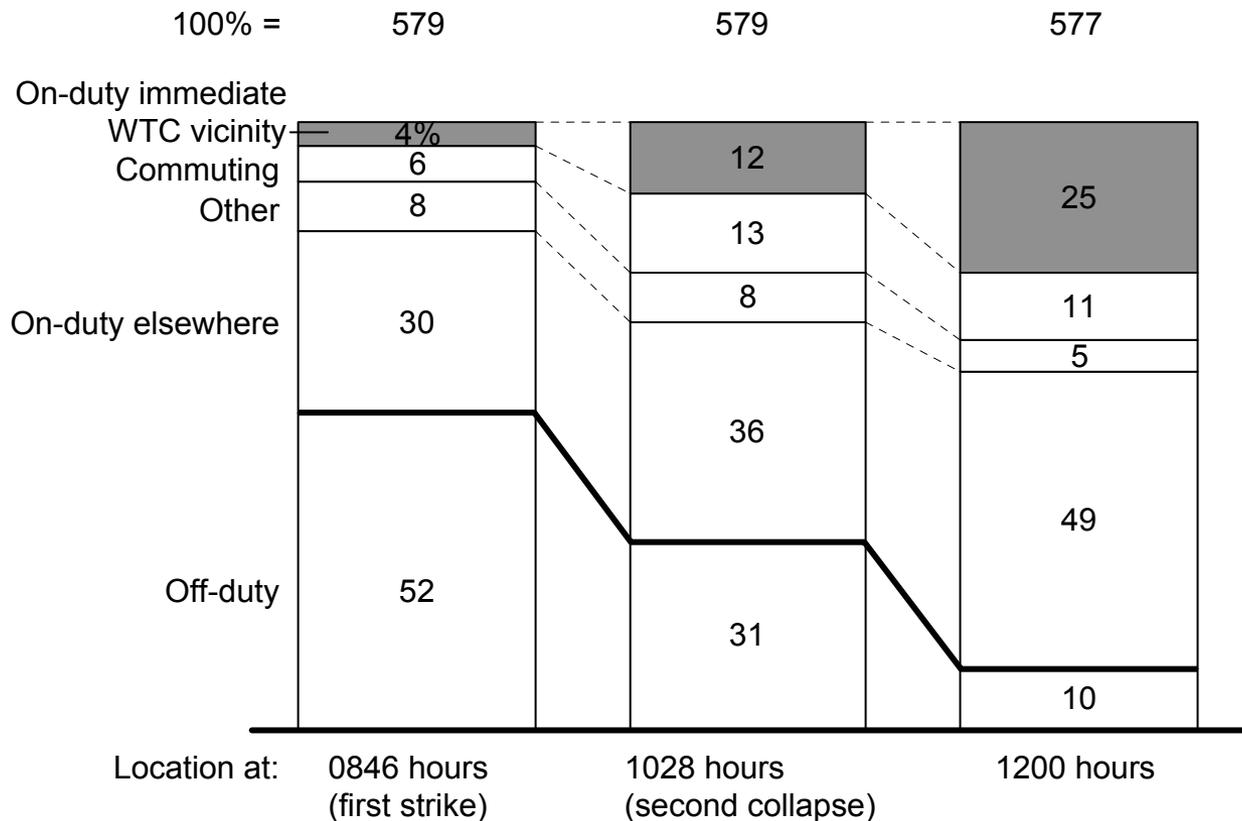
Percent, number of respondents

*"I responded to Manhattan south of Canal Street on 9/11"*



# TRACKING LOCATION OF NYPD PERSONNEL ON 9/11

Percent, number of respondents

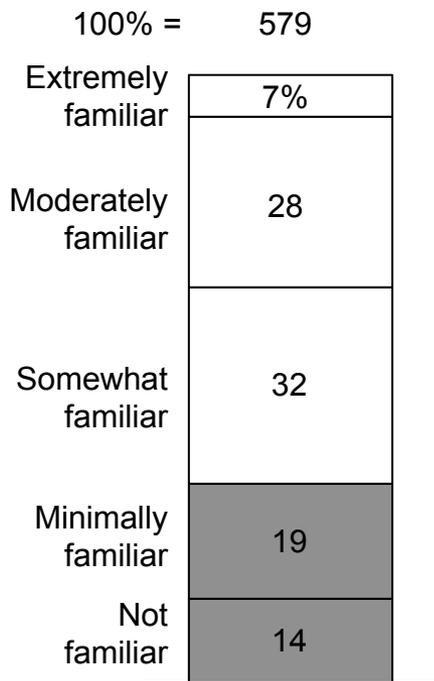


- By 1200 hours, 90% of personnel were on-duty or commuting to work
- The equivalent of about one full tour worked in the disaster vicinity

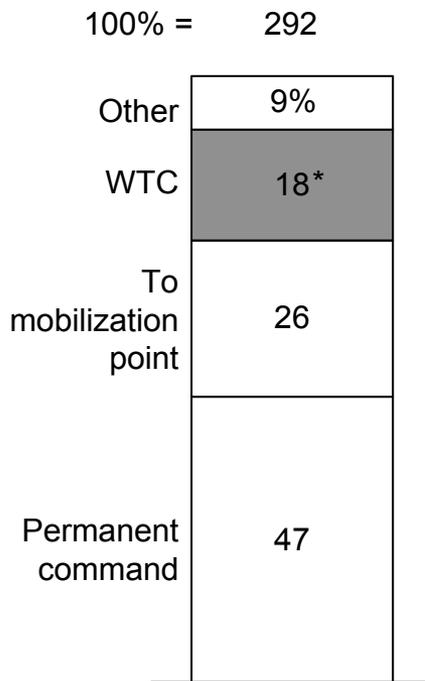
# ON-DUTY MOBILIZATION

Percent, number of respondents

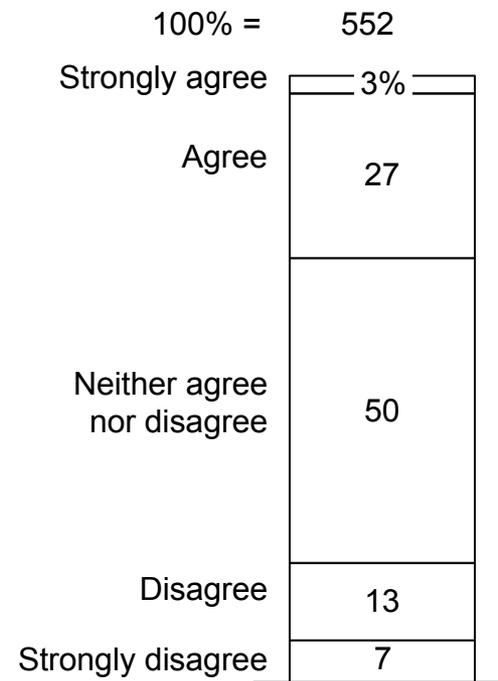
***“How familiar are you with NYPD on-duty mobilization plans?”***



***“If you were part of the on-duty, Level 4 mobilization, where did you respond?”***



***“I felt that on-duty mobilization guidelines were followed well on 9/11”***



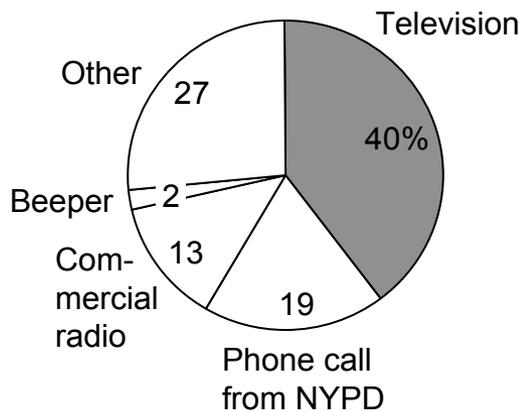
\* First responders = 64%

# OFF-DUTY MOBILIZATION ON 9/11

Percent, number of respondents

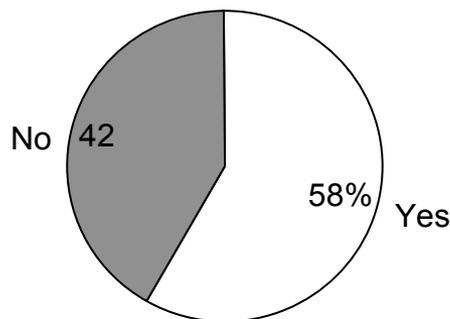
**How were you first informed about the off-duty mobilization?**

100% = 433



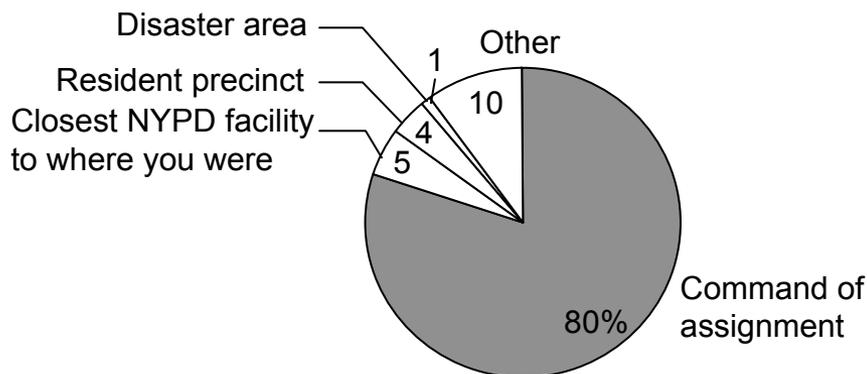
**Were you clear where to report for the off-duty mobilization?**

100% = 449



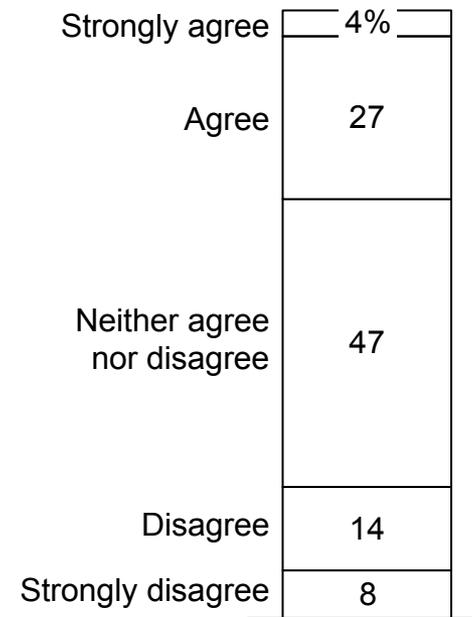
**If you responded to the off-duty mobilization, where did you report for duty?**

