

## **City Administrator's October 2012 Special Supplemental Report – Hurricane Sandy Prepared for the November 13 City Council Meeting**

### **Hurricane turned into Superstorm Sandy – by any other name caused great damage**

In relative terms and compared with many other communities throughout the coastal mid-Atlantic and northeastern United States, the City of New Castle fared fairly well when Superstorm Sandy blew through here overnight from Monday, October 29 through Tuesday, October 30. That is not to say that the City emerged from the storm unscathed, and in fact, quite the opposite is true.

When the winds died down and the high tides subsided, the morning light on Tuesday revealed significant destruction and damage to City properties. In Battery Park and other locations adjacent to the Delaware River banks, it was apparent how high the tide had risen over the River banks, as massive fields of debris reached far inland.

Fortunately, forecasts well in advance of the storm allowed the City to plan and meet with all the emergency management partners involved in handling these type of situations. A Friday planning meeting included representation from all City departments, City elected officials, the Municipal Services Commission, the Good Will Fire Co. and the Trustees of the New Castle Commons. Of course, the New Castle County (NCCo) Office of Emergency Management (OEM) serves as the overall coordinating agency for the County, working under DEMA and FEMA.

The Community Room at the Police Station served as the main incident command center and was staffed throughout the storm event. Normal City operations were suspended and City offices were closed Monday and Tuesday. Both police and public works personnel adopted 12-hour shift schedules so personnel would be available to respond around-the-clock.

With the very severe storm threat, the decision was made to order a mandatory evacuation for a number of neighborhoods and streets throughout the City. Thanks to the Volunteers In Police Service (VIPS) for assisting with the written notification delivery to all properties in the evacuation areas. That notice was supplemented by NCCo OEM creating a reverse 9-1-1 call to all the impacted households.

Some forecast reports referred to the situation being ideal for creation of a “perfect storm” – an expression made famous by a movie of the same name, where “perfect” is not a positive reference, but rather indicates numerous factors are working together creating an extreme threat that a storm is likely to have a tremendous impact. In our case, that included wind and rain from the hurricane, the highest of tides influenced by the full moon and the storm moving at a slow pace so it would be over our area for an extended time period (predicted to be six high tide cycles). Outside of our area, an early winter storm arctic air mass was predicted to collide with the hurricane, which did, in fact, causing significant snowfall in some states south of Delaware.

Of course, City personnel in the incident command center overnight monitored closely weather reports of where Sandy was going and the variances in the wind velocities. The front section of the storm made landfall near Atlantic City, NJ around 8 p.m. and a bit of good news was that the travel speed of the storm had increased to nearly 30 mph. The time we had predicted of highest concern for the City was when the storm would be passing over our area with the high winds and rain, coupled with the predicted high tide time of 12:22 a.m. Tuesday. The front section of the storm passed through the area well in advance of that time and we were all relieved at that point at the apparent lack of damage the City incurred. Then, for a few hours it was very calm – literally the calm in the eye of the storm. It was only a fleeting reprieve, however, as the worst came as the back end of the storm roared through the area, starting shortly after midnight and continuing for a few hours. This was the “worst case scenario”, as the height of the storm coincided with the high tide, which as it turned out occurred about two hours later than predicted due to influence from the storm.

A USGS tide gauge has been in place on the pier and ice breaker, however the storm knocked that out so data from that device specific to New Castle City is not available. Mayor Reese and Chief McDerby were out around midnight, I was out with Lt. Bernie Torre, public works personnel were out, as well as various representatives from the Good Will Fire Co., inspecting areas expected to be at risk. At first, again, it did not seem too alarming, however concern mounted through the early morning hours.

The River inundated Battery Park and went as far inland that it was rushing across W. 3<sup>rd</sup> Street near the tennis courts where it was also impacting private homes. The situation was similar at Bull Hill, with the River filling the parking lot at the Boat Club and flooding and running around the end of the Broad Dike near the houses at the end of E. 2<sup>nd</sup> Street. It was during this time period when the most damage and destruction to City property occurred – from about midnight until 3 a.m. on Tuesday.

