

Increase operational preparedness

To effectively prepare for fire and EMS incidents of all sizes, emergency services organizations need well-defined systems and procedures that are flexible and can be quickly expanded. We have seven major recommendations to increase operational preparedness at the FDNY:

- 1) Expand the use of the Incident Command System (ICS) to provide a foundation for responding to and managing any type of emergency.
- 2) Further develop the existing Fire Department Operations Center to support the response to specific incidents and ensure that the Department's mission is accomplished citywide during major incidents.
- 3) Create Incident Management Teams, which are specialized highly trained teams that use ICS principles to manage large or complex incidents.
- 4) Fully deploy a flexible recall procedure to allow FDNY to recall specific off-duty personnel required to respond to an incident or maintain citywide coverage.
- 5) Develop agreements with neighboring departments for fire operations mutual aid, to augment FDNY's resources when necessary.
- 6) Modify and enforce staging protocols to increase command and control, and the capability to track personnel.
- 7) Expand capabilities to deal with hazardous materials incidents and re-evaluate heavy rescue and marine capabilities.

1) EXPAND USE OF THE INCIDENT COMMAND SYSTEM

The founding principles of the Incident Command System were designed 30 years ago to aid in the management of resources at emergency incidents. Today, ICS provides a basis for establishing a flexible command and control structure, along with defined roles, procedures and organizational principles that can be adapted to any specific situation or incident. In addition, ICS addresses specific operational, planning, logistics and finance issues relating to emergency incidents. Federal and state agencies mandate that all emergency response agencies operate in accordance with ICS.

The FDNY uses many ICS principles on a daily basis, but rarely uses other important aspects of the approach because of the nature and scale of most incidents in the city.

In order to examine ways to further deploy ICS, an FDNY task force of senior chiefs from Fire and EMS Operations worked with McKinsey for the last three months of our effort. This task force studied how ICS is used in other fire departments and agencies around the country and reviewed existing ICS models such as FIRESCOPE and the National Interagency Incident Management System (NIIMS). The task force chose the NIIMS model for FDNY. It then compared current FDNY command and control, procedures, tactics and operations with NIIMS and identified gaps between the two systems. The result of this effort was a clear, well-documented blueprint for expanding ICS at all levels in the FDNY.

We now recommend that the FDNY take the next steps toward increasing and further formalizing the day-to-day use of the Incident Command System. This will provide the basis for the Department to increase its ability to respond to large, complex incidents by:

- ¶ Ensuring that the command and control structure used by the Department is flexible, modular, and consistent across incidents and over time.
- ¶ Improving the Department's incident planning and logistics capabilities by creating specific planning and logistics functions consistent with ICS.
- ¶ Creating the foundation to achieve effective response coordination with other municipal, state, and federal agencies responding to major incidents.
- ¶ Defining clear roles and responsibilities for senior personnel responding to major incidents.

To achieve this, the Department must take three key steps over the next few months: review all FDNY procedures to ensure consistency with ICS principles; train FDNY personnel on the ICS; and establish ongoing ICS training programs for senior personnel.

1.1) Review all FDNY procedures to ensure consistency with ICS principles

In the course of its work, the FDNY task force examined how ICS principles might apply to procedures that the Department uses to fight a fire in a high-rise building. The task force developed recommendations for a number of changes. For instance, regarding the command and control structure, it recommended adopting ICS terminology to increase interagency understanding of FDNY operations. It also recommended new communications protocols that would

identify individual incidents and create consistent radio identification names for roles in the command structure.

We now recommend that FDNY review *all* its procedures to update them and make them comply fully with the ICS. The result of this review should be a comprehensive set of ICS-compliant FDNY procedures for emergency incident situations (e.g., multiple casualty, hazardous materials, transportation, residential and commercial building fires).

In addition, we recommend that, during this review of procedures, the Department explicitly re-evaluate the location and roles of operations and command posts. The Department needs to re-evaluate when to use a remote command post, when Fire and EMS command posts should be co-located, when Fire and EMS command posts should be in a mobile command vehicle, and how the incident command post should be made accessible to other agencies.

1.2) Train all FDNY personnel in ICS principles and procedures

It is crucial for the FDNY to increase its awareness, understanding, and use of the ICS to effectively lead the response to large incidents, or support other agencies when they lead such responses. Effective formalization and expansion of the use of the ICS will require training officers, firefighters and EMS personnel.