100% = 343



***"I felt that off-duty mobilization guidelines were followed well on 9/11"***

100% = 507

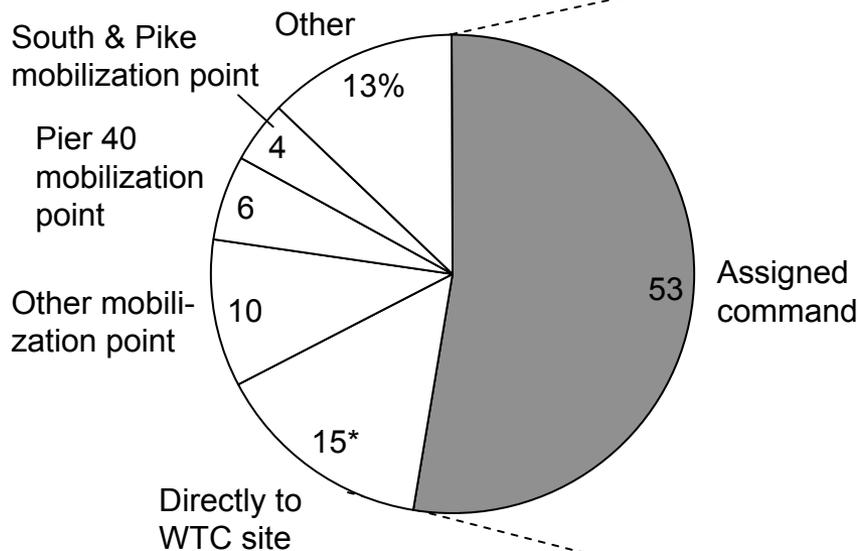


# ASSIGNMENTS ON 9/11

Percent, number of respondents

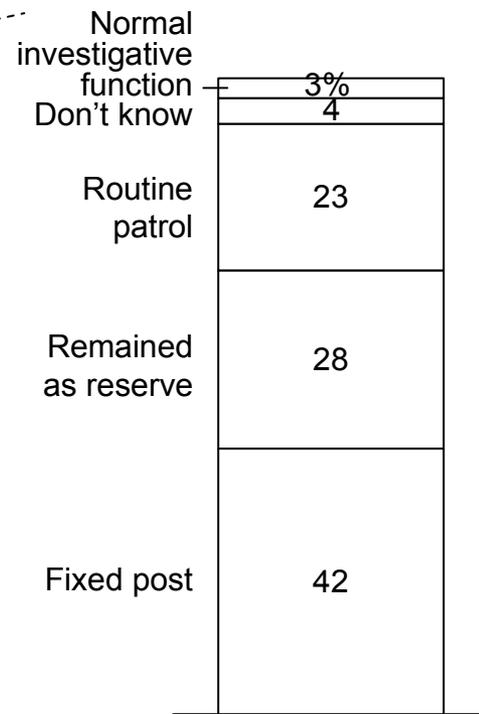
*Once you reported for duty, where were you assigned?*

100% = 414



*If you remained at assigned command, what was your primary duty?*

100% = 196



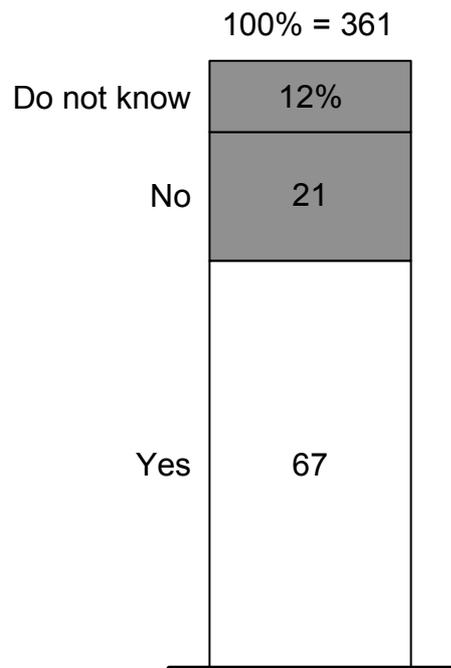
\* First responders = 41%

Source: NYPD Field Survey

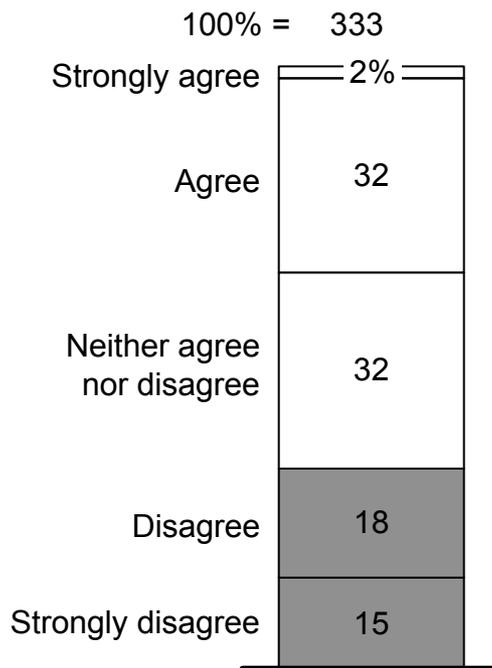
# MOBILIZATION ON 9/11

Percent

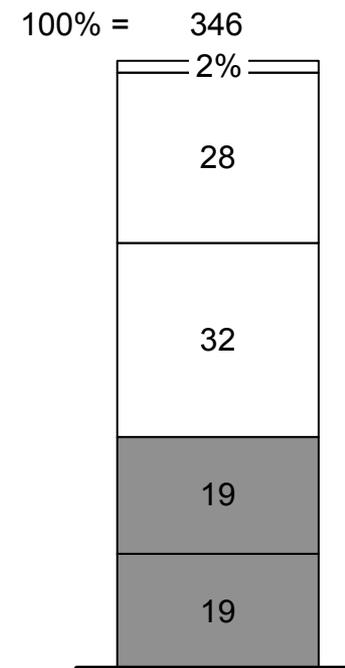
*“Once at a mobilization point, were you assigned to a specific supervisor and carried on his/her roster?”*



*“I was clear about which mobilization point I was assigned”*



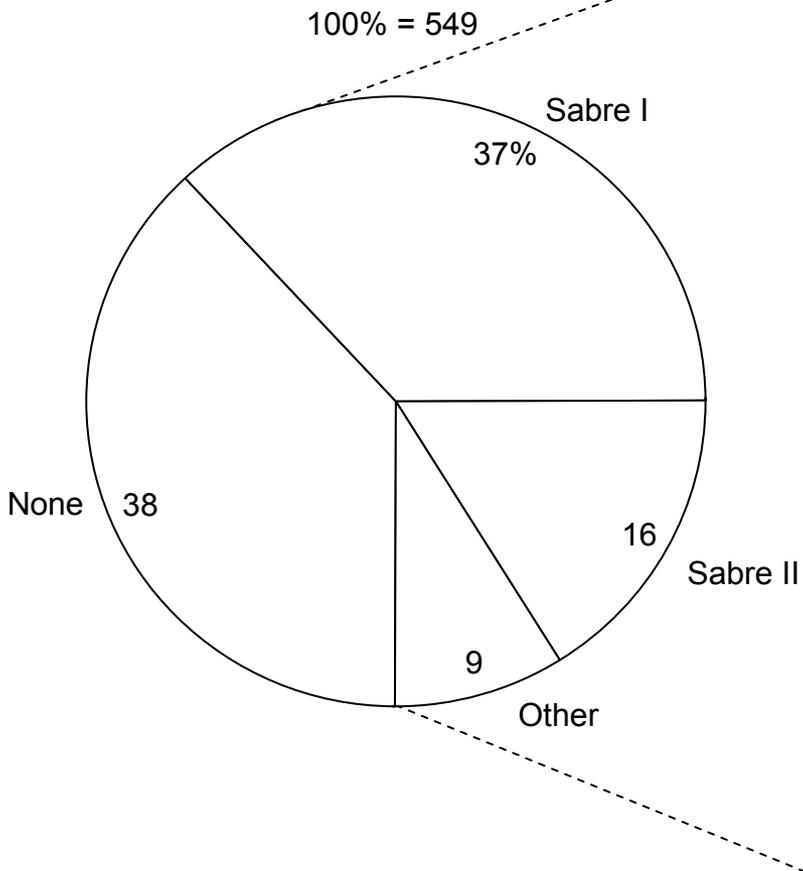
*“I was given a clear location and route to my mobilization point”*



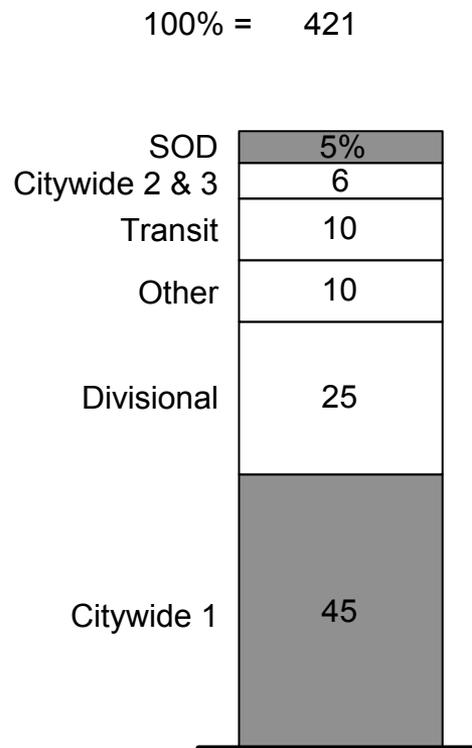
# COMMUNICATION ON 9/11

Percent, number of respondents

*Type of radio used on 9/11*



*Primary frequency monitored*



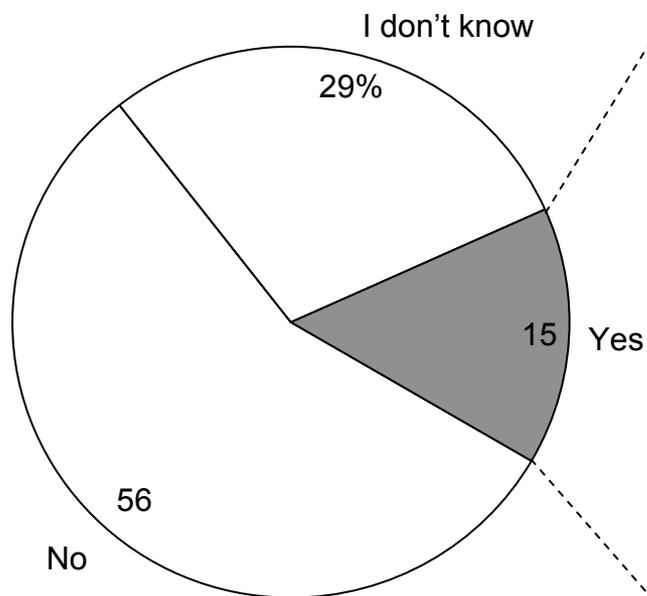
**About half of MOS were monitoring Citywide 1 and SOD**

