

# **PRELIMINARY REVIEW OF THE CITY'S RESPONSE TO THE DECEMBER 2010 BLIZZARD**

Report and Recommendations to Mayor Michael R. Bloomberg

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## **Introduction**

On December 26, 2010, a blizzard struck New York City and surrounding areas. Though earlier forecasts had called for only a light to moderate snow falls, the National Weather Service issued a blizzard warning at 3:55 PM on December 25th. At that time, between 11 and 16 inches of snow were predicted, along with high winds and low visibility. Even this forecast underestimated the storm's ferocity. Snow fell steadily from the morning of Sunday, December 26th through the following morning, accumulating up to 20 inches in Central Park and far more in parts of Brooklyn and Staten Island.

The City's response to the snowfall failed in many ways, as became apparent when many streets across the city remained unplowed and impassable hours and even days after the snowfall had stopped. Many factors, both within and outside of the City's control, combined to make effectively responding to the blizzard particularly challenging, and the challenges the City faced or failures in its response are described in details below. Nevertheless, it is important to note that a couple of natural factors significantly exacerbated the City's ability to address the challenges presented by the storm. First, the weather forecasts predicted low accumulations up until 18 hours prior to the storm, which fell on a holiday weekend. Second, the snow fell at an unusually fast rate of over 2" per hour or more. Finally, because the storm fell on a holiday weekend, more vehicles were on the roads than would typically be driving during snow events, as New Yorkers were returning from or embarking on holiday travels.

## **Problems Identified**

The preliminary results of the review conducted by the Mayor's Office of Operations and the Office of Citywide Emergency Communications found problems in six areas: (1) the decision not to declare a snow emergency; (2) insufficient accountability tools that led to a lack of real-time information on street conditions; (3) insufficient and delayed deployment of City assets that could have assisted with snow removal operations; (4) failure to procure and

preposition private resources; (5) insufficient communication within City government and to the public; and (6) problems with emergency communications and response.

**1. Decision not to declare a snow emergency.** On Saturday, December 25, City officials decided not to declare a “snow emergency”, which by law would require private vehicles not to utilize certain designated snow routes unless they are equipped with snow tires or chains, as well as ban parking on these streets. Later, during the night of Sunday December 26 and the morning of Monday, December 27, discussions regarding declaring a “snow emergency” or a “state of emergency” were not marked by a clear understanding of who could issue either declaration, what powers and actions such declarations would enable amongst City agencies and other entities, and how the public would be required to act as a result.

Declaring a snow emergency would not have kept cars from being snowed in or stuck on smaller avenues and streets in the city, which became a major problem in and following this storm. The utility of having citizens try to move parked cars off of major avenues as the storm approached was properly deemed to be very low. However, based on the review over the past two weeks, we have determined that the decision to declare a general emergency could have provided a triggering event for those City agencies and other entities that utilize such a declaration as a catalyst for action, and by the public, which potentially might have heard the word “emergency” and ceased driving to the extent practicable.

**2. Insufficient accountability tools.** Throughout the storm and particularly in its aftermath, City agencies were deluged with calls and emails regarding streets that had not been plowed, or had been insufficiently cleared. In some instances, City officials believed the streets had already been cleared, but learned this was not the case, or that the street remained impassable. The lack of real-time information on street conditions inhibited effective deployment of resources or effective quality control. The Department of Sanitation currently lacks the capability to track data on street conditions in an automated or real-time fashion. DSNY reports on completed routes after a shift ends every 12 hours, and only once snowfall stops. As a result, the status of a street may be significantly different once the report is received. In addition, plowing progress is tracked based on routes, so it is difficult to know the status of a particular City street at any given time. The lack of real-time data led to an inability to make speedy management decisions, redistribute resources as needed, and communicate an accurate status to the public and elected officials.

**3. Insufficient and delayed deployment of City assets.** The weather forecast for the storm got significantly worse rather quickly, culminating in a

blizzard warning issued at 3:55pm on Christmas Day. Due to the late change in the forecast, as well as the fact that DSNY has adeptly handled large snowfalls so many times previously without assistance, agencies that are not typically involved in snow removal – such as the Taxi and Limousine Commission --were not mobilized expeditiously. Streets that DSNY could not plow immediately could have been tackled sooner by other City personnel and equipment, including the use of tow trucks, as countless stuck vehicles – private cars, ambulances and buses – slowed DSNY’s plowing operation. In addition, other City workforces could have been leveraged to clear crosswalks and bus stops, tasks that do not require heavy equipment yet did not begin until many days after the storm ended. Additional areas that could have been cleared for the safety and convenience of pedestrians remained impassable for several days.

