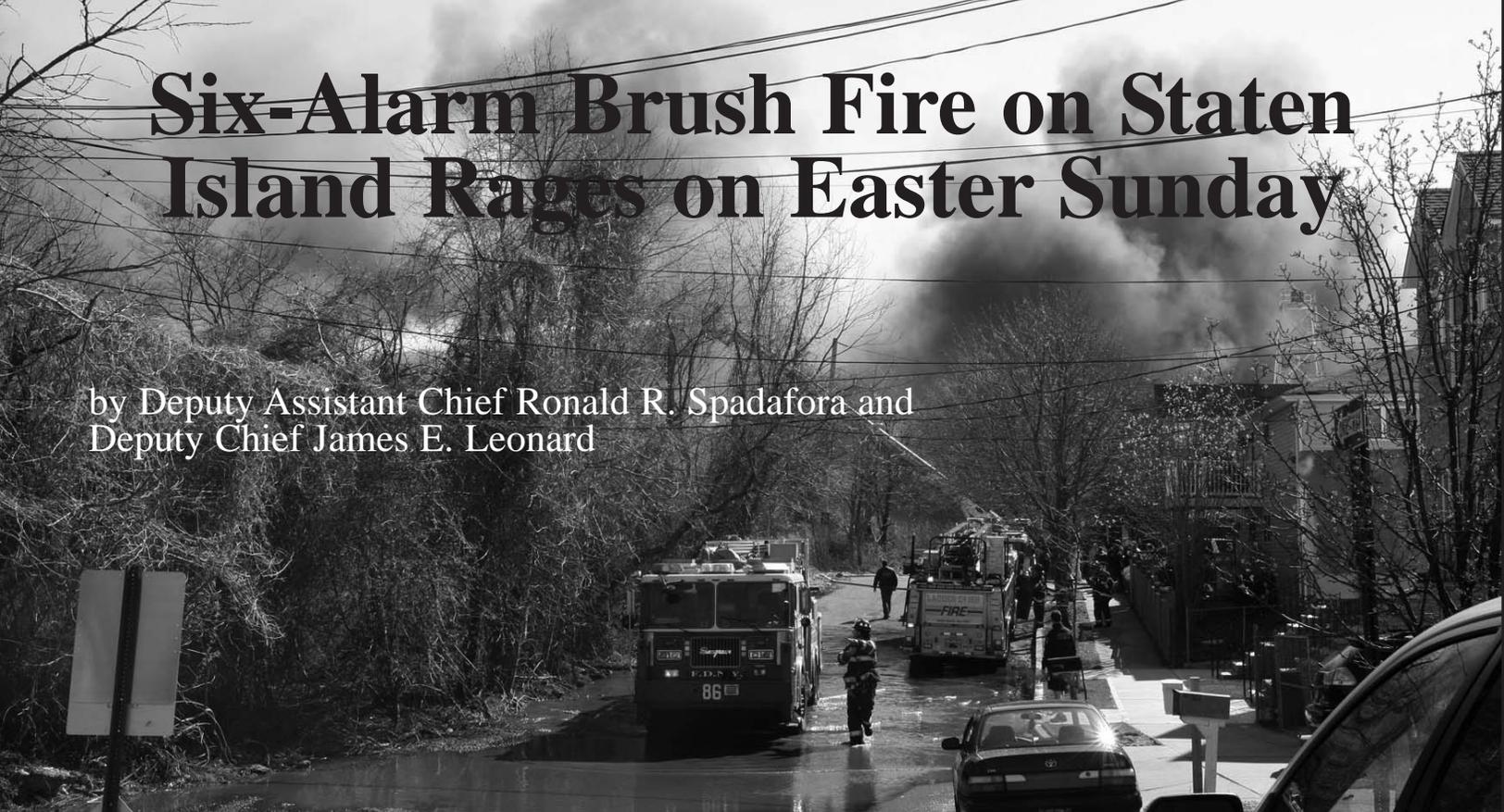


# Six-Alarm Brush Fire on Staten Island Rages on Easter Sunday

by Deputy Assistant Chief Ronald R. Spadafora and Deputy Chief James E. Leonard



Wildland/urban interface fire involved strategic apparatus positioning and relay water operations to protect residential buildings. *photo by Mary DiBiase Blaich*

Easter Sunday, April 12, 2009, fell squarely within the FDNY's brush fire season (March 17-April 30). Deputy Chief James E. Leonard, Division 8 Commander, who was working the 9x6 tour on the holiday, checked the National Weather Service web site. Weather conditions were ideal for severe brush fire activity. The temperature was in the high 60s, with winds 18-22 mph, gusting to more than 30 mph. There was bright sunshine without a cloud in the sky. Humidity also was low.