# RADIO PERFORMANCE ON 9/11

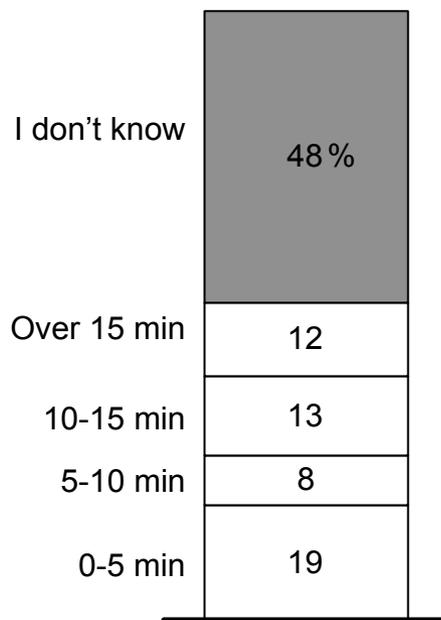
Percent, number of respondents

**“Did you experience a communications failure (dead air) on 9/11?”**

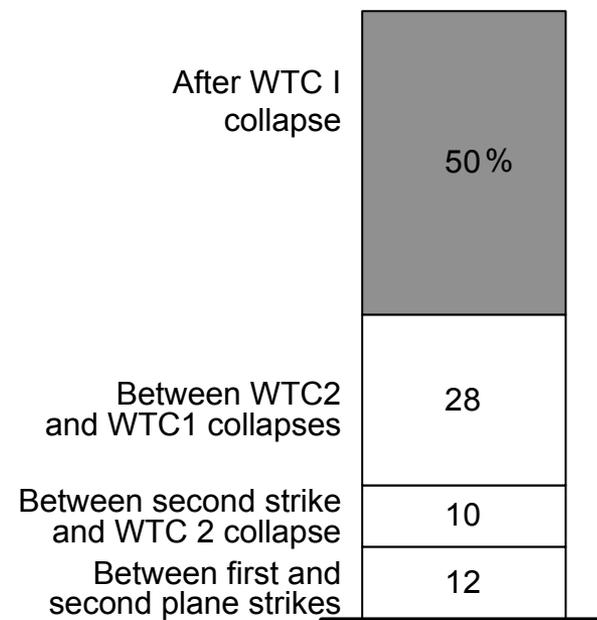
Total = 453 respondents



## Length of failure



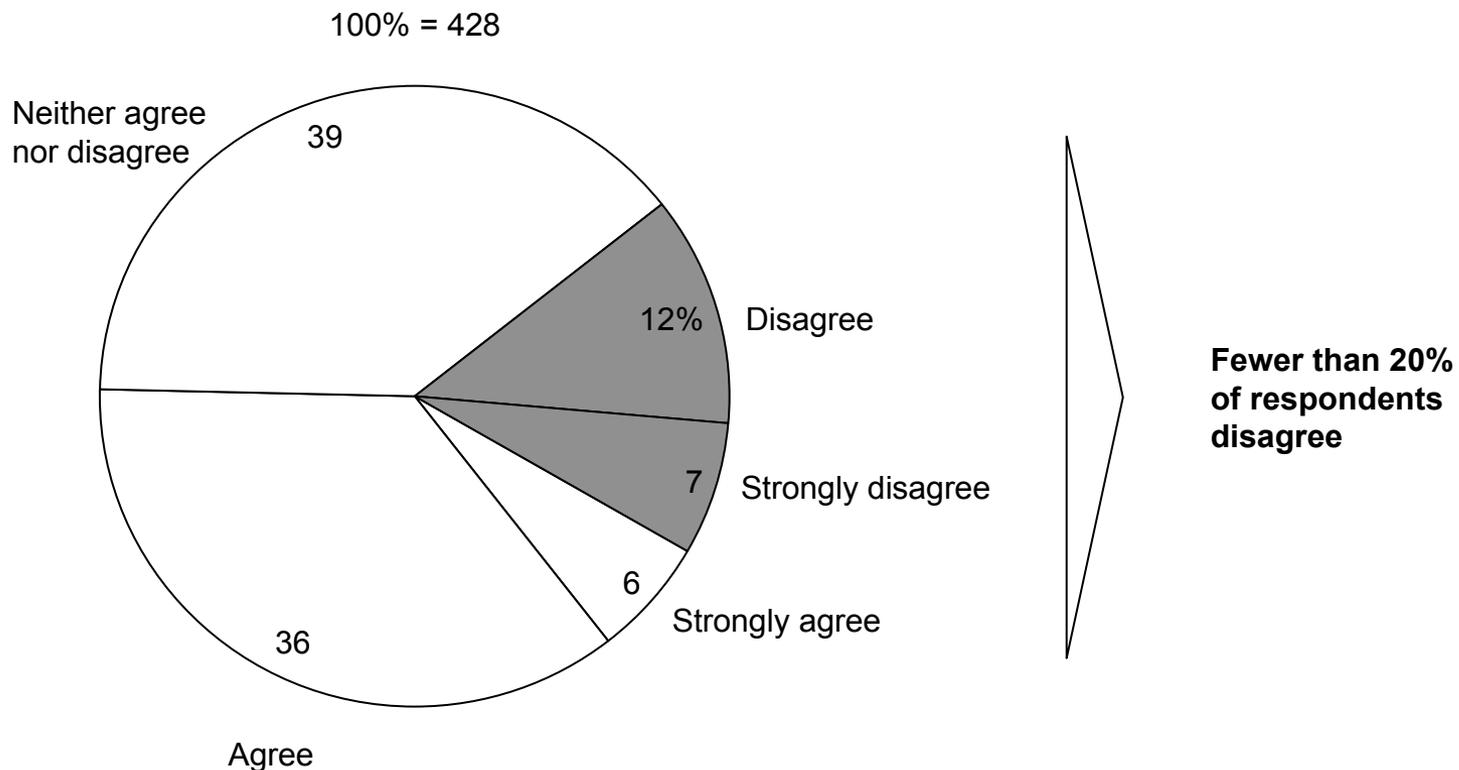
## “When did your radio fail?”



# RADIO PERFORMANCE ON 9/11 (CONTINUED)

Percent, number of respondents

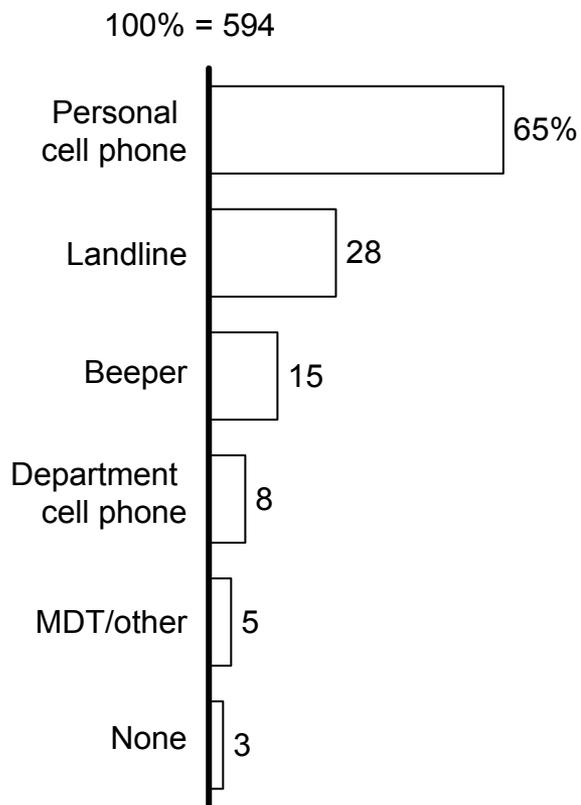
*“I was able to clearly hear and decipher radio traffic on 9/11”*



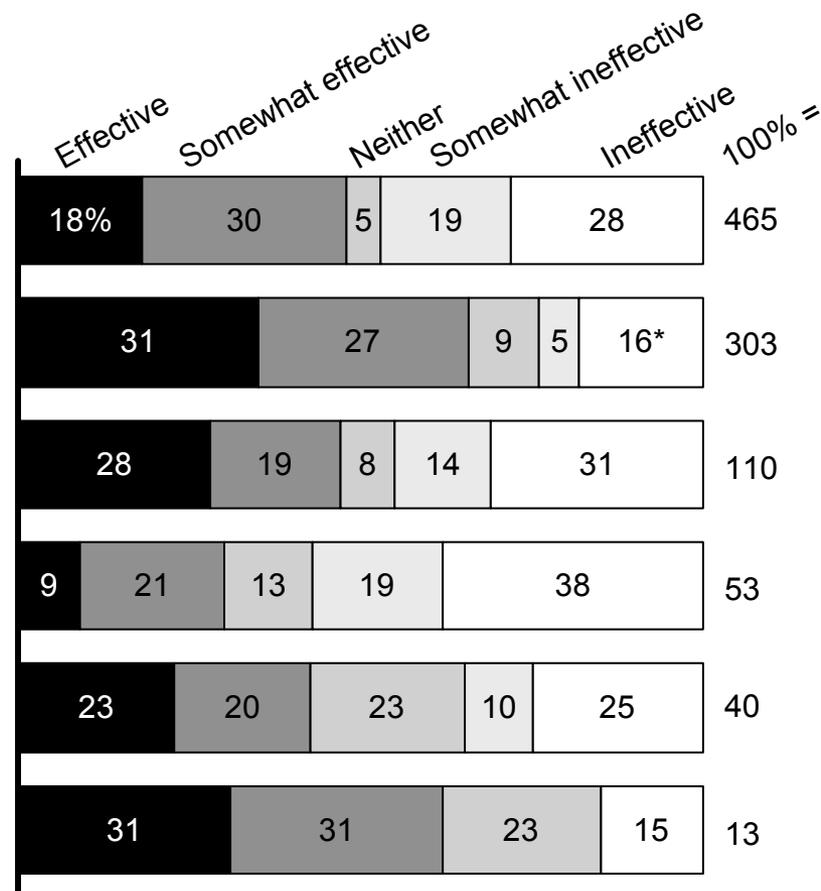
# USE AND EFFECTIVENESS OF NON-RADIO COMMUNICATIONS

