

Air Tragedy Above the Hudson River

by Deputy Assistant Chief Ronald R. Spadafora and Deputy Chief Daniel Donoghue



Plane and helicopter crash mid-air over the Hudson River, prompting a 10-60 (major emergency) response by the FDNY. *photo by FOX News Channel*

A tranquil, sunny, summer Saturday was marred shortly before noontime on August 8, 2009. A fixed-wing private aircraft--leaving Teterboro Airport and headed for Ocean City, New Jersey--with three members of a Pennsylvania family collided over the Hudson River with a Liberty Tours helicopter--carrying a pilot and five Italian tourists, including a family celebrating a 25th wedding anniversary in New York--taking off from Manhattan's West Side heliport. It was the City's worst air disaster since the November 11, 2001, American Airlines commercial jet (Flight 587) crash in Queens that killed 265 people.

Witnesses stated the two aircraft appeared to be flying parallel, traveling south along the Hudson River, prior to the collision and subsequent plummet into the water. Phone calls to 911 from astonished people enjoying outdoor activities along the river began being re-directed into the Manhattan Borough Communications Office almost simultaneously. Fire Alarm Box 0501 (intersection of Washington and Christopher Streets) was transmitted by the Manhattan dispatchers at 1154 hours.

Note: There is a corridor of flying space over the Hudson River called the *exclusion zone*, which extends up to 1100 feet. Planes flying below that altitude do not have to communicate with air traffic control at Newark Liberty International Airport. Pilots must talk to air traffic controllers when they are entering or flying out of the exclusion zone, but when operating in the area, they may fly only under visual (see and be seen) flight rules.

Initial response and discovery of first victim

Members of Marine Company 1, conducting training on the river aboard their 27-foot Safeboat (Marine 1A) at the time of the crash, observed the incident first-hand. They immediately responded toward the vicinity of the wreckage located near the New Jersey (Hoboken) side of the river and updated the Manhattan dispatchers regarding the location of debris. This was the first of five FDNY fireboats (Marine 1, 6, 8 and 9 were the others) to operate at this incident.

Members on Marine 1A located and recovered the first victim (a 15-year-old male passenger of the plane), floating on the surface of the water. A signal 10-37-1 was transmitted to the dispatcher and the fatality was brought to shore at Pier 40 (adjacent to West Houston Street) and delivered to Squad Company 18 and EMS personnel. Marine 1--manned by the members of Engine 24, who were directed to respond on the initial alarm to its quarters--also was quickly assigned to operate in the search for possible survivors at this incident. Subsequent reports from the Marine units were not encouraging, however, as there were no more visible surface victims and little evidence of aircraft parts.

Additional units responding to this incident on the first alarm included Ladders 5 and 12, Battalion 2, Safety Battalion 1 and Rescue Battalion 1. Within five minutes from the transmission of the alarm, Rescue 1, Marine 6, Division 3 and Tactical Support Unit 1 either were 10-84 or responding into the incident.

Establishing Command and control

Battalion Chief James Tracy, Battalion 2, set up the Incident Command Post (ICP) at Pier 45 (adjacent to West 10th Street) and assumed the role of Incident Commander (IC). He was joined quickly by Ladder 5 and other first-alarm units. Deputy Chief Daniel Donoghue, Division 3, responded to the ICP from quarters upon confirmation of the incident. (**Note:** Division 1, normally assigned to this Box, previously was dispatched to the Bureau of Training at Randall's Island and was unavailable.)

After consultation with Chief Tracy, Chief Donoghue was ready to take command of FDNY operations. Chief Tracy, however, could not confirm the position of aircraft wreckage. Additionally, the ranking officer of the NYPD stated that their incoming units were mustering on a pier somewhat north. For these two reasons, Chief Donoghue decided to move the ICP to Pier 53 (adjacent to West 15th Street). Chief Tracy was ordered to remain at Pier 45 to establish an Operations Section and coordinate the arrival of incoming units. In an ongoing effort to detect survivors along the shoreline in the immediate area of the Pier, he also was instructed to maintain a visual surveillance using binoculars.



In total, five Marine fireboats responded and operated in search of plane/helicopter crash victims.

all photos by FF Bill Magnus unless stated otherwise

The 10-60 signal

With the confirmation of at least one aircraft in the water, Chief Donoghue transmitted a 10-60 signal (enhanced second alarm/major emergency response) at 1211 hours. This signal triggered the response of many more units, including all the remaining Battalions (1, 4, 6 and 7) from Division 1. A Staging Area also was designated along the West Side Highway in the immediate vicinity of Pier 53.

