

and 5 crewmembers evacuated the airplane successfully. One flight attendant and four passengers were seriously injured.

D. DETAILS OF THE INVESTIGATION

1.0 Emergency Response

New York Waterway (NY WW) Ferry Boats, the U.S. Coast Guard (USCG), New York Police Department (NYPD), Fire Department of New York (FDNY), New York and New Jersey Port Authority, New York Office of Emergency Management (NY OEM), and New Jersey Office of Emergency Management (NJ OEM) responded to US Airways flight 1549. The Emergency Response Group interviewed key rescue personnel from NY WW, the USCG, NY OEM, NJ OEM and the Weehawken Police Department (WPD) and obtained response logs from the NYPD, the FDNY, and emergency response and disaster preparedness plans from the NY OEM, and NJ OEM.

1.1 Notification

NY City Dispatch provided 911 radio transmission records to Safety Board Staff. There were more than 100 calls from accident witnesses to 911 between 1529 and 1540 on the day of the accident. The first transmission occurred at 1529 and reported a “ --- plane—on fire –then disappear...” from a citizen using a cellular phone located at 2846 Briggs Avenue, N.E., NY.

The Port Authority of New York (NY) and New Jersey (NJ) LaGuardia Airport Emergency Plan states that, when the FAA tower activates the Crash Alarm signaling an aircraft accident a request for emergency equipment is immediately relayed through a Conference Circuit (Call 44²) to the following airport and emergency response agencies: the Public Affairs Police Desk, the Airport Duty Manager’s Office, the General Manager’s Office, the Airport’s central heating plant, electric shop, and maintenance office, NYPD, the FDNY, Emergency Medical Systems (EMS) and the USCG. The LGA Tower Controller informed Safety Board investigators that the Crash Alarm was activated and the USCG, NYPD, and other search and rescue operations were immediately notified following the ditching of US Airways flight 1549. See the ATC Group Factual Report for additional information about the initial notification of the accident.

According to the US Airways Director of Emergency Planning and Response (EP&R), Captain Sullenberger called the US Airways LaGuardia station manager (about the time when passengers were being transported to area hospitals) and requested that US Airways provide a manifest for flight 1549 to the NYPD. The US Airways EP&R confirmed and electronically distributed the manifest for flight 1549 to the Port Authority of NY and NJ, NYPD and FDNY, at 1656 EST on the day of the accident. According to

² According to the LaGuardia Airport Emergency Plan a functional check of the Conference Circuit telephone is made twice daily at 0900 and at 2400 hours.

US Airways EP&R, Lt. Georgelies of the NJ State Office of Emergency Management (NJ OEM) informed them that between 1730 and 1800 all 155 of the occupants on board flight 1549 had been rescued and taken to 3 different ports (on the NY and NJ shore.) Additionally, the US Airways Family Support Center in coordination with the NY and NJ OEM authorities, made continuous telephone calls to NY and NJ area hospitals, shelters, and passenger's relatives to confirm and locate all the occupants on board flight 1549, and established contact with all at about 2030 on January 15, 2009. See the Survival Factors Group Chairman's Factual Report for information about the hospitals and shelters where the occupants were taken following their rescue.

1.2 Rescue

Flight 1549 ditched in the Hudson River near NY Pier 88 and the location of the ferry terminal for the NY WW ferries at Weehawken, NJ. Many of the ferry Captains and crews were either preparing their vessel for the afternoon pedestrian commuter rush hour or operating their vessels over established routes in the local waterway. The Emergency Response group interviewed the NY WW management and majority of (5 of 7) the ferry Captains who rescued the occupants from US Airways flight 1549. See Attachment 1 of this report for photographs of the vessels that responded to the accident, and the rescue equipment used during the response.

1.3 Ferry Operators

NY WW
Director of Operations

He holds a valid, USCG License as a 100 GT Master. He started with the NY WW as a deck hand and worked his way up to his current position in 2004. His job responsibilities include operations safety, crew training, regulatory compliance, crew and vessel scheduling and vessel operations.

At the time of the accident, he was driving from Yankee Marine Ship Repair in Tuckahoe, NJ, to his office (at Port Imperial) when he received a cellular call from his assistant, NY WW Office Manager, regarding reports of an airplane down in the Hudson River. He instructed her to alert all NY WW vessels (ferry boats) to the ditching location. He began receiving calls from FDNY, NY OEM, NJ State Police, NJ OEM, Hudson County Sheriffs Department, and NYPD. He thought that the best location for the NY WW ferry Captains to drop off passengers was the NY WW Port Imperial ferry terminal at Weehawken, NJ because EMS assets had arrived at the terminal and because the terminal could accommodate a large amount of people. See Figure 1 below for a map showing the US Airways occupant drop off locations.



Figure 1, Map showing the NJ and NY drop off locations for the occupants on board US Airways flight 1549

He thought that all occupants from flight 1549 were rescued and taken to shore within 30 minutes after the accident. After talking to a representative from the NJ OEM (and receiving the number of occupants on board flight 1549) and checking with the NY and NJ agencies at the drop off locations, he felt comfortable that all the occupants had been rescued from the airplane. He was comfortable that all of the occupants were rescued from the airplane at about 1700 on January 15, 2009.

The NY WW ferries were in communication with the USCG while they were rescuing the occupants. He believed that NY WW management and ferry operators' communication with the key people at the NYPD, and FDNY helped to assure all the occupants on board flight 1549 were accounted for. He stated that the distribution of the flight 1549 occupants to different NY and NJ locations made it more difficult to account for the occupants on board flight 1549. The accountability of all the passengers and crew would have been much quicker had all occupants been taken to a central location. The NJ OEM emergency plan was established to encompass a large-scale tragedy.