Percent, number of respondents

**Non-radio communications methods used on 9/11**



**Effectiveness of non-radio methods**



\* First responders = 83%

# ABILITY TO CLEARLY HEAR AND DECIPHER RADIO TRAFFIC ON 9/11 BY FREQUENCY AND LOCATION

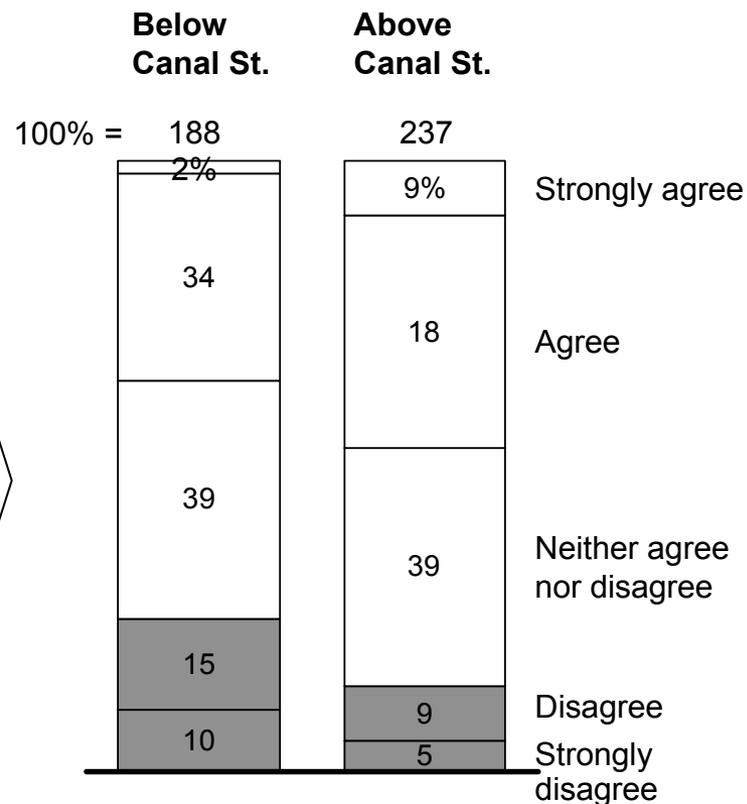
Percent, number of respondents

## Frequency breakdown

|                           | Division   | SOD       | Citywide 1 | Citywide 2&3 | Transit   |
|---------------------------|------------|-----------|------------|--------------|-----------|
| Strongly agree            | 11%        | 5%        | 7%         | 0%           | 0%        |
| Agree                     | 45         | 42        | 37         | 32           | 40        |
| Neither agree or disagree | 31         | 26        | 35         | 50           | 40        |
| Disagree                  | 8          | 22        | 14         | 14           | 10        |
| Strongly disagree         | 5          | 5         | 7          | 4            | 10        |
| <b>Total (number)</b>     | <b>102</b> | <b>19</b> | <b>180</b> | <b>22</b>    | <b>40</b> |



## Location

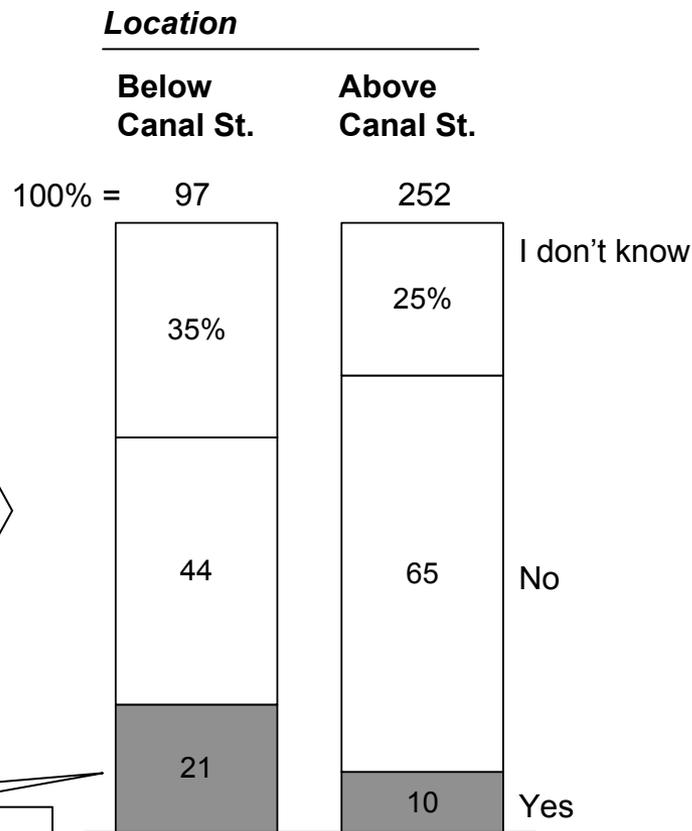


# RADIO FAILURE BY FREQUENCY AND LOCATION

Percent, number of respondents

## Frequency breakdown

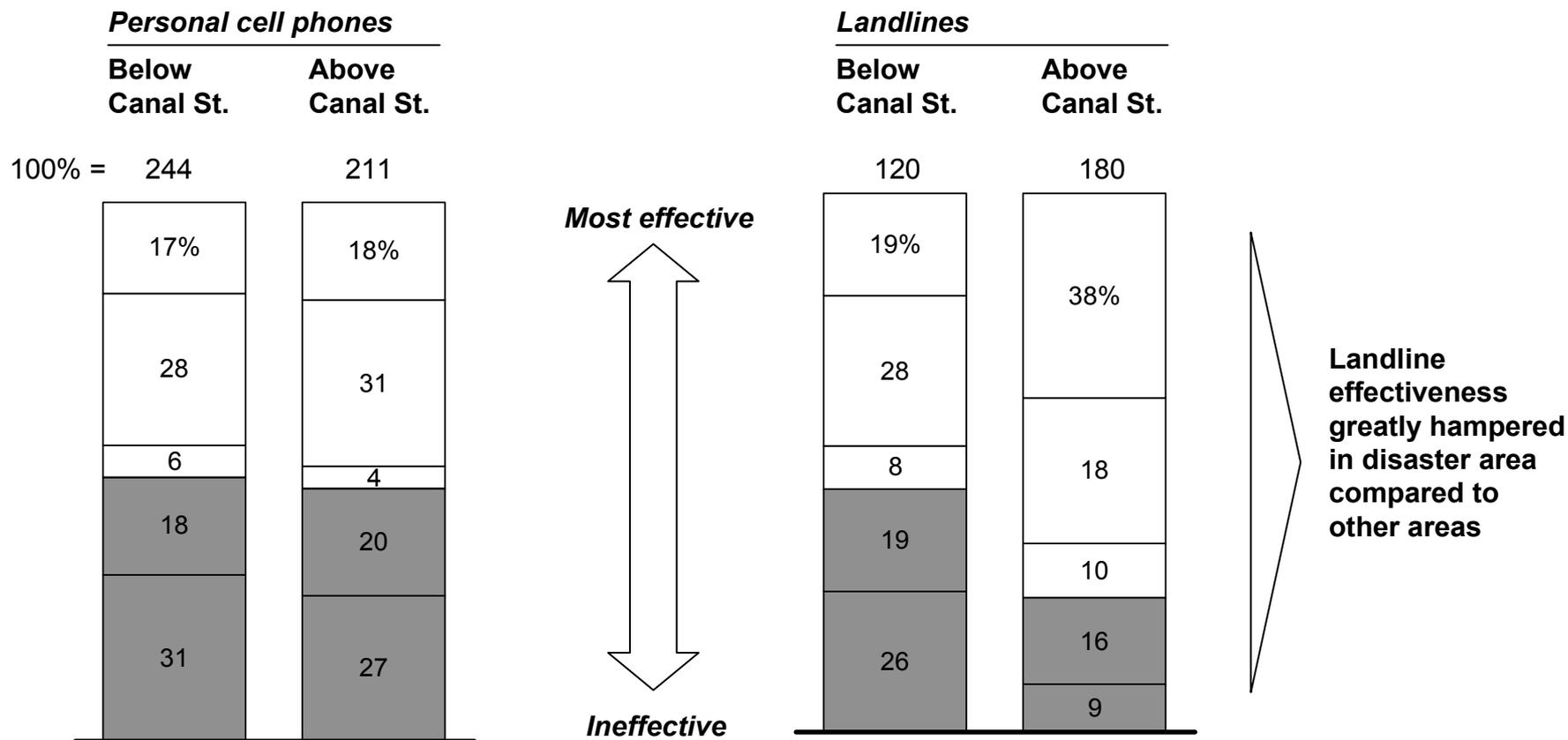
|                       | Division | SOD | Citywide | Citywide | Transit |
|-----------------------|----------|-----|----------|----------|---------|
| I don't know          | 19%      | 31% | 27%      | 22%      | 15%     |
| No                    | 69       | 53  | 55       | 61       | 66      |
| Yes                   | 12       | 16  | 18       | 17       | 19      |
| <b>Total (number)</b> | 105      | 19  | 186      | 23       | 41      |



- Failure reported to be more prevalent in disaster area
- No significant distinction reported among frequencies

# COMMUNICATIONS EQUIPMENT EFFECTIVENESS BY LOCATION

Percent, number of respondents



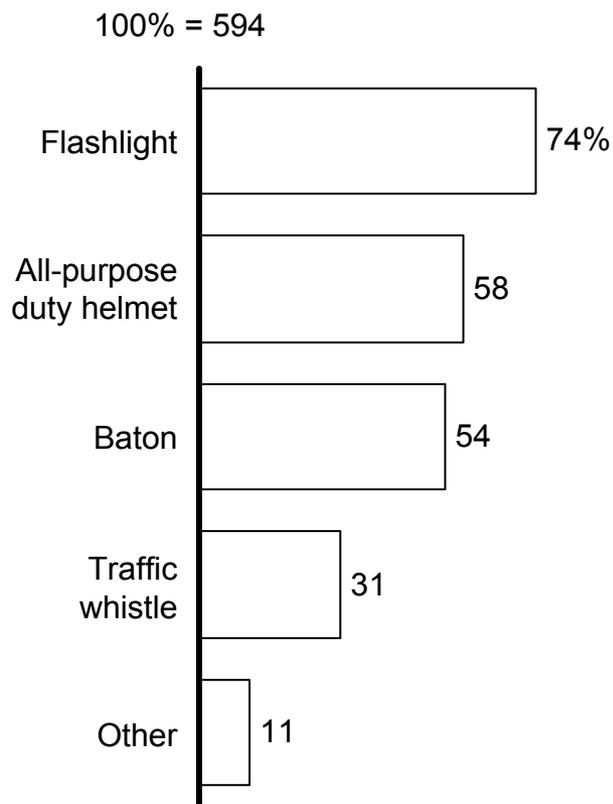
Note: Survey asked respondents to rank effectiveness on a 1-5 scale, with 1 being most effective and 5 being least effective