The 10-60 signal was transmitted for the following reasons:

- Conflicting reports early in the incident presented the possibility of a mid-air collision between two aircraft. This information eventually was verified by the FDNY's Fire Department Operations Center (FDOC), Fire Marshal's Office, NYPD and Office of Emergency Management (OEM) through communications with the Federal Aviation Administration (FAA) and New Jersey OEM.
- The size of both aircraft and the number of passengers onboard had not been confirmed yet. The possibility of many victims existed.
- Enhanced management of the operation over a substantial geographical area and better supervision of large numbers of operating members required an abundance of Chief Officers.
- An Air Reconnaissance (Air Recon) Chief was necessary. Battalion Chief Steve Palmeri, Battalion 33, manned the NYPD helicopter located at Floyd Bennett Field in Brooklyn and provided the Incident Commander with vital information from above via the Command Channel (Channel 2).
- Experience gathered on January 15, 2009, from the U.S. Airways jet (Flight 1549) crash into the Hudson River demonstrated that tidal movement at various times of the day can cause both aircraft and victims to drift long distances. At this incident, with the direction of the tide southbound, land-based units could be expected to be needed and used at various points south of the crash site.
- Units assigned on the initial alarm were used for victim searches from fireboats.
- **The need for the manpower, expertise and unique equipment of the Special Operations Command and SOC Support Units (Rescue Battalion, Haz-Mat Battalion, additional Rescue and Squad Companies, Collapse Units, SOC Support Ladders, Technical Response Vehicle and SOC Logistics Van) was anticipated.**
- Multi-agency incidents of large scale and long duration require the expertise and specialized communications equipment of the Field Communications Unit (FCU) and Mobile Command Center (MCC). These two units ensure that the IC will make a smooth transition to multi-channel usage and establish interoperability communications.
- Summer operations--even when they are of short duration--require one or more Recuperation and Care (RAC) Units. It was obvious that this incident would last for many hours and the need for fluid replenishment for members was critical.

Verification of the incident

At Pier 53, Chief Donoghue established a Unified Command with the NYPD, per the CIMS Primary Agency Matrix. Both agencies, with the help of OEM, attempted to verify the number of aircraft and the number of passengers aboard. Chief Thomas Meara, Battalion 9, was ordered to respond to the West 30th Street heliport and obtain any and all information concerning their latest helicopter departures.

Chief Meara verified that it was a Eurocopter AS 350 helicopter involved in a crash with an unidentified, small, fixed-wing airplane and that the helicopter had a pilot and five passengers onboard. Chief Meara also was able to obtain the name of the pilot and passengers from Liberty Helicopter management. This vital information was provided to the IC. Subsequently, information



Marine 1 members recovered the first victim (a plane passenger) from the Hudson River.

gathered through FDOC members, via cell phone, and Chief Fire Marshal Robert Byrnes, at the scene, gathered from the FAA and New Jersey OEM allowed the IC to verify the plane (a Piper PA-32) involved in the collision, as well as the pilot and passengers aboard.

Ensuring safety

After monitoring radio communications, Deputy Assistant Chief Ronald Spadafora (Command Chief) responded to the incident from a multi-unit drill being conducted at the National Grid LNG facility in Maspeth. His arrival on-scene traveling north along the West Side Highway at 1225 hours brought him in contact with the victim recovery operation being performed at Pier 40; Acting Deputy Chief (now Deputy Chief) Michael Ajello (Division 11), the new Operations Section Chief at Pier 45; and Chief Donoghue at the joint ICP on Pier 53. Useful data regarding victim information and FDNY resources gathered en route to the ICP helped him fully understand the broad nature of the incident.

Prior to assuming Command, Chief Spadafora was briefed on operational conditions, as well as the status of strategic and tactical issues by Chief Donoghue. At this time, it was decided to have Safety Battalion Chief Eugene Vellia board Marine 1 to evaluate safety issues. Members on boats were instructed to don flotation vests and remove their bunker gear. Ladder 3 (FAST unit) members also were ordered to board this vessel in an attempt to enhance safety capabilities on the water.

An additional FAST unit was special-called to protect members at the ICP. Pier 53 was under renovation with an abundance of uncovered openings, exposing members to trip and fall hazards. The possibility of members falling off the Pier also had to be addressed. The responsibility for mitigating these hazards was assigned to Battalion Chief Wayne Mera, Battalion 6, designated Safety Officer, on his arrival. A meeting with the ranking Police Commander at the ICP confirmed that the NYPD also would use Pier 53 as their Command Post and would be staging their operational resources immediately to the north of the ICP at Pier 54.

