

Docket No. SA-532

Exhibit No. 6-A

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

Survival Factors Group Chairman's
Factual Report

(186 Pages)

NATIONAL TRANSPORTATION SAFETY BOARD
Office of Aviation Safety
Washington, DC 20594

SURVIVAL FACTORS GROUP CHAIRMAN'S FACTUAL REPORT

May 22, 2009

I. ACCIDENT

Operator : US Airways, Inc.
Airplane : Airbus A320-214 [N106US] MSN 1044
Location : Weehawken, NJ
Date : January 15, 2009
Time : 1527 eastern standard time¹
NTSB # : DCA09MA026

II. SURVIVAL FACTORS GROUP²

Group Chairman : Jason T. Fedok
National Transportation Safety Board
Washington, DC

Member : David Lefrancq
Airbus
Toulouse, France

Member : Barrington Johnson
Association of Flight Attendants
Charlotte, NC

Member : Dr. Didier Delaitre
Bureau d'Enquetes et d'Analyses
Paris, France

Member : Mark James
Federal Aviation Administration
Kansas City, MO

Member : Brenda Pitts
Federal Aviation Administration
Garden City, NJ

¹ All times are reported in eastern standard time unless otherwise noted.

² Not all group members were present for all activities.

Member : John Shelden
Federal Aviation Administration
Renton, WA

Member : Bob Hemphill
US Airways, Inc.
Phoenix, AZ

III. SUMMARY

On January 15, 2009, about 1527 eastern standard time (EST), US Airways flight 1549, an Airbus A320-214, registration N106US, suffered bird ingestion into both engines, lost engine thrust, and landed in the Hudson River following take off from New York City's LaGuardia Airport (LGA). The scheduled, domestic passenger flight, operated under the provisions of Title 14 CFR Part 121, was en route to Charlotte Douglas International Airport (CLT) in Charlotte, North Carolina. The 150 passengers and 5 crewmembers evacuated the airplane successfully. One flight attendant and four passengers were seriously injured.

IV. DETAILS OF THE INVESTIGATION

1.0 Airplane Configuration

The airplane was configured with 12 first class passenger seats, 138 economy class passenger seats, two cockpit flight crew seats, two cockpit observer seats, and five retractable, flight attendant jumpseats. (Two aft-facing seats were wall-mounted at door 1L, a forward-facing, bulkhead-mounted “direct view” jumpseat was in the aft aisle, and an aft-facing jumpseat was wall-mounted on each side of the aft galley.) See Figure 1.

The accident airplane was equipped as an Extended Overwater (EOW) airplane. The following table compares the ditching equipment carried by EOW vs. non-EOW US Airways A320s:

EOW A320 (20 in fleet)	Non-EOW A320 (55 in fleet)
<ul style="list-style-type: none"> • Crew life vests at every jumpseat location 	<ul style="list-style-type: none"> • Crew life vests at every jumpseat location
<ul style="list-style-type: none"> • Passenger life vests at every seat for primary passenger flotation 	<ul style="list-style-type: none"> • No passengers life vests
<ul style="list-style-type: none"> • Seat cushions for auxiliary passenger flotation 	<ul style="list-style-type: none"> • Seat cushions for primary passenger flotation
<ul style="list-style-type: none"> • 10 infant life vests 	<ul style="list-style-type: none"> • 10 infant life vests
<ul style="list-style-type: none"> • 2 ELTs 	<ul style="list-style-type: none"> • 2 ELTs
<ul style="list-style-type: none"> • 4 slide/rafts 	<ul style="list-style-type: none"> • 4 slides (detachable)
<ul style="list-style-type: none"> • 4 survival kits 	<ul style="list-style-type: none"> • No survival kits
<ul style="list-style-type: none"> • 4 life lines 	<ul style="list-style-type: none"> • 4 life lines

Table 1. US Airways A320 fleet information

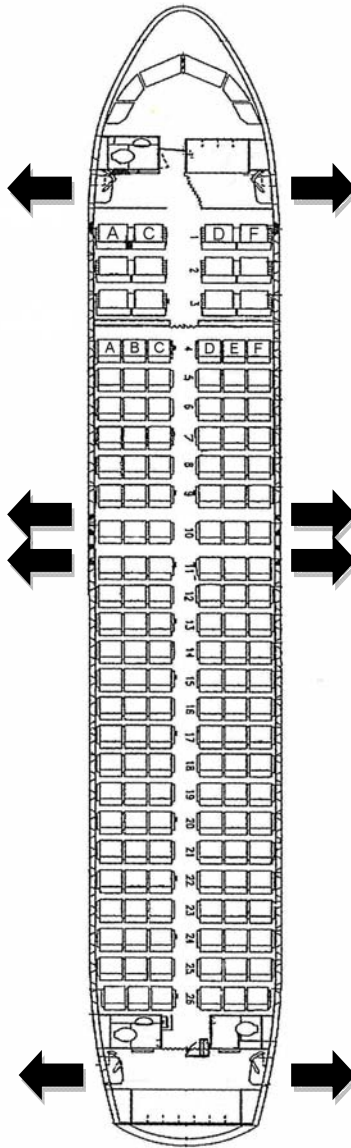


Figure 1. Cabin configuration of N106US

2.0 Cabin Crew Information

2.1 Cabin Crew Training Summary

Name and Position	Initial Ground Training	Initial EOW Training	Last Recurrent Training	FAA Certificate Number
Donna Dent – F/A ‘A’	6/22/82	8/20/90	1/31/08	2997383
Doreen Welsh – F/A ‘B’	9/15/70	9/18/89	7/17/08	3002558
Sheila Dail – F/A ‘C’	2/27/80	10/17/89	1/31/08	2997210

Table 2. Cabin crew training summary

2.2 Cabin Crew Statements

Cabin crew statements were requested but not obtained from the flight attendants by US Airways until mid-April 2009. They are included as Attachment 1.

2.3 Cabin Crew Interviews

Flight Attendant ‘A’

Age: 51 Hgt: 5’7 ¾” Wgt: 145 lbs.
Aft-facing forward jumpseat (outboard seat)

Jason Fedok (NTSB), Brenda Pitts (FAA), Barrington Johnson (AFA), Bob Hemphill (US Airways), and David Lefrancq (Airbus) interviewed flight attendant (F/A) A on January 16, 2009. Attorney Dane Jacques was present as the interviewee’s personal representative.

The flight was the last leg of a four day trip. The flight was scheduled to depart for Charlotte and they were headed home. The flight attendants were based in CLT. An elderly woman in a wheelchair preboarded.³ There was a lap child on the flight.⁴ Boarding was routine. There were six “chairmen” (frequent flyers) in first class who she knew were seasoned travelers. There were two non-revenue “jumpseat” riders. One female American Airlines pilot was seated in 3D. The other pilot was a “strong man” who was seated in 6E. He was “incredible” and helped a lot during the evacuation.

The airplane pushed back from the gate on time. There was a little delay before the airplane began to move. Taxi was normal. There was a manual safety demonstration. They did not demonstrate the life vests because it was not an overwater flight. The announcement for takeoff was made. She pressed the cabin ready light. A second announcement was made for takeoff and she checked the cabin ready light a second time.

The airplane took off and on climbout she heard a loud “thud.” It immediately got “very quiet.” All engine noise stopped except that she thought she might have heard the fans still rotating. (She demonstrated the sound it made by clinking on a glass with her fingernails.) Flight attendant ‘C’ asked her, “what was that?” Flight attendant ‘A’ overheard a passenger in first class say something about a bird and told F/A ‘C’ that they may have had a bird strike. It was so quiet that the flight attendants could hear each other, even though they were whispering. There was a “burning electrical smell” in the cabin. Flight attendant ‘C’ told her that she saw “smoke” or “haze” in the back of the cabin. Flight attendant ‘A’ was behind a solid partition (without window) and could not see far into the cabin. She saw passengers on the right side of first class looking out the windows. Flight attendant ‘C’ tried to calm a male passenger in seat 1D who appeared panicked by telling him to “breathe, just breathe.”

³ She did not provide the woman with a special briefing.

⁴ She believed the young boy was in row 19. She did not see him during the evacuation.

Flight attendant 'A' did not feel the airplane turn but had the sensation that the airplane was descending rapidly. It was "too quiet." She was hoping they were returning to the airport. Flight attendant 'C' said she saw F/A 'B' motioning in the aft cabin and attempted to contact her via the interphone but the call did not go through so flight attendant 'C' hung the handset back up. Flight attendant 'A' commented that she believed the design of the buttons and "zones" on the phone were unnecessarily complicated.

It seemed like "forever" but the captain eventually made a public address (P/A) announcement "brace for impact." Flight attendant 'C' asked her, "what did he say?" Flight attendant 'A' confirmed he said "brace for impact." They both were already in their brace positions and began shouting the commands, "brace, brace, heads down, stay down!" They repeated those commands continuously through impact.

Flight attendant 'A' described a "really hard landing" followed by a "gradual deceleration." The captain made a P/A announcement, "evacuate!" There were no other instructions from the flight deck. She had no difficulty releasing her restraints and started to shout the evacuation commands, "leave belongings, come this way!" Flight attendant 'A' went to assess door 1L and realized the airplane was still moving. She shouted to F/A 'C,' "wait, we are still moving!" She looked out the window and only then realized they were in the water. She told F/A 'C' that "we have water on this side." Flight attendant 'A' held the assist handle and opened door 1L. Water did not come in the door. She was expecting to see the slide/raft inflate automatically, but it did not. She pulled the manual inflation handle and the slide/raft inflated normally. Regardless of whether the slide/raft inflated or not, she stated that pulling the manual inflation handle was part of their procedures and they were taught to do that in training.

She remembered having to "put a lot into it to get the door to lock against the fuselage." She started to shout commands "come this way, don life vest!" She got a good flow going and used her protected position on the cockpit side of the doorway. The passengers exited in a single line. Most of them sat and "scooted" into the slide/raft. A lot of passengers had seat cushions but a lot had nothing at all. One woman came to the door with a vest out of its pouch. She asked her "what do I do with this?" F/A 'A' put the vest over her head and sent her out the door. When the flow stopped she moved inboard and grabbed the jumpseat shoulder harnesses and yelled commands down the aisle. She did this because she felt the passengers "needed to see us." The evacuation was orderly, quick, and quiet. No passengers pushed. There were no problems with carry-on baggage. There were no signs of any damage in the airplane. When passengers boarded the raft there was no build up of passengers by door 1L. She could not estimate the proportion of people wearing life vests or carrying seat cushions.

At some point during the evacuation she grabbed two life vests from beneath the jumpseat and passed one to F/A 'C.'⁵ Flight attendant 'A' noticed an injured man in the

⁵ She stated that the crew life vest was easy to open. She inflated the life vest in the slide/raft once she was outside the airplane. It operated quickly and effectively.

1L slide/raft who was wearing only boxer shorts and a t-shirt. Passengers were yelling for her to grab blankets and a life vest for him. She did not feel there was time to search through the overhead bins for blankets so she threw her sweater into the slide/raft. She then went through the cabin looking for life vests under the seats. She managed to find “a few” (possibly as many as five) life vests. She had no difficulty extracting them from under the seat. She noticed a lot of people bottlenecked at the overwing exits. She yelled for passengers to come to the front of the airplane. Passengers had opened the overwing exits. She did not know if the lifelines were used.

Flight attendant ‘A’ heard the daughter of the elderly woman say, “can I get some help here?” Flight attendant ‘A’ went down the aisle (aft of the overwing exits) to assist the elderly woman. The airplane was on an incline and the elderly woman was having trouble walking up the slope to the exits. Flight attendant ‘A’ noticed there were some passengers behind the elderly lady. She also saw water in the aft galley.

While F/A ‘A’ was walking down the aisle to assist the elderly passenger she saw F/A ‘B’ walking up the aisle “like she was on a mission.” She moved out of the way of so F/A ‘B’ could pass and did not ask her any questions. Flight attendant ‘B’ went forward and immediately exited into the 1R slide/raft. She believed flight attendant ‘B’ was wearing a passenger life vest at some point. Flight attendant ‘A’ grabbed the two hands of the elderly woman and guided her forward. Flight attendant ‘A’ put the elderly woman in the slide/raft with F/A ‘B.’

Ferries arrived incredibly quickly. The captain and first officer made several walks through the cabin and the captain grabbed the emergency locator transmitter (ELT) from behind first class. The back end of the airplane was going under water. Some of the passengers on the wing may have been trying to come back inside. Flight attendant ‘A’ kept saying, “we have to get out.” She did not retrieve any additional emergency equipment. The captain wanted to release the 1R slide/raft from the airplane. While he was doing that, she pulled the quick release and got into the 1L raft. The quick release was not as easy as she thought it would be. She stepped into the raft and slipped. The captain and first officer got into the 1L raft after her and it was “pretty full.” There was some water in the raft and she got wet. She did not remember seeing any lights on the raft. She thought the raft was too close to the airplane. The first officer could not find the knife attached to the raft to cut the mooring line. She thought the location was “not convenient.” Someone from the ferry threw a knife into the raft to cut the mooring line. The first officer cut the mooring line with the knife thrown from the ferry and dropped it into the water so it did not puncture the raft.

She could see that there was already a ferry at the 1R raft. Two ferries came to the far end of the 1L raft. At one point the raft was “sandwiched” between the two ferries. Flight attendant ‘A’ had difficulty climbing onto the ferry at the “slippery” boarding station and lost her shoes. The shoes were mid height with a block heel. Most of the passengers had already gotten off, but some helped push her onto the ferry.

Flight attendant 'A' stated the captain was trying to get a headcount on the ferry. It was difficult because passengers were boarding the ferry and moving around. She saw the young man in the boxer shorts downstairs being attended to by passengers. She went upstairs to get warm. The ferry took them to a dock on the NY side of the river. The entire crew was transported to St. Luke's Hospital, except for F/A 'B'. Flight attendant 'A' received a general examination but had no injuries.

Flight Attendant 'B'

Age: 58 Hgt: 5'6" Wgt: 160 lbs.

Forward-facing "direct view" jumpseat (aft, center aisle)

Jason Fedok (NTSB), Bob Hemphill (US Airways), and Barrington Johnson (Association of Flight Attendants) interviewed F/A 'B' on January 17, 2009. Mr. Tim Welsh was present as the interviewee's personal representative.

It was the last leg of a four day trip for the crew. The boarding process was normal. She recalled holding a 9 or 10 month-old infant for a mother while the crew attempted to reseat the family of four so that they could all sit together. The woman's husband was seated with his daughter who she believed was 4 or 5 years old. The crew was unable to reseat the family. There were "a couple" of open seats on the airplane. She specifically recalled that the 'D' seat in the last row of the airplane was unoccupied.

She read the safety briefing as part of her duties. It was not an overwater flight so they did not demonstrate the life vests. Taxi and takeoff were unremarkable. Very shortly after liftoff, it "felt like we hit a wall." It "was like something was slowing us down." She did not recall any noises but she "instantly" knew that something was wrong.⁶ The cabin was quiet. She noticed "smoke" near the overhead bins in the last row of the cabin. She described the smoke as "very light" and similar to the mist that can be seen on warm summer days coming into the cabin from the air conditioning system. The smoke was associated with an "electrical" smell. She thought it might have been coming out of the overhead bins. She released her seatbelt and walked up the aisle opening the overhead bins on either side of the cabin. She got almost halfway up the aisle without seeing a fire and decided to close the bins and return to her seat. The airplane was "flying weird" and she felt that they were returning to the airport.

As she returned to her seat she attempted to calm and reassure frightened passengers. She briefly considered reseating herself in the unoccupied seat in the last row. Her assigned jumpseat was forward-facing and affixed to the bulkhead aft of the lavatory. It was a spring-loaded swivel-style seat. She stated that she "never liked" the aft jumpseat on the A320 and had never been comfortable in it. She felt that it left her exposed to being struck by items that might come loose from the galley during an impact. She liked the idea of having a bulkhead behind her and a seat in front of her that she

⁶ She stated that she had been a flight attendant for 38 ½ years and had experienced a bird strike in the "early 80s" in New Orleans, LA. In that event the flight attendants had approximately 45 minutes before landing and had time to prepare the cabin. When asked to compare the two incidents she stated that, in this case, "there was no time."

could use to brace herself against. Although the seat was called a “direct view” seat she did not like the fact that the seat did not have a view outside any window on the airplane. She decided against sitting in the empty passenger seat and sat on her jumpseat and buckled her four-point restraint.

She saw a flight attendant in the front of the cabin and may have motioned to her to pick up the interphone. She remembered picking up the interphone to see if the forward flight attendants were talking to the cockpit but no one was on and she did not attempt to make a call. She did not hear the interphone chime.

A short time later the captain made a P/A announcement “brace for impact.” She took her brace position which she described as sitting up “tense and tight,” putting her hand beneath her legs, and putting her chin on her chest. She began shouting the commands, “Brace, brace, heads down, stay down!” She noticed that many of the passengers complied and had crossed their arms on the seatback in front of them and were leaning over. She was only able to repeat the commands two or three times when she felt a “thud” followed by a “violent” impact. She remembered the airplane shaking and stated that it was the hardest landing she ever experienced. She remembered seeing some passenger oxygen masks drop and heard things coming loose behind her in the galley. She said the “A320 rattles on a good day” but the noise from the galley was more than usual. She “never thought about landing in the water” and did not know they were in the water when the airplane came to a stop because she could not see outside.

The captain made a P/A announcement “evacuate, evacuate.” She immediately released her seat belt and attempted to “kick up” the jumpseat as they are trained to do. However, the swivel jumpseat can only be stowed by use of a “lift button” under the seatpan.⁷ She attempted to use the button to stow the seat but could not get it to work. She did not know why the seat did not stow properly but stated that she “never liked that seat” and sometimes had trouble stowing it during normal operation. She knew they had to get out so she thought that she left the seat unstowed and went to door 2L. She commanded passengers to “stand back, stand back, let me get the doors open!” She recalled feeling the door with the back of her hands as they were taught in training. She looked at the window in the door to assess the conditions and saw that the airplane was in the water. It was “the surprise of [her] life” because she had never considered that they would be in the water. She attempted to judge how high the door was from the water and thought that she might have time to open the 2L and get the slide/raft deployed prior to the water rising too high. She grabbed the assist handle and put her hand on the door handle but did not remember if she lifted it a little or not. She then thought to herself “no,” and let go of the handle. At that time a female passenger entered the aft galley and yelled “you have to get these doors open!” The woman went by her and grabbed the 2L door handle and partially lifted it. Flight attendant ‘B’ believed the door “cracked.” She pushed the woman away and attempted to close the door but was unable to get the handle in the fully down position.

⁷ She stated that the swivel-style seat was not used for the stowage drill in training.

She had already been aware that there was water in the galley and felt that, after the door was cracked, it began to get deeper more rapidly. She thought she was going to drown, but then told herself she needed to “fight.” She shouted that the exits were unusable and redirected passengers to move forward. She stated that the passengers complied with her commands. At no time did she do anything with door 2R nor did she see any passengers get near door 2R. As she moved the passengers forward she followed them. By the time she left the galley the water was at her waist and rising rapidly.

She commanded passengers to move forward as fast as they could. She began improvising commands and told “young, able-bodied” passengers to climb over seats to get people away from the water. Several male passengers complied with the command. She continued moving forward as fast as possible and continued shouting commands. The water got shallower after 4 or 5 rows and she looked for a seat cushion to take for herself. She reported that a majority of the seat cushions in the aisle seats were missing. When she reached the overwing exits there were “no more than eight” passengers remaining in that area. A few passengers were behind her. She paused briefly and commanded the passengers to exit “leg, body, leg!” She did not notice whether the overwing exits were inside the airplane. She continued up the aisle where she encountered F/A ‘C’. Flight attendant ‘C’ told her that she did not have a life vest on. Flight attendant ‘B’ went to seat 1A and retrieved the life vest from beneath that seat. She had no difficulty opening the pouch or donning the vest. She believed that she also secured the waist strap but she did not inflate it. She began to feel “woozy” and nauseous. She went to door 1R and slid into the raft. It was “a little difficult.” Immediately passengers began to comment about blood in the raft and asked who was bleeding. She looked at her leg and noticed that her slacks were torn and her left shin was bleeding. Passengers applied direct pressure in an attempt to slow the bleeding. Eventually a passenger tied a tourniquet on her leg. She thought a few passengers entered the raft after her.

She stated that a ferry “just appeared” and they moved the raft to it. The passengers told her she needed to go first because she was injured. She had to climb up a “frozen ladder” and had no idea how she did it. The pain from her leg was excruciating. Two men from the boat reached over and pulled her on board. They placed her on a bench and passengers attended to her injuries as best they could.

When they reached the dock she was placed on a gurney and taken to the hospital. She recalled a policeman that stayed with her until her son arrived at the hospital. She described her injury as a “deep V-shaped laceration” on her anterior left shin that involved the muscle. The wound required surgery under general anesthetic to close. Her leg was not fractured.

Flight attendant ‘B’ did not remember seeing the emergency lights at any time and did not describe any difficulty seeing during the evacuation. She wore contact lenses and had them in before, during, and after the flight. She did not describe any difficulties with them during the accident.

Flight Attendant ‘C’

Age: 57 Hgt: 5’6” Wgt: 140 lbs.
Aft-facing forward jumpseat (inboard seat)

Jason Fedok (NTSB), Brenda Pitts (FAA), Barrington Johnson (AFA), Bob Hemphill (US Airways), and David Lefrancq (Airbus) interviewed flight attendant ‘C’ on January 16, 2009. Attorney Dane Jacques was present as the interviewee’s personal representative.

The flight had arrived a little late into LGA. They got the airplane ready for the next flight and started the boarding process, which went well. There was a woman with a lap child who wanted to move to sit by her husband. Flight attendant ‘C’ tried to move passengers so the wife and husband could sit next to each other, but they could not find another passenger willing to change seats. There were two jumpseat riders seated in 3D and 6E. 3D was an American Airlines pilot while 6E was a pilot for a different airline. The airplane was full except for one empty seat – a middle seat in the last row.

The door was closed and the airplane pushed back and sat for a little bit. They got clearance for takeoff and the flight attendants performed a manual safety demonstration. Flight attendant ‘C’ provided an individual briefing for the exit row passengers. The cabin crew heard the P/A announcement to take their seats for takeoff and did so.

“A few seconds” after takeoff F/A ‘C’ heard a “thump and then complete silence.” Flight attendant ‘A’ whispered “what was that?” Flight attendant ‘C’ thought she heard a passenger say something about birds and told her “I think it was a bird.” She thought they would go back to LGA. She did not remember the airplane making any turns and it felt like they were “coasting.”

Passenger 1D looked “fearful” and she told him to “breathe, just breathe.” Other passengers were looking out the windows. She looked down the aisle and saw F/A ‘B’ motioning to her. Flight attendant ‘C’ stated she tried to call F/A ‘B’ on the interphone but it did not ring, so she hung up. She did not “feel like [she] had time to deal with it.” She saw “hazy smoke” in the cabin and noticed a “metallic smell.” She looked out the windows of seats 1F and 2F and saw water and realized they were not very high. She thought they were headed back to LGA because water was sometimes visible until the airplane landed there.

Flight attendant ‘C’ heard the captain make a P/A announcement “this is the captain, brace for impact.” She got into her brace position and started to shout the commands “brace, brace, heads down, stay down!” Passengers were looking at the flight attendants and were not putting their heads down into the brace position. Instead, they appeared to be trying to mimic the flight attendants’ brace position. Both she and flight attendant ‘A’ kept saying “brace, brace, heads down, stay down” with an emphasis on “heads down.”

The airplane “hit” and “slammed down on what felt like the belly.” It felt like one hit and there was no bounce. Flight attendant ‘C’ looked to see how many pieces the airplane was in and was surprised to see the airplane was intact. She heard “evacuate” over the P/A with no other instructions. The airplane has an evacuation alarm but she did not hear it. She did not remember seeing the emergency lights. She released her seatbelt and assessed conditions at the 1R door. She remembered touching the door to check for heat. She heard F/A ‘A’ say “wait we are still moving... no, we’re in water!” Flight attendant ‘C’ looked out the window and it did not look like the water was high so she felt the door could be opened.

The slide/raft inflated automatically, faster than she thought it would. She estimated the door sill was 2-3 feet above the water. Passengers had not gotten to her door yet. She shouted, “Come this way! Leave everything! Don life vests!” She remembered they were taught to hold the assist handle on the door while passengers were evacuating but she moved to the “galley assist” (a black metal handle in between four atlas carriers) instead so the cabin could better hear her voice and commands. She stated that if she had held the door assist handle she would have been behind a partition. Flight attendant ‘C’ noticed a lot of seat cushions were being used and not a lot of passengers had life vests. No one was screaming. The evacuation was one by one and no one came to her exit with carry-on bags, only coats.

The 1R door swung back in a little and got “hung up” and impinged on the slide. The 1R door started to close and intruded about 10-12 inches into the doorway. Flight attendant ‘C’ assigned an able bodied person in the slide/raft (a man, possibly from seat 6D) to hold the 1R door and keep it off the slide/raft. He held the door and passengers evacuated under his arm.

The slide/raft was not full to capacity. Flight attendant ‘C’ could see people at the overwing exits facing the windows and waiting to exit onto the wings. She shouted for them to “come this way!” She waved them forward and the passengers complied, going out both exits. The evacuation was “as orderly as [she] could have wanted it.”

Flight attendant ‘B’ came up the aisle. Flight attendant ‘C’ could see blood on her teeth and life vest. It looked like she was in shock. She did not say anything and got into the 1R slide/raft. (Later, when she got into the same slide/raft, F/A ‘C’ noticed F/A ‘B’ had a deep gash in her left shin.)

There was an elderly woman who was seated toward the back with her daughter. Flight attendant ‘A’ went back to help an elderly lady. Flight attendant ‘C’ put her in the 1R slide/raft thinking F/A ‘B’ could help her. The woman was moaning because she was not used to moving that quickly. Flight attendant ‘C’ was aware of the captain’s presence and asked him how deep the water was. He said it was not shallow at all.

The captain walked back through the cabin. Flight attendant ‘C’ could see that water was up to the overwing exit rows. It was the first time she realized how much water they were taking on. The captain said he wanted to detach the 1R slide/raft. The

raft was still “hung up” in the door. She got in and the captain pulled the quick release. Flight attendant ‘C’ could not find the knife and a passenger from a one-story, covered ferry threw a knife to the raft to cut the mooring line. There was another ferry at the wing. The raft was free floating and they maneuvered it to the ferry steps. There was no panic. The ferry threw a rope to the raft and started to get passengers up immediately. The ferry crew asked if anyone was hurt and they told them that there were two people hurt. She and two men helped get F/A ‘B’ off the raft. Flight attendant ‘B’ was in a lot of pain and it was slippery and awkward. They did the same thing to assist the elderly lady into the ferry.

The passengers remaining on the raft said “women and children first.” Flight attendant ‘C’ refused for a while until there were only four men left in the raft. She then got onto the ferry. She went inside and noticed F/A ‘B’ was very wet and thought she must have been in quite a bit of water. She had her leg elevated and people were covering her in blankets. Flight attendant ‘C’s’ hands were very cold and a passenger gave her a pair of gloves. The raft at the 1R door had a little water in it and her feet had gotten wet. No one else was injured and “no one got that wet.” The ferry dropped them off on a dock on the NY side of the river. They put F/A ‘B’ on a stretcher and took her to a hospital. She saw the rest of the crew come off a different ferry. There were a lot of police who were trying to get a headcount. They put pieces of cardboard around their necks at one point. After a long time the remaining crew was transported to the hospital together. Flight attendant ‘C’ was examined but was not injured.

2.4 Cabin Crew Requirements and Training

2.4.1 FAA Training Requirements

14 *CFR* § 121.421 “Flight attendants: Initial and transition ground training” stated:

(a) Initial and transition ground training for flight attendants must include instruction in at least the following:

(1) General subjects—

- (i) The authority of the pilot in command;
- (ii) Passenger handling, including the procedures to be followed in the case of deranged persons or other persons whose conduct might jeopardize safety; and
- (iii) Approved crew resource management initial training.

(2) For each airplane type—

- (i) A general description of the airplane emphasizing physical characteristics that may have a bearing on ditching, evacuation, and inflight emergency procedures and on other related duties;
- (ii) The use of both the public address system and the means of communicating with other flight crewmembers, including

emergency means in the case of attempted hijacking or other unusual situations; and

(iii) Proper use of electrical galley equipment and the controls for cabin heat and ventilation.

(b) Initial and transition ground training for flight attendants must include a competence check to determine ability to perform assigned duties and responsibilities.

(c) Initial ground training for flight attendants must consist of at least the following programmed hours of instruction in the subjects specified in paragraph (a) of this section and in §121.415(a) unless reduced under §121.405.

(1) Group I airplanes—

(i) Reciprocating powered, 8 hours; and

(ii) Turbopropeller powered, 8 hours.

(2) Group II airplanes, 16 hours.

14 *CFR* § 121.417 “Crewmember emergency training” stated (in part):

(a) Each training program must provide the emergency training set forth in this section with respect to each airplane type, model, and configuration, each required crewmember, and each kind of operation conducted, insofar as appropriate for each crewmember and the certificate holder.

(b) Emergency training must provide the following:

(1) Instruction in emergency assignments and procedures, including coordination among crewmembers.

(2) Individual instruction in the location, function, and operation of emergency equipment including—

(i) Equipment used in ditching and evacuation;

(iv) Emergency exits in the emergency mode with the evacuation slide/raft pack attached (if applicable), with training emphasis on the operation of the exits under adverse conditions.

(3) Instruction in the handling of emergency situations including—

(iii) Ditching and other evacuation, including the evacuation of persons and their attendants, if any, who may

need the assistance of another person to move expeditiously to an exit in the event of an emergency.

(c) Each crewmember must accomplish the following emergency training during the specified training periods, using those items of installed emergency equipment for each type of airplane in which he or she is to serve (Alternate recurrent training required by §121.433(c) of this part may be accomplished by approved pictorial presentation or demonstration):

(1) One-time emergency drill requirements to be accomplished during initial training. Each crewmember must perform—

(iii) An emergency evacuation drill with each person egressing the airplane or approved training device using at least one type of installed emergency evacuation slide. The crewmember may either observe the airplane exits being opened in the emergency mode and the associated exit slide/raft pack being deployed and inflated, or perform the tasks resulting in the accomplishment of these actions.

(2) Additional emergency drill requirements to be accomplished during initial training and once each 24 calendar months during recurrent training. Each crewmember must—

(i) Perform the following emergency drills and operate the following equipment:

(A) Each type of emergency exit in the normal and emergency modes, including the actions and forces required in the deployment of the emergency evacuation slides;

(D) Donning, use, and inflation of individual flotation means, if applicable; and

(E) Ditching, if applicable, including but not limited to, as appropriate:

(1) Cockpit preparation and procedures;

(2) Crew coordination;

(3) Passenger briefing and cabin preparation;

(4) Donning and inflation of life preservers;

(5) Use of life-lines; and

(6) Boarding of passengers and crew into raft or a slide/raft pack.

(ii) Observe the following drills:

(A) Removal from the airplane (or training device) and inflation of each type of life raft, if applicable;

(B) Transfer of each type of slide/raft pack from one door to another;

(C) Deployment, inflation, and detachment from the airplane (or training device) of each type of slide/raft pack; and

(D) Emergency evacuation including the use of a slide.

2.4.2 US Airways Initial Training Program

US Airways provided several documents detailing the different aspects of the initial training program. One document was a student guide entitled “Section IV – Ditching” (dated January 2008).⁸ The following are excerpts:

- There are two types of water landings: planned and unplanned. Planned water landings, also known as “ditching,” is characterized by at least some preparation time. The possibility of structural damage is less likely making evacuation easier. In unplanned water landings there will be no time to prepare. The possibility of aircraft damage is more likely followed by flooding and the possible sinking of the aircraft. Whether five minutes or five hours from the runway most of the domestic and international airports US Airways serves are at or near bodies of water.
- Girt lacing attaches a slide or slide/raft to the girt bar. If you are attempting to separate the slide or slide/raft by pulling the “For Ditching Only” handle this lacing may completely unravel. If it fails to unravel you may have to manually pull the lacing apart.
- Mooring lines keep the slide connected to the aircraft once the slide has been quick released. These lines make rescue attempts easier and should remain attached unless a life-threatening situation exists. Should it be necessary to release the mooring line look near the girt bar end of the slide for a manual release. On some aircraft the manual release lever is at the doorsill, but on most it is at the girt bar end of the slide or slide/raft.

⁸ The purpose of the guide was for students to review it as supplemental information just prior to or just after receiving the classroom lecture on a particular topic.

- During a ditching emergency, assess the door exit. Look for: water level, obstructions, fire, pitch of aircraft, and structural damage.
- If your exit is blocked and there is time and no immediate life threatening situations, a slide can be transferred from a blocked exit
- Question #3 on the self-test was: The exits most likely to be usable [during a ditching] will be _____: a. forward doors, overwing exits (if applicable); b. aft doors, forward doors; c. overwing exits, aft doors. The correct answer (provided by US Airways) was “a. forward doors, overwing exits (if applicable).”

The following are excerpts and notes from the instructor’s guide for a 2 hour 30 minute module entitled “New Hire: Water Landing II – EOW” (dated 3/24/08). The entire lesson is contained in Attachment 2 and contains sections on flight attendant procedures for both planned and unplanned water impacts.

- The FAA requires that each certified air carrier operating extended overwater aircraft must have these six pieces of equipment present and in working condition:
 - Life vest
 - Survival kit
 - Life raft (slide/rafts or rafts)
 - Emergency locator transmitter (ELT)
 - Pyrotechnic signaling device (Flare)
 - Life lines
- The life vest announcement must be read verbatim from the departure section of the announcement booklet.
- Flight attendants were shown a 24-minute video on “Water Evacuation and Survival”
- Flight attendants were required to participate in a simulated drill in a slide/raft or life raft in which they would: demonstrate/observe proper raft commander procedures (as applicable), don a life vest (transition classes only), board a raft or slide/raft, locate and describe the operation of the raft components and equipment.

The following are excerpts from the instructor’s guide for a 2-hour module entitled “New Hire: Water Landing I – non-EOW” (dated 2/12/08). The entire lesson is contained in Attachment 2.

- 80% of accidents occur during the take-off or landing phase of flight. A water landing is a real possibility due to the fact that many airports we serve are located near a body of water.
- **ASK:** What airports does US Airways serve that are located near water?
ANS: TPA, PBI, MIA, LAX, SFO, LGA, BOS, DCA, and many more.
- **V. USABLE EXITS**
- In a water landing, overwing window exits are the probable useable exits.
 - There are some A/C specific exceptions.
- **ASK:** Why do you think the windows would be useable exits?

- ANS:** The window exits are located over the wings and would probably be above the water level.
- Always direct passengers to exit off the leading (towards nose of A/C) edge of the wing, when in a water landing.
 - Trailing edge (towards the tail) probably under water and may be jagged.
 - Instruct ABPs to use the escape rope (on A/C, where applicable) and attach to loop located on the wing near the leading edge and inside window frame (A/C specific).
 - Wings can be slippery. This will aid passengers when entering water.
 - Keep in mind that depending on how the A/C lands in the water, or if it lands on something in the water, the FWD part of the A/C, or one side of the A/C, could be submerged.
 - **ASK:** What must you do before opening any exit?
ANS: Assess conditions
 - **ASK:** What are you checking for?
ANS: Fire, obstruction, is the exit above water level.
 - Due to the flotation of the A/C, the AFT doors on the B737-300 are most likely not useable. However, should conditions permit, and depending on the situation:
 - Use your good judgment
 - Use an exit after assessing and determining it is useable.
 - There will be exceptions when the AFT exits may be probable useable exits. Details will be A/C specific.
- **VIII. SLIDE TRANSFER**
 - Slides may also be removed and transferred from an unusable exit and deployed at a useable exit to be used for additional flotation (overwing window or door).
 - A slide may be transferred only if time and conditions permit.
 - Slide transfer procedures vary from one A/C type to another.
 - The following DVD illustrates slide transfer techniques for each A/C type.
 - **SHOW** Slide / Raft Procedure DVD. (8.5 minutes)
 - **IX. UNPLANNED WATER LANDING**
 - **SHOW** Video – Accident Review: US Airways Flight 5050 (Rev. 10/98) Time: 11 min. (aborted take-off).
 - Unplanned Water Landing - Forced water landing with no time to prepare.
 - **ASK:** What is the signal from the flight deck to indicate an emergency landing?
ANS: A verbal command from the flight deck stating “Brace for Impact,” or a prearranged signal determined during the preflight briefing.
 - **ASK:** Upon receiving the emergency signal, what actions should you take?
ANS: Assume brace position and shout commands.
 - **ASK:** What are the commands for an unplanned emergency?
ANS: “Bend Over, Heads Down, Stay Down”
 - **REFER** to IEM, Chapter 11, Page 16 to follow, Non-EOW ditching procedures.

- **ASK:** When the A/C comes to a complete stop and you receive the signal to evacuate (“This is the Captain/first officer. Evacuate! Evacuate!”), what are your actions?
ANS: Release your seat belt and shoulder harness; shout commands to passengers, “Release seat belts and get out!”
 - Kick up jumpseat
 - Responsible F/A, turn on Emergency Light Switch (ELS)

New hire US Airways flight attendant candidates participated in a 2-hour “wet” raft drill as part of the Initial Training Program. The drill demonstrated the proper use of flotation seat cushions and life vests, the procedures needed to quick-release a slide, the inflation of a life raft (not slide/raft) and erection of a canopy. The new hire candidates also performed an evacuation for a “planned/unplanned water landing.”

Candidates donned life vests and jumped into a pool prior to inflating them. They then inflated one chamber of the life vest and entered the life raft⁹ at the boarding station. The candidates were then asked questions about the location and purpose of the equipment on board the life raft. Finally, the candidates erected the life raft canopy and used the heaving rig to practice rescuing someone who had fallen out of the raft.

2.4.3 US Airways Recurrent Training Program

US Airways provided a class schedule for the May ’08-April ’09 recurrent training cycle and it is included in Attachment 3. As part of that recurrent training cycle, US Airways required flight attendants to participate in: a 35-minute emergency equipment exercise, a one hour non-EOW A319 “planned cabin prep” water landing exercise, and a 20-minute A320 “dry ditch” hands-on exercise. The instructor’s guides for all three exercises are included in Attachment 3.

According to the “dry ditch” instructor’s guide, participants were shown video demonstrating slide deployment and detachment procedures, slide/raft and life raft inflation, and the procedures for slide/raft transfers on several aircraft types. They were then taken to a room with an inflated A320 slide/raft and shown the different components, including: “For Ditching Only” flap, quick-release handle, raft knife, and stenciled instructions. Each student was then required to enter the slide/raft while the instructor asked numerous questions about the equipment and procedures. See Attachment 4 for photographs of the training device.

In addition to the classroom portion of the curriculum, US Airways also provided flight attendants with a homestudy packet that was to be completed prior to arrival at recurrent training. The self-tests in the packet were intended to be completed after reviewing the pertinent sections on the Inflight Emergency Manual. The homestudy self-

⁹ US Airways used a 757 life raft at the PHX training base and an A320 slide/raft at the CLT training base.

tests (dated February 2009) for “Chapter 11: Ditching Evacuation” and “Chapter 12: A319/A320” are included in Attachment 3.

2.4.4 US Airways F/A Inflight Emergency Manual

Relevant sections of the US Airways Inflight Emergency Manual that describe the flight attendants’ procedures and responsibilities are included as Attachment 5. The excerpts are from the following chapters:

- Chapter 4: Announcements (2 pages)
- Chapter 10: Emergency Evacuation (9 pages)
- Chapter 11: Ditching Evacuation (18 pages)
- Chapter 12: A319/A320 (15 pages)
- Chapter 12: A319/A320 Cabin Prep Water EOW (12 page insert)
- Chapter 12: A319/A320 Cabin Prep Water non-EOW (12 page insert)

2.4.5 Cabin Safety Inspector Survey

14 *CFR* §121.571(a)(1)(iv) required that passengers be briefed “on the location and use of any required emergency flotation means.” 14 *CFR* §121.573(a) required that, in addition to the oral briefing required by §121.571(a), “each certificate holder operating an airplane in extended overwater operations shall ensure that all passengers are orally briefed by the appropriate crewmember on the location and operation of life preservers, life rafts, and other flotation means, including a demonstration of the method of donning and inflating a life preserver.”

FAA Cabin Safety Inspectors (CSI) were surveyed about their carriers’ procedures regarding preflight briefings and demonstrations for life vests. Fourteen CSIs responded to the survey. Twelve of the respondents had oversight responsibilities for airlines operating EOW airplanes. Of those 12 respondents, four airlines verbally briefed the location and demonstrated donning the life vest on all flights. One airline verbally briefed and did a partial demonstration (held up the life vest) on non-EOW flights. One airline verbally briefed only the seat cushion on non-EOW flights. The remaining six airlines only verbally briefed and demonstrated the life vest on EOW flights.

There were two responses to the survey from CSIs who oversaw non-EOW airlines that were equipped with life vests. One carrier verbally briefed and did a partial demonstration (held up life vest) and one carrier verbally briefed the life vest location and donning instructions but did no demonstration.

2.4.6 Airbus Guidance Material

In 2004, Airbus began providing customized cabin crew operational documentation (called the Cabin Crew Operational Manual (CCOM)), to A320 operators

receiving a new airplane with enhanced cabin equipment.¹⁰ This CCOM was customized by Airbus to the individual airplane being delivered. The accident airplane (MSN 1044) was delivered before this policy went into effect. Prior to 2004, Airbus did not systematically deliver cabin crew operational documentation (called Cabin Attendant Operational Manual (CAOM) at the time) to Airbus A320 customers. This document was only delivered on customer request. Airbus had no record of a request from US Airways for the CAOM. However, Airbus reported that the Flight Crew Operating Manual contained detailed cabin/cockpit evacuation procedures that covered most of the essential information in the CCOM. Additionally, all operators had access to a generic A320 CCOM from the “Airbus World” internet portal.

In 2005, Airbus produced a document entitled “Getting to grips with cabin safety” and distributed it to all Airbus customers (either through their Resident Customer Support Resource Management (Airbus representatives on site with major operators) or directly to the airlines’ Flight Operations Department) in April 2005. Chapter 6 “Ditching” of the document is included as Attachment 6. Excerpts are included below:

- The definition of ditching is “a deliberate emergency landing on water, where the aircraft touches down under control.” However, in commercial aviation this is a rare occurrence.
- Many “inadvertent water landings” (referred to as “Unplanned Ditching”) have been documented. Unlike a planned emergency, during unplanned ditching there has been no time for the cabin crew to prepare the passengers, for example advising “Brace” positions, or donning life vests.
- The level of the water will determine whether the exit is usable or not. Exits that are below water, or seeping water at the sides, are not considered usable. Use all exits above the water line. If the level of water is at the doorsill, evacuate passengers directly on the slide/sliderafts, and leave the slide/slideraft attached to the floor of the aircraft.
- Overwing exits are secondary exits during a ditching, because they are not equipped with slide/sliderafts.
- If the overwing exits are usable, attach the lifeline, when installed, to the hook on the wing.
- Instruct passengers to step on to the wing, inflate their lifejackets, and hold on to the lifeline. If circumstances permit, keep the passengers together on the wing until rescue arrives.

3.0 Passenger Information

According to the US Airways passenger manifest, there were 150 passengers on flight 1549. There were 95 adult men, 52 adult women, and 3 children (two girls ages 6

¹⁰ The intended purpose of the CCOM was to assist operators in developing their own flight attendant manual as it is the operator’s responsibility to comply with the regulations of their aviation rulemaking authority.

and 4 and one boy who was 9 months old). The 9-month old was a lap-held infant. Two of the passengers were non-revenue pilots.

3.1 Passenger Interviews

Male Passenger - Seat 1A

Age: 38 Hgt: 5'11" Wgt: 203 lbs.

Exit Used: Door 1L

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 21, 2009 via telephone. He flew about 100 flights a year and was traveling alone on the accident flight. He watched a little of the safety demonstration but did not read the safety information card. He may have looked at it “for a second.”

After the noise he thought they were heading back to LGA. The captain announced to “brace for impact.” He cinched his seatbelt down hard. He heard the flight attendants chanting “lower your head, brace for impact!” They must have said it 20 to 25 times. He chose not to brace that way. Instead, he put his legs against the bulkhead and put his head back. He thought that would be safer. His torso flew forward on impact but he did not hit the bulkhead during the impact. He saw water flying past the windows and thought they were underwater. After the airplane stopped he heard the pilot or flight attendants say “evacuate!” He was surprised to be alive and followed passenger 1C, who had grabbed a seat cushion and was holding it with his arms around it like the preflight video shows. Passenger 1C was first in line and he was second. He did not take a seat cushion or life vest. He “just did not think of it” even though he flew often and felt like he knew all the procedures.

The flight attendant had opened the exit and then bent down. No water came in. She was calm but “fiddling with something,” so he bent over and asked her if he could help. Passenger 1C was “very jumpy, uneasy and fidgety” and jumped into the water. He could hear people shouting from behind “go, go!” Passenger 1A turned around and “gave a look of assurance” to the man who was being vocal. He could see from where he was standing that he still needed to wait for the flight attendant. It seemed like the door 1R evacuation was a few seconds ahead of the 1L. Finally, the flight attendant stood up and looked him right in the eyes and said “jump!” He jumped into the slide/raft as it was still inflating. He did not know it was going to be a raft until he got to the end of it. If passenger 1C had waited five seconds he would have been in the slide/raft. He was pulled on board after about 30 seconds in the water.

He saw passenger 11B dive into the water from the wing. He screamed at him to come to the slide/raft. Passenger 11B and another person swam from the wing to the slide/raft. Passenger 11B told him that he thought the airplane was going to blow up and tried to swim as far away as possible. He saw the captain who was very calm. He looked at him and asked him to “give me a headcount.” He started counting and thought there

were either 33 or 34 people in the slide/raft. When it was full, the crew struggled to detach the slide/raft from the airplane for a little while but eventually got it free.

He spent about 5-8 minutes on the raft until ferries arrived. Women and children boarded first. He held the netting to help people get on board. He was wet from the waist down from water in the raft and helped try to warm those who had been in the water. The ferry took them to Port Imperial in Weehawken, NJ. He was sore in a couple of places but was not transported to a hospital.

Male Passenger - Seat 1C

Age: 55 Hgt: 6'0" Wgt: 185 lbs.

Exit Used: Door 1L

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 21, 2009 via telephone. He flew over 40 times a year, usually on the same flight every week. He was traveling alone on the accident flight. He watched some of the safety demonstration but did not read the safety information card.

Shortly after takeoff, he heard a “bang” and then a sound similar to “tennis shoes rolling around in a dryer.” Someone said the engine was “wobbling.” He loosened his seatbelt so he could look out the window. He noticed that the engine was not moving very fast. He recalled smelling an electrical odor but did not see any smoke. He did not notice any changes in the cabin lighting. The captain announced “this is the captain, brace for impact.” He bent forward, reached down and put his hands low. He heard the flight attendants chanting “brace, brace, brace!” They would stop for a bit, and then resume with “brace, brace, brace!”

The impact was “horrific,” and seemed to last for several seconds. He heard the flight attendants say “take seatbelts off and come to the nearest door!” He was the first passenger to arrive at door 1L. He observed one of the flight attendants open the door, but the slide/raft did not deploy right away. He “had no earthly idea as to what to do.” The flight attendant was having difficulty trying to deploy the slide/raft. He did not want to jump into the water but heard a flight attendant say “we’ve got to get off the airplane,” so he took off his shoes and jumped into the water before the slide/raft inflated. He was the first passenger to exit from door 1L. He believed that several other passengers jumped into the water behind him. There was no pushing or shoving and the evacuation was very calm and orderly.

He did not take a life vest or a seat cushion. He knew they were on board, but he “just didn’t think about it.” He swam away from the airplane toward shore for about one minute. He believed he had only about 5 minutes in the water before perishing. He realized that he could not make it to shore and swam back toward the airplane. He noticed the 1L slide/raft was inflated and crawled into it. He believed that he was in the water for about 2 to 2½ minutes and that there were four to five other passengers in the water as well. He did not remember using a boarding station to get back onto the

slide/raft. Once in the slide/raft, he helped a man and a woman into it. The captain asked someone to “count off” and he believed there were 24 people in the slide/raft.

When the ferries arrived he recalled having to assist one woman who was unable to get off the raft by herself. It was difficult to exit the raft and get onto the ferry. He did not see anyone swim from the wing to the slide/raft. A ferry picked up all passengers from the 1L raft and took them to the NJ side of the river. He was transported to Palisades Medical Center where he spent two days. He sustained a cracked sternum and bruises but did not know how he received them. His doctor speculated that his chest might have hit his knees, but they could not tell for sure. His suggestion was for flight attendants to give immediate instructions to wait while they are preparing the slide/raft for evacuation.

Male Passenger - Seat 1F

Age: 31 Hgt: 6’2” Wgt: 250 lbs.

Exit Used: Door 1R

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 21, 2009 via telephone. He was a frequent flyer (about 200,000 miles in the last 2½ years) and was traveling with 24 colleagues on the accident flight. He generally paid attention to safety announcements; however, he did not recall reviewing the safety information card prior to this flight. He believed that the flight attendants briefed the life vests during the safety demonstration, but did not watch a lot of it.

When the captain announced to “brace for impact,” he immediately grabbed the life vest from beneath his seat. He was surprised that it was in a container and had to pull on the strap for a few seconds before it came out. Once out of the container, he had no trouble donning the life vest. He heard the flight attendants chanting “brace, brace, brace!” He looked up at the flight attendants and one of them told him to “put your head down and grab your ankles.” He took the position but remembered peeking out the window to see if they were going to land in the water.

He described the impact as “hard” and received a “seatbelt rash” as well as bruised ribs and soft tissue. He went directly to door 1R with no instruction from the flight attendants. He was sitting nearest to that door and saw others were already lined up to go out the 1L door. He saw a flight attendant go directly to the 1R door after the airplane stopped. When he got to the door, it was already open and the slide/raft was already deployed. He was one of the first two or three passengers to get into the 1R slide/raft. Upon exiting, he immediately inflated both chambers of his life vest. He used his cell phone to call his wife to tell her he was safe. He did not observe a change in electrical lighting during the entire incident, but noted that there was sufficient light outside that was coming into the cabin.

He did not get wet in the slide/raft. Everyone in his slide/raft was picked up by one ferry. The ferry had a fixed metal ladder and took them to the NY side of the river. He did not see anyone in the water but noticed a lot of seat cushions in the water.

Male Passenger - Seat 2A

Age: 48 Hgt: 6'1" Wgt: 220 lbs.

Exit Used: Door 1L

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 21, 2009 via telephone. He flew on a weekly basis. He recalled that the flight attendants performed a safety demonstration but he did not watch it. He did not review the safety information card; however, he always had a primary and a secondary exit in mind in case an emergency occurs.

The captain said to "brace for impact" and the flight attendants started repeating "brace for impact" over and over again. He bent over at his waist and put his head in his lap to prepare for impact. He did not strike anything during impact. When the airplane stopped he "grabbed" the woman next to him and went forward at the direction of the flight attendants. He did not remember seeing any emergency lights in the cabin. Door 1L was open and the slide/raft was inflated when he arrived in the doorway. The slide/raft was flat on the water and, after he slid down, he moved to the end so that other passengers could fit into it. He did not take a life vest or seat cushion before he exited the airplane. He was the fourth or fifth passenger to exit from door 1L.

He got wet from the waist down from pulling 3-5 people from the water and because the slide/raft had water in the bottom of it. A ferry took them to the NY side of the river and he estimated that there was between 10 and 12 people in the raft before the ferry rescued them. He was not injured except that his fingers were still numb from being wet and cold.

Female Passenger - Seat 2C

Age: 56 Hgt: 5'9" Wgt: 165 lbs.

Exit Used: Door 1L

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 21, 2009 via telephone. She flew frequently, about 150 flights per year and was traveling alone on the accident flight. She normally sat in the front of the cabin and always paid attention to flight attendant safety demonstrations and she knew where the exits were located. She thought that the video safety briefings were easier to pay attention to and that other passengers paid much more attention to video demonstrations than manual safety briefings.