As a result, we recommend that, while the review and approval of new ICS-compatible procedures is taking place, the FDNY develop a training program to support the full rollout of those procedures. This program should be designed to ensure that FDNY personnel at all levels:

- ¶ Are knowledgeable about the ICS and its implementation at the FDNY and understand its importance and usefulness.
- ¶ Understand how the FDNY deploys the ICS for specific types of procedures.
- ¶ Are aware of the roles and responsibilities of the different ICS functions such as planning, logistics, and finance.
- ¶ Understand ICS communications protocols.

The training program must have two components: 1) a short-term component that will ensure that personnel have the training required to deploy revised, ICS-consistent procedures in the field; and 2) a long-term component that will ensure continuous training in ICS principles and their implementation at the FDNY.

We estimate that the total incremental cost to the Department of creating and implementing this training program over the next 12 months is \$5 million to \$7 million, depending upon the training program design and delivery method (e.g., classroom training supplemented with computer-simulated exercises).

Implementing a training program of this magnitude and importance would require a substantial commitment from all bureaus in the Department, particularly Fire and EMS Operations, which would have to commit resources to support the design and lead the delivery of the training program. We estimate that the Department would have to commit approximately 1,000 chief-hours over the next six months. In addition, the Bureau of Training would need to dedicate substantial resources to develop the curriculum and materials with the assigned chief officers.

Once the training program is developed and the first, short-term component is implemented, incremental training costs are expected to be minimal.

1.3) Establish ongoing ICS training programs for senior personnel

FDNY must ensure that all senior personnel such as Fire and EMS chief officers can perform all leadership roles associated with the FDNY ICS in a wide variety of situations. This requires that these chiefs be trained in the following functions:

- ¶ Incident command, including: coordinating the overall response strategy, managing (at a high level) all FDNY resources and those from other agencies, and ensuring a manageable span of control for other supervisors as incidents escalate.
- ¶ Operations, including the selection and execution of FDNY procedures.
- ¶ Planning, including the creation, updating, and use of incident action plans, management of interagency meetings, collection and synthesis of information from multiple sources (e.g., intelligence, media, other responding agencies) and estimation of future resource requirements for the incident response.
- ¶ Logistics, including the procurement, receipt, transportation, and management of equipment, materials and services to support FDNY operations, and tracking all additional or special FDNY equipment used at an incident.

In addition, the Department should put in place the financial and administrative capabilities to support incident response, including the ability to track and assign costs to a particular incident and carry out emergency procurements as needed.

The training programs described above will help chiefs better understand their roles, functions, and responsibilities under the ICS. However, in order for these chiefs to be more effective managers of the response to large, complex incidents, the Department must do more. It must train them regularly to perform these roles in a variety of specific scenarios.

Currently senior FDNY chiefs receive their last formal training when they are promoted to the rank of battalion chief or EMS captain. Some senior chiefs have not received routine, periodic training for more than 15 years. We recommend that the Department create a periodic (e.g., twice a year) training program for its senior chiefs to practice different ICS roles in the context of specific, complex incidents. This program should include incidents involving terrorism (e.g., biological, chemical and radiological agents), large numbers of victims, widespread damage to structures and disruption of communications or utility services.

We believe that the total annual cost of training the Department's 100 most senior chiefs (staff and deputy ranks) twice a year would be in the range of \$1 million to \$2 million.

2) FURTHER DEVELOP THE FIRE DEPARTMENT OPERATIONS CENTER

The existing Fire Department Operations Center (FDOC) today has three main functions: to notify senior staff of fire and EMS emergencies, to act as a point of contact for other city, state and federal agencies, and to prepare a daily report of Department activities. It is staffed 24 hours a day with one officer, three firefighters and an EMT.

We recommend that the FDNY expand the center into a fully functional emergency operations center with infrastructure and communications capabilities to provide citywide command, control, and operational planning for the Fire Department during routine operations and major incidents. Senior personnel should report to the FDOC during major incidents.

Specifically, the following activities should take place at the FDOC:

- ¶ Set the Department's operational priorities during resource-taxing events in the city.
- ¶ Keep up-to-date on the incidents taking place in and around the city and their current and future resource requirements.
- ¶ Monitor citywide coverage, analyzing the Department's resource availability and managing the Department's resource pool, including the initiation of recalls and mutual-aid requests.