Source: NYPD Field Survey

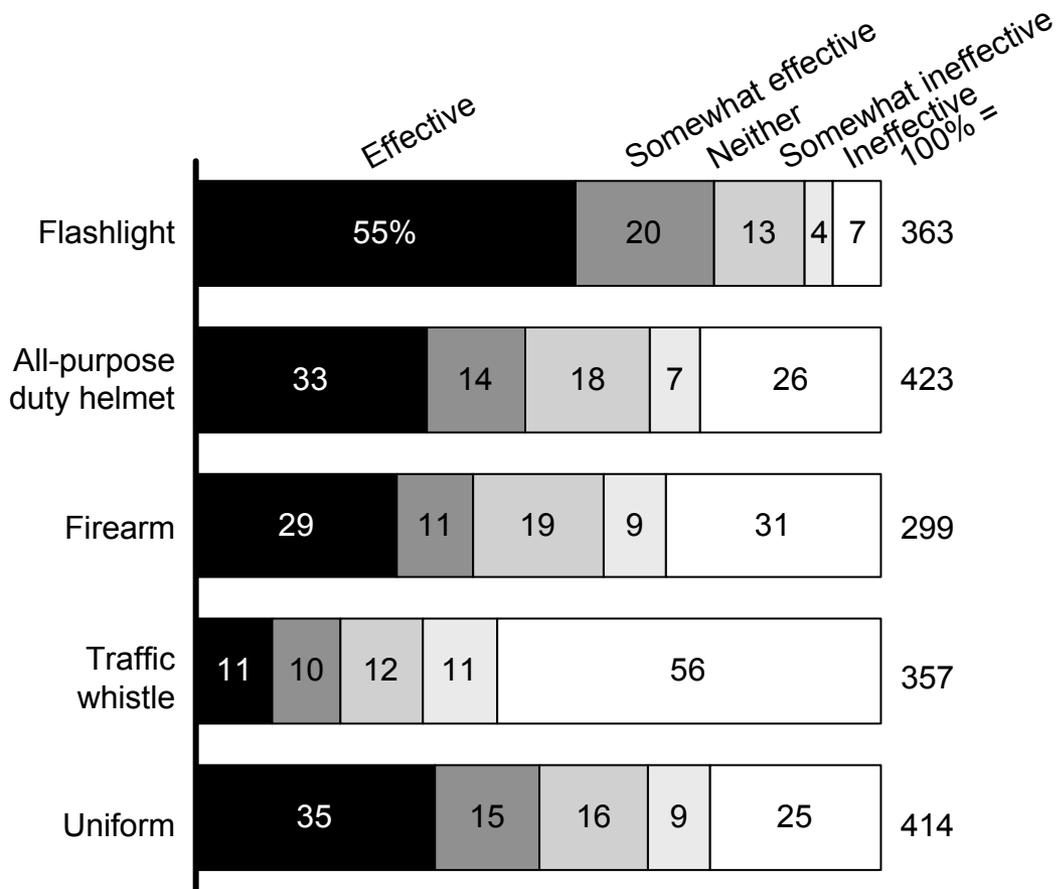
# ARRIVING WITH REQUIRED EQUIPMENT

Percent, number of respondents

*What responders had on their person on 9/11*



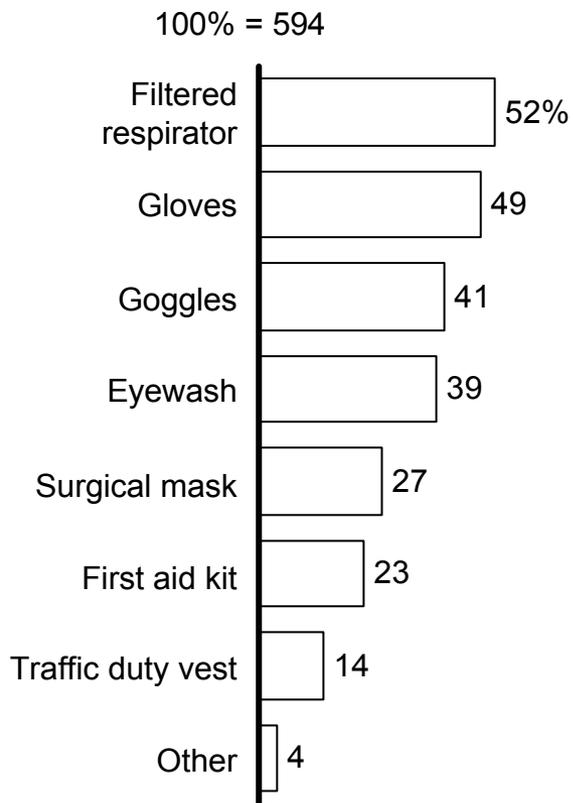
*Usefulness of equipment*



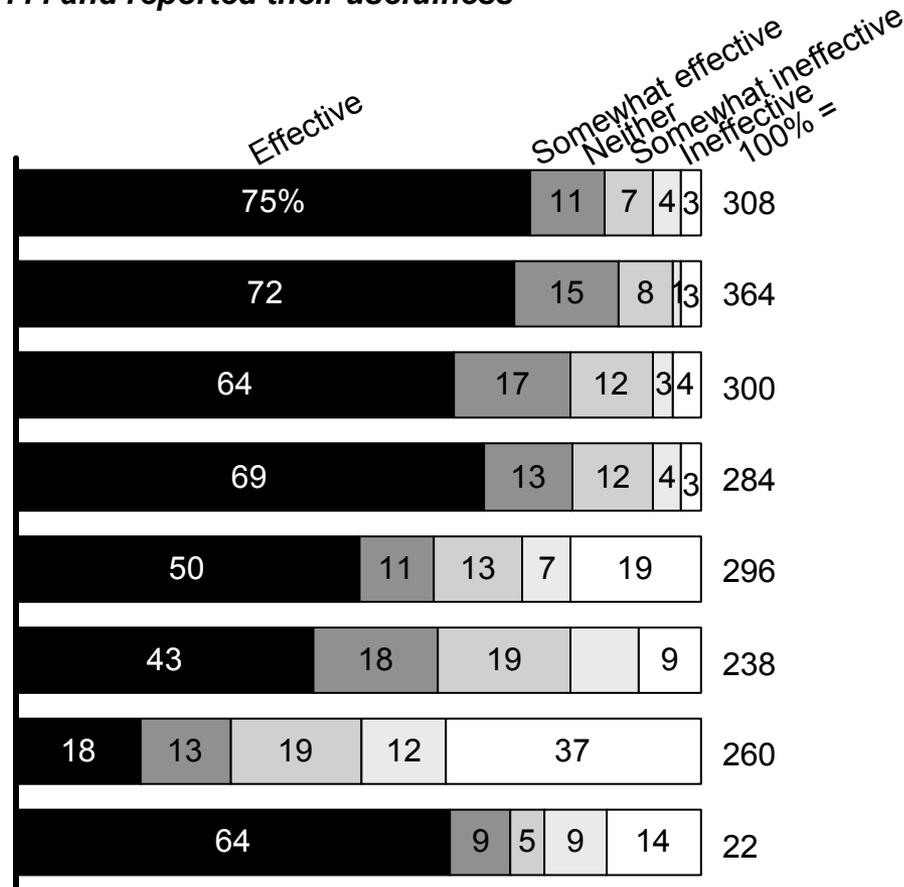
# ADDITIONAL NEEDED EQUIPMENT

Percent, number of respondents

*Respondents said they needed the following . . .*



*. . . and reported their usefulness*



# DECONTAMINATION EQUIPMENT

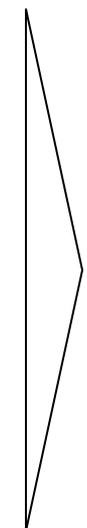
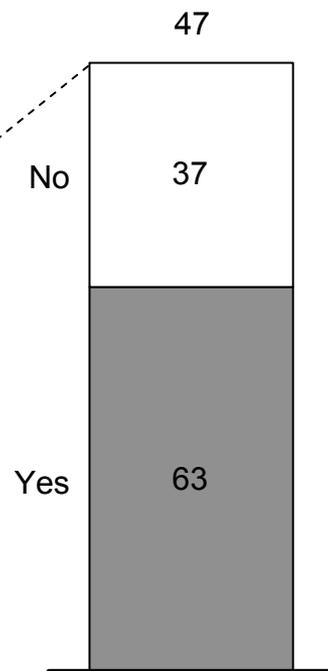
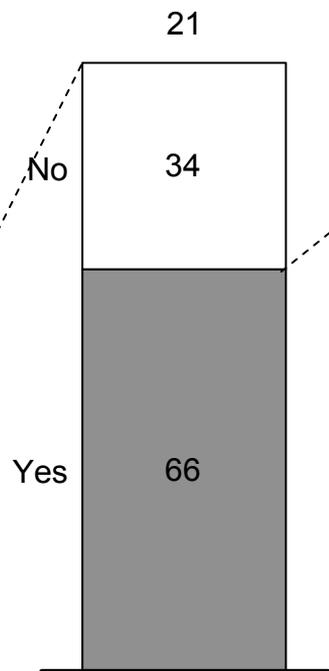
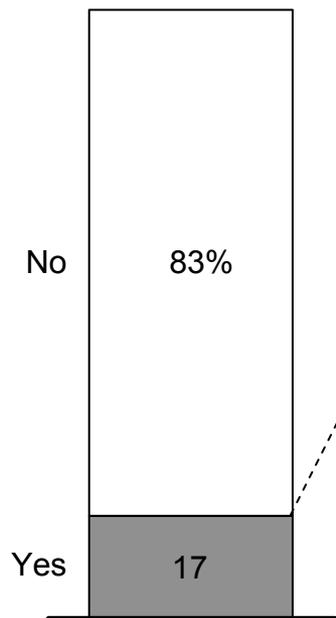
Percent, number of respondents

*“If at disaster vicinity, were you aware that decontamination was available on 9/11?”*

*Aware of decontamination location*

*Received decontamination on 9/11*

100% = 246

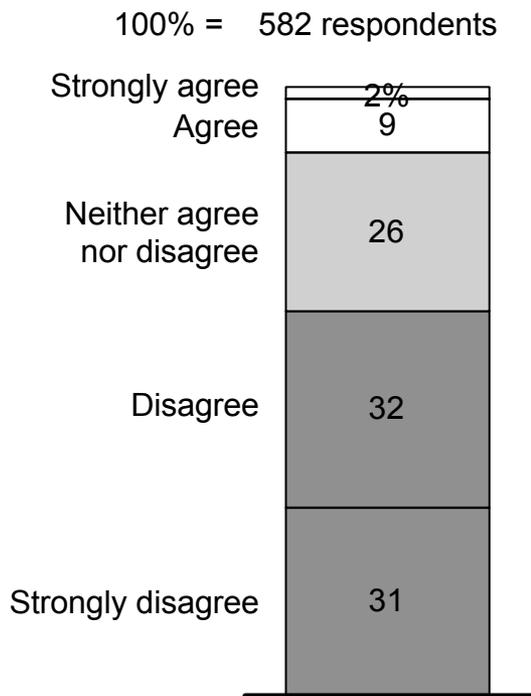


- 93% of those below Canal Street did not receive decontamination
- Lack of decontamination resulted primarily from lack of information