NY WW

Office Manager and Assistant to Director of Ferry Operations

She worked for NY WW for almost 13 years. Ted Diguilmi, her co-worker witnessed the accident from his desk (overlooking the Hudson River) and came to her

office and told her that an airplane had ditched into the river. She radioed the NY WW ferry operators and told them to respond to the accident. She radioed the Master of the *Thomas Jefferson* and told him there was an airplane in the water and that he should respond to the airplane and assist rescuing the airplane occupants. She also radioed the Master of the *Yogi Berra* and told him to respond to the airplane (7 NY WW Ferries responded to US Airways flight 1549.) A chart showing the operator of the vessels that rescued the survivors, the quantity of occupants rescued and the discharge locations is included in Attachment 2 of this report.

She broadcast over VHF channel 69, to NY WW traffic. She did not experience any communication difficulties with the NY WW ferries. She called the NY WW Director of Operations and informed her boss of the accident. She called NJ 911 at about 1540 and told the operator that the NY WW ferries would be bringing the occupants to the Port Imperial terminal, and to notify ambulances to respond to this location. Ambulances and fire trucks arrived at the NY WW terminal before the first wave of airplane occupants arrived. She radioed the ferry Captains and told them to pull into any of the 4 slips at the NY WW Port Imperial terminal. She thought that all the occupants from flight 1549 were rescued from the airplane and brought to shore within 60 minutes.

The North Hudson Fire Department (NHFD), NJ EMTs, and numerous NJPD set up a triage for the passengers and crew arriving on the ferries at the Port Imperial terminal located on the ground floor directly below her office. In addition to the emergency response resources provided to the survivors, NY WW gave old uniforms (from storage closets) and provided warm showers to the flight 1549 occupants.

NY WW

Director of Homeland Security, Safety & Compliance Coordinator

On January 15, 2009, around 1530 he was at the Port Imperial terminal corporate office when he witnessed the airplane hit the water. He ran to Piers 3 and 4, where he saw the NY WW ferry *Thomas Jefferson* approaching the airplane. He did not recall seeing any of the airplane doors open or the slides deploy. He contacted Master Lombardi, of the *Thomas Jefferson* via VHF radio. He was standing at the end of the pier and he could see emergency vehicles arriving at Arthur's Landing restaurant³. The current was ebbing southward at a very rapid pace, and a USCG crewmember on board a small USCG boat, waved to him and the USCG brought seven flight 1549 occupants to Arthur's Landing docks and offloaded them and EMS personnel attended to them.

He drove to a shelter in Weehawken, NJ where NHFD, NJ Regional Fire and Rescue, EMS and the NJ Port Authority personnel treated flight 1549 occupants⁴. A NHFD Chief was coordinating resources at the shelter. About 7 to 8 minutes after the

³ A dock at Arthur's Landing is located approximately ¼ mile south of the Port Imperial terminal and was used as a survivor drop off location.

⁴ The NJ OEM established a triage location at a Weehawken, NJ senior citizen nutrition center where occupants from flight 1549 were taken for processing and emergency care.

accident, Mr. Kevin Fowler, from the NJ OEM, contacted him and he informed Mr. Fowler that the emergency command post/triage should be set up at NY WW Port Imperial terminal. Mr. Fowler agreed and informed him that responders from the surrounding community were directed to that location.

He returned to the Port Imperial terminal where many local response vehicles and personnel had established a command post and triage. He did not recall the exact number of and type of response equipment and personnel on site, but indicated there were many ambulances, Fire/Rescue and other law enforcement at the terminal. Doctors and nurses (from Palisades and St. Mary's Hospital) evaluated the condition of the occupants and color-coded the occupants according to the severity of their injuries. NY WW's personnel provided old uniforms, personal clothing and jackets to the occupants for warmth, and the ferry terminal cafeteria provided food and warm beverages to survivors.

He believed that NY WW personnel interacted well with the local agencies because they participated in meetings and worked with the emergency response agencies from NY and NJ. NY WW participated in a tabletop exercise with NJ emergency response agencies in October 2008. Prior to the accident NY WW management had requested but had not been granted their request to participate in mass casualty drills with the NY and NJ Port Authority and NY OEM. The day after the accident, he received a call from representatives from the NY Port Authority and NY OEM regarding NY WW participating in future emergency response exercises. He informed the NY emergency response agency representatives that NY WW would participate in all future NY and NJ emergency response exercises.

Captain Vincent Lombardi
Thomas Jefferson

He had been employed by NY WW for the past 7 years and was a licensed Captain operating ferry vessels for NY WW for over six years. He was the Captain of the ferry vessel *Thomas Jefferson*. The *Thomas Jefferson* was the first vessel to arrive on scene. He was backing out of Pier 79 when he and his deckhands (Rabanes and Rivera) witnessed the airplane in the water at about 1531. He received a call from the NY WW Assistant Director of Ferry Operations asking if he saw an airplane in the water, and he told her he was enroute to rescue the occupants on the airplane. On his way to the airplane he radioed the USCG using Channel 16 and notified them about the airplane in the water and its location. He arrived at the airplane at about 1534. He pulled his vessel up to the starboard wing because it was more submerged and the occupants appeared wetter than the occupants on the port wing. He pulled his vessel along side of the starboard wing without touching the aircraft or the wing. The main deck of his vessel was about a 5 to 6 feet above the wing of the aircraft. There was a deployed emergency evacuation raft with passengers next to the right wing. The emergency evacuation raft was secured to his vessel by securing a rope from the liferaft to the vessel.

There were 22 paying passengers on board the *Thomas Jefferson* when his crew rescued 56 occupants from the right wing and liferaft next to the wing. The flight 1549

occupants boarded his vessel using a ladder on the port bow of his vessel. A flight attendant in the liferaft, needed assistance getting onto the vessel because of injuries she sustained during the accident. She had blood on her life vest and on the gentleman that was helping her get out of the liferaft and into his vessel. There was an elderly woman from the life raft that received assistance from his crew getting onto his vessel. The *Thomas Jefferson* ticket agent recorded the flight 1549 occupant's names on a clipboard however the list of names was misplaced when the passengers and the ticket agent were offloaded at Pier 79.