All of these factors contributed to the largest brush fire to occur on Staten Island since April 23, 1963 (the inspiration for the development of the Superpumper). Units from virtually every command of FDNY operated at this incident. The blaze extended across 400 acres, destroyed one home and damaged three others, along with numerous cars and even a waterfront bulkhead.

More than 100 buildings were severely exposed. Numerous residents were reported trapped at various locations. Command and control--using the Incident Command System (ICS), along with aggressive firefighting by FDNY units--protected these civilians and saved these exposures. Despite difficult conditions, there were no civilian casualties and minimal FDNY injuries.

## Wildland/urban interface fire

This fire was a classic wildland/urban interface blaze. It originated in a large area of 10- to 15-foot-tall reeds, known as phragmites, and quickly exposed many structures. Firefighters' first consideration is the protection of life and then property. Usually at brush fires, the strategy is to avoid the head (leading edge) of the fire and flank the fire with hand-lines, while other firefighters operate in the burned-out areas of the fire, using portable, backpack Indian pumps and brooms to control the fire.

At this fire, the blaze was so intense and moving so rapidly that all efforts were geared to protecting exposed structures while the fire swept by them. The flame front at this fire was anywhere from 500 to 1000 feet wide and as high as 50 feet. The radiant heat problem was also severe. Large-caliber streams and numerous hand-lines were placed into position quickly.

## Initial operations

The initial alarm for Staten Island Box 2693 was received via phone at the Staten Island Borough Communications Office at 1348 hours, reporting a brush fire at Mill Road and Aviston Street in the Oakwood Beach section. This residential community has a history of multiple-alarm brush fires. It is also a difficult area for FDNY apparatus to access and maneuver through.

The Box was quickly filled out due to numerous calls. A 10-75 signal was transmitted by the initial Incident Commander (IC), Battalion Chief Michael McLaughlin, Battalion 21. The normally assigned first-due Battalion Chief, John Gregorio, Battalion 23, initially was unavailable, at another Box in the general vicinity. Taking up from that incident, Chief Gregorio responded and was on the scene quickly. The actions taken by both Battalion Chiefs McLaughlin and Gregorio set the scene for a successful operation.

On arrival, Chief McLaughlin was confronted with a large brush fire severely exposing two groups of houses that were approximately 1/4-mile apart. The initial Command Post was established at Mill Road, between Fox Lane and Kissam Avenue. He assigned two engines and two ladders and one brush fire unit to protect houses on Fox Beach Avenue. Concurrently, he assigned Chief Gregorio to protect a cluster of 30 houses severely exposed on Kissam Avenue.

Chief Leonard, leaving quarters and responding on the 10-75, could see a large cloud of smoke. He monitored both radio and handie-talkie communications en route. Based on visual information, audio conversations being monitored between Chiefs McLaughlin and Gregorio and the location of the fire, Chief Leonard transmitted a second alarm while still minutes away from the site at 1408 hours.

On arrival, transfer of information and command was conducted between Chiefs Leonard and McLaughlin. Life and exposure strategy and tactics were discussed in relation to unit assignments. This large-scale operation required a readily accessible Incident Command Post (ICP), as well as sectoring and early establishment of a Command channel. Chief Leonard relocated

the Command Post to Mill Road and Aviston Street, notifying all on-scene units via handie-talkie, as well as incoming units through the Department radio. An initial staging area location (intersection of Adelaide Avenue and Riga Street) was designated by the Borough Communications Office in anticipation of additional alarms, but was barely used due to the critical need for rapid deployment of responding units while en route.