**4. Failure to procure and preposition private resources.** For the overwhelming majority of snow storms, the City has the in-house resources – both in terms of personnel and equipment – necessary to clear the streets with alacrity. However, for storms of the magnitude of the December 26 blizzard, additional resources from the private sector or other entities need to be utilized. Prior to the storm and the winter season, the City did not make a comprehensive effort to ensure sufficient private contractors were on call to assist with plowing or towing during any storm. Many private contractors with heavy equipment could not be reached and those that were reached were presented with lengthy contracts while critical snow clearing operations waited. DSNY has a list of potential contractors, but it was not extensive enough to yield the needed help.

In addition, though DSNY recruits potential snow laborers each fall, the Department did not recognize the size of the manpower need and beef up its solicitations to the public for hired labor prior to this storm. Although day laborers could proactively call 311 looking for work, a 311 message for potential snow removal workers stated that the Department was not registering new applicants and that payment can take between 6-12 weeks, which dissuaded prospective applicants from signing up since when other similar work was readily available. As a result, additional snow removal tasks that do not required only a shovel were not undertaken and completed nearly as quickly as it could have been had the workforce been recruited and the impediments to expeditious payment eliminated.

**5. Insufficient internal and external communications.** Approximately 50% of the Department of Sanitation’s trucks currently lack radios; for those that do have radios, one channel serves all of the vehicles in a borough command. As a result, the channels became over-saturated with radio traffic during the height of the response, when drivers faced numerous plowing impediments. Route completion could not always be quickly communicated and issues that arose

during a shift—such as a disabled vehicle blocking a route—could not be immediately escalated and slowed operations.

In addition, the public lacked information regarding the three-tiered (primary, secondary and tertiary) system by which DSNY prioritizes snow clearance on streets, and the classification of their own street. Thousands of residents called 311 but could not get information about when their streets would be plowed, or if it had reportedly been already.

**6. Problems with emergency communications and response.** During the emergency, the 911 system—and specifically the EMS portion of the system—became overburdened with calls. Though steps were taken to increase call-taker staffing, the backlog continued to grow. By the night of December 26, over 1000 calls were in the queue, waiting for a response. These problems were exacerbated by the fact that well over 100 ambulances became stuck in the snowy conditions, thereby further depleting EMS’s ability to respond to medical emergencies. The Police and Fire Departments increased the number and types of emergencies they responded to, but response times climbed in the wintry conditions.

## **Action Plan**

The recommendations outlined below are meant to address the problems identified above. The City will work to implement this plan as quickly as possible. This is not an exhaustive list of the work the City will do to improve its operations, but a starting point as we continue to consider and analyze our performance during December’s storm.

### **I. Declaration of Emergencies**

**1. Amend the process for declaring emergencies.** The City will establish a more formal process for considering emergency declarations in all circumstances and in particular in severe weather events. During this past storm and in others officials face difficult judgment calls about whether to disrupt the lives of the public in anticipation of an event the severity of which is often uncertain. To ensure that the merits and consequences of any emergency declaration are fully evaluated during a significant weather event, specific protocols for decision-making will be developed that outline the roles of all parties.

**2. Provide a broader range of options that could be part of an emergency declaration and make them clear and understandable to New Yorkers.** Because a declaration requiring the public to use snow tires and chains on certain snow emergency routes, and forbidding parking on those streets is not the best or only possible solution to reduce vehicular traffic or muster resources in inclement

weather, the City will establish a menu of options for emergency managers that expand the choices of decision-makers and take into account the actions that other entities will undertake based on the declaration.

These options will be designed in advance and communicated in plain language, so their meanings and the actions required are clear to the public. For instance, driving could be restricted, but the City might not require motorists to move their cars off of primary roads.

## **II. Accountability Tools**

**3. Equip every Department of Sanitation truck with a GPS device enabled with two-way communication.** The City will now equip collection trucks that are used for plowing with GPS-enabled phones with two-way communication. Field workers and supervisors will be trained on these mobile devices to share real-time progress reports with supervisors, assist supervisors in measuring performance, and enhancing the safety of field workers. This will enable more frequent productivity reporting to improve public transparency, and assist in assessing resource deployment. During the snow event on January 7<sup>th</sup> a test of 50 devices was performed successfully in one Sanitation District in Brooklyn.

**4. Improve accountability tools and plowing definitions used by Sanitation for street conditions.** To address the issues of reporting delays and inadequate measurements of street conditions, DSNY will create new definitions and reporting standards so their data accurately matches the reality on the street. The Department of Transportation's evaluation system for the bridges and other thoroughfares it maintains provides a potential citywide model.

**5. Use live monitors (SCOUT) to stream video of trouble spots.** In August 2007, the City launched the Street Conditions Observation Unit (SCOUT), teams – a group of inspectors whose mission is to drive every city street once a month and report conditions that negatively impact quality of life. During an average workday, the City uses 15 SCOUTs, largely in 3-wheel vehicles or electric Mini Coopers. During snow emergencies the City will deploy some of those SCOUTs in four wheel drive vehicles equipped with digital video technology that can stream back to a command center real time pictures of critical or sensitive areas. This initiative to provide DSNY, OEM and the Mayor's Office independent quality assurance was successfully piloted during the January 7 snow event.