- ¶ Be a single point of contact for other agencies to coordinate activities on a citywide or regional basis.
- ¶ Gather and analyze information on specific incidents and on relevant conditions throughout the city (e.g., relevant law enforcement activities, traffic and weather conditions) and disseminate this information to appropriate parties.
- ¶ Support the command and control of any major incident in the city as required (e.g., serving as temporary incident command post, leading the re-establishment of command and control structure).
- ¶ Serve as an area command post if multiple large incidents are taking place in the city.

The management structure of the FDOC should be consistent with the ICS deployed at the FDNY. Personnel will be assigned ICS roles such as operations and planning. All who regularly staff the FDOC will require ICS training (including civilian staff responsible for bureaus within the Department) and will be assigned to the FDOC for at least one year, after substantial training by experienced FDOC personnel.

The FDNY's ICS task force worked with McKinsey to develop a detailed set of guidelines for FDOC operations. The guidelines include multiple levels of readiness with corresponding staffing levels (which vary in numbers and seniority of the personnel at the FDOC), clear rules for decision-making within the FDOC, definition of roles and responsibilities, and communications needs.

We recommend that the Department implement the FDOC in line with the guidelines developed by the task force. The implementation must be followed by a set of planned drills for all responding staff.

3) CREATE INCIDENT MANAGEMENT TEAMS

ICS principles dictate that all first-responding chief officers and supervisors be able to perform any assigned role effectively at a variety of incidents. However, for large, complex incidents it is beneficial to deploy personnel who are highly trained and specialized in the specific functions of incident management (e.g., operations, planning or logistics).

To accomplish this, we recommend the Fire Department build at least two Incident Management Teams (IMTs), each composed of 21 individuals who will receive specific training. A minimum of two teams is required to guarantee that the Fire Department has adequate around-the-clock coverage capabilities over prolonged periods of time (e.g., weeks).

The teams should be made up of high-performing individuals who are selected by the Chiefs of Fire and EMS Operations. Each member of each team should be highly specialized in one specific function of ICS, but be able to carry out any other role within the ICS organization. These personnel would receive regular training, including scenario and tabletop training. They would continue to perform their regular functions at FDNY, but would be recalled when IMTs are activated to respond to a large, complex incident.

The effectiveness of highly trained individuals working in teams was evident on September 13, e.g., with the arrival of the U.S. Department of Forestry Southwest IMT, which assisted with the WTC rescue effort, and on the West Coast, where fire departments regularly deploy IMTs to manage the response to large forest fires, earthquakes and other major emergencies.

The FDNY ICS task force developed a specific proposal for the structure, roles and responsibilities for the IMTs. We recommend that FDNY create IMTs based on this proposal. We estimate that the one-time incremental cost to establish the two IMTs would be approximately \$500,000 to \$1 million with annual maintenance costs of approximately \$500,000.

4) CREATE AND FULLY DEPLOY A FLEXIBLE RECALL PROCEDURE

Before September 11, the Department had not issued a recall of its personnel for more than 30 years. Firefighters and EMS personnel had not received much training or clear guidance on how to proceed in case of a recall.

We believe the Department should be able to efficiently mobilize all or part of its off-duty personnel in case of emergencies and increased threat levels. The recall process should enable the Department's operational leadership to mobilize specific, targeted capabilities, such as rescue or hazardous-materials units, and to recall large numbers of personnel in a simple, modular and orderly way.

An internal FDNY task force, with support from McKinsey, developed a set of detailed guidelines for the recall procedure. We recommend that the Department immediately take steps to finalize and deploy the recall policy consistent with these guidelines. We believe that once a recall procedure developed under these guidelines is fully deployed, the Department will rarely need to issue a full recall.

Below are the major aspects of the proposed recall guidelines.

- ¶ **Create pre-defined recall packages.** The Department should create multiple, pre-defined recall packages with different staffing levels and capabilities. These will form the building blocks necessary to tailor a recall to meet the needs of a specific situation. For example, different

recall packages could offer: manpower only, manpower with reserve apparatus, manpower and apparatus with special operations capabilities (e.g., hazardous-materials or rescue), rapid response teams, or incident management teams (IMTs). The packages should be designed to be self-contained, i.e., they should be organized so that, when a package is recalled, all necessary equipment and supporting personnel, such as logistics and planning, are mobilized. The Department should have the ability to issue a recall on a citywide basis or on a borough-by-borough basis. And it should be able to implement recall packages at different levels (e.g., different numbers of units of different types).