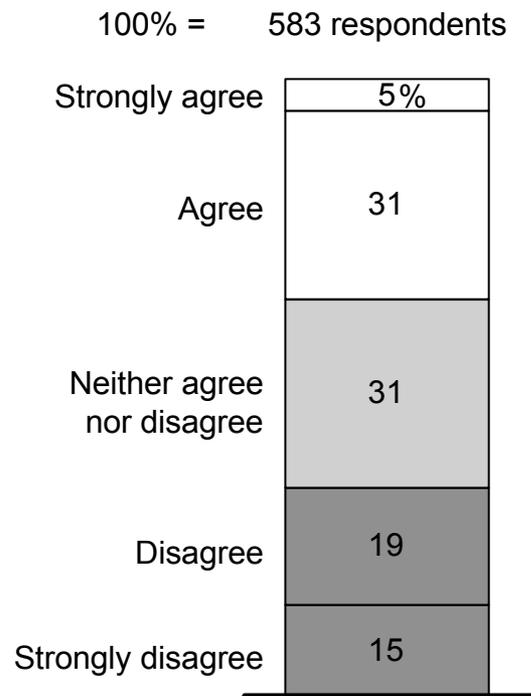
# CONFIDENCE IN EQUIPMENT

Percent, number of respondents

***“I feel confident that the Department requires me to carry the right type of equipment to deal with a large disaster”***



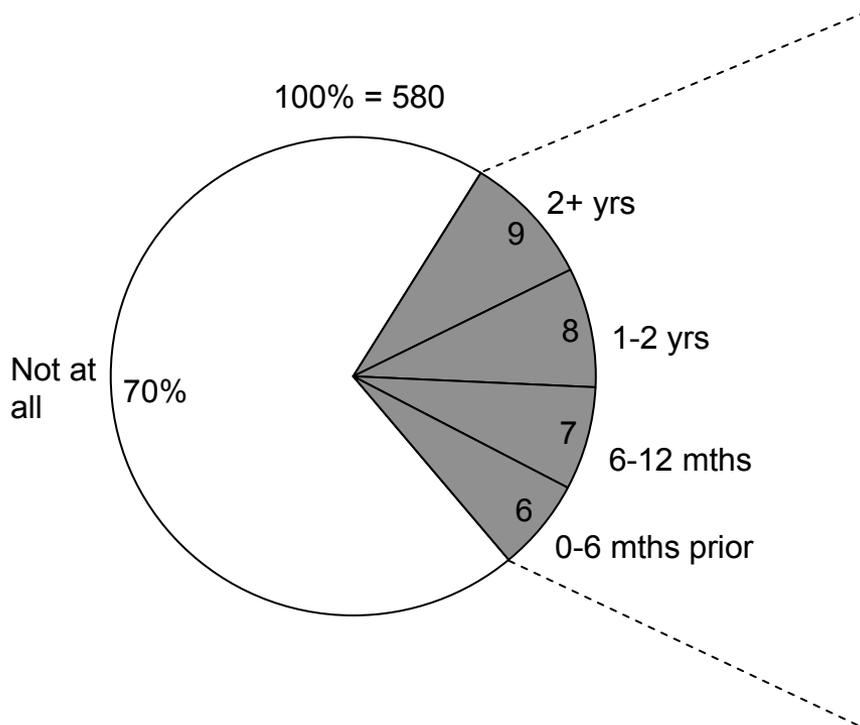
***“I feel confident that my equipment will function properly in an emergency”***