Of course, being nighttime it was difficult to see. Tuesday morning in the light, however, it was clear what areas and infrastructure sustained the most damage. Of course, that is:

- The pier was destroyed. The decking and railing lifted off the piling foundation and came to a rest (at least at first) beside the pilings to the northeast. Some of the pilings closer to the shore were also damaged or destroyed. Part of the decking remained attached to the ice pier, while other portions wound up floating still in that area of the River.
- A large section of the walkway in Battery Park was destroyed. Council President Bill Barthel provided the best description of that destruction – that the damage looked more like it was caused by an earthquake, versus the action of the waves, wind and high tides pounding that area.
- All three dikes (Buttonwood, Broad and Gambacorta) sustained damage, with Gambacorta being hit the hardest.
- A massive amount of debris was left behind after the River and tide subsided.

In the early stages of managing the event aftermath, Mayor Reese and I both heard from Governor Markell and DNREC Secretary Collin O'Mara. They wanted to be sure we had everything we needed to take care of our many needs, and offered that if at any point we were having trouble with storm-related matters that we could contact them for assistance.

Public Works Supervisor George O'Neal and I performed an initial damage assessment, walking the Gambacorta and Buttonwood dikes. I had already seen the Broad dike and was only able to access that City property a short ways on the path, as it was densely covered with debris and unsafe to travel into the property any distance. This includes that a large, empty oil tank was on top of the path and dike, which DNREC has said it will take responsibility for removal.

“Walking” on top of the Gambacorta dike was quite a challenge, as the path was blocked in numerous places by downed and uprooted trees and debris. In many places where trees were uprooted, this caused major damage to the dike and even ripped up the asphalt path in many spots. This dike was the most severely damaged of the three City dikes. Major sections were missing, eroded from the wind, wave and tide action. The Buttonwood dike had obviously been overtopped and also had a sea of debris deposited on top of the dike after the tide went back out.

City crews got to work right away on debris cleanup. MSC immediately offered assistance from that agency, including personnel and equipment, and we are so grateful for that mutual aid assistance! Of course, I was in constant contact with Dave Carpenter (NCCo OEM Coordinator) to inform him what we were dealing with here in the City. As it turns out, our City did earn the distinction of sustaining the most damage from the storm within New Castle County.

To supplement our crews and equipment for debris removal operations, we hired one private contractor with large dump trucks and also rented from a private contractor equipment to help collect the debris to get it into the trucks. Of course, once a truck is full, it needs a place to dispose of the debris, and I dealt with that over a couple days.

The Holland Mulch company took some of the larger tress/tree trunks and other “clean” (i.e., no trash mixed in) debris for free for a limited time, as they can recycle and sell the material. At one point, however, they declared their stockpile area as full and we had to find other alternatives. There is the Cherry Island Landfill, where we can take most anything (much of what we have picked up has lots of litter mixed in [i.e., countless pieces of plastic]) so it cannot be dumped with other material which is supposed to be exclusively organic. Those tipping/disposal fees are the highest.

Representative J.J. Johnson contacted me to offer assistance, and he had a representative from Peninsula Compost contact me, who offered to take a limited number of loads free of charge, however after that would charge our normal rate, which still is about half of the landfill rate. The State helped out and arranged for organic loads to be taken at DRPI (Delaware Recyclable Products, Inc.) site at a reduced rate, and we were also able to get 30 yard dumpsters delivered to near the Broad dike in Bull Hill and also the Buttonwood dike near the Zenith building in the Twin Spans industrial park.

Rep. Johnson also put me in touch with Lt. McLellan, the person in charge of prison labor. He and I met in the City to assess what debris still needs to be collected and how that group can help. Those efforts are ongoing.

After a few days, the private rental dump trucks were replaced with DelDOT trucks to help us haul debris. Thanks to many DelDOT officials for that, including Mark Alexander, the DelDOT Canal District Engineer and our area contact for DelDOT maintenance.