- ¶ **Clearly define who can issue a recall.** Only the Chief of Department or a specific designee (e.g., the Chief of Fire Operations or Chief of EMS Operations) at the FDOC should have the authority to issue a recall. Centralizing this authority ensures that citywide needs are considered (versus, for example, the needs of any specific incident or incidents). It also decreases the potential for confusion regarding the origin of the recall decision, who is being recalled, when and for what purposes.
- ¶ **Create pre-established recall trigger points.** The Chief of Department, or his designee, should be able to issue a recall at his discretion, or when specific trigger points are reached. Trigger points should be developed based on a number of variables, such as city coverage capabilities, identified threat levels and the need to proactively augment resources for pre-planned events such as VIP visits.
- ¶ **Enable FDOC to determine recall need and characteristics.** The planning personnel at the Fire Department Operations Center should play a major role in how recalls are ordered and conducted. They should have the responsibility and the capabilities to determine whether a recall is required (e.g., instead of or in addition to mutual aid), which personnel will be recalled and how the recall will be put into action. To make these determinations, they should leverage pre-determined recall packages, tables that detail the composition of these packages and staffing matrices. These determinations will allow them to develop a specific recall recommendation to the Chief of Department or his designee. Once the Chief or his designee authorizes the recall, the FDOC planning personnel should initiate the appropriate communications to all parties, such as Operations, the Public Information Office and Fleet Services.
- ¶ **Communicate recalls precisely and consistently.** The Department should develop a standard recall message to be communicated to FDNY members, consisting of specific instructions on who is being recalled and where they should report. The Department should have redundant means of communicating recall messages accurately. These should include

internal methods, such as phone trees and pager messages, and external methods such as the use of news media.

- ¶ **Create mobilization points.** The Department should instruct and train FDNY personnel to report to regular, pre-specified locations during a recall. In addition, the FDOC should maintain a list of alternative “mobilization points” for recalled personnel to be used when appropriate. For example, if the transportation infrastructure is compromised in a way that prevents recalled personnel from responding to their regular location, FDOC should identify a mobilization point and send personnel there. This will allow the Department to facilitate transportation, track and control recalled personnel.
- ¶ **Train for recalls.** The Department should communicate the new recall procedures to FDNY members and conduct regular training so that all personnel understand the procedures thoroughly. This regular training is especially important for those involved in the recall decision process – such as the Chief of Department, his designees and the FDOC personnel – along with those responsible for communicating recalls to FDNY personnel. The Department should conduct formal staff performance evaluations following this training. In addition, the Department should conduct drills on full deployment of different recall packages periodically (e.g., once or twice a year).
- ¶ **Enforce recall rules.** The Department should develop control measures and sanctions to ensure the appropriate response during drills and in the case of an actual recall. Recall discipline should be enforced, allowing only recalled personnel to respond. Off-duty personnel who are not recalled, but who report anyway should be sent away, if circumstances allow, and should be referred for disciplinary action. Company and Chief officers should not allow off-duty personnel to respond along with on-duty units.

5) DEVELOP MUTUAL AID AGREEMENTS FOR FIRE OPERATIONS

Mutual aid agreements allow emergency services agencies to utilize partnerships that augment their resource pools when necessary. The FDNY should develop a mutual aid policy for fire operations and sign agreements with other fire departments and agencies, allowing it to plan and operate joint responses to incidents that require additional resources beyond its own. It should also conduct joint training exercises with other agencies on deployment of mutual aid. Finally, it should ensure that its personnel (particularly FDOC personnel and chief

officers) are aware of the different capabilities of local, state, and federal agencies and understand the processes to activate them.

Increasing the resource pool available to FDNY through mutual aid agreements and inter-agency training will materially enhance the Department's ability to mobilize a large amount of resources in a short period of time. Such a system will not only allow FDNY to make targeted and measured responses to a broader variety of incidents, but will improve the coverage available to the city on a sustainable basis with limited investment.

5.1) Assess partner capabilities before signing agreements

Currently, local fire departments in New York State operate without close coordination and standardization.³⁰ Therefore, if the FDNY is to ensure that its mutual aid agreements are effective, it must first work with other departments and agencies to ensure that equipment and procedures interoperate. The first step in this process is for the FDNY and neighboring Departments to exchange information on their capabilities and procedures, such as resource availability, levels of training, special operations capabilities, command, control and communications procedures and interoperability of equipment and procedures with FDNY. This information will help FDNY determine how it should negotiate mutual aid agreements. For example, it will enable the FDNY to prioritize which departments would be the best initial candidates for such agreements.