Division 8 Firefighter, FF John Picciano, did a spectacular job of establishing the Command Board and tracking units, along with using and monitoring both Department radio and handie-talkie communications. Subsequently, Battalion Chief Brian Lanci, Battalion 42, arrived on the scene as the designated Resource Unit Leader (RUL) and assumed this important function. The members of the Field Communications Unit (FCU) enhanced communications capabilities on their arrival.

It was important to establish the Command channel early at this fire because it facilitated the timely and orderly transmission of reports and reduced radio traffic. All Battalion Chiefs responding in were directed by the IC to bring their Command Post radios with them to their designated assignments. Command Post radios were ideal for use at this blaze due to long separation distances between the Command Post and Fire Sectors.

The fire was divided into two sectors (Fox Beach and Kissam Avenue). Chief McLaughlin was designated Fox Beach Sector Supervisor and Chief Gregorio was assigned as the Kissam Avenue Sector Supervisor. These Chiefs were advised that a Command channel was established. Strategy information was transmitted via handie-talkie to all on-scene members, as well as to the Staten Island Borough Communications Office for re-transmittal to all responding units. Eventually, as fire parameters

expanded, a third Sector was established in the New Dorp Beach section. Battalion Chief Edwin Travers, Battalion 57, was designated as the New Dorp Beach Sector Supervisor. Chief Travers subsequently relinquished command to Deputy Chief John (Jay) Jonas, Division 11, on his arrival. A Deputy Chief was assigned to this Sector based on the large number of operating units.

**Fox Beach Sector**

Chief McLaughlin was confronted with a rapidly extending brush fire that also involved automobiles, a boat and illegally discarded oxygen/acetylene tanks. There were numerous frame houses endangered in this Sector. Units operated hand-lines, deck pipes and tower ladder large-caliber streams to extinguish this fire. These units included Engine Companies 165 and 159, Ladder Company 85 and Brush Fire Unit 5. The Hazardous Materials Battalion, Battalion Chief Frank Naglieri, and Hazardous Materials Company 1 were special-called to this fire in order to safely mitigate the fire and leak in the oxygen/acetylene tanks. Units under the command and leadership of Chief McLaughlin successfully protected life and property on Fox Lane.

**Kissam Avenue Sector**

Chief Gregorio faced the following conditions when he assumed command of this Sector: three occupied frame houses involved in fire, a fully involved two-story vacant house and more than 30 frame homes severely exposed by a 50-foot wall of flames sweeping toward them. Nine hand-lines, numerous deck guns and one tower ladder stream were used in the successful defense of Kissam Avenue homes. Water relay operations also were conducted in areas with limited hydrants. Among the units valiantly oper-





**Bulkhead fire--fueled by plastics--generated heavy, black smoke. The fire was extinguished with a Marine unit monitor, in conjunction with land-based hose-lines.**

*all photos by Staten Island Dispatcher Steven White (retired), unless noted otherwise*

ating in this Sector were Battalions 22 and 23, Rescue Battalion, Engine Companies 154, 163, 166, 158, 153, 152 and 162, Ladder Companies 81, 82, 83, 85, 84, 77 and 79, Rescue 5 and Squad 1. Chief

Gregorio deployed units in his Sector in an expert manner, employing excellent communications skills.

### **New Dorp Beach Sector**

The New Dorp Beach Sector was established when the fire spread north past the buildings that were being defended by the Kissam Sector. Chief Travers was assigned command until the arrival of Chief Jonas. This fire extended over a wide area and entered into the Cedar Grove Beach community. Battalion Chiefs Robert Wing, Battalion 40, and Barry Brandes, Battalion 41, led a brave defense of this area, using available hydrants and water relays to supply four hand-lines, numerous deck guns and four tower ladder streams.

The fire in this Sector communicated to a 500-foot-long, fiberglass seawall, located at the below-sea-level Cedar Grove Beach Club, generating heavy smoke conditions. Two hand-lines stretched and operated at this location were unable to extinguish this large fire and the situation dictated the response of Marine 6. While en route, the Officer of Marine 6 notified the Borough Communications Office that due to the shallow depth of the water, they would be unable to access the area. This information was relayed to the IC, who special-called the shallow-water fireboat, Marine 1A, to respond. Their bow monitor, in conjunction with land lines, extinguished this intense, plastics-fueled fire. The Sector Supervisor coordinated Marine operations via Channel 1 (Primary Tactical). Additional units that operated included Battalion 57, Engine Companies 201, 246, 247, 284, 243 and 254 and Ladder Companies 76, 80, 114, 131, 148, 168, 172 and 169.