She heard a loud bang from the left side of airplane and then there was silence throughout the cabin. She smelled an odor that she could not identify. It was like nothing she had ever smelled before. The captain announced to "brace for impact" in a monotone voice. The flight attendants began shouting, in unison, "tuck and brace, tuck

and brace, tuck and brace!” She was concerned that the airplane was going to break apart when it impacted the water.

After impact she did not have any problems exiting the airplane through door 1L. Some passengers grabbed luggage, but nothing interfered with her evacuation from the airplane. She left everything on the airplane (including her glasses) except her Blackberry. She had it in her hand when the accident occurred so she took it with her and called her sister after she evacuated the airplane. She did not take a seat cushion or life vest. She jumped away from the exit and slid down into the slide/raft. She did not fall into water, although she got wet up to her waist because part of the slide/raft was filled with water. She helped pull other passengers out of the river. Approximately 6 to 8 passengers swam from the wing to the 1L slide/raft.

A large ferry pulled up to the left side of their slide/raft and picked them up. She did not see the lanyard that kept the slide/raft attached to the airplane, nor did she see anyone disconnect of the slide/raft from the airplane. She did not remember the captain or first officer in the 1L slide/raft. Someone said “let women and children go first” and assisted her with getting into the ferry. She had to climb up a “square ladder rope” but her hands and feet were frozen and she became weak. The deck hands helped her up. The ferry took them to Port Imperial in Weehawken, NJ. She sprained her right ankle and had soft tissue bruises to her legs, arms, and waist.

Male Passenger - Seat 2D

Age: 40 Hgt: 6’3” Wgt: 215 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on May 8, 2009 via telephone. He was a frequent flyer and flew on a weekly basis. He watched some of the flight attendants’ preflight safety demonstration but did not look at the safety information card.

He braced himself by tightening his seatbelt, bending over and putting his arms over his head. Although he sustained some whiplash-type neck injuries, he did not recall striking the seat in front of him during the impact. He had some bruising on his hip from the seatbelt. He evacuated into the 1R slide/raft after waiting for a queue of people in front of him. He did not recall the flight attendant struggling with the 1R door. He knew there were life vests and flotation seat cushions on the airplane but did not think to take one until he was outside in the slide/raft.

When the decision was made to separate the slide/raft from the airplane he recalled the flight attendant saying there should be a knife, but she could not find it. Passengers asked for a knife and one was provided by someone on the ferry. He boarded the ferry and the taken to a ferry terminal near 40th St. on the NY side of the river. He was not transported to a hospital.

Male Passenger - Seat 2F

Age: 52 Hgt: 5'10" Wgt: 185 lbs.

Exit Used: Door 1R

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 22, 2009 via telephone. He flew on a weekly basis, about 100 times a year.

During climb there was a loud explosion from the left engine. He looked out his window at the right engine, and it looked like the right engine was spooling down. He heard the flight attendants repeatedly chant "brace, brace, brace" and "do not look up" before the airplane hit the water. He heard the commands coming from both the front and back of the airplane. He braced by bending over at his waist and putting his elbows between his knees and his hands over his head.

During the impact he recalled "tremendous forces" pushing him forward and causing him to strike the seat in front of him. When the airplane came to rest in the water he took his coat off because he assumed he would have to go into the water and swim. He "flipped" his seat cushion up but did not see a life vest. He was in such a hurry to evacuate that he forgot that he could use the seat cushion for flotation and left it behind. He followed the other passengers to door 1R. There were no obstacles during his evacuation from the cabin. He did not see anyone retrieve any carry-on baggage during the evacuation. It was a very bright day and he did not notice any emergency lights inside the cabin. The slide/raft was inflated when he approached the exit and he jumped into it and moved to the end to make room for others.

When the *Thomas Jefferson* ferry arrived, life vests were thrown down to them and he helped distribute them. He yelled to the *Thomas Jefferson* ferry crew to go to the right wing and rescue the five passengers in the water. The passengers standing on the right wing were up to their knees in water at the inboard part of the wing. He estimated there were 35-40 people on the 1R slide/raft, including two flight attendants, an elderly passenger, and a child. The elderly women needed assistance getting into the slide/raft and getting into the ferry. The ferry took them to the NY side of the river to a pier between 12th and 40th Street.

He did not feel he was injured and was not transported to a hospital. After experiencing pain in the days following the accident, he visited a physician who performed an MRI. The MRI revealed that he had a bulging disk between his 5th and 6th vertebrae. He experienced numbness in his arms and tingling in his hands from the bulging disk.

Male Passenger - Seat 3A

Age: 37 Hgt: 6'0" Wgt: 215 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 25, 2009 via telephone. He usually flew several times per month. He was traveling with passengers 11F and 20A on the accident flight. He did not watch the safety demonstration and did not look at the safety information card.

The airplane was climbing and there was a noise that shook the airplane. He looked out at the left engine and saw the fan blades were "mangled." They were still turning but making a "sickening sound like a tennis shoe in a dryer." The pilot seemed to have control of the airplane and made a left turn. He thought they were returning to the airport. The cabin was "quiet, in stunned silence." The pilot made an announcement, "this is the captain. Brace for impact." He did not know how to brace. The flight attendants started "chanting" the commands, "heads down, stay down, brace, brace!" That helped bring him back to reality. He put his arms on the seat in front of him and nestled his head in his arms. He looked out the window occasionally and could see they were over water but he kept hoping to see the runway appear beneath the airplane.

The impact was "a very hard hit." He felt the seat in front of him fly forward but he did not strike it. He thought the airplane was going to flip but it settled down. He unbuckled his seatbelt and got up from his seat. After a second of panic people calmed down when they realized the airplane was not sinking immediately. They began filing out to the front. He got in the aisle and saw a passenger in row 2 putting on his life vest. That reminded him that he did not have a flotation device. He reached under a seat in row 2 and retrieved a life vest for himself. He had no trouble opening the package or putting it over his head. He did not secure the waist strap or inflate it. He exited from door 1R and slid into the slide/raft. He did not see any emergency lights.

The people on the wing were standing in ankle deep water. There was still room in the 1R slide/raft so they started calling for people to go back in the airplane and go forward. He called his wife from his cell phone and let another passenger do the same. A ferry came and they yelled to take the passengers off the wing first. When all of the people were off the wing, the ferry came to the 1R slide/raft. The people on the ferry threw life jackets and a pocketknife so they could cut the slide/raft free from the airplane. They tossed a mooring line to him which he caught and held on to. The front of the ferry had large icicles that were breaking off and they were trying to prevent anyone from being injured by them. The injured flight attendant, an elderly woman, and a woman with a young girl all boarded the ferry first up by climbing up a ladder. They were taken to Pier 78 on the NY side of the river. He was not injured and did not go to a hospital.

Male Passenger - Seat 3C

Age: 67 Hgt: 5'8" Wgt: 170 lbs.

Exit Used: Door 1L (swam to left wing)

Jason Fedok (NTSB) conducted the interview on February 27, 2009 via telephone. He flew 120 flights last year and was traveling alone on the accident flight. He listened to about half of the flight attendants' safety demonstration but did not remember looking at the safety information card.

During climb he heard a "loud thud" and the airplane was "jolted." He could hear metal clanging inside the engine and the airplane's speed slowed. There was no loss of control and he thought that they had lost one engine. It got silent and there were no communications from the crew. The airplane banked and he thought they would go back to LGA. He could see out the window that they had passed LGA and were still gradually descending straight ahead. The captain announced "this is your captain, brace for impact." The flight attendants began shouting "heads down, grab ankles" in unison. He braced himself by putting his hands on the seat in front of him and leaning his head on his hands.

A few seconds later they impacted the water. He had "had rougher landings" and the jolt was not severe. When the airplane stopped, the doors opened quickly. He did not take his seat cushion or life vest because he felt that there was not enough time. He did not know how long the plane would stay afloat. He went to the 1L door and slid into the slide/raft. He briefly considered taking his shoes off but decided against it. He believed that he slid all the way to the end and tumbled into the river. He swam to the wing and tried to get up but the wing was icy and very slick. He wanted to swim back to the 1L slide/raft but it was against the current. He swam to the wing tip but could not get on there either. A woman appeared next to him in the water who did not have a seat cushion. (He later learned it was passenger 13C.) She asked him what they should do and he told her to keep kicking her feet to try to stay warm. He held onto the slat and a woman standing on the wing held onto his other hand.

The first ferry came from Weehawken and dropped a Jacob's ladder. He had to climb 8 to 9 feet to reach the deck. He estimated that he had spent about 12 to 13 minutes in the water and his hands were completely numb. He had to put his wrists over the ropes and push with his feet to climb. His feet were the only parts of him that were not numb. When he got near the deck a man grabbed his wrist and pulled him over the side. They were taken to Arthur's Landing restaurant on the NJ side of the river. The people there were very kind and the assistant manager of the restaurant literally gave him the shirt off his back. The EMTs checked his blood pressure and pulse numerous times and wanted him to go to the hospital but he was not injured and declined. He did not even lose his glasses, cell phone, or wallet throughout the event.

Female Passenger - Seat 3D

Age: 51 Hgt: 5'4" Wgt: 170 lbs.

Exit Used: Door 1R

The passenger was a non-revenue pilot (for another airline) who had been previously interviewed by the Operations/Human Performance group on January 16, 2009. (For a summary of that interview see the Operations/Human Performance Group Factual Report.) Jason Fedok (NTSB) conducted a follow-up interview on March 10, 2009 via telephone. She was traveling in uniform and was not traveling with anyone else on the accident flight. She did not recall the flight attendants' safety demonstration and she did not look at the safety information card.

After striking birds the airplane turned and descended. The captain announced to "brace for impact" and she knew they were landing in the river. She braced by folding her arms on the seatback in front of her and putting her head on her arms. The impact was milder than she expected. She quickly looked for her life vest by opening a compartment in the armrest where they are stowed on the airplane she flew (767). The 767 also had a placard on the back of the seat informing passengers where the flotation equipment was located. She looked for the placard on this airplane but she did not see one. She felt that placarding should be standardized to avoid confusion about where the equipment is stowed. She exited the airplane into the 1R slide/raft without a life vest or a seat cushion.

She was one of the first people into the raft and moved to the end. A man had to hold the door open because it did not lock into position against the airplane. It appeared that the door was "binding" on the slide/raft. She wanted to watch the slide/raft being disconnected from the airplane but could not see it from her position. She was not injured but was transported to St. Luke's Hospital in NY with the crew as a precaution.

Passenger 3D took three photographs while on the raft and provided them to investigators. The photographs can be seen in Attachment 4.

Male Passenger - Seat 3F

Age: 38 Hgt: 5'8" Wgt: 175 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 24, 2009 via telephone. He flew 100,000 miles last year on US Airways, a lot of it on A320s and A319s. He fell asleep after boarding and did not remember if the flight attendants performed a safety demonstration. He did not look at the safety information card.

He woke up when the airplane took off. He was looking out the window and saw what he described as "a formation of fighter jets" in the distance. He thought it was odd because he had never seen fighter jets before. Almost immediately there was an unusual noise and the airplane was "jolted." There was an immediate reduction in thrust. The pilot seated next to him said they would probably be returning to the airport. The

airplane made a hard left bank. He smelled “jet fuel mixed with bird feathers and flesh.” He did not know they had lost both engines. The river got closer and closer and the buildings got larger and it was obvious they were gliding. The pilot said to “brace for impact.” The flight attendants repeatedly chanted “grab ankles, brace, brace...” all the way to the water.

The impact was “jostling” and ended with a hard left turn. He got up out of his seat and retrieved his life vest from beneath it. He did not hear any commands to retrieve it, but he knew the location from his extensive traveling. He had no difficulty getting it out or putting it on but did get assistance from one of the crewmembers with getting the waist strap secured. He did not remember seeing any emergency lights. He exited into the 1R slide/raft and was about the 11th or 12th person to exit from the front. He inflated the life vest when he got into the raft and it worked without problem. The ferries came quickly. Their concern was trying to separate the slide/raft from the airplane in case the airplane sank. They could not find the knife and had to get one from someone on a ferry. There were approximately 20-30 people on it. When he boarded the ferry there were still five or six people on the raft. They were taken to Pier 78 on the NY side of the river. He had a bruise and a small gash on his shin but did not go to a hospital.

Male Passenger - Seat 4A

Age: 27 Hgt: 5’10½” Wgt: 235 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on March 18, 2009 via telephone. He had flown weekly in the past and was traveling alone on the accident flight. He did not remember the flight attendants’ safety demonstration, most likely because he was listening to music. However, he did look at the safety information card.

During climb he heard a “bang” and then the hum of the engine “pattered out.” He looked out the window and reported seeing “fireballs” coming from the engine. It got silent but he could still hear something turning. The pilot announced to “brace for impact” but he did not know what that meant. He knew they were above the river. The flight attendants were shouting “brace, brace, keep your head down!” He put his head between his legs but kept “popping up” to look out the window. He did not think it really mattered because he thought he was going to die.

The impact was “not too bad” and at the end the airplane turned. He thought it might flip over but it did not. He did not strike his head on anything. He remembered smelling jet fuel immediately. The pilot announced “evacuate, evacuate!” He unbuckled his seatbelt, stood up and retrieved his life vest from under his seat. He had no difficulty and was surprised how easy it was to find, get out, and open. He put it over his head but did not secure the waist strap or inflate it. He did not remember seeing any emergency lights. He exited into the 1R slide/raft and estimated he was the 8th person to get into it. He inflated the vest when he got into the slide/raft and it got very tight around his neck. He recalled the injured flight attendant getting into the slide/raft. He did not see how it was disconnected from the airplane.

The ferries were there quickly and the men helped some of the women board. He had sneakers and a coat on and was only a little wet from the bloody water in the raft. The ferry took them to the ferry terminal near 12th Avenue and 40th St. He was not injured except for a scratch on his palm and was not taken to a hospital.

Female Passenger - Seat 4B

Age: 40 Hgt: 5'2" Wgt: 150 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 9, 2009 via telephone. She flew every other week for business. She watched the safety briefing but did not remember the flight attendants demonstrating the life vests. She did not look at the safety information card because she was in a bulkhead row and did not believe there was one for her to look at.

After takeoff she heard a “deafening, loud boom” that was followed by a “mechanical burning” smell. The airplane also “trembled and rattled” for a while. They began losing altitude quickly. The captain said “brace for impact” but she and her seatmate did not know what that meant. The flight attendants began to shout “heads down” and she complied with the instruction. It was a “very rough landing” but she thought they were on the ground. It was not until the pilot said “evacuate” that she looked up and saw water outside the window. She did not take a seat cushion or life vest and exited out the 1R door. She did not see any emergency lights or placards but was out of the airplane very quickly. She was the fourth or fifth person on that raft. No one in the raft had a seat cushion or a life vest. A blue and white ferry approached quickly. The people had difficulty cutting the line connecting the raft to the airplane. They could not find the knife and someone had to give them a knife. A coworker got cut in the process. She got on board the ferry and it took her to the NY side of the river. She was not injured and did not go to a hospital.

Male Passenger - Seat 4C

Age: 37 Hgt: 5'10" Wgt: 200 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 18, 2009 via telephone. He flew on a weekly basis for a majority of the past year. He knew two other people on the flight (7F and 19C) but was not traveling with them. He remembered that a young girl and her mother were seated in 4E and 4F, respectively. The little girl had her seatbelt on but was sitting on the very edge of the seat. A flight attendant came by and told her they needed to tighten her in. She sat her back in the seat and tightened the seatbelt. The flight attendant safety demonstration was performed but he did not pay attention. He did look at the safety information card to see what kind of airplane he was on and noted it was an extended overwater A320. (While he understood that this meant it could go long distances over water, he did not realize that the airplane was equipped with

life vests.) He counted the seatback rows and knew his closest exits were at the front of the cabin.

Taxi and takeoff were routine. He was thinking about getting up and getting a newspaper from the overhead bin when “something shook the airplane.” He thought they might have lost an engine. The engine noise decreased and he began to panic at first, but when there was not a sudden loss of altitude he assumed they still had one engine that may have been running on “idle.” There was an “electrical burning smell” in the cabin. The airplane made some turns and he knew they were over a river but he was not familiar enough with New York to know where they were exactly. When the captain announced “brace for impact” he thought they would probably end up in the river. The flight attendants made an announcement telling people to grab their ankles and put their head between their knees, but did not provide a lot of detail. They then began “chanting” commands. He braced himself by bending over as far as he could and grabbing his ankles as instructed.

The impact was like a “wild roller coaster” but he did not strike the partition in front of him. He quickly and easily got up and exited out of the front right exit into a slide/raft. He did not see any emergency lights. There were five or six others already in the slide/raft. He did not take a seat cushion or life vest. By the time he got to the others he saw that others had them but by then it was too late. He wished that the flight attendants had mentioned that in their instructions after they lost the engines. The ferries arrived quickly and the 1R raft “could have held a lot more people” than it did. Passengers had to steady the raft against the ferry and his hands got very cold from touching the ferry. He was the second to last one off the raft. When he got on board the crew gave him a “chemical bag” to warm his hands for which he was grateful. They were taken to Pier 72 on the NY side of the river. They waited there a very long time and it was quite unorganized. US Airways did not have a representative there. He was not injured and did not go to a hospital.

Male Passenger - Seat 4D

Age: 40 Hgt: 6’0” Wgt: 180 lbs.

Exit Used: Door 1R

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 22, 2009 via telephone. He did not read the safety card and did not pay attention to the safety demonstration. He was traveling alone but knew some business associates on the airplane.

He heard the pilot say to “brace for impact.” He was amazed at how many times that the passengers needed to be told to do something in order to do it. The flight attendant commands helped him understand what to do. He assumed a brace position in which he was “hunched over” with his head down. He struck the left side of his head on the bulkhead “hard.” He had a ½-inch knot on his head from it and noticed another passenger who also had slight head injuries.

He saw people grabbing seat cushions and vests, but when he grabbed his seat cushion, he expected to see the life vest underneath it. He was confused and paused for “half a second.” He took his seat cushion and went with the flow of traffic. Although he did not recall any emergency lighting, he did not have any difficulties getting to the door. He stopped for a moment and helped the flight attendant keep door 1R open. It did not seem to be functioning correctly. The slide/raft was inflated when he got there and he “plopped down” in the middle of it. Three to six passengers had exited ahead of him. After he was in the slide/raft, he noticed passengers struggling to straighten the slide behind the right wing. Some passengers moved forward from the overwing exits and boarded the 1R slide/raft, making about 30 people in the slide/raft.

The *Thomas Jefferson* picked them up via a boarding ladder. He observed other passengers yelling for a knife from the ferry, which they provided. They were transported to Pier 78 on the NY side of the river. Despite his head injury, he was not transported to a hospital.

Female Passenger - Seat 4F

Age: 45 Hgt: 5’3” Wgt: 180 lbs.

Exit Used: Door 1R

Female Passenger - Seat 4E

Age: 6 Hgt: 3’3” Wgt: 50 lbs.

Exit Used: Door 1R

Passenger 4F understood English, but did not speak it well. Ms. Yvette Delgado, a Spanish-speaking NTSB employee, conducted the interview on February 18, 2009 via telephone.

They were supposed to leave at 1445 but the flight left after 1500. She was seated in the first row of economy class (seats 4E and 4F) with her daughter. She looked around for the exits because she had an odd feeling that something was not right. She did not look at the safety information card because she had traveled before. She was waiting to hear the safety demonstration from the flight attendants, but she did not remember that one was performed. That was very strange to her. Neither she nor her daughter ever took their coats off, but they both had their seatbelts on.

After the airplane took off, she was looking out the window and saw they were flying over buildings. Then she heard a noise on the left side of the airplane. The airplane continued flying for a few minutes and she smelled smoke. There was no announcement about what was going on, and the airplane turned like it was going back to the airport. The airplane turned quickly, but she did not recall which way it turned. She looked out the window and saw they were going towards the water. The passengers were screaming “pray, pray, pray!” Everything happened very quickly. Her motherly instinct was to hug her daughter. Her daughter was crying and she was trying to keep her calm. No announcements were made at any time. She did not take any seat cushions or life vests.

When the airplane hit the water she thought about the movie *Titanic* and knew they needed to get out. She grabbed her daughter and exited through the front exit on the right side. A man from the left side of the airplane helped her with her daughter. They were one of the first ones to get out of the airplane and into the slide/raft. She did not see any emergency exit lights.

They waited for the ferries to arrive. The airplane was sinking and there were still people inside. People were saying that the raft on the other side was not working. She recalled people swimming toward her slide/raft. She helped her daughter board the ferry and they were taken to the NY side of the river. They were asked for their names and other information and if they wanted to go to the hospital. She hurt the back of her head, but did not go to the hospital. Her daughter was uninjured. No information was given to them and eventually she called her husband to pick them up.

Male Passenger - Seat 5A

Age: 54 Hgt: 5'8" Wgt: 170 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on April 16, 2009 via telephone. He was traveling with passengers 5F, 6A, 6C, 7C, and 22A. Passenger 5A braced himself by putting his head down and he was thrown into the seat in front of him during the impact. He sustained a muscular injury to his neck but x-rays showed no evidence of a fracture. He did not retrieve a life vest but picked up a seat cushion from a seat while he was moving toward the exit. He evacuated through the left overwing exit. He was rescued by a small police or fire department boat and taken to the NY side of the river. He was not transported to a hospital.

Female Passenger - Seat 5B

Age: 53 Hgt: 5'4" Wgt: 130 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 12, 2009 via telephone. She flew from California to New York approximately once a month since August 2008 and was traveling alone on the accident flight. Boarding was delayed 30 minutes and there was a gate change for the flight. She had a connecting flight to California and was concerned about missing it. After boarding she recalled the flight attendants performing a safety demonstration but she did not watch much of it. She did not look at the safety information card. The airplane took off at 1515 on her watch.

Less than five minutes later there was a "boom" on the left side of the airplane followed by a metal grinding sound. The pilot said to "prepare for emergency landing" and the airplane made a u-turn. She thought they would go back to LGA. She tried to calm the woman in 5C who was a little panicked. There was another louder noise on the right side of the airplane and she knew they were going down.

The flight attendants began to shout “duck down” and she complied. She held onto the seat in front of her and had her head against the seat tray. At impact she recalled everyone was screaming. The next thing she knew she woke up and the airplane was completely empty. She looked around twice and there was no one there. She got up and was “walking on clouds” and had to move very slowly. She walked forward and saw an orange vest which she picked up. She did not know how to put it on. When she got to the front of the cabin she saw a man and asked him “can you help me put this on?” He said “sure” and put it over her head. He told her to be sure not to pull the strings until she was outside in the water. She exited into the 1R slide/raft. She saw a lot of people standing on the wing and several went back inside the airplane and came up to her raft. Two or three people slid in behind her and ran into her with their feet.

A large ferry came and they helped tie a rope around an old woman to get her on it. A young 5 or 6 year old girl and her mother went next, followed by another woman, then her. She was struck by an icicle hanging off the boat which cut her nose and it was bleeding badly. The ferry took them to the NY side of the river and she was transported to St. Vincent’s Hospital. Her neck was injured from striking the seat in front of her. They did x-rays and gave her an injection and a prescription for pain medication. The injury was muscular in nature. When she returned to California she had an MRI due to her shoulder and back pain and was told that her C6 vertebra was 11 millimeters out of alignment. She had been going to the chiropractor every day since her diagnosis.

Female Passenger - Seat 5C

Age: 49 Hgt: 5’4” Wgt: 180 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 18, 2009 via telephone. She was a frequent flyer who flew “every couple of weeks.” She was not traveling with anyone on this flight, but knew several other people on the airplane because they work for the same employer. She did not recall whether the flight attendants performed a safety demonstration. She did not look at the safety information card either before or during the flight.

Takeoff was thirty minutes late but normal. She was about to go to sleep when she heard the left engine “explode.” She described the noise as a “catastrophic engine failure.” She could hear the engine clicking and decelerating but did not know they had lost the right engine as well. The airplane turned and she thought they were going back to LGA. She smelled an odor like the “engine was burning up.” The passengers were relatively calm. Someone in the middle of the cabin said it was going to be a water landing. The pilot made an announcement but she could not decipher what was said because it was garbled. She heard the flight attendants up front shouting “heads down, stay down.” She did not comply and continued to look out the window until moments before impact. She braced herself by leaning forward and putting her fingers on top of the tray table for something to hold on to.

She stated she was “jostled around pretty good” during the impact and struck her nose on the tray table giving her a nosebleed. She likened it to a “high impact car accident.” She saw water rushing by the windows. After the airplane stopped she did not remember anything for a few seconds because she was stunned. Another passenger said to her “come on, get out.” She unbuckled her seatbelt and went forward. She did not see any emergency lights. As she went through first class she realized that she would have to jump into the water. (She did not know there were rafts at the doors.) She reached under one of the seats and retrieved a life vest. She had to pull a Velcro tab, pull the package out, and then rip it open to get to the vest. She put it over her head and fastened the waist strap without difficulty before sliding into the 1R slide/raft. She estimated there were six or seven people already in it. There was a 4-year old girl with a woman. The woman did not speak English and passenger 5C was speaking with the little girl. There was also an elderly woman and the injured flight attendant.

A ferry came and took off the injured, children, and women first. She felt that the ferry crew was “fantastic” and that they were the “unsung heroes.” They were taken to the NY side of the river where FDNY, NYPD, and the NY Office of Emergency Management had set up a triage area. She did not seek medical attention and was not taken to a hospital. She was examined by a doctor when she returned to Charlotte but her nose was not broken. She recommended better passenger education about the life vests and how they are secured and packaged because that was never explained to passengers.

Female Passenger - Seat 5D

Age: 48 Hgt: 5’6” Wgt: 135 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on February 13, 2009 via telephone. She was a frequent “Gold” level flyer. She did not watch the safety briefing nor did she read the safety information card.

After takeoff she heard a “boom” and immediately thought that they had hit birds. The passenger in seat 6E was a pilot and she asked him if they would be returning to LGA. He told her that he thought so. She smelled sulfur. The airplane banked to the left. The lights never went off. About 30 seconds before impact the captain said “ladies and gentlemen, brace for impact.” The flight attendants began shouting “heads down, brace!” She put her head on her lap and her arms under her knees.

After impact it was obvious they were in the water. It was not as bad as she was expecting. The flight attendants shouted for them to get their seat cushions and life vests. She took her purse which contained her ID and cell phone and searched under her seat for the life vest. While she was searching for it, passenger 6E handed her one. She put it over her head but did not connect the waist strap. She went forward and exited from door 1L. She believed she saw red lights near the floor as she was moving to the exit. She estimated she was among the first twenty people off the airplane. She called her husband to let him know what had happened. Eventually the pilot came out and gave her a “flare” which he said was very important. A helicopter came and caused rough water which

made a ferry go out of control and almost crush the raft. She got on a ferry that took her to Weehawken on the NJ side of the river. While on the ferry they divided into groups based on their injuries. She was placed in the 'minor' injury group because she was bleeding from a laceration from under her eye. She believed her injury was from striking the tray table during impact. She was transported to Hoboken University Medical Center where they did a CT scan but did not find a problem. The laceration did not require stitches but was "black and blue" for about a week.

Female Passenger - Seat 5E

Age: 44 Hgt: 5'7" Wgt: 130 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on February 26, 2009 via telephone. She flew "a few" times a year. She was traveling alone on the accident flight. After boarding she watched the flight attendants perform the safety demonstration. She did not look at the safety information card prior to the flight.

She spoke briefly with passenger 6E who was a non-revenue pilot. During climb she heard a "thump, thump, thump" sound and asked the non-revenue pilot if they were okay. He said yes and that they would probably be returning to LGA. It got silent and there was no engine noise. The flight attendants were shouting for them to brace and someone said they were over the water. She put her head between her knees and held her ankles. The pilot announced "brace for impact" and a short time later the airplane impacted the water.

The impact was "not terrible" and she had been through harder landings during regular flights. She looked up and the flight attendants were shouting "get up, get out!" They told people to take their seat cushions and life vests. She took her carry-on bag and put it around her neck and took her seat cushion. She could not remember where the life vest was stowed. She exited quickly into the 1L slide/raft. She did not see any emergency lights. She was probably one of the first five people to board the slide/raft. The first people were jumping in which was getting water in the slide/raft. They told others to simply slide into it. A woman swam to the slide/raft and asked if there was room. They pulled her aboard. Some life vests were thrown into the slide/raft for those who did not have a flotation device.

A ferry arrived quickly. The captain appeared and gave one man the responsibility to count everyone in the slide/raft. They told the ferry to get those on the wings first. A helicopter arrived and made things worse by spraying the passengers with water and making waves. The ferry slid into the 1L slide/raft and they screamed at the crew to stop. Another ferry came and she boarded with some other women. The ferry took them to the Weehawken terminal on the NJ side of the river. They were well cared for in a large room. She was not injured and declined to go to a hospital. She was taken to a senior center and from there was taken back to the airport and drove herself home to Connecticut. The next day she noticed she had bruises on her knees that may have been from striking the seat in front of her.

Male Passenger - Seat 5F

Age: 32 Hgt: 5'9" Wgt: 170 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 3, 2009 via telephone. He usually flew about twice per year. He was traveling with passenger 5A, 6A, 6C, 7C, and 22A. He remembered watching some of the flight attendants' safety demonstration. He usually looked at the safety information card but could not find it in his seat pocket. He did not spend a long time looking for it.

During boarding he noted that there was an off-duty pilot seated in the row behind him. After takeoff there was a loud noise and he turned around and asked the pilot "what was that?" The pilot responded that it sounded like a bird and explained that it happened all the time and that they would probably be returning to LGA. There was a burning smell in the cabin. He heard one engine shut down and then the other and the airplane went silent. The captain announced to "prepare for impact." The flight attendants began shouting "heads down, brace yourself!" He did as they instructed and tucked his upper body down and put his arms over the front of his head. They were descending and he saw the water below them.

Just before impact he peeked out the window and was not quite tucked back down when the airplane hit. He struck his head just above his left eye on the tray table in front of him. He thought the airplane would sink so he unbuckled his seatbelt and stood up immediately. He looked for the other members of his group who were seated nearby. When he got into the aisle he realized that he needed a flotation device and went back to his seat and grabbed his seat cushion. He briefly attempted to retrieve the life vest under his seat as well but struggled to find it. He looked under the seat but was "not even sure that's where it was." He got back into the aisle and went to the overwing exits. He did not remember seeing any emergency lights. He turned right and was about to exit onto the left wing when the man stopped him and said "I need a flotation device!" Passenger 5F looked around and all of the seat cushions were gone near the exit. He did not know what happened to the man but passenger 5F exited onto the left wing. The water was above his ankles and he saw a couple of passengers jump out into the water. He yelled at others not to jump because he knew they would not survive long in the cold water. One of passengers who jumped in the water got in the 1L slide/raft while the other was helped back onto the wing.

The passengers spread out evenly along the wing to make room for others. The water was rising and they saw a ferry arrive on the other side of the airplane. Other ferries then appeared and came to the left side. The ferry and tried to maneuver and almost crushed the 1L slide/raft. It almost struck the wing as well and only two people managed to jump on. The water rose to above his knees when a smaller fire department boat arrived. Some women boarded first and he was then told to board because they needed younger men to help get others on board. He kept his seat cushion with him until he boarded the boat. The boat took them to the NY side of the river. He was not injured

except for a small bump on his head from impacting the tray table. He was not transported to a hospital.

Male Passenger - Seat 6A

Age: 30 Hgt: 5'5" Wgt: 190 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 12, 2009 via telephone. He flew once or twice a year and was traveling with passengers 5A, 5F, 6C, 7C, and 22A on the accident flight. He "listened to parts" of the flight attendants' safety demonstration but did not look at the safety information card.

During climb he heard a "big bang" that he knew was not normal. He was looking out the window at the time but did not see anything strike the airplane. He thought the noise came from the left side of the airplane. The pilot banked the plane to the left he thought they were returning to LGA to switch planes. The airplane "leveled out" above the Hudson River and the skyline of New York City kept getting lower and lower. He knew that something was seriously wrong and that they were going to land in the river. Approximately 10 seconds before impact the pilot announced to "brace for impact." The flight attendants began chanting "brace, brace, heads down!"

The impact was "pretty hard, but not as bad as it could've been." He thought he was going to die and really did not brace himself other than putting his head down at the last moment. He also tightened his seatbelt as much as he could. He was thrown forward in his seat during impact but did not strike his head on the seat in front. The airplane stopped quickly and he got out of his seat into the aisle. There was no chaos and people were not pushing. He remembered to grab his seat cushion but "didn't even think" about getting his life vest. He also gave a seat cushion to his uncle and brother in law who were in the same area. He followed those in front of him toward the overwing exits and got out on the left wing. He did not remember seeing any emergency lights.

The water was initially ankle deep but rose to his waist before he could board a ferry. The ferries were there within approximately 10 minutes. The first ferry was very large and had trouble getting close enough to the wing for people to board. It struck the wing and almost knocked everyone into the water. Only about five people were able to board that ferry. A fire rescue boat arrived at the front of the wing and he boarded it on the bow. It took them to a dinner boat on the NY side of the river. He was not injured or transported to a hospital but experienced "whiplash-type headaches" in the days after the accident.

Male Passenger - Seat 6B

Age: 47 Hgt: 5'9" Wgt: 165 lbs.

Exit Used: Right Overwing/Door 1R

Jason Fedok (NTSB) conducted the interview on March 2, 2009 via telephone. He usually flew five or six times per month. He was traveling alone on the accident

flight. He did not listen to flight attendants' safety demonstration nor did he look at the safety information card.

After he got seated he took off his shoes and wedged them under the seat in front of him with his computer bag. He put on a pair of eyeshades and earplugs and attempted to drown out the noise around him. He was awoken by a "huge bang." He looked out the window and noticed they were no longer climbing and thought they would go back to LGA. A short time later the captain announced "brace for impact." He asked another passenger what the captain had said because he did not hear it. He heard the flight attendants chanting for the passengers to brace themselves. He attempted to brace himself but only got "halfway down." He had his right hand on the seat in front of him, his left hand on his knee, and his head turned to the left so he could look out the window.

He may have hit his head during the impact because his glasses came off. He was not sure if he lost consciousness. He heard the man next to him say "go, go" and he got up and turned to the right to go to the overwing exits. He was not wearing shoes. He realized he did not have his seat cushion and took one off a seat near row 9. He exited onto the right wing through the overwing exit in row 10. He reported being one of the last passengers on the right wing but was unsure why that would be the case because he did not have any delays in getting out the exit. He immediately noticed a flight attendant sitting in the 1R slide/raft. She and another man were motioning for people to go back into the airplane and go forward to that slide/raft. He turned around, went back inside, and ran up the aisle. He did not notice any emergency lights. He exited into the 1R slide/raft. He believed that a few others boarded the slide/raft behind him. It was "pretty crowded." He saw people wearing life vests and asked them where they got them. They told him they were under the seat and then he remembered that was where they were stowed.

When the ferries arrived they threw life jackets to the people in the raft and he helped a woman put one on. There was an elderly woman in the raft who they had to tie a rope around so that the people on the ferry could pull her up. Other women and children boarded the ferry next and the non-revenue pilot assisted them. He climbed a fixed metal ladder to board the ferry and it took them to Pier 78 on the NY side of the river. He was not injured and was not taken to a hospital. His right wrist was a "little sore" for about a week after the accident.

Male Passenger - Seat 6C

Age: 60 Hgt: 5'9" Wgt: 170 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 27, 2009 via telephone. He flew about three or four times a year to visit family. He was traveling with five other family members and friends on the accident flight. They were seated in seats 5A, 5F, 6A, 7C, and 22A. He did not remember the flight attendants performing a safety demonstration but believed they may not have had time due to the short duration of

the flight. He did not look at the safety information card but knew his closest exit was behind him.

During climb he heard the engine “pop.” There was a distinct smell of “jet fuel or geese.” The other engine went out and they were gliding. The captain announced “brace for impact.” He braced himself by bending over and putting his head between his legs. After impact he got up, grabbed his seat cushion, and went to the exits behind him. Some people tried to get their baggage. He exited onto the left wing and took his seat cushion with him. He believed that most passengers did not know where the life vests were located.

One woman slid off the wing into the water and he got her out of the water by bringing her to the end of the wing. A ferry came to the wing. It had a rubber mat with holes in it for passengers to climb up. Some of the passengers had a very difficult time climbing it. The ferry took him to the NJ side of the river. He was concerned because he could not find his son. The EMTs wanted him to go to the hospital but he declined. He had no physical injuries other than a scratch on the left side of his face. He was not sure how he received the scratch. He was not transported to a hospital.

Male Passenger - Seat 6D

Age: 36 Hgt: 5’8” Wgt: 190 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on March 9, 2009 via telephone. He usually flew on a monthly basis for business and was traveling alone on the accident flight. He did not watch the flight attendants’ safety demonstration nor did he look at the safety information card.

During climb he heard a “loud bang” followed by a “grinding, popping noise from the engine.” The man seated in 6F said that he had seen birds. He knew the right engine was out but did not think that they had lost both engines. He thought they would return to LGA. The cabin was quiet and passengers were concerned. The airplane turned and the captain announced to “brace for impact.” Flight attendants began chanting for passengers to grab their ankles and brace. He attempted to brace by bending over as far as he could, but he felt it left his neck exposed to injury if he struck the seat in front of him. Therefore, he put his right arm over his face and grabbed his left ankle with his left hand and leaned over into the aisle. Just before impact someone asked “how close are we?” Someone else responded “on the water!”

He compared the impact to being rear-ended in a car accident. He was snapped forward and back but did not hit his head on anything. The flight attendants were immediately up out of their jumpseats. He unbuckled his seatbelt and went forward but did not take his life vest or a seat cushion. He did not hear any commands to do so. While he was moving forward he remembered to get a flotation device and grabbed a seat cushion from another seat. He saw a young girl with a stuffed animal who was

screaming and an older woman who may have been her mother. He told the young girl that it would be okay, took her hand, and walked her and her mother to door 1R.

When he arrived at the door he saw flight attendant 'C' struggling with the door to keep it open. She told him that she needed his help to keep the door open so he got into the slide/raft and kept pushing the door forward with his left hand. Other passengers evacuated under his arm as he held the door. He "kept pushing hard but it would not lock into place." He remembered helping to lower flight attendant 'B' into the slide/raft. She sat down on the door sill and he asked her where she was injured because he saw blood. She pulled up her pant leg and he saw two "gashes" that were bleeding "pretty badly." He lowered her into the slide/raft with his right arm and told others to get something to wrap her leg with. An elderly woman came to the door and he helped her into the slide/raft as well.

He could see a ferry in the distance. He also saw a mother with a young baby standing on the wing. There was approximately six inches of water on the wing covering the passengers' feet. He yelled to the mother go back into the airplane and come up to the 1R slide/raft but he was not sure if she heard him. He told flight attendant 'C' that there was a mother and baby on the wing and she went back into the cabin briefly. When she reappeared there were about six men behind her who got into the slide/raft. Finally flight attendant 'C' slid into the slide/raft and the captain told them to disengage it from the airplane. Flight attendant 'C' pulled on a cord but nothing happened. He pulled on the cord as well but "it wouldn't budge." The cord "disappeared under something yellow." He wrapped the cord around his hand and "wedged" himself between the raft and the airplane for better leverage but still could not disengage the slide/raft. The captain reappeared and he asked him how they were supposed to disengage it. The captain told him to pull off a Velcro strip and then pull on a pin to release the lacing. He did as instructed and the lacing came undone but the raft could not pull away from the airplane because it was pinched between the door and the fuselage. He and another man started pushing on the airplane and eventually freed the raft from the door.

As the raft floated away he noticed that they were still connected to the airplane by a "blue cord." He shouted to those in the raft to give him a knife and then realized that no one from the airplane would have one. He yelled to the ferry and a man threw down a knife which they used to cut the cord. By that time they were also lowering ropes to help the elderly woman get on board. There were approximately 25 people on the raft. The injured flight attendant had difficulty climbing the ladder and he had to push her from behind so that the crew could grab her and get her on board. The ferry took them to the same location as the flight crew on the NY side of the river. He had a bruised right shin with a deep cut but declined to go to the hospital.

Male Passenger - Seat 6E

Age: 25 Hgt: 6'2" Wgt: 220 lbs.

Exit Used: Door 1L

The passenger was a non-revenue pilot (for another airline) who had been previously interviewed by the Operations/Human Performance group on January 16, 2009. (For a summary of that interview see the Operations/Human Performance Group Factual Report.) Jason Fedok (NTSB) conducted a follow-up interview on May 6, 2009 via telephone. He watched most of the flight attendants' safety demonstration but did not look at the safety information card prior to the flight.

He braced himself for impact by bending over, crossing his hands, and putting his forearms against the seat in front of him. He reported that position working well and did not strike the seat in front of him during the impact. After the airplane stopped he immediately retrieved the life vest from under his seat. He knew that was where they were stowed on some airplanes that were equipped to fly overwater. He had no difficulty opening the package or donning the life vest. He recalled there was an Asian woman who was "delirious" and did not know what to do. He told her to get her life vest but she did not know where they were. He retrieved one from under another seat and gave it to her. She asked him what to do with it so he opened it, put it over her head, and directed her to the forward exits. He also retrieved a seat cushion and gave it to her as well. He exited into the 1L slide/raft but did not know where she went.

He recalled that passengers were rescued from the 1L raft by at least two ferries, although he could not recall their names. He boarded a large two-story ferry that took him to a ferry terminal on the NY side of the river. He was transported to the hospital with the rest of the crew but was uninjured.

Male Passenger - Seat 6F (assigned 6E)

Age: 53 Hgt: 5'11" Wgt: 165

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on February 11, 2009 via telephone. He initially sat in his assigned seat but, once the door had closed, he moved to 6F because it was unoccupied. When an off-duty pilot came to his row he offered him the window seat, but the pilot chose to sit in the middle seat, 6E. He remembered a safety briefing but did not watch it. He did not look at the safety information card.

After takeoff he was looking out the window and had a good view of the engine. He saw some brown objects appear and enter the engine. He immediately felt a "jolt." He knew immediately that they had struck birds and told passenger 6E. Passenger 6E replied that they would probably return to LGA. There was an "acrid, metallic burning smell" in the cabin but no smoke or fire. He felt the airplane turn very smoothly. It was very quiet and they were not gaining altitude. He knew something was wrong. The pilot made an announcement to "brace for impact." He immediately heard the cabin crew begin shouting "brace, brace, heads down." He and passenger 6E bent over the best they

could but passenger 6F was unable to keep himself from looking out the window. He wanted to be prepared for impact. He knew they would be landing in the river. He counted down the approximate altitude until impact.

The vertical portion of the impact was “not bad” but the deceleration was “incredible.” He felt everything moving forward and then the airplane “canted” to the left. The crew began evacuating passengers immediately. He asked passenger 6E, “do you know where to go?” He replied, “Sure do. Follow me.” He unbuckled his seatbelt and stood up but before he left his seat area he heard someone else say “grab your seat cushion.” He grabbed his seat cushion and also got out the life vest from below his seat. He followed passenger 6E forward and as he moved he took out the life vest and put it over his head. He did not have any difficulty getting the package open. He did not inflate it because he knew he was not supposed to until he got outside the airplane. He did not notice any emergency lights that may have been on. When he got to the front exits people were going out both sides. He went to the left because it seemed less crowded. He did not know where passenger 6E went. There were about five people in the raft when he entered. There was some water in the raft he was sitting in and it came up near his waist.

Some passengers had jumped from the wing and he helped pull them into the raft. The first ferry arrived and they directed it to the wing where the passengers were up to their knees. The ferry attempted to back up but hit the raft. He thought they might be crushed between the boat and the airplane. They tried to detach the raft from the airplane but no one had a knife. Someone from the boat threw them a foldable knife. Another ferry arrived and the men made sure the women went on first. He kept his seat cushion until he boarded the ferry. They were taken to the NY side of the river. He was not injured and did not go to a hospital. He could not feel his hands and feet for several hours. The next day he noticed a small laceration on his scalp that he thought was from striking the seat in front of him while in the brace position.

Male Passenger - Seat 7A

Age: 48 Hgt: 6’0” Wgt: 235 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 13, 2009 via telephone. He was a frequent flyer and flew approximately once a week. He was not traveling with anyone but knew three other people on the flight from business. The flight attendants performed a safety briefing but he did not watch. He did not look at the safety information card.

After boarding he stowed his coat in the overhead and his backpack beneath the seat in front of him. He dozed off during taxi. After takeoff the “left engine went with a sudden thud.” It felt almost as if “brakes had been applied.” He smelled an electrical smell that also resembled spoiled meat cooking. The airplane went into a sharp left bank and started descending rapidly. The front housing of the left engine was rattling badly and it got “real quiet.” The pilot made a second left turn and he saw LGA out his

window and knew they would not make it back. The airplane continued a controlled, steady descent with a few little turbulence bumps. He saw the river and knew they would be going in the water. The pilot made an announcement to “prepare for impact.” A passenger in row 6 said “this is for real.” He tried to dial his cell phone but could not get the password in correctly because his hands were shaking. He bent over as far as he could to brace but wanted to look out the window to see when they were going to hit. He could hear the flight attendants chanting “heads down, stay down, brace, brace!” It was so quiet he could hear a computer voice saying “pull up, pull up” from the cockpit.

He described two impacts. The first impact was the tail hitting the water. The top of his head struck the tray table causing a small cut on his head. He looked up and saw water rush by the window. The airplane then “dug in” and twisted to the right causing him to do a “face plant” into the tray table. He did not get a nose bleed but passenger 7B did. He stood up and “by instinct” got his seat cushion and told others to do the same. The overwing exits behind them were open and people were moving out of them. He did not remember seeing any emergency lights. There was no pushing and he had no difficulty getting out one of the overwing exits on the left side. There were three or four people in the water and he was concerned about the airplane sinking, but he saw there was no way he could swim to shore. The water on the wing was initially mid-thigh height. He moved out farther on the wing to make room for others and the water was only ankle high. There were about 10 or 11 people in front of him. He called his family on his cell phone.

He saw a ferry on the other side of the airplane and then one came to the left wing. Its back end slid into the 1L slide/raft and they yelled at it to stop. People were throwing out life vests from the ferry and he got one and put it over his head. He pulled the tabs and it inflated normally but he did not secure the waist strap. Passenger 13C fell into the water and passenger 7B helped pull her out. A FDNY boat came and women began to board. Passenger 13C fell in the water again. A helicopter came and the “rotorwash” almost knocked him into the water. The FDNY boat was full and there were still three or four people left on the wing. Passenger 8F and another woman were with him. The woman got on the ladder of another boat and he and passenger 8F pushed her up. Passenger 8F boarded next and he was the last person on the left wing. He went to push off to climb up and fell into the water. He was completely submerged and the life vest slipped over his head. He only had to swim one stroke before he grabbed the ladder. He got halfway up and passenger 8F grabbed him by his belt and pulled him on. He was shivering uncontrollably and was given a hooded sweatshirt to wear. He called his family again and cell phone records indicated that the time between the two calls was 17-19 minutes (from the time he got on the wing to the time he got into the boat). They were taken to Weehawken, NJ for triage but he did not seek medical attention. He still has numbness in several of his fingers and was told by a doctor that he had frostbite.

Male Passenger - Seat 7B

Age: 50 Hgt: 6'3" Wgt: 285 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 26, 2009 via telephone. He had flown on a weekly basis for the past 10 years and accumulated approximately 150,000 frequent flyer miles last year on US Airways. He was traveling alone on the accident flight. He watched all of the flight attendants' safety demonstration but did not look at the safety information card. He looked for his closest exit prior to the flight and noted it was behind him.

He was familiar with the flight pattern departing LGA and knew that they would be landing in the water "early on." The flight attendants shouted for passengers to "brace, brace, heads down, stay down" and he complied. He bent over as far as he could and placed his hands on his head. His head was in contact with the seat in front of him and he recalled being thrown backwards when the tail of the airplane impacted the water and then being thrown forward when the airplane decelerated. He "smashed" his nose into the tray table of the seat in front of him and it began to bleed. He immediately got into the aisle and believed that he was the "end of the line" of passengers going to the overwing exits from the front. He heard someone say "get a vest" and remembered he had not taken a flotation device. He grabbed the seat cushion from seat 7C and held onto it through the evacuation.

He turned right and exited onto the left wing through the front overwing exit. He estimated he was among the "middle 1/3" to get off the airplane. He was not wet until he stepped onto the wing. He reported that several people who had exited before him jumped into the water off the front part of the wing and others had gone to the left and were getting into the slide behind the wing. He was the second person to walk out to the end of the wing. (The other person was passenger 15D.) There were three or four women who had fallen into the water and he and passenger 15D helped some back onto the wing. A ferry arrived at the wing and several people boarded. Just before it was about to pull away he jumped onto the mesh net and got on board. There were only a "handful" of passengers that boarded his ferry and they were taken to a restaurant on the NJ side of the river. He declined to go to a hospital and his nose stopped bleeding later that night. The next day he noticed that he had bruises on his knees (from hitting the seat in front of him) and elbows.

Male Passenger - Seat 7C

Age: 35 Hgt: 5'10" Wgt: 195 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 27, 2009 via telephone. He flew about three or four times a year. He was traveling with five other family members and friends on the accident flight. They were seated in seats 5A, 5F, 6A, 6C, and 22A. He watched some of the flight attendants' safety demonstration but did not look at the safety information card.

During climb he heard a "loud bang" on the right side of the airplane. He heard someone on the right side say that they had hit a bird. Smoke immediately came into the cabin. The airplane turned and the left engine began making noise as well. Then everything went silent and the captain announced "brace for impact." The flight attendants shouted "brace, brace, heads down" over and over. He could tell they were going to land in the water. He tightened his seatbelt as much as he could and looked at others to see how they were bracing. A lot of people were bent over and had the tops of their heads against the seat in front of them. He was worried that if he took that position he would break his neck in the impact. He put his forearms on the seat in front of him and put his head between his arms.

He never felt a big impact and it was similar to a rough landing on a runway. He believed that the left engine caught in the water and turned the airplane. He unbuckled his seat belt, stood up, and went aft to the right overwing exits before most passengers even stood up. It was the first exit that he saw open. It had been opened quickly and people were getting out. He noticed a lot of seat cushions missing and realized that he did not have his seat cushion or his life vest. He did not see any emergency lights. He was the fifth or sixth person on the right wing. He could already see a ferry coming. The water got up to his waist and the wing was "pretty packed." He noticed a slide behind the wing that was upside down. He helped some other passengers try to turn over the slide. Eventually passenger 21C jumped into the water and freed the slide, enabling them to pull it over. He got into the slide with 20 or 30 other passengers.

When the ferry came to the slide he was one of the first two people to board it because of his position on the slide. There was a mother with a baby on the slide and the baby was passed up to him on the ferry. The ferry took them to the NJ side of the river. He was not injured and did not go to a hospital.

Male Passenger - Seat 7D

Age: 56 Hgt: 6'1" Wgt: 185 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 26, 2009 via telephone. He flew 35-40 round trips per year and was traveling alone on the accident flight. After boarding the flight attendants performed a safety demonstration and he "may have watched some of it." He did not look at the safety information card prior to the flight but he always counted the number of rows to his closest exit which was behind him.

He was tired and fell asleep as the airplane took off. He woke up when "the right engine went." The airplane leveled off and turned to the left. He heard passenger 6E (a pilot) say that he thought they were going back to LGA. A few seconds later the second engine went "with a pop." The airplane started descending and he still thought they were going to LGA. The captain announced, "this is the pilot, brace for impact." The flight attendants started chanting "lean forward, brace yourself." The cabin was very quiet.

Passenger 7E was looking around and he told her “you’ve got to get your head down.” He braced himself by crossing his wrists on the seat in front of him and putting his head against his wrists.

When the airplane hit the water he had no idea where they were. He looked outside and saw the USS Intrepid and then knew exactly where they were. He was not injured. He unbuckled his seatbelt and stood up. Everyone seemed to be heading to the front so he went to the rear. He saw that someone else had taken their seat cushion and removed his. He yelled for others to take their cushions. He never thought about taking his life vest. There was a woman from row 7, 8, or 9 on the left side of the airplane who was trying to get something out of the overhead bin. People yelled at her to leave it. He went out onto the left wing through row 10. He did not notice any emergency lights

Water was near his ankles right away. Some people had gone out and jumped into the water. Others yelled that they needed people to move out on the wing farther because they needed more room. A ferry arrived on the left side and went to take people off the front of the wing. The ferry bumped into the 1L slide/raft and swung around. He thought the ferry was going to knock him into the water so he jumped onto the “Jacob’s ladder” and climbed up. There was a helicopter hovering which made climbing more difficult. Eventually people on the boat grabbed his arms and he was able to climb aboard. The ferry took 18 passengers to a restaurant on the NJ side of the river. He was not injured and was not taken to a hospital. He went to a senior center and someone from his company picked him up.