Before Captain Lombardi departed flight 1549, he noticed the following vessels arrive at the airplane in order: *Thomas Kean*, *Moira Smith*, *Yogi Berra*, *Jersey City*, and FDNY's *Marine 1A*. He also observed a *Circle Line Manhattan* vessel arrived at the airplane with FDNY and NYPD personnel on board. The *Circle Line* vessel did not rescue any occupants from the airplane.

The NY WW Assistant Director of Ferry Operations radioed him and asked him to take the occupants to the Port Imperial ferry terminal, but because the airplane had floated downstream during the rescue (away from the Port Imperial terminal) he decided to go to Pier 79 (a NY WW terminal for New York City) because it became the closest port. The occupants were wet and cold and he felt it was important to get the passengers to shore as quickly as possible. He radioed the USCG that he had 56 occupants from the airplane and that he was enroute to Pier 79. Pier 79 was designated as triage for the flight 1549 occupants and when he offloaded the survivors, NYPD, FDNY, and the Red Cross were standing by with hypothermia blankets and other supplies to assist the occupants. There were also ambulances and fire engines standing by at Pier 79. He did not notice anyone tracking or counting the passengers offloaded from his vessel.

After the occupants disembarked his vessel, representatives from the FBI, NYPD, NY OEM, the NY emergency services unit (NYPD ESU), two Port Authority Police Officers, and the FDNY Deputy Chief boarded his vessel and he took them out to the airplane. During the return trip to the airplane, the FDNY Deputy Chief was on the radio attempting to obtain an accurate count of the number of occupants rescued from flight 1549.

The *Thomas Jefferson* returned to regular ferry service around 2140 the evening of the accident and shut down at 0025 on January 16, 2009.

Captain Brittany Catanzaro
Thomas Kean

She has been a licensed Captain since June 2008. She began working for NY WW in March 2008 as a deckhand and worked her way up to Captain in August 2008, and has been operating ferry vessels for NY WW since then.

She was conducting her normal afternoon route when she saw the airplane in the water around 1530. She diverted her vessel to the scene and arrived on scene at about

1535. The *Thomas Kean* was the second vessel to arrive at the ditched airplane. During her first attempt to approach the airplane she tried pull up to the starboard side of the airplane but because the *Thomas Jefferson* was at the right wing she maneuvered her vessel to the port side of the airplane and began picking up airplane occupants.

She picked up 24 occupants from the airplane and brought them on board her vessel. Some of the passengers were on the wing and some were in the liferaft on the left side of the airplane. Her crew took a head count of the survivors, and she observed that there were no visible traumatic injuries to the occupants other than shivering from being very cold. She said that she had three paying passengers on board the *Thomas H. Kean* before she picked up the occupants from the airplane. She did not transfer any of the rescued occupants to other vessels during the rescue.

The NY WW Ferry Operations Coordinator radioed her to take the passengers to the Port Imperial terminal because the FDNY had designated that location as the central triage site for the flight 1549 survivors. She kept a log on board her vessel in which she recorded the time she saw the airplane in the water, the actions taken by her crew, and the time they delivered the occupants to Port Imperial. She piloted the *Thomas H. Kean* back to the airplane to transport any other occupants back to shore, but when she arrived at flight 1549, there were no other occupants on the airplane or in the water.

Captain Manuel Liba
Moira Smith

He has held a Captain's license for the past 19 years and has been a Master of ferry vessels since October 17, 2006. He has been a Captain for NY WW for the past 2 years.

He was getting the *Moira Smith* ready for the run from Edgewater to Midtown at about 1530 when he witnessed the airplane ditch into the Hudson River and the airplane occupants jumping out of the exits. He arrived at the airplane between 1538 and 1540, about 8 to 10 minutes after he witnessed the airplane ditch into the river. He was the third vessel to arrive at the airplane and he approached the left wing. The *Thomas Jefferson* was evacuating the occupants from the right wing so he moved his vessel to the left wing and began evacuating occupants from the left wing. His deckhands counted 14 occupants rescued by his crew from the airplane. His deckhands created a list of the occupants and when the vessel arrived at the dock, representatives from the FDNY took this list from the deckhand.

The *Moira Smith* was equipped with a ladder called a "Jacob's Ladder" (a paneled folding ladder.) When they were evacuating the occupants from the left wing, a NYPD helicopter was hovering over the airplane. The downwash from the helicopter blew the airplane occupants off the ladder while they attempted to board his vessel, and it blew his vessel away from the ditched airplane. He worried that the downwash would cause his vessel to collide with other rescue vessels. On his first approach to the airplane his

vessel's bow (colored blue) lightly touch the left wing, however his vessel's impact with the wing did not disturb the occupants attempting to board his vessel.

Some of the airplane occupants were bruised, scratched and showed signs of shock, but they all walked off his vessel without assistance when they arrived at Arthur's Landing. Arthur's Landing was the closest marina from the airplane when he departed for shore. He radioed NY WW (on VHF Channels 16/69) and was told that ambulances were waiting to transport passengers to area hospitals from Weehawken, NJ. He logged the time he was on scene picking up the airplane occupants, but he did not log any other information.

After he dropped off the occupants at Arthur's Landing, the FDNJ Rescue Squad Chief directed him to go back to the airplane, so he radioed NY WW and he headed back to the airplane and when he returned there were no more occupants on the airplane.

Captain Vince Lucante
Yogi Berra

He has worked for NY WW for the past 12 years, and has been Captain since 1992. He was walking onto the NY WW barge when NY WW Operations called him and told him an airplane had crashed into the Hudson River. He alerted his deck hands and they boarded the *Yogi Berra* and arrived at the airplane within 3 minutes at about 1535. The *Thomas Jefferson* and *Moira Smith* were already at the airplane. The *Thomas Jefferson* was at the forward right (R1) exit and the *Moira Smith* was on the other side of the airplane by the left wing loading airplane passengers on their vessels.