### **Aviation operations**

Chief Leonard special-called NYPD Aviation with an FDNY Air Reconnaissance Chief (ARC) on-board. Battalion Chief John Johnson, Battalion 33, responded to Floyd Bennett Field, Brooklyn, and assumed the duties of the ARC. Communications with the Command Post using the Command channel was faulty during the flight over the fire area. After landing, however, valuable information was conveyed indirectly to the IC through the Borough Communications Office regarding the direction of flame travel, exposure protection and unit deployment.

In anticipation of a prolonged air operation and utilization of helicopter water drop equipment (Bambi bucket), NYPD Aviation also established a temporary landing area at nearby Miller Field, dispatching a tanker fuel truck to this location. However, the use of water drops was rejected by the IC for the following reasons:



**Advanced fire conditions necessitated defensive tactical procedures at this unoccupied, burned-out home on Kissam Avenue.**

- Fire was not in a remote location and was being accessed by fire-fighting units.
- Helicopters can produce artificial, hurricane-force winds (rotor wash) that can exacerbate fire conditions and, thereby, endanger operating forces below.
- Using the Bambi bucket requires fire operations to cease and remove units from the deployment area prior to the start of water drop operations. This inactive time frame can cause the fire to extend rapidly, negating advantages previously realized.

### **Safety concerns**

On arrival, the IC must make an early assessment of the safety issues. Developing a strategy to deal with these issues is extremely important. At this fire, the Incident Commander addressed two major safety concerns: electrocution hazards related to downed electrical lines and fall hazards of members into small streams or off small bridges within the fire area. Safety issues were recorded at the ICP on the Command Board and broadcast to responding units at frequent intervals.

Battalion Chief Joseph Harris, Battalion 22, was assigned as the Safety Officer for this fire. He was briefed on the issues and instructed to monitor firefighting units operating in dangerous areas of the fireground. The later arriving Safety Battalion Chief, Kevin Blaine, was informed of the situation and coordinated safety efforts. The Chief of Safety, Stephen Raynis, as well as Safety Chief Daniel Melia, also were on-scene to implement the safety strategy. Due to the large geographic area, a FAST unit was assigned to each Sector.

### **Advanced operations**

This wind-enhanced fire necessitated transmittal of third and fourth alarms in rapid succession by Chief Leonard at 1417 and 1430 hours, respectively, prior to the arrival of the Command Chief, Deputy Assistant Chief Ronald Spadafora, at 1444 hours. Fifth and sixth alarms were transmitted by Chief Spadafora at 1502 and 1521 hours, respectfully, in a successful attempt to flank the fire and relieve exhausted initial-alarm units.

**Note:** Additional alarm Boxes (listed below) were transmitted by Chief Officers to urgently request more units for critical, life-threatening areas of the fire in both the Kissam Avenue and New Dorp Beach Sectors. The IC was immediately notified and these responding units were incorporated into the overall operation by him.

- **Box 2663** (Kissam Avenue Sector)--full-alarm assignment requested and transmitted at 1411 hours. Three Engines, one Ladder and one Battalion Chief operated at this Box.
- **Box 2666** (Kissam Avenue Sector)--transmitted with a two Engine and one Battalion Chief assignment at 1434 hours.

Subsequently, another Engine and Ladder were directed to respond directly to this Box while en route. At 1616 hours, an additional Engine was special-called. Four Engines, one Ladder and one Battalion Chief operated at this Box.

- **Box 22-2269** (New Dorp Beach Sector)--at 1504 hours, two Engines and two Ladders responding in on the fifth alarm were redirected into this Box. At 1511 hours, two additional Engines and Ladders were assigned. At 1549 hours, an additional alarm (second), separate from the sixth alarm, was transmitted.