Operations on the water

Aviation fuel slicks aided Marine units in locating the position of both aircraft wrecks during the first hour of the operation. These areas were *marked* using GPS technology and weighted floats. Gas meters from Hazardous Material Company 1 were used to monitor fuel vapors for concentration levels nearing their explosive limits. The helicopter crashed into the water near Pier C along the Hoboken shoreline and the wreckage was located under approximately 30 feet of water, while the plane fell into the middle of the River, about 60 feet below the surface. Using a grid pattern, FDNY Marine boats worked throughout the rescue effort in the



Chiefs Donoghue and Spadafora exchange information during the transfer of Command. The Unified Command operation employed drew many federal, state and local agency representatives to the Incident Command Post.

search for surface victims in these areas.

Battalion Chief Jack Spillane, Rescue Operations Battalion, was designated the Rescue/Recovery Group Supervisor. He took a position aboard Marine 1 to get a close look at the aircraft wreckage. He advised the FDNY Incident Commander not to order FDNY divers into the water. His advice was based on several conditions: lack of visible victims, no definitive search area, extremely poor water visibility (less than one foot), strong tidal currents and the water depth (25 to 60 feet). Marine units supported the NYPD divers in their search for possible entangled victims below the water's surface. EMS personnel and medical equipment were available on a standby basis. No additional surface victims were discovered.

Probably Will Hold

At 1332 hours, Chief Spadafora--after consultation with then-Chief of Department Salvatore J. Cassano via cell phone, the Police IC and Chief of Marine Operations James Dalton--declared the incident a Recovery Operation and transmitted to the Manhattan dispatcher a *Probably Will Hold*. The downsizing of the FDNY commitment of resources to the operation now was accelerated. Subsequent operations conducted by land-based, Marine and EMS personnel included a continued search for surface victims, support for NYPD divers, air monitoring, spill control and collection of debris for National Transportation Safety Board (NTSB) investigation.

Inter-agency cooperation

A major commitment of FDNY personnel and equipment, as well as the resources and subject matter experts from many other agencies at the local, state and federal levels had to be coordinated. The private sector also was represented. Mayor Michael Bloomberg arrived at the ICP early into the operation and was provided with the latest information concerning rescue attempts and recovery operations, as well as a status report on the number of victims recovered by the FDNY IC.

An inter-agency meeting was conducted by OEM at 1345 hours, with the Mayor in attendance, to consolidate and disseminate information and decide on the remaining course of action during daylight hours. This information was used later by the Mayor during his afternoon press conference to update the general public at 1415 hours. Among the agencies and private sector groups who sent representatives to the Command Post or were in contact with the Incident Commander via FDNY communications units and/or FDOC were: Mayor's Office, NYPD, OEM, Office of Chief Medical Examiner (OCME), Department of Environmental Protection (DEP), New York State Department of Environmental Conservation (DEC), Department of Health and Mental Hygiene

(DOHMH), Port Authority of New York/New Jersey (PANYNJ), NTSB, FBI, FAA, Environmental Protection Agency (EPA), Army Corps of Engineers, Coast Guard, American Red Cross and Liberty Helicopter Tours.

Communications and interoperability

Managing this incident was difficult at best. The magnitude of the event and the distance between the ICP and the Operations Sector necessitated timely activation of the Command channel and use of the Post Radio. The Post Radio was used on the Command channel to communicate with the Air Recon Chief, Battalion 9 at the West Side Heliport and Battalion 2 at the Operations Sector. Post Radios transmit a strong signal at 45 watts, enabling messages to travel over long distances. A second Post Radio was kept available at the ICP for possible communications on the Tactical channel, if necessary. Fortunately, the two Post Radios were not needed because the portable radios worked well at this incident. Communications, command and control were handled professionally at the Command board via the joint efforts of Resource Unit Leader, Battalion Chief John Martorana, Battalion 32, and then-Battalion (now Deputy) Chief Kevin Woods, Battalion 1. They worked well in conjunction with FCU and MCC personnel to effectively carry out all aspects of their duties.

Communications among FDNY Marine unit vessels and the NYPD, Army Corps of Engineers, Coast Guard, Jersey City Fire Department and New Jersey State Police boats were carried out over (bridge-to-bridge) marine VHF radio Channel 13. Ship-to-shore communication with FDNY Marine units was provided to the Incident Commander by FCU personnel via marine VHF radio channel 17. This channel is not for public use and is restricted to governmental agencies. Interoperability communications via radio with New Jersey OEM regarding operations being performed on the New Jersey side of the River were provided to the IC by FCU and MCC personnel through the use of the New Jersey UHF channel 4.

