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ARMY CORPS DELIVERS BIG RESPONSE TO HURRICANE SANDY

The Corps worked with the Port Authority of New York and New Jersey, as well as federal, state, city and other partners in response to the October storm that wreaked havoc on communities throughout the Northeast

By JoAnne Castagna, Ed.D.

The Army Corps teamed with federal, state, city and regional agencies to unwater flooded areas, provide temporary power, remove debris and – just as important – provide an ear, a hand or a hug to residents still reeling from the devastation caused by Hurricane Sandy in late October 2012.

Hurricane Sandy was the largest Atlantic hurricane on record, causing severe damage across 24 states, hitting New York and New Jersey especially hard.

The super storm's 95 mile-per-hour winds and record breaking storm surge flooded streets, subways and vehicular tunnels with salt water wreaking havoc on communities throughout the region, especially those in coastal areas creating major debris issues and knocking out power to millions of residents.

The Army Corps plays a major role in disaster response with more than 40 specially trained response teams capable of providing a wide variety of public works and engineering related support.

In the immediate aftermath of the hurricane, the Army Corps immediately had teams on the ground working around the clock to get things back to normal, families safely back in their homes and people back to work.

"Twenty employees from our district jump-started the initial operations," said Col. Paul Owen, commander, New York District. "Even though our district was severely impacted, we maintained the ability to perform emergency operations and quickly established recovery field offices throughout the region. I was proud to see my employees so energized and dedicated to work on the mission, even though their own families had damaged homes and no power."

On top of supporting FEMA-assigned missions throughout the region, the Corps' New York and Philadelphia districts also carried out their own regular missions following the storm. These included helping the critical Port Authority of New York and New Jersey reopen, closing barrier island breaches in Long Island, and assessing damages to federally authorized and constructed shoreline projects while developing short, mid, and long-term alternatives for coastal storm damage risk management.

One of the first FEMA response missions the Army Corps received was to unwater critical public infrastructure in the NYC metro area. "Before we could get transportation systems and critical infrastructure back online the flood waters had to be drawn down," said Thomas Heinold, deputy chief, Operations Division, Rock Island District, who was part of the Army Corps' Unwatering Task Force. This team also played a major role unwatering the flooded streets of New Orleans in the aftermath of Hurricane Katrina. "This is critical because flooding creates dangerous situations, such as drowning and public health hazards."

One of the major challenges in the aftermath of the storm was removing almost 500 million gallons of seawater that washed into New York City's mass transit system. According to a story by New York University, almost 70 percent of the 1.6 million commuters who work in Manhattan use the subway system, be it MTA or PATH, on a daily basis.



New York District drift collection vessels work long hours to clear tons of drift and debris from the New York and New Jersey Harbor after Hurricane Sandy. (Photo by Chris Gardner, New York District public affairs)

“The mass transit system was basically shut down in the whole area. Having the system flooded like this has a tremendous negative effect on normal business activities and ultimately the economy,” said Roger Less, chief, Design Branch, Rock Island District, who served as senior project manager on the Unwatering Task Force. “I saw some of the worst flooded areas of the city. There were subway stations that had water that came so high it was on the subway platforms.”

The team immediately had pumps of various types and sizes sent to points around the transit system and began pumping. The Corps also provided technical assistance for other similar infrastructure unwatering efforts throughout the region.

The pumps efficiently removed about 116,000 gallons of saltwater per minute and, in just nine days, 475 million gallons of saltwater had been drained from the city’s subways and tunnels – the equivalent to nearly 719 Olympic-sized swimming pools.

The Corps’ unwatering efforts augmented the existing capacities and efforts of local and state authorities like the MTA and the Port Authority that went straight to work to drain their subway lines, tunnels and other infrastructure sites. The destruction caused by the storm was the worst disaster in the 108-year history of the city’s subway system.

The Corps also played a vital role in providing temporary emergency power to critical public facilities including water and wastewater treatment plants, hospitals, nursing homes, public housing developments, fire stations and police stations. The temporary emergency power allowed these sites some level of operability while the commercial grid was restored by local power authorities.

Picking up the pieces after a hurricane like Sandy is the hardest thing for residents to do, and it’s also the Army Corps’ most intensive and largest mission that will continue into early 2013.

“It’s important to clear the debris from streets so that people can get to their homes and begin to rebuild their lives and eventually get back to normal,” said Col. John Pilot, the debris team chief who deployed from the Corps’ South Atlantic Division. “Once the streets are clear then residents are able to bring the debris from their property to their curbs for pick up. This allows them to clean up their



Members, supporting the Army Corps FEMA mission to allow access to flooded homes in Breezy Point, N.Y., pumped an average of 750,000 to 1 million gallons of water a day in the week following Hurricane Sandy. (Photo by Mary Markos, St. Louis District, public affairs)

homes and begin their recovery process, file insurance claims, rebuild or in some cases demolish their homes.”

FEMA, the Corps’ Debris Task Force and the Environmental Protection Agency (EPA), in cooperation with state and local agencies, continue to clean up an estimated 3.6 million cubic yards of debris left behind from Hurricane Sandy in the metropolitan area – or enough to fill about seven Yankee Stadiums. The debris is being sent to temporary storage areas in the region where it’s being handled, sorted and recycled and then transported to landfills – often via barges.

The Army Corps also assisted those trying to gather their belongings among the mounds of debris.

“I saw an older couple with some friends having some difficulty trying to carry a piano out of a house to the curb to be taken away. I ran up to them to give them a hand, and they were very appreciative,” said Col. Trey Jordan, commander, Baltimore District, who took part in the debris removal effort as commander for the New York Recovery Field Office. “We talked for a while and one of them told me he had worked for the Army Reserves for 20 years. It was a nice chance to bond with the people we were trying to help out. It’s a personal way for the Army Corps to help besides what we are accomplishing through our assigned missions.” ●

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Some of an approximate total of 57 million gallons of water is pumped out of the Battery Park Underpass just days after Sandy hit as part of the U.S. Army Corps of Engineers’ unwatering mission. (Photo by Chris Gardner, New York District public affairs)