5.2) Develop and deploy mutual aid agreements

We recommend that the Department negotiate mutual aid agreements for fire operations consistent with the following guidelines:

- ¶ **Develop memorandums of understanding.** These agreements with other public safety agencies pre-establish mutual aid procedures and guidelines for ongoing working relationships. They should define the levels of support that each partner can expect. They should include:
 - A detailed outline of responsibilities for all parties, such as equipment to be carried, response time, and operational requirements.

³⁰ This is not the case in several other states. In California, for example, the Governor's Office of Emergency Services ensures coordination among municipal and state agencies.

- A formalized mechanism for the communication of a mutual aid request and resulting response that incorporates standard language and specific instructions, such as units desired, time and place to respond to, and units responding.
- Standard terminology of units, equipment and capabilities to improve coordination and communication of units that would potentially work together.
- An agreement on the frequency and type of joint training to be pursued.
- Financial terms and conditions that guarantee parties are appropriately compensated (e.g., for overtime, equipment loss and damage).

¶ **Maintain FDNY command and control.** FDNY should develop procedures to ensure it has command and control of all mutual aid responders throughout the course of their deployment in response to incidents under FDNY's command.

- FDNY should develop procedures to activate and communicate mutual aid requests to partners and train personnel in the procedures. FDOC planning personnel should have the responsibility and capability to decide on the amount and type of resources to be requested from mutual aid partners, using information on each partner's resource levels, capabilities, estimated response time, and degree of interoperability. The Chief of Department or his designee at the FDOC should be responsible for authorizing the request of mutual aid for Fire Operations and for authorizing the release of FDNY resources to provide mutual aid to other agencies.
- FDNY should pre-define mobilization points in or around the city for responding mutual aid units, in order to establish initial command and control of those units. An FDNY chief or officer should meet mutual aid units at the mobilization point and serve as liaison to give them specific instructions.
- While FDNY would maintain overall command of all units responding to incidents under its jurisdiction, the immediate tactical command of responding mutual aid units would be handled by the unit's immediate chain of command (e.g., unit officer or supervisor).
- Only appropriately authenticated mutual aid units reporting to the pre-defined mobilization points should be allowed to participate in the incident response.

- ¶ **Conduct joint training.** FDNY should develop and conduct training drills with potential mutual aid partners. These drills must be built into the training cycle for FDNY units and conducted on a regular basis to increase the Department's understanding of mutual aid units' capabilities and increase the efficiency and coordination capabilities of FDNY and mutual aid units.

5.3) Seek help coordinating agreements

Establishing mutual aid agreements is likely to require a substantial commitment from the FDNY and its neighbors. We believe these agreements have great potential to significantly increase the pool of resources available to the Department on very short notice, thus improving the Department's preparedness. Their benefits more than justify the effort required to establish such agreements. However, as the number of mutual aid agreement grows, the Department will find it increasingly difficult to manage relationships with multiple agencies. Therefore, as it pursues mutual aid agreements, FDNY should seek to coordinate its Fire Operations mutual aid policies with the city Office of Emergency Management (OEM).

5.4) Participate in regional EMS mutual aid planning

EMS agencies deal with mutual aid policies differently than Fire Operations. FDNY'S EMS mutual aid policy is dictated by the New York Regional EMS Council, which creates a regional mutual aid plan and ensures coordination and standardization of procedures and equipment. The Department will take a leading role in the implementation and deployment of this plan.

We also recommend that the Department continue to implement the procedures established by the regional plan. And, we recommend that the Department develop, in cooperation with neighboring EMS agencies, a detailed, periodic inter-agency training program for regional EMS mutual aid.

6) MODIFY AND ENFORCE FIRE STAGING PROTOCOLS

FDNY should modify its current staging protocols to ensure that the incident commander can effectively maintain command and control of resources deployed at an incident as it escalates.

Below are the key aspects of our proposed staging protocol guidelines:

- ¶ **Use staging on third alarm or greater.** While the incident commander can use staging at his discretion at any time prior to a third alarm, staging areas must be used for all third alarm assignments and greater.