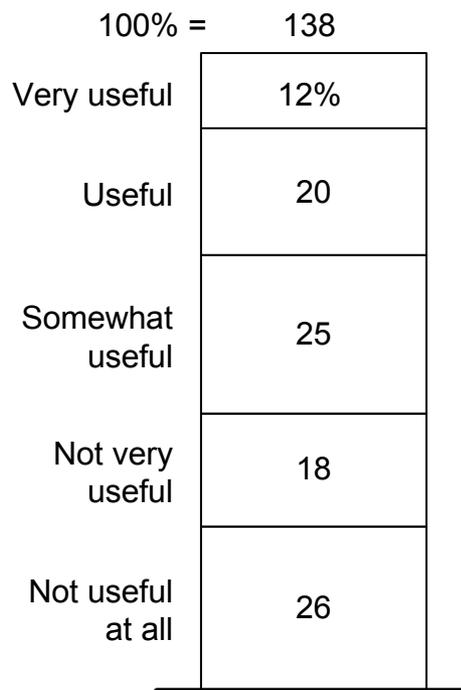
# BIO/CHEM/NUCLEAR TRAINING

Percent, number of respondents

**Frequency of training**



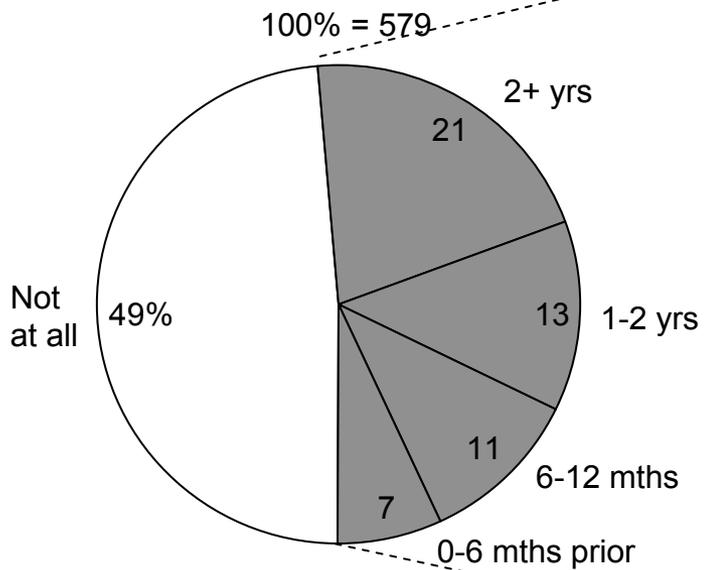
**Usefulness of training**



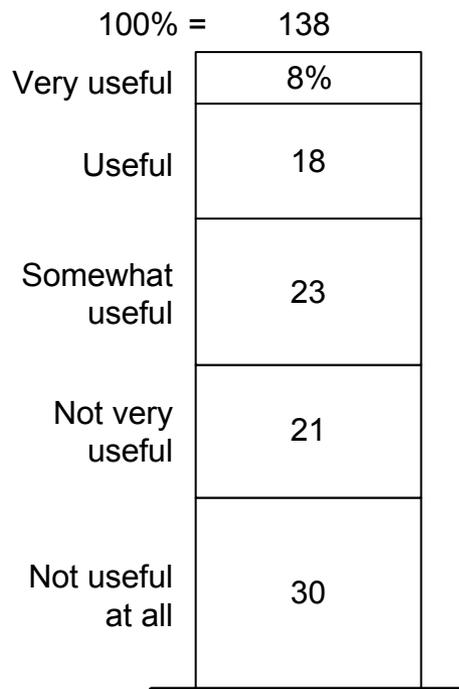
# HAZARDOUS MATERIALS TRAINING

Percent, number of respondents

**Frequency of training**



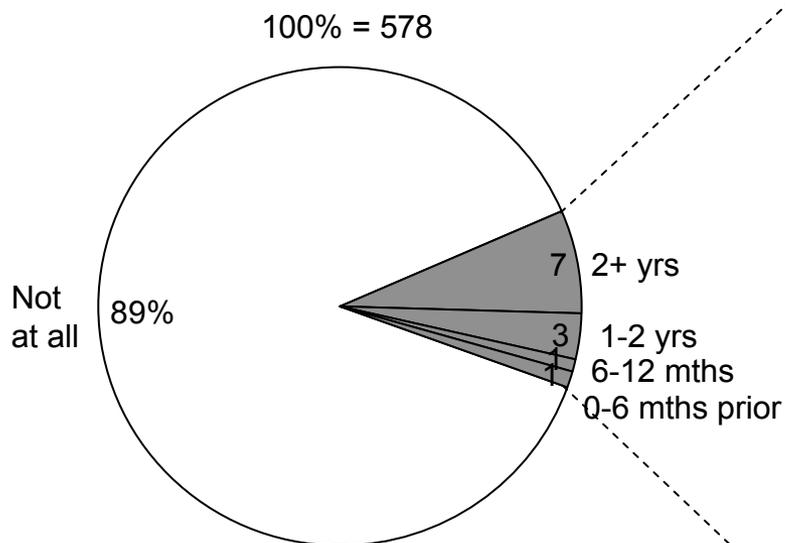
**Usefulness of training**



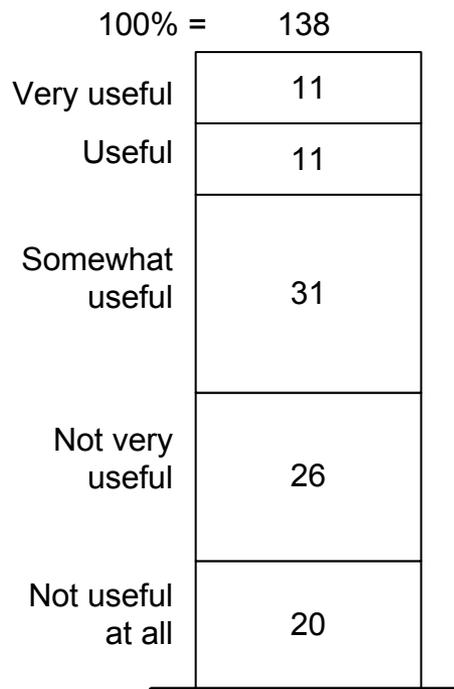
# BUILDING COLLAPSE TRAINING

Percent, number of respondents

*Frequency of training*



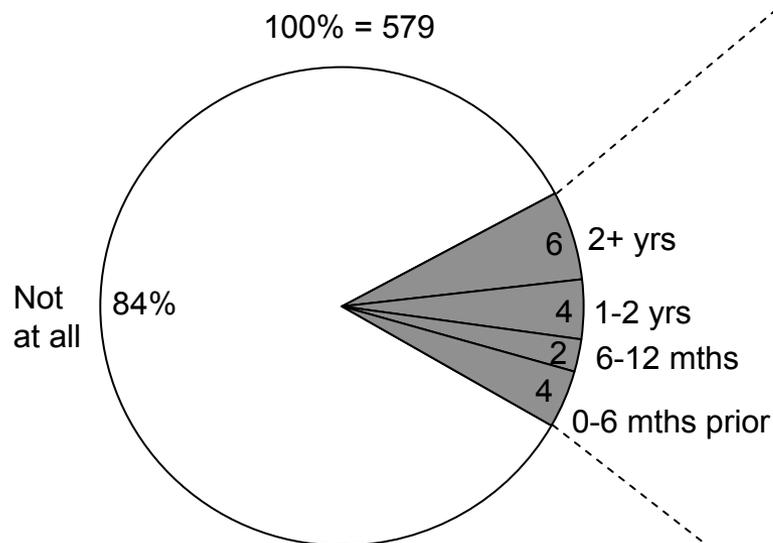
*Usefulness of training*



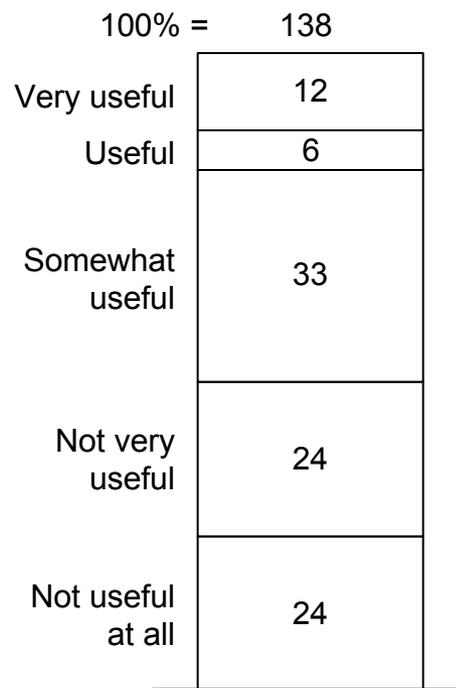
# COUNTER TERRORISM TRAINING

Percent, number of respondents

**Frequency of training**



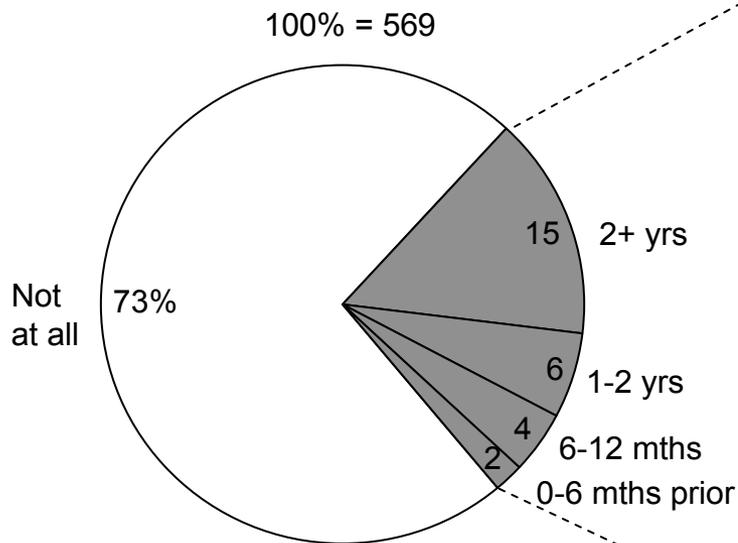
**Usefulness of training**



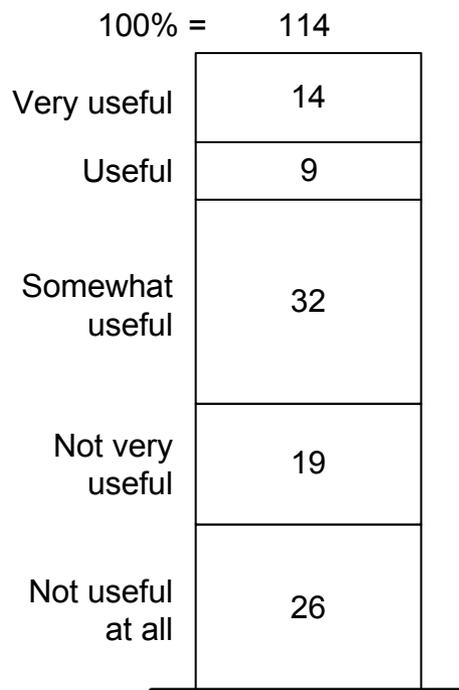
# FIRE RESCUE/EVACUATION TRAINING

Percent, number of respondents

*Frequency of training*



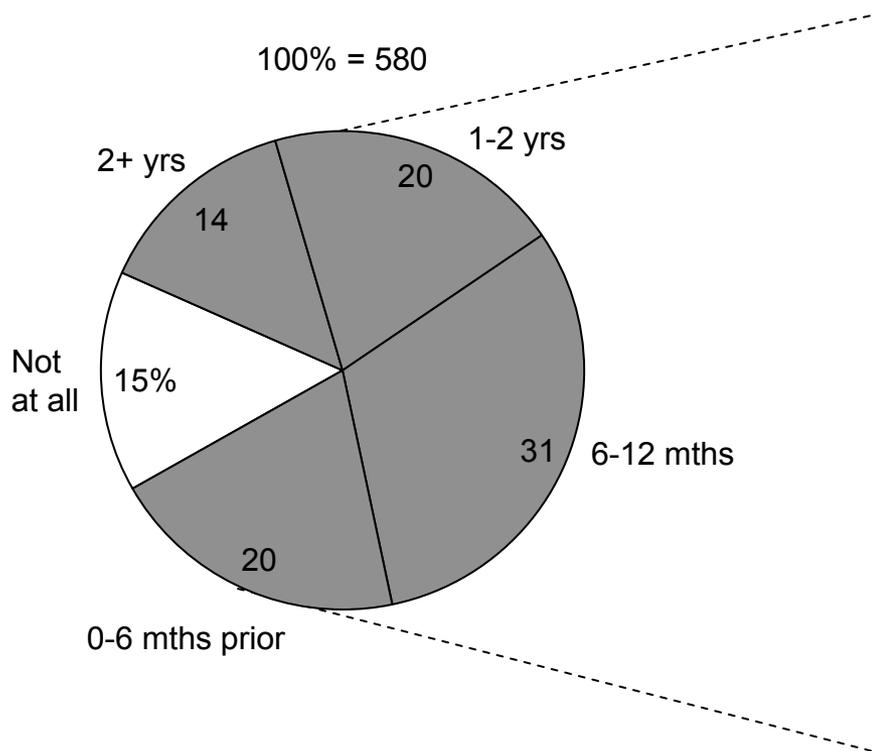
*Usefulness of training*



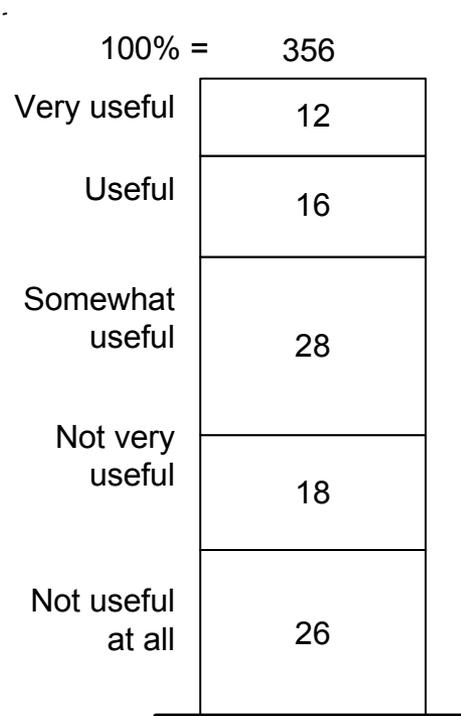
# MOBILIZATION PROCEDURES TRAINING

Percent, number of respondents

**Frequency of training**



**Usefulness of training**



# TRAINING PRIOR TO 9/11

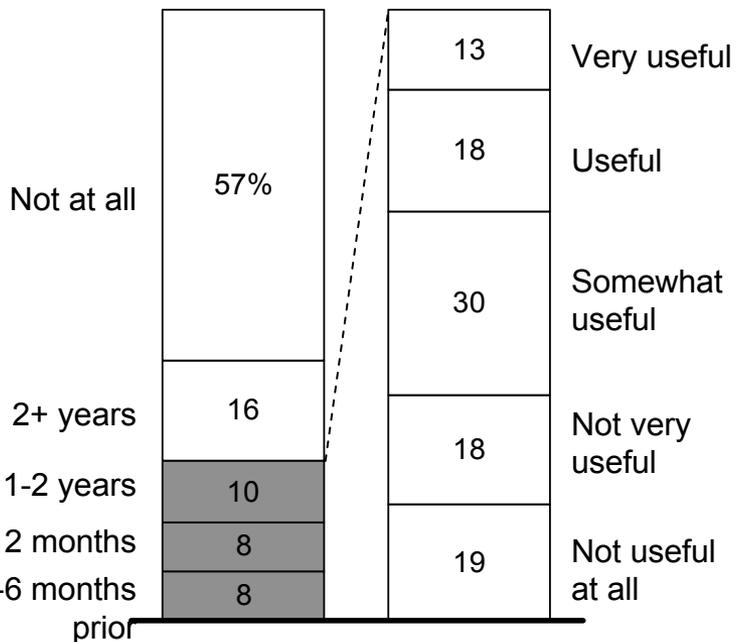