Female Passenger - Seat 7E

Age: 48 Hgt: 5’5” Wgt: 130 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 25, 2009 via telephone. She usually flew once every six weeks and was traveling alone on the accident flight. She was “sure” that the flight attendants performed a safety demonstration but did not watch it. She did not look at the safety information card.

After takeoff she heard a “gigantic thud” that was “very loud.” Passenger 7F had been looking out the window and said he thought they had hit a bird. There was soon complete silence in the airplane and she could smell something burning. She was in a “state of shock” and did not remember much about what was happening. Passenger 7F told her to put her head down but she did not hear an announcement. She bent over and hugged her knees. The airplane seemed as if it was gliding and she had no idea they were landing on the water.

The impact was “not that bad.” When the airplane stopped, passenger 7F told her to get up and that they were in the water. She grabbed her tote bag with her cell phone. She went to her nearest exit which was behind her. There was no chaos or pushing. Someone said, “get a seat cushion” and a man near the exit row tossed her one. She went out of an overwing exit on the right side of the airplane but did not remember stepping on

the wing. She believed she stepped directly on a slide. There was a raft behind the wing that did not deploy correctly. Eventually someone pulled it closer and she was able to climb onto it. Ferries arrived and threw the lift jackets and she put one on. She climbed a rope ladder and only got her feet wet up to her ankles. She boarded a ferry that took her to a ferry terminal on the NJ side of the river. She was not injured and did not go to a hospital. The next day she noticed she had some bruising on her shins that might have been from striking the seat in front of her.

Male Passenger - Seat 7F

Age: 39 Hgt: 6'6" Wgt: 230 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 5, 2009 via telephone. He had flown on a weekly basis in the past but only once or twice a month since autumn 2008. He was traveling alone on the accident flight. He believed that the flight attendants' performed a safety demonstration but did not pay attention to it. He did not look at the safety information card.

While the airplane was climbing he was looking out the window and saw approximately 4 to 6 objects strike and go by the right engine "in a blur." When they struck there was a "very loud bang." The engine continued to run but he could tell it was damaged. It was shaking and making a "high whining scream." The airplane banked and he thought they were going back to LGA. He had no idea that the left engine also had been struck. The smell of fumes entered the cabin. Passenger 6E was an off-duty pilot and he did not appear to be concerned. When the pilot announced to "brace for impact" passenger 7F was very surprised. The flight attendants began shouting "heads down, stay down, brace, brace!" Passenger 7E asked him "what do we do?" He saw passenger 7D with his head down and his arms braced on the seat in front of him. He told passenger 7E to do what he was doing. He put his feet flat on the floor and his forearms against the seat in front of him and ducked his head down. When nothing happened after two or three seconds he picked his head up and looked out the window. He did not hear any engine noise but the airplane was descending in a controlled manner. He put his head back down and thought that they would be landing on the runway at LGA. He picked his head up again a short time later and saw water out his window.

The airplane impacted the water and he felt a strong jolt. It came to an instantaneous stop and he saw water outside the windows. He unbuckled his seatbelt, took his cell phone, and looked around. Some people were moving forward but his closest exit was the overwing exit behind him. He moved into the aisle toward the exit and saw other passengers with seat cushions. He grabbed one for himself and gave two or three others to passengers. He knew that airplanes were equipped with life vests but did not think to take one. There was a good flow but when he got to the overwing exit row a woman in front of him stopped and he had to move her to the exit. He did not remember seeing any emergency lights but it was not dark in the cabin.

When he stepped out on the wing there were a lot of passengers already on it. There was a slide four or five feet behind the wing. It was on its side against the fuselage and passengers could not get to it. He and passenger 16B and another man formed a human chain and he was able to get his hand around the edge and pulled the raft over. Two other men grabbed it and they flipped the smooth side down. They put a woman on it to keep it steady and several other women boarded as well. He jumped into the slide and someone gave a baby to him.

The ferry arrived and the raft occupants instructed it to get the people from the wing first. He recalled the baby's father on the edge of the wing was very cold and had a hard time boarding the ferry. He saw an older woman carrying a large pocketbook who was struggling to climb up as well. They were screaming at her to let her bag go but she refused. Finally another passenger wrestled it from her and threw it into the water. A medium-sized commercial boat with "A-frame" structure on the back arrived at the airplane and rescued all of the people from the 1R slide/raft. It then moved to the front of the wing and took passengers from it. A ferry came to his slide. He grabbed a net to hold it next to the slide and two people boarded prior to him. He estimated that there were a total of 20 to 30 people on his raft and he helped to pull many of them onto the ferry. He believed that all of the people from the raft boarded his ferry which took them to a terminal on the NJ side of the river. He was not injured except for a scratch on one of his fingers and was not transported to a hospital. His right knee dislocated while he was on the raft but stated that was not uncommon and was due to a previous injury. Only his shoes and his pants up to his knees were wet

Female Passenger - Seat 8A

Age: 40 Hgt: 5'4" Wgt: 140 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 6, 2009 via telephone. She flew "every couple weeks" for business. Boarding was 10-15 minutes late. She sat in seat 8A and began reading a book. She noted a mother with a little girl and an infant pass her row. She also noted an elderly woman who boarded later and went farther back. Although she was reading, she did remember a safety briefing being performed. She did not look at the safety information card.

After takeoff she heard a "thud" and felt a "jolt." She then heard a "deceleration" of engine noise. The airplane began a hard bank to the left over the river. She thought they would return to LGA. She had once been on another flight that had lost an engine 15-20 minutes into flight. She thought that this would be similar but, in the previous event, the crew made an announcement. This time there was no announcement. They were descending pretty quickly and it was "eerily quiet." The captain made an announcement to "brace for impact." She knew that they would not make it back to the airport. She looked over her shoulder, saw where the closest exit was, and tightened her seatbelt "pretty tight." The flight attendants were shouting "heads down, brace!" She was holding hands with the woman to her right, had her left on the armrest, and watched out the window until impact. She ducked her head as the airplane hit.

The impact was “less than expected.” The top of her head struck the tray table which “crunched up” her neck and shoulders.” She got up and did a “u-turn” and went out on the left wing. On her way out she noticed some of the seat cushions were missing and grabbed one from another seat. She knew that there were life vests on board but it “never crossed [her] mind” to get one. She did not remember seeing any emergency lights or signs in the cabin. When she stepped onto the wing she was wearing high-heeled boots and fell immediately. She got into a seated position and “scouted” out to the end of the left wing. In photographs she stated that she was the second person from the end of the left wing. “A couple of people jumped from the left wing... a lady had a seat cushion and a man did not.” She did not recall what happened to them. She remembered the pilot telling people in the slide/raft who was in charge and then came back near the wing and “appointed someone in charge of the wing.” After a few minutes ferries started arriving. One had a tough time maneuvering. A second boat got closer. She thought it was a police boat and it was smaller than the others. She took her boots off, stood up, and tossed the seat cushion in the water because she knew she would not need it. When the boat was 5-6 feet away she jumped and grabbed a net that was in the water. She climbed it and got on board. Eventually they did a head count and there were 12 airplane passengers on board. They were taken to Arthur’s Landing restaurant on the NJ side of the river. Some people with life vests could not get them deflated and they had to “stab” them with knives and forks. She was not injured and was not taken to a hospital. She later noticed that she had a “knot” on her head and a sore shoulder and neck.

Female Passenger - Seat 8B

Age: 49 Hgt: 5’9” Wgt: 193 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 13, 2009 via telephone. She flew frequently, about two or three times a month. She was not traveling with anyone on the accident flight. She watched the flight attendants’ safety briefing prior to takeoff but did not look at the safety information card.

After takeoff there was a “loud pop” and she felt a “jolt.” It sounded like they lost an engine and they began losing altitude immediately. It got very quiet and the airplane banked to the left. Approximately 60-90 seconds later the pilot made an announcement to “prepare for impact.” She was in disbelief and grasped hands with the woman on her right. The flight attendants were shouting “brace, brace, heads down, stay down!” She put her head down but turned to look out the window. She had no idea they were going in the river. She and passenger 8A looked over their shoulders and saw where the exits were.

The impact was “forceful, but didn’t seem violent.” She had her seatbelt pulled tightly but struck the top of her head on the seatback in front of her. She unbuckled her seatbelt and went to the overwing exits on the right side. There was no water at her seat but when she got to the exit it was at her ankles. After she got on the wing she saw people with seat cushions and realized that she had forgotten her seat cushion and life

vest. There was a ferry throwing life jackets down and there was a raft that men were trying to turn over on the wing. She got on the raft and remembered two children on it as well. A ferry came to rescue them. It had a single deckhand who was “amazing” and pulling people on board. She was the last person on the raft and fell into the water while trying to get in the boat. She floated away toward a USCG boat near the airplane’s tail. She boarded that boat and it picked up a few more passengers but she was not sure where. They were taken to the NJ side of the river. She went to Arthur’s Landing restaurant and then to a senior center. In addition to a bruise on her head from the impact she had various “bumps and bruises” including some bruising where her seatbelt restrained her.

Female Passenger - Seat 8C

Age: 38 Hgt: 5’6” Wgt: 140

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on May 8, 2009 via telephone. She usually flew once per month. She believed that she watched some of the flight attendants’ preflight safety demonstration but did not look at the safety information card.

She braced herself for impact by putting her head down with her hands on top of her head. Her legs struck the seat in front of her during impact but she did not believe that she hit her head. She did not remember to take her life vest or seat cushion and exited onto the left wing. She did not climb over any seats.

She saw an inflatable slide behind the wing and jumped into the water and swam to it. She could not pull herself into it but was helped by other passengers who were already in it. They were thrown life vests in packages and she had no trouble opening one and putting it over her head. She had difficulty figuring out how to inflate it and one of the other passengers did it for her. She did not secure the waist strap. She helped another passenger open his package and inflate his vest.

A ferry came to the slide and threw them a rope and tried to pull them away from the plane but it did not work. A smaller boat arrived and the larger ferry moved out of the way. The smaller boat came to the back side of the slide and she boarded along with approximately 4 other passengers. They had to crawl underneath a canopy to get inside to a warmer area. She did not know what type of boat it was although the men were in uniform. It might have been a Coast Guard boat. It took the passengers to Arthur’s Landing on the NJ side of the river.

Male Passenger - Seat 8D

Age: 61 Hgt: 5’9” Wgt: 200 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 26, 2009 via telephone. He usually flew once or twice per month and was traveling alone on the accident flight. After boarding the flight attendants performed a safety demonstration but he did not watch it. He did not look at the safety information card.

He fell asleep after boarding and awoke to a “loud explosion” on the right side of the airplane. Moments later the captain said to “brace for impact” and all of the mechanical systems shut down. He braced himself by bending over as far as he could and putting his hands on his head. The flight attendants were chanting “brace!” He did not know where they were landing.

The airplane hit “with a jar.” His right hand had been placed on top of his left and he sustained a small laceration from contacting the latch on the tray table. He unbuckled his seatbelt without difficulty and stood up. He spent much of his life around motor boats and knew from the feeling of the airplane that they were in water. He did not take a seat cushion or life vest, but knew the life vest was under his seat. His feet were wet by the time he got out of the right side overwing exit. He saw a slide behind the wing that was upside down. Some men were trying to pull it over and finally got it to the point where someone was able to get on and keep it down. He saw a ferry right away. It came up to the end of the wing and several people managed to climb up the ladder. The water was up to his thighs. The current made it difficult for the ferry driver to stay in contact with the airplane and he had to jump into the water to get to the ladder. The ferry took them to the NY side of the river. He injured his back climbing up onto the ferry but did not go to a hospital.

Male Passenger - Seat 8E (assigned 21F)

Age: 36 Hgt: 5’9½” Wgt: 200 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 19, 2009 via telephone. He flew approximately 15 business trips per year. He was not traveling with anyone but recognized passenger 12A when he boarded the airplane. He had been scheduled to take a later flight but was at the gate for this flight. Three or four other standby passengers were called but were not present so he asked the gate agent if he could get a seat. The gate agent checked and gave him a boarding pass for seat 21F. He was one of the last passengers to board the airplane and when he got to seat 21F there was a man seated there. They both had boarding passes that said 21F and he asked a flight attendant what he should do. The seated man was traveling with his wife and did not want to move. The flight attendant told him to wait in the galley until boarding was finished. She later took him to an empty seat in the front of the airplane that he believed was 8E.

He usually watched the safety briefing but did not remember one being done on this flight. He looked at the safety information card as he always does. He fell asleep briefly and woke up while they were still taxiing. After takeoff he was speaking with passenger 8F when he heard a “bang.” Both he and passenger 8F thought they had lost an engine. The airplane turned and they could see LGA out the left windows and EWR out the right side. When the captain announced “brace for impact” he knew they would be landing in the river. Passenger 8F asked where the closest exit was. They looked behind them and saw that it was two rows back. He heard the flight attendants shouting

commands but was not sure what “brace” meant. He grabbed the headrest of the seat in front of him with both hands and ducked his head down a little but turned it so he could watch out the window.

The impact was “very, very smooth.” He stood up quickly and thought for a second whether or not to take his briefcase but decided to leave it. Passengers did not panic, but were saying, “let’s go!” Passenger 8D was “gone” immediately so he picked up the seat cushions from both 8E and 8D. He did not know there were life vests on the airplane. He went aft down the aisle and exited from the right side overwing exit in row 10. Just before he exited he allowed a woman who was climbing aft over the seats to exit in front of him. She did not have a seat cushion and he gave her one of his. He did not remember any emergency exit lights.

The wing was cold and slippery and he saw one man fall into the water immediately. The slide behind the wing was flipped over. He shuffled out to the mid-wing area. Eventually the water was up to his waist. A ferry arrived and passengers went up the ladder in an orderly fashion. He was one of the first 10-12 people on the ferry. He had to get into the water to get to the ferry and got wet up to his shoulders. They were taken to the NY Waterway building on the NY side of the river. He was not injured and was not taken to a hospital.

Male Passenger - Seat 8F

Age: 54 Hgt: 5’8” Wgt: 150 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on April 14, 2009 via telephone. He usually flew between 75-100 times per year and was traveling alone on the accident flight. He did not watch the flight attendants’ safety demonstration nor did he look at the safety information card.

While the airplane was descending he could see NJ out his window and knew they were landing in the river. The pilot announced to “brace for impact” and he put his head down and put his hands over his head. He heard the flight attendants shouting “heads down, brace, brace, brace!” He believed the airplane would break apart upon impact and did not have much chance for survival. The impact was “pretty violent” but he was not thrown into anything in the cabin. He saw water come up over the windows.

He got up from his seat and took his seat cushion. He did not think to take his life vest and no one commanded them to do that. Some people were climbing over the seats initially but then they calmed down. He moved aft to the overwing exits and he exited onto the left wing. He and another man helped passenger 13C who was struggling in the water. He and passenger 7A were among the last three people on the left wing. They boarded a ferry that took them to the ferry terminal in Weehawken, NJ. Passenger 7A later told him that they were on the wing for 17 minutes, based on text messages that he had sent from his cell phone. He was not injured and was not transported to a hospital.

Male Passenger - Seat 9A

Age: 56 Hgt: 5'7" Wgt: 160 lbs.
Exit Used: Left Overwing (swam to 1L slide/raft)

Jason Fedok (NTSB) conducted the interview on February 26, 2009 via telephone. He flew approximately three or four times per year and was traveling alone on the accident flight. After boarding he heard the flight attendants perform a safety demonstration but he did not watch it. He knew that his closest exit was in the row behind him. He did not look at the safety information card prior to the flight.

The flight was completely normal until he heard a "big bang" during climb. His initial thought was that a cargo door had come off. After a few seconds there was a little smoke in the cabin but it dissipated quickly. Someone in front of him said that they had hit birds. He looked out his window and saw the left engine was vibrating. The airplane made a normal turn to the left and got aligned with the river. It was descending, but not rapidly. The pilot said to "brace for impact." He thought they still had one engine and would be able to make it back to LGA and the captain would just have to stop the airplane harder than usual. But the airplane stayed aligned with the river and continued to get lower. He put his head down and put his hands over his head as he had learned from previous flight experience. The flight attendants were also shouting "heads down."

There was one "sharp impact" followed by a second and the airplane made a left turn. He did not strike anything in the cabin. When it stopped he recognized that the airplane was floating and he immediately smelled jet fuel. By the time he stood up the overwing exits had been opened. He took his seat cushion and exited onto the left wing. Taking his life vest "did not come into [his] mind." He did not see any emergency lights. Some people in front of him had jumped into the water and he "went to them." He held his seat cushion to his chest and jumped into the water. He probably got out about 40 feet from the wing where there was a woman and a man in the water. The 1L slide/raft had inflated and they swam to it. The woman got on it first, then the man, and then him. A ferry arrived and tried to get people off the front of the left wing. The stern of the boat drifted into the 1L slide/raft and he was worried the slide/raft would go under the water. The ferry repositioned behind the wing. A second ferry came and took off some of the women and the other man that was in the water. He stayed on the raft for the next ferry which also took the captain. They went to the NY side of the river. He was not injured and was not taken to a hospital.

Female Passenger - Seat 9B

Age: 48 Hgt: 5'3" Wgt: 157 lbs.
Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 3, 2009 via telephone. She had flown extensively overseas and was traveling alone on the accident flight. English was not her native language. She remembered the flight attendants performing a safety demonstration. She looked at the safety information card prior to the flight and understood it.

After takeoff she heard an “explosion.” After a few minutes smoke came into the cabin. The captain made an announcement but she was not sure what he said. She asked the man in seat 9C and he told her that the captain said "brace for impact." She braced herself as he did, with her hands on the seat in front of her and her head down. She did not know they were landing on the river.

After impact the airplane stopped and she got out onto the left wing. She "panicked" and did not take a seat cushion or life vest with her, but someone gave her a seat cushion later. She fell into the water and did not know how to swim. A man and a woman in the slide behind the wing helped her up into it. A boat came to take the passengers off the slide and she fell in the water again. A scuba diver helped get her up onto the boat. They were taken to the NY side of the river. She was suffering from hypothermia and was transported to St. Vincent's Hospital. She did not receive any other injuries.

Male Passenger - Seat 9C

Age: 46 Hgt: 6'2" Wgt: 195lbs.

Exit Used: Right Overwing

Mark George (NTSB), John Sheldon (FAA), and Barrington Johnson (AFA) conducted the interview on January 22, 2009 via telephone. He had been a frequent traveler for the last six years. He “zoned out” the safety demonstration. He did not look at the safety information card. He did not remember if there was an exit row briefing.

During climb he heard an explosion from the right engine. He thought they would be returning to LGA. When the captain announced to “brace for impact” he knew they had lost both engines. He saw something that looked like “cigarette smoke” up near the forward galley. He remembered hearing a flight attendant saying something like “heads down, brace, brace!” He placed his head between his knees and crossed his hands on the back of his head. He did not hear any other commands or announcements.

The impact felt like “being rear-ended at 30 miles an hour at a stop light.” He did not see who opened the exits. He did hear someone say “throw it out!” He had no difficulty getting to the right side overwing exit at row 10. He estimated that he was the seventh or eighth passenger to go out the exit. He thought he took the seat cushion off seat 10E and took it with him. He knew there was a life vest under his seat but he did not try to get it out. He saw no water in the airplane.

He went to the tip of the wing. He saw a slide behind the wing, but it was at a 30 to 45 degree angle. Once someone climbed on it, the slide settled down. The slide/raft at door 1R was not completely full. He heard passengers in the 1R slide/raft calling to the passengers on the wing to go back into the airplane and go up to 1R slide/raft because it was not full. A man out on the right wing of the airplane slipped into the water and another man helped him back up. The wing of the airplane was very slippery. He had on his dress shoes but did not fall. He did not see anyone on the right wing wearing an

inflatable life vest. He remembered people on the ferry throwing life preservers. He let go of his seat cushion and swam to the ladder of one of the ferries that was about ten feet away. He then climbed into the ferry and was transported to the NY side of the river. He was not transported to a hospital; however he reported having a sore neck and back and a few “bumps and bruises.”

Female Passenger - Seat 9D

Age: 58 Hgt: 5’2” Wgt: 125 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on May 9, 2009 via telephone. She believed that she watched some of the flight attendants’ preflight safety demonstration but did not look at the safety information card.

The pilot said to “brace for impact” and the flight attendants began chanting something. She braced herself for impact by putting her head down and covering it with her hands. She “smashed” her hands on the seat in front of her during the impact. Both her seatmates got into the aisle before her. She was using her mink coat as a blanket, had her purse over her arm, and her briefcase at her feet so she took all three items with her. She did not know they were on water and thought they had made it to LGA and were getting off to get on another airplane. She did not take her life vest or seat cushion but when she got to the overwing exit row behind her there was a man standing there asking if everyone had a flotation device. He was ripping them off the seats and gave her one that she put beneath her right arm.

She exited onto the right wing and, a short time later, a ferry arrived and threw them life preservers. She got one but had trouble putting it on. She eventually jumped into the water to swim to the ferry but had difficulty with her belongings. She let go of the briefcase which sank and the coat which floated away. She was reluctant to drop her purse and another man offered to take it on board for her, so she gave it to him. The ferry took her to the NJ side of the river and she was transported to Christ Hospital. She sustained bruising to her hands, wrist, and legs and was released later the same day.

Female Passenger - Seat 9E

Age: 33 Hgt: 5’9” Wgt: 160 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 12, 2009 via telephone. She flew monthly for business and was not traveling with anyone on this flight. The flight attendants did a safety demonstration but she did not watch all of it. She noted that the exit row was behind her. She did not look at the safety information card.

About 90 seconds after takeoff she heard a “loud boom” and almost immediately the pilot made a sharp turn back towards LGA. The cabin was very quiet but she did not realize the airplane had lost both engines. She smelled something burning. She was

waiting to hear something from the crew and knew the longer it was before they said something, the worse the situation was. The pilot made an announcement to “brace for impact” and immediately the flight attendants began shouting “brace, brace” over and over again. She looked at the women next to her and none of them knew what that meant. She ducked her head like she had seen done in the movies. Because she is tall her head was against the tray table in front of her. She took her “chunky” necklace off because she did not want it to strangle her.

She did not remember the impact. When the airplane stopped she unbuckled her seatbelt, stood up, and turned around. She fell toward her seatback. She remembered the overwing exit was already open by the time she turned around and the people in row 10 DEF were telling a man that he needed to throw the exit outside. She did not notice any emergency exit lights. She climbed over her seatback and was the third person out on the right wing. She did not think to get her seat cushion or a life vest, although she knew they were available. She saw a slide inflating against the wing. She was wearing running shoes but another woman was sliding in her dress shoes. She let her lean against her and took her shoes off. A short time later she noticed the woman had fallen into the water. She saw a ferry approaching. It was the Thomas Jefferson. When it got 5-10 feet away a man gave her his seat cushion and she jumped in and swam to the ferry. It began pulling away from her because they did not want to hit the wing. She swam about 10 feet and was in the water no longer than a minute. She pulled herself onto a “base” and people lifted her onto the ferry by her arms. She was taken inside to get warm.

The ferry took them to Pier 78 on the NY side of the river. She declined to go to the hospital. The next day she was very sore and went to an emergency room in Charlotte. She had a contusion on the back right side of her head which she believed was from striking the tray table. She had numerous “bumps and bruises,” an especially large one was above her right knee.

Female Passenger - Seat 9F

Age: 40 Hgt: 5’4” Wgt: 137 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 21, 2009 via telephone. She flew approximately once a month and was traveling alone on the accident flight. She did not look at the safety information card and fell asleep prior to pushing back from the gate.

A “loud noise” awoke her. An unusual smell came into the cabin. The airplane made a hard bank to the left. The woman next to her asked if they were over land or water but all she could see was sky. When the airplane leveled out she said they were over water. The pilot said to “brace for impact” but she did not know what that meant. She put her hands on the seat in front of her and put her head down. She “cheated” however and looked out the window.

After impact the water came up quickly. The emergency exit behind her was opened in “no time.” She heard a man saying “go, go, go!” She got her purse and stood up. The others from her row were in the aisle. They might have gone forward. She was waiting to “get around the corner” into row 10 when someone said “get a flotation device!” She retrieved the seat cushion from seat 9F. She went “both over and around” seat 9D and exited from the overwing exit onto the right wing. The water was not high initially but eventually got up to near her knees. There were “more than a dozen” people on the right wing before her. She stood at the front of the wing. Women and children were being put into the slide behind the wing. She slipped and grabbed the man next to her to regain her balance. He told her she needed to be in the raft too. He helped her make her way there and she got into it. There were two young children in it. Eventually a ferry came and they had to climb up a rubber mesh net to get on board the ferry. It took them to a ferry terminal on the NJ side of the river. She was not injured but was advised to go to the hospital by an emergency worker “just in case.” She was transported to Jersey City Medical Center. She had some bruises on her legs from boarding the ferry.

Female Passenger - Seat 10A

Age: 30 Hgt: 5’6” Wgt: 120 lbs.

Exit Used: Left Overwing (swam to 1L slide/raft)

Jason Fedok (NTSB) conducted the interview on March 3, 2009 via telephone. She usually flew weekly for business and was traveling alone on the accident flight. She did not watch the flight attendants’ safety demonstration nor did she look at the safety information card

During climb she was staring out the window and "saw birds fly into the engine." She remembered the airplane dipping just before the birds hit and thought that she saw approximately seven “black dots” out the window. She heard a loud noise and smelled something burning. Both engines went out and it got very quiet. The pilot announced to "brace for impact" but she heard no commands from the flight attendants. She knew they were landing in the water. She braced herself by tightening her seatbelt and holding onto the seat in front of her, but did not remember the impact. She did not believe she struck the seat in front of her.

When the airplane stopped she unbuckled her seatbelt and opened the overwing exit next to her while she was still seated. The exit opened "much easier than [she] thought it would." The exit either popped out or she threw it out into the water. She got out onto the wing but did not see a slide. She did not take her seat cushion or a life vest. She saw several men jump into the water and she jumped in as well. She thought the airplane might blow up. She eventually swam to the 1L slide/raft and was pulled into it. She boarded a ferry which took her to a ferry terminal on the NJ side of the river. She was hypothermic and was transported to Christ Hospital for treatment. She was released later the same day. The next day she noticed she had "deep bruising" from the seatbelt.

Male Passenger - Seat 10B

Age: 37 Hgt: 5'9" Wgt: 155 lbs.

Exit Used: Left Overwing (swam to 1L slide/raft)

Jason Fedok (NTSB) conducted the interview on February 5, 2009 via telephone. He was an experienced traveler who was connecting after a flight from Buffalo. There was nothing unusual about the boarding process. He was seated in an overwing exit row between two women. He buckled his seatbelt after sitting down and remembered the flight attendants performed the normal safety briefing. He had seen it before and did not watch. He also did not review the safety information card. A flight attendant came to the overwing exit rows and asked if everyone was capable of opening the exit. He did not see anyone who appeared unable to do so.

After takeoff he was looking out the window at the city and saw a "pretty good sized black or brown blur" enter the left engine. It was immediately followed by a "boom" similar to a shotgun blast. The engine shook and smoke came out. There was an immediate smell in the cabin. He "knew it was a bird" but figured the airplane still had one working engine. It immediately began a turn. The cabin was calm and quiet. The captain made an announcement "brace for impact" two or three times. He saw they were landing in the water. He and the women next to him linked arms, bent over at a 45 degree angle, and put their heads down.

The impact was a "pretty good jolt" and he felt the airplane rock back and forth. He saw water come up over the windows. The seatbelts did a good job keeping all three people in their seats. When they stopped moving he unbuckled his seatbelt, stood up, and went to the overwing exit. He pulled off the cover and grabbed the upper handle with his right hand. He grabbed a lower handle with his left hand. He pulled down and the exit opened easily and came inside. He threw it out of the airplane forward of the wing. He was surprised how quick and easy it was to operate and maneuver.

The woman seated in 10A was the first to exit. She ran to the end of the wing and jumped into the water. She did not have a flotation device with her. He took seat cushions from seat 10A and 10B and was the second to exit. He followed her path and threw her seat cushion 10A. He also jumped into the water with his seat cushion. When he saw others exit and simply stand on the wing he knew he had to get out of the cold water. A man in the 1L slide/raft called for him to swim there. He fought against the current and made it. The man pulled him into the slide/raft. He did not know what happened to passenger 10A. He asked the man to call his wife because he could not dial his phone number due to the cold. His wife told him she received the call at either 1537 or 1538.

NY Waterway boats were there pretty quickly. The captain tried to back the boat to get people off the front of the left wing and pinched the raft between the hull and the plane. At one point he remembered actually putting his hands on the hull of the boat. The people were yelling and they "gunned the engine to get away." The boat then approached the wing from a different angle.

Later he remembered that someone got a knife and cut a line so the raft would not sink with the plane. Everyone was off the wing and there were 4 or 5 people left on the raft when he got off. The captain was the last one off. He was holding a rope to keep the raft near the ferry. Passenger 10B was soaked and cold and removed his coat and shirts once on the ferry. The airplane captain gave him his jacket to keep warm. The crew of the boat was “phenomenal” and took them to the Waterway Terminal on the NY side of the river. He was examined by EMTs but was not injured. The tips of his fingers were numb for a few days and he later noticed a bruise near his right kidney which he thought might have been from contacting the armrest during the impact.

Female Passenger - Seat 10C

Age: 35 Hgt: 6’1” Wgt: 150 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 6, 2009 via telephone. She flew approximately once per week for business. She was traveling with five coworkers who were assigned seats 8C, 9D, 12C, 13D, and 17C. She remembered a family with children being preboarded. When she got to her seat passenger 10A and 10B were already seated. An elderly woman was helped down the aisle near the end of boarding. The flight attendants performed a safety briefing that she watched. She also looked at the safety information card. The flight attendants checked seatbelts and seatbacks and asked the overwing passengers if they could speak and understand English. Taxi was faster than normal because a lot of flights had been cancelled earlier.

Takeoff was normal. A short time later she heard a “really loud boom” on the left side of the airplane. The woman in seat 10A said that a bird had been sucked into the engine. The airplane got quiet and there was an odor of jet fuel and “burning” inside the cabin. The airplane began to bank. She felt the right engine still had power for a minute or two after the left but then stopped as well. There was an “eerie quiet.” The pilot made an announcement to “brace for impact.” Passengers remained calm. Some got out cell phones and PDAs to call loved ones. Passenger 10B knew they were going to land in the Hudson River and was examining the door to see how it worked. Flight attendants were yelling for passengers to brace and keep their heads down. She bent over and tried to get as low as she could. The impact “wasn’t that bad.” She likened it to a car accident at 20 mph. She did not strike anything. She felt the airplane skid and spin to the right a little.

After stopping, passenger 10B opened the exit “very quickly” and threw it outside. She saw him grab his seat cushion and exit but she did not grab hers. Everyone was yelling “go, go, go” and she did not want to slow them down. She knew there were life vests but it did not occur to her to retrieve one. When she exited she saw an inflatable “boat” aft of the wing that was still trying to inflate and was “twisted.” She “went into the water” to get to it because the airplane was sinking. She swam to it but it was “tilted at a weird angle” and she could not get into it. A coworker swam to the slide as well. Passenger 10C found a black handle (“like on a Zodiac boat”) but did not have the strength to pull herself into it. An overwing exit hatch was floating nearby and she

tried to use it to float but it sank under her weight. She was “treading water back near the tail” and she managed to get to the back of the wing where another coworker pulled her up. Life vests were being handed out from inside the airplane. The wing was very slippery.

The first NY Waterway ferry approached from the nose of the airplane but there was a strong current and it ended up ramming the wing and forward slide. Eventually it came around to the other side of the wing and was trying to get people out of the water who were “having trouble functioning.” Men on the wing were telling women to go first. The boat got to about five feet away and people were yelling for her to jump. She jumped into the water and swam to a “hard plastic netting.” People threw a rope down to her which she grabbed. Two men then helped pull her into the ferry. She immediately went inside and tried to get warm. About 10 more people boarded the ferry before they were taken to the Weehawken terminal on the NJ side of the river. They were taken into a restaurant where people tried to help them get warm. She was examined by EMTs but was not injured and declined to be taken to a hospital.

Female Passenger - Seat 10D

Age: 27 Hgt: 5’7” Wgt: 135lbs.

Exit Used: Right Overwing

Mark George (NTSB), John Shelden (FAA), and Barrington Johnson (AFA) conducted the interview on January 22, 2009 via telephone. She was in a group of six who were the last passengers to board the airplane. She was one of the last to sit down in the exit row. On her previous flight she sat behind the exit row and recalled a special briefing was given to the exit row passengers by the flight attendants. She specifically recalled that they were required to understand English. On this flight she did not recall a specific briefing being given. She paid attention to the preflight safety demonstration, including the use of the seat bottom cushion for flotation. For some reason it stuck in her mind how, she, as a woman with short arms, could reach around and hold onto the big cushion with those straps. She pictured it in her head. She did not recall the flight attendants providing a specific briefing to the passengers in the overwing exit row.

During climb, she felt a “large jolt” and heard a loud bang on the right side of the airplane. It was loud enough to wake sleeping passengers. The cabin lights went out and a few seconds later she smelled something burning and noticed a smoky haze in the cabin. The passengers stop talking and it got very quiet. She heard some noises that she thought were coming from the engine, and then everything was quiet. She looked at the overwing exit and read the opening instructions on the placards. She heard a passenger say they were over the water, and then the captain said to “brace for impact.” She heard a passenger say “what does that mean?” Another passenger began doing a “countdown” to impact. She heard the flight attendants repeatedly chanting “tuck, heads down, brace for impact!” She put her head between her knees and held onto the armrest. She was glad to hear the passenger counting down so she would know when the impact was coming. She could not see much outside the window.

She felt “one big hit” and then “two skids.” The right wing dipped down then came back up. After the airplane stopped she did not recall hearing any commands from the crew. She saw the window seat passenger open the overwing exit and throw it outside. Passenger 10E dove over passenger 10F to get out first. Passenger 10F exited next, but both forgot their seat cushions. She handed them their cushions and was the third person out of the right overwing exit. She took her seat cushion and noted it was easy to pull up and hold on to. She had on high heels and noted it was slippery walking on the wet wing, but she did not fall. She followed a woman from row 11 out on the wing to make room for other passengers getting out. The woman fell off the end of the wing and was helped up by passenger 10E. She looked back to the cabin and saw the slide inflating behind the wing and noted passengers quickly coming out of both exits. A ferry was coming toward the wing tip. It backed up and returned again. She waited for it to come back then stepped onto the platform and got onto the ferry. She did not need to use her cushion for flotation. She saw some other passengers swim to the ferry. She was the fourth person to climb the metal ladder on the first ferry that came to the right wing. She was taken to the NY side of the river. She bruised her right knee but was not taken to a hospital.

Male Passenger - Seat 10E

Age: 45 Hgt: 5’11” Wgt: 175 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 12, 2009 via telephone. He flew approximately twice a month for business and was traveling with passenger 18B on the accident flight. He remembered a flight attendant gave the overwing passengers a specific overwing exit row briefing and he had to verbally respond that he understood English. He quickly looked at the safety information card to see what kind of airplane he was on but fell asleep during the flight attendants’ regular safety demonstration.

He woke up when he heard a bang on the right wing. He could tell that the airplane had hit something. He heard a “metal on metal” sound and the engine powered down. A short time later he smelled a faint, burning plastic smell. The airplane banked sharply but there was no communication from the crew. He had had other flights with equipment failures and had once been on an airplane that was struck by lightning, and each time the crew immediately informed the passengers about the situation. He knew something was “very, very wrong” when he heard nothing from the crew and they were descending over the river. The captain announced to either "brace for impact" or "prepare for impact." He told passenger 10F that he would help open the door when they stopped. The flight attendants were chanting "flat feet, heads down" and he thought he could hear a computer voice from the cockpit counting down the altitude. He "crouched a little" in his seat but did not brace himself because he wanted to know exactly when they would hit the water. He looked at the placards on the door to ensure he knew how to operate it. He stretched out and had his hand on the overwing exit door handle prior to impact.

The impact was an “unbelievable jolt.” The airplane stopped very quickly and slid to the right. He unbuckled his seatbelt while the airplane was still moving. When the airplane stopped completely he stood up, pulled the release handle, and he and passenger 10F threw the exit outside. He remembered blinking lights near the exit. He exited onto the wing behind passenger 10F. He looked to his right and saw an “inflatable raft” flipped over behind the wing. He instructed everyone to continue exiting and they would “deal with the raft” after everyone was out. There was a “dazed” woman carrying a seat cushion who slipped and fell into the water. He went out on the wing and dove in the water to help her back on the wing.

He did not take a seat cushion or life vest with him and asked other passengers to throw him a spare seat cushion. The first ferry arrived and the two women closest to the ladder tried to board. He jumped into the water to help them up the fixed metal ladder and then boarded as well. They were taken to the NY side of the river near 40th St. He remembered the injured flight attendant being at the same location. He was not injured and was not transported to the hospital.

Male Passenger - Seat 10F

Age: 39 Hgt: 6’4” Wgt: 235 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 20, 2009 via telephone. He flew once every 2-3 months and was traveling alone on the accident flight. He usually requested an exit row for the additional leg room. He watched the flight attendants’ safety demonstration. He also believed that the flight attendants did a special briefing to the passengers at the overwing exits. He “might have glanced” at the safety information card.

After takeoff there was a “loud noise” on the right side of the airplane that “rocked” the airplane. He heard the engines “winding down.” He smelled an odor of “burning machinery.” The pilot had control of the airplane and put it into a left bank. They were descending and he thought they were going back to LGA. He realized that he might have to open the overwing exit after landing and “memorized” the instructions on the door placards. He also reviewed the safety information card. He tightened his seatbelt. The captain made an announcement, “this is the captain. Brace for impact.” The flight attendants shouted “heads down, stay down, brace for impact.”

The impact was not as bad as he had expected. He opened the door from his seated position immediately after it came to a stop. It opened “easily” and he threw it out on the wing. Passenger 10E was the first one out of the exit and he was second. The water on the wing was approximately shin height. Before exiting he removed his seat cushion and took it with him. He did not take a life vest. A slide had deployed upside down behind the wing and several men helped flip it over. He got on the slide and the ferries arrived a short time later. The people on the ferry threw them life preservers. He got one and put it on. The passengers on the slide helped a mother with a young baby.

People were very calm. The ferry took him to the NY side of the river where he received excellent care. He had some “bad bruising” but did not go to a hospital.

Female Passenger - Seat 11A

Age: 58 Hgt: 5' 3¼" Wgt: 136

Exit Used: Left Overwing

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 21, 2009 via telephone. She was a very frequent flyer and was traveling alone on the accident flight. She fell asleep after boarding and did not remember a safety demonstration or read the safety information card. She also did not remember the flight attendants giving an overwing exit row briefing but was asked about the rules at the check-in kiosk.

Passenger 11C told her that he was a pilot and that they had hit a bird. He was very calm and said “we lost an engine.” She knew there was a life vest under her seat because she traveled so much and reached under the seat and retrieved it. She could not remember if she did that before or after the captain announced to “brace for impact.” She donned the vest but did not inflate it. She had no difficulty pulling the life vest from under her seat. She did not remember pulling on a strap; she just remembered grabbing the plastic pouch.

She was seated right next to the overwing exit. Passenger 11C asked her if she was “okay” to open the door, and she said “yes.” When the captain said to “brace for impact” she looked at the instructions on the window. The instructions were self-explanatory. She tightened her seatbelt and braced herself by putting her forearms and wrists on the seatback in front of her and put head in between her arms. She did not put her head on her wrists and did not cross her arms. She did not hear any commands from the flight attendants to brace.

After impact and the airplane came to a stop she opened the overwing exit hatch. There was no cover on the overwing window handle because it had fallen off during impact. She had no difficulty operating the handle to open the exit. She did not notice any emergency lights. She threw the hatch outside and later noticed that it was floating behind the wing. She exited head first and saw a slide behind the wing. She could not figure out why part of the slide was sticking up in the air. She could not push the slide away from the fuselage and could not figure out why it was not working. She got wet up to her waist but eventually got into the slide. There were approximately six people in the slide.

She saw other passengers evacuating and stated that it was orderly. People stopped coming out and then there was a second wave of passengers that she thought might have come from the back of the airplane. The wing was wet and slippery and some passengers were sliding. She thought it depended on what kind of shoes people were wearing. There was a lot of jet fuel in the water.

Ferries and Coast Guard boats eventually came to rescue people off the wing. At one point the ferries moved away to make room for the helicopter that dropped a diver. The wind from the helicopter was very cold and misty. Passengers stopped getting into the ferries until the helicopter left. She estimated that she may have been in the slide for approximately 30 minutes before they were rescued. She had numb hands and feet when a red Zodiac boat picked her up. It took her to a restaurant on the NJ side of the river.

After the accident she said her shoulder was sore but she declined to go to a hospital. She followed up with her physician the next day and he referred her to an orthopedist who scheduled an MRI for Saturday, January 17. The MRI indicated she had a cracked humerus (upper arm bone) and torn cartilage in her shoulder. She provided medical records to substantiate her injury which is described in Attachment 7. She believed the injury most likely occurred from the brace position she used during impact.

Male Passenger - Seat 11B

Age: 25 Hgt: 6'0" Wgt: 160 lbs.

Exit Used: Left Overwing (swam to 1L slide/raft)

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 22, 2009 via telephone. Although he flew "quite a bit," he did not review the safety information card before this flight. He believed that the flight attendants performed a safety demonstration prior to the flight but he did not watch it. He did not recall the flight attendants providing a specific exit row briefing.

After the engine shut down the airplane descended gradually and the passenger 11C told him to tighten his seat belt and he complied. Prior to impact, he saw passenger 11A put on her life vest, but he did not. He thought we would have enough time to do it after impact if he needed to. He assessed the tray table to determine if his head would strike the tray table during impact. He did not believe it would, so he braced for impact by only placing one arm against the seatback in front of him. He did not put his head down as he thought it was more important to look out the window and determine what was happening in order to respond properly to the situation. He saw other passengers assuming the full brace position and vaguely heard flight attendants shouting commands. He could not remember if his arm was actually on the seatback when they impacted the water, but he did not sustain any injuries. He took his seat cushion and had no difficulty exiting the airplane through the left side overwing exit.

Once outside the airplane, he felt like he needed someone to give him direction, but he received none. He feared the airplane would explode so he jumped into the water with his seat cushion and tried to swim away from the airplane. He saw that there was a slide/raft inflating at the 1L door. He saw a man in a white shirt and green tie (later identified as passenger 1A) who told him to swim to the slide/raft. Several passengers helped him into the slide/raft. He estimated that he was in the water for 3-5 minutes. As the ferries were approaching he heard someone ask for a knife, so he stood up and asked for a knife from ferry personnel, which was provided. The ferry took him to the NY side of the river. He was not injured and was not transported to a hospital.

Male Passenger - Seat 11C

Age: 45 Hgt: 6'1" Wgt: 200 lbs

Exit Used: Left Overwing

Cindy Keegan (NTSB), Brenda Pitts (FAA), and Bob Hemphill (US Airways) conducted the interview on January 22, 2009 via telephone. Passenger 11C was an aeronautical engineer with an avionics background. He also had a pilot certificate and had been trained by both Boeing and Airbus; however, he did not work in the field of aviation at the time of the accident. He was a frequent flyer, logging 160,000 miles in 2008. He did not pay attention to the safety briefing but knew it “by heart.” He did not look at the safety information card but noted that the flight attendants did not give a specific exit row briefing. He often chose to sit in the exit row and knew it was done on previous flights.

After the bird strike he heard a “clanking sound” from the left engine. It sounded like the engine was destroying itself. He did not hear any noise from the right engine. It was silent with no power. He could hear the “trim wheels” turning as the captain was trying to “keep the pitch up.” The captain announced to “brace for heavy impact” and the flight attendants repeatedly shouted “brace, brace, brace!”

He instructed the passengers to his left how to open the exit. He also told them that it would be heavier than it looked. He explained it would be best to throw it outside so that it would not cause a tripping hazard. He told everyone to tighten their seatbelts. Passenger 11A repeated the door instructions back to him and she did a good job. He remembered “issues with broken ankles and seats collapsing on impact” so he looked around to prepare himself for impact. He pushed his laptop under the seat in front of him. He got into a “half braced” position. He did not want to put his head down because he wanted to be aware of his surroundings and react to them.

On impact he was “jolted forward,” but did not strike the seat in front of him. He remembered the airplane “jolting to the right.” (He had a bruise on his leg that looked like the shape of the armrest from the airplane shifting to the right.) He did not notice any emergency lights or signs. He grabbed his seat cushion and was the second or third person out the window exit. He “did not have time” to grab his life vest. The overwing exit hatch was sitting right under the window and people had to step on it to exit. He kicked it into the water aft of the wing. The wing was very slippery. He had on leather-bottom dress shoes and got knocked into the water behind of the wing. The water was very cold and he had difficulty swimming with the seat cushion so he got rid of it. He swam to the mid-wing area and climbed up onto the wing, using the flaps to help him up.

He was standing on the wing waiting for the ferries to arrive when a woman gave him a hug and would not let go. She said she had never flown before and did not know what to do. He told her that she had to let go but that she could hold onto his belt. She grabbed his belt in the back of his pants and did not let go. He did not notice anyone go back into the airplane but did see life vests being thrown out.

Ferries came on both sides of the airplane. One ferry got caught in the current and “rode over” the leading edge of the left wing. It pushed everyone together and a slight panic ensued. The ferry captain saw what was happening and put it in reverse, but the momentum kept it moving. The back of the ferry pushed the slide/raft against the airplane. The ferry crew put down a black cargo net and about five people went up it. The ferry had to pull away with a woman hanging on the net. She was halfway in the water and a helicopter diver helped her get off the net and held her up out of the water. A “red Zodiac” came in on the left side and took everyone off the wing. As the Zodiac started to leave, they yelled “come back” so that he and three others could climb into the back of the boat. There were four passengers in the back and about ten in the front. The Zodiac took them to a dock where the wall was 8 feet tall and too high to get up. Two firemen helped pull the passengers up out of the Zodiac. Then they went up some steps and entered another ferry on the NY side of the river.

An EMT came and asked him to remove his clothing and wrapped him in three blankets. Rescuers used tablecloths to wrap around people to keep them warm. In addition to the bruise on his leg, his wrist “bent back” when he fell on the wing. He was not transported to a hospital.

Female Passenger - Seat 11D

Age: 59 Hgt: 5’3” Wgt: 161 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 13, 2009 via telephone. She was a frequent flyer and traveled approximately once a week. She usually selected an exit row. She was not traveling with anyone on the flight. The flight attendants performed a safety demonstration that she watched. One of the flight attendants stood next to her while she performed it. However, she thought it was unusual that the flight attendant did not come back to give the overwing exit row briefing. Usually passengers needed to verbally respond that they can speak and understand English. This was the only flight she had taken where it was missed. She did not look at the safety information card prior to the flight.

After takeoff she heard a noise. What really alarmed her was the lack of noise that followed. She pulled out the safety information card and “looked it over several times” and tightened her seatbelt. The man in the window seat was a “little panicked” and she told him “if you haven’t read the safety card, do it now.” He took out the card and looked at it. The captain announced “brace for impact.” She had “no idea” how to brace but the woman seated next to her showed her what to do. She bent over and put her arms up with her hands over her head. She could faintly hear the flight attendants up front yelling “brace” over and over again.

There was a single, hard impact. She was “driven forward in the seat” but did not strike the seat in front of her. By the time the airplane “rebounded” the overwing exit was already open. She did not see any emergency lights. She was the third person out

her exit on the right side. She saw a slide inflated against the wing. The wing was sinking so she went out to the end of the wing. Passenger 11E fell almost immediately because the wing was covered in ice. Her goal was to stay as dry as possible for as long as possible. Eventually the water got over her knees and she “zoned out” because she was so cold. She “doubled over” and the man behind her put his hands on her back and moved her down the wing. Other passengers helped move her along as well. She eventually was helped into the slide near the wing. Someone handed her a 9-month old baby.

People on the wing were rescued first by a ferry. When a ferry came to the slide they began to empty it from the end opposite her. Another woman took the baby and boarded the ferry. She was one of the last three people off the slide. She had to climb up a webbing and a deckhand pulled her up and flung her on the deck. They were taken to Port Imperial on the NJ side of the river and she was later taken to a shelter. She was not injured and did not go to a hospital.

Female Passenger - Seat 11E

Age: 32 Hgt: 5’8” Wgt: 148 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 26, 2009 via telephone. She usually flew a minimum of once a month and was traveling with passenger 13E on the accident flight. She did not watch the flight attendants’ safety demonstration nor did she look at the safety information card. A flight attendant with “short brown hair” gave a special briefing to the overwing exit row passengers and asked them if they all understood where they were seated.

She had fallen asleep and was “jolted” awake by a noise when the airplane struck something. The cabin was completely silent and the airplane banked sharply to the left. It leveled out and she thought they were returning to LGA. A woman next to her pulled out the safety information card. She was not aware the airplane was descending until the pilot announced to “brace for impact.” Her reaction was “is he kidding? What do I do?” She tightened her seatbelt and put her head down and covered it with her hands. The flight attendants were “chanting” something but the words were not audible. Someone from the rear of the airplane yelled, “exit row people be ready!” She turned her head and began reading the instructions on the door. She peeked out the window to see where they were and saw that the airplane was over water and there were buildings on the right. She realized that they would be landing on water.

Within seconds the airplane “hit and skidded.” When the airplane stopped she believed the captain said to evacuate. Everyone stood up and passenger 11F opened the door incredibly quickly, “like it was his job.” He did not take his seat cushion. She took hers and his and gave one to him. She did not think about taking a life vest because it was not “visibly available.” She felt she was already “holding people up” because she was retrieving the seat cushions and there was a great desire to get off. She had no trouble exiting but was wearing three inch heels and slipped into the water. She was not

moving at the time, she was just standing and fell in. The seat cushion worked and kept her afloat. She got soaked from her armpits down. Passenger 10E pulled her back onto the wing. She saw the slide behind the wing was inflated upside down. Eventually people got into it. She recalled passengers in the 1R slide/raft telling the woman with the baby to go back into the airplane and get in their slide/raft.

She saw the ferries arriving and thought they would have to swim to them. When the first one approached the wing she jumped into the water and “swam a little” to it. She boarded it and used someone’s cell phone to call family members. The calls were received at 1537 and 1538. Passengers gave her dry clothing to wear and the ferry eventually took them to the ferry terminal at 39th St. on the NY side of the river. She was not injured and did not go to a hospital. She saw her doctor the next day who diagnosed her with nerve damage in her elbow and left leg. She also developed some bruises on her knees, but she was “pretty sure” she did not hit anything during the impact. She had a small bruise on her hip from the seatbelt.

Male Passenger - Seat 11F

Age: 35 Hgt: 5’10” Wgt: 170 lbs

Exit Used: Right Overwing

Jason Fedok (NTSB), David Lefrancq (Airbus), and Didier Delaitre (BEA) conducted the interview on January 21, 2009 via telephone. Passenger 11F recalled that boarding was normal. He was traveling with business colleagues seated in 3A and 21A. He often sat in the emergency exit row because of the additional legroom. He did not remember a safety demonstration and did not look at the safety information card. He believed he read a magazine after sitting down.

Less than a minute after takeoff he heard a “really loud bang” and the airplane shook a little. He looked out his window and could see the right engine but did not see anything unusual. He recalled hearing the engine “shut down.” He smelled a burning smell but could not tell where it was coming from. He did not see any smoke inside the cabin. The captain was in control of the airplane the entire time. The airplane banked to the left and he thought they would return to LGA. People were looking out the left windows but he could not see anything. He was not “overly concerned.” He thought that the engine had “blown” and the sound had “dramatically reduced.” The airplane then made a sharper turn to the left and he knew the pilot was trying to land immediately. They were losing altitude but it was a controlled descent. He no longer thought they could make it to LGA. There was no communication from the crew until there was a P/A announcement “This is your captain. Brace for impact.” He saw they were over water. He did not know how to brace but put his head down. He realized he would be required to open the door when they landed. He turned his head to attempt to look at the placards on the door. Looking at the placards helped to show him what to do.