He pulled up to the right wing of the airplane and loaded 24 occupants on his vessel. A 3-year old child and a 9-month old infant were among the 24 airplane occupants that they rescued. Several of the occupants exhibited signs of hypothermia; shivering, chattering of their teeth and slowed speech. When he pulled the *Yogi Berra* away from the airplane, all of the occupants from the right side of the airplane had been rescued from the airplane. He initially pick up occupants from the right wing and then he moved his vessel behind the right wing and picked up occupants from the emergency evacuation slide that was floating aft of the right wing.

He received a radio call from the NY WW Facilities Operations Coordinator to take the rescued occupants to the Port Imperial terminal at Weehawken, NJ. When they arrived at Port Imperial, no one on shore took the passengers names nor was a recount taken of the number of occupants from his vessel. After he dropped off the airplane occupants, his deck hand and he went back to the airplane to make sure that all the occupants had been rescued from the airplane. When they arrived at the airplane they were assured by the NYPD and FDNY (at the airplane) that all the airplane occupants had been rescued, so he and his deck hand collected debris (seat cushions, clothing and luggage) from the river.

Captain Carl Lucas
Athena

Carl Lucas has been a licensed Captain since 1999. NY WW contracts his ferry, the *Athena*, to run during the winter months. This was the third winter his vessel was contracted by NY WW. The *Athena* is owned and operated by his employer, Interstate Navigation Company, for the past five years.

He was warming up *Athena's* engines to prepare for the evening commuters when he saw the airplane in the water and its occupants exiting onto its wings. He immediately got the *Athena* underway and arrived on scene at approximately 1540. The *Athena* was the fourth vessel to arrive on scene. He pulled his vessel up to the nose of the airplane because there were already other vessels taking on occupants from the port and starboard wings of the airplane.

His crew began picking up occupants from the emergency evacuation slide/raft deployed from the 1L door. The occupants boarded his vessel via a Jacobs Ladder on the side of his vessel. The liferaft had drifted close to the nose of the airplane due to the strong river current. He maneuvered his vessel toward the liferaft and his crew began helping the liferaft occupants onto the *Athena* via the Jacobs Ladder. They rescued 19 occupants from the airplane. The occupants did not exhibit any visible traumatic injuries but some occupants were cold and shivering and showed signs of hypothermia. A flight attendant and the Captain were among the 19 occupants rescued from the liferaft. Captain Sullenberger was the last person removed from the airplane, and the Captain informed him that all 155-airplane occupants were evacuated from the airplane. He did not have any paying passengers on board his vessel prior to arriving at the airplane.

The USCG wanted to transfer airplane occupants from their small boat onto the *Athena*, but the transfer was deemed unsafe because of the height difference between the ladder on the *Athena* and the deck of the USCG vessel. He radioed NYPD (on Channel 17) and reported he had 19 airplane occupants on board his vessel. He piloted his vessel to Pier 79 (because it was the closet pier/dock of its size that could accommodate the draft of his vessel) and offloaded the occupants. Other docks in the area were too shallow for his vessel. He arrived at Pier 79 between 1550 and 1600.

Upon arrival at Pier 79 there was a host of FDNY and NYPD personnel assisting with the offloading of the occupants. He then took between 15 and 20 FDNY and about five to six plain clothed NYPD detectives to the accident airplane. There were no occupants on board the airplane or in the water when he returned to the airplane. He waited on scene for further instructions and later returned to Pier 79 at about 1750.

1.4 U.S. Coast Guard Response

The statutory authority for the USCG SAR missions is contained in Title 14, Sections 2, 88, and 141 of the U.S. Code. The code states that the Coast Guard shall

develop, establish, maintain and operate SAR facilities and may render aid to distressed persons and protect and save property on and under the high seas and waters within the United States. It also states that the Coast Guard may use its resources to assist other Federal and State entities.

The USCG Sector New York search and rescue assets consist of 3 Small Boat Stations, and 8 Cutters.⁵ The Sector NY Command Center (SCC) acts as the initial call and command center for incident response. CG personnel staff the SCC 24 hours a day, 7 days a week. According to the NOAA⁶ station BATN6 - 8518750 the water temperature of the Hudson River, near the location of US Airways flight 1549 ditching, and at the time of the accident, was 5.2 degrees Celsius (or 41.36 degree Fahrenheit) and the current was ebbing at 1.4 knots.

USCG Vessel Traffic Service (VTS) is located adjacent to the SCC and is also staffed 24 hours a day, 7 days a week. VTS is a marine traffic monitoring service that integrates radar, closed-circuit television, VHF radio and Automatic Identification System (AIS) data to track vessel movement and provide navigation safety information to vessels within the NY VTS zone. VTS communicates via VHS channel 11, 12, 14, and 16. The SCC also monitors channel 13 and 16 for distress or mayday calls from mariners and dispatches the appropriate assets when needed. The primary search and rescue assets for inland waters are three USCG small boat stations at King's Point, NY, and at Sandy Hook, NJ.

The USCG and FDNY provided Safety Board staff a timeline for the notification and response to US Airways flight 1549. See Attachment 3 for a USCG and FDNY response timeline to US Airways flight 1549.

The Emergency Response Group interviewed the USCG Command Duty Officer and Initial Incident Commander and the USCG Incident Commander in charge of the USCG response to the accident and the on January 17, 2009.

LT Damon,
USCG, Command Duty Officer and Initial Incident Commander,

LT Damon enlisted with the USCG in 2002 and attended Officer Candidate School in 2004. She is qualified to stand watch as a Command Duty Officer at the Sector Command Center, Sector New York, and assumed watch at 1400 on January 15, 2009. According to her records the incident happened at 1532 on January 15, 2009.

LT Damon was in the VTS and Mr. Mosley (a civilian VTS watch stander) received a phone call about the accident, and immediately shifted the VTS cameras to capture the airplane that had ditched into the water. The USCG Operations unit was

⁵ The cutters consist of: 140 foot Icebreaking Tugs, 65 foot Harbor Tugs, 110 foot Patrol Boat, and a 175 foot Buoy Tender.