Percent, number of respondents

## Basic leadership

Frequency      Usefulness

100% = 579

196

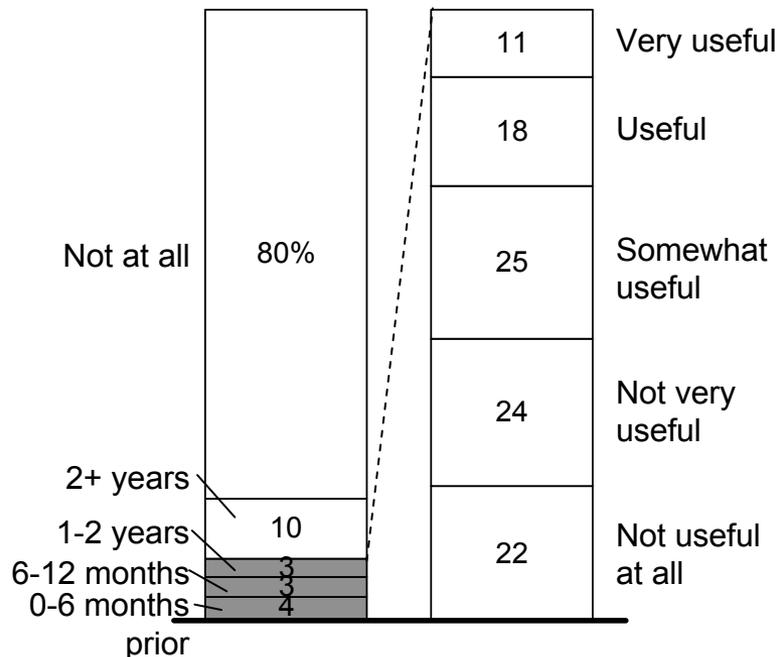


## Advanced leadership

Frequency      Usefulness

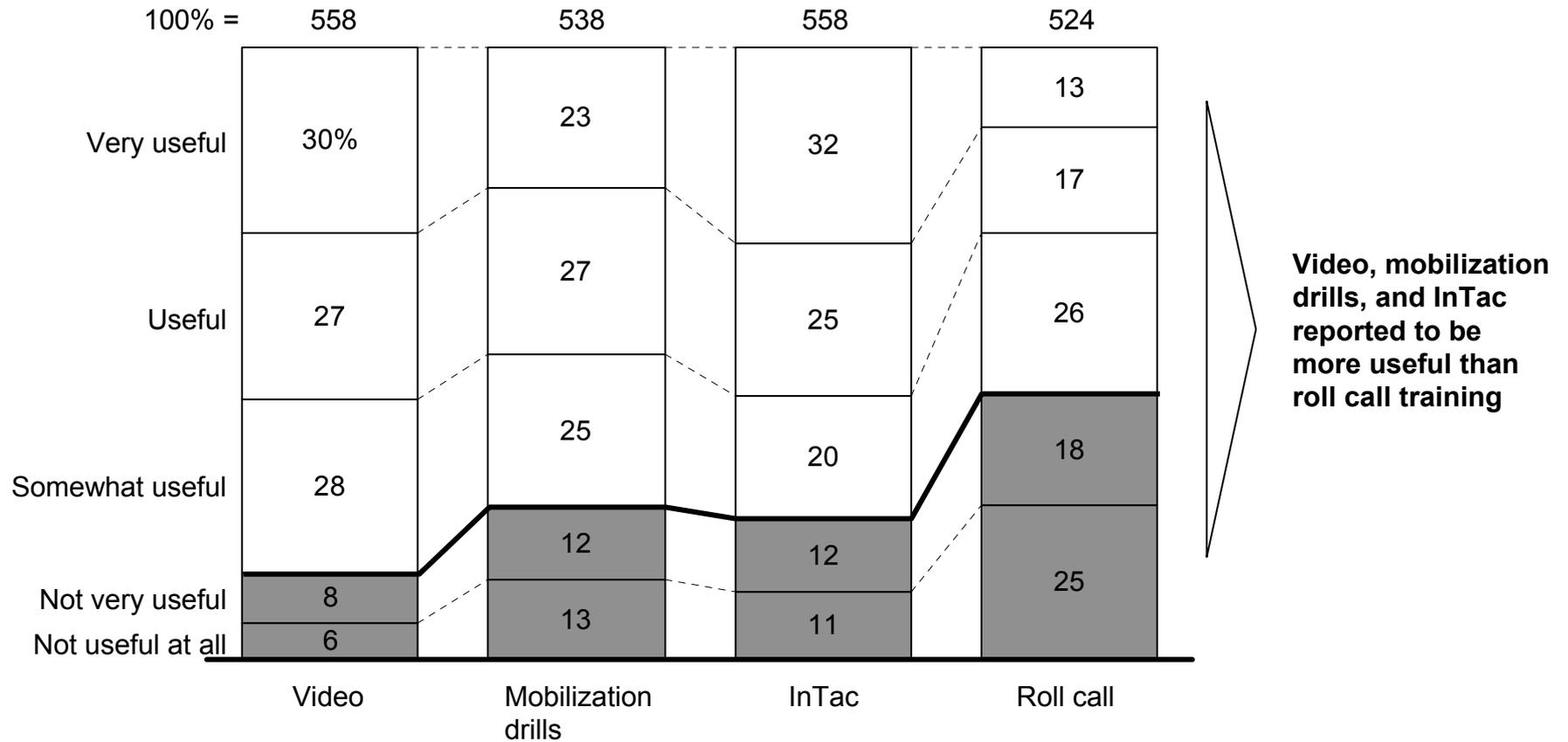
564

85



# TRAINING FORMAT EFFECTIVENESS

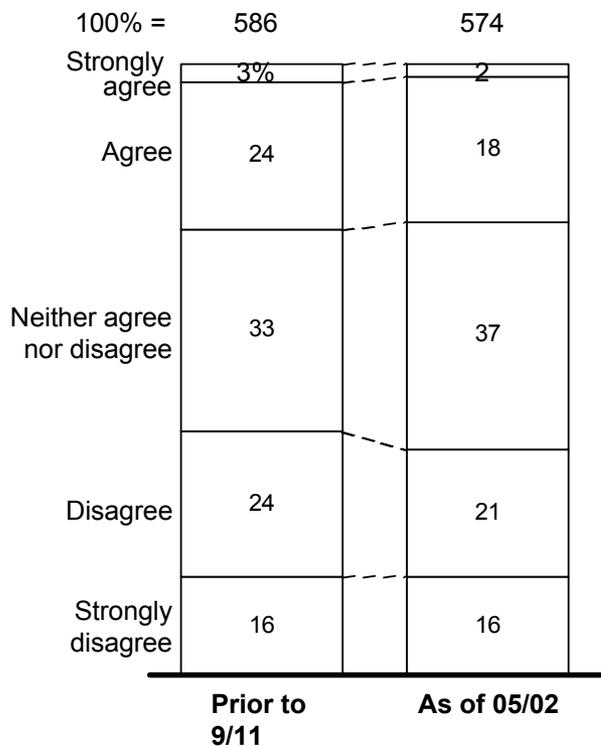
Percent, number of respondents



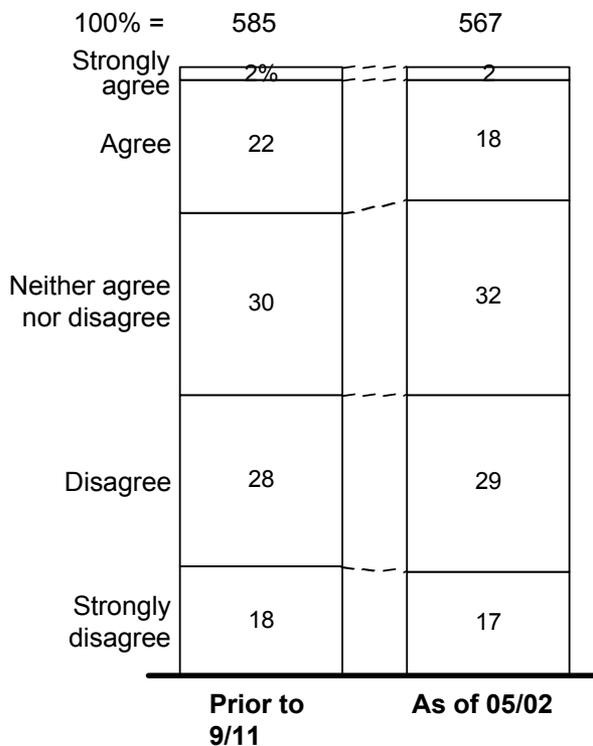
# OPINIONS ABOUT PLANNING

Percent, number of respondents

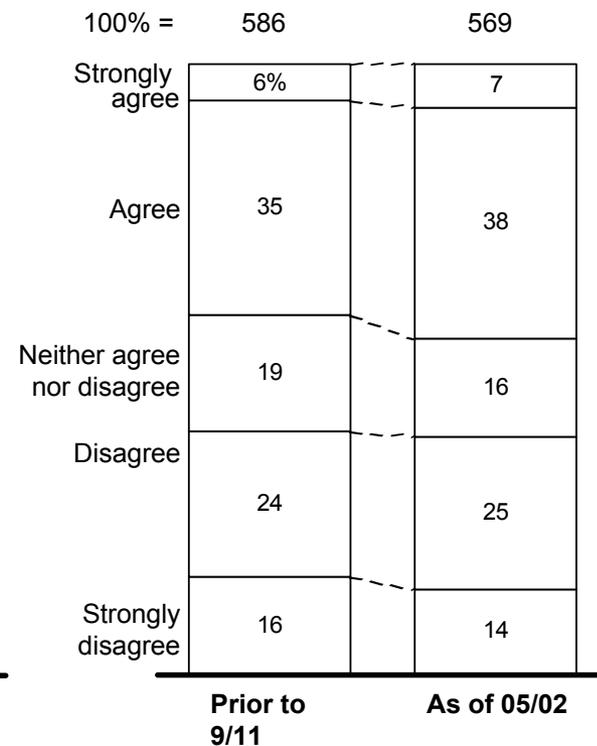
*“I feel/felt confident that NYPD developed adequate and acceptable plans to respond to emergencies”*



*“I clearly know/knew my role and responsibilities during an emergency, and received appropriate training to carry them out”*



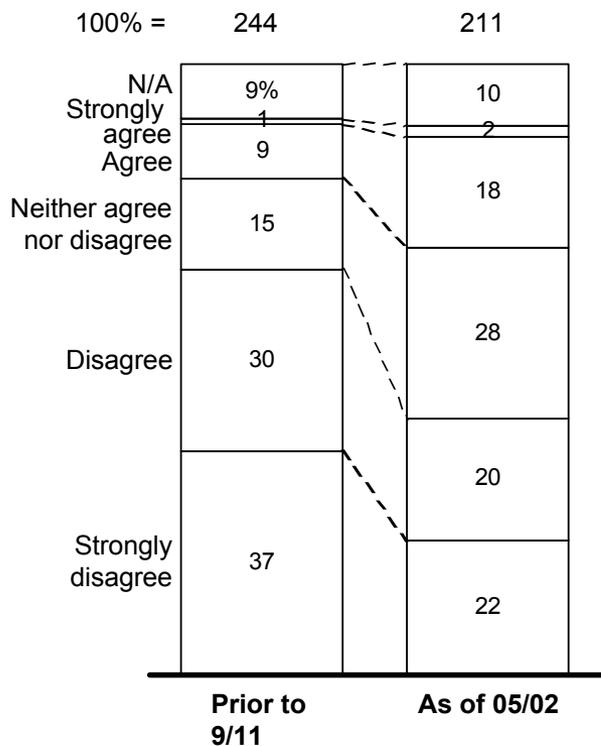
*“I am/was knowledgeable of off-duty mobilization procedures”*



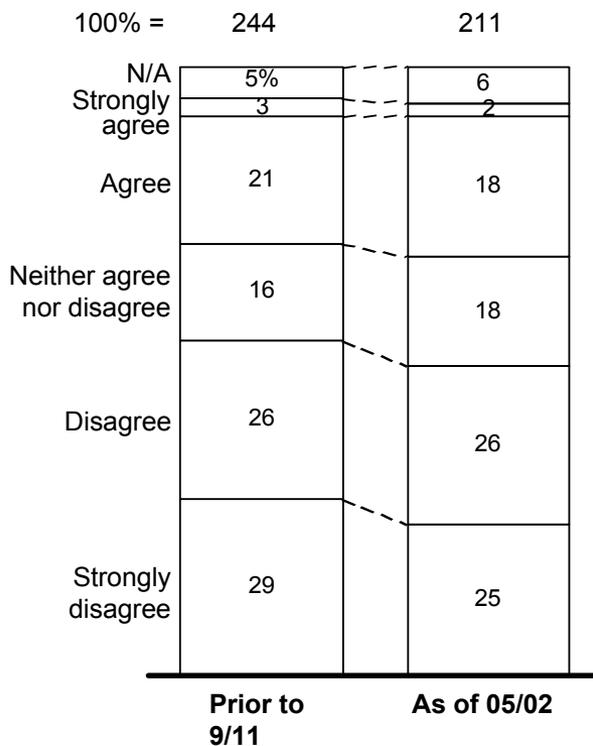
# OPINIONS ABOUT PLANNING (CONTINUED)

Percent, number of respondents

*“I am/was familiar with and received training regarding my precinct's Disaster Plans”*



*“I am/was aware of the pre-assigned mobilization points and staging areas within my command”*



*“I feel/felt my precinct's Disaster Plans are/were adequate and covered all sensitive locations in our jurisdiction”*