At 1620 hours, both the Chief of Department Salvatore J. Cassano and the Assistant Chief of Operations (now Chief of Operations) Robert F. Sweeney arrived at the Incident Command Post. Both Chiefs were briefed on the status of the fire and implementation of resources by Chief Spadafora. Chief Cassano assumed command of the fire, employing effective strategy and tactics, leading to a *Probably Will Hold* at 1737 hours. Chief Sweeney assumed command of the fire when Chief Cassano departed. Under his leadership, the fire was placed *Under Control* at 1754 hours, more than four hours after transmittal of the original alarm.

### Bureau of Communications

For fires in remote areas of Staten Island, dispatchers proactively send several adjoining companies from Brooklyn over the Verrazano Bridge. These units then are back-filled with other companies to maintain acceptable coverage. At this fire, companies from all five boroughs were used for relocations. When anticipated that greater alarms will be forthcoming through conversations with the IC, RUL and/or the Field Communications Unit (FCU), dispatchers fill all uncovered Engines, Ladders and Battalions in the immediate vicinity of the fire or set up a nearby secondary staging area with dedicated companies to respond if the next higher alarm is transmitted.

### Lessons learned/reinforced

- Early transmissions of multiple alarms are critical. Incident Commanders must take the travel time of units into consideration. Some units had extended response times to this location.
- Initial attack operations should concentrate on mobility and avoid hooking up to hydrants except to protect exposures.
- The location of the Incident Command Post must be announced on Department radio and handie-talkie frequencies.

### Inter-Agency Operations

The Police Liaison to the Fire Department, Captain Josef Nolte, coordinated NYPD activities with the needs of the FDNY from the Command Post. He worked diligently in conjunction with the NYPD Staten Island Patrol Duty Captain to evacuate residents from more than 30 houses during the early stages of the fire. Captain Nolte also was successful in sealing off the fire area to both automotive and pedestrian traffic.

Representatives of the *Office of Emergency Management (OEM)* were on the scene quickly. Their function as a coordinating agency is critical at large-scale operations.

*Department of Environmental Protection (DEP)* was present and increased the amount of pressure in the water main system in the area after consultation with the IC. With more than 20 hand-lines and numerous deck pipe and tower ladder streams being used, water pressure dropped in the entire area. Their actions enhanced FDNY land firefighting operations.

Utility Companies--*Con Edison* personnel mitigated the severe safety issue of the downed electrical lines by cutting power to the area in a timely and professional manner. *National Grid* representatives also were present at the Command Post.

*Department of Buildings (DOB)* and *Department of Housing Preservation & Development (HPD)* representatives were helpful in assisting the IC with various issues involving building structural stability.

*American Red Cross* personnel were on hand to coordinate civilian relocation issues and provide canteen service for both the public and first responders.

It is important and required by ICS principles that representatives with decision-making ability from other agencies remain at the Command Post.



Long, arduous stretches required engine companies to team up in order to position and operate hose-lines on the fire.

- Sectoring large and complex operations is vital to coordinated efforts and a successful operation.
- Units not protecting exposures or operating in a position to effectively extinguish fire should be repositioned or returned to the Command Post for reassignment.
- Brush fire operations are extremely labor-intensive and require frequent relief and rest and recuperation of operating members. Ensure that adequate RAC units are assigned to the incident.
- Use of the Command channel greatly enhances communications.
- Chief Officers should consider having their Battalion/Division/Staff Firefighters use and monitor cell phones to communicate with FDOC, Borough Communication Offices, incoming superior Officers/specialized units, outside agencies, etc., to remain focused and enhance their situational awareness. At this operation, Staff Chief Firefighter William Magnus was directed by Chief Spadafora to contact FDOC to clarify the situation concerning additional alarms being transmitted by the Staten Island Borough Communications Office in response to the fire threatening community occupants and to obtain useful operational information from both aviation and Marine units.
- Currently, the Field Communications Unit is assigned on the third alarm for brush fires. ICs anticipating an escalating fire situation should consider special-calling the FCU early.
- Inter-agency coordination and cooperation are imperative for a successful operation. Ensure that the Command Post can be accessed readily by all responding agencies. It is extremely important that Borough Communications dispatchers provide the Command Post location to outside agency personnel.
- Knowledge of areas that units normally respond to on multiple alarms and relocations is vital. All Staten Island units have brush fire maps in their vehicles. The use of *Google Earth* maps played an important role in identifying exposure hazards. It is recommended that all companies use office computers to download and print appropriate area maps.
- The Incident Commander must provide responding units with a specific street location to respond to. Maps will facilitate this process. At this fire, some locations that companies were being assigned to were nearly one mile away from the Command Post.
- Weather conditions should be a regular part of the daily size-up routine. The weather forecast is transmitted at the change of tours on Department teleprinters. The computer in the company office can access sites such as the National Weather Service or Weather.com.
- Employ tower ladders as observation posts to determine size and extent of fire, as well as potential exposures.