⁶ The National Oceanic and Atmospheric Administration's (NOAA) National Ocean Service owns and maintains BATN6 – 8518750 located at 40.700N 74.015 W (40°42'0" N 74°0'54" W) Battery, NY.

notified of a search and rescue (SAR) and all three USCG Small Boat Stations were alerted. The USCG Station NY sent out between 4 and 6 small rescue vessels, Station Sandy Hook sent out a 47-foot rescue vessel, and Station Kings Point sent out a 25-foot rescue vessel. She walked over to the VTS and ordered the VTS watch stander to pull up a camera on the river where the airplane had ditched.

She notified Captain Hitchen, Chief of Operations, Duty Section 4 (LT Drews and LCDR Hahn), the XO and the CO about the accident. She also initiated the notification tree to command centers at USCG District 1, USCG Atlantic Area and USCG Commandant (headquarters). All of her notifications took place within 3 minutes. Ten to 15 minutes passed during the USCG briefs, tasking and other operational matters. The USCG SCC communicated with NY OEM, and sent representatives to 1 Police Plaza and the FDNY, and the NY OEM command post at the Chelsea Pier in Manhattan, NY. She also spoke to the FAA through the Port Authority where the USCG received the first estimate of the number of occupant on board N106US.

NY WW vessels communicated with the USCG VTS, but most of the SAR calls came into the Communications Unit at the USCG SCC on SAR and Operational Channels. USCG VTS and Communications Unit were directed (via VHF Channel 16) to set up staging for recovery/discharge of airplane occupants at the Chelsea Pier. She initially forgot to specify which Chelsea Pier; the NJ or NY side of the river, for the offload the airplane occupants, so she radioed USCG and commercial vessels and specified the Chelsea Pier Manhattan, NY drop off location.

The first call received by the USCG SCC reporting the crash came in at 1532. The decision to use the NY Chelsea Pier location was made at the USCG CDO level, prior to communication with any other of the responders. The NY Chelsea Pier was chosen because of its accessibility, its size, and its familiarity to local mariners. The initial occupant count was 100 on board the airplane but she did not know where that number came from. The USCG SCC initially handled the SAR response, but later turned the SAR over to the USCG's Incident Management Division around 2200 hours. She initially had concerns about the large ferry vessels pulling up so close to the airplane and rescuing the occupants because the maneuverability was much easier with the smaller vessels.

Captain Gregory Hitchen
Chief Operations – USCG Sector NY

He joined the USCG in 1987, and has been at Sector NY since June 2007. He runs the day-to-day operations and supervises approximately 100 USCG persons. He was the duty Incident Commander at the time of the accident. The USCG duty cycles run 1 week on and 1 week off.

He was returning from a meeting on Staten Island when he received a call from the Command Duty Officer, Lt Damon, at about 1540 reporting that the USCG VTS observed the ditching of US Airways flight 1549 on one of its monitors. He directed the

command duty officer to get LT CDR Hahn, Captain Healy and LT Drews to stand up the incident command structure and oversee the launch of small boats from the three CG small boat stations to the accident scene. A USCG responded to One Police Plaza and another USCG provided support/communication to the FDNY. LT Moore arrived at the airplane in the 87-foot CG cutter Ridley at about 1700, and MST1 Lowe arrived at the NY OEM command post at about 1800.

CAPT Healy informed him that a variety of small vessels and cruise lines were observed responding to the ditched airplane and rescuing the airplane occupants. It took him about 20 minutes to get to the USCG command center; he arrived at about 1600. His immediate concern was search and rescue, getting the airplane occupants to land, passenger accountability, and keeping the airplane afloat. He was also concerned about the airplane occupants experiencing hypothermia from the cold river temperature.⁷

The NYPD and US Airways coordinated the accountability for all occupants on board flight 1549. The accountability of occupants was difficult because the occupants were taken to Pier 79, Chelsea Pier, and Weehawken Piers. Ambulances and fire trucks convened mostly at Chelsea Pier, and the NY WW ferries that rescued the occupants mostly took passengers to Weehawken, NJ. Also the accountability was delayed because it took a while to get in touch with US Airways to verify the names of the crew and passengers. He thought that all the occupants were rescued from the aircraft within 10 minutes after the accident, and accountability of all the occupants occurred within 4 hours after the accident.

NYPD put divers in the water to ensure that no airplane occupants had drowned. The USCG launched an 87-foot patrol boat (with LT Moore acting as incident field observer, responsible for relaying information to USCG situation unit), and 5 boats from Station NY. The hulls of the vessels that rescued the occupants were colored orange, white, red and blue. There were 3 or 4 NYPD vessels that also responded to the airplane. There was a concern about keeping the aircraft afloat because they wanted to make sure all occupants had evacuated the airplane and because they wanted to ensure stability of the airplane.

The NY OEM operated a mobile command post with OEM, NYPD, FDNY and USCG personnel. A USCG First Class Petty Officer (MST1 Lowe) and a USCG Federal On-Scene Coordinator Representative (MST2 Raby who coordinated the removal of fuel on board the airplane) assisted NY OEM and the other emergency response at mobile command. The NY OEM mobile command eventually moved closer to where flight 1549 was tied to the seawall near Battery Park. He coordinated salvage of the airplane with NY City and the NTSB before ceasing his USCG incident command at 0500 on January 16, 2009. Don John Marine arrived on scene to secure the airplane to the pier.

⁷ The USCG survival limits for an average healthy persons functioning in hypothermic conditions (the Hudson water temp was about 41° F) is about 2.5 hours.

The current moved the airplane toward the Manhattan side of the Hudson and a tugboat moved the airplane to the pier.

He coordinated the emergency response with the NY OEM, and the NYPD. The USCG initially shut down vessel traffic on the Hudson River, and after the occupants were rescued the safety zone was reduced to 500 yards surrounding the airplane. The USCG later (around 1830) reduced the zone to 200 yards around the airplane to accommodate rush hour vessel traffic, and the safety zone was lifted at 1852 for passenger vessels only at about 1852.