Less than a minute later the airplane impacted the water. It was “a little jarring and then a rapid deceleration.” It was similar to “slamming on the brakes in a car.” He did not hit his head on the seat in front of him. It felt like the airplane skidded to the right

and he saw water near his exit. The airplane leveled out. He tried to jump up and open the exit but forgot to release his seatbelt. He quickly released it and had no trouble. He stood up and put his right hand on the top lever and the left on the bottom and brought the door in. He did not know exactly what to do with it for a few seconds and did not recall the placard being specific. It was lighter than he was expecting it to be. He stepped out the door with one foot and carried it with him. He maneuvered it out the door and threw it into the water in front of the wing.

He moved out on the wing to allow others to exit behind him. His feet got wet but as others added more weight to the wing the water rose to his knees. He did not take his seat cushion or a life vest with him initially, but the woman seated in 11E handed his seat cushion to him once he was out on the wing. There was an “emergency chute deployed upside down” and “twisted” on the wing. Passengers tried to turn it over by pulling on a rope but it seemed like it was stuck or hooked on something. He did not see any damage on the wing. They could not get enough leverage to get it over initially but he thought they may have eventually succeeded. There was not much panic because passengers immediately saw ferries and helicopters responding to get them. People were generally calm.

He went to the very end of the wing and clutched the seat cushion to his chest. The red straps were against his chest with his right arm was through them. He wrapped his left arm around the outside of the cushion. A ferry got very close and he reluctantly jumped in. His head stayed above water. The ferry was so close he did not have to swim to it. It was “the very first NY Waterway boat.” He climbed aboard a pedestal at the bottom of the ladder and was helped aboard by passengers. He was the third passenger to get into the ferry. He was very cold and wet and passengers gave them coats and scarves to try to warm up. He was taken to the NY 39th St. Terminal. He was examined briefly at the terminal but was not injured and was not transported to a hospital.

Female Passenger - Seat 12A

Age: 42 Hgt: 5’5” Wgt: 132 lbs.

Exit Used: Left Overwing (swam to 1L slide/raft)

Jason Fedok (NTSB) conducted the interview on February 13, 2009 via telephone. She usually flew one a month for business, but since November 2008 she had flown once per week. She was not flying with anyone but recognized passenger 21F when he walked down aisle past her. She did not remember the flight attendants doing a safety demonstration and she did not look at the safety information card. She knew the airplane and was familiar with where the exits were.

After takeoff she heard and felt a “bang.” She knew they had hit something. She was waiting for information from the crew and the airplane began to turn left. She thought they were going to EWR. She smelled smoke but did not see it. There was a “lack of sound” which was not normal and she knew it was not good. She saw the George Washington Bridge and thought they would most likely end up in the river. The pilot made an announcement to “brace for impact.” She grabbed the back of the seatback

and put her head between her arms, above the tray table. She was wearing a wool jacket and wanted to take it off if they were going to be in the water. She sat up and started to take it off but saw how close to the water they were and went back into her brace position. She remembered a man in the row in front of her reading the safety information card while they were descending.

The impact was “hard” but she was prepared for worse. The overwing exits were opened very quickly. She took her seat cushion because the first woman to exit said aloud that she did not have hers. She knew there was a life vest under her seat but did not get it. She was approximately the 10th person on the left wing. She jumped in the water off the front of the wing right away because she did not think she could walk out on the wing and thought the airplane would either sink or blow up. She wanted to make room for others and get as far away as possible. At first she thought she could swim to Manhattan. The 1L slide/raft did not open initially. After about three minutes in the water she made it to the 1L slide/raft which had inflated. Passenger 2A pulled her into the slide/raft.

She saw the ferries arriving. The passengers in the slide/raft told the first ferry to get the people from the wing. The ferry tried to maneuver but pinched the raft against the airplane. The captain appeared in the doorway and gave them something with a long antenna. He told the passengers to get a headcount but that “did not go well.” They had to ask someone on a ferry for a knife to cut them free of the airplane. When a ferry came for them she was the second one to board and had to be pushed and pulled up because she was numb. They were taken to the Weehawken ferry terminal where tags were placed around their necks and they were given NY Waterway uniforms to change into. EMTs were doing triage and she was told she should go to the hospital because she was shaking so violently. She was taken to Christ Hospital where they noted she had a rash all over her body. Her back hurt so they did x-rays and gave her blankets and heating pads to get warm. She sustained a bruised knee as well as bruising to her upper, inner arms and thighs. She attributed those injuries to boarding the ferry.

Female Passenger - Seat 12B

Age: 57 Hgt: 5’3¼” Wgt: 154 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 25, 2009 via telephone. She had flown once a month for the past several months and was traveling alone on the accident flight. She was “sure” that the flight attendants performed a safety demonstration but did not watch it. She knew her closest exit was the overwing exit in front of her. She reviewed at the safety information card prior to the flight and took it with her when she evacuated the airplane.

After takeoff she heard a “whish, thump” sound that was followed by a strong burning odor. The pilot announced “brace for landing.” She removed the airplane pillow she had behind her back and placed it over her head and bent over. She was not in contact with the seat in front of her and did not remember hitting it during the impact.

She described the impact as “strong, like being struck from behind” in an automobile. She did not know they were landing in water but saw the spray and realized that was where they landed. When the airplane stopped she reached for the life vest stowed under her seat but could not really reach it and could not get it out. She still had her seatbelt on. She was anxious to get out so she unbuckled her seatbelt stood up and took her seat cushion. When she got near the aisle someone took it from her so she retrieved a second one. She exited through one of the left side overwing exits. She did not remember seeing any emergency lights.

She had taken her cell phone with her and tried to call 911. She saw a slide behind the wing but she would have had to swim to it and she did not want to get wet. A “young man” passed out life vests in packages from inside the airplane. She got one and had no difficulty opening it or putting it on. She secured the waist strap and inflated it without a problem. After several minutes a NY Waterway ferry arrived and tried to take people off the wing but knocked into the forward raft. A smaller boat eventually came and took her and approximately 12-14 others off the wing. It took them to a “party boat” on the NY side of the river. They were given medical attention and people helped them warm up. She was not injured and did not go to a hospital.

Male Passenger - Seat 12C

Age: 37 Hgt: 5’10” Wgt: 200 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 27, 2009 via telephone. He flew about once a month for business. He was traveling with five coworkers (passengers 8C, 9D, 10C, 13D, and 17D) on the accident flight. He was reading the newspaper and did not watch the flight attendants’ safety demonstration nor did he look at the safety information card. He knew he was seated directly behind an exit row.

During climb he heard a "boom" on the right side of the airplane. He immediately smelled a burning odor. He was seated over the wing and could not see the engine out the window. He thought that they had lost one engine. The airplane made a turn and was very quiet. When the airplane went over the George Washington Bridge he thought they might be landing at EWR. The pilot said to "brace for impact" and he could see out the window that they were below the Manhattan skyline. He knew they would be landing in the water. He was not sure what to do to brace. He saw other passengers grabbing the seats and he mimicked them by placing his hands on the seat in front of him and placing his head on his hands. He raised his head to try to look out the window and was not braced when the impact occurred.

The impact was "hard" but not as bad as he thought it would be. He "slammed" his face “pretty hard” into the seat in front of him. He sustained a cut on his nose from the impact. The airplane skidded to a stop and he immediately got up and went into row 11 on the left side of the airplane. The overwing exit had already been opened and the passengers had exited. The overwing exit had been placed on the armrest of the seats in

row 11 and had partially fallen on the floor. He picked it up and placed it back on the armrests. He did not want to throw it outside because there were already passengers on the wing. He remembered that he did not have a seat cushion and removed the seat cushions from seats 10B and 10C. He saw passenger 10C on the wing and she did not have a flotation device. As he exited he attempted to give her one of the two seat cushions. Another woman took it from him before he could give it to her. He never thought about taking a life vest. He did not see any emergency lights. He saw some people jumping into the water but decided not to because he did not want to get wet. There was a slide upside down behind the wing but he could not get to it without swimming. He moved out further on the wing and saw passenger 10C in the water. He put his arm through one of the red straps and held it out for her. She grabbed onto the other red strap and he pulled her onto the wing. He saw passenger 13C screaming in the water and he and passenger 14C pulled her onto the wing as well. She was very cold and had difficulty standing.

They saw a ferry approaching. He was approximately the fifth person from the end of the wing. The two deck hands from the ferry put down a plastic mesh for the passengers to climb up. Some passengers were able to get on board but the ferry had to keep maneuvering because of the current. It moved to the front of the wing and came into contact with the slide/raft at door 1L. It maneuvered again and hit the front of the wing. He had to make a decision whether to jump into the water or onto the plastic mesh. He chose to jump onto the mesh and the deck hands pulled him on board. He was approximately the sixth or seventh person to board the ferry. The ferry took them to the Arthur's Landing restaurant on the NJ side of the river. He was not injured other than the cut on his nose.

Male Passenger - Seat 12D

Age: 54 Hgt: 6'0" Wgt: 185 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 2, 2009 via telephone. He usually flew two or three times per month. He was traveling with passenger 12E on the accident flight. He did not listen to flight attendants' safety demonstration, nor did he look at the safety information card.

Not long after takeoff he heard a "thump" on the left side of the airplane. He told passenger 12E that they had had a bird strike and were not going to make their connection in Charlotte. He thought they would go back to LGA. The airplane leveled off and made two turns to the left. He could not see out the windows and did not see the water. The cabin was very quiet. The captain announced to "brace for impact" about 10 to 15 seconds before impact. He braced himself by putting his head between his knees and interlacing his fingers behind his neck.

He described the impact forces as three times more severe than a log flume ride at an amusement park. He stated that "it wasn't that bad." He was moved forward in his seat, but did not strike the seat in front of him. The man in row 11 opened the exit

quickly and he was one of the first dozen people to exit onto the right wing. He did not know where his life vest was and did not retrieve it. Passenger 12E told him to take his seat cushion and he took it without difficulty. The evacuation was "orderly." There was ample light from the exits being open and he did not notice any emergency lights. When he got onto the wing he saw the slide behind the wing was twisted and the men had to work together to get it right side up. When they did, a male passenger jumped on to stabilize it for the women and children.

The first ferry was already on its way when he got onto the wing. He walked out toward the end of the wing and the water eventually got waist deep. Approximately 12 people boarded the ferry before him. The ferry had a fixed metal ladder which they had to climb up. He had to jump into the water up to his chest to reach the ladder. He called his wife using someone else's cell phone when he got on board of the ferry. The call was received at 1543. He did not remember the ferry's name but the captain's name was Vince Lombardi. It transported between 20 and 30 passengers to the NY side of the river. He may have "clipped" his leg on something while exiting and had a little bit of blood on his shin, but was otherwise uninjured. He was not transported to a hospital.

Male Passenger - Seat 12E (assigned to 12F)

Age: 36 Hgt: 6'1" Wgt: 175 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 6, 2009 via telephone. He flew between three and six times a year for business and was traveling with passenger 12D on the accident flight. He did not pay attention to the flight attendants' safety demonstration nor did he look at the safety information card.

During climb he heard a "loud bang" and he thought something had snapped or broken on the airplane. Passenger 12D told him that they may have hit a bird. He saw a "dust cloud" in the aisle near first class. The airplane banked but the pilot had full control. He assumed that they had lost one engine and would return to LGA. The airplane got very quiet but he was not really aware of it at the time. He did not remember hearing anything from the flight attendants. The captain announced to "brace for impact" in a very emotionless, matter-of-fact voice. He could tell that they were over water and thought that they would die because the airplane would flip and break apart. He saw other people bracing themselves but thought to himself "what difference does it make what I do?"

As they got closer to the water he could tell that they were level and that the nose was up. At the last moment he put his hands on the seat in front of him and put his head down, but kept looking out the window. He described the impact as similar to a car accident. He did not strike the seat in front of him. One of the overwing exits opened immediately when the airplane stopped. Another passenger struggled with the other one, but had it open within three seconds. People immediately began filing out systematically. He unbuckled his seatbelt and reminded passenger 12D to take a seat cushion. He remembered the seat cushions from his years of flying but did not remember that life

vests were under the seat until a week after the accident. He waited in his row until he saw a break in the flow, then jumped over the seat and exited onto the right wing.¹¹

The slide behind the wing was inflated but trapped against the airplane. He tried to flip it over but was unable to and slipped on the trailing edge of the wing. Eventually several other men made a human chain and were able to right the slide. One man got in to steady the slide and then women boarded it. He stood on the leading edge of the wing with passenger 11D. The first ferry arrived and it had a lot of ice on the front of it. The ferry had to continuously reposition because of the current and would only get a few passengers at a time. The ferry's captain was initially screaming for the passengers to give him the baby which did not make sense because the baby was safe in the raft and it would have been more dangerous to have tried to give it to him. When it was his turn, the ferry was approximately 10 feet away and he jumped into the water and swam to the ladder. He boarded the ferry and estimated he was between the 15th and 20th person to board from the right wing. He was shaking uncontrollably and was taken to a warmer place on the ferry. The ferry took them to the NY side of the river, the same location where the flight crew was. His only injuries were some bruises on his shins which he believed were from boarding the ferry.

Male Passenger - Seat 12F (assigned to 12E)
Age: 45 Hgt: 5'7" Wgt: 148 lbs.
Exit Used: Right Overwing/Left Overwing

The interview was conducted by Jason Fedok (NTSB) on February 5, 2009 via telephone. He was originally assigned to sit in seat 12E but the window seat passenger asked him to switch and he agreed. He remembered the flight attendants performing a safety briefing but did not watch. He knew he was one row behind the overwing exit. He did not review the safety information card.

One or two minutes after takeoff he was looking out the window and saw a "brown cloud" go into and around the engine. He could see the front 1/3 of the engine from his window. He also heard "three thuds in very rapid succession." He knew they had hit a flock of birds. He smelled "burnt meat." He thought that the engines continued to run because they made noise, but they may not have been producing thrust. He could tell the airplane was "sluggish." The airplane turned and about 30 seconds later the pilot made an announcement "brace for impact." He could tell they were over the Hudson River and thought they might have been heading for EWR. They kept losing altitude and it became apparent they would not make it to EWR. He braced himself by putting his head down and putting his arms on the seat in front of him to act as a "shock absorber" for the impact. He said assuming that position was based on "instinct."

The impact was much less violent than he expected and was similar to a "speedboat hitting a wave." It was "hard and forceful but not violent." The airplane

¹¹ He estimated that it took him 20 seconds to get onto the wing and that he was on the wing for approximately 10 minutes while the water slowly crept up to his waist. He arrived at this estimate because his caller ID showed that he made a call to his wife from the ferry approximately 13 minutes after impact.

veered slightly to the right and he thought it would flip. It did not and when it stopped he got “very relaxed” because he knew the worst was over. The overwing exit in front of him was opened immediately but he did not know who opened it. The cabin was intact and he did not think there was a lot of water in it. He “was not in a rush to evacuate” so he stood on his seat and allowed others to go first. The airplane emptied very quickly and the exit was free after about 30 seconds. He picked up his seat cushion and climbed over seats 11E and 11F and exited onto the wing. He was one of the last passengers out and the wing was very crowded. He looked back into the cabin and saw that the left wing was less crowded. The airplane was not sinking so he went back into the cabin where the water was about knee deep. He retrieved his briefcase containing his passport, computer and camera from the overhead bin. He did not notice any emergency lights in the cabin or see any other people. He exited out the left overwing exit onto that wing.

Ferries were there within five minutes and he remembered that the first ferry went to the right wing. Several more were right behind it. The most annoying thing that happened was that a helicopter arrived and began spraying wind and water onto the wing and airplane which immediately turned to ice and made it very slippery. He fell once and a woman near the wing tip fell into the water and had to be rescued by a boat. Two boats were focusing on the wing passengers and one hit the wing twice. He was one of the last people off the left wing and had to climb up a heavy plastic mesh onto a boat. He threw his briefcase on the boat and dropped the seat cushion prior to climbing up. He took three pictures while on the ferry of the left side of the airplane. There were still people in the offwing slide when he took the pictures. There were only three passengers on his ferry which took them to a ferry terminal on the NJ side. He was aware that there were life vests and did not know why he chose to take a seat cushion.

The passengers were divided into groups of those who wanted to go to a hospital and those that did not. He was not injured and chose not to go to a hospital. His group was transported to a community center where there was food, a counselor, and police taking identification information. Private citizens offered to wash people’s clothes smelling of jet fuel at their houses and he accepted. He chose to take the offer of a bus ride back to LGA because he wanted to speak with someone from US Airways.

On June 30, 1987, this passenger stated that he had been on board a Delta Air Lines 767 that experienced an engine problem after taking off from Los Angeles. He recalled that the pilot then shut down the wrong engine before finally restarting both engines again at about 500 feet of altitude. He compared the experience and thought it was unusual that in 1987 the flight attendants made P/A announcements giving instructions to passengers about what to do and had people put on their life vests, while in this case he heard nothing from the F/As and only one announcement from the pilot. Other passengers told him that the flight attendants were shouting commands but he did not hear them and was surprised they did not use the P/A system.

Female Passenger - Seat 13A

Age: 48 Hgt: 5'8" Wgt: 165 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 17, 2009 via telephone. She did not have extensive flying experience. She had flown a business trip in November 2008, but had only flown once in her life prior to that. She was traveling alone on the accident flight. She watched the flight attendants' safety demonstration but did not look at the safety information card. She was aware that her closest exit was the overwing exit in front of her.

During climb there was a "real loud boom." She saw a flash out of the corner of her eye and smoke came from the engine. She asked passenger 13B what had happened and he said that they had lost an engine. She smelled smoke and the airplane turned around. She could see that they were over water. The pilot announced to "brace for impact" and she asked passenger 13B what she should do. He told her to bend over and hang on. She tightened her seatbelt and bent over and grasped the seat in front of her with her left arm. She rested the right side of her head against the seat.

The impact was "rough" and she hit her head on the seat in front of her. When the airplane stopped the other passengers were immediately gone. She unbuckled her seatbelt but could not get into the aisle because it was clogged. She did not hear anything from the flight attendants. She asked aloud, "could somebody let me out?" No one let her out. She remembered she needed a flotation device and got her seat cushion. When she lifted it up there was no life vest there. She went forward by "hurdling two seats." A man (later identified as passenger 6C) let her in front of him and she got out onto the left wing. Water was coming in through the exit and she slipped into the water behind the wing up to her waist. Passenger 6C helped her back on the wing. The slide behind the wing was twisted and could not be used. She saw ferries coming and used her cell phone to call her husband.

She moved out on the wing to make room for others by taking baby steps and hanging on to the pants of passenger 6C. She saw a ferry almost crush the 1L slide/raft. She thought it was also going to knock them off the wing but a man pulled her into the "gash" in the ferry and the net was "right there." She dropped her seat cushion to a woman who had fallen and got onto the net. She could not feel her legs and her slide-on shoes got caught in the net so she could not climb. The deck was very high and a man had to push her from behind and another pulled her from above to get her on board. Her legs and feet were badly bruised from this. She believed that a total of six passengers got onto that ferry. They were taken to a restaurant on the NJ side of the river. She "felt okay" and declined to go to a hospital. She developed a large bruise on her forehead above her right eye from hitting the seat in front of her.

Male Passenger - Seat 13B

Age: 55 Hgt: 5'8" Wgt: 210

Exit Used: Left Overwing

Female Passenger - Seat 14B

Age: 52 Hgt: 5'2" Wgt: 115

Exit Used: Left Overwing

Jason Fedok (NTSB), David Lefrancq (Airbus), and Didier Delaitre (BEA) conducted the interview on January 21, 2009 via telephone. Passenger 13B was traveling with his wife who was seated behind him in seat 14B. He spoke for her in the interview. He remembered that a safety demonstration was performed before the flight but “usually zones that out.” He did not recall looking at the safety information card.

After takeoff there was a “pop” sound and some people screamed. He assumed they lost an engine but still had one since the lights were still on and the air kept flowing. He thought they would “limp” back to LGA. It got “awfully quiet” and he realized they were not going to make it. When the pilot banked toward the Hudson River he knew that would be where they landed. He was a boater and knew the Hudson River well. He was looking outside and told the people around him that they would be landing near the Intrepid, which was a good place. As the airplane descended he yelled out where they were and how close they were to impact. He yelled “and impact will be... now!” as the airplane hit. He and his wife were in brace positions. He described his position as bent over with his head between his arms and his forearms on the seat in front of him – like a boxer “covering up.” He felt this position was superior to the position that flight attendants were instructing “head between your knees.” His wife was behind him and took the flight attendant described position. He felt her “whack” into his seat during the impact and she had a bump on her head from it. She was sitting next to a 20-year old girl and comforting her by holding her hand while they were in the brace position.

Passenger 13B and his wife both exited through one of the left overwing exits.¹² He heard the door open “followed the flow” to that exit and said it was “common sense” to go there. He did not see or hear any of the flight attendants. Both he and his wife took their seat cushions based on previous knowledge. When they got outside they knew they would not need them and threw them into the water. He saw a few people going over seatbacks to get to exits – perhaps the man seated next to his wife. He did not see any lights or signs near the exit. There were some people trying to get their carry-on bags and he “forcefully” told them not to do that. His wife did take her pocketbook and they had their cell phones because he knew that they would need them.

The exit and wing were slippery and there was some pushing near the exit. He and his wife did not fall into the water but some people (3 or 4) did. There was a “raft” on the wing that did not deploy correctly. There were approximately 6-8 people on it. Some of the people who fell into the water got onto it. He told the people to huddle

¹² In their returned questionnaires, these passengers indicated they had exited onto the right wing. Clarification was sought on May 6, 2009, and passenger 13B confirmed they had exited onto the left wing.

together and dance to keep moving and stay warm. The water was only at his shoes at first but eventually got up to his waist. Those who were wet got into the middle of groups to try to stay warm. Someone threw out life vests in packages to people on the wing. He made sure to get his wife one and ripped open the package. He got it over her head but “nobody could figure out how to tighten them.” He inflated it but could not figure out the “snap mechanism.” Eventually he gave up because he knew she would be fine as long as it was inflated. He was an avid boater and was very familiar with boating personal flotation devices.

He estimated it was 15 minutes before he was rescued by a “red fire boat.” His wife and several other girls got on before he did. When it was his turn he had “no push” because his legs were so cold. People on the boat helped pull him in. He went directly from the wing to the boat and did not get into the water. The boat took them to the NY side of the river and, although his wife did not want to go, they were both transported to a hospital via ambulance. They were examined and released without any medical findings. In addition to his wife’s head bump, they both had “whiplash-type” neck and shoulder pain.

Female Passenger - Seat 13C

Age: 38 Hgt: 5’7” Wgt: 195 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 12, 2009 via telephone. She flew about six times per year. She was traveling with a coworker who was seated in 14C. She remembered the safety demonstration and it reminded her to look for her closest exit (which was in front of her). She did not look at the safety information card because she knew where her exit was.

After takeoff she heard one “loud pop” on the right side of the airplane. There was an immediate electrical smell. She still thought they had one engine and would go back to LGA. The airplane was descending and several people took out their cell phones and made calls. The captain announced “brace for impact.” Passenger 13B looked out the window and said “he’s putting it in the water.” She braced herself by bending over and turning her right shoulder into the seat in front of her. She put her hands up to the right side of her face so she would not strike her face on the seat.

The impact with the water was “not extremely hard” but she was pushed into the seat in front of her. She felt the airplane come to a stop and the tail swerved to the right. She released her seatbelt, stood up and got her seat cushion. She knew there was a life vest under the seat but it was not in view and she did not want to delay her exit to find it. She went up the aisle and exited through the left overwing exit at row 11. She did not remember seeing any emergency lights. She stepped onto the wing and did not recall seeing an inflatable slide. She went to the front of the wing and jumped out “diagonally” from the airplane. She wanted to get as far away from the airplane as possible because she feared it would explode. She tried to swim away with her seat cushion but was going against the current. When her coworker got onto the wing she called her back to the wing

and she swam back. There was another man there who was hanging onto the wing as well. People on the wing pulled her up but she was so cold it was hard to stand.

A ferry arrived and went to the front of the wing but bumped into the 1L slide/raft and they were afraid it would be crushed. It went to the back side of the wing. A man took off her boots so she could stand more easily. Some people got on the ferry and it returned to the front of the wing where she attempted to board. She grabbed onto a ladder but the ferry moved before she could climb up and she was hanging by her left arm and fell back into the water. A helicopter arrived and dropped a diver who helped her onto a boat with lower sides. She was the only passenger on that boat. It took her to the NY side of the river and she was transported to NY Downtown Hospital. She was very cold and had an elevated CPK (creatinine phosphokinase) count so she was admitted to the hospital. Additionally, she had severe bruising of her left lower leg (inner aspect) and the doctors were concerned about blood clots. She was released from the hospital on Sunday, January 18, 2009. She reported residual numbness and tingling in her fingers.

Female Passenger - Seat 13D

Age: 56 Hgt: 5'7" Wgt: 155

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 10, 2009 via telephone. She heard the flight attendants conduct a safety briefing but did not pay particular attention to it. She always counted the rows between her seat and the exit and knew the overwing exits were in front of her. She did not look at the safety information card.

Takeoff was normal. She heard a "boom" and felt a "jolt" as if they had "hit something." She immediately smelled something burning. The passengers were waiting for instructions from the crew and the airplane began to bank to the left. She thought they were going back to LGA. There was silence and she realized the engines were out. She retrieved her cell phone from her purse and called her husband. While she was speaking with him the call disconnected. The pilot made an announcement "brace for impact." She said, "everyone did something different." At first she attempted to put her head between her knees, but she bumped her head on the seat in front of her and knew that was not going to work. Someone near her had their arms crossed on the seat in front of them with their head resting on them so that was what she did. Her phone rang and she answered it and spoke with her husband briefly before hanging up. She resumed her brace position, keeping the phone in her left hand. She saw a man in an exit row reading the safety information card for how to open the exit.

After the airplane hit the water the overwing exits were opened immediately. It did not occur to her to take her seat cushion until she heard someone else say it. She quickly attempted to retrieve hers but it was fastened tightly and she did not want to waste time and hold other people up. The most important thing was to get out of the airplane. There was no shoving and she exited out one of the left overwing exits. There was no raft there; it was "tucked under the airplane." She slid off the wing into the water.

She saw the overwing exit floating and tried to get on top of it to get out of the cold water. The exit immediately sank. People were tugging on the raft and managed to get a portion out. Two people got in and they managed to get more of the raft out. She got in. There was a “hysterical” woman in the raft. Someone came to the overwing exit and began throwing out square packages containing life vests. A coworker (passenger 8C) caught two of the packages and gave her one. Her hands were so cold she could not open it. She kept looking for an easy pull cord but there was not one. Some people used their teeth to open it. Her coworker put a vest over her head. They “didn’t care about tying it” she just wanted it inflated and someone pulled the cord for her.

The “hysterical” woman then tipped the raft and she fell back into the water. She swam back to the wing and passengers pulled her up. There was a very strong smell of jet fuel. A helicopter dropped a diver and she saw passenger 10C being pulled out of the water. Passengers were tossing their seat cushions into the water because they could not figure out how to get their arms through them. The first ferry arrived and backed into the wing which knocked her into the water again. It moved around to the other side of the wing. Passenger 10C jumped into the ferry’s netting first. When it was her turn she could not feel her feet and could not climb up the netting. She was pushed from below and two men pulled her up by her arms. She went inside to get warm. She could not get the inflated life vest off and a boat crewmember had to stab it with a sharp object. The ferry took them to the NJ side of the river and they were led into a restaurant. People gave them hot drinks and they changed into tablecloths and chefs clothing. Later they were asked to split up into groups of those who wanted to go to the hospital and those who did not. Although she was sore she did not elect to go to a hospital.

She spent the night at a hotel and took the 0800 flight back to Charlotte the next morning. She could not move her right arm and went to see her doctor. He diagnosed her with a rotator cuff tear which she believed was from being pulled into the ferry. He sent her to an orthopedist who did an MRI and found a fracture in her right humerus. When she described her brace position to him he hypothesized that her right arm was jammed into the shoulder during the impact causing the fracture. She provided medical records to substantiate her injury and those records are summarized in Attachment 7.

Male Passenger - Seat 13E

Age: 50 Hgt: 6’0” Wgt: 220 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 11, 2009 via telephone. He flew several times a month for business. He was the most senior of the 23 passengers on board the flight who worked for his company. He remembered that the flight attendants performed a manual safety demonstration that he did not watch. He knew that his closest exits were in front of him. He did not look at the safety information card.

Shortly after takeoff he heard a “massive thud” and he heard someone say that there was a fire in the left engine. It was very quiet and the airplane banked to the left.

He knew it was a bad situation because of the silence and that they were losing altitude. He called his wife on his cell phone and spoke with her briefly. The captain made an announcement to “brace for impact” about 10-15 seconds prior to impact. He heard the flight attendants shouting commands and he tightened his seatbelt and got down as best he could. He has a long torso and had to lean to the left to get down. Just before impact someone in the back said “exit row people, be ready!”

He described the impact as a “double hit.” The first impact was “down” and “pretty firm.” He thought that it was over and sat up but the airplane was still moving. It suddenly came to a stop and he was thrown forward and “smashed the top of his head into the seat in front of him.” There was immediate “pandemonium” in the cabin. He stood up and got his seat cushion. He knew there were life vests but did not think about getting one. The exits opened quickly but there was a “little stampeding.” A man behind him was “freaking out” and knocked a woman down in front of him. Passenger 13E told him to calm down and helped the woman up. Some people were trying to grab things and were told not to. He did not recall seeing any emergency lights. When he got to the right overwing exits he stepped down onto the wing and helped others out. He helped two people get out of the water and got his arms wet in the process. He was near the mid-wing area and the water was shin deep. People had to shuffle and hold onto one another to move. The wing was sinking a couple of inches per minute.

The raft on the back of the wing was “twisted” and passenger 26B agreed to be “catapulted” into it to steady it. He was further toward the front of the wing. He saw a ferry coming closer. The first ferry had eight deckhands and had a set of steps for people to climb up. A second ferry had only one deckhand and had a cargo net to climb up. When the second ferry got close enough he jumped onto the cargo net. A man jumped on before he could climb up and passenger 13E was knocked into the water up to mid-chest height. The passenger who knocked him off then could not climb the ladder and had to be coached up because he was delaying other passengers from using it.

When he finally got on board, passenger 13E went inside briefly before returning to help the deck hand. A “low profile” boat came and it was easier for people to get into. The passengers were then transferred onto his boat. The ferry eventually went to the Weehawken Terminal on the NJ side of the river. EMTs were there and he required assistance to change his clothes because he was so cold. His legs were like standing on “pegs.” They were taken to an office to warm up. When he was examined both his blood pressure and pulse were elevated. He was getting “groggy” and the EMTs indicated he probably had moderate hypothermia. He was taken to Palisades Medical Center where they warmed him up and did an MRI of his neck. He was released at 2130 or 2200 that evening. He stated that his “fingers remain a problem” and that his knee has a “clicking” that might be torn cartilage. His one suggestion was that the flight attendants should use the P/A system to shout brace instructions because some passengers could not hear them.

Female Passenger - Seat 13F

Age: 26 Hgt: 5'0" Wgt: 100 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 23, 2009 via telephone. She used to fly frequently when she worked for a company in Australia. She was traveling alone on the accident flight. She "halfway" paid attention to the flight attendants' safety demonstration. She did not look at the safety information card but knew her closest exits were right in front of her.

The airplane took off and she heard a "startling pop" and smelled smoke right away. The airplane turned left and was dropping. It sounded as if the engines had "died" and she recalled a sound similar to someone "manually turning a wheel." The captain told them to take their brace positions but she was not sure what that meant. She thought they would hit a building. She looked out the window but could only see the wing and did not know they were over water. She braced herself by "hugging" the seat in front of her. She put both arms around the headrest and put her head on the seatback.

After impact and the airplane stopped she stood up but had "no orientation." The doors opened right away and someone said "we're in water." She tried to get into the aisle but it was clogged. A man said to get a life vest and she reached under seat 13D but could not get it out of the pouch. She tried again under seat 13E and was able to retrieve the pouch. She opened it, put it over her head, and inflated it by pulling both tabs prior to leaving the airplane. She reported that the front portion inflated but the "back half did not inflate." She did not secure the waist strap. A few seconds later she exited through one of the left overwing exits. She did not remember seeing any emergency lights.

Once on the wing she jumped into the slide behind the wing. Someone was throwing out life vests to people on the wing and in the slide. They were worried about being sucked under the airplane when it sank or the jet fuel igniting. Ferries arrived and took the people off the wing first. The ferry she boarded took them to a restaurant on the NJ side of the river. She was wet from the waist down and not injured except for a "bump" on the head. She did not know whether the bump was from hitting the seat or possibly from the exit doorframe. She did not go to a hospital.

Male Passenger - Seat 14A

Age: 39 Hgt: 6'3" Wgt: 195 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 3, 2009 via telephone. He usually flew once "every week or two." He was traveling with passenger 17B on the accident flight. He did not listen to flight attendants' safety demonstration nor did he look at the safety information card.

Shortly after takeoff he heard a "very loud boom" from the left engine. He immediately smelled something burning. The lights flickered and the airplane lost

velocity. He knew the situation was serious but thought they would be okay because they still had the right engine. The captain made an announcement to "brace for impact." The airplane continued to descend normally and it became obvious by looking out the window that they were going to land in the river. He braced himself by placing his hands on the seat in front of him and pushing against the seat. He did not bend over.

The impact was "very rough" but it was not violent. He did not recall striking the seat in front of him. Water sprayed up over the windows and the airplane spun to the left and stopped. The overwing exits were opened quickly and he got up out of his seat. Passenger 14B attempted to take her purse and the strap got caught on the armrest. She struggled with it for a few seconds but he decided not to wait for her. He stood up on his seat, stepped onto seat 14B and 14C, crossed the aisle and went over the right side seatbacks until he got to the overwing exit. He had focused on that exit because there was so much light coming in from it. There was no panic in the cabin. He did not take a seat cushion or life vest. He did not see any emergency lights.

When he got onto the right wing he helped several other men turn over a raft behind the wing and people began getting into it. He was wearing leather-soled loafers and had excellent traction on the wing, so he decided to stay on it rather than get on the raft. He was confident he would be rescued because the first ferries were already arriving. He moved out toward the wing tip and climbed the ladder to board the ferry. He estimated he was most likely within the first 20 to 30 people to board the first ferry. They were taken to a pier on the NY side of the river. He was not injured and was not transported to a hospital. The next day he noticed bruises on his legs, probably from climbing onto the platform below the ladder on the ferry.

Female Passenger - Seat 14C

Age: 29 Hgt: 5'7½" Wgt: 119 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 26, 2009 via telephone. She flew six or seven times per year and was traveling with passenger 13C on the accident flight. After boarding the flight attendants performed a safety demonstration and but she did not watch it. She did not look at the safety information card.

During climb the airplane started shaking and she heard a "pop" on the right side of the airplane. The noise alarmed everyone around her. She immediately smelled smoke and thought the airplane was on fire. She thought they would turn around and go back to LGA. Someone else said they might go to EWR. It got completely silent and she knew they had no engines. The pilot announced, "passengers brace for impact." She did not know what that meant. Passenger 14B told her to put her head down.

The impact was very hard and the back end of the airplane skidded to one side. She had "no idea" they were on water. She grabbed her pocketbook which was on her seat but did not take a seat cushion or life vest. She noticed "smoke and light" in the cabin. People were saying, "go, go, go" and were gently pushing each other along.

When she got to the left side overwing exits she noticed they were in the water. She yelled that she did not have her seat cushion. The person behind her said they could share. When she stepped onto the wing it was cold and she saw rafts to her left and to her right. She looked for her coworker who was in the water. She got ready to get in the water too, but someone told her not to and she stayed on the wing.

A ferry eventually came to the wing and she jumped from the wing onto a rubber grid and climbed up. A helicopter was hovering which did not help. Her legs were completely wet. The ferry took them to Arthur's Landing restaurant on the NJ side of the river where she was given chef's pants to change into. She was not injured and was not taken to a hospital.

Male Passenger - Seat 14D

Age: 42 Hgt: 5'6" Wgt: 180 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 3, 2009 via telephone. He usually flew about once a week and was traveling alone on the accident flight. He did not remember the flight attendants' safety demonstration but may have been asleep. He did not look at the safety information card, but knew his closest exit was a few rows in front of him.

During climb he heard a "loud bang" and thought the left engine exploded. He heard another passenger say that the left engine was on fire. He heard the engine make a noise similar to when the engines shut down at the gate. He did not know there was anything wrong with the right engine. As they descended he heard someone say for those in the overwing exit rows to be ready when the airplane landed. He asked passenger 14F if they were over the water and he said yes. The captain announced to "brace for impact." He took off his glasses and placed them in his shirt pocket. He bent over with his chest a few inches from his knees and may have put his hands on the tray table in front of him. He tried to look out the window to see when they would hit.

He described the impact as a "roar" followed by a "bang." When the airplane stopped he unbuckled his seatbelt, stood up, and went forward up the aisle. He turned right and exited onto the right wing. There may have been a small queue in the aisle but he did not feel that he was slowed by it. He did not notice any emergency lights. He was approximately the 10th or 11th person out on the right wing. He did not think to take either a seat cushion or a life vest with him. He reported being preoccupied with thoughts of the airplane rolling or catching fire and did not plan his escape. The overwing exits were opened immediately after the airplane stopped.

People from inside the airplane started passing out seat cushions to those on the wing. He got one and moved out past the engine pylon. The water got up to 6 inches below his belt. When a ferry arrived he jumped into the water with the seat cushion and swam to the ladder. His ferry had a fixed steel ladder and it was frozen making it difficult to climb up. They were taken to a ferry terminal on the NY side of the river. He

was not injured and was not transported to a hospital. He developed some pain in his neck in the days following the accident.

Female Passenger - Seat 14E

Age: 29 Hgt: 5'9" Wgt: 145 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 25, 2009 via telephone. She had flown approximately 25 flights in the past year. She was traveling with her fiancé, passenger 14F, on the accident flight. She was reading a book and did not remember the flight attendants performing a safety demonstration. She did not look at the safety information card.

After takeoff she heard a "thud" that was followed by a burning smell. The airplane was silent and she did not hear anything from the flight attendants. The pilot announced to "brace for impact." She put her hands on the seat in front of her and put her head down as far as possible. The impact with the water was "much more than a rough landing" but she did not remember striking anything or being thrown around. However, she had a rigid gold bracelet on her wrist that was badly deformed after the accident. She was stunned after the impact and passenger 14F told her to "pop" her seatbelt and go to the exit. She got to the right side overwing exit "fairly quickly" with passenger 14F behind her. There was no chaos. She did not take a seat cushion or life vest. She did not know where the life vests were stowed and just wanted to get off the airplane as quickly as possible. She did not see any emergency lights. She stepped onto the right wing and into some water. There was an upside down slide behind the wing. They had to walk to the end of the wing to allow others to come out and it sank as they moved out farther. They saw the overwing exit floating by and passenger 14F picked it up in case they needed it to float.

A ferry arrived and they had to jump in the water and swim to a metal ladder. She thought she was the second person to board and passenger 14F was within the first ten people. She had no trouble getting up the ladder. The ferry took them to the NY side of the river. She was not injured and did not go to a hospital.

Male Passenger - Seat 14F

Age: 28 Hgt: 6'0" Wgt: 170 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 25, 2009 via telephone. He flew approximately 30-40 times in the three months prior to the accident. He was traveling with his fiancé, passenger 14E, on the accident flight. After boarding he read a magazine and did not notice if the flight attendants performed a safety demonstration. He did not look at the safety information card.

As they were climbing he heard a "big pop" and saw a "dark flash" out the window. He immediately smelled a "burning" odor. The airplane banked to the left and

he thought they would be going back to the airport. The pilot announced “brace for impact.” He did not hear any commands from the flight attendants. He and passenger 14E braced themselves by tightening their seatbelts, leaning forward, and placing their hands on the tray tables in front of them. He could see they were going down in the water.

The impact was “not too bad.” He banged his head slightly on the tray table. The evacuation was “orderly.” It did not take them long to reach the aisle. Passenger 14E was in front of him. They did not take their seat cushions or life vests. They were “more intent on getting off” because they did not know if the airplane would sink. He did not see any emergency lights. They exited onto the right wing. The water was ankle deep and they had to keep walking out on the wing to make room for others. The slide behind the wing did not deploy correctly and two men were trying to flip it over. The water at the end of the wing was knee deep.

The ferries arrived within a few minutes. He saw one of the overwing exits floating and grabbed it in case they would need it to float on. The passengers tried to make women and children go first but it did not work well because they were all in a line and it was hard to make room for others to pass. Passenger 14E was the third person to board the ferry. The passengers had to jump into the water and then climb up a rope ladder to get on the boat. They were taken to the NY side of the river and saw the captain at their location. He was not injured and declined to be taken to a hospital.

Male Passenger - Seat 15A

Age: 47 Hgt: 6’1” Wgt: 235 lbs.

Exit Used: Right Overwing

Mark George (NTSB), John Shelden (FAA), and Barrington Johnson (AFA) conducted the interview on January 21, 2009 via telephone. He flew over 100,000 miles each year. He did not remember the flight attendants performing a safety briefing and did not read the safety information card.

During the flight he heard a loud boom. It was like an explosion and he had never heard a sound like that before. The airplane was “stone cold quiet.” He expected people to “freak,” but they did not. When he looked out the window he saw red and orange fire coming out of the engine. He knew they had lost an engine and that they had another engine to go back. He did not hear the any announcements. He placed both hands on the seat in front of him and sat up with his knees out.

Upon impact he heard a “large thump.” He was thrown back into his seat. He heard a female voice say “get the fire extinguisher.” The cabin went dark. There was ankle deep water near his seat. He tried to grab his life vest from under his seat but could not find the red tab. He stated, “I knew there was something under my seat.” He believed that he grabbed the seat cushion from the seat next to his, not from his seat. As he moved toward the exit, he kept looking for the green lights on the floor. Some passengers were crawling over seats on the left side of the airplane. He “hung back” to

see where the flow was going. Most people seemed to go to the left so he went right. He went out the right side overwing exit in row 11 and had no difficulty getting to the exit, except that the aisle was “jammed up.” He and another gentleman (wearing a grey sweater with black pants) hung back and were the last to leave the airplane. Before exiting he threw seat cushions out for other people to use. He saw that one of the pilots had come back in the cabin and was assisting with the evacuation.

The water at the overwing exits was up to his knees. After exiting he jumped into the water but did not take the seat cushion with him. He saw the ferries and swam to the second one. He got in a basket and they pulled him up. The basket had yellow and black stripes on it. He was certain that he did not get in the first ferry. They were taken to the NJ side of the river and he was transported to the Palisades Medical Center. His core temperature was low and he had bruises on his forearm and hips. He also had “frostbite burns” on his lower torso.

Male Passenger - Seat 15B

Age: 32 Hgt: 5’9” Wgt: 170 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on May 13, 2009 via telephone. He was a frequent flyer who usually flew twice a month for business. He did not recall if the flight attendants performed a safety demonstration but was “half dozing” prior to takeoff. He did not look at the safety information card prior to the flight.

After takeoff there was a “jolt.” Passenger 15A told him that the engine was smoking but he thought they still had one good engine. A little smoke came into the cabin and there was an “electrical burning” odor. He heard the engines winding down and the airplane made a steep turn. He looked out the window and saw they were over water. The captain announced to “brace for impact” and he looked around at others to try to figure out what the best way to brace was. The descent was “fast” and he could see the buildings of NY getting lower out the window. He saw the river below and realized they would be landing in the river. Someone yelled to “be sure and get ready with the doors!” He braced himself by putting his arms on the seat in front of him to absorb the impact. It worked well and he did not strike his head during impact.

The impact was a “sudden jolt” and he felt the airplane sliding. He felt the tail “sliding out” and briefly thought the airplane might flip but it did not. When it stopped there was a “split second” of silence and then everyone got up and went to the exits. He did not look to the back but there was a bottleneck to get to the overwing exits. He removed the seat cushion from his seat but did not take the life vest. He knew there was one based on his previous flying experience but was unsure exactly where or how it was stowed. He stayed in the center aisle and exited through the overwing exits on the right side of the airplane.

There was a slide behind the wing that was upside down and he worked with several other men to flip it over so that others could board it. He continued out farther on

the wing and after a few seconds saw a ferry arriving. When it was his turn he jumped from the wing tip onto the ferry's fixed metal ladder and the crew helped him aboard. He estimated there were approximately 30 passengers on that ferry. They were taken to a ferry terminal on the NY side of the river. He had some bruises on his legs but declined to go to a hospital.

Male Passenger - Seat 15C

Age: 44 Hgt: 6'3" Wgt: 220 lbs.

Exit Used: Left Overwing (swam to 1L slide/raft)

Jason Fedok (NTSB) conducted the interview on February 10, 2009 via telephone. He was a frequent flyer and traveled approximately six times per month. He did not look at the safety information card. He fell asleep during taxi and did not remember whether a safety briefing was performed.

He awoke when he heard a "loud whump." There was immediate concern among the passengers. One woman was very upset and using her Blackberry. There was a "burning, electrical" smell and a "buzzing" sound. There was no communication from the crew. The man in 15A said there was fire coming from the engine. The airplane was "dropping." A flight attendant ran by quickly. The airplane turned to the left and the pilot made an announcement to "brace for impact." He bent over and had to put his left shoulder against the seat in front of him because he would not fit any other way. (Days later he noticed a large bruise on his left shoulder.) He believed passenger 15A gave a "play by play" of where they were as they came down the river. The flight attendants shouted "crash position, crash position." Approximately 10-15 seconds before impact someone said "be ready to open the doors, be ready to open the doors!"

The impact was a "big ba-boom" and the airplane twisted to the left. There was calmness or shock for a few seconds. Then "it was like go, go, go!" He stood up and got his Blackberry from the seat pocket. He moved with the crowd and saw the doors ahead. Someone said to get a seat cushion and he found one in a row where two were already missing. He did not remember to retrieve a life vest although he knew they were on the airplane. He did not see any emergency lights and did not see anyone taking carry-on bags with them. He remembered seeing passengers 11B and 12A (both identified later) exit before him. He was one of the first people out the left overwing exits. He stepped outside and immediately fell into the water. He held the seat cushion to his chest and kicked his way toward passenger 12A, who also had a seat cushion. She asked him, "what do we do now?" He thought the airplane would explode or sink and saw a pier in the distance on the NY side of the river. He told her they should swim for the pier. As they kicked in that direction they got closer to the nose of the airplane and saw a raft. The passengers were calling them into the raft. Both he and passenger 12A were pulled into the raft.

A ferry came and tried to take people off the wing but backed into their raft. Outflow water from the ferry was pouring into the raft and people screamed for it to stop. He saw the captain lean out and told the passengers to begin a head count. Later the

captain got into his raft. They tried to cut the tether but could not find the knife. Someone threw them a knife and they floated near another ferry, the Governor Thomas Kean. The ferry took them to the Weehawken terminal on the NJ side of the river. He had mild hypothermia and was taken to Christ Hospital where he was treated and released the same day.

Male Passenger - Seat 15D

Age: 54 Hgt: 6'0" Wgt: 215 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 19, 2009 via telephone. He flew approximately twice a month for business. He was traveling with passenger 25B. The flight attendants did the normal safety demonstration which he listened to "somewhat." He did not look at the safety information card.

After takeoff there was a "loud bang" and the airplane stopped producing thrust immediately. Someone to his left said the left engine was on fire and he smelled an electrical burning odor. He still thought the engines were producing some power but then it got quieter. The captain said "brace for impact" very calmly. The way he said it gave him some confidence. He took out his Blackberry and emailed his wife. He counted four rows to the exits in front of him. He braced himself by placing his palms on the seat in front of him and leaning over with his head tilted to the left. The flight attendants were saying something but he could not hear what they were saying. He took his position by watching others.

He looked out the window and saw they were over water. Ten seconds prior to impact a male voice yelled, "be ready at the doors!" The impact was "very violent." He hit the right side of his head on the seat but was not injured. He felt three "bounces" followed by a sharp left turn. The power went out but light was coming through the windows. He unbuckled his seatbelt and got into the aisle. It was very orderly. The doors opened immediately. A man asked, "what do I do with it?" Passengers told him to throw the hatch out. When he got near the exit rows he realized that he did not take his seat cushion or life vest with him. He wished someone had made an announcement to remind passengers to take them. He exited onto the left wing and saw that the passengers in front of him had all jumped into the water. He saw a piece of the airplane floating nearby and knew he could jump to it if necessary, so he decided to stay on the wing because the airplane was not sinking quickly. He walked out farther on the wing. Two men were flipping the slide behind the wing over and it landed on top of a woman. Several people got into it, women and children first. The wing was very slippery and they had to pull people out of the water. He eventually got to the very end of the left wing.

A few minutes later the first ferry arrived on the right side of the airplane. Other ferries arrived and one came to his side with a steel cargo net. It was difficult for the people in the water to climb up, especially with the inflated life vests. The ferry had difficulty maintaining a position in front of the wing and moved to the wingtip where he

jumped on. He saw passenger 13C in the water and she could not get on the net. Eventually a USCG boat came and helped her onto a rubber boat. The helicopter arrived which was a “real mistake.” It blew water and the rafts all around. There were eventually 17 people on his ferry and it took them to Weehawken and Arthur’s Restaurant. They were given waiters’ clothes to change into but he was not very wet except for his shoes. He was not injured and declined to go to a hospital. He was taken to a senior center and then bussed back to LGA.

Male Passenger - Seat 15E

Age: 43 Hgt: 5’9” Wgt: 170 lbs.

Exit Used: Right Overwing

Mark George (NTSB), John Shelden (FAA), and Barrington Johnson (AFA) conducted the interview on January 21, 2009 via telephone. He watched some of the safety demonstration but did not read the safety information card

The first sign of a problem was when he heard a muffled boom from the left side of the airplane. The cabin got “stone quiet.” He heard no engine noise. He heard a passenger say the left engine was on fire. He thought they would be able to return to the airport on just one engine. He recalled the airplane turning, leveling out, and then descending. He looked out the windows and saw buildings on each side of the airplane. He heard the captain say to “prepare for impact.” He did not know what the brace position was supposed to be, but he put his head down to about tray table level. He was wearing his seatbelt “pretty tight.”

Upon impact he felt a jolt like he had “jumped off a couple of stairs,” but said that he had experienced worse landings. He did not recall water entering the cabin. He believed he exited from the aft, right overwing exit. He did not see who opened the exits. He used the aisle to get to the exit, but noticed that some people were climbing over the seats on the left side to get to the left overwing exit. He had no difficulty getting to the exit, but when he got there he remembered he had forgotten a flotation device. He was a frequent traveler and recalled previous safety briefings where he was instructed about the seat cushions and life vests, but he “just forgot” to get his. He recalled the cabin being bright and did not notice a change in lighting before or after the accident. Someone handed him a seat cushion as he exited.

Once on the wing he went aft toward the offwing slide, which was twisted upside down behind the wing. He could not reach it. He tried to pull it toward him but it would not move. As he was pulling it, he fell into the water and used the seat cushion for flotation. It worked well to keep him afloat. He was able to get back on the wing. He saw a man and a woman in the water. The man was panicking saying, “I can’t move!” Standing on the wing was not that bad initially but as he moved out on the wing the water got waist deep. He could no longer see the wing or his feet so that made it hard to walk. A two deck ferry arrived and passengers on it began throwing hard foam life preservers. One hit him in the head and he grabbed it. His fingers were very cold but he managed to undo the strap and put it on. He let go of his seat cushion to put on the life preserver.

The ferry had a device (not a ladder, but had squares that two people could climb up at same time) that he climbed up and was helped on board. He was not injured other than a slight bump on his head that was possibly from striking the tray table during the impact.

Male Passenger - Seat 15F

Age: 59 Hgt: 6'1" Wgt: 215 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 12, 2009 via telephone. He flew at least once a week for business and was traveling alone on the accident flight. He did not watch the flight attendants' safety demonstration nor did he look at the safety information card.