Members are urged to review the following WNYF articles:

- "Six-Alarm Brush Fire in Douglaston, Queens," by Deputy Chief Michael Giovinazzo, in the 3rd/2000 issue.
- "Helicopter Operations at Brush Fires," by Battalion Chief Robert J. Glynn, in the 3rd/2000 issue.
- "Brush Fire Operations," by Deputy Chief James E. Leonard and Battalion Chief John A. Calderone, in the 4th/2008 issue.

- Command Post radios are ideally suited for operations over large geographic areas.
- When anticipating the use of NYPD Aviation, the IC should request this resource early in the operation. Normal response time for the ARC is 45 minutes between the time the unit is requested and the time of actual arrival on-scene.
- Safety concerns should be announced on FDNY handie-talkie frequencies, preferably every 30 minutes. Later arriving units should be informed of these safety issues.
- Safety Chiefs should not be assigned as Sector Supervisors or be given an assignment that would remove them from their primary focus of Firefighter safety.
- Firefighters should familiarize themselves with brush fire terminology to standardize communications and enhance operations. Terms--such as *head*, *rear* and *flank*--should be understood by all members when fighting a brush fire.
- When operating in areas without hydrants, have pre-positioned lines stretched close to the point of operation to refill apparatus booster tanks.
- Standard engine apparatus are not designed for off-road operations. A bogged-down apparatus will become an exposure problem requiring a commitment of units and manpower to protect it.
- Use brush fire units and ATVs designed for off-road operations.
- Poison ivy, oak and sumac, insect bites, falls, sprains, strains and eye trauma are just some of the injury hazards to operating forces at brush fires. Ensure an adequate number of EMS resources are on-scene throughout the entire incident.
- The most common type of brush fires in New York City are fast-moving surface fires, burning grass, weeds and leaves on the ground.

## Conclusion

More than four hours of arduous firefighting resulted in saving many lives and--incredibly--zero civilian injuries! Hundreds of homes also were saved. Aggressive firefighting strategy and tactics, combined with strong leadership, resulted in a favorable outcome. Clearly, the core values of FDNY--*service, bravery, safety, honor, dedication and preparedness*--were displayed by all members at this operation. They are not just words, but the values that are exhibited every day by FDNY members.

*Special thanks to Battalion Chief John A. Calderone, Battalion 22, and Henry Dingman, Deputy Director for Dispatching Operations, for providing technical information in the Advanced Operations and Bureau of Communications sections of this article.*



## About the Authors...

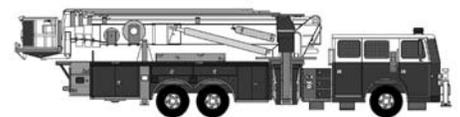
**Deputy Assistant Chief Ronald R. Spadafora** (top) is a 31-year veteran of the FDNY. He is assigned to Operations as the Chief of Logistics. He holds a masters degree in criminal justice from LIU-C.W. Post Center, a BS degree in fire science from CUNY-John Jay College and a BA degree in health education from CUNY-Queens College. He is an Editorial Advisor and regular contributor to WNYF. He teaches fire science at John Jay College as an adjunct lecturer and is the senior instructor for Fire Tech Promotions, Inc.

**Deputy Chief James Leonard** (bottom) is a 30-year veteran of the FDNY. He is the Division Commander of Division 8. He holds both AAS and BA degrees from St. Francis College. He is a graduate of the Fire Officers Management Institute (FOMI) at Columbia University. He is a frequent contributor to WNYF.