He said that the State of NJ has an excellent mass casualty plan. He said the timeliness of the response and rescue of the passengers went very well. He thought that the location the airplane ditched into the river was calm (not choppy) and the milder weather on the day of the accident was fortunate for the accident occupants. A petty officer assigned to the NY OEM mobile command post informed him the confirmation that all occupants on board flight 1549 had been rescued occurred between 2030 and 2100 on January 15, 2009.

He said that the USCG participated in a Table Top exercise a few months ago with Staten Island and conducted a mass casualty exercise. The exercise provided the agencies with an education about how NY City worked with other agencies. He said that improvements could be made by response agencies receiving the passenger manifest in a timelier manner, by transporting occupants to a central location, and by the NY OEM improving their emergency communications with other agencies (with NJ OEM.) He also thought the USCG needed to place more senior level people at the OEM mobile command post.

1.5 New York Police Department Harbor Unit

The NYPD provided response logs and emergency response records to the Emergency Response Group following the accident. The following summaries the resources that the NYPD Harbor Unit launched for the response to US Airways flight 1549.

The NYPD Harbor Unit launched a 55-foot *SCUBA*⁸ vessel from Governor Island and its 55-foot *Harbor Charlie* vessel from Harbor Unit Station House at 1531. Additionally, NYPD's 55-foot vessel *Harbor George*, and a 36-foot vessel launched from Launch Repair Shop at Randall's Island and responded to flight 1549. At 1535 the NYPD Air Sea Rescue #23 deployed from Floyd Bennet Field, Brooklyn, NY. At 1542 the Air Sea Rescue #23 arrived on scene and deployed two divers into the Hudson to assist flight 1549 occupants in the water. At 1552 the NYPD Harbor Unit 55-foot *SCUBA* arrived on scene with 3 additional divers who assisted the first two divers with

⁸ The NYPD Harbor Unit is based at the Marina at the Old Brooklyn Army Terminal and consists of a team of 30 self contained under water breathing apparatus (SCUBA) police officers.

occupant rescue. The NYPD's 55 foot, *Harbor Charlie* arrived 5 minutes after the 55-foot SCUBA and its crew helped remove USCG crew from the wing of the airplane.⁹

The NYPD Harbor Unit report stated that two 55 foot vessels were on scene prior to the FDNY *Marine 1 (McKean.)* The *Marine 1* crew assisted FDNY crew with running a line through the front exits of the airplane to secure N106US to *Marine 1*. Later that evening, the NYPD Harbor Unit collected airplane debris and maintained a security zone around N106US. The NYPD Harbor Unit assisted with securing the airplane at the Battery Park seawall, and assisted other NY agencies in the recovery of the airplane and its engines in the days following the accident.

The NYPD logs showed that, upon notification of the accident, a level three (3) mobilization¹⁰ was transmitted to the NYPD, FDNY, EMS, OEM, FBI, and Red Cross. Citywide Incident Management System (CIMS) was put into effect with the NYPD as the primary agency. Rescue operation began immediately and NYPD Harbor and Aviation units joined commercial vessels in picking up airplane occupants. See Attachment 4 for NYPD Harbor Unit accident response review and timeline.

1.6 Weehawken Police Department Response

The Weehawken Police Department (WPD) received initial notification of the accident at 1533 from a call from a person who witnessed US Airways flight 1549 ditch into the Hudson River. The WPD Special Operations Department (SOD) notified local Police and EMS. WPD Dispatch sent 7 officers initially to the Weehawken Port Imperial Terminal. WPD Dispatch notified North Hudson Regional Fire and Rescue (NHFD) who also sent responders. Safety Board staff interviewed the WPD officer who participated in the NJ unified command at Port Imperial.

Pat Cannon
Sergeant, Weehawken Police Department

The first WPD officer arrived at the Port Imperial terminal at 1536 and reported a large commercial airplane in the river. The WPD and EMS assigned responders to Arthur's Landing in addition to Port Imperial terminal (the designated survivor drop off location in the NJ Port Security emergency plan) because the USCG dropped off airplane occupants at Arthur's Landing. At 1542 a unified incident command was set up by NHFD, Weehawken EMS, NJ OEM and the WPD, in the Port Imperial terminal. In accordance with the NJ State emergency plan other NJ mass casualty response units from the Newark University Hospital were called in because there could be as many as 200 airplane occupants.

⁹ The USCG reported they had people on flight 1549 to help secure the airplane to the seawall at Battery Park, NY.

¹⁰ An NYPD Harbor Unit Inspector informed Safety Board staff that a level "3 mobilization" for the NYPD requires a predetermined number of personnel and equipment to respond to an accident/incident.

At about 1550 a secure zone was established around the Port Imperial Terminal allowing only authorized personal and vehicles near the terminal. There were 22 life support ambulances, 6 paramedic units (non-transport units), 2 waterfront strike force trailers (loaded with disaster supplies for EMS), and 4 EMS Mass Casualty Response Units. EMS set up a triage area in the terminal and treated one “red” coded occupant who was suffering chest pains. Several airplane occupants were treated for hypothermia and the majority of the passengers were not injured. A total of 57 airplane occupants came into Port Imperial and Arthur’s Landing. NJ OEM disaster plan recently designated a Weehawken senior citizen nutrition center as a city shelter for the triage and processing of people involved in mass disaster emergencies. The airplane occupants were moved to the shelter for debriefing via Weehawken city owned busses by the WPD before being transported to a hotel at the LaGuardia Airport. The NJ Unified Incident Command ceased at 2230 and the Weehawken shelter shut down 2300.

Sergeant Cannon believed the problems that occurred during the emergency response included; the USCG took airplane occupants to Arthur’s Landing, and the communications problems between NJ and NY City emergency response authorities. NY City sent two officers (a Manhattan Borough Captain and a Special Investigation Captain) to Weehawken to improve communications between NY and NJ emergency responders. NJPD normally communicated with other NJ emergency response on a U-TAC (state interoperability channel)¹¹. The NJ Incident Command had trouble reaching the NY Incident Command throughout the initial stages of the emergency response, however, after the NY City officers arrived at Weehawken communications between NY and NJ improved.