During climb there was a "pretty violent explosion" and he saw fire coming from the right engine. He could feel the heat of the fire through the fuselage but it extinguished itself quickly. There was a burning smell in the cabin and some people yelled "fire." The odor dissipated within 10-15 seconds and the cabin calmed down. He was not very concerned because he knew the airplane could fly long distances on just one engine. The airplane banked sharply and descended. He did not hear anything from the flight attendants. The captain announced to "brace for impact." He prayed for a short time and then took out his PDA and sent a text message to his wife. He looked out the window and saw the airplane was only 300 to 400 feet above the water. He pressed 'send' and then began to focus on the impact. He braced himself by putting his arms on the seatback in front of him and his head between his arms. He also tightened his seatbelt.

During the impact he saw water flying past the windows and it seemed like the airplane bounced once. On the second impact it felt like "Velcro grabbing." The airplane turned and then stopped moving. There was not much debris in the cabin although he thought that two or three overhead bins had opened. The exit row passengers opened the exits immediately. A few people tried to go over the seatbacks but after a man shouted "women and children first," everyone settled down. He got into the aisle and, while he was standing there, opened the overhead bin and pulled out his leather coat and computer bag. He put the coat over his shoulder but, after looking outside at the wing, decided to leave his bag and threw it into the seats. He did not retrieve a seat cushion or a life vest.

He exited onto the right wing which was about half full. He called his wife from his cell phone and took several pictures while standing on the wing. The slide behind the wing was twisted, so he and about five other men wrestled it over. They got into the slide and moved to the back to keep it stabilized for others to board. He saw a ferry approximately 100 yards away and it came to the right wing. Eventually passengers from the slide climbed on board a ferry. There were four people left when he boarded. Two men from the boat helped pull him up. When he looked back at the airplane he saw the water was within a few inches of the top of the overwing exits. He took more pictures (27 total¹³), including one of passenger 8B who was the last person off the slide. (She

¹³ Passenger 15F declined to provide his photographs for use in the investigation.

boarded a red Coast Guard boat because the ferry had moved away from the slide.) The ferry took him to a ferry terminal on the NJ side of the river. He was not injured and declined to go to a hospital. He visited a doctor the next day because he had "smacked" his knee which he had surgery on years ago.

Male Passenger - Seat 16A

Age: 41 Hgt: 5'10" Wgt: 210 lbs.

Exit Used: Left Overwing/Door 1R

Mark George (NTSB), John Shelden (FAA), and Barrington Johnson (AFA) conducted the interview on January 22, 2009 via telephone. He did not look at the safety information card and he did not remember the flight attendants performing a safety briefing prior to takeoff. He believed that the flight attendants briefed the exit row passengers before the flight.

During climb, he heard a "loud thump, like an explosion," come from the left side of the airplane, and the airplane "shook." He saw smoke coming from the left engine. The airplane seemed to level out, and then gradually turned to the left. After a few seconds, he yelled to a passenger on the right side, "What's going on over on the right side?" The passenger just "shook his head" in response. He recalled a burning smell in the cabin, which he described as "electrical/diesel."

The airplane turned to the left again, then right for a short time, and descended. He saw that the flaps were extended, but he was not sure if they had been redeployed or had been that way since takeoff. The airplane was very quiet. He heard the captain say to "prepare for impact." At that point, he realized they were going into the water. Some passengers were praying, others were just looking around. He was looking around at the other passengers, and he tightened his seatbelt. The passengers discussed the need to get the doors open after they landed, and he heard a passenger say something like, "get ready on the doors." He also heard the flight attendants repeatedly say "brace for impact!"

He leaned forward and put his head up against the seatback in front to him, and had a grip on the left armrest. When the airplane hit the water, he thought he hit his head on the tray table and latch at least once, maybe twice. He did not remember the airplane lighting changing at any time during the flight and impact. After the airplane stopped, all of the passengers got up and started moving toward the overwing exits. There was no panic, and it was not chaotic. He did not see any exit signs in the cabin; but he knew where the overwing exits were because all four were already open and people were lined up to use them.

He walked forward toward the exits, and realized he had forgotten his seat cushion, so he went past both sets of exits to allow others to pass while he retrieved a cushion off one of the seats forward of the exits. He then went aft and exited through the forward overwing exit on the left side of the airplane. After he got onto the left wing, he noticed that other passengers had inflatable life vests, so he went back into the airplane to

find one. He did not know there were inflatable life vests under the seats prior to the flight.

He walked toward the front of the airplane and met the captain and “possibly” some cabin crew near the cockpit. The captain gave him a yellow life vest, but he had trouble getting it on. The captain helped him put it on and deploy the straps. While he was walking forward, he saw an elderly woman moving toward the front of the airplane. He and the crew helped her into the raft at door 1R. He thought that he and the captain were the only ones left in the airplane, and then he saw the captain walk aft into the cabin. He used seat cushions and “made steps” out of them to assist people getting into the 1R slide/raft. He also got into the 1R slide/raft. There were quite a few people in it already, but he felt there was room for more.

He saw a ferry approaching the right wing, and another came near the 1R slide/raft. The slide/raft was tethered by two lines. He was able to pull one line free but not the other. He asked someone on the ferry to throw him a knife. They did, and he used the knife to cut the raft free from the airplane. The lines were “like ropes,” about the diameter of a pencil, and had multicolored “patterns” on them. He was concerned that the raft would be pulled under if the airplane sank. The elderly woman was the first one that was loaded onto the ferry, and then other passengers got on. He was not injured and was not transported to a hospital.

Male Passenger - Seat 16B

Age: 62 Hgt: 5’9” Wgt: 161 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 12, 2009 via telephone. He flew at least once a week for business and was traveling alone on the accident flight. He did not watch the flight attendants’ safety demonstration nor did he look at the safety information card.

During climb one of the engines “really blew.” He was a very frequent flyer but got immediately “white knuckled.” He smelled smoke in the cabin but did not see any fire come out of the engine. The airplane immediately dropped then stabilized. He noticed the engines were not making much noise. The captain announced to “prepare for impact.” He thought he was going to die and went into a “meditative state.” He did not brace for impact and only placed his left hand passively on the seat in front of him. He did not think it would make any difference and if he did survive he wanted to be able to look for daylight to get out of the airplane.

He knew they were over the river but was confused during the impact and thought they had made it back to the runway at LGA. The landing was not that rough. The airplane skidded to a stop and water immediately came up at his feet. He attempted to stand up without taking off his seatbelt. He unbuckled it and got into the aisle. He did not take a seat cushion or life vest because he was focused on getting to daylight. There were a few passengers attempting to get carry-on bags and passengers forcefully told

them to leave their luggage. He did not remember seeing any emergency lights but thought there was sufficient light in the cabin.

He exited onto the right wing and moved to the end of the wing. There were approximately 12 passengers on the wing when he exited. He saw a slide behind the wing that was upside down. He moved back down the wing and he and passengers 7F and 21C formed a human chain and managed to flip the slide over. Passenger 21C jumped on the slide to stabilize it and then they loaded the women and children onto it. Passenger 16B recalled a large man dressed in black who was in the river. The people in the slide pulled him in and he was completely soaked. Passenger 16B boarded the slide and was the second to last one to board a ferry and was taken to a ferry terminal on the NJ side of the river. He was wet only up to his knees and was not injured or transported to a hospital. Passenger 8B was the last person from the raft to board a ferry.

Male Passenger - Seat 16C

Age: 39 Hgt: 5'10" Wgt: 195 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on April 16, 2009 via telephone. He usually flew once or twice a week and logged more than 100,000 flight miles last year. He was traveling alone on the accident flight. He watched the flight attendants' safety demonstration but did not look at the safety information card.

Shortly after takeoff he heard a "boom, a big thud" that startled many of the passengers. He saw some "thin, black smoke" near the ceiling and knew there was a problem when the pilots did not make an announcement. He felt the airplane "almost stop" and decelerate. It made a hard, banking turn to the left over the Hudson River. The captain announced to "brace for impact" and he knew they would be landing in the river. He could hear the flight attendants repeatedly shouting "brace!" He braced himself by tightening his seatbelt, putting his feet forward, and bending over at the waist. He grasped the sides of the seatback in front of him with his hands.

He described the impact as similar to impact of a power boat's hull after hitting the wake of another boat. He distinctly remembered the sound rather than the motion of impact. It was less severe than he was expecting and he stated that he had had harder landings during his previous flights. He did not remember striking anything in the cabin. A little water splashed on his shoulder before the airplane stopped but he was not wet. The evacuation was orderly and people were yelling "go, go, go!" He immediately went forward to the left overwing exit and got onto the left wing. He took a seat cushion with him but did not think it was from his seat. He did not take a life vest. A few people fell in the water and he watched some others "dive" to get into the slide behind the wing. They did not make it and he had to help them back up onto the wing. A few passengers were throwing out vests from inside the airplane to those on the wing.

Ferries arrived quickly and he helped three people up onto the net of one of the boats. Only a few people got on the first ferry from the left wing. It had to back up

because it was compressing the 1L slide/raft. It eventually repositioned to the end of the left wing. A helicopter arrived and a rescue diver jumped in to help a woman who was struggling in the water. A smaller boat (named *Marine 1*) arrived and had an easier time maneuvering. It came to the front of the left wing and he was the second to last person to board it. The water was knee deep when he boarded. He estimated the boat rescued a maximum of 12 passengers – all from the left wing. There were still passengers on the slide behind the left wing when they departed. The boat did not pick anyone up from the right wing before taking them to a triage area set up on a dinner cruise ferry on the NY side of the river. His only injury was a swollen elbow from “whacking” it at some point. He took a bus to the Crowne Plaza at LGA and eventually took the 2200 flight to CLT later that evening.

Male Passenger - Seat 16D

Age: 46 Hgt: 6'4" Wgt: 210 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 6, 2009 via telephone. He flew three or four times a week for business and was traveling alone on the accident flight. He “was sure” the flight attendants performed a safety demonstration but did not specifically remember it. He did not look at the safety information card.

During climb there was an "explosion" on the left side of airplane. He felt the airplane “shimmy” and it immediately lost thrust. The pilot made a slow banking turn and he thought they were going to land at one of the area airports. Some smoke came into the cabin. He did not know that both engines were out. The flight attendants in the front of the airplane stayed in their jumpseats but the aft flight attendant got up to secure something in the galley. The airplane began to lose altitude and a short time later the pilot announced to “brace for impact,” which shocked him. He got into a crash position by crossing his arms on the seat in front of him and resting his head on his arms. Just before impact someone yelled to “get the windows ready.”

When the airplane hit he was surprised they were in water. The lights went out and the water sprayed on his head. He was thrown forward against the seat in front of him and received a "good knot and a scratch" on the top of his head from striking the tray table. He got up into the aisle and moved forward to the overwing exits. He did not take his seat cushion or a life vest, although he was aware life vests were under his seat. He was “all about getting off the airplane as quickly as possible.” He described his evacuation as similar to getting out of a crowded subway car. He did not notice any emergency lights. A woman had brought the overwing exit inside the airplane and passengers screamed at her to throw it out. She did and he exited onto the left wing. Several passengers jumped into the water. There was an inflatable slide behind the wing and a woman got on it. He tried to reach out to her so that he could pull the slide closer for others but she would not reach out to him. He moved onto the flap behind the wing to get closer and fell into the water, scraping his hip. He was completely wet but managed to get back onto the wing.

A ferry arrived but he knew it would be difficult to get on board because the deck was too high. They lowered a metal/rubber net and a woman got on, but really struggled to climb up. People on the ferry grabbed her arms to get her up and dislocated her shoulder. The ferry had to continuously maneuver because of the current and almost crossed the 1L slide/raft. It was taking "way too long" to get people off the wing. Someone had thrown life vests in packages out to people on the wing. He got one of the packages, opened it, and put it over his head. He was unable to connect the waist strap because he did not have use of his fingers due to the cold. He did not inflate it. A smaller fire department boat came and removed most of the people off the wing. It took the women first and the bow filled up. He asked the captain if he could get on the stern and he said that they were fully loaded. Two other men immediately dove onto the stern and the captain then allowed him to board on the stern as well. They were taken to the NY side of the river and disembarked onto a dinner ferry. Other than his head and hip injuries he was hypothermic but declined to go to a hospital. His fingers were numb for about a month afterward.

Male Passenger - Seat 16E

Age: 40 Hgt: 5'10" Wgt: 180 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 26, 2009 via telephone. He usually flew to New York on a weekly basis for business and was traveling alone on the accident flight. He was reading the newspaper and did not remember the flight attendants performing a safety demonstration. He did not look at the safety information card prior to the flight.

While the airplane was climbing she heard a "muffled bang" and the airplane shuddered. He saw a hazy smoke in the forward part of the cabin. It immediately got quiet and he believed the air conditioning system had shut off. The airplane banked to the left and he realized that there was no engine noise. They were over the river and losing altitude and he concluded they would not make it back to LGA or EWR. He recalled a woman four or five rows behind him who was in an overhead bin and the flight attendant telling her to sit down. Someone on the left side of the airplane said that they had "hit something" and that they had seen a "shadow" go by their window. Someone also said the left engine was on fire. He could not see anything out of the right side window because he was over the wing. He believed that he pulled out the safety information card and looked at the brace positions. One position was to bend over and grab your knees. Another position was to put your arms on the seat in front of you and put your head between your arms. When the captain announced "this is your captain, brace for impact" he chose the second position because he did not like the idea of the seat in front of him possibly crushing him if he was bent over. The flight attendants were chanting "brace!"

The impact took longer than he expected and he looked up just as they were impacting the water. The impact was "not terribly violent" but he was thrown around a little because he was not completely braced. The airplane stopped and he stood up. The

overwing exits on both sides were already open. There was a “steady stream” of people leaving from the exits. One woman tried to get in the overhead bins and was “shouted down.” He did not see any emergency lights. When he got to the right side overwing exits he realized he did not have a flotation device and all of the seat cushions had already been taken. In retrospect he wished that the flight crew or flight attendants had reminded them to take them or instructed them to don the life vests in the last few minutes of flight. He knew the life vests were under the seats, he “just didn’t think of it” because he was trying to get out of the airplane. He was a good swimmer and did not think about the cold water and the effect it would have on him if he needed to swim. When he got out on the wing his feet were still dry and the wing was above the water. He helped several men turn over an upside down raft and then moved out further on the wing to make room for others. He remembered looking back at one point and seeing that the wing was so full that people could not get out of the exits easily. He recalled the woman with the young baby being one of them. As the wing sank further and further people could no longer see the edge and were less willing to move. Those without flotation equipment held onto one another.

The first ferry to arrive came to the right wing. The driver at first was “obsessed with getting the baby before anyone else” but the passengers told him they could not pass the baby to him without endangering it. The baby was in the raft with its mother and was safe. Eventually he let others board. He had to jump in the water and swim a few strokes to get up on the platform and board. They were taken to Pier 78 on the NY side of the river. He was not injured and was not taken to a hospital

Male Passenger - Seat 16F

Age: 26 Hgt: 5’5” Wgt: 175 lbs.

Exit Used: Right Overwing/Door 1R

Although this passenger returned a passenger questionnaire, he could not be reached for an interview. (See Attachment 8)

Male Passenger - Seat 17A

Age: 38 Hgt: 6’5” Wgt: 195 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 23, 2009 via telephone. He flew approximately twice per week and was traveling alone on the accident flight. He fell asleep immediately after boarding and did not read the safety information card or remember the flight attendants’ safety demonstration.

He woke up when he heard a loud explosion. He looked out the window and saw fire coming from the left engine. A “really intense” smell of fuel came into the cabin. The airplane made a hard left bank and he thought they would be going back to the airport to get another airplane. The airplane was descending quickly over the Hudson River and he had an idea that they would be landing in the water. About thirty seconds before impact the captain said to “brace for impact.” He and passenger 17B got their cell

phones and quickly tried to dial or text message their families. He put his laptop under the seat in front of him and located his desired exit – the right-side overwing exits. He saw the water coming up quickly and bent over as best he could. He tried to watch out the window until the very last moment. He tightened his seatbelt, put his head on his knees, and wrapped his arms around his legs. He could not bend over straight ahead because he was too tall and had to bend over toward passenger 17B.

He compared the impact to a speedboat hitting the wake of another boat “very hard.” The airplane stopped and water immediately started pouring in the side at foot level. It got up to his knees before he could get out of his seat. He unbuckled his seatbelt and “sloshed” his way to the aisle. He never saw or heard anything from the flight attendants. He remembered to take his seat cushion and chose that over his life vest because he was concerned with getting out quickly. While he was moving up the aisle the man in front of him turned around and took his seat cushion from him. Passenger 17A took another one from a nearby seat. He saw several people climbing over seatbacks “like monkeys.” He did not see any emergency lights. When he got to the right side overwing exits there were already 30-40 people on the wing and they were “backed up to the door.” He exited and noticed that the wing was slippery from the water and fuel. He looked to his right and he saw a slide that was not fully inflated “sticking straight up in the air.” He and another man “wrestled it” and allowed it to inflate. Other passengers got on it to stabilize it and then he got on. Eventually there were approximately 15 passengers on the slide, including a very young child. He did not believe the slide was tethered to the airplane and passenger 15A used his right arm to make sure they would not float away. Several people began taking pictures with cameras and cellular phones

Ferries arrived and a massive NY Waterway ferry approached his slide. It dropped a rubber “Jacob’s ladder” and the women and children boarded first, followed by those who were the wettest. They were taken to the NJ ferry terminal. He was not injured and not wet above his knees. They were given the option to go to a hospital which he declined. He was bussed to a senior center where his wife picked him up. He later noted that he had a small cut on his forehead (near his hairline) that might have been from striking something during the impact.

Male Passenger - Seat 17B

Age: 32 Hgt: 6’0” Wgt: 192 lbs.

Exit Used: Right Overwing/Door 1R

Jason Fedok (NTSB) conducted the interview on February 24, 2009 via telephone. He flew approximately once a week for business. He was traveling alone on the accident flight but recognized passenger 14A while at the gate. After boarding he was listening to music and reading before closing his eyes to go to sleep. He did not remember the flight attendants doing a safety demonstration and he did not look at the safety information card.

After takeoff there was a “loud boom” that seemed to stop the momentum of the airplane. There was an immediate smell and passenger 17A said that the engine was on

fire. He looked out the window and saw flames coming from the left engine. The airplane made a left turn and was losing altitude. He saw passenger 17A get out his cell phone so he did the same and sent a text message to his wife. The captain said to “brace for impact.” He recalled from a book he had read that he needed to have his feet off the floor. He was worried about an explosion injuring them or getting mangled with the floor and seats. He put the heels of his shoes on the front edge of the seatpan and put his arms on the seat in front of him with his head tucked down. The woman next to him was panicked and he showed her how to brace. He did not hear any commands from the flight attendants. About 15 seconds before impact he yelled “whoever is by the door, get ready!”

The airplane “slammed” into the water and he was thrust forward in his seat and then “jolted to the right” when the airplane turned sharply. He knew his closest exit was behind him so he looked back and did not see any light. He looked forward and saw daylight as the doors popped open. He was still seated and he reached under his seat to get out his life vest. He was unable to open the pouch because the Velcro was “too sticky.” He tried a second time and was still unable to undo the Velcro closure. It was taking too long so he ripped up his seat cushion and got into the aisle. The water was at his feet. There were a couple of people going over the seats but he told people not to push and that they would all get out. He did not remember seeing any emergency lights.

He went up the aisle to the overwing exits and exited through the right side in row 10. He saw a slide behind the wing that was upside down. Passenger 14A and another man were trying to flip it over. He was freezing and water was coming over the top of the wing and he knew the situation was not good. He saw the slide/raft at door 1R and there was room in it. He turned around and went back to the overwing exits telling other passengers that there was room in the front right slide/raft. Almost everyone was out of the airplane and he estimated that he spent less than 30 seconds on the wing. He went inside, walked up the aisle, and saw the captain in the cockpit doorway. The captain instructed him not to jump into the slide/raft, just slide in. He believed several other passengers followed him and got into the slide/raft after he did. The ferries arrived and he yelled for them to get the people on the wings first. There was a flight attendant with an injured leg in the slide/raft who was upset.

When a ferry arrived they had women and children board first. When he boarded there were five or six people left on the raft. The helicopter arrived as he was boarding which made it more difficult to climb up. The ferry took them to the NY side of the river. He was at the same location as the captain. His only injury was a “knot” on the back left side of his head where he believed something struck him during the impact. He was not transported to a hospital.

Female Passenger - Seat 17C

Age: 57 Hgt: 5'10" Wgt: 160 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on March 2, 2009 via telephone. She had flown a lot in the past and approximately once per week since October 2008. She was traveling with passengers 18C and 19C on the accident flight. She did not listen to much of the flight attendants' safety demonstration nor did she look at the safety information card.

She was one of the last passengers to board the airplane. An elderly woman boarded right behind her. After takeoff she had her eyes closed and was trying to sleep when the airplane hit turbulence. It was as if the airplane stopped moving forward. She looked out the window and the engine "blew." Passenger 17A said the engine was on fire. The airplane turned and she thought they were going back to LGA. Some passengers took out cell phones and made calls or sent text messages. The pilot announced to "brace for impact." She did not know how to brace but put her hands on the seat in front of her and bent her head down. She thought they still had one engine and might have a hard landing at LGA and the pilot was preparing them for that. She did not hear any commands from the flight attendants.

The impact was "hard" but she had harder landings in the past. The airplane turned slightly and came to a stop. She unbuckled her seatbelt and stood up and passenger 18C gently pushed her forward toward the overwing exits. She was "in shock." She heard someone in the back yelling to go forward but did not remember water inside the airplane. When she got to the right side overwing exit a man helped her onto the wing. It was then that she first realized they had landed in the water. Because of that, she did not have a seat cushion or life vest. She estimated she was between the 12th and 15th person out on the right wing. She "inched down" the wing with the other passengers to make room for more people. She saw a slide behind the wing but it was too far away to get into. The water was about knee deep and she almost slipped but a man behind her caught her. Eventually some men pulled the slide closer to the wing and she was able to get into it.

The ferries were already on their way when she got onto the wing. One came to the slide and they helped the women and children up first. There were about 20 people on the slide. A woman with a baby went up the cargo net first. They were able to climb directly onto the net from the slide without getting into the water. When she got on board the ferry someone told her it had taken only 12 minutes to get her on board. There were still passengers on the wing when she boarded the ferry. They were taken to a pier in Weehawken on the NJ side of the river. She was not injured but was transported to the hospital to obtain her heart medication. The next day she reported being "bruised all over."

Female Passenger - Seat 17D

Age: 30 Hgt: 5'10" Wgt: 130 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 10, 2009 via telephone. She flew every month for business. In addition to checking a bag, she carried a plastic shopping bag on board which she stowed in an overhead bin near rows 23-25. She remembered the flight attendants performing a safety demonstration but did not watch. She did not look at the safety information card.

She was reading a magazine after takeoff and heard a "boom." It got quiet. She thought they lost one engine and may have lost the other later. There was an older woman seated in the window seat with her adult daughter in the middle seat. There was a burnt smell and smoke or haze in the cabin. Passenger 17A said "we're on fire." The captain made an announcement to "brace for impact." Passengers crouched and put their heads down. She wanted to brace but she also wanted to look out the window to see where they were. She struggled to get into what she felt was an adequate brace position. The impact was "not as hard as expected." She took her seatbelt off and got her cell phone and wallet. She got into the center aisle and was unable to move forward due to the queue of passengers. She retrieved her coat and heard people mentioning seat cushions, so she took hers off her seat. She did not think about a life vest. Water was rushing in at her feet and she could smell jet fuel. People were "nudging" each other forward but not pushing. She believed there were floor lights on beneath the water, which was up to her knees.

She exited from the right overwing exits. There was an inflatable raft "hung up" behind the wing. She eventually ended up in the raft and used her cell phone to call her family. She saw rescue boats approaching. Ferries came first and started taking people off the wings. A "Coast Guard boat" came later and was lower to the water. It loaded people from the raft. There were seven people on the boat including her. The boat's engine failed and they had to be taken by another boat to a pier on the NY side of the river. She was "ushered to an ambulance" and taken to Beth Israel Hospital. She believed she was the only passenger to be taken there. She was cold but uninjured. They checked her vital signs and warmed her up. She later called a friend who picked her up from the hospital.

Female Passenger - Seat 17E (assigned 17F)

Age: 58 Hgt: 5'4½" Wgt: 135 lbs.

Exit Used: Door 1R

Female Passenger - Seat 17F (assigned 17E)

Age: 85 Hgt: 5'7" Wgt: 136 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 18, 2009 via telephone. Passenger 17E flew approximately every 2-3 months. She was traveling with her mother who was seated in 17F. She spoke for her mother during the interview.

They arrived at the airport early and had lunch. When they got to the gate the flight had already started boarding. The gate agent asked if they should stop boarding other passengers or if they would wait and be boarded last. They chose to wait. Passenger 17F could not walk without the assistance of a walker, which she used until the bottom of the jetway. It was taken and stowed beneath the airplane. A flight attendant assisted her down the aisle to her seat. She did not require a wheelchair to board.

Passenger 17E watched some of the flight attendant safety demonstration. She did not look at the safety information card. The flight took off at 1526. Not long after they heard a “loud boom” followed by an “eerie silence.” There were no engine sounds. The pilot told them to “prepare for an emergency landing.” She looked out the windows and saw buildings. She could not see the water. The pilot said to “prepare for impact.” She and her mother grabbed each other and bent over with their heads near their knees. The impact was “not very violent” but they were “bounced around.” They did not strike the seats in front of them. Passenger 17E had glasses on the top of her head which were not dislodged or damaged.

When the airplane stopped she was “totally shocked” that they were in the river. People did not panic but said “go, go, go” to get others moving. The exits opened right away. She and her mother stood in their row for quite a while because she could not figure out how to get her mother into the aisle. She recalled one woman running over the seats going forward. She felt water coming in and it got up to their knees. When most of the passengers had exited she asked “please help me with my mother” and a man helped her into the aisle. She remembered to take two seat cushions (from seats 17D and 17E) but did not realize there were life vests under the seats. When they got to the overwing exits someone told them to go to the front which was empty. Her mother could walk by herself while holding onto the seatbacks. They did not remember seeing any emergency lights. A flight attendant came back near the overwing exit rows and said “come with me.” She helped her mother to the 1R door and eased her into the slide/raft. She got in as well and they saw the ferries arriving. An injured flight attendant got in the slide/raft and men tried to stop her leg from bleeding. They tried to detach the slide/raft from the airplane. One man tried using his teeth to cut the cord. Eventually someone from the ferry threw a knife down to them.

There was a big ladder to climb up. The injured flight attendant went first then men threw down a big rope which they tied around her mother’s waist. The men hoisted her up to the deck. Passenger 17E climbed the ladder next. They were shivering and a man gave them his coat and allowed them to use his cell phone. They were taken to the NY ferry terminal where she, by coincidence, saw her husband’s doctor. He examined both of them but they were not injured. They were transported to Roosevelt Hospital for observation and released the same day. Later that night on their drive home her mother developed terrible leg cramps and they had to take her to the hospital for tests.

Female Passenger - Seat 18A

Age: 40 Hgt: 5'7" Wgt: 120 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 23, 2009 via telephone. She flew approximately once every three weeks and was not traveling with anyone on the accident flight. After boarding she began a discussion with passenger 18B and did not recall the flight attendants performing a safety demonstration. She did not look at the safety information card.

After takeoff she heard the airplane hit something and asked her seatmate "what was that?" It got very quiet and a "bad burning smell" came into the cabin. She asked him if they were "going down." Passenger 18C said he thought they might be returning to the airport. The pilot calmly said to "brace for impact." The aft flight attendant was shouting "tuck and brace." She pulled down the window shade but passenger 18B asked her to keep it up so he could look out. She braced herself by putting her head in her lap and her hands over her head.

The impact was "one hit" that was not that bad. The water was at her ankles right away. She saw a couple of people going over the seats. A man said to get a seat cushion and she took the one from 18B. She knew there were life vests but was not sure where they were. She went forward up the aisle to the overwing exit rows. The water got above her knees. She went out the right side overwing exit. She saw men trying to stabilize a raft behind the wing. They put women and children in the raft first. She got in and held a young baby for a while. Ferries arrived and threw life preservers to them. She put one on. The ferry put down a grid and she was able to climb aboard. The ferry took them to Arthur's Landing restaurant the NJ side of the river. She was transported to Jersey City Medical Center because she was "banged up" and had twisted her knee while climbing aboard the ferry. She also sustained a bruise to the top of her head which she believed was from impacting the seat in front of her during impact.

Male Passenger - Seat 18B

Age: 41 Hgt: 5'9" Wgt: 165 lbs.

Exit Used: Right Overwing/Door 1L

Jason Fedok (NTSB) conducted the interview on February 19, 2009 via telephone. He normally flew on a monthly basis, usually internationally. He was traveling with passenger 10E. After boarding, the flight attendants performed a safety demonstration but he did not watch it, nor did he look at the safety information card.

After takeoff he was talking to passenger 18A and the "whole plane started shaking." She told him that flames were coming out of the left engine. He told her they could fly on just one engine. The airplane turned and he thought they might be going to EWR. It got really quiet and they were descending. He could see Manhattan out the left window. He smelled an "electrical burning" odor. There was a flight attendant out of her

seat in the back who was looking through an overhead bin. The captain made an announcement to “brace for impact” and he heard the flight attendants chanting “heads down, cover your head, feet flat on the floor!” Passenger 18A had shut the window shade and he asked her to open it so he could see and she did. He put his hands over his head and “tucked down” but turned his head to the side so he could see out the window. He knew they would be landing in the water.

He described the impact as a “pretty hard hit” but he did not strike anything around him. What surprised him was how quickly they stopped. The lights stayed on. Passenger 18C was “gone” immediately. Passenger 18B got out of his seat and did not take his seat cushion or life vest. His only thought was to get out of the airplane as quickly as possible. Passenger 18A held on to the back of his shirt and he told her to stay behind him. The passengers were relatively calm and stayed focused on getting out quickly. He saw a few people climbing over seats. Eventually someone let him into the aisle and passenger 18A got in behind him. He got to row 11 and went to the right and exited onto the wing. When he got to the exit the water was between his feet and his knees. It was not much deeper on the wing. He moved out 10-12 feet and was looking forward when he saw a flight attendant with “short hair” appear at door 1R and yell that there was room in the slide/rafts if anyone could get there. He walked back to the fuselage and looked in the overwing exit. There was no one in the back but he saw the captain and first officer near the cockpit. He thought that if they were still in the airplane he would have time to get up front. He reentered the airplane and exited into the 1L slide/raft. It was “relatively full.” The flight attendants threw out flotation devices but he did not take one. A flight attendant and the first officer got into the slide/raft. The captain pointed at passenger 18B and told him “you are in charge of this raft. I want an accurate head count.” The first officer suggested he point to people and they call out a sequential number. When the captain appeared at the door again he reported that there were 27 people in the slide/raft. The captain went back inside briefly but then got into the 1L slide/raft and sat next to passenger 18B. He thanked him for saving his life and the captain responded, “you’re welcome.” He did not say much else but the first officer told someone they had hit birds and there was no way to avoid them. They remained attached to the airplane for a while then got a knife from the ferry to cut themselves free.

The ferries arrived and rescued people from the water first, followed by those on the wings, and then the people in the rafts. A ferry ran into their raft a couple of times while trying to maintain position in the current. He was the last person out of the 1L raft except for the captain. Just before he climbed up the “plastic rope ladder” he handed up a flight attendant’s shoe and glasses. Men on the ferry grabbed passengers as they went up the ladder and helped them onto the ferry. When he got on board he was ushered to a heated area on the upper deck. The flight crew stayed to themselves. They were taken to the NY side of the river and were well taken care of by the emergency responders. He was not injured and did not go to a hospital.

Male Passenger - Seat 18C

Age: 31 Hgt: 6'4" Wgt: 200 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 6, 2009 via telephone. He had flown a lot in the past and on a weekly basis since November 2008. He was traveling with passengers 17C and 19C on the accident flight. He did not watch the flight attendants' safety demonstration nor did he look at the safety information card.

As the airplane was climbing it hit a pocket of turbulence just prior to a "loud bang" on the left side of the airplane. The airplane began to turn and he thought they were returning to LGA. Some smoke came into the cabin and someone said the left engine was on fire. Someone behind him tried to retrieve a fire extinguisher. The cabin was calm and there was no engine noise, but he did not realize that at the time. The pilot announced to "brace for impact" and he put his hands over his head and bent over. He noticed other passengers having difficulty figuring out what to do to brace.

During the impact he remembered being sprayed with water. When the airplane stopped he took his seatbelt off and moved up the aisle to the overwing exits. On his way out he took a seat cushion from an unoccupied seat. He got out onto the left wing and helped a few others out behind him. He was standing with his back against the fuselage when he heard someone say "here take these." Passenger 26F handed him some life vests in pouches. He gave them to other passengers and went back inside to help retrieve more vests. He did not realize they were under the seat but passenger 26F told him where to find them. They passed out as many as they could find to people on the left wing. Passenger 26F was further aft and got cold because he was in more water so they switched positions for a time. He kept handing the vests to passenger 19C as fast as he could. He realized he was only distributing them on the left wing and threw a few out on the right wing as well. He did not recall any crew members passing out any life vests. He remembered that the captain came down the aisle several times. He told them that they had to evacuate so both he and passenger 26F exited onto the left wing. The water was thigh deep on the wing and a similar depth inside airplane at the overwing exits.

His feet were frozen and he was shaking because he was so cold. His hands were "like ice." There was a ferry out near the end of the wing attempting to help passengers. A small red boat came to the wing and women got on first. When the bow of the boat was full he got on the stern with passenger 26F. They were among the last two to board that boat. He saw a woman clinging to the cargo net of the ferry holding a seat cushion. She could not climb up and a helicopter dropped a diver to help her. His boat had to navigate around the diver and they were taken to the NY side of the river. They arrived at a pier with a banquet hall or restaurant. They used tablecloths and napkins to try and warm up because it took a while for the Red Cross to provide clothing. He was not injured and declined to go to a hospital.

Male Passenger - Seat 18D**Age: 23 Hgt: 6'3" Wgt: 180 lbs.****Exit Used: Right Overwing**

Jason Fedok (NTSB) conducted the interview on March 17, 2009 via telephone. He flew approximately five or six times a year and was traveling with his girlfriend (passenger 18E) on the accident flight. He did not pay much attention to the flight attendants' safety demonstration nor did he look at the safety information card.

During climb there was a "really loud bang" that shook the airplane. There was a light haze in the cabin and he smelled a fire. Someone in the back jumped up and said "there's a fire!" The aft flight attendant calmed the passenger down. The airplane made a hard left turn and he thought they were going back to LGA. He could see they were over water after the captain announced "ladies and gentlemen, brace for impact." Passenger 18E leaned into him and he tried to cover her.

The impact was "hard" but not as bad as he thought it would be. They did not hit the seats in front of them. The airplane stopped and they got up and stood in the aisle. The overwing exits were opened immediately. They moved up the aisle and took some seat cushions from empty seats but did not think to get life vests. He did not remember seeing any emergency lights. They exited onto the right wing and a family of four was right behind them. The water was up to their ankles and he saw ferries coming to rescue them. Passengers were yelling for people in the airplane to go forward to the front slide/rafts. Passenger 18E took the baby and helped him into the slide behind the wing with the mother.

The first ferry to arrive went to the front of the right wing. People threw orange life preservers from it and he and passenger 18E put them on. Another ferry also took people from the wing and the slide behind the wing. It was the same size as the first but it had a mesh ladder instead of a fixed, metal ladder like the first. People had more trouble climbing the mesh ladder. The water was up to his waist when a "little platform boat" arrived which he boarded with another man. They then transferred to the second ferry. They tried to use a rope to pull the slide closer to the ferry but it was attached to the airplane. After emptying the slide the ferry took him to the NJ side of the river. Passenger 18E stood on the wing with him for a while but when the water got higher also got into the slide. She eventually got onto a Coast Guard boat and was also transported to NJ. Passenger 18D was not injured but was transported to Christ Hospital as a precaution.

Female Passenger - Seat 18E**Age: 24 Hgt: 5'3" Wgt: 125 lbs.****Exit Used: Right Overwing**

Jason Fedok (NTSB) conducted the interview on February 27, 2009 via telephone. She flew "a couple of times" a year and was traveling with her boyfriend,

passenger 18D, on the accident flight. She “kind of listened” to the flight attendants’ safety demonstration but did not look at the safety information card.

After boarding she spoke briefly with passenger 18F and said hello to a mother with a young child seated behind her. She was reading a book during climb when she heard a "huge balloon popping." The airplane was "jostled." She knew that something was wrong but did not know that both engines were out. The pilot made a turn and she thought they were returning to the airport. He announced "brace for impact" and she thought that they might be making a hard landing. She braced herself by leaning into passenger 18D and he put his arm around her. She believed that he was sitting straight up. The flight attendants shouted for them to put their heads down between their legs. She did not know they were landing in the water.

The airplane hit "really hard" and she was jostled straight forward. She saw water rushing by the window and coming into the airplane. People were filing quickly up the aisle. She grabbed her seat cushion because she saw someone else get theirs. Passenger 18D also got his but neither took a life vest. They did not take any carry-on bags with them. When she got to the overwing exits the doors were already open. She exited onto the right wing with passenger 18D. She saw an inflated slide behind the wing but it appeared to be full. The mother with the baby came out right behind them and she helped get the baby into the raft. The baby was only wearing a cotton “onesie” and she was very concerned about it. A woman in the slide asked passenger 18D to go back into the airplane and get her purse but he told her he could not.

The ferries came immediately but had trouble maneuvering. The first ferry picked up several people and a “fishing boat” came and got more. She recalled a woman wearing a fur coat in the water with four carry-on bags who could not climb into the boat. The water got up to their waists. Passenger 18D boarded the ferry. She was one of the last people on the wing. She got picked up by a tiny Coast Guard boat and taken to a restaurant on the NJ side of the river. She was soaking wet from standing on the wing and helping people get out of water. She was not injured and did not go to a hospital. The next day she noticed she had bruises on her knees and a sore neck.

Male Passenger - Seat 18F

Age: 56 Ht: 5’11” Wgt: 155 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 18, 2009 via telephone. He flew weekly and estimated he had taken this same flight 250-300 times. He was traveling with passenger 26C. He went to sleep after boarding and did not remember whether the flight attendants performed a safety briefing. He did not look at the safety information card. He always counted the seatbacks to his closest exit and knew he was eight rows behind the overwing exits.

He was awoken by a “bang” from the engines. It got very quiet and he could tell they lost both engines because they were gliding. He was very familiar with NY airspace

and knew which way the airplane would turn to go to LGA or EWR. When it did not turn and they flew over the George Washington Bridge he knew it would be a water landing. There was a little smoke high in the cabin. He believed there were two flight attendants in the back opening overhead bins looking for a fire. The captain made an announcement to “brace for impact.” The cabin remained relatively calm. There was a young couple next to him who did not know how to brace and he showed them how by putting his forearms straight out on the seatback and his forehead on his forearms.

The impact felt like a “hard landing” and he was “surprised by how little effect it had on the passengers.” The airplane twisted to the left. He stood up immediately and could see all the way to first class. He got into the aisle but forgot both his seat cushion and life vest. He grabbed another seat cushion as he moved forward. The progress was “slow but steady.” One man to his left climbed over the seats to move forward faster but he decided against it. There were two people trying to retrieve items – a woman was trying to get a coat out of the overhead bin and a man was trying to get a computer bag from under a seat. Other passengers told them not to and they did not retrieve the items. He did not see any emergency lights on during his evacuation. When he got to the overwing exits, the left side was jammed with people while the right was clear so he went onto the right wing. There was a slide behind the wing and a couple of men were trying to get it straightened out. He got in the slide with several other people. It was attached to the airplane and he tried to find a way to disconnect it. He was trying to find a flap or release mechanism but the water was dark and he could not see well and his hand got very cold.

He saw a ferry coming and abandoned his effort to detach the slide. A woman with a baby came out on the wing and everyone was yelling for her to pass the baby into the slide. She would not let go of him. It took a “collective effort” to get them both into the slide. The mother and child were among the first to board the ferry. When it was his turn he could not climb well because he could not open or close his left hand. The deck hands had to pull him on board the “Major Keegan,” which he believed was the first ferry on-scene. They were taken to the NJ ferry terminal where the passengers were taken into a glass room where they brought in portable heaters. He was not injured and did not go to a hospital.

Male Passenger - Seat 19A

Age: 46 Hgt: 6’1” Wgt: 154

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 12, 2009 via telephone. Passenger 19A’s primary language was French and he understood and spoke limited English. He flew at least twice a year to Africa and occasionally to visit family in New York. He was traveling alone on the accident flight. He watched the flight attendants’ safety demonstration but only understood a little of what they said. He looked at the safety information card and understood most of it.

After the airplane landed in the water he exited onto the left wing. He did not take a seat cushion or life vest with him and followed others to the exit. He got wet and was taken by a boat to New Jersey. He reported that he was examined in an emergency room for chest and back pain and stayed there for 4 hours. He could not remember what the name of the hospital was.¹⁴ Two days later he went to a hospital in New York City and had an MRI. He also had bruising on his left leg but was not sure where it was from.

Male Passenger - Seat 19C

Age: 33 Hgt: 6'0" Wgt: 187 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on April 9, 2009 via telephone. He usually flew once every two or three weeks for business and had taken this same flight "for weeks." He was traveling with passenger 17C and 18C. He did not recall the flight attendants' safety demonstration nor did he look at the safety information card.

After takeoff he felt a little turbulence and then heard a "loud boom" that got his attention. He could see smoke going past the window and heard the engine "dying." Someone said that the left engine was on fire but he did not realize they had lost both engines. The airplane continued trying to climb for a short time then leveled out and began to turn to the left. Passengers were mostly calm and he thought they would return to LGA. There was a "trace" of smoke in the cabin and an odor of sulfur. The smoke was not heavy and dissipated quickly. The airplane began a gradual descent and he thought it would be a normal landing until the pilot announced to "brace for impact." He still thought they would make it to the runway but tightened his seatbelt and put his head between his legs to prepare for a hard landing. The flight attendants shouted for other passengers to "get down, brace!" He turned his head to look out the window to see how close they were to the ground. The water was coming up quickly and realized they would land in the water.

The impact occurred 5-10 seconds later and was "nothing." He had been in car accidents and hard landings that were worse. He saw the splash cover the windows and put his head down. He did not strike anything during the impact. When the airplane stopped he immediately felt water around his feet. He took his seatbelt off and stood up. It took a while to get into the aisle but he knew his closest exit was at the overwing rows. He saw the doors opened and followed others up the aisle. A few people climbed over seats to his left and right. People were saying "hurry, hurry" but they were not pushing. He did not remember seeing any emergency lights.

He grabbed a seat cushion and a life vest from a seat as he moved up the aisle. The water was about to shin level. He exited onto the wing through the left overwing exit. He believed that he and passenger 18C were the last people on the wing. He stayed near the overwing exits. A woman motioned to him that she did not have a flotation device and he gave her his life vest. Passenger 18C and another passenger were inside

¹⁴ None of the five New Jersey hospitals that received patients from flight 1549 could find any record of treatment of an individual with passenger 19A's name.

the cabin passing out life vests and he distributed them to the people on the wing. They continued doing that until the captain walked back in the cabin and told them they needed to get out onto the wing. They complied and waited for a ferry to rescue them. The first ferry picked up a few people but had trouble maneuvering in front of the wing. Later a smaller fire department tugboat arrived and came to the front of the wing. The women were boarded first. When it was his turn he got on board and helped two others after him. The water was up to about thigh height by then. He looked and saw people still in a raft behind the wing, but the wing itself was empty. The ferry took them to a dinner boat on the NY side of the river. He was not injured except for a small cut on his hand.

Male Passenger - Seat 19D

Age: 43 Hgt: 5'6" Wgt: 187 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on April 14, 2009 via telephone. He usually flew approximately three times per month and was traveling with passenger 25C on the accident flight. He fell asleep prior to takeoff and did not remember the flight attendants' safety demonstration nor did he look at the safety information card.

He awoke when he heard a "boom" from the left side of the airplane. He knew that they had lost an engine, but did not know they had lost both engines. He thought they would return to LGA. Someone shouted that the engine was on fire but he did not see it. The captain announced to "brace for impact" and he could see that they were over the river and going to land on it. He braced himself but thought that the impact was "much easier" than he expected and he was able to "hold himself" back from striking anything. He likened the impact to riding *Splash Mountain* at Walt Disney World.

After the airplane stopped water was "immediately" above his ankles. He was a little panicked and did not retrieve his life vest. He took his seat cushion instead and moved into the aisle. His nearest exit was at the overwing area but there were a lot of people in front of him. Someone in the back was shouting to go forward. When he arrived at the overwing exits he noticed there was no one in the front of the airplane so he continued up the aisle and got into the 1L slide/raft. When he tried to jump into the slide/raft and woman told him not to, but he ignored her and jumped in anyway. There was water in the bottom of the slide/raft and he got wet. The captain came to the door and threw him a locator beacon which he caught.

After a few minutes ferries began to arrive and they called for someone to throw down a knife to cut the slide/raft from the airplane. Everyone from the raft boarded a second ferry that took them to the NY side of the river. He was not injured and did not go to a hospital.

Female Passenger - Seat 19E (assigned 23B)
Age: 40 Hgt: 5'4" Wgt: 115 lbs.
Exit Used: Right Overwing

Male Passenger - Lap Child (19E)
Age: 9 mo. Hgt: 2'5" Wgt: 23 lbs.
Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on January 22, 2009 via telephone. Passenger 19E was traveling with her family. Her 9-month old son was seated on her lap. Her husband was seated in 23B. Her 4-year old daughter was assigned to sit in 23E but moved to 23A to sit next to her father. She stated that she usually bought a seat for her son but did not for this flight.

During boarding she learned that the family had been separated. She spoke with a flight attendant about switching seats while she was unpacking her things but the people around her husband would not move. She described the boarding process as "chaotic." The man seated in 19F made her feel more comfortable by telling her that he was a father of five children. The man in 19D appeared to be taking a nap. She was waiting for a flight attendant to come by and give her a seatbelt to strap the baby in on her lap but they did not. She also did not remember the flight attendants doing a safety briefing or coming through the cabin to check passenger seatbelts. She stated that she "always" read the safety information card but there was not one in the seat pocket in front of her. She was surprised when the airplane began to roll for takeoff because the flight crew had not made any announcements as they usually do.

After flying for a short while she felt the right engine "shake" and there was a "clunk" sound. The passenger in 19F said, "oops, that's an engine problem." He told her they would be okay. She also remembered hearing an "explosion on the left side of the airplane, but could not remember if it happened before or after the "clunk" sound. The pilot began to turn the airplane around. Passenger 19F was talking to her baby and they had a "peaceful descent." The pilot said "brace for impact" and the man asked her if he could brace her son for her. He "seemed like he was there to do that" for her and "knew what he was doing" so she gave him her son. The flight attendants were saying "duck and cover" so she put her head between her legs and covered her head with her hands. About 10 or 20 seconds later she felt a "very strong impact" that did not last a long time.

The next thing she remembered she "found [herself] on the other side of the aisle. Passenger 19F handed her crying son to her and "disappeared." She was not able to move into the aisle so she began crawling over the seatbacks while carrying her son. She went forward because it seemed like "the fastest way out." She crawled over about five rows and stopped. She did not remember seeing any emergency lights. Her inclination was to get out on the right side of the airplane. Someone was trying to get a big bag down and someone else forcefully told them to "leave that here." She tried to cross the aisle but said it was a "stampede." She made eye contact with a man who saw her baby and asked why she was not going to the exit. She said she could not get through so he

put her in a “bear hug.” She closed her eyes and let him guide her to the exit. When she got there she waited for her husband and daughter. She made eye contact with her husband and wanted him to go out the same exit she did.

She exited onto the right wing and the cold water was almost to her waist. Most of the people were already on a raft behind the wing. She started screaming because she did not know what to do with her children. One woman (whom she later learned was seated in 26D) asked to take her daughter and she agreed. People were telling her to throw her baby to them in the raft but she refused. Eventually she was able to hand him to someone to get him into the raft and she followed. Her daughter was calm in passenger 26D’s arms. There was no room for her husband and he had to climb onto a ferry. She later had to get back on the wing and climbed aboard the ferry using a hard rubber tire-type device. Her baby was handed to people on the same boat.

The ferry took them to the NJ side of the river and the family was transported to Jersey City Medical Center to be examined. Her husband had a bruised foot and she had hit her head. She was given an MRI but was not injured. Her children were not injured. She did not think about getting a life vest or a seat cushion. She “naively” thought that she might be given one at the exit.

On February 12, 2009, passenger 19E called Jason Fedok (NTSB) and reported that she recalled additional information. After passenger 19F had handed her son to her, she turned around and looked for her husband and daughter. While looking back into the cabin she saw the aft flight attendant extinguishing a fire on the right side of the airplane with a fire extinguisher. She also remembered a confrontation between a woman who was retrieving a bag from an overhead bin and a man who forcefully made her leave it behind.

Male Passenger - Seat 19F

Age: 44 Hgt: 6’1” Wgt: 180 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on February 4, 2009 via telephone. He flew approximately 150 flights every year. He was standby for the flight and got the last seat available. Boarding was unremarkable. He was seated next to a woman with a lap child. She was distressed because she was not able to be reseated with her husband. Passenger 19F attempted to calm her and her baby by speaking and playing with them. He remembered a safety briefing but did not watch it as he had been “desensitized” over the years and “knew it well.” He did not look at the safety information card but knew his closest exit was the overwing exit on the right side.

Takeoff was normal. A few minutes later the right engine had a “failure.” He saw a “massive amount of discharge coming out of the right engine.” He saw the engine “flame out” and the airplane went into a big, banking turn. There was some anxiety in the cabin and the woman next to him was understandably distraught. He had looked out his window and saw they were going to land in the water. When it came time to brace for

impact he asked her if he could hold her baby and she agreed. He put the baby to his chest, put “one knee up” on the seatback in front of him, and leaned back into his seat so he would not crush the child on impact. When they hit the water he remembered that he did flail forward but did not strike the seat in front of him nor was the baby injured. In fact, the baby “did not even whimper” and he was able to hold him the entire time.

After a second of shock there was “pandemonium” and “chaos” in the cabin. He grabbed the woman in 19E who was still leaning over. She released her seatbelt and stood up. He pressed the baby into her arms and, seeing that the aisle was full, “sent her over the seats going forward on the right side.” He stated that he lost sight of her after she went over seat 18E. He remembered to take his seat cushion with him before getting into the aisle, but said a majority of the passengers had nothing at all. He did not see anyone with a life vest during the evacuation, nor did he think to retrieve his. The water was ankle deep within seconds. At some point it got deeper because he was wet up to his thighs. There were some people pushing and others trying to retrieve carry-on bags. He and several other passengers took charge and made a “big concerted effort to get people moving as fast as possible.”

He went forward up the aisle. When he got to the overwing exits the entire aisle to the front of the cabin was completely clear. He continued forward and saw the captain and at least one flight attendant in the forward galley. He remembered seeing the “lighted floor tape” in the aisle as he moved forward. He exited from door 1L and got into a slide/raft. He believed the first ferry on-scene came to his raft. It was a two-story ferry. Within minutes there were multiple ferries. It took the ferry captain some time to maneuver the floating ferry with the floating airplane and at one point pinched the slide/raft between the ferry and the plane. The boat dropped a “canvas ladder” and he had no trouble using it. There were some older women that required assistance from below. He did not have to get into the river to use it. The ferry took them to the Weehawken ferry terminal in NJ. He was evaluated by EMTs but was not injured. He was not transported to a hospital.

Male Passenger - Seat 20A

Age: 38 Hgt: 5’11” Wgt: 194 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 11, 2009 via telephone. He was traveling with two coworkers who were seated in 11F and 3A. He did not watch the safety demonstration or look at the safety information card.

After takeoff he felt an impact and heard a “series of loud thumps.” It felt like moderate turbulence. He saw fire coming out of the left engine. The pilot veered sharply to the left but seemed to have good control of the airplane. He smelled a burning odor. The pilot made an announcement to “prepare for impact” and the flight attendants began shouting instructions. He complied and bent over and lowered his head but wanted to see where they were so he looked out the window. He saw they were over the river and only a few hundred feet above the water. He put his head down as far as he could and clasped

his hands behind his head. The impact was “a lot softer then [he] thought.” The airplane stopped quickly and “the lights came on.” (He believed it was the normal overhead lighting.) A plastic package approximately 7-8 inches long and 5 inches thick “fell” on him during the impact. He picked it up and examined it for a moment. He thought it might be his life vest but was not sure and dropped it. He unbuckled his seatbelt and stood up. Water was immediately at his feet and was soon up to his knees.