Under Control

At 1542 hours, Chief Spadafora declared the incident *Under Control*, based on the growing probability that there would be no survivors, continued stabilization of the scene and the future commitment of FDNY resources. With the possibility of nighttime operations, Chief Spadafora special-called the Planning vehicle with a Planning Chief to respond to the scene. On arrival, they were instructed to develop an Incident Action Plan (IAP) for a 12-hour period, starting at 1800 hours. Information concerning the incident (objectives, safety issues, accomplishments, etc.) was conveyed to them for inputting into the Plan. The IAP would be employed should night diving and wreckage removal be deemed necessary.

A second inter-agency meeting was held at 1700 hours to discuss ongoing operations. It was agreed that night diving and removal of the wreckage using the Army Corps of Engineers' vessel with crane-lift capability would be suspended from 1900 until 0700 hours the next morning. Production and dissemination of an IAP, therefore, was deemed unnecessary by the IC for the limited responsibilities and resources required. FDNY units did, however, remain on-scene past 1800 hours and throughout the night. A total of three victims (one surface and two from the submerged helicopter) were recovered during the first day of operations.

Lessons learned/reinforced

- At aviation incidents, according to CIMS procedures, the FDNY will operate under a Unified Command structure with the NYPD. It is essential that the FDNY IC contact the NYPD IC and potential primary agencies and subject matter experts (PANYNJ, USCG, NTSB) early into the operation to set com-

Members are urged to review the following WNYF articles:

- "Rockaway Plane Crash Kills 265; FDNY Members--as Usual--Perform with Distinction," by recently deceased Battalion Chief Howard Carlson, in the 4th/2002 issue.
- "Using the FDNY Post Radios," by then-Battalion Chief Peter J. Hart, in the 1st/2007 issue.
- "Airbus in the Hudson Results in a Happy Ending," by Deputy Chief James D. Daly, Jr., and Battalion Chief Michael Buckheit, on page 4 of this issue.

mon objectives and coordinate efforts.

- Ideally, representatives from contributing agencies should be present at the ICP. Personal communication will ensure an enhanced understanding of key issues and objectives.
- Confusion and conflicting reports will be the norm at large-scale incidents similar to this one. The Incident Commander should fill all the Officer positions of the Command Staff (Safety, Public Information and Liaison) and take full advantage of their expertise. At this operation, the Press Office took on the role of both PIO and Liaison Officer.
- Good Samaritans in private and commercial watercraft can complicate the accountability of passengers during rescue and recovery operations on the water. Although it did not happen at this incident, don't overlook the possibility of survivors and fatalities being retrieved on these vessels and brought to shore with no notification to authorities.
- Pier recognition can be confusing. Some piers are easily identified by large names and/or numbers posted on the exterior of the structures. Others, however, are marked poorly or not labeled at all. At this incident, incoming units had difficulty locating Piers 40, 45 and 53. When using piers as Command Posts, Operations Sectors, staging areas or points of reference, always include the nearest adjacent street for the dispatcher to relay this information to responding units and units at the scene. Redundant messages should be transmitted via portable radio at necessary time intervals.

Conclusion

Throughout the days immediately following the incident, Marine units with EMS personnel aboard continued to support NYPD divers in the recovery effort. Marine 1 worked from Sunday through Wednesday, August 12, in this capacity, while Marine 1A operated in similar fashion from Sunday through Thursday, August 13. Unlike the *Miracle on the Hudson*, this incident did not have a happy ending. All passengers aboard the two



FDNY divers load equipment onto the *Kevin C. Kane* for possible underwater use in victim search operations.

aircraft--a total of nine fatalities--eventually were recovered by Tuesday, August 11.

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 Daniel Donoghue** (bottom) is a 25-year veteran of the FDNY. He is assigned to the 3rd Division. He holds an Associate degree in Nursing from Suffolk Community College, a BA degree in Fire and Emergency Service from CUNY-John Jay College of Criminal Justice and is a graduate of the FDNY Officers Management Institute (FOMI). He writes occasionally for WNYF.