NY Port Security emergency plan (established by the USCG regions in the NY/NJ areas) was established after “9/11” and this was the first time the Port Security emergency plan was implemented. Port Imperial is one of 24 locations identified as a primary evacuation facility in the plan, and the local authorities have done drills and performed mass casualty exercises at the Port Imperial terminal. He believed that the response to US Airways flight 1549 was timely and orderly because the WPD, NHFD and local EMS previously participated in emergency response drills at the ferry terminals.

1.7 New York City Emergency Response

NY OEM utilizes a Citywide Incident Management System (CIMS) that establishes the roles and responsibilities and designates authority for City agencies performing and supporting emergency response. CIMS implements the National Incident Management System (NIMS.¹²) When the NY City public safety agencies respond to a

¹¹ V-TAC, U-TAC, and I-TAC are typically in the 151-159 band channel range with high (800) Mhz frequency for use by multiple agencies for communication.

¹² The Department of Homeland Security developed and implemented NIMS, in March 2004. NIMS provides a systematic, proactive approach to guide departments and agencies at all levels of government, nongovernmental organizations, and the private sector to work seamlessly to prevent, protect against,

complex multi-agency and multi jurisdictional incident/accident the CIMS management doctrine defines how multi-agency, large-scale emergency response is managed. CIMS defines the roles and responsibilities of multi-agency incidents, establishes the ICS organizational structure, the integration of regional, state and federal agencies, the operational implementation of CIMS and defines how the incident operation are prioritized, and when they can be implemented concurrently. See Attachment 5 of this report for the NY OEM CIMS protocol.

The NY OEM received notification of the accident at their Emergency Operations Center (EOC) at their headquarters building (located in Brooklyn, NY) from the LaGuardia Airport Crash Alarm that signaled the accident through the Conference Circuit. The Emergency Response Group Chairman interviewed the NY OEM Deputy Commissioner of Operations, the First Deputy Commissioner, and the Deputy Commissioner for Agency Development and Coordination.

Brad Gair
Deputy Commissioner of Operations, NY OEM

After receiving notification of the accident while in OEM Watch Command, Mr. Gair reported to Chelsea Piers, the NY location of the primary incident command post. (Note: While there should only be one incident command post per incident, this incident was unique due to the drifting of the airplane on the Hudson River. There were several incident command posts, including Chelsea Piers, the Jacob Javits Center, and the NY WW Terminal¹³ (39th Street and 12th Avenue); however, because interoperable communications methods (I-TAC) were used at all the posts, communication between the NY command posts was not a problem.

New York, New Jersey and federal agencies maintained constant communications during the response phase using pre-established protocols, with much of the emphasis being placed on the expeditious account of the passengers and crew from flight 1549. By approximately 1800, local, state and federal officials were relatively confident that everyone on the board the airplane had been accounted for. As soon as the plane was secured to the promenade in Battery Park City, a more traditional incident command post with a fully developed unified command (consisting of representatives from NYC OEM, NYPD, FDNY, and USCG) was established in accordance with CIMS and NIMS.

Mr. Gair believes that the key to the successful emergency response to the US Airways flight 1549 accident was because the procedures set forth in the CIMS and NIMS protocols were followed with appropriate adjustments and flexibility due to the nature of the incident. Because of its unique framework for the City of New York, and its implementation with the National Incident Management System (NIMS) CIMS

respond to, recover from, and mitigate the effects of incidents, loss of life and property and harm to the environment.

¹³ New York Water Ways has ferry terminals on the NJ and NY shores of the Hudson River.

provides the emergency responders (FDNY, NYPD, EMS, FBI and the Red Cross) clear and concise information that allows everyone to know their position and responsibilities during an emergency.

Calvin Drayton
First Deputy Commissioner NY OEM

Mr. Drayton is responsible for communicating incident/accident activities with the Deputy Commissioner of Operations, the NY OEM EOC, the City of New York Commissioner, and the Mayor of New York. After receiving notification of the accident he departed from his OEM Office (located at 165 Cadman Plaza East, Manhattan, NY) and arrived at the Chelsea Pier command post about 20 minutes after the accident occurred. He coordinated with the command post, FDNY, the NY WW vessel Captains, regarding the rescue of the occupants, and later that evening the stabilization of the airplane. He also assisted FDNY and NYPD with organizing cranes and other equipment to help stabilize the airplane after the occupants had been rescued from the airplane.

Jake Cooper
NY OEM Deputy Commissioner,
Agency Development and Coordination

The EOC is responsible for coordinating New York City emergency response agencies during emergencies. The EOC handles information requests and city recourses. He is responsible for the coordination and operation of the EOC.

He was in his office when his agency received the Call 44 Crash notification from LGA. He and other designated EOC staff went upstairs to the EOC and commenced manning the phones and handling requests that came in from the command bases. Mr. McKinney coordinated the emergency response activities between NJ OEM and NY OEM. The EOC staff conferenced with representatives from FDNY, NYPD, and the Red Cross about recourses needed for the survivors. NYPD representatives were in the EOC building and came into the EOC after hearing about the accident. The EOC informed the other agencies that they would be standing up a situation room and coordinating via conference calls. All resource requests from the field (from NYPD and FDNY) were given to the OEM Responder who then relayed the information to the EOC to fulfill. FDNY was on the conference call and worked with the EOC representatives. Red Cross and Salvation Army arrived at the EOC one hour into the response to help with organizing the Family Assistance Center.

The EOC coordinated resources within New York City for the command bases, established a hotel at LGA where the survivors were taken, organized busses to transport the survivor's family members to the LGA hotel, and set up family assistant centers at LaGuardia. The EOC also established a Family Assistance Center at LGA at about 1800 that remained in operation until 2100 on January 15, 2009.