He got to the aisle and there seemed to be a “bottleneck” around row 11 and the aisle was not moving quickly. He heard someone in the back say “go over the seats” and saw someone else climbing over the seatbacks. He got up on the seats around row 20 or 19 and went up the left side of the airplane. After a few rows he realized he did not have flotation equipment and grabbed a seat cushion from a seat. He carried it with him as he climbed over the seats. He did not remember seeing the left side overwing exits. Once he got past the bottleneck, the aisle was “totally clear” and there was no water on the floor. He got back into the aisle and continued forward. He saw F/A ‘C’ beckoning for people to come forward. She pointed him out the 1R door and he slid into the slide/raft.

He estimated that the raft was about 1/3 full but quite a few people came in after him, including a “wheelchair passenger” and the injured flight attendant. He was not injured other than a few scratches and bruises. A NY Waterway ferry took him to the NY side of the river and he was not transported to a hospital.

Male Passenger - Seat 20B

Age: 24 Hgt: 6’0” Wgt: 160 lbs.

Exit Used: Left Overwing/Door 1L

Jason Fedok (NTSB) conducted the interview on February 21, 2009 via telephone. He flew about once or twice a year and was traveling by himself on the accident flight. The flight was delayed but there was nothing unusual about the boarding process. He was reading a book, but believed the flight attendants performed a safety demonstration. He did not look at the safety information card.

He knew there was something wrong after takeoff but did not know how bad it was. The pilot made a P/A announcement and he braced himself for impact. When they hit the water, his seatbelt kept him in his seat, but his back and ribs contacted the armrests. He was “soaked” right away. There were a lot of people trying to go to the back. He knew that was where his closest exit was, but people could not get out in the back. The water was up to his waist. He climbed over the seatbacks on the left side of the airplane until he reached the overwing exit. He did not take a seat cushion or life vest with him. He got out on the left wing. He saw a slide behind the left wing that was floating away but he could not get on it. He was very cold and wet and decided to go back inside the airplane. It was “pretty empty” inside, but he saw the captain “still doing his rounds.” He did not see any emergency lights. He went over more seatbacks and eventually exited into the 1L slide/raft. The captain and first officer got on the slide/raft after he did.

A ferry came and took them to the NY side of the river. They were given triage tags and new clothes. He was transported to St. Vincent's Hospital to have his ribs and back examined. His ribs were bruised and his back had "whiplash" injuries.

Female Passenger - Seat 20C

Age: 64 Hgt: 5'5" Wgt: 200

Exit Used: Door 1L

Jason Fedok (NTSB) and David Lefrancq (Airbus) conducted the interview on January 22, 2009 via telephone. She had been taking this same flight every other Thursday for the past year. Boarding was at a different gate than normal and was delayed. She watched the safety briefing and looked at the safety information card prior to the flight. She thought that her closest exits were over the wings.

A very short time after takeoff she heard a "loud boom" and felt a "short jolt." She thought it came from the left side of the airplane. She knew it was not a normal sound. She heard the engine spool down and it got very quiet. She smelled smoke and the flight attendant thought there was a fire. She thought the flight attendant got up to get a fire extinguisher. The smell subsided after a few seconds. The plane banked sharply to the left. When the airplane passed the George Washington Bridge she knew they were low. A few seconds later she heard an announcement "This is your captain. Brace for impact."

The flight attendant shouted "feet flat, heads down" and she complied. The impact was a "really strong hit" and within two seconds water was up to her knees. The passengers at the overwing exits opened them within seconds. Some people tried to go to the back but the rear was filled with water and someone was saying "go to the wings!" Her shawl had fallen off and gotten wet. It wrapped around her feet and she spent a short time untangling it. She went forward up the aisle. She did not notice any emergency lights. Some of the people behind her were up to their waist in water.

There were already a lot of people on the wing when she got there. The flight attendants in the front were telling passengers to come forward, so she did. She was wearing "Crocs" shoes and had lost them at some point. She was walking on things in the aisle which hampered her ability to move as quickly as she wanted. She had grabbed her seat cushion and had attempted to retrieve the life vest but water was already under her seat and she could not tell what she was grabbing. The flight attendants were sending people out both sides and she believed she saw the flight crew as well. She hesitated at door 1R and the flight attendant told her to jump in. There was about 10 inches of freezing water in it. The flight attendants began inflating life vests and throwing them into the slide/raft. She got one of them and put it on and dropped her seat cushion in the water. The pilots were at the exits and assigned people in the slide/raft to do a head count.

She felt the evacuation was very controlled and people followed instructions. Some people fell off the wing into the water. The first ferry arrived within about three

minutes. She saw a small "Coast Guard" boat on the other side. They felt safe on the raft and told the ferry to get the people on the wings first. There was another boat there as well. The ferry came back and started to pick them up. There were no children on the raft so they took the injured first and then 4-5 women went in front of her. She had to climb up a heavy rubber tire mechanism and two men pulled her into the ferry. They were taken to the NJ side of the river to the Weehawken Terminal. They were given triage tags and blankets. She was transported to Jersey City Medical Center and had some "bumps and bruises." They took x-rays of her chest, shoulder, and legs and she had no fractures. She thought her knees might have been bruised from hitting the seat in front of her during the impact. Her left shoulder and upper left arm also hit the seat. She had some bruises she thought might have been from her seatbelt. Her seatbelt was cinched down tightly at impact.

Female Passenger - Seat 20D

Age: 49 Hgt: 5'9" Wgt: 155 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on February 20, 2009 via telephone. She flew approximately 60 flights in the previous year. She did not watch the safety demonstration or look at the safety information card after boarding.

After takeoff there was a "loud explosion" on the left side that shook the airplane. She thought they had lost an engine. The airplane began to circle back to go to the airport. The cabin was calm and she was reading a book. The aft flight attendant got up to look for a fire extinguisher. They were descending and someone told her that they were over water. The captain said to "brace for impact." She had just enough time to bend over and put her head between her knees. She tightened her seatbelt and wrapped her arms around her knees.

After impact, water came in immediately and eventually got up to her waist. She struck her head on the tray table of the seat in front of her. She took her seat cushion but did not think to take her life vest. She tried to go to the aft exits but people were saying, "no, go to the wings!" She described the cabin as organized chaos with some people climbing over the seats. She went up the aisle. When she got to the overwing exits the wings were full and a passenger said, "go up to the front." The front was completely clear. She exited into the 1L slide/raft which had cold water in it. Three or four men got into the slide/raft after her. She did not remember seeing any emergency lights.

The ferries arrived and got the people off the wings first. It got close to her raft several times. Another ferry came and she boarded that one. It took them to the NJ side of the river where she was given new clothes. She was transported to Meadowlands Hospital with mild hypothermia. She was warmed and released later that day.

Male Passenger - Seat 20E

Age: 30 Hgt: 5'9" Wgt: 180 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on March 10, 2009 via telephone. He flew two or three times per month for business. He was traveling alone on the accident flight. He did not watch the flight attendants' safety demonstration nor did he look at the safety information card.

During boarding he recalled a woman with a small child in his area and a flight attendant attempting to make her comfortable. After takeoff there was a "big heavy impact" that shook the airplane. He thought the impact was on the right side. Passengers were uneasy and after about a minute he smelled something burning. There was an "eerie" quiet but he did not know that the engines had stopped. The aft flight attendant was attempting to find a fire extinguisher and he thought there might be a fire. The airplane started to turn and he thought they would land at one of the area airports. The airplane descended pretty quickly and he could see buildings on the NJ side of the river. The pilot announced to "brace for impact" but he did not know they were landing on the water. He braced himself by putting his hands over his head and ducking down.

He was surprised during the impact when water rushed by the window. The impact was "not bad" but water came "gushing in" around his ankles. People were yelling "get to the exit" and he could see open exits in front of him. Passengers were crammed into the aisle and a lot of others were jumping over seats. The queue in the aisle moved very slowly. While he moved forward he noticed some seat cushions missing and grabbed one for himself. When he got near the overwing exits the aisle suddenly opened up and he could see all the way to the front of the cabin. He looked for the emergency lights but did not see any. He said it was "very dark" in the cabin. He ran forward and slid into the 1L slide/raft. At least six or seven people were already in the raft and approximately five or six more entered after he did. He shouted for a life vest and someone gave him one in a pouch. His hands were so cold that he could not use them and had to rip the package open with his mouth. He was initially confused about how to wear the life vest but eventually figured out to put it over his head. He did not connect the waist strap or inflate it.

A ferry arrived and attempted to position itself near the wing. It got close to hitting the raft several times and they had to shout at it to get their attention. They were able to get a knife from someone on the ferry to cut the slide/raft free from the airplane. Other ferries had arrived and they allowed the women to board first. The ferry took them to the ferry terminal on the NJ side of the river. He was very cold but not injured. An emergency technician told several passengers to go to the hospital "just in case" and he was transported to Meadowlands Hospital.

Female Passenger - Seat 20F

Age: 34 Hgt: 5'6" Wgt: 135 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 19, 2009 via telephone. She flew very frequently prior to having a child 10 months ago. She was not traveling with anyone on the accident flight.

There was a mother and young boy seated in the row in front of her. The mother was upset because she could not sit with her husband. During pushback the woman stood up and the aft flight attendant told her she would have to sit down or the airplane would go back to the gate. She noticed her closest exit was behind her which she "never does." The flight attendants performed a safety demonstration which she watched. She did not look at the safety information card.

After takeoff she was "counting the seconds" because she once heard that the first 120 seconds are the most critical for a safe flight. Her counting got to 90 when she heard a "boom" similar to "something being sucked into a vacuum cleaner." She looked out the window and saw a "fireball and black smoke" coming from the engine. The airplane "wiggled" a little and there was a collective gasp from the passengers. There was a faint smell in cabin but she did not remember a difference in sound. The aft flight attendant was out of her seat and said something about a fire extinguisher. The airplane began banking and she thought they were going back to LGA. The captain said "something" on the P/A and she began to feel worse about the situation. She closed her eyes and leaned her head back. The captain came on again and said "brace for impact." She did not know how to brace. She tightened her seatbelt and got out her cell phone. She attempted to send a text message to her husband but it did not go through. The time on the message was 1529. She looked at others and copied their brace positions. She bent over with her chest on her knees and put her hands over the back of her head.

She could not recall the impact. When she opened her eyes there was water up to her knees. The hat and scarf she had placed under the seat in front of her were floating. She unbuckled her seatbelt, stood up, and tried to go to the back of the airplane. People were all pushing to get to the aisle and she could not get to it. Someone in the back was screaming for people to go forward. Everyone turned around but could not move forward either. She went into "survival mode." She grabbed her seat cushion and began climbing over the window seats to move forward. She did not hear any commands to do that, she just knew she had to get out. She forgot to take her life vest. When she got to the overwing exit row a passenger on the wing directed people to go forward because there were so many people on the wing. She continued to go forward over the seats and the front of the airplane was completely empty. There was no water in the front cabin. She got back into the aisle and ran forward. She did not see any emergency lights. She saw flight attendant 'C' putting on her life vest in the galley. She went to the right and another passenger helped her slide in the 1R slide/raft.

She saw the ferry coming immediately. The injured flight attendant got in after her. The occupants wanted to detach the slide/raft from the airplane. They asked someone on the ferry to throw a knife and they cut the line. Women and children boarded the ferry first. The ladder was frozen and difficult to use. A man basically threw her up on the ferry. She moved to the back of the ferry where it was warmer and people gave passengers cell phones to use to call their families. She called her husband and his cell phone indicated the call was received at 1543. They were taken to the ferry terminal on the NY side where she received good care. She was not injured and was not transported to a hospital. She later noticed a “little knot” on the top of her head where she thought she hit the tray table. She also had bruises from the seatbelt and soreness in her left lower back.

Female Passenger - Seat 21A

Age: 71 Hgt.: 5’4” Wgt: 185 lbs.

Exit Used: Left Overwing

Male Passenger - Seat 21B

Age: 73 Hgt: 5’11” Wgt: 196 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB), David Lefrancq (Airbus), and Didier Delaitre (BEA) conducted the interview on January 21, 2009 via telephone. Passenger 21A was traveling with her husband who was seated in seat 21B. She and her husband watched the safety demonstration before the flight but they did not look at the safety information card.

During climb there was a “big explosion.” When she looked out the left windows she saw a flame coming out of the left engine. Some “fumes or smoke” entered the cabin. She remembered the flight attendant saying something about a fire and she told them to prepare for impact by bending over and putting their heads between their legs. After the impact they followed “everyone else” to the overwing exits on the left side of the airplane. She thought that a flight attendant may have been telling people to go forward. She took her pocketbook with her and a small bag with her medications. They had no time to get a life vest or take a seat cushion. She did not see any emergency lights or signs.

She had no difficulty getting through the exit. The water was to her waist when she got out. She got into the offwing slide behind the wing. Someone threw her and her husband yellow vests in packages. They had no difficulty opening the vests and a man helped her put it over her head. They both inflated their vests. She stated it was very wet and slippery and she could not stand up. They were rescued by a “small police boat” and taken to the New York side of the river. They were both taken to Roosevelt Hospital. Her left leg was “black and blue” and her husband had “a bump on his head.”

Male Passenger - Seat 21C

Age: 31 Hgt: 5'8" Wgt: 220 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on May 11, 2009 via telephone. He was a frequent flyer who usually flew twice a week for business. He recalled that the flight attendants performed a safety demonstration but did not watch it nor did he look at the safety information card.

The captain announced to "brace for impact" but he "didn't even bother" because he thought he would probably die and wanted to look out the window at where they were landing. It was a "good, solid" impact. He did not strike the seat in front of him but thought his chest might have struck his knees, which were bruised. He got up into the aisle and attempted to go to the back of the airplane but heard the aft flight attendant shouting that the exit was not usable. It sounded as if she was having an altercation with someone. He went forward up the aisle and reported carrying passenger 19E and her child to the right overwing exit. He helped her out onto the wing and exited himself. He did not take a seat cushion or life vest.

He saw a slide behind the wing that was unstable and worked with passenger 16B and another man to flip it over. The back kept coming up because it had no weight on it so he jumped into the water and climbed aboard (using some straps) to stabilize it and allow others to board. Ferries arrived and threw life preservers to those on the slide. He and passenger 16B helped a man dressed in black out of the water. He was hypothermic and curled up into the fetal position. When a ferry arrived at the slide he and passenger 16B helped the man up the net. He and passenger 16B were among the last off the slide and onto the ferry. It took them to the NJ side of the river. In addition to his bruised knees he had numbness in his hands but did not go to a hospital.

Male Passenger - Seat 21D

Age: 47 Hgt: 6'5" Wgt: 192 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 20, 2009 via telephone. He flew approximately six times per year and was traveling alone on the accident flight. He remembered the flight attendants performing a safety demonstration, but was not sure if he watched it. He looked at the safety information card prior to the flight.

Shortly after takeoff he heard a "bang bang" almost simultaneously and the airplane lost some altitude. He smelled a little smoke and heard a flight attendant telling other passengers to sit down. The flight attendant said something about finding a fire extinguisher. The airplane was turning and he thought it might be going to JFK but could not see out the window. The pilot announced "brace for impact" and the flight attendants shouted for passengers to put their heads down. He was too tall to put his head down so he bent over and "stuck it in the aisle."

The impact was “fairly hard” but not as hard as he thought it would be. When the airplane stopped passengers “piled into the aisle”. He described it as “controlled chaos.” A few passengers tried to get items out of the overhead bins and other passengers told them not too. There were a lot of people in the aisle who were not moving. He climbed over the seatbacks on the left side to move forward. Just before exiting through the left overwing exits in row 11 he removed a seat cushion and carried it with him. He did not remember seeing any emergency lights.

There was a floating slide behind the wing which he got on. There were approximately six people on it before him. There was a woman in the water hanging onto it and he helped pull her on the slide. People threw them life vests in sealed packages. He got one and had no trouble opening it. He put it over his head and inflated it without difficulty. He did not secure the waist strap. Their slide was one of the last ones to get on a boat. A ferry threw them a rope to try to pull them closer but the slide was attached to the airplane. Later a smaller police boat came and he and four or five others passengers got aboard. He remembered both of the boat’s engines failed and they had to be transferred to another boat. They were taken to the NY side of the river and he was transported to St. Vincent’s Hospital. He had bruising on his arms and legs and numbness in his fingers.

Female Passenger - Seat 21E

Age: 47 Hgt: 5’9” Wgt: 150 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 4, 2009 via telephone. She flew on a quarterly basis for business and was traveling with passenger 21F on the accident flight. The flight attendants performed a safety demonstration but she did not watch it, nor did she look at the safety information card.

Everything was normal until she heard a “loud thud” during climb. Immediately smoke started coming through the vents and she thought there was a fire on the airplane. The aft flight attendant got up and might have been trying to get a fire extinguisher. The airplane made a sharp left turn and she could tell there were no engines working. The captain announced to “brace for impact.” She did not know they were landing in the water. She braced herself by putting her feet flat on the floor, her head between her legs, and wrapping her arms around her knees. She took her glasses off and placed them in the seat pocket in front of her so she would not be injured by them.

The impact was "not that bad." She was pushed forward in her seat. Water came into the cabin immediately. She unbuckled her seatbelt, got into the aisle, and followed others back approximately two rows. She did not take any carry-on bags, her seat cushion, or a life vest. Her “first instinct was to get out.” She could not see into the galley but someone said that the door would not open. Everyone turned around and tried to go forward. The water was starting to get high and people were not moving.

Passengers were beginning to push and say “go, go, go!” She saw one man climbing over seats to go forward.

Once things started to move it was a "fast walk" up the aisle to the overwing exits. She did not remember seeing any emergency lights and thought it was dark in the cabin. She exited onto the left wing and the water was above her knees. She looked to her left and right and saw people in rafts and wondered how they got there. When the first ferry arrived it dropped a mesh ladder and she hoped that she would not have to climb it because it was approximately 8 or 9 feet to the deck. Someone gave her a seat cushion to hold while she was on the wing. A smaller fire boat named *Marine 1* came to the wing which was easier to get on board. She was able to get on without going into the water. The fireboat took them to Chelsea pier. She was very cold and "shaken up" and was transported to NY Downtown Hospital for evaluation. She was diagnosed with mild hypothermia and released the same day. Days later she experienced some back pain which had subsided when the interview occurred.

Male Passenger - Seat 21F

Age: 44 Hgt: 5’7” Wgt: 235 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 3, 2009 via telephone. He flew on a monthly basis for business and was traveling with passenger 21E on the accident flight. He “was sure” the flight attendants performed a safety demonstration but did not pay attention to it. He did not look at the safety information card.

During climb he heard two "thumps." Passenger 21E asked him “what was that?” There was an immediate burning smell in the cabin and the aft flight attendant got up because she thought there might be a fire in the overhead bins. She eventually realized there was no fire and sat back down. The airplane got quiet and made a left turn. He never looked out the window and thought they were returning to LGA. The pilot announced to "brace for impact" but neither of them knew what that meant. He braced himself by bending over and wrapping his arms around his knees.

The impact was "not that severe" and was similar to being rear-ended in a car. He did not recall striking the seat in front of him. Water began rushing in immediately and that was his first indication that they had landed in the water. He unbuckled his seatbelt and tried to move to the back of the airplane. The water was up to his knees immediately and someone said that the door would not open and that they should go forward. Passengers were urging each other to move and gently pushing. He observed people climbing over the seats on the left and right side of the cabin but he kept going up the aisle because the water was getting shallower. He did not recall seeing any emergency lights but they were under water. He retrieved seat cushions for himself and passenger 21E. He did not think to retrieve life vests. They both exited onto the left wing and were among the last two or three people on that wing. After a few minutes the water got up to his waist.

The first ferry arrived and its stern struck the 1L slide/raft. It repositioned and threw down a rubber ladder for those on the wing. He remembered people throwing out life vests to those on the wing. He did not take one but kept the seat cushion with him. A short time later a fire department boat came to the wing which was lower and easier to board. Passenger 21E boarded first and then a few other women. They asked for younger men to board to help get others on. He eventually boarded and there were approximately 20 people on the bow of the boat. They were taken to the NY side of the river and disembarked onto a dinner cruise boat. They wrapped tablecloths around themselves to try and warm up. He was transported to NY Downtown Hospital for treatment of hypothermia. He later experienced some pain and numbness in his right hand which a doctor has diagnosed as due to a bone pinching a nerve in his neck. He also noticed a bruise from the seatbelt in the days following the accident.

Male Passenger - Seat 22A

Age: 31 Hgt: 5'10" Wgt: 165 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on April 14, 2009 via telephone. He usually flew approximately 15 times per year and was traveling with passengers 5A, 5F, 6A, 6C, and 7C on the accident flight. He was reading during the preflight and did not remember the flight attendants' safety demonstration nor did he look at the safety information card.

During climb he heard an "aggressive thump" outside the window. He looked outside and saw a "lot of fire coming from the left engine." He estimated the flames lasted for 30-60 seconds. The airplane did not drop initially but he could tell it was no longer climbing. The airplane turned to the left and he thought they would return to the other runway at LGA or one of the airports in New Jersey. The airplane was lined up with the river and got lower and lower. There were no announcements from the crew until the captain said to "brace for impact" about 20 seconds before they hit the water. He did not hear any brace commands from the flight attendants. He put his head down and covered his head with his arms. He kept peeking out the window because he wanted to know when the impact would be.

At impact his head struck the seat in front of him but he was not injured. The airplane stopped and he felt like he was in a "fish tank." There was water outside the window and, by the time he stood up, water was up to his knees. He screamed at other passengers to keep calm. He knew his closest exit was in the back of the airplane so he went aft down the aisle. He did not take a seat cushion or a life vest. When he got near row 25 someone (he believed it was a passenger) was telling everyone to go forward. The water was at least waist deep in that area. Passengers moved up the aisle as fast as they could. No one was pushing, but there was "jostling." He saw one woman carrying a baby who was climbing over the seats. She got out into the aisle in front of him. When they got to the overwing exit rows there was a "logjam." She exited there, but he continued forward and exited into the 1R slide/raft. There was an older woman and a

flight attendant with a gash in her leg already in the slide/raft. He did not remember seeing any emergency lights inside the airplane.

Ferries began to arrive and they thought the plane might sink and drag the slide/raft under. He grabbed a “tightly wound braided rope” that was attached to the aft part of the door area.¹⁵ He rubbed it against the edge of the metal door to try to get it to fray, but was unsuccessful. He briefly tried to bite through it but realized that would not be possible. Someone yelled to the ferry for someone to throw down a knife. He caught the folded knife and held the rope while someone else cut it. He did not remember a flight attendant being involved in the separation process.

People on the ferry threw flotation devices to them and he helped to gather them and put them on some of the women. They paddled the raft next to the ferry and held onto the ladder to keep them anchored to it. There were approximately 20-30 people on the raft and he was one of the last three or four to board the ferry. He immediately used a commuter’s cell phone to call his wife and then looked for his traveling companions on the airplane’s wings. He saw several of them and knew they were probably okay. His ferry took them to a pier on the NY side of the river. When his companions did not arrive there he left and walked north to a second pier where ferries were arriving. They would not let him inside due to security concerns so he waited outside with members of the media for about an hour. He was briefly examined in an “EMS van” before deciding to meet his wife at a local hotel. A reporter helped to arrange a reunion with his companions at the hotel later that day. He was not injured although a few bumps and bruises developed the next day.

Male Passenger - Seat 22B

Age: 37 Hgt: 5’10” Wgt: 185 lbs.

Exit Used: Left Overwing/Door 1L

Jason Fedok (NTSB) conducted the interview on March 17, 2009 via telephone. He flew two weekend trips a month and was traveling alone on the accident flight. He did not watch the flight attendants’ safety demonstration nor did he look at the safety information card.

He had fallen asleep and woke up to the sound of an “explosion.” He thought they had hit something on the runway. The passenger to his left was calm but said that the engine was on fire. He assumed that they had lost one engine and would have to return to LGA. The airplane got very quiet but he did not realize at the time that there were no engine sounds. A flight attendant told him to tighten his seatbelt and he complied. He saw the aft flight attendant on the phone. He looked down the aisle and could see “faint smoke” in the front of the cabin. He smelled an electrical burning odor. The airplane made a hard left turn and he could see that they were over the right side of the Hudson River. He recalled the flight attendants yelling to one another and that they pulled out an “antenna that looks like it was from 1985.” The airplane remained level

¹⁵ Passenger 22A examined several digital pictures of lanyards on the door sill area. He identified the mooring line as the likely “rope” that he attempted to separate, and was eventually cut with a knife.

over the river and he did not think that they would crash. When they reached the George Washington Bridge he could tell that they were low because he was looking up at some of the buildings. At that point he realized that they would crash and put his head between his legs and held onto the seat in front of him in order to brace.

The pilot announced to “brace for impact” about 10 seconds before they hit the water. He wanted to see where they were (and was fairly certain he would not survive) so he looked out the window. The airplane "hit, skipped, hit, and belly-flopped" into the water. He hit his head on the seat but was not injured. At the end, it turned sideways. He took his seatbelt off and stood up but could not immediately get into the aisle. His feet were already covered in water. Passengers near row 18 were all attempting to go to the aft exits. He could see water splashing up against the outside of his window. Someone in the back yelled that the doors would not open and some people began climbing over the seats to go forward. He could see that the overwing exits were open and the water was up above his knees. By the time people in the aisle began moving forward the water was up at mid-thigh level. When he got to the overwing exits approximately 25 to 30 passengers were on the left wing. Some had fallen into the water. There was approximately 8 to 10 inches of water on the wing when he got out. He did not take a seat cushion or a life vest. There was no organization and he did not hear anyone telling passengers to take them. He stayed close to the airplane's fuselage and eventually saw that the 1L slide/raft had deployed. He went back into the airplane where the water was up to his waist. There was no one in the back of the airplane and he saw the captain and flight attendants in the front. He walked to first class where the water was lower and exited into the 1L slide/raft. There were a couple of inches of water in the slide/raft.

He used his cell phone to call his family and coworkers and allowed others to make phone calls as well. A helicopter arrived which made everyone very cold. The ferries were there quickly but it was a slow process to get people on board. They had to detach the slide/raft and someone threw them a knife from one of the boats. One of the ferries dropped a mesh net but the deck was 7 to 8 feet high and some of the women could not climb it. Some men pushed them up and people on the deck pulled them on board. When he got on board he was taken to a heated area. They were taken to the same location on the NY side of the river where the mayor was. His neck and shoulder was sore and he jammed his thumb, but he did not go to a hospital.

Male Passenger - Seat 22C

Age: 37 Hgt: 5'10" Wgt: 230 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on March 10, 2009 via telephone. He flew frequently for business, including every week since November 2008. He was traveling with passengers 1F, 4B, and 26F on the accident flight. He did not watch the flight attendants' safety demonstration nor did he look at the safety information card.

After boarding he recalled a family that was separated asking other passengers to move but no one was willing. The mother was “agitated” and the aft flight attendant had to tell her to sit down again as the airplane was pushing back from the gate. After takeoff there was a “boom” and a short time later he smelled smoke in the cabin. Someone got up from their seat behind him and he thought there might have been a fire. The flight attendant told the passenger to sit back down. It was very quiet on the airplane and he thought that an engine had had a mechanical failure and they would return to LGA. He could see New York City out the window and heard the captain say to “brace for impact.” He thought they were going to crash into a building until another passenger said that they were over water. Although he heard a passenger say that, he did not think about the life vest under his seat. He braced his head against the soft part of the seatback in front of him and grabbed the seatback with both hands. He also tightened his seatbelt.

The impact was “a little violent” but not as bad as he thought it would be. He was surprised to be alive and felt water around his ankles. He unbuckled his seatbelt, stood up, and tried to get into the aisle - but it was full. He briefly thought about getting his briefcase before they started moving forward. There was a “clog” six or seven rows ahead of him. Some passengers were trying to go to the back of the airplane. He got into the D seat across the aisle and climbed over the seatbacks for several rows until he got past the clog. While climbing he heard someone say “get the baby.” He turned around and someone handed him the young baby and he gave it to someone ahead of him. He noticed several seat cushions were missing and he realized he did not have a flotation device. He grabbed a seat cushion for himself but gave it to one of the passengers who was “freaking out.” He gave another seat cushion to a second passenger who was also clogging the aisle. He turned them around and they began moving forward but he did not know where they exited. He retrieved another seat cushion for himself but never got a life vest. When he got to the overwing exit rows, he looked outside and the situation was “not appealing.” The aisle forward was completely clear and he could see out the windows that there was a raft at the front door. He moved forward and exited into the 1L slide/raft. He had specifically looked for emergency lighting but did not see any. He also felt that the overwing exits were not easily discernible and that if it had been dark outside it would have been very difficult to find them.

A few other passengers got into the slide/raft after him and he sat next to a man holding a locator beacon. He called his wife and could see the ferries coming. A helicopter arrived and dropped divers. They needed to disconnect the slide/raft from the airplane. Someone threw a knife down from the ferry and they cut themselves loose. The raft had several “close calls” with a ferry that “sandwiched” them up against the airplane. He had to climb a plastic net to board the ferry and he was taken to a warmer room on the upper level of the ferry. They were taken to a ferry terminal on the NY side of the river. He had “nicked” his cuticle at some point and had a lot of blood on his shirt but did not believe he was injured. Later that night his left shoulder began to hurt “really bad” and he had it examined at a hospital the next day. He was diagnosed with a shoulder strain.

Female Passenger - Seat 22D**Age: 46 Hgt: 5'4" Wgt: 293 lbs.****Exit Used: Left Overwing**

Jason Fedok (NTSB) and David Lefrancq (Airbus) conducted the interview on January 22, 2009 via telephone. Boarding was late and the plane left late. There was no overhead space and a lot of people had to gate check bags. She had flown in from Memphis and only had a small rolling bag which fit under the seat in front of her. She placed her coat in the overhead bin across from her. She sat down and buckled her seatbelt. The flight attendants did the normal safety demonstration and she watched. She knew her closest exit was behind her. She did not read the safety information card.

The flight crew announced ready for takeoff. The flight attendants took their seats and the airplane rolled down the runway. It seemed to take longer than usual to takeoff and she got concerned about running off the runway. A short time later there was a "loud bang" on the right side of the airplane. The airplane experienced a "little turbulence" for no more than 20 seconds. A woman from behind her came forward up the aisle and said that there was a fire. The flight attendant told the woman to return to her seat but she did not see the flight attendant. Passenger 22D did not see any smoke or fire on or inside the plane and everyone remained very calm.

In a "matter of minutes" the captain made an announcement and said "ladies and gentlemen, brace for impact." He had a "calmness" in his voice that helped keep the passengers calm. She heard a woman ask what that meant and a man answered "that we're going to crash." She quickly grabbed her cell phone and attempted to make a call to her family but the signal was blocked. She linked arms with the man next to her and he told her they were going to be okay. She bent over and made her body as taut as she could. She did not remember anyone telling her to do that.

The airplane hit the water, skidded to the left, and came to a stop. She did not hear any instructions. Some men said "we're ok. Get your seatbelts off. Go, go go!" She got up and tried to go to the back but immediately people told her to go forward. There was no chaos or pushing. People were just gently urging each other forward. She remembered that she had forgotten to take her seat cushion and was mad at herself. She looked for another one, but they were all gone. She did not see any emergency lights or placards. She had to wait before exiting since some people were in front of her. By the time she got to the exit the water in the plane was knee deep. She had no trouble getting out the overwing exit on the left side. There was a man there helping people step up through the exit. She stood on the wing and waited to be rescued. Some men were going back and forth in the plane throwing out seat cushions and life vests to passengers. She first got a seat cushion and then gave it someone next to her when she got a life vest. She did not have any difficulty opening it and put it over her head. She could not figure out how to get the strap to work. It was folded up in a rubber band. She did not inflate it because the boats were already there.

When on the wing she saw slides in front of and behind the wing. Some people tried to board the aft slide. As she waited on the wing she lost her footing and got wet up to her chest. Some men helped her. When the boat got there the men said, "ladies first." A couple of women got on before her. She stated that she was a large woman and that the men on the ferry had difficulty pulling her in. Several other men got into the ferry to help them. The ferry started hitting the wing causing people to lose their footing. They yelled for the boat to pull away. A man on the boat had a hold of her and would not let go. People from below gave her a boost and she landed "face first" on the boat deck. The boat took them to a pier on the NY side of the river where they had to climb a 25-30' ladder to the pier. They were taken to a dinner boat where people could change clothes. They were triaged and she could not get warm. She also had an elevated heart rate and high blood pressure. She was eventually transported to Roosevelt Hospital where she was treated and released. She stated that she had some pain in her upper back that had subsided as well as pain in her right thigh. She also had numbness in the tips of her pinky fingers.

Male Passenger - Seat 22E

Age: 32 Hgt: 6'0" Wgt: 175 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 12, 2009 via telephone. He flew regularly every two to three months and was traveling by himself on the accident flight. He was "really tired" and was not sure if the flight attendants performed a safety demonstration. He did not look at the safety information card.

After takeoff the right engine "blew up." He saw black smoke and fire coming out of it. The airplane began losing altitude. A flight attendant in the back got up and was closing overhead bins. She told passengers to stay in their seats. There was a little smoke and a burning smell in the cabin. The captain announced "brace for impact." Someone screamed "fire." He put his hands over his head and leaned forward. A woman next to him grabbed his hand. The flight was "very, very smooth" until the impact with the water.

The impact was a "bang." He hit the back of the seat in front of him. Everyone got up at the same time. He tried to go to the back but they could not use that exit. He did not think to take his seat cushion or life vest. He did look for a seat cushion while evacuating but there were "none left." They were told to go forward. The water was coming in "really quick." It was up to his knees by the time he got into the aisle. The people were not moving. Some people climbed over the seats. By the time he got to the exit the water was up to his waist. He did not notice any emergency lights. He exited out the left overwing exits. He got onto the wing and jumped into a raft behind the wing. Ferries were already there when he exited. A man threw life vests to the people in the raft. He put one on and inflated it. He found it restrictive and hard to breathe so he turned it around backwards. His raft was one of the last to be rescued. They were taken to the NJ side of the river and into a restaurant. Although he was cold and shaking, he declined to go to a hospital and was taken to a senior center before being driven home.

The next day he noticed a bruise on his elbow (that may have been from striking the seat in front of him) and also bruises on his shins.

Male Passenger - Seat 23B (assigned 19E)

Age: 48 Hgt: 6'1" Wgt: 250 lbs.

Exit Used: Right Overwing

Female Passenger - Seat 23A (assigned 23E)

Age: 4 Hgt: 3'4" Wgt: 34 lbs.

Exit Used: Right Overwing

Jason Fedok (NTSB) conducted the interview on February 6, 2009 via telephone. His family was not seated together. He sat in 23B and had a passenger switch seats with his daughter so she could sit in 23A. The flight attendants told them to wait until after takeoff and maybe they could all be reseated together. He did not recall a safety demonstration being performed. He was showing his daughter the magazines to keep her occupied and did not recall seeing a safety information card with the magazines.

A minute after takeoff he heard a loud explosion and a jet fuel smell came into the cabin. He could tell the flight attendants had been alerted to it because he saw one with a fire extinguisher. He heard the other engine shut down and the airplane was gliding. He felt it bank to the left and sensed they were descending. He looked out the window at the New York skyline and saw they were over the river. It seemed like the pilot had control. He made an announcement to "brace for impact." He tightened his daughter's seatbelt. The flight attendants were shouting to "duck and cover." He leaned over his daughter and covered her with his body.

When they hit the water the lights went out and the airplane began taking on water. By the time he got their seatbelts off the water was already as high as his seat. He picked up his daughter and got into the aisle. His first thought was to go to the back but he wanted to be with his wife who was forward in the cabin. It seemed like it was a couple of minutes before there was any movement forward. He did not remember seeing any emergency lights.

When he got to the overwing exit he met his wife and son. They went out onto the right wing which was partially submerged. Someone gave him a yellow vest when he exited. There was a raft there that people were struggling to level out. The people on it told them to throw the baby to them but they would not. Eventually they were able to pass the baby and his daughter to people in the raft. His wife got in the raft as well, but there was no room for him. A ferry came from the forward side and tried to get to the raft but could not and just threw life preservers. Another ferry came from the west but it only had one crewmember besides the captain. The crewmember was having difficulty with the rope ladder. By that time he was up to his chest in water and numb. He and two other men swam to the ferry and managed to get up the ladder. Eventually the boat picked up his wife and children and others from the raft. They were taken to Weehawken

in NJ and then transported by ambulance to Jersey City Medical Center. He sprained his ankle and had some frostbite. His daughter got wet but was not injured.

Male Passenger - Seat 23C

Age: 49 Hgt: 6'4" Wgt: 228 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 27, 2009 via telephone. He flew between 150,000 and 200,000 frequent flyer miles last year. He was traveling alone on the accident flight. He did not pay attention to the flight attendants' safety demonstration nor did he look at the safety information card. He recommended changing the safety demonstration to simply include what is unique about the airplane that the passenger was currently on. He believed that repeating the same speech on each flight caused people not to listen.

He was one of the last passengers to board the airplane. During climb he heard a "big thud" on the right side of the airplane. He did not know they had lost both engines. The pilot seemed to have complete control and he thought they were returning to LGA. He could not see through the window and did not know where they were. The pilot told them to get into the brace position which surprised him. He crossed his arms on the seat back in front of him (with his right hand on top of his left) and put his forehead against his right hand. He still thought they would land at LGA and maybe have a hard landing.

When the airplane landed in the water he saw the spray and thought they were in the bay just short of the runway. He quickly unbuckled his seatbelt and got up from his seat. A piece of trim from the ceiling had landed in the aisle and he moved it out of the way so no one would trip on it. He immediately tried to go to the back of the airplane but it started filling with water right away. He heard someone in the back saying that they had to go the other way. He looked out the windows and saw that they were underwater. Everyone turned around and moved forward as quickly as possible. No one was pushing but they were applying "firm pressure." A few people climbed over the seats. He stayed in the aisle until he got to the overwing exits. Passengers were "queued up" to get onto the wings. He saw that the front of the airplane was dry and there was someone waving them forward. He continued up the aisle and exited into the 1R slide/raft. He did not see any emergency lights. He had grabbed a seat cushion that floated by him as he went up the aisle. He did not think to take the seat cushion or a life vest from his seat. Approximately two or three people (including the injured flight attendant) got into the 1R slide/raft after him. A ferry was there within a minute. The ferry threw life jackets and a rope to the passengers in the slide/raft. He grabbed the rope and was the one of the first passengers to board the ferry. It took them to Chelsea Pier on the NY side of the river. He was not injured except for a dime-sized abrasion on his left elbow. He thought it may have been from impacting the tray table.

Male Passenger - Seat 23E (assigned to 23A)
Age: 23 Hgt: 5'11" Wgt: 180 lbs.
Exit Used: Door 1L

Jason Fedok (NTSB), David Lefrancq (Airbus), and Didier Delaitre (BEA) conducted the interview on January 21, 2009 via telephone. He was traveling alone and was assigned to sit in 23A, but changed to 23E to allow a child to sit next to a window. After boarding he dozed off and did not remember a safety demonstration or looking at the safety information card.

He awoke and noticed they had taken off but dozed off again. He then experienced "a big jerk" as if the airplane had gone "up and down really quick." He thought it was just "regular turbulence." He then saw the aft flight attendant talking on the interphone and asking for a fire extinguisher. He did not smell anything but heard another passenger saying that they did. The pilot started a left turn. The flight attendant started to panic because she could not find a fire extinguisher. She then came through the cabin checking to ensure that passenger seatbelts were fastened.

The airplane got lower and lower but the pilot was in control. The pilot made a P/A announcement, "brace for impact." He took the brace position by copying other passengers who had their heads down. He linked arms with the passenger to his left. He saw both land and water outside the window and did not know when or where they were going to land. Less than a minute later the airplane hit the water. He could see water outside the windows. It was a "smooth" but "tremendous impact." His head hit the seat in front of his and knocked his eyeglasses off. He wiped his face and saw blood. He had a cut on his chin and bit his tongue or lip. He could not see well without his eyeglasses. Before he was able to get out of his seat water was already covering his feet.

He released his seatbelt without any problem and everyone started to rush to the back of the airplane (his nearest exit). He got to the last row and the water was rising very rapidly. He remembered that the doors were not open but he did not know why. He thought he was going to drown so he climbed on a seat in the last row. He could feel the heavy weight of the water in his clothes. He thought he would have to swim so he took off all his clothes down to his underwear and t-shirt. He attempted to move forward by climbing over the seatbacks. He was "moving so fast" that he passed by the overwing exits and continued climbing over the seatbacks until he got to the front of the cabin. He did not notice any emergency lights or placards. There were very few passengers remaining. He exited out of door 1L. He had no difficulties getting into the raft. Other passengers tried to keep him warm with their jackets.

After a few minutes a ferry arrived. He climbed aboard the ferry on a ladder. After reaching shore paramedics insisted he be taken to Roosevelt Hospital. He had a badly bruised right knee as well as a "partially crushed right triceps" behind his right elbow. He was treated and released the same day.

Male Passenger - Seat 23F

Age: 74 Hgt: 5'11½" Wgt: 200 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 11, 2009 via telephone. He flew about once every three weeks for business. He remembered the safety demonstration that covered "all the normal things." He did not look at the safety information card.

Takeoff was normal. A short time later there was "one bang" and he saw flames coming out of the right engine. A woman behind him yelled "fire" and the aft flight attendant told her to sit down and fasten her seatbelt. It got very quiet in the cabin and he realized they had lost both engines. There was no smoke or fire in the cabin and he did not smell anything unusual. The pilot made an announcement "prepare for impact." He looked out the window and they were getting closer to the water. The flight attendants were shouting commands "feet on floor, stay down, heads down!" He was waiting for the landing gear to come down but it never did.

The impact was "really hard" and he remembered the sound of "metal being ripped." He had his head down and tucked under the seat. Water came in very quickly and for a "split second" he was completely under water. The water went down and he sat up but the water was as high as his seatpan by the time he got his seatbelt off and stood up. His glasses came off during the impact. He grabbed his seat cushion but did not see or look for the life vest. He saw the left overwing exits "pop" immediately and moved forward toward them. He heard someone in the back shout, "there's water coming in the door... go to the wing!"

There was no panic or pushing. One man tried to get something out of an overhead bin and other passengers told him "no, no, no!" They were two abreast in the aisle. He did not remember any emergency lights but also did not look for them. He was one of the last people to exit out the left overwing exits. He remembered one woman in the water. He also recalled that someone kneeled at the window exits and passed out life vests. He got one of the vests and put it on. He inflated it and secured the waist strap. He did not have any difficulty with it.

A ferry came and dropped a ladder from the bow. Because of the current the stern of the boat swung around and hit the 1L slide/raft. Later a small "pilot" boat came and got up against the leading edge of the wing. He had a little difficulty getting into the boat because he had two artificial hips. A helicopter arrived and dropped two divers. The boat took them to a pier on the NY side of the river. Firemen dropped a small ladder down to the boat that they had to climb to get off. He was not injured but was transported to Roosevelt Hospital to be examined to ensure his hips were okay. The next day he noticed he had a slight bump on his head possibly from striking the seat in front of him.

Male Passenger - Seat 24A

Age: 38 Hgt: 6'0" Wgt: 175 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on March 4, 2009 via telephone. He flew 100,000 miles last year on business and was traveling alone on the accident flight. He watched the flight attendants' safety demonstration, as he always did. He did not look at the safety information card on the accident flight.

After the birds struck the airplane he looked out the window and saw fire coming out of the left engine. He did not realize the right engine was out as well. The airplane turned and he thought they would go to LGA or EWR. One woman behind him stood up and the flight attendant calmed her down and told her to remain seated. The captain announced to "brace for impact" and the flight attendants began shouting for passengers to put their heads down and assume the brace position. He complied and bent over as far as he could and hugged his knees. He looked out the window and knew they were going to land in the river.

The airplane hit "hard" and water came rushing in immediately. He had placed his laptop computer in the seat pocket in front of him and his head hit the computer during impact. It did not leave a bruise. When the airplane stopped he unbuckled his seatbelt, retrieved his life vest from under the seat, and put it on. The life vest was "a little further down than [he] thought." It "took some work" and was "not that easy to grab." The life vest was under water while he was attempting to retrieve it. He stated that he remembered the life vest because he formulated a plan of what he was going to do in the event that he survived the impact.

He pulled up some of the seat cushions and threw them to other passengers. The lights went out and the water reached up to his waist. He moved up the aisle and was confident he would get out so he did not climb over any seats. He heard the flight attendant telling everyone to go forward but did not see her. When he got to the overwing exits he saw that the aisle ahead of him was clear and dry and saw the captain standing in the forward galley motioning for him to come forward. He was the last person on the airplane except for the flight crew and exited into the 1L slide/raft. He boarded a ferry that took them to a pier on the NY side of the river. He was not injured and was not transported to a hospital.

Male Passenger - Seat 24B

Age: 48 Hgt: 5'7" Wgt: 152 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on May 6, 2009 via telephone. He did not recall the flight attendants' performing a preflight safety demonstration and did not look at the safety information card.

About eight minutes after takeoff there was an “explosion” or “pop” sound. F/A ‘B’ stood up and said “I think we hit birds.” He stated that the airplane was experiencing heavy turbulence and “bobbing up and down.” He and passenger 24A were looking out the window and saw the airplane began making a turn. After a short time F/A ‘B’ said “I think there’s a fire.” He saw the buildings getting lower and lower and the airplane was completely silent. He thought they were going back to LGA but 3-5 minutes later he looked out the window and only saw the water. The captain announced to “brace for impact” and he knew they were going to land in the water. He still had his heavy winter coat on so he took it off and put it on the floor because he knew he would have trouble swimming with it. F/A ‘B’ immediately began shouting commands “heads down, brace” and he complied.

He described a “huge impact” and thought that he may have struck his head on the seat in front of him, even though he was not injured. When the airplane stopped he jumped up, retrieved his seat cushion, and went aft. He got into the galley and saw F/A ‘B’ pushing open the door. When water came in she said “oh my God, we’re in water! We have two minutes!” He turned around to go forward and saw people trying to retrieve items from the overhead bin. There was a “bottleneck” and he saw several people climbing over the seats to go forward. Another man was banging on a window to try to get out and the water was rising quickly. People were yelling that there was no exit in the back and getting panicked. He shouted for everyone to calm down.

Eventually the passengers began moving forward and he went up the aisle to door 1R and attempted to get into the 1R slid/raft. He fell into the water but was quickly able to get himself into the 1R slide/raft. About one minute later F/A ‘B’ got into the slide/raft and was bleeding badly from her leg. He saw a ferry arriving and people were yelling to “cut the rope!” No one had a knife so they had to get one from someone on the ferry. The injured flight attendant and an elderly woman were hoisted onto the ferry first followed by a child. He was approximately the 5th or 6th man to board the ferry. They were taken to the NY side of the river. He was not injured and declined to go to a hospital.

Male Passenger - Seat 24C

Age: 65 Hgt: 6’0” Wgt: 220 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB), David Lefrancq (Airbus), and Didier Delaitre (BEA) conducted the interview on January 21, 2009 via telephone. He did not recall a safety demonstration and he did not look at the safety information card.

The airplane seemed to use the entire runway to takeoff. They climbed for about 1-1 ½ minutes and he heard a “not too loud explosion.” It was like a “sharp, crackle, or snapping sound” coming from the right. Immediately he saw some gray, hazy, acrid smoke coming into the cabin from the right and he turned on the air ventilation above his seat. The smoke dissipated within a few seconds. He believed the airplane had begun a left turn just before the sound.

The airplane became “very, very quiet.” He could not hear any sound from the engines. He was hoping the pilot could make it back to LGA, but he was not optimistic. A few minutes later the captain made an announcement, “brace for impact.” Although he was a frequent flyer, it was something he had never heard before. He realized that it was a serious situation. He thought the airplane still had considerable altitude and was not descending too rapidly so he wondered what impact he was referring to.

A flight attendant made a P/A announcement and gave instructions for bracing – “bend over and put your head in your lap.” Everyone that he saw complied. It was hard to do that and maintain a sense of readiness for the impact. He kept “sneaking looks” out the windows. He was relieved to see the West Side Highway on the left and the “Palisades” on the right. He knew the pilot was lining up for a landing on the river. He put his head close to his knees and put his arms “parallel over his head, vertical to the airplane, holding onto the top of his head.” He gripped tightly right before impact.

He described the impact as a “tremendous crash” with a lot of noise and “stuff flying everywhere.” The airplane stopped quickly. When he sat up he had a “piece of metal (approximately one foot wide by 3-4 feet long) was in his lap. He thought that it might have been an overhead panel but did not know how it got into his lap since he was bent over.

He released the seatbelt and got into the aisle. During the descent he recalled that his closest exit was behind him and he had planned to go there. Many of the people attempted to go forward. He said the situation was “not orderly” but that no one was “misbehaving” either. The water was already up to his waist when he got into the aisle. He tried to go to the back but the flight attendant said “it’s hopeless.” He believed she was referring to the door. He took a few more steps aft and was able to see the 2L door. The door was still in its “casing” but had been “wrenched and twisted,” causing gaps where water was coming in. He tried the door handle “a couple of times” but it was clear that the door could not be opened. He thought water might have been coming in door 2R as well. The water was up to his neck and he thought he was going to drown. He did not realize the airplane was settling at an angle.

He moved forward and after a few steps the water was getting lower. The cabin was emptying of passengers quickly. He realized he did not have his life vest, so he grabbed a seat cushion that was floating nearby. He was not sure why, but he did not see the overwing exits and passed them by. He thought that they may have been submerged. He did not notice any emergency lights or placards. His “eyes were drawn” to the forward exits – particularly door 1R where “the sun was streaming through.” He did not remember any crew members at the doors. He sat down and slid into the 1R slide/raft. It was almost at the same level as the airplane and had no water in it. He sat next to a flight attendant with a “gash” in her leg. She was very agitated and worried about having her leg amputated. He and another man attempted to wrap it in a tan blanket that was in the raft. He described the laceration as 6-7 inches long but said that it did not have a lot of

blood coming out of it. A man said he was a doctor and had her elevate the leg above her head.

A ferry boat arrived next to the raft. It had a metallic ladder that he grabbed, trying to keep the raft alongside the boat. The doctor got the flight attendant ready to go up the ladder and two men helped her while the doctor “coached” her up the ladder. There was a “very elderly” woman in the raft with her daughter who was waiting patiently. They called for the people on the boat to throw down a line which they tied around her. Some people on the boat pulled and some men helped push her up. Her daughter went up next followed by some other women. Someone said, “get the old guy” and was looking at him. His left hand was “frozen” from holding onto the ladder but he made it up. He could not remember the name of the boat but it took him to the NY side of the river where they waited for 2-3 hours. He was not transported to a hospital. He reported that he had slightly bruised his right thumbnail.

Female Passenger - Seat 24D

Age: 23 Hgt: 5’6½” Wgt: 135 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on February 20, 2009 via telephone. She flew once every two or three months and was traveling by herself on the accident flight. She was reading during taxi and did not remember the flight attendants performing a safety demonstration. She did not look at the safety information card.

About three minutes before takeoff she fell asleep. Shortly after takeoff she heard a “big bang” and the airplane dropped a little. The aft flight attendant got out of her seat and was looking for something. She smelled a smoky odor and saw a “light haze” near the aft lavatory. It was very quiet. She was trying to calm a woman next to her. The airplane was descending and she knew they would be landing on the water. The pilot made an announcement to “brace for impact” and the flight attendants began shouting “heads down” over and over.

The airplane “hit pretty violently” she saw water rushing past the windows. She unbuckled her seatbelt and knew her closest exit was behind her. She went aft and got to the area of the lavatory when the flight attendant told everyone to go to the front. She got back to the area of her seat and could not move forward any further due to the passengers in the aisle. She looked down and the water was at mid calf height and rising quickly. People were still not moving. She stood on an aisle seat and could see that the very front of the airplane looked clear. Several people began climbing over seatbacks. She followed someone in front of her over the seatbacks.