- ¶ **Let incident commander determine staging location.** The incident commander should use pre-identified factors to help him determine the location of the staging area(s). These factors might include: pre-planned, suggested staging areas, the effectiveness of unit response, unit ingress and egress routes, distance from the incident, safety of the location, location of responding resources, and proximity to other incidents. The FDOC should give the incident commander information on where responding units are most likely to be arriving from so that he can incorporate that information into the choice of staging location.
- ¶ **Assign staging chiefs.** A battalion chief should be assigned to control the staging area as his sole function. He should be responsible for maintaining personnel accountability at the staging site, command and control of the site and coordination and communication with the incident commander. If units arrive at the staging area before the designated staging chief, the first arriving officer should perform the staging coordination function until the designated chief officer relieves him.
- ¶ **Enforce staging protocols.** If staging protocols are to be effective, they must be adhered to at all levels by responding units. Discipline at the unit level must be maintained and enforced by the responding company officers, the battalion chief in charge of the staging area, the incident commander, and ultimately by the senior leadership of the Fire Department. To do this, the Department should:
- Clearly assess, during training and post-incident evaluations, how well units and individuals adhered to staging procedures.
 - Develop and apply sanctions for personnel not adhering to procedures during training or on a daily basis.
 - Ensure that Dispatch and responding units adhere to communications protocols when information on designated staging areas is relayed to units.
 - Seek ways to leverage technology as a tool to help manage staging and enforce discipline. For instance, track the location of units assigned to staging areas, and enable chiefs in command posts to track which units have been assigned the incident area (either directly or after being released from a staging area).

7) EXPAND HAZMAT CAPABILITIES AND RE-EVALUATE OTHER SPECIAL OPERATIONS CAPABILITIES

The FDNY has just one hazardous materials unit (Hazmat Unit), which it committed to the World Trade Center on September 11. That day, the Department would have been unable to respond quickly and effectively to another incident that required advanced hazardous materials capabilities to assess and detect threats, rescue and evacuate civilians, and perform decontamination tasks.

Special operations units such as hazmat are likely to play crucial roles in the city's response to large and complex incidents, particularly those that result from terrorist acts. Such attacks could involve radiological, chemical, and biological agents, and/or multiple, simultaneous incidents, either on land or over water. Preparing for and responding to such attacks could require special operations capabilities well beyond those currently possessed by the FDNY.

We recommend that the FDNY expand its hazmat capabilities and re-evaluate its heavy rescue and marine operations capabilities. In addition, we believe that the city or state should create an inter-agency planning process that ensures all local, state and federal agencies likely to be involved in hazmat incidents respond cohesively and effectively.

7.1) FDNY initiative

The FDNY's Operational Planning Unit³¹ should lead the Department's effort to expand hazmat and re-evaluate heavy rescue and marine operations. It should analyze the costs and benefits of different hazmat expansion alternatives and develop a specific expansion proposal, including new funding requirements. Possible expansion alternatives include: increasing training and equipment of FDNY Squads, deploying a second hazmat unit similar to the current one, replacing the current unit with several smaller ones that could be stationed in different boroughs, or a combination of the above.

7.2) Inter-agency initiative

The FDNY should participate in an inter-agency initiative with other city, state and federal agencies. The initiative should include all agencies likely to be involved in the prevention of, and the response to, incidents that require hazmat

³¹ The Planning and Management section of this report includes a series of additional recommendations for expansion of the Operational Planning Unit.

and special operations capabilities, such as the NYPD, the FBI, the Federal Emergency Management Agency, the U.S. Departments of Defense, Justice, and Energy, the Environmental Protection Agency, and the Coast Guard. The initiative should have these goals:

- ¶ Clearly define the processes, capabilities and responsibilities of all agencies that are likely to respond to incidents involving hazardous materials, heavy rescue or marine operations.
- ¶ Ensure that all such agencies understand each other's processes, capabilities and responsibilities, and that they possess the information and resources required to perform those responsibilities.

In order for the initiative to be truly effective and comprehensive, it must include a number of steps:

- ¶ Assessing different threats, their likely impact on the city and its citizens, and the effect of different prevention and response measures.
- ¶ Understanding the city's maximum level of tolerable risk for different types of hazmat attacks and incidents, or other attacks requiring a special operations response.
- ¶ Determining the right balance between investing in measures to prevent these attacks and to responding to them after the fact.
- ¶ Evaluating how well different city, state, and federal agencies could complement and/or extend the FDNY's special operations capabilities in responding to these attacks.
- ¶ Defining investments, processes, plans and policies to ensure that the city is adequately protected.

This initiative, if and when it is undertaken, would help determine FDNY's special operations capabilities. For example, it would define the type and scale of events the Department should be able to respond to. It would also define how long the Department would need to respond to such events alone before the deployment of additional special operations resources from other agencies.