Functions of the Safety Officer at Water Incidents

by Deputy Assistant Chief Stephen Raynis, Chief of Safety

This past year, the FDNY responded to two major water incidents. (See "Airbus in the Hudson Results in a Happy Ending," by Deputy Chief James D. Daly, Jr., and Battalion Chief Michael Buckheit, on page 4, and "Air Tragedy Above the Hudson River," by Deputy Assistant Chief Ronald R. Spadafora and Deputy Chief Daniel Donoghue, on page 18, both in this issue.) The Safety Officer played a vital role at both of these emergencies.

The Safety Officer is responsible for identifying, appraising and correcting hazardous conditions and unsafe practices. The welfare of all FDNY personnel on the scene is paramount and the focus of the Safety Officer. Among the various duties of the Safety Officer at all incidents--including operations on or at water-fronts--are obtaining briefings from the Incident Commander (IC), participating in planning at the Command Post, reviewing the plans for the operation and continuously assessing the safety of the operation. Additionally, the Safety Officer is responsible for investigating any on-site accidents that occur and documenting any pertinent information from the incident.

At both of the above-mentioned incidents, the Safety Officers ascertained that members had flotation devices and had removed their bunker gear when boarding or disembarking any vessel. At the January incident, the Safety Officer checked the mooring lines to ensure that if the lines moved or snapped, the members would be prevented from harm. At the August incident, an additional FAST unit was called in to protect members at the Incident Command Post.

Water incidents can include swift water, lake, oceanic, flood and ice situations, almost all of which fall within the purview of the FDNY. Each can present

hazards for the rescuer:

- Swift/hidden currents
- Submerged entrapment hazards
- Electrocutation
- Fragile and/or shifting ice
- Frightened animals
- Reduced visibility (murky water and water/salt spray)
- Crushing wave forces and undertows or rip tides
- Low-head dams (below the water line)
- Floating debris
- Hypothermia
- Marine life
- Distance to solid ground

Numerous Firefighter fatalities have occurred at water incidents throughout the United States. The importance of the Safety Officer at these kinds of incidents cannot be overemphasized.

About the Author...

Deputy Assistant Chief Stephen Raynis is a 28-year veteran of the FDNY. He is the Chief of Safety. He is a graduate of the Masters Program from the Center for Homeland Defense and Security at the Naval Postgraduate School and FDNY Officers Management Institute (FOMI) from Columbia University Graduate School of Business. Additionally, he is a nationally certified Incident Safety Officer and a Type II-All Hazard Incident Safety Officer for the FDNY Incident Management Team. This is his first WNYF article.

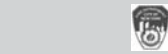


photo by Queens Dispatcher Joseph Epstein



Queens Box 44-9689, 84-70, 129th Street/Kew Gardens Road, January 11, 2010.

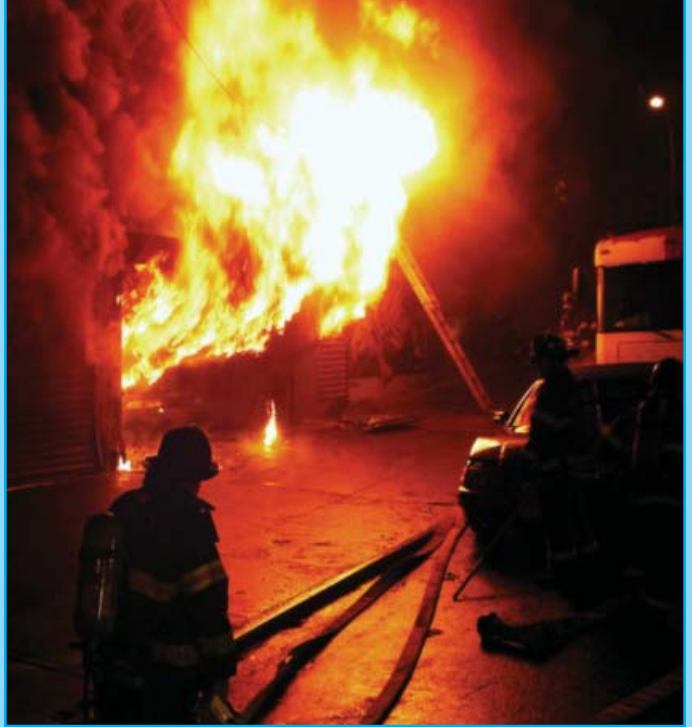


photo by Steve Troche

Bronx Box 75-2908, 1711 Boone Avenue, near 174th Street, in the West Farms section, November 25, 2009.

Photo Reporter

photo by Paul Samner



Brooklyn Box 75-3090, 1114 East 40th Street, November 2, 2009.