When she got near the overwing exits, people were yelling for others to go forward because there was no more room on the wing. She continued past the overwing exits and saw someone pulling off a seat cushion, so she pulled one off too, because she could not swim. The airplane was “completely empty” forward of the overwing exits. She did not notice any emergency lights. She exited into the 1R slide/raft and people

were there helping others onto the raft. Ferries came quickly. They took the passengers off the wing first, and then came to her raft. The flight attendant with the injured leg had gotten into the raft after her and people were helping with first aid. The ferry took them to the NY side of the river. She had a sore spot behind her ear the size of a tangerine, and a few cuts on her hand. She was not taken to a hospital.

Female Passenger - Seat 24E

Age: UNK Hgt: UNK Wgt: UNK

Exit Used: Door 1R

Jason Fedok (NTSB) conducted the interview on May 12, 2009 via telephone. The only information this passenger provided was that she climbed over all 24 rows of seats and exited into the 1R slide/raft.

Male Passenger - Seat 24F

Age: 30 Hgt: 5'11" Wgt: 175 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 3, 2009 via telephone. He did not fly often and his last flight was "years ago." He was traveling with passenger 24E. He watched the flight attendants' safety demonstration and complied with all of their instructions. He also looked at the safety information card.

After takeoff he heard a "loud boom" and he saw that the right engine was on fire. The pilot turned the airplane and announced to "brace for impact." He did as was instructed and bent over. When the airplane hit the water his window "came in." He unbuckled his seatbelt and got into the aisle. The water was rising rapidly. He moved to the back where the flight attendant could not open the door. She told them to go forward. The water was up to his chest. He moved up the aisle to the overwing exits and exited onto the left wing. Passenger 24E turned to the right and went out on the right wing. He was one of the last people on the airplane. He grabbed a seat cushion while moving up the aisle but did not retrieve a life vest. While he was standing on the wing he saw someone inside the airplane throwing life vests out to people. He was rescued by a firefighting boat and helped to pull a woman out of the water. They were taken to the NY side of the river. He sprained his wrist and sustained a facial bruise when the window "came in" on him and was transported to St. Vincent's Hospital.

Male Passenger - Seat 25A

Age: 49 Hgt: 5'11" Wgt: 175 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on March 26, 2009 via telephone. He flew on a weekly basis for business and was traveling alone on the accident flight. He did not watch the flight attendants' safety demonstration nor did he look at the safety information card.

About one minute and thirty seconds after takeoff he heard a “huge explosion.” He looked out the window and saw that the engine was on fire. It was like a “bonfire.” He had seen other engine fires before but they were smaller or went out quickly. This one was “violent” but did eventually dissipate somewhat. He noticed a strong smell of jet fuel. The airplane decelerated but still climbed for a short time. After about 15 seconds the airplane made a slow bank to the left. He thought they still had power from the right engine. He could see LGA out his window but the airplane straightened out over the river and he soon realized they were not headed there. He thought they might be diverting to EWR.

The aft flight attendant told them that everything would be alright. A female passenger had stood up and started to go through one of the overhead bins and the aft flight attendant told her to sit down and buckle her seatbelt. The captain announced to “brace for impact” at what he estimated was 1,500 feet. He knew then that they were going to land in the river. He tightened his seatbelt and the aft flight attendant began shouting for passengers to brace and put their heads between their knees. He looked around and identified the aft exits as his closest. He leaned forward but did not want to put his head between his knees because he felt he might break his neck in an impact. He wanted to look out the window to see when the impact would be so he could relax his body.

Approximately 40 seconds after the captain’s announcement, the airplane impacted the water. It was “violent” and “pretty jarring.” He recalled being thrown forward and striking the seat in front of him. The airplane bounced and water came up over the windows. The back of the airplane “fishtailed” to the right and he thought it was going to flip but it did not. When the airplane came to a stop water was “streaming” through his window and up through the floor immediately. He got up out of his seat and told the two men next to him to go to the back. He did not hear any instructions to take a seat cushion or life vest but he did attempt to take his life vest out of the pouch beneath his seat. He struggled with it for approximately 10 seconds but the water was rising “really fast.” He was more interested in getting out and gave up. He felt the water first at his ankles, followed by his knees, waist, chest, and shoulders. He got as far aft as the aft part of the lavatory when he saw the aft flight attendant telling everyone to go forward because the door would not open. He estimated there were two or three passengers in the galley area. He turned around and the aisle was “packed.” He got into row 26 and began climbing over the window seats on the right side of the airplane. The water was at least halfway up the seatbacks. He got up to row 12 or 13 when he encountered a woman with a young child (approximately 3 years of age) who was standing and blocking the overwing exit. He “looped around” them and went to the left side of the cabin. He found the overwing exits there to be open but the wing was “completely full” and he did not want to force anyone to go into the water. He decided he had to go forward. He continued climbing over seats on the left side of the cabin and eventually saw that the aisle was clear. He did not remember seeing any emergency lights and had no difficulty seeing in the cabin. He also saw members of the crew at the front of the airplane calling him forward. He exited into the 1L slide/raft.

About 20 seconds later the captain and first officer also boarded the slide/raft. No one could find the knife to cut the mooring line but 5 or 10 minutes later a ferry arrived and someone gave a knife that they used to cut free from the airplane. He spoke briefly with the pilot and thanked him for saving their lives. He also had a conversation with the first officer who told them they had hit a flock of geese and that they landed the airplane in the water at about 115 knots. The raft occupants told the first ferry to take the people from the wing. It dropped a rope ladder and several women had a difficult time climbing it. The current of the river pushed the stern of the boat into the raft. The captain of the boat heard them shouting and backed off. A second ferry arrived and the people on the raft boarded it. They were taken to a terminal on the NY side of the river and he declined to go to a hospital. The next day he developed a bruise on the left side of his head (which he believed was from striking the seat in front of him in the impact) and general soreness which lasted for several days.

Male Passenger - Seat 25B

Age: 62 Hgt: 5'6" Wgt: 175 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on February 12, 2009 via telephone. He was a frequent flyer and was traveling with passenger 15D on the accident flight. After boarding, he was reading a book but remembered that the flight attendants performed a safety demonstration. He did not look at the safety information card.

After takeoff he was attempting to doze when he heard a loud noise like a "muted explosion." There was a little smoke in the cabin and he smelled jet fuel. It got very quiet. The aft flight attendant got up and pulled forward passenger 26D's seatback looking for something. The flight attendant told passenger 26D to sit back down and fasten her seatbelt. He tightened his seatbelt and the captain announced "brace for impact." He put his head down and braced his left shoulder against the seat in front of him. He tried to look out the window to see when they would hit but did not know they were going in the river until after impact when water sprayed up at him from the floor.

The impact was "pretty violent." He unbuckled his seatbelt and, by the time he got to the aisle a few seconds later, the water was up to his knees. Approximately 6-8 people had gone to the aft exits. He heard the flight attendant shout, "no, no, water is coming in, we can't use this door!" He moved forward up the aisle and the water was getting deeper. They were moving slowly. When he got near the middle of the airplane he saw there was no one up front. He heard the flight attendant shout "crawl over the seats" which he thought was a good idea. He got up on the seats and walked over the seatbacks on the right side of the airplane until he passed the bottleneck at the overwing exits rows. He passed right through those exiting out the overwing exits. He then walked up the aisle and exited out of door 1L. It "didn't cross [his] mind" to take a seat cushion or a life vest. He did not see any emergency lights on during his evacuation.

Once he was in the raft the first ferry came quickly. They were afraid they would be pulled down with the airplane so someone threw them a knife and the captain cut them

loose. He boarded the *Athena* which took them to Pier 78 on the NY side of the river. He was not examined by an EMT and was not injured. He was not taken to a hospital.

Male Passenger - Seat 25C

Age: 36 Hgt: 5'11" Wgt: 176 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on April 14, 2009 via telephone. He flew frequently and was traveling with passenger 19D on the accident flight. He watched some of flight attendants' safety demonstration but he did not look at the safety information card. English was not his primary language but he did not express any difficulty understanding the safety information.

Prior to impact he braced himself by copying those around him and bending over. He recalled striking his head on the seat in front of him during impact. He moved up the aisle to the overwing exits and exited onto the left wing. He did not have a life vest with him but remembered to take his seat cushion. However, while he was on the wing, someone gave him a life vest in a plastic pouch. He opened it but it took "a few minutes" for him to figure out how to get it on properly. He eventually succeeded and fastened the waist strap around him. He inflated both chambers of the vest without difficulty. He was rescued by a "tug boat" and taken to Pier 84 on the NY side of the river. He had a "minor bump" on his head from striking his head during the impact but did not go to a hospital.

Male Passenger - Seat 25D

Age: 21 Hgt: 5'11" Wgt: 170 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on February 26, 2009 via telephone. He was a student in Florida and flew three or four times a year to and from school. He was traveling alone on the accident flight. After boarding he did not pay attention to whether the flight attendants performed a safety demonstration. He did not look at the safety information card.

He fell asleep around the time of takeoff. A short time later he heard a "huge thud." He looked behind him and saw the aft flight attendant "rummaging around" for something in the "drink tray" and overhead bins. He saw smoke and thought there was a fire on board. The airplane slowed considerably and some people took out their cell phones and made phone calls because they knew the situation was serious. The airplane made a hard left turn and there was no sound from the engines. The captain announced to "brace for impact." He put his head down near his knees and put his hands over his head but he wanted to look out the window to see where they were. He knew they were over the Hudson River.

The impact was "very strong" and the cabin got dark right away. Water came in the cabin immediately and it was quickly up to his chest. There was panic in the back and he thought he was going to drown. The water seemed to stop rising about six inches

below his neck. Both of the last two aft windows were completely submerged. People were grabbing seat cushions and moving forward up the aisle as fast as they could. Some people climbed over the seats but he stayed in the aisle. He grabbed a seat cushion at some point because he did not know there were rafts and he thought he would go right into the water. When he got up near the overwing exits he saw the pilot and one of the flight attendants calling people to come forward. There were just a few people left in the cabin. He continued up the aisle and exited into the 1L slide/raft. He did not notice any emergency lights.

A NY Waterways ferry arrived and took people off the wings first. It hit the 1L slide/raft at one point and he was worried about it crushing them. After the people were off the wings it took people off the raft. About 15-20 people from the raft got on that ferry. They were taken to the NY side of the river. He sustained a “black eye” and some scratches on his face. He thought it may have been from being struck by something that came out of an overhead bin during the impact.

Male Passenger - Seat 25E

Age: 26 Hgt: 6’0” Wgt: 155 lbs.

Exit Used: Door 1L

Jason Fedok (NTSB) conducted the interview on February 20, 2009 via telephone. He was not a frequent flyer but had flown 4-5 times in the months prior to the accident. He was traveling alone on the accident flight. A safety demonstration was performed but he was reading and did not watch it. He did not look at the safety information card.

Everything about the flight was normal until there was a “loud thud” and the airplane “lurched a little.” The aft flight attendant stood up and appeared to be alarmed. Passenger 26D stood up and asked if there was anything the passengers could do to help. The flight attendant was trying to get something from behind the seat. He thought there might be a fire and then noticed the lack of engine noise and that the airplane was descending. There was no panic in the cabin. The captain said “brace for impact” and the flight attendants shouted “head between your knees” over and over. He tightened his seatbelt and leaned forward and put his hands over his ears. He did not remember striking the seat in front of him.

When the airplane hit it was “fairly rough.” The water immediately came in around his ankles. The airplane slid, then shifted to the left, then stopped quickly. By the time he stood up the water was near his knees. He looked to the rear and the flight attendant was back there. He thought she was trying to open the door. She yelled that it could not be opened and water eventually got up to his chest. People were standing on the seats and climbing over rows. He climbed over several rows and the water was not as high. There was a large crowd around the wings. He went through it and the forward part of the airplane was completely empty. He went forward and got into the 1L slide/raft. He did not remember any emergency lights. He did not take a seat cushion or life vest with him. When he was in the slide/raft one of the crewmembers gave him a life

vest. He was the last passenger to board the raft. The copilot got on after he did. The ferries arrived and he was taken to the NY side of the river. He was not injured and did not go to a hospital.

Female Passenger - Seat 25F

Age: 45 Hgt: 5'7" Wgt: 138 lbs.

Exit Used: Door 1R

Jason Fedok (NTSB) and David Lefrancq (Airbus) conducted the interview on January 22, 2009 via telephone. She was traveling alone. The boarding was a bit slow and the plane left later than scheduled. The flight attendants performed a manual safety demonstration which she watched. She did not look at the safety information card.

A few minutes after takeoff there was a "loud bang." She looked out the window next to her and saw flames coming out of the engine. The airplane continued to climb for a while and she was concerned that the pilot may not know about the engine. She smelled something "burning," but did not see any smoke. The airplane made a left turn and she thought they were heading back to LGA. She did not hear any engine noise. She saw a flight attendant looking in the overhead bins. A passenger asked if they could do anything and she said to remain seated. She was very calm. The pilot announced "brace for impact." She put her head between her knees. She was previously aware that was the proper position. The landing was "pretty smooth." Immediately water rushed into the cabin. It was at seat level before she could stand up. She released her seatbelt and got up. The water quickly rose over her waist. Eventually even her hair got wet. Passengers tried to go to the aft exits but they could not. She saw about three people going forward over the seatbacks. She did not get far enough aft to see the doors before she turned around.

She did not know how to swim. She grabbed a seat cushion floating to her right. She did not think to grab a life vest, and, even if the crew would have requested it, she would have preferred a seat cushion. She stayed in the aisle and went forward. There was a little bit of panic when more water came in but passengers were relatively calm and orderly. She did not remember seeing any change in the cabin lighting. She saw some people on the wing. The overwing exits were full and a passenger told her to go forward. She exited out of door 1R and did not recall a crew member there. She stepped into the slide/raft and slid into the center without any difficulty.

A ferry was there within minutes and they threw them life preservers. It was the first ferry on-scene. There was an injured flight attendant in her slide/raft, as well as a woman with a child. She thought the woman was seated a few rows in front of her on the flight. A man was trying to maintain the raft's position next to the ferry by holding on to the ferry's metal ladder. The injured flight attendant was helped on the boat first followed by the woman with the child and then the child. The ferry took them to the NY side of the river. She had some bruises on her legs which she thought may have been from contact with other people in the raft.

Female Passenger - Seat 26A

Age: 37 Hgt: 5'7" Wgt: 135 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) and David Lefrancq (Airbus) conducted the interview on January 22, 2009 via telephone. When she arrived at her row during boarding, a woman was already seated in 26B. The window shade next to her seat was down. The woman in 26B asked her to keep it down because she was scared about flying and she agreed. She did not remember if a safety demonstration was performed but "usually let it slide." She did not look at the safety information card.

Taxi and takeoff were normal. A few minutes later she heard a "muffled explosion" somewhere outside, but she was not able to localize it. The airplane shook a little. It sounded like a huge suitcase falling on a concrete floor from 10-15 feet. She could not hear the engines. She heard the aft flight attendant saying something about a fire. There was a strong smell like airplane fuel and a little bit of smoke. The flight attendant got up and went into the aft galley and it sounded as if she was opening some compartments. Most of the passengers remained seated at that time. Some asked if they could help. There was no communication on the P/A system. The airplane was maneuvering but she could not see where they were going because the window shade was down. The flight attendant seemed to be getting worried.

The pilot announced "brace for impact" and the flight attendant shouted for people to brace saying, "put your head down." After ten seconds, the airplane hit the water and she heard a "bumping, screeching noise." She might have hit her head on the seat in front of her. Once they stopped, there was a strong smell of fuel. The cabin lights went out but she did not remember seeing any emergency lights. Passengers took their seatbelts off. She heard liquid coming into the airplane. Her feet were wet right away. She thought it was fuel coming in very fast and it was up to her knees "immediately." She knew her closest exit was behind her and went to the back. There were a few people back there. Most of the people rushed to the middle of the cabin. She saw that door 2L was "slightly ajar two to three inches." Some water was entering through the gaps. She could see the sky above and the water level outside the plane was at her eye level. The water was up to her waist. She remembered that either she or some other passenger tried to open the door by jerking on the handle but it would not open.

She knew the only way out was forward. She did not have time to think about taking a life vest or a seat cushion. She thought the flight attendant said "we have two minutes." People moved up the aisle and were urging others to go faster and faster. She could see people evacuating quickly onto the wings. She exited through the left side overwing exits without difficulty. She was not the last one out; there were a few passengers behind her. When she got onto the wing, she realized that she had neither a life vest nor a seat cushion. Someone closer to the airplane distributed life vests and cushions. The life vest was in a package. She had no difficulty opening the package or putting it over her head, but was not sure about the waist strap and did not connect it. She inflated the vest with both red handles.

She saw there was a kind of raft at the back of the wing with about 10 people on it. The water on the wing was just above her ankle. A large two-level ferry arrived and the passengers tried to get them to lower a ladder. The boat got too close and almost swept some people into the water. The boat turned around and tried to back in but almost hit a raft with its back end. One or two people may have gotten aboard. A “little fire department tugboat” arrived but could not get close enough. The only way to get to it was to jump in so she did. She swam 10-15 feet to the boat. She was the 5th or 6th person pulled out of the water. The boat eventually took them to a pier on the NY side near the Intrepid. She sustained some “saucer-sized” bruises to her left thigh and had one under her left knee. She also had one at her below her waist on her right side. She cannot remember when she got them but guessed it was from getting into the boat.

Female Passenger - Seat 26B

Age: 37 Hgt: 5’0” Wgt: 117 lbs.

Exit Used: Right Overwing

The interview was conducted via telephone by Jason Fedok (NTSB) on February 3, 2009. She flew biweekly for business. She was traveling with a coworker who was seated in seat 8A. She asked the woman seated in 26A whether she would mind keeping the shade down because she was a “nervous flyer.” Passenger 26A agreed and shut the shade which remained closed for the duration of the flight. She did not watch the safety briefing or look at the safety information card but knew her closest exit was behind her.

Takeoff was smooth. As the airplane was climbing she heard a “clunking” noise similar to “shoes in a washing machine.” There was a “sulfur” type smell in the cabin as if someone had set off firecrackers. She thought they had lost an engine but believed they still had one working. The aft flight attendant got up and began opening the overhead bins and asked the passenger in 26D to get up. She might have been looking for a fire extinguisher but then seemed to realize that the smell was coming from outside the cabin. Some of the women around her began getting out their cell phones to call their loved ones. She tried to calm them and told them that they needed to listen to the captain who had come on and stated “brace for impact.” The airplane had made a left turn and she thought that they would be landing at LGA. She felt like the pilot had full control of the airplane. He came on the P/A again and said “Brace, brace, brace!” She took off her heeled shoes and placed her feet flat on the floor. She tightened her seatbelt low across her hips. She took off her glasses and made sure she had no sharp objects nearby. She took an airplane pillow that she had been using as a back support and placed it on top of her arms which she placed on the seatback in front of her. She put her head on the pillow and bent over. She did not hear any flight attendant commands in her area and took the position described based on previous knowledge.

She was “quite surprised” with the impact. It was “not bad” and the airplane stayed intact. She had been expecting it to possibly break apart. The overhead bins remained shut and nothing was strewn about the cabin. She grabbed her Blackberry and released her seatbelt. She went into the aft galley where the flight attendant was

attempting to close the 2L door where there was water coming in. Water was up to her knees and the flight attendant told people to go to the wings. She repeated the command and began “gently pushing” those in front of her up the aisle. They were not moving quickly and she knew that to survive they had to get out in two minutes. Therefore, she stepped up onto the seats on the right side of the airplane and began crawling over the seatbacks. As she went forward she noticed that all of the seat cushions were gone and she realized she had forgotten hers. She also knew that there was a life vest under her seat, but did not remember to retrieve it either. She went over the seatbacks until she reached the right side overwing exits where a man stopped and said, “ma’am, after you” and let her exit.

When she got onto the wing several men were trying to flip over a slide. They needed something to weigh it down and began “throwing” some people into it. She was “gently placed” into it and it had about 8” of water. Other people were getting in and she took the time to use her Blackberry to call her husband to let him know that her airplane had crashed but that she was okay. (Her husband later told her that the call was received at 1533.) She smelled jet fuel and said she was close enough to touch the airplane’s fuselage. A two-story NY Waterway ferry came and threw life preservers to some of those in the raft. She tried to put it on but had difficulty because her “hands and brain weren’t working.” She knew it was captained by Alan Warren because she had his jacket and it had business cards inside of it. The ferry had a rubber lattice for people to crawl up but she could not because her “legs were not functional” from being in the cold water. One of her male coworkers was able to “throw” her into the boat. They were taken to Port Imperial on the NJ side of the river. She was not injured but traveled to the hospital with a coworker (seated in 13E) who was very hypothermic. Once she was at the hospital and realized she had been on the plane they convinced her to have her feet examined and she agreed. She gave statements to several Port Authority and NYPD officers.

Female Passenger - Seat 26C

Age: 38 Hgt: 5’6” Wgt: 127 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on February 4, 2009 via telephone. Passenger 26C checked her bag and boarded the airplane with her purse and coat which she stowed under the seat in front of her. Boarding was a little late and she was one of the last ones to board the airplane. She buckled her seatbelt and remembered overhearing a conversation about passenger 26B being afraid to fly and asking the window shade be closed, which it was. She remembered hearing the safety briefing but it “really didn’t register. I’ve heard it so many times.” She did not recall looking at the safety information card.

She closed her eyes after takeoff to take a nap. Sometime later she heard a “huge pop” which was accompanied by a “little jolt.” She did not feel the airplane lose acceleration. Immediately there was a “burning smell” in the cabin. She believed that she heard the aft flight attendant get up and look for something in the aft galley.

Passenger 26D stood up and said she was going to get help and the flight attendant told her to remain seated. The flight attendant uttered an expletive and passenger 26C knew something was wrong.

The captain made an announcement “brace for impact.” She held hands with the woman on her left and leaned forward as far as she could. She did not remember why she took that particular position. She wanted to call her husband but passenger 26B convinced her not to. She did not know where the airplane was and could not see out a window. She described the impact as “pretty significant, but not as bad as [she] expected.” She immediately felt extremely cold water around her feet and realized they were in the water. She released her seatbelt and went to the aft galley but could not see anything. It was dark and she did not believe the airplane had power. At no time did she see any emergency lights or placards. All she heard was someone saying “go to the wings.” The water was coming in pretty fast and there a long queue in the aisle to move forward. She thought she was going to drown and called her husband and left him a voice mail message. The water was up to her waist. She remembered a seat cushion floating by so she scooped it up with her arm. She knew that there was a life vest under her seat from information received on previous flight but did not think to take it.

The next thing she remembered she was at the overwing exits. She went out the left side but did not know why she chose that one. The water on the wing was up to her knees. It was very crowded. There were three people wearing life vests in a raft off the back of the wing. She decided to try and jump into it but miscalculated and landed in the water. She let go of her seat cushion and attempted to climb back aboard the wing. Someone helped her back up. She did not remember any damage to the back side of the wing.

Someone began passing out life vests from the plane. The passengers distributed them. She had no difficulty opening one of the pouches and put it over her head. She inflated both of the chambers but did not fasten the waist strap. Eventually a large ferry tried to back toward the left wing but began bumping into the 1L slide/raft. People on the wing yelled for them to get away. A helicopter came and got everyone colder by blowing wind and water on people. They were concerned about people being blown in the water and yelled for the helicopter to leave. A smaller red tugboat arrived and had an easier time maneuvering around the wing. Two men were pulling passengers into the boat. Eventually she was pulled in and landed on her back because her legs were numb. She remembered someone on the boat saying “we can’t take anymore” and they departed for the shore on the NY side of the river. She entered a dinner boat where there were a lot of emergency responders. She was briefly examined but was not injured. She was not transported to a hospital. The next morning she noticed that she had a lump on the back of her head, as well as bruises to the front of both knees, lower back, and legs.

Female Passenger - Seat 26D (moved to 26E inflight)
Age: 37 Hgt: 5'5" Wgt: 180 lbs.
Exit Used: Right Overwing

Jason Fedok (NTSB) and David Lefrancq (Airbus) conducted the interview on January 22, 2009 via telephone. She normally flew two or three times a month. Boarding was normal. There was a gentleman seated in 26F. Seat 26E was empty. She heard the flight attendant say that the flight was full and some people had to check their carry-on bags. Boarding began at 1500 and she noted on her watch that the taxi began at 1524. During taxi, there was a safety demonstration performed that she watched. She knew the nearest exit was behind her. She did not look at the safety information card.

Takeoff was "a little rough." They were not in the air for long when she heard a "boom." The man in 26F had been intently looking out the window and she asked him, "what was that?" He replied that it was a bird. She smelled smoke and it got "cloudy or foggy" in the cabin. The flight attendant came up from the galley and was trying to get something from behind her seat. Passenger 26D got up and moved a few rows forward to allow the flight attendant more access to the area around her seat. The flight attendant leaned the seatback forward and said something about a fire extinguisher. Passenger 26D asked if she wanted her to call a flight attendant and the flight attendant replied that she *was* a flight attendant. Passenger 26D knew that and asked if she wanted her to call *another* flight attendant to help. The flight attendant "slammed" the seat back in place and did not retrieve anything from behind it. She asked passenger 26D to move to 26E in case she needed the aisle seat. She spent the rest of the flight in seat 26E.

She knew they were no longer climbing. She did not hear any engine noise. She thought they would glide back to LGA. She grabbed her Blackberry and sent a text message to a family member "my flight is crashing." Passenger 26F told her she was out of time and the captain announced "brace for impact." She cinched her seatbelt down tightly and the flight attendant instructed them to put their feet flat on the floor and put their arms under their legs. It was very quiet and she heard someone say "we are going in the water. Be ready!" Approximately 45 seconds later they hit the water. She stated that she had had rougher landings on regular touchdowns and that it was "quite smooth" in the back.

After a few seconds, the airplane stopped. She remembered that some oxygen masks had dropped down and some overhead bins had opened. She took off her seatbelt and briefly thought about taking her purse but decided against it. She went straight to the aft galley. She did not remember seeing any lights on. The flight attendant was the only one there and she was trying to open the door 2L, which was "cracked" and could not be moved. She tried to help the flight attendant move it but it would not open. The flight attendant said "oh no, we are on the water." It was "as if her training kicked in." She instructed the passengers to "go to the wing!" She looked at door 2R and thought water was coming in it as well. The water in the galley was at her waist and quickly rose to her chest. The flight attendant said "we have two minutes" and then was "gone." Other people came to the back. She remembered the woman from 26C in a brown fleece coat

went in the galley and tried to push the door open as well. Passenger 26D put both of her hands up and told the other passengers that they could not get out in the galley and to go to the wings. She saw seat cushions floating by and grabbed one with her right arm.

She moved forward and when she reached approximately row 18 she saw people exiting onto the wing. She began to calm down because she knew she would get out. She did not know if she was the last one out but she went out the right overwing exits. She had no difficulty exiting. The wing was full of people. The water was over her ankles. She did not move far from the fuselage and saw a ferry right away. To her right, she saw a raft behind the wing that was “pretty much to capacity.” There was a mother on the wing with a baby approximately 9-12 months old and a little girl. The woman’s husband was “frozen in the water” farther out on the wing. A man in the raft was trying to get the mother to give him her baby. Another man held the raft and passenger 26D helped pass the child into the raft. Passenger 26D got into the raft and held the young girl on her lap. The mother was “hysterical” as the father got farther away, but calmed down (and sat down) once she saw him get on a ferry. The little girl was calm and stayed seated in passenger 26D’s lap. Eventually a two-story ferry came with a “weird rubber grid” that they had to climb up. She pushed the little girl up and then climbed up herself. They were taken to the NJ side of the river. She could not stop shaking so the EMTs transported her to Hoboken University Medical Center. Her temperature was 95 degrees and she had a few bumps and bruises. She was treated and released around 1900.

Male Passenger - Seat 26F

Age: 35 Hgt: 6’1” Wgt: 195 lbs.

Exit Used: Left Overwing

Jason Fedok (NTSB) conducted the interview on March 9, 2009 via telephone. He usually flew every other week for business. He was traveling with passengers 1F, 4B, and 22C on the accident flight. He did not watch the flight attendants’ safety demonstration nor did he look at the safety information card.

After he took his seat he removed his shoes to relax for the flight. During climb the airplane “experienced an unusual movement” which caused him to look out the window. He saw “debris” coming past the window and immediately knew that they had struck a bird. He saw other birds flying in the distance and told the woman in 26D “we hit a bird.” There was a sense of anxiety on the airplane but there were no instructions from the crew. The flight attendant appeared to be going through her procedures and was “locking something down.” Passenger 26D seemed upset, got up from her seat, and walked up the aisle. She asked the flight attendant if she needed help. The flight attendant told her, “no, I want you to sit down.” The cabin was still calm and very quiet and he could hear conversations throughout the airplane. The pilot seemed to be in control and turned the airplane smoothly and aligned it with the river. He saw some passengers sending text messages on their phones. The captain announced to “brace for impact.” He put his forearm against the seatback in front of him but did not lean over because he wanted to watch out the window to see when they would hit the water. He

noticed that, an instant before impact, passenger 26D (who had reseated herself in seat 26E) put her head down even though he did not hear any commands to do that.

During the impact he felt water on his feet immediately even before the airplane came to a stop. He compared it to a “minor car crash” and effectively braced himself with his forearm. He did not strike the seat in front of him. He was pushed to the right as the airplane turned slightly and stopped. He unbuckled his seatbelt, stood up, and retrieved his laptop bag from under the seat in front of him. By the time he placed it on his seat cushion and removed his wallet the water had risen above the seat cushion and was rising quickly. He stood up on his seat cushion and put one foot on the seat cushion of seat 25F, essentially straddling the seatback of 25F. He saw light coming into the cabin on the right side of the airplane near the overwing exits. He wanted to climb over the seats to the exit but did not. The water had stopped rising so quickly and stayed between waist and shoulder depth. He did not remember seeing anyone else climb over the seatbacks. He did not hear any commands from the flight attendants.

The crowd of people in the aisle finally started to move forward. He saw a man who was the last in line and he got into the aisle behind him. They walked slowly to the overwing exits. The water was at least waist high. As he moved forward he noticed there was an elderly woman and her daughter in front of him. He remembered that he did not have a seat cushion. He reached down to pick up a seat cushion and asked the elderly woman and her daughter if they wanted one as well. He asked two or three times and they would not answer him. He did not recall what happened to them but did not believe they took a seat cushion from him. At some point he figured out that there were life vests under the seats as he got to the overwing exit door he gathered up several of the vests and began giving them to someone on the wing. He made at least three or four trips into other areas of the cabin to look for more life vests. He did not believe the cabin was lit in any way. He was trying to get one for himself but every time he got to the door “they just kept asking for more.” He believed there were two other men (including passenger 18C and possibly passenger 19C) in the cabin retrieving life vests as well. He went as far forward as first class and as far aft as row 20 to retrieve the vests. Each time he returned to the overwing exit he noted the depth of the water at the exit. If he had seen it getting deeper he would have exited immediately, but the water level seemed to have stabilized. Eventually, his hands were frozen from reaching under the seats in the water. He decided he could not get anymore and was going to exit. He passed the captain, who was also in the cabin, and thanked him for saving his life. The captain responded that it was time he evacuated the airplane. Passenger 26F exited onto the left wing and saw a life vest in a package floating outside the exit. He was able to open the package and put the life vest over his head, but he did not secure the waist strap or inflate it.

There was at least one, and possibly three, ferries on the left side of the airplane. He remembered seeing a man trying to climb a ladder or net. There was a fire department boat forward of the left wing and, as it turned, a man helped him onto the back of the boat. As the boat departed he recalled that there were still a few passengers on a slide near the tail. His boat went to the NY side of the river and the passengers disembarked onto a dinner boat. His feet were exceptionally cold because he was

barefoot throughout the event. His entire right leg was bruised the next day. He hypothesized that it might have been from running into the seats with numb legs while he was retrieving life vests.

3.2 Passenger Questionnaires

Questionnaires were mailed to all 147 adult passengers on board flight 1549 on February 20, 2009. As of the date of this report, 77 questionnaires had been returned. They are contained in Attachment 8.

3.3 Passenger Information Summary

Of the 150 passengers on the airplane, information was collected about 146. This included information collected from 145 passengers (including 3 children) via telephone interviews and information collected from one additional passenger (who returned a passenger questionnaire but could not be reached for an interview). No information could be collected from 4 of the 150 passengers despite numerous attempts to contact each of them. The following sections present a summary of the information obtained about the 146 passengers.

3.3.1 Demographic Information

Ages were obtained for 143 of the adult passengers and ranged from 21 to 85. The average age of the adult women was 44.3 years. The average age of the adult men was 42.2 years. For a graphic depiction of the age distribution by gender, see Figure 2.

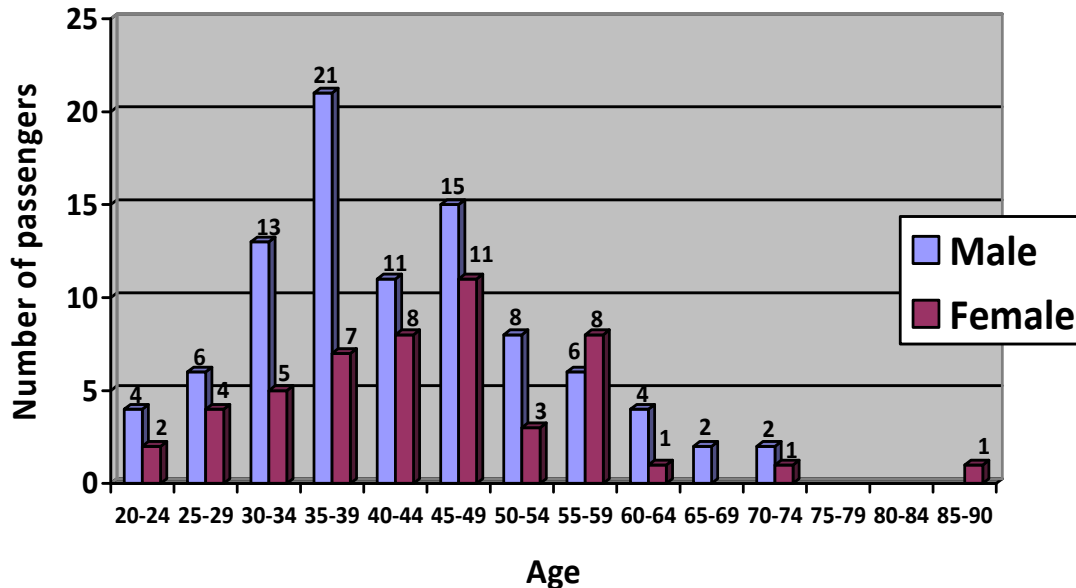


Figure 2. Adult Passenger Age Distribution (143)

Height information was obtained for 142 adult passengers and ranged from 5'0" to 6'6".¹⁶ The women's heights ranged from 5'0" to 6'1" with an average height of 5'5". The men's heights ranged from 5'5" to 6'6" with an average height of 5'11". For a graphic depiction of the height distribution by gender, see Figure 3.

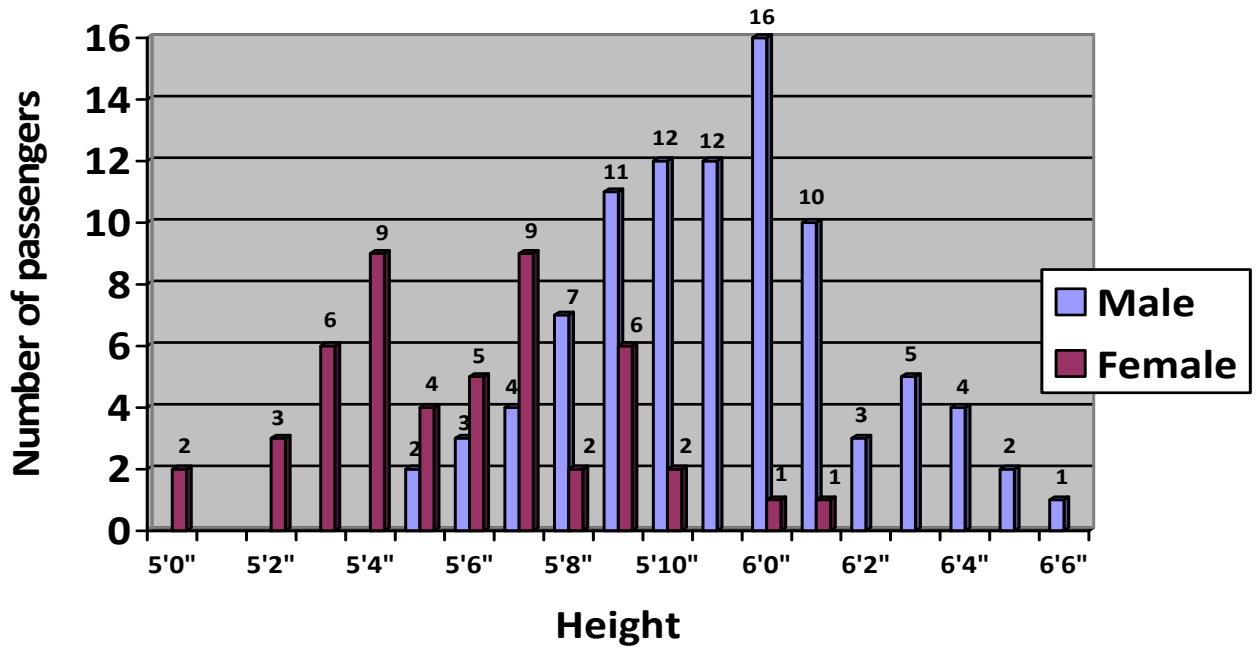


Figure 3. Adult Passenger Height Distribution (142)

Weight information was obtained for 142 adult passengers and ranged from 100 lbs. to 293 lbs.¹⁷ The women's weights ranged from 100 lbs. to 293 lbs. with an average weight of 148 lbs. The men's weights ranged from 148 lbs. to 285 lbs. with an average weight of 191 lbs. For a graphic depiction of the weight distribution by gender, see Figure 4.

¹⁶ A 1999-2002 study by the Centers for Disease Control and Prevention (CDC) indicated that the average height of an American adult male was 5'9.3" while the average height of an American adult female was 5'3.8"

¹⁷ A 1999-2002 study by the Centers for Disease Control and Prevention (CDC) indicated that the average weight of an American adult male was 190 lbs. while the average weight of an American adult female was 163 lbs.

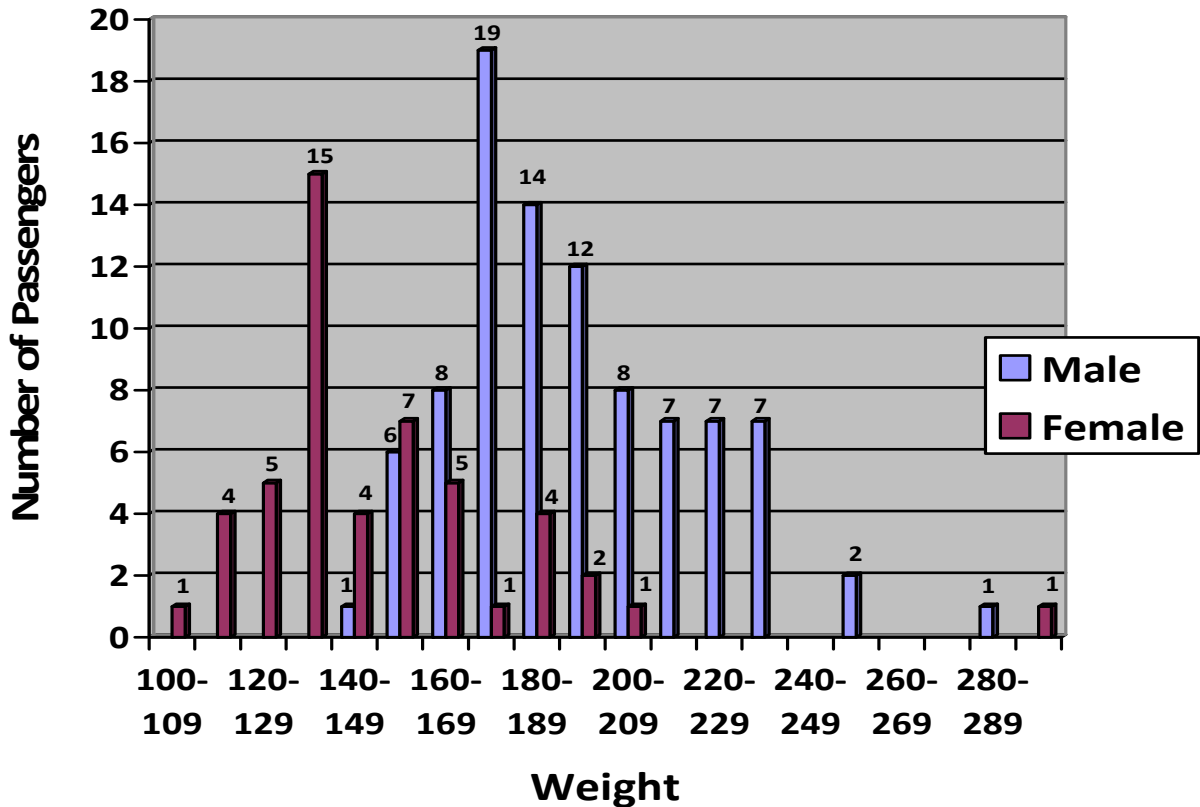


Figure 4. Adult Passenger Weight Distribution (142)

3.3.2 Exit Usage

Figure 5 depicts the exits used by the occupants during the evacuation. Please note that, due to post-evacuation passenger movement, it does *not* accurately indicate the locations where people were rescued. (See section 3.3.3) Additionally, several passengers exited the airplane, reentered, and exited the airplane a second time. These passengers' seat locations are designated with a '/'. The first exit used is represented by the upper color while the second exit is shown by the lower color.

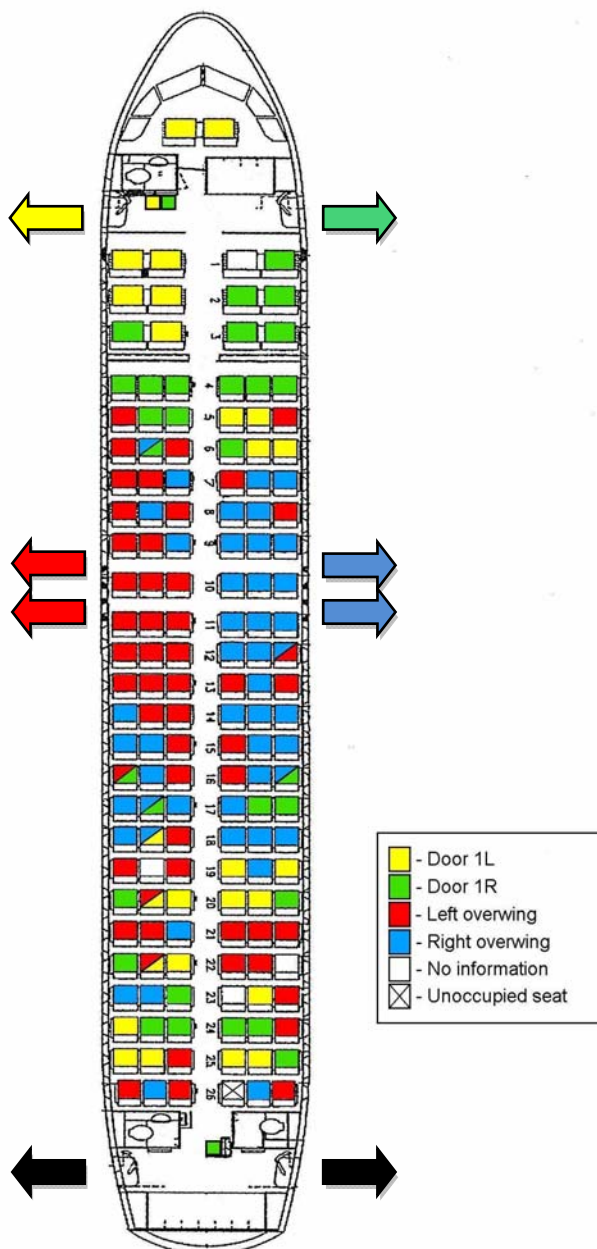


Figure 5. Exit Usage

3.3.3 Miscellaneous Information

As stated previously, the information compiled in this section represents data from the 146 passengers who were successfully contacted by investigators.

- 25 passengers (17%) reported watching a majority of the preflight safety demonstration. An additional 18 passengers (12%) reported watching some of the demonstration.

- 12 passengers (8%) reported reading the safety information card prior to or during flight.
- 27 passengers (18%) reported striking their head on the seat in front of them during the impact. Another 4 passengers said it was possible that their head struck the seatback.
- 85 passengers (58%) reported having possession of a seat cushion during the evacuation. Of these, 45 retrieved the seat cushion from their own seat, 27 retrieved a seat cushion from a different seat, 8 were given a seat cushion by someone else, and 5 found a seat cushion floating in the cabin.
- 7 passengers (5%) reported retrieving the life vest from under their seat. An additional 5 passengers (3%) reported retrieving a life vest from a different seat.
- 2 passengers (1F and 11A) retrieved and donned their life vests prior to impact.
- 21 passengers reported being given a life vest (from the airplane) by someone during or after they had evacuated.
- 15 passengers reported climbing over multiple rows of seats during the evacuation. 13 of the 15 were from row 19 and aft.
- 7 passengers (six from the left wing and one from door 1L) intentionally jumped into the water during the evacuation. Five of the six from the left wing swam to and boarded the 1L slide/raft. The other two passengers swam to the left wing.
- 11 passengers unintentionally fell into the water from the wing (9) or slide/raft (2).
- 18 passengers intentionally jumped into the water to board or swim to a raft or ferry.
- 8 passengers reentered the airplane from one of the wings and exited via a second exit.
- 32 occupants (29 passengers and 3 crewmembers) were rescued from the 1L raft.
[Note: this is more than the number of passengers shown exiting from door 1L in figure 5. This is due to post-evacuation passenger movement.]
- 32 occupants (30 passengers and 2 crewmembers) were rescued from the 1R raft.
- 36 passengers were rescued from the left wing.
- 8 passengers were rescued from the left offwing slide.
- 22 passengers were rescued from the right wing.
- 21 passengers (including lap child) were rescued from the right offwing slide.
- 96 passengers and crew were transported to the NY side of the river.
- 55 passengers were transported to the NJ side of the river.

3.4 Evacuation Videos

Several digital videos that showed the airplane's initial impact and subsequent evacuation were retrieved by the Federal Bureau of Investigation and provided to the NTSB. Two videos, one from a camera on the 59th St. Bridge and one from the U.S. Coast Guard are included in the public docket as Attachment 9. The videos contained time stamp recordings that neither accurate nor identical; however, by using the time of initial impact as 1530:43 (as recorded on the flight data recorder) and common events in multiple videos, the following events (and approximate times) were identified:

- 1530:43 – Time of initial impact with water on FDR¹⁸
- 1530:58 – Left overwing exits opened
- 1530:59 – 1st passenger seen exiting from left overwing exits
- 1531:06 – Door 1L opened
- 1531:11 – Door 1R opened
- 1531:16 – 1R slide/raft fully deployed
- 1531:18-1531:27 – Multiple passengers jumped into water off front of left wing
- 1531:23 – One passenger jumped into water from door 1L
- 1531:26 – 1L slide/raft began to inflate
- 1533:58 – Last two passengers visible swimming in water arrive at 1L slide/raft
- 1534:40 – *Thomas Jefferson* arrived at right wing
- 1536:53 – *Moira Smith* arrived at left wing
- 1554:43 – Small boat departed with last rescued passengers (left offwing slide)

4.0 Cabin Documentation

The Survival Factors group began documentation of the cabin after the airplane was recovered from the Hudson River and moved by barge to the Weeks Marine facility in New Jersey. The initial documentation took place on January 19-20, 2009. The group reconvened and performed additional documentation on March 31, 2009 at the J. Supor & Son salvage facility in Harrison, NJ.

4.1 General Condition

The cabin of the airplane was intact and no crew or passenger seats were dislodged. The following table summarizes items that were found in the center aisle and forward galley.

¹⁸ The airplane's forward movement never completely stopped due to the river's current. Therefore, it was not possible to report a stop time for comparison purposes with when the exits opened.

Location	Item(s)
Fwd. Galley	One seat cushion
Row 3	One red nylon messenger-type bag
Row 4	One laptop bag and two seat cushions
Row 5	One black roll-aboard from seat D (protruding into aisle)
Row 6	One black laptop bag and the aft right lavatory door (found on the DEF seat, protruding into aisle)
Row 19	Two roll-aboards (one tan, one black)
Row 22	One seat cushion
Row 23	One laptop bag, one coat
Row 24	One seat cushion

Table 3. Cabin debris

The following overhead bins were open: Row 1 DF, 16 DEF, 17 DEF (internal divider fractured), 18 DEF (aft hinge fractured), 24 ABC, 24 DEF (both hinges fractured, but door retained by pneumatic assists), and 25 DEF.

The following oxygen masks were deployed: Row 14 ABC, 21 ABC, 22 ABC, 24 ABC, 24 DEF, 25 ABC, 25 DEF, 26 DEF, direct view jumpseat, and right aft lavatory. None of the chemical generator pins had been pulled and it was confirmed that 4 masks were present at each location.

The following interior windows were missing: Row 6 ABC, 7 ABC, 14 DEF, 15 ABC, 16 ABC, 16 DEF (two), 17 ABC, 17 DEF, 19 ABC (two), 21 ABC, 21 DEF (loose), 22 ABC (two), 22 DEF (two), 23 ABC, 23 DEF, 25 ABC (two), and 25 DEF.

4.2 Doors and Slide/rafts

The accident airplane was equipped with four floor-level Type I exits and four Type III overwing exits. Each floor-level exit was equipped with a door-mounted, automatically inflating slide/raft that was designed with a quick release handle to separate the slide/raft from the airplane in the event of a water landing. Each overwing exit pair was equipped with a fuselage mounted, automatically inflating offwing slide. The offwing slides were *not* designed with a quick release handle.

4.2.1 Door 1L

Door 1L was found open in the armed mode. The door assist bottle's pressure gauge indicated zero psi. The door lining was not damaged. The exit signs around the doorframe were not damaged except for the lower sign panel which had detached and was hanging by a wire. The telescopic girt bar was not damaged and was engaged in both floor fittings. Approximately 50 inches of the mooring line connected to the girt bar. The portability studs (red handles on top of slide/raft packboard) were in place and undamaged.

The door 1L slide/raft was recovered from the river and was examined by the Survival Factors group on January 18, 2009. (It was later identified as the 1L slide/raft by matching the subassembly P/N with US Airways maintenance records.)

Slide/raft Information (yellow lacing cover)

P/N: D30664-109

S/N: A7641

Slide/raft Information (silver inflatable)

P/N: S/R subassy D30674-105

S/N: A9581

Complies with TSO C69A

DGAC QAC 143

Date of manufacture: Oct. 2003

Aerazur

Cognac, France

No visible tears or cuts were noted on the inflatable. The hook knife was present and stored in its pouch next to the girt. Approximately six inches of mooring line was attached to the girt. One side of the left (from the cabin looking outside) red toe handle was detached from the slide/raft tube. The aspirators did not appear to be damaged. The upper step of the boarding station was detached from the right side. The top right side emergency light was found disconnected. The gauge of the inflation bottle indicated zero psi. A manual inflation lanyard was found on the floor in the forward galley.

4.2.2 Door 1R

Door 1R was found to be open and could not be closed. It was twisted (rotated clockwise when viewed externally) on its hinge and the top tie rods had separated. The door assist bottle's pressure gauge indicated zero psi. The telescopic girt bar was not damaged and was engaged in both floor fittings. Approximately 41 inches of the mooring line was connected to the girt bar; however, the mooring line was looped (wrapped twice) around the aft side of the girt bar and was found approximately 23 inches aft of its normal attachment point on the girt bar. There was some damage to the door lining. The overhead emergency light lens had been dislodged and was not located. The portability studs were in place and undamaged.

The door 1R slide/raft could not be located during the Survival Factors group's initial on-scene documentation. It was eventually located and transported to the J. Supor & Son salvage facility on March 31, 2009 where it was examined.