# Taking Up

July 1-September 30, 2009



<b>Assistant Chief</b>	Peter Marino	Engine 331	Richard W. Draves	Engine 251	Richard G. Margino	Ladder 129
Patrick M. McNally	ADMOP	James P. McCluskey	Ladder 30	Joseph A. Edrehi, Jr.	Carl R. McBratney, Jr.	Rescue 5
<b>Battalion Chiefs</b>	Eugene J. McKeon, Jr.	Ladder 36	John Eichele	Ladder 49	Kevin P. McCaffrey	Ladder 153
Michael DiLena, Jr.	Battalion 39	Michael V. O'Connell	Ladder 124	Victor W. Emerick	Timothy S. McCauley	Division 8
John T. Kleehaas	Battalion 46	Robert J. Orloff	Engine 259	Rosario A. Evola	Bryan J. McDonough	Ladder 128
Michael S. Sapienza	Battalion 48	John H. Scharfenberg	Engine 73	Charles W. Flood	Glenn McManus	Engine 82
<b>Captains</b>	Paul F. Shannon	Ladder 159	Robert M. Fredrickson	Engine 14	Michael R. Meldrum	Ladder 6
William E. Dudley	Engine 8	Anthony F. Tomesheski	Engine 237	Thomas R. Gander	Anthony J. Migliore	Ladder 151
John P. Flynn	Haz-Mat 1	Anthony Urti	Engine 241	Thomas Giardino	Kevin E. Mills	Engine 264
Peter J. Frontera	Ladder 113	<b>Fire Marshal</b>	Ladder 166	Mark E. Gleason	Robert P. Miuccio	Engine 216
James D. Gillespie	Ladder 150	Ronald F. Darcy, Jr.	Ladder 143	Robert M. Grover, Jr.	Joseph P. Murphy	Ladder 156
James P. Kielty	Engine 282	<b>Wiper</b>	Ladder 149	Gregory C. Hearn	John T. Northshield	Engine 72
Ronald A. Russomanto	Engine 37	William J. Cody	Ladder 158	Francis R. Henglein	Frank D. Perrone	Ladder 163
Richard J. Weldon	Ladder 20	<b>Firefighters</b>	Michael D. Herold	Michael D. Herold	Charles M. Popp	Ladder 29
<b>Supervising Fire Marshals</b>	Joseph M. Abbott	Ladder 121	Wayne D. Hulse	Engine 285	Robert Portano	Engine 329
Jules E. Keitt	ADMBFI	Daniel T. Boylan	Engine 4	Robert J. Humphrey	Neil T. Ridge	Battalion 49
Wayne V. Sforza, Jr.	Bronx Base	Joseph P. Byrne	Engine 71	Guy R. Jordan	Joseph Rocha, Jr.	Engine 68
<b>Lieutenants</b>	Kevin G. Byrnes	Ladder 118	Vincent Kabus	Ladder 21	Michael Schaefer	Engine 306
James T. Brennan (2)	Battalion 58	Dominic P. Carino	Engine 313	Sean T. Kehoe	Michael T. Smith	Engine 264
Peter M. Campanelli	Squad 18	Joseph Cavalcante	Ladder 101	Ronald Kingsley	Glenn R. Stordeur	Ladder 142
Michael Capasso	Engine 245	Thomas J. Colvin	Ladder 154	Ronald J. Kirchner	Charles A. Todd, Jr.	Ladder 49
Peter J. Cooney	Ladder 12	Joseph A. Connor, Jr.	Ladder 23	Nicholas J. Ladisa	Thomas J. Vanasco	Ladder 152
Paul A. Dunne	Engine 38	Robert Constant	Ladder 24	Thomas J. Langan	William M. Vesely	Engine 287
John A. Garcia	Ladder 5	Richard J. DiDonato	Engine 44	Christopher T. Larney		
Richard S. Harold	Engine 162	Kyle J. Dolder	Ladder 40	Kenneth J. Lavin		
Albert L. Loyola	Ladder 173	Michael G. Doyle	Ladder 22	Reginald M. Manley		