## **III. Rapid Deployment of All Possible City Assets**

**6. Enhance immediate availability of critical equipment.** OEM will

update the asset inventory it maintains of city equipment to ensure it can identify and deploy resources effectively during an emergency. To facilitate the use of this equipment, OEM will work with the agencies to designate an on-call person who can deploy equipment and operators from their agency as needed. Potential agency assignments will be pre-determined so that when a need arises, agency equipment can be most effectively deployed.

**7. Enhance ability to deploy City labor from other departments.** OEM will conduct a survey of all areas where City employees can be called out to provide additional labor in an emergency, whether it is snow, flood or another event. The City has large numbers of committed employees willing to do work in response to emergency events. Where necessary or appropriate, OEM will work with agencies to train staff in functions critical to emergency response so that when a need arises, City employees are ready to help.

**8. Enhance the Emergency Operations Center as the center of resource coordination.** OEM, as the City's coordinator of resource deployment, sets up the Emergency Operations Center (EOC) to serve as the City's operational hub. OEM and City agencies will reassess their protocols for deploying agency representation to the EOC to ensure that representatives are agency decision-makers, have up to date agency data about in-progress operations, and are familiar with key agency assets and operations (e.g. staff and equipment).

**9. Improve tow truck deployment.** Through a centralized coordinator, the City will better incorporate the full citywide towing resources into its snow planning and ensure that all agencies prepare these resources for deployment prior to a significant storm. Specific processes that outline the timing of tow truck deployment and the authority of City tow trucks to tow private vehicles will also be developed and better communicated.

#### **IV. Better Prepositioning of Private Resources**

**10. Secure and expeditiously deploy private contractors for assistance.** The City will identify organizations that can produce needed assets to be assigned to specific tasks immediately upon request in an emergency. Assignments will include but not be limited to towing, plowing and hauling. Procurement of these resources must be streamlined and organized in advance to the fullest extent possible. The contracting process and the contracts themselves must be competitive with what other potential employers are paying, so that when contractors are needed, they will not choose other opportunities over City work. DSNY and OEM should utilize all contracting vehicles available to them, including the use of agency procurement cards.

**11. Improve the process of hiring additional laborers.** To ensure that the City can recruit the external workers it needs, it must be able to compete with other potential employers. While the City cannot pay in cash or engage employees without checking certain Federal work requirements, it can and will identify workforce and staffing partners who can be organized to respond when necessary and will revise procurement and payment processes accordingly. Contracts will be structured to ensure that service is provided within critical timeframes and that work is pre-assigned to workers who can appropriately fulfill their given assignments.

## V. Communications

**12. Improve two-way communications through real time portal.** To enhance transparency and improve accountability, the City will create a dedicated site on NYC.gov for winter weather events that includes maps, news and announcements, as well as a community forum. The website will serve as a public reporting and accountability portal through which New Yorkers can support the City's quality assurance efforts by providing real-time reports, including photos and video, of the status of streets. NYC City Map will be updated to show which streets are designated as primary, secondary and tertiary for snow removal.

**13. Provide better methods for citizens to request help.** The 311 call center experienced high call volume during and after the storm that included a high number of non-critical informational requests that clogged the system. 311 has enhanced web reporting options that can handle most types of service requests. We will encourage more New Yorkers to sign-up for Notify NYC and move quickly to enhance 311 social networking options that will allow citizens to more easily register in advance for information to be pushed to them on critical and non critical actions like trash pickup and parking. 311 will also move quickly to add texting options to the call center in order to provide efficient responses to short questions and eventually as another channel for reporting requests for service.

## VI. Emergency Communications

**14. Reform dispatch protocols in extreme and high volume events.** The 911 system can improve the way it responds to high call volume events by creating escalation protocols that focus on expected problem areas and improve the ability to bring in new staff. The City will also conduct a comprehensive review of its 911 call handling during large scale emergencies. Procedures given to supervisors for monitoring calls in backlog during heavy volume will also be



reviewed. Protocols for which type of FDNY, EMS or NYPD resource is sent to specific types of events in these extreme situations will also be reviewed. In addition, the City will improve its ability to bring in additional staff during high call volume events.

**15. Accelerate PSAC integration and implementation.** Over the upcoming months, the integration of the City's dispatch and telephony systems will be improved through the Emergency Communications Transformation Program. In the near-term, operational procedures will be reviewed and the best practices applied where necessary. Technology systems will be employed and tailored to meet the operational needs of NYPD and FDNY. Co-location of NYPD and FDNY will enhance the effectiveness of emergency response citywide. The Emergency Communications Transformation Program will continue to transform a 30-40 year old system by implementing state-of-the-art technologies.