Slide/raft Information (yellow lacing cover)

P/N: D30664-105

S/N: A6707

Slide/raft information (silver inflatable)

P/N: S/R subassy D30674-101

S/N: A6721

Complies with TSO C69A

DGAC QAC 143

Date of manufacture: Dec. 1998

Aerazur

Cognac, France

Overhauled June 2005

Repaired Oct 2002

The manual inflation handle was affixed in its normal location on the girt and the lanyard was routed through the fabric guide sleeve and through the grommet on the underside of the girt. Approximately 34 inches of mooring line was attached to the girt. There were multiple tears in the slide/raft. Two tears (of 2 and 4 inches) were located approximately 11 feet from the girt on the left tube. A 20-inch long tear was noted approximately 7 feet from the girt on the right tube. A 10-inch long tear was located approximately 4 feet from the girt on the slide surface. An L-shaped 6x9 inch tear was located approximately 15 inches from the girt on the slide surface. There also was an L-shaped 2x4 inch tear on the girt. The hook knife was present and stored in its pouch next to the girt. The aspirators did not appear to be damaged. The boarding station was not damaged. The gauge of the inflation bottle indicated zero psi.

4.2.3 Door 2L

As the airplane was being lifted from the Hudson River by a crane, on-scene NTSB personnel noted that door 2L opened and the slide/raft deployed and inflated.¹⁹ When the Survival Factors group examined the airplane on January 19th, the slide/raft was still connected to the telescopic girt bar; however, the underside of the airplane was resting on the inflatable.

The telescopic girt bar was undamaged and engaged in the floor fittings. The door assist bottle's pressure gauge indicated zero psi. The door lining was damaged at the top, aft corner (2 by 1.5 inches) and bottom aft part in three locations (approximately 2.5 inches long). A portion of door 2L sill was partially lifted in the vicinity of floor damage. No damage was noted to the lighted exit signs.

Slide/raft Information (yellow lacing cover)

P/N: D30665-105

S/N: A6588

Date of manufacture: Oct. 98 (amendments 1, 2, 3)

The manual inflation handle was affixed in its normal location on the girt. The mooring line was found properly stored inside the slide/raft girt. It was removed and its

¹⁹ This corresponded with flight attendant B's statement that the door had been partially opened (in the armed mode) during the evacuation but could not be opened far enough for the slide/raft to deploy.

measured length was 310 inches (25.8 ft).²⁰ The hook knife was found properly stowed in its pouch next to the girt. No obvious damage was noticed to the visible portions of the slide/raft. The portability studs were in place and undamaged.

4.2.4 Door 2R

Door 2R was found closed in the armed position. It was successfully disarmed prior to inspection. It was noted that a slide/raft packing strap was visible from the exterior of the airplane at the bottom of the door. Several opening lever cycles were necessary to open the door (due to ice formation at the door sill fittings) after the slide/raft packing straps were released. Once opened, the door engaged in its gust lock. The door assist cylinder pressure indicated 1600 psi. The aft door lining seal was pulled out of place in one small location about half way up the door. No damage was noted to the door exit signs.

The decorative cover of the 2R slide/raft was found detached from the door. It was a Velcro attachment type decorative cover and the skirt was stuck under the right side of the slide/raft. The slide/raft gauge was found in the green band. The reservoir lock pin was found properly stowed in its pocket. It was inserted into the inflation bottle's pulley mechanism to prevent an inadvertent activation.

Slide/raft Information (yellow lacing cover)

P/N: D30665-105

S/N: A5460

Date of manufacture: Feb. 92

SB 00425641 was stenciled on the yellow lacing cover

4.3 Overwing Exits

All four overwing exit hatches were recovered from the Hudson River and examined by the Survival Factors group on January 18th. All of the 'pull to open' handles were in the 'open' position. The self-illuminating placards for 'pull' and opening instructions indicated that the hatch was to be thrown outside the airplane once opened. Each hatch's placarded weight was 33 lbs.

²⁰ TSO C69a required no less than a 20 ft length with a breaking strength of at least 500 pounds, or 40 times the rated capacity of the slide/raft, whichever is greater, but need not exceed 1000 pounds.

Location	Information	Condition
Forward, Left	P/N: D5227900200700 S S/N: UH-3109 MNG: 03.99	Inner window missing
Aft, Left	P/N: D5227900200600 S S/N: UH-3110 MNG: 03.99	Undamaged
Forward, Right	P/N: D5227900200600 S S/N: UH-3109 MNG: 03.99	3-inch area of chaffing on top
Aft, Right	P/N: D5227900200700 S S/N: UH-3110 MNG: 03.99	Undamaged

Table 4. Overwing exit hatch information

The overwing exit frames were not damaged. The offwing slide manual inflation handles were in their stowed positions in the doorframe.

4.4 Offwing Slides

The airplane was equipped with automatically activating, dual-lane, offwing slides to be used in the event of a ground evacuation. The offwing slides were contained in external compartments behind each wing and automatically deploy and inflate when the release handle of either of the overwing exit hatches was pulled.

4.4.1 Left Offwing Slide

Upon arrival of the Survival Factors group chairman on the evening of January 15th, the left offwing slide was still fully inflated and connected to the partially submerged airplane. After the recovery of the airplane the left offwing slide was examined on January 19, 2009 on a barge at the Weeks Marine facility.

Offwing Slide Information

P/N D31865-111

S/N A9593

Two tears were noted. There was one 38-inch long tear noted at the lower, external right corner (as looking outside from the cabin). There also was a 5-inch long tear at the upper, inner corner. The aspirator showed evidence of compression. The enclosure door was still attached to its restraints.

4.4.2 Right Offwing Slide

The right offwing slide was recovered from the Hudson River and was examined by the Survival Factors group on January 18, 2009.

Offwing Slide Information

Assembly P/N: 60070-104
S/N: A6744 (written 1024AL)
Date of manufacture: Oct. 98
Complies with TSO C69b
DGAC QAC 143
Aerazur
Cognac, France

Several tears were noted. There was a “shredded” 5-inch hole on the top surface of the ramp, near the overwing exit. There was a 9-inch horizontal tear on the outboard slide rail tube. There were approximately ten tears in the rail support wall ranging from 1 inch to 5 inches. There was an 18-inch tear along the inner rail tube under the girt extension. The aspirator was crushed and the flapper valve was missing. The girt extension was torn off. Two pieces of the black inflation guides had tears around the grommets.

4.5 Flight Crew Seats

The flight deck seats were undamaged and in good condition. The restraints were found unbuckled and were buckled and released without difficulty. The life vest compartments on the back of the seats were found empty. The seat data plates and restraints contained the following information:

Captain’s Seat

EADS SOGERMA
P/N: TAAI2-33PE00-01
S/N: 1188
DMF: 30-01-2000
AV9G

Captain’s Seat Restraint

RH P/N: [Illegible]
Crotch Strap P/N: 502606, MFR 0FWE1, DMF 1203
LH P/N: 503919-201 AmSafe, MFR 0FWE1, DMF A0205, conforms to TSO C22G

First Officer’s Seat

EADS SOGERMA
P/N: TAAI2-33CE00-01
S/N: 778
DMF: 27-07-1999
AV9G

First Officer's Restraint

LH P/N: 503919-201 AmSafe DMF A0208

Crotch Strap P/N: 502808-438 AmSafe DMF A0208

RH P/N: 503919-201 AmSafe DMF A0208

4.6 Flight Attendant Jumpseats

4.6.1 Forward Jumpseats

The outboard (O/B) wall-mounted seat and its restraint system were inspected and did not show any visible damage. Its upper stowage compartment (behind the seatback cushion) was found closed and contained magazines and plastic gloves. The lower stowage door was found open and empty, except for a flashlight (red LED was flashing). The door latch was broken. The seat data plate contained the following information:

O/B Seat

P/N: WA50BYF4YS01065

S/N: 25

TSO C39b

Date of manufacture: 5/99

The inboard (I/B) wall-mounted seat and its restraint system were inspected without any visible damage. Its upper stowage was found closed and contained plastic bags. Its lower stowage door was found closed, containing a flashlight (red LED was not flashing). The seat data plate contained the following information:

I/B Seat

P/N: WA44BYF4YS01065

S/N: 00T0950

TSO C39b

9/2000

The forward flight attendant panel was in good condition. Based on the statement from F/A 'C' that she attempted to use the interphone but it did not ring, investigators removed several components of the interphone system. The Cabin Assignment Module (CAM) (P/N ZO50H6068051) was removed from the forward flight attendant panel and retained. Similarly, the Cabin Intercommunication Data System (CIDS) directors 1 and 2 (P/N Z010H000520A, S/N 03150 and S/N 03487) were removed from the avionics bay and retained. Finally, the three handsets (fwd jumpseat, aft left jumpseat, and direct view jumpseat) were removed and retained.

A teardown examination of the CIDS directors was performed in Germany under the supervision of the French Bureau d'Enquetes et d'Analyses (BEA). The teardown found neither class 1 or class 2 faults stored in the memory of either director. For more information, the report of the teardown examination can be found as Attachment 10.

Additionally, maintenance records for the CIDS were requested and received from US Airways. In the 90 days prior to the accident there were no write-ups for the CIDS. On November 19, 2008 the aft, right F/A handset was found to be inoperative and a replacement was installed on November 21, 2008. The second discrepancy was listed as “CIDS director #1 inop” on December 12, 2008. On December 17th, US Airways maintenance tested the system and reported that “CIDS bite chk good.”

4.6.2 Aft “Direct View” Aisle Jumpseat

The center aisle “direct view” jumpseat was designed to operate by activating a lever near the forward, left side of the seat bottom. When the lever was lifted, the seat bottom folded up and the seat swiveled forward and stowed against the lavatory. The seat was found in the open and locked position.²¹ The following information was obtained from the seat and restraint system:

SICMA
P/N: RL12FYF4YS00065
S/N: 00T1610
Date of manufacture: 12/2000
TSO C39b
SB 153-25-068 (11/8/06)

Restraint Information

AmSafe P/N: 502868-413-2847
TSO C114

When investigators lifted the seat release lever, the seat released easily and stowed properly. Wear marks were noted on the top of the underseat stowage box where the seat pivots forward across its top. The underseat stowage compartment was latched closed. It opened without difficulty and contained the following items: red crew life vest, flashlight (red blinking LED), first aid kit, rescue mask, dust mask, and the supplemental equipment pouch. The seat-top stowage box was empty and undamaged.

4.6.3 Aft Right-side Wall-mounted Jumpseat

The aft, right side, aft-facing attendant seat (SICMA P/N WA44BYF4YS01065, complies with TSO C39b, DOM 05/99) was stowed and the interphone handset was out of its cradle hanging by the cord. The handset was not damaged. The seat did not appear to be damaged and the seat bottom was rotated down without binding. The restraint system and anchorages were not damaged. The underseat stowage door was open and lying on the floor in the exit passageway. The crew life vest was not found in the compartment. The flashlight was in its cradle but the Halon fire extinguisher (needle in green) was loose and lying on top of the compartment door. A coffee pot and a water

²¹ When the seat was open, a distance of 21.5 inches was measured between the left edge of the seat pan and the entry wall of the left side lavatory.

bottle were also lying on the floor at the underseat stowage area. The headrest/stowage box was empty and undamaged. The Protective Breathing Equipment (PBE) stowage container (on outboard wall) was empty.

4.6.4 Aft Left-side Wall-mounted Jumpseat

The aft, left side, aft-facing attendant seat (SICMA 160200-9 [only reference found - no seat assy number found] TSO C127A Oct 03) was stowed and the intercom handset was out of its cradle hanging by the cord. The handset was not damaged. The seat bottom was rotated down without binding and a blue knit garment with a “property of ATA” tag was found lying on the bottom cushion. The restraint system and anchorages were not damaged. The headrest/stowage box was empty. The underseat stowage door was found closed and the flashlight (corroded, no LED flashing), red crew life vest, and Halon fire extinguisher (needle in green) were in their stowed positions. The PBE stowage container (on outboard wall) was empty.

4.7 Passenger Seats

4.7.1 Seat Pitch

Seat pitch measurements were taken throughout the cabin and US Airways interior arrangement diagram 28P25D0227, Sheet 3 of 6, was confirmed to be accurate. The three first class rows each had a seat pitch of 36 inches. Rows 4-9 of economy class had a 32-inch seat pitch. Overwing exits rows 10 and 11 had a 40-inch seat pitch. Economy class rows 12-18 had a 31-inch seat pitch. Economy class rows 19-26 had a 32-inch seat pitch.

4.7.2 First Class Seats

The first class seats were manufactured by B/E Aerospace (Model BE 1.0-2-57) under TSO-C39b. The rated loads on the seat data plate were listed as “9g forward, 8.7g down, 1.5g aft, 5.4g up, 4g side.” According to B/E Aerospace, the seats were dynamically tested to meet the seat structural integrity requirements in 14 *CFR* 25.562 (which included structural and lumbar testing, but not Head Injury Criteria or femur loads). Because of this, B/E Aerospace classified the seats as “TSO-C39b + 25.562,” which are commonly called “16g compatible” seats. The installed seatbelts were all identical. The buckle portion was P/N 504377-209-8000 and the insert position was P/N 504377-211-8000.

4.7.3 Economy Class Seats

The economy class seats were also manufactured by B/E Aerospace (P/N 985-US125) and were manufactured under TSO-C39b. The rated loads were listed on the data plate as “gust 12g forward, 2g aft, 4.5g side, 5.4g up, 11g down.” The seats weighed 112.5 lbs. All of seats’ breakover functions were locked with the exception of the aft

row, which was designed to break over with 30 lbs. of force to allow access to things behind the seat.

According to B/E Aerospace, the seats were dynamically tested to meet the seat structural integrity requirements in 14 *CFR* 25.562 (which included structural and lumbar testing, but not Head Injury Criteria or femur loads). Because of this, B/E Aerospace classified the seats as “TSO-C39b + 25.562,” which are commonly called “16g compatible” seats. When asked about the “gust 12g forward” indication on the data plate, B/E Aerospace explained that the seats were manufactured during a period of time when they included a 1.33 fitting factor ($9 \times 1.33=12$) in their labelling, a procedure they no longer use. The 1.33 fitting factor was required for the seatbelt and shackle and the track fitting/stud. The installed seatbelts were all identical (P/N 504468-409-2258).

4.7.4 Seat Documentation

As stated in section 4.1, no passenger seats were dislodged. A thorough review revealed no structural damage to any major first or economy class seat components including floor track fittings, seat legs, seat tubes, armrests, or seatbacks. All of the seatbelts were examined and none showed any evidence of tears, fraying, or warping. Some minor damage was noted including numerous economy class seatback tray table latch hooks that were damaged.²² The following table provides the seats’ part number, serial number, and remarks about any minor seat damage that was noted. It also identifies any carry-on baggage and clothing that were found in the seat rows.

Seat Number	Part Number	Serial Number	Remarks/Damage ²³
01A	87843003	99681	Red tote on floor
01C			Large black backpack on floor
01D	87843002	99958	
01F			Laptop on floor
02A	87843001	99945	
02C			Laptop on floor
02D	87843002	66107	
02F			
03A	87843005	99956	
03C			Tray table latch hook broken
03D	87843008	99951	Small duffle bag on floor
03F			Black rollaboard on seat
04A	985-US125C-3L	M006914	
04B			
04C			Tray table latch hook broken
04D	985-US125D-3R	M006915	Tray table latch hook broken

²² No latches were broken to the extent that tray table retention was compromised. It was noted that some of the broken ends had been previously sanded and finished to minimize any roughness.

²³ Economy class tray table and latch damage is listed on the seat unit where it was *installed*. That is, damage to the seat 12E’s tray table would have been for the inflight use of the passenger in seat 13E. All of the slight dents described in the table were discovered by tactile examination. They were not readily apparent via visual examination.

04E			
04F			Tray table latch hook broken; computer bag on floor
05A	985-US125J-3L	M014384	Small tote on seat
05B			
05C			Aft seat tube slightly curved; tray table down
05D	985-US125B-3R	M011581	Black duffel on floor
05E			
05F			Brown garment bag on floor
06A	985-US125J-3L	M006921	Slight dent in tray table, left center
06B			
06C			
06D	985-US125B-3R	M006912	Lav door on floor
06E			Lav door on floor
06F			Lav door on floor
07A	985-US125A-3L	M031956	Slight dent, upper center
07B			Slight dent in tray table, lower center
07C			
07D	985-US125B-3R	M037729	Tray table down
07E			Tray table latch hook broken
07F			Black rollaboard on seat; tray table down
08A	985-US125J-3L	M031981	
08B			Aft seat tube slightly curved
08C			
08D	985-US125B-3R	M013073	
08E			Grey bag and orange purse on floor
08F			
09A	985-US125E-3L	M006916	
09B			
09C			
09D	985-US125E-3R	M006917	
09E			
09F			
10A	985-US125K-3L	M006930	
10B			
10C			Laptop in seatback pocket
10D	985-US125K-3R	M006931	
10E			
10F			
11A	985-US125F-3L	M006932	
11B			Tray table latch hook broken
11C			Laptop in seatback pocket
11D	985-US125F-3R	M006933	
11E			
11F			
12A	985-US125J-3L	M006928	Survival kit on floor
12B			
12C			Aft seat tube slightly curved, baggage bar separated at aisle attachment point
12D	985-US125B-3R	M007229	One slight and two sharp object dents in tray table (tray table down)
12E			Slight dents in tray table, left and right of center
12F			Tray table latch hook broken
13A	985-US125A-3L	M006895	

13B			Dent in tray table, center
13C			
13D	985-US125B-3R	M006909	
13E			Tray table down
13F			Slight dent in tray table
14A	985-US125J-3L	M006920	Tray table latch hook broken
14B			
14C			Slight dent in tray table, lower right
14D	985-US125B-3R	M006901	Slight dent in tray table, middle right; tray table latch hook broken
14E			
14F			
15A	985-US125A-3L	M006893	Slight dent in tray table, center left; tray table latch hook broken (tray table down)
15B			Tray table down
15C			Sharp object dent in tray table
15D	985-US125B-3R	M006900	
15E			
15F			Tray table latch hook broken
16A	985-US125J-3L	M006927	
16B			Sharp object dent in tray table
16C			Sharp object dent in tray table; brown tote on seat
16D	985-US125B-3R	M006905	
16E			
16F			
17A	985-US125A-3L	M006894	Laptop on seat
17B			
17C			Tray table latch hook broken; black tote on floor
17D	985-US125B-3R	M006908	
17E			
17F			
18A	985-US125J-3L	M006926	
18B			
18C			Large rollaboard on floor (partially in aisle); tan purse on seat; tray table down
18D	985-US125B-3R	M013064	Black and red rollaboard on floor; tray table down
18E			
18F			
19A	985-US125J-3L	M011576	
19B			Tray table latch hook broken
19C			Slight dent in tray table; rollaboard on seat
19D	985-US125B-3R	M006906	Three slight dents in tray table
19E			
19F			Rollaboard on floor
20A	985-US125A-3L	M006897	Pair of men's jeans (size 32x32)
20B			Tray table down
20C			Tray table latch hook broken
20D	985-US125B-3R	M006904	One light transparent cover missing at row 20; tray table down
20E			Tray table down
20F			
21A	985-US125J-3L	M006929	Black tote on seat; tray table down
21B			Slight dent in tray table, top/center left
21C			Cell phone clipped to seatback

21D	985-US125B-3R	M006911	Tray table latch hook broken; tray table down
21E			Brown purse on floor
21F			Sharp object dent in tray table; white plastic Macy's bag with clothing inside; tray table down
22A	985-US125A-3L	M006892	
22B			Sharp object dent in tray table; small brown purse on floor
22C			Tray table latch hook broken
22D	985-US125B-3R	M006902	Tray table down; black rollaboard and Reebok duffle bag on floor
22E			Tray table down
22F			Tray table latch hook broken
23A	985-US125J-3L	M006925	Tray table latch hook broken; tray table down
23B			White plastic shopping bag and sweater on seat
23C			Tray table latch hook broken; tray table down
23D	985-US125B-3R	M006903	Large blue duffle bag on floor; tray table down
23E			Tray table down
23F			Tray table latch hook broken; tray table down
24A	985-US125A-3L	M006896	Leather briefcase on floor
24B			Tray table down
24C			Tray table down
24D	985-US125B-3R	M006910	Tray table down
24E			
24F			
25A	985-US125J-3L	M006924	Briefcase on floor
25B			Tray table down
25C			Tray table down
25D	985-US125B-3R	M006898	Garment bag on floor
25E			Bag on floor
25F			Bag on floor
26A	985-US125G-3L	M006918	
26B			
26C			
26D	985-US125H-3R	M006919	Black coat on seat
26E			
26F			Black coat and black purse on seat

Table 5. Seat documentation

4.8 Emergency Flotation Means

14 *CFR* §121.339 “Emergency equipment for extended overwater operations” stated:

- (a) Except where the Administrator, by amending the operations specifications of the certificate holder, requires the carriage of all or any specific items of the equipment listed below for any overwater operation, or upon application of the certificate holder, the Administrator allows deviation for a particular extended overwater operation, no person may operate an airplane in extended overwater operations without having on the airplane the following equipment:

(1) A life preserver equipped with an approved survivor locator light, for each occupant of the airplane.

(2) Enough life rafts (each equipped with an approved survivor locator light) of a rated capacity and buoyancy to accommodate the occupants of the airplane. Unless excess rafts of enough capacity are provided, the buoyancy and seating capacity beyond the rated capacity of the rafts must accommodate all occupants of the airplane in the event of a loss of one raft of the largest rated capacity.

(3) At least one pyrotechnic signaling device for each life raft.

(4) An approved survival type emergency locator transmitter. Batteries used in this transmitter must be replaced (or recharged, if the battery is rechargeable) when the transmitter has been in use for more than 1 cumulative hour, or when 50 percent of their useful life (or for rechargeable batteries, 50 percent of their useful life of charge) has expired, as established by the transmitter manufacturer under its approval. The new expiration date for replacing (or recharging) the battery must be legibly marked on the outside of the transmitter. The battery useful life (or useful life of charge) requirements of this paragraph do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.

(b) The required life rafts, life preservers, and survival type emergency locator transmitter must be easily accessible in the event of a ditching without appreciable time for preparatory procedures. This equipment must be installed in conspicuously marked, approved locations.

(c) A survival kit, appropriately equipped for the route to be flown, must be attached to each required life raft.

14 *CFR* §121.340 “Emergency Flotation Means” stated:

(a) Except as provided in paragraph (b) of this section, no person may operate an airplane in any overwater operation unless it is equipped with life preservers in accordance with §121.339(a)(1) or with an approved flotation means for each occupant. This means must be within easy reach of each seated occupant and must be readily removable from the airplane.

(b) Upon application by the air carrier or commercial operator, the Administrator may approve the operation of an airplane over water without the life preservers or flotation means required by paragraph (a) of this section, if the air carrier or commercial operator shows that the water over which the airplane is to be operated is not of such size and depth that

life preservers or flotation means would be required for the survival of its occupants in the event the flight terminates in that water.

4.8.1 Placarding

14 CFR §25.1561(c) required that “stowage provisions for required emergency equipment must be conspicuously marked to identify the contents and facilitate the easy removal of the equipment.” The accident airplane included the statements “Life Vest Under Your Seat” and “Bottom Cushion Usable For Flotation” printed on the passenger service units (next to the reading light switches) above each row of seats. These placards were not backlit.

4.8.2 Life Vests

Eleven inflatable aviation life vests²⁴ were recovered from various locations and examined by the Survival Factors group. Two of the life vests were still in their plastic pouches.

- 5 yellow/orange Hoover Industries life vests were marked as model FV-35F, P/N 3505-101P-09, TSO-C13f (manufactured 1997-1999). One vest had not had the inflation tabs pulled. Two vests had both inflation tabs pulled. Two vests had one of the two inflation tabs pulled. (One of these two vests had the rubber band around the adjustment strap.)
- 2 yellow/orange Hoover Industries life vests were marked as model FV-35E, P/N 3505-101P-09, TSO-C13e (manufactured 1993). One vest had not had the inflation tabs pulled and the rubber band remained around the adjustment strap. One vest had one of the two inflation tabs pulled.
- 1 red Hoover Industries life vest was marked as model FV-35FE, P/N 3505-101C-99, TSO-C13f (manufactured 1997). The vest had 1 of 2 of the inflation handles pulled.
- 1 yellow Air Cruisers Company vest was marked as model AC-2F, P/N D21343-195, TSO-C13f (manufactured 2003). The vest had both inflation tabs pulled.
- 2 unopened life vests were manufactured by Hoover Industries. One was a TSO-C13e (manufactured 1993) and one was a TSO-C13f (manufactured 1998).

Additionally, 101 passenger life vests were found stowed under seats inside the airplane.²⁵ Thirty-one of the vests were manufactured by Air Cruisers Company (P/N

²⁴ Ten of the life vests were yellow (or orange/yellow) indicating they were passenger vests. One was red indicating it was a crew vest.

²⁵ Additional crew life vests were documented at jumpseat stowage locations throughout the cabin. See section 4.6.

D21343-195). Seventy of the vests were manufactured by Hoover Industries (P/N 3505-101P-09). None of the life vests were past their expiration dates. The locations where passenger life vests were found can be seen in Figure 6.

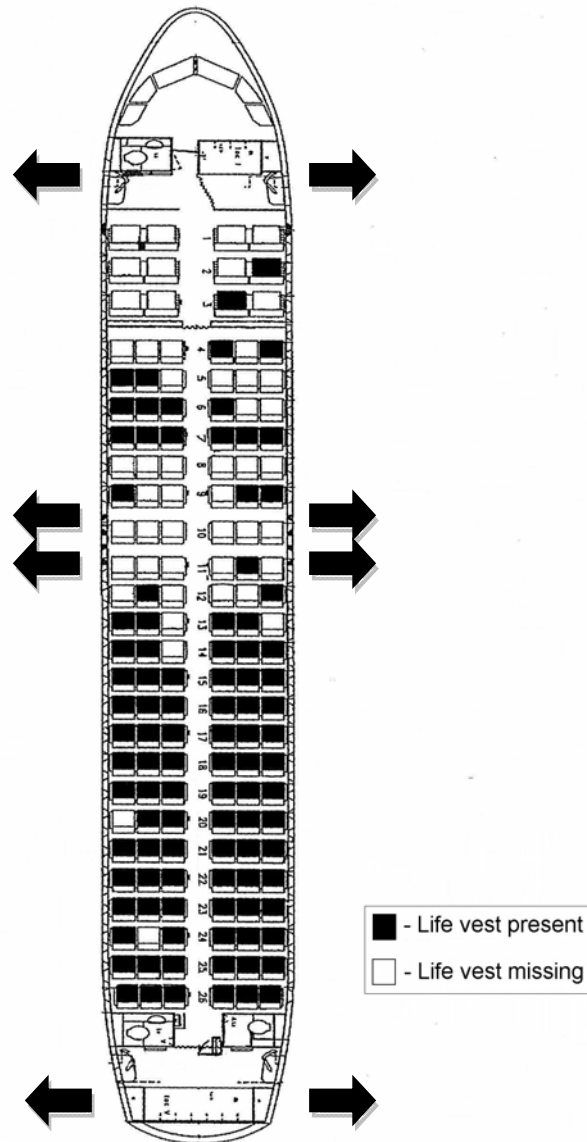


Figure 6. Life vest locations

4.8.3 Pull Force Measurements

Some passengers stated during their interviews that they attempted to retrieve the life vest from under their seat but were not successful. Although they were not certain why they had a problem, the Survival Factors group took measurements using a hand-held force gauge in an attempt to ascertain whether it took an excessive amount of force to open the life vest pouches beneath the passenger seats.

The economy class storage pouches were completely made of fabric and were sewn to the underside of the seat pan. (See Attachment 4 for photographs) The front of the pouch had a flap with a 6-inch Velcro strip that, when fastened, closed the pouch and secured the life vest in place. The flap also contained a 4-inch long red looped strap that, when pulled, would release the Velcro and allow the occupant to extract the life vest (still enclosed in a sealed plastic bag). There were no tamper resistant seals or other impediments to opening the fabric pouch.

Pull force measurements taken while opening several economy class storage pouches with the red looped strap in a forward direction generally ranged from 1-4 lbs.²⁶ It was noted, however, that if the pull angle was increased vertically, the force increased to approximately 15 lbs. at 45 degrees. It was also noted that if the red looped strap was pulled in a purely vertical direction the Velcro would not release at all.

The first class seats' storage pouches were designed differently than those in economy class. These fabric pouches were also sewn to the bottom of the seat pan; however, they were fastened via a button snap to the front seat tube. A red lanyard was stitched inside the pouch and contained an elastic loop that was designed to hold a life vest in a sealed plastic bag. The red lanyard had a grommet that was engaged with the button snap. When the occupant pulled on the red strap, the button snap would disengage and the strap would pull the life vest from the container onto the floor. The occupant would then remove the vest from the elastic strap and continue with the donning process. There were no tamper resistant seals or other impediments to opening the fabric pouch.

Pull force measurements while opening two different first class storage pouches with the red looped strap in a forward direction generally ranged from 8-9 lbs. It was again noted that if the angle was increased vertically, the force increased to approximately 27 lbs. at 45 degrees. It was also noted that if the red looped strap was pulled in a purely vertical direction it was unlikely that the button snap would release before deforming or breaking the button snap.

4.8.4 Flotation Seat Cushions

Fifty-two leather economy class flotation seat cushions and one leather first class seat cushion were recovered from various locations and examined by the Survival Factors group. Information on the two types (both TSO C72c) that were recovered can be found in the table below:

²⁶ Values were dependent on the amount of engagement between the Velcro strips. Those with less engagement resulted in lower force values.

Location	Manufacturer	Information
First Class	Custom Products, Inc. Mooreville, NC	Assembly P/N 19270057 Cushion P/N 13270057 Liner P/N 15270057 Complied with 14 CFR 25.853(c) Qualified for TSO C127a Type A when installed on approved TSO C127a seat qualified for TSO C72c
Economy	Franklin Products Torrington, CT	Emergency float Type A FPI P/N 10BM3300 or 10BM3500 BEA P/N 127275-01 or -05 Model Number 100-03-3 TSO C72c Eligible A319-100, A320-200, A321-200 Complied with FAR 25.853(c) when used with an approved dress cover material

Table 6. Flotation seat cushion information

Additionally, 32 seat cushions were found on seats throughout the cabin. Figure 7 shows their locations.

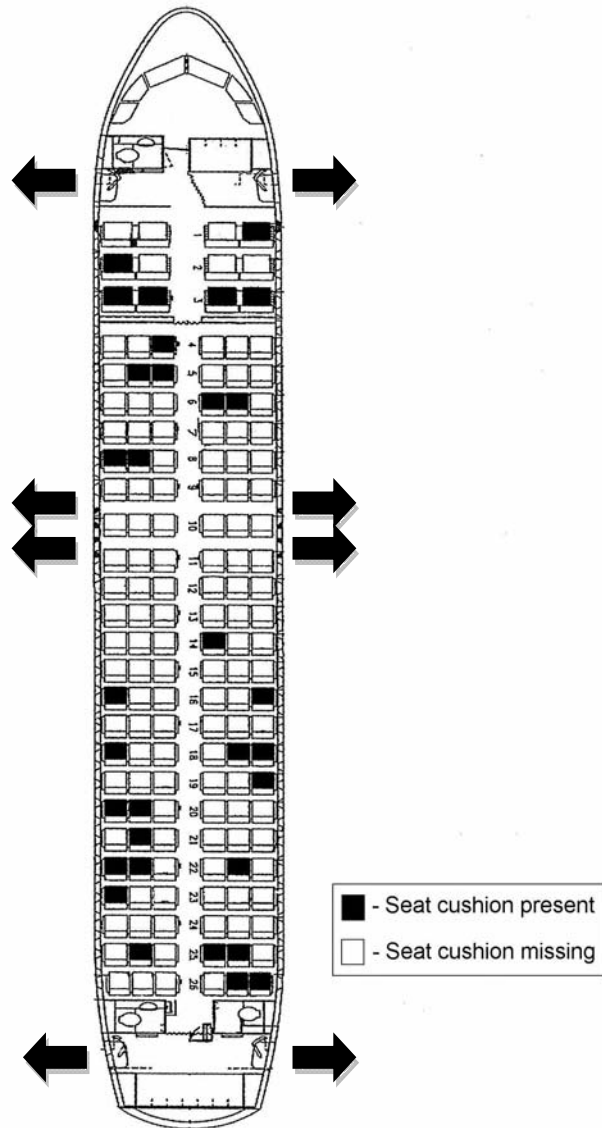


Figure 7. Seat cushion locations

4.9 Galleys and Lavatories

4.9.1 Forward Galley and Lavatory Area

The galley area was undamaged. The oven was locked and empty. All of the galley carts were secured by the securing levers. The forward lavatory was not damaged. The Halon fire extinguisher beneath the lavatory sink was present and the needle was in the green area of the gauge. Neither of the forward galley/cabin partitions was damaged. The forward ceiling area was found in good condition. The central circuit breaker panel was open and no circuit breakers were tripped. The flight deck door had a panel missing from above and toward the right side. A manual inflation lanyard and a handle for a ditching quick release lacing were found in the forward galley.

4.9.2 Aft Galley and Lavatories

Aft Galley

Carts 5-21 and 5-22 were partially unstowed approximately 12-14 inches and 8 inches, respectively. The ¼-turn toggles adjacent to carts 5-21 and 5-22 were not engaged. The other ¼-turn toggles in the galley were engaged. Areas 5-10 and 5-11 were empty as the ovens had been previously removed and the wiring capped. Two round vents near the ceiling were dented but ceiling itself was undamaged. The waste containers were in place although door 5-17 was found open. The hinge of compartments 5-3 and 5-4 was loose and almost broken. The “flip up” compartment above the oven area had only one of four screws present. The left service access trim panel (8 inches by 6 inches) was missing and the same panel on the right side was loose. The cabin system circuit breaker panel was opened and only the “VACUUM SYS” was pulled. Compartment 5-15 contained two electronic credit card devices. Coffee pot position 5-7 was found with both securing levers up (unsecured). The coffee pots were missing from the coffee makers and one pot was found forward of 2R door slide/raft cover. A second coffee pot was found aft of the 2R door slide/raft cover.

During the follow-up activity on March 31, 2009, several food and beverage carts were removed from the aft galley area. The front pair of wheels from carts 5-21, 5-22, and 5-23 was broken off. The vertical divider wall between area 5-21 and 5-22 remained attached to the floor beam and was not damaged. For a description of the floor damage please see section 4.10.3 of this report.

Aft Right-side Lavatory

There was one crack on the top of the right aisle wall. The lining was detached on the top of lavatory. It was still fixed at the outboard attachments, but separated from the inboard attachments. The lavatory oxygen container door was opened, masks deployed. The seat cover compartment and upper bin door were open. All of the linings and the toilet bowl were in place and undamaged. The Halon fire extinguisher under the sink was stowed with its gauge needle in the green band. The mirror was intact. The folding lavatory entry door was found partially detached from its fittings.

Aft Left-side Lavatory

The lining was detached on the top of lavatory. It was still fixed at the outboard attachments, but separated from the inboard attachments. The lavatory oxygen container door was closed. The seat cover compartment and upper bin door were open. All of the linings and the toilet bowl were in place and undamaged. The Halon fire extinguisher under the sink was stowed with gauge needle in the green band. The mirror was intact. The folding door was missing (identified on the cabin floor at row 6 DEF). On the ceiling, the galley curtain rail was found compressed and detached from its left-side fitting.

4.10 Floor

Three areas of the floor were damaged: an area beneath seat 22E, a puncture by a piece of underfloor structure in the aisle near the direct view jumpseat, and in the aft galley.

4.10.1 Row 22

The floor at row 22 DEF was fractured and buckled upward. To examine the area more closely, the carpet was removed from the floor panels in rows 21, 22, and 23. Some floor panel damage was evident to all of three panels (center, inboard and outboard); however, the most significant damage was to the honeycomb flooring directly beneath seat 22E. The center panel was buckled upward approximately 7-8 inches. There was no visible damage to the seats, seat fittings, or seat tracks in the area. For more information about the associated subfloor structural damage, please see the Structures Group Chairman's Factual Report and attachments.

4.10.2 Direct View Jumpseat

Approximately 4³/₄ inches of a piece of structure identified as the "frame 65 vertical beam" (P/N D5347226500600) was protruding through the cabin floor in front of the direct view jumpseat. It was located approximately 11 inches forward of the seatpan and 19 inches to the left of the right lavatory wall. (See Attachment 4) According to Airbus, the purpose of this beam is as a support for the cargo liner. It was designed to be held in place by two removable pins. Removing these pins and rotating the beam down allowed maintenance to access the waste tank for the aft lavatories. For more information about the damage to the frame 65 vertical beam, please see the Structures Group Chairman's Factual Report and attachments.

4.10.3 Aft Galley

The non-textile floor galley floor surface was cut out and removed to expose the floor panels. The center floor panel was pushed upward and the heads of the floor fasteners had pulled through the honeycomb material. Some of the heads of some of the fasteners had sheared off. The upward deformation of the panel created a 2-3 inch gap around the perimeter of the panel providing visibility directly into the underfloor cargo compartment.

4.11 Emergency Equipment

The following table describes the location and information obtained from the documentation of the stowed emergency equipment on the airplane.²⁷ None of the equipment was opened or used except where noted.

²⁷ The emergency equipment stowed at the flight attendant jumpseats was previously described in section 4.6 of this report.

Emergency Equipment	Location	Information
Halon fire extinguisher	Flight Deck	Manufacturer: Air Total P/N: 1660053 S/N: 3476 Due date 09/2009 Last inspection 12/09/04
Protective Breathing Equipment (PBE)	Flight Deck	Present [could not be retrieved, i.e. frozen]
Escape ropes (2)	Flight Deck	Good condition
Crash axe	Flight Deck	ES 04000 P/N: 680-0040-000 AUX ILEC-F02A6
Life vests (4)	Flight Deck	Capt. and F/O not identified; both jumpseat life vests stowed
Emergency Medical Kit	Flight Deck	
Survival Kit (sealed)	Fwd. Right O/H Bin	Air Cruisers Co. P/N 60128-101, S/N C61703 Date of Manufacture: 11/1998 Last mx: 7/10/07 Inspection due: 3/2010 Expiration date: 8/2012
PBE	Fwd. Left O/H Bin	AVOX System Inc. P/N: 802300-14 MFR 53655 SER: E08040418 DMF: 04/2008 FAA TSO C99/C115
Halon fire extinguisher	Fwd. Left O/H Bin	Manufacturer: Air Total P/N: 1660853 S/N: 8799 Date of Manufacture: 8/16/07 Last inspection: 6/14/08 Overhaul: 06/2014
Supplemental Equipment Pouch (SEP)	Fwd. Left O/H Bin	Included: sharp “shuttle” holder, protective breathing mask, barrier mask, 2 sets of latex gloves
First Aid Kit	Fwd. Left O/H Bin	Manufacturer: North P/N: 9400280 Last inspection: 8/15/07
Portable Oxygen Bottle	Fwd. Left O/H Bin	Manufacturer: Scott MPN 5500-A1ABF20B S/N: 814653 Last inspected 3/19/08 Service after 11/2011
Portable Oxygen Bottle	Fwd. Left O/H Bin	Manufacturer: Scott

		MPN 5500-A1ABF20B S/N: 536712 Last inspected 2/5/07 Service after 4/2010
Megaphone	Fwd. Left O/H Bin	Manufacturer: Arc Electronic Model: Arc/EM-1A P/N 5164066, S/N016682 Last inspected 2/14/08 Due 3/1/09
Lifelines (2)	Overwing O/H Bin (Row 10 ABC)	Unopened ²⁸ ; stowed behind demo equipment
Lifelines (2)	Overwing O/H Bin (Row 10 DEF)	Unopened; stowed behind trash bags
Enhanced Emergency Medical Kit (EEMK)	Aft Left O/H Bin ²⁹	Manufacturer: MedAire P/N: EEMK 121803 S/N: US0004 Last inspected: 02/12/08 Next Mx: 2/28/09 P/N: 9x11120457-3
Supplemental Equipment Pouch (SEP)	Aft Left O/H Bin	Included: sharp “shuttle” holder, protective breathing mask, barrier mask, 2 sets of latex gloves
Automatic External Defibrillator (AED)	Aft Left O/H Bin	Manufacturer: Medtronic LIFEPAK S/N 471106 Last service: 9-06 US Airways tag Assy P/N: 3011790-000172m P/N: 99-2563-4-0010 S/N: 13471106 Last inspection: 11/07 Due 02/10
Megaphone	Aft Left O/H Bin	Manufacturer: Fanon Model: MV-10 US Airways Tag P/N 510874, S/N N/A Last insp.: 11/7/08 Due: 11/7/09
Survival Kits (2)	Aft Right O/H Bin	Air Cruisers Co. P/N 60128-101, S/N C1658 & C1680 Date of mfg: 10/98

²⁸ One of the four adjustable-length lifelines (AmSafe 2560M1C015301, P/N AFGO367463, Date A0199) was removed from the airplane and the sealed pouch was opened. The lifeline measured 21 feet, 9 inches long to its maximum finished length. (The finished length was defined as widest part of the inside of the hook.)

²⁹ Also found in this location were: three AmSafe seat belt extensions, one buckle piece of airplane lap belt, and one bag of white dust masks

		Last Mx: 8/15/07 Expiration date: 12/2012
Infant Life Vests (10)	Aft Right O/H Bin	Sealed blue plastic bag
Portable Oxygen Bottle (2)	Aft Left Bulkhead (behind 26 ABC)	Manufacturer: Scott Fully charged (~1600 psi)
Emergency Locator Transmitter (ELT)	Aft Left Bulkhead (behind 26 ABC)	Manufacturer: Honeywell

Table 6. Emergency Equipment

One survival kit from the right forward overhead bin was located on the floor at row 11 ABC. It contained the following information:

Air Cruisers Co.
P/N 60128
S/N C1781
Inspected: 2/2007
Expiration date: 12/2012

One 406 MHz emergency locator transmitter from the first class bulkhead was recovered from the crew after the rescue and was examined by the Survival Factors group on January 18, 2009. It did not appear to have been activated. It was undamaged except that the antenna had fractured and approximately 16 inches was missing. It contained the following information:

Rescu 406 MHz ELT	US Airways equipment tag:
Manufacturer: Honeywell	P/N: 1151324-1
TSO-C126	S/N: 8491
P/N: 1151324-1	Last inspection: Dec 2007
S/N: 1151324-08491	Due 19 th Dec 2012
ID code: ADCC0687AE00401	
Manufacturing number: 07217	

4.12 Wing Surfaces

The top surfaces of the airplane wings were photographed and the markings reviewed. There was white paint (with anti-skid properties) and red arrows (pointing aft) near the wing root, indicating where evacuees needed to turn to go in the direction of the offwing slide. The top surface of the remainder of both wings was painted with glossy-type paint. Each wing had a double-eyelet fitting where the lifelines were designed to be attached. Airbus used a laser meter to measure the distances between the attach fittings at the overwing exits and the fittings on the wing on a new production A320 airplane. The distance between the forward fittings was approximately 20.5 feet and the distance between the aft fittings was approximately 18.7 feet.

4.13 Safety Information Card

Safety information cards were present in all of the emergency exit row seats and a majority of other seatback pockets throughout the airplane; however, they were removed (along with the other contents of the pockets) by US Airways' personal effects recovery contractor before a complete inventory was accomplished. A copy of the safety information card for the US Airways EOW A320 is included as Attachment 11.

The depictions shown in the overwing exit operation section of the card indicated that the overwing exits were *not* to be opened in the event that the passenger saw water outside the window after landing. Similarly, the section of the card depicting a water landing showed red 'X' indications over both offwing slides, indicating they were not to be used in the water. The same section showed a seated woman retrieving the life vest from under her seat. The arrow indicated she was pulling on the red tab of the pouch in an upward direction. Finally, a section of the card depicted the brace positions for passengers, including those carrying lap children.

5.0 Medical and Pathological

Forty-five passengers and the 5 crewmembers were transported to a total of 10 area hospitals. Twenty-two passengers and the 5 crewmembers were transported to 5 hospitals in NY. Twenty-three passengers were transported to 5 hospitals in NJ. Medical records were subpoenaed and received for all of the occupants who were transported to hospitals. A summary of the information is contained in Attachment 7.

Two of the transported passengers and flight attendant 'B' sustained serious injuries. One of the passengers (1C) sustained a fractured xiphoid process on his sternum while passenger 13C suffered hypothermia and was not released from the hospital until 1645 on January 17, 2009.³⁰ Flight attendant 'B' sustained a complicated, 12cm long, 5cm deep, lower left leg laceration that required surgery to close.

There were also two passengers who were not initially transported to a hospital but reported serious injuries during interviews. Both were requested to provide medical records to substantiate their injuries and complied. Passenger 11A sustained a fractured left shoulder while passenger 13D sustained a fractured right shoulder. Injury information for these passengers is also summarized in Attachment 7.

The following injury table contains injury information from medical records and self-reported injuries from interviews:

³⁰ 49 *CFR* § 830.2 defines serious injury as "any injury which: (1) requires hospitalization for more than 48 hours, commencing within 7 days from the date of the injury was received; (2) results in a fracture of any bone (except simple fractures of the fingers, toes, or nose); (3) severe hemorrhages, nerve, muscle, or tendon damage; (4) involves any internal organ; (5) involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface."

Injuries	Flight Crew	Cabin Crew	Passengers	Other	Total
Fatal	0	0	0	0	0
Serious	0	1	4	0	5
Minor	0	0	95	0	95
None	2	2	51	0	55
Total	2	3	150	0	155

Table 7. Injury Table

6.0 FAA Ditching Certification Requirements

14 *CFR* §25.801 discussed the requirements an airplane must meet to be certified with ditching provisions. It stated, in part:

(a) If certification with ditching provisions is requested, the airplane must meet the requirements of this section and §§25.807(e), 25.1411, and 25.1415(a).

(b) Each practicable design measure, compatible with the general characteristics of the airplane, must be taken to minimize the probability that in an emergency landing on water, the behavior of the airplane would cause immediate injury to the occupants or would make it impossible for them to escape.

(c) The probable behavior of the airplane in a water landing must be investigated by model tests or by comparison with airplanes of similar configuration for which the ditching characteristics are known. Scoops, flaps, projections, and any other factor likely to affect the hydrodynamic characteristics of the airplane, must be considered.

(d) It must be shown that, under reasonably probable water conditions, the flotation time and trim of the airplane will allow the occupants to leave the airplane and enter the life rafts required by §25.1415. If compliance with this provision is shown by buoyancy and trim computations, appropriate allowances must be made for probable structural damage and leakage. If the airplane has fuel tanks (with fuel jettisoning provisions) that can reasonably be expected to withstand a ditching without leakage, the jettisonable volume of fuel may be considered as buoyancy volume.

14 *CFR* §25.1411 discussed the requirements for ditching equipment that airplanes certified under 14 *CFR* §25.801 must meet. It stated, in part:

(a) Accessibility. Required safety equipment to be used by the crew in an emergency must be readily accessible.

(b) Stowage provisions. Stowage provisions for required emergency equipment must be furnished and must—

(1) Be arranged so that the equipment is directly accessible and its location is obvious; and

(2) Protect the safety equipment from inadvertent damage.

(c) Emergency exit descent device. The stowage provisions for the emergency exit descent devices required by §25.810(a) must be at each exit for which they are intended.

(d) Life rafts

(1) The stowage provisions for the life rafts described in §25.1415 must accommodate enough rafts for the maximum number of occupants for which certification for ditching is requested.

(2) Life rafts must be stowed near exits through which the rafts can be launched during an unplanned ditching.

(3) Rafts automatically or remotely released outside the airplane must be attached to the airplane by means of the static line prescribed in §25.1415.

(4) The stowage provisions for each portable life raft must allow rapid detachment and removal of the raft for use at other than the intended exits.

(e) Long-range signaling device. The stowage provisions for the long-range signaling device required by §25.1415 must be near an exit available during an unplanned ditching.

(f) Life preserver stowage provisions. The stowage provisions for life preservers described in §25.1415 must accommodate one life preserver for each occupant for which certification for ditching is requested. Each life preserver must be within easy reach of each seated occupant.

(g) Life line stowage provisions. If certification for ditching under §25.801 is requested, there must be provisions to store life lines.

These provisions must—

(1) Allow one life line to be attached to each side of the fuselage; and

(2) Be arranged to allow the life lines to be used to enable the occupants to stay on the wing after ditching.

14 *CFR* §25.1415 discussed the requirements that slide/rafts on airplanes certified under 14 *CFR* §25.801 must meet. It stated, in part:

(b) Each life raft and each life preserver must be approved. In addition—

(1) Unless excess rafts of enough capacity are provided, the buoyancy and seating capacity beyond the rated capacity of the rafts must accommodate

all occupants of the airplane in the event of a loss of one raft of the largest rated capacity; and

(2) Each raft must have a trailing line, and must have a static line designed to hold the raft near the airplane but to release it if the airplane becomes totally submerged.

(c) Approved survival equipment must be attached to each life raft.

(d) There must be an approved survival type emergency locator transmitter for use in one life raft.

7.0 A320 Ditching Certification

The A320 was type certified by the FAA on December 15, 1988, on the basis of the application for type certification dated February 7, 1984. The ditching certification for the airplane was based on tests performed on a scale model of an earlier Airbus type (the A300B2) and National Advisory Committee for Aeronautics (precursor to NASA) reports from the 1950s.

Based on this information, an Airbus document entitled “Establishment of Ditching Substantiation” (Ref. 00D025P0002/C12, Issue 1) dated January 21, 1988, concluded that the fuselage of an A320-100 would “undergo no destruction liable to create a water passage” if landed with the following assumptions:

- 1.) landing gear retracted
- 2.) a nose up attitude of 11°
- 3.) a -0.5° glideslope
- 4.) flaps in landing configuration
- 5.) sea swells taken longitudinally

It added that, under those assumptions, after impact, “the lowest point of the passengers (*sic*) exits remains above the waterline for more than 7 minutes 40 seconds.” Given the same assumptions, a May 17, 1988 document entitled “Establishment of Ditching Substantiation (Ref. 00D025P0003C22, Issue 2) indicated that an A320-200 (with a higher maximum takeoff weight) would behave similarly and that the passenger exits would remain above the waterline for 7 minutes and 15 seconds.

A June 10, 1992 certification document entitled “Ditching Evacuation Analysis” (Ref. 00D025P0003C22, Issue 2) considered two scenarios:

- 1.) all doors were available
- 2.) only two doors (on the same side of the airplane due to high winds and rough seas) were available and one of the largest slide/rafts was unusable. An additional 20-person life raft was also stowed in an overhead bin.

For the analysis, Airbus assumed a passenger capacity of 185 persons. It was also assumed that it would take:

- 10 seconds to operate the doors
- 5 seconds for the slide/rafts to deploy
- 73 seconds to transport two slide/rafts to the opposite side of the airplane³¹
- 1.5 seconds for each passenger to evacuate
- 30 seconds to transport an additional raft to the door (second scenario)
- 20 seconds to deploy that slide/raft (second scenario)

The analysis for scenario #1 concluded that the airplane could be evacuated in 2 minutes 26 seconds. The analysis for scenario #2 concluded that the airplane could be evacuated in 4 minutes and 18 seconds. Neither time exceeded the 7 minute 15 second flotation time calculated by Airbus for an A320-200.

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Survival Factors Investigator

Attachments:

- 1.) Cabin crew statements
- 2.) US Airways F/A initial training materials
- 3.) US Airways F/A recurrent training materials
- 4.) Photographs
- 5.) US Airways Inflight Emergency Manual
- 6.) Airbus document “Getting to grips with cabin safety”: Chapter 6 – Ditching
- 7.) Injury chart
- 8.) Passenger questionnaires
- 9.) Evacuation videos (shelf item)
- 10.) CIDS teardown report
- 11.) US Airways EOW A320 safety information card

³¹ To show compliance with 14 *CFR* 25.1411(d)(4), Airbus conducted tests of the time necessary to transport slide/rafts from one door to another. A report of the tests entitled “Slide/Raft Portability Test Report” (Ref. 732-1613/88 Issue 2) dated September 16, 1998, indicates the results were as follows: Fwd LH to Aft RH 1:28 (0:32 to disconnect, 0:28 to transport, and 0:32 to connect); Aft LH to Fwd RH 1:32 (0:32/0:28/0:32); Fwd LH to Fwd RH 1:13; Aft LH to Aft RH 1:13; Fwd RH to Aft RH 1:32 (0:32/0:28/0:32). According to Airbus, two people were used to transport the slide during these tests.