1.8 New Jersey Emergency Response

The NJ OEM Emergency Management Section Supervisor holds the rank of Major and also serves as Deputy State Director, Office of Emergency Management. The OEM is under the command of the Deputy Superintendent of Homeland Security, who is the Assistant State Director, Office of Emergency Management. The Regional Operations Intelligence Center (ROIC) located in West Trenton, NJ, is the home for the New Jersey Office of Emergency Management and the state Emergency Operations Center (EOC). It serves as the command center for all state-led emergency response operations, such as natural disasters, chemical or nuclear emergencies, or terror alerts. During emergency response missions, the ROIC serves as the gateway for situational information and requests for aid. ROIC personnel coordinate and organize requests with resources and personnel run by federal, state and local agencies.

The NJ OEM organizes, directs, staffs, coordinates and reports the activities of the Communications Bureau, Emergency Preparedness Bureau, and Recovery Bureau. The Supervisor and staff facilitate the flow of information to and from the various Bureaus supervised and serve as a conduit for communication with other Division entities. The Emergency Management Section is also responsible for planning, directing and coordinating emergency operations within the State that are beyond local control. The following three Bureaus make up Emergency Management Section of the NJ OEM: Communications, Emergency Preparedness, and Recovery.

Kevin Fowler,
NJ State Police (NJSP) Lieutenant Unit Supervisor for the North
Region under the Emergency Preparedness Bureau of NJ OEM

His office handles emergency management activities throughout the northern counties (7 counties) including Hudson County (which includes Weehawken, NJ) and coordinates emergency response in the North NJ region. The NJ OEM falls under the supervision of the NJSP.

Lt. Fowler was in his office when WPD Sergeant Cannon called at about 1530 and informed him an airplane landed in the Hudson River. He called Director of Operations at NY WW and was informed that the NY WW ferryboats were bringing the flight 1549 occupants to the Port Imperial terminal¹⁴. He notified NJSP Sergeant (Sgt) Paddock and Trooper (Trp) Dunham and requested they report to the NY WW and assist with the incident command at the Port Imperial terminal. He called NYC OEM and spoke to the Deputy Commissioner about the emergency response, the accountability of all the occupants on board flight 1549, and the location where the survivors were being delivered via the NY WW ferries. The NJ OEM's biggest concern was that all the occupants were accounted for. He also communicated with the NJ ROIC and provided

¹⁴ NY WW is currently working with the NJ OEM and NJSP on the NJ ICS and emergency evacuation response plan.

status updates. The ROIC personnel and the NJSP Command Staff assisted with the coordination of state assets for the accident.

He faxed the US Airways flight 1549 manifest (which he received from U.S. Airways LaGuardia Station Manager) to NYC OEM, and called Erik Grosf, Assistant to the Director of the NTSB Office of Transportation Disaster. He called Mr. Grosf, because he had worked with him on a prior surface accident (Bergenfield, NJ Pipeline Accident) and had attended a First Responders, Incident Transportation Program that Mr. Grosf organized at the NTSB Academy.

The NY WW Director of Operations informed him that the NY WW ferryboats were bringing US Airways flight 1549 occupants to the Port Imperial terminal and that this was a good location for the mobile command vehicles to set up for the incident command. NJSP aviation and marine divisions sent a helicopter and boats to the airplane to assist with the search and rescue however neither were needed to rescue the airplane occupants. In addition, the NJSP set up a command post at Liberty State Park in Jersey City. The NJSP TEAMS Units (tactical) were put on standby at the direction of the Superintendent of the NJSP, in case local resources became overwhelmed.¹⁵ The NHFD also responded to Port Imperial to assist with occupant identification and rescue.

He said that NJSP Sgt Paddock and Trp Dunham drove SUV vehicles to Weehawken, Port Imperial and assisted NHFD with setting up a command center in a mobile command vehicle on the road in front of the terminal building. At the scene, Sgt Paddock and Trp Dunham met with H. Mickey McCabe the Hudson County Office of Emergency Management EMS Coordinator, who organized emergency medical vehicles at Port Imperial for the occupants on board flight 1549. Mr. McCabe assisted Sgt Paddock with calls to area hospitals to verify that all of the occupants on board flight 1549 had been rescued.

The NJ OEM did not want to risk the life of rescue personnel (divers) going into the Hudson River if all the occupants were safe and accounted for. Sgt. Paddock and Trp. Dunham relayed info to; the ROIC, the officers at Weehawken, and to Lt. Fowler, regarding the accountability of all the flight 1549 occupants. Lt. Fowler then coordinated the passenger information with the Deputy Commissioner NYC OEM. He thought that all occupants from flight 1549 were accounted for between 2300 and 2330 the evening of the accident. H. Mickey McCabe and the state Health Department assisted Sgt. Robert Paddock with locating the passengers. He said that it was a challenge to track the occupants while keeping patient confidentiality. Because some of the occupants were brought to Arthur's Landing it created some confusion. The occupants that were brought to Arthur's Landing were given blankets and coffee and later brought to Port Imperial.

¹⁵ The NJSP Marine Bureau located one of the engines from the accident airplane, using image-sensing sonar several days after the accident.

The NJ OEM Incident Command System (ICS) is structured under the National Incident Management System (NIMS.)¹⁶ The NJSP are NIMS trained and aware of what their ICS roles are when deployed to an incident or accident. He thought there were some communications issues interstate between New York and New Jersey agencies. The NJSP used I-TAC channels to communicate between other NJ agencies. The issues consisted of establishing a direct frequency between command posts where the flight 1549 occupants were brought to shore. The NY Port Authority sent representatives to the command post at Port Imperial in Weehawken, NJ to improve communications between the NY and NJ incident command.

Cynthia L. Keegan
Senior Survival Factors Engineer

Attachments

1. Photographs
2. Vessel Response Information
3. USCG and FDNY Incident Log and FDNY Emergency Response Recourses
4. NYPD Harbor Unit Report PSB#67s.09 and HU#/037s.09
5. NY OEM CIMS Protocol

¹⁶ See <http://www.fema.gov/index.shtm> for information about the NIMS and ICS structure and training that NJ OEM and NJSP receives.