One item of concern had been the pieces of the dock floating in the River and that if they floated away and out of the area, then they could become hazards to navigation. Initially, Good Will Fire Chief Chris Robinson offered his volunteer personnel and boats to assist in the dock recovery efforts. Prior to exercising that option, however, I asked the County OEM to see if the Coast Guard could assist.

Later that day, the Coast Guard arrived in a boat near the wharf and dock. That crew was not equipped to handle the entire job, although they did tie up one of the dock pieces, which they also thought was hung up on some cable underwater, to an existing piling.

There also was the question of dock ownership, as some persons reported that could be owned by the Army Corps Of Engineers (ACOE). I contacted the ACOE to check that out and a few days later received the answer that the ACOE had owned the pier at one time, however in 1969 the Delaware River Ice Harbor Project was conducted and completed as a cost-shared project. That means that ownership of the final project is in the hands of the non-federal sponsor (in this case the City), not the United States.

Finally, for the pier on Tuesday the week after the storm (also election day), Dave Carpenter arranged for a crane rental to assist in extracting the remains of the pier from the River. These efforts were also coordinated with the Good Will Fire Co., their crews and boats, who further enlisted the help of Minquas Fire Co. personnel and their boat.

The operation included severing with chain saws several sections of the pier attached to the ice breaker. That started in the morning, however efforts were halted as the receding tide was not conducive to floating dock pieces into position for the crane to lift.

Operations resume a little after mid-day and with the higher tide, that task was made somewhat easier. The afternoon operations also saw the crane from the morning swapped out with a larger crane unit, with longer reach. All these personnel working in concert were able to accomplish the final goal of extracting all of the pieces of the damaged pier from the River, as they were placed on the wharf and still need to be handled as a further part of debris removal operations.

Right after the storm, the City heard from the Trustees of the New Castle Commons, who offered their assistance. Council President Barthel and I met with Trustee President Mike Alfree, Battery Park Chair Chris Castagno and Executive Secretary Kathy MacDonough. We discussed measures to be taken in Battery Park related to public safety and unsafe areas such as the walkway in the Park and the walkway extending onto the Gambacorta Dike. It was decided that walking areas made dangerous by storm damage should be fenced to restrict and/or prohibit public access, in conjunction with appropriate signage.

Councilperson Megginson, Kathy and I met with a fencing contractor on Saturday and did an extensive walking tour to determine the locations where fencing is needed. I have that contractor quote and I am required to obtain other competing quotes to ensure the City follows its procurement procedures, which is a prerequisite to receiving reimbursement from FEMA.

Meanwhile, on the Thursday immediately following the storm, Kevin Donnelly of the New Castle Conservation District (NCCD) arranged a tour of the dikes with a number of State staff members and also representatives from the O'Brien & Gere engineering firm which has been working on our dike rehabilitation plans. Some Trustees also joined that tour.

It was also around this time frame that we became aware of a new storm threat predicted for the following week. It was nothing on the magnitude of Sandy, however still a nor'easter which could bring severe weather to the area and pose a significant threat to the City with the damage just having occurred from Sandy to our dikes.

Mr. Donnelly arranged for a contractor to immediately make temporary, emergency repairs to the Gambacorta dike. This included the placement of 208 one-ton sand bags (obviously done with heavy equipment) in a number of sections of the dike damaged by the storm. The work also involved removing the damaged asphalt and filling in the dike behind the sand bags with stone and then compacted dirt on top. This work was performed over the weekend to ensure its completion prior to the coming storm event.

Of course, prior to that work being able to be performed, the dike had to be cleared of all those downed trees and a lot of the debris. Again, City and MSC crews worked on this project and did an outstanding job in a very quick time frame.

So far the City has worked with two FEMA representatives, the second performing a more detailed preliminary damage assessment, with that group accompanied by representatives from the County OEM and DEMA. After the field tour we returned to my office to document all the costs (again, remember these are preliminary estimates).

The total damage, debris cleanup and installation of emergency protective measures comes to just under \$3 million. In order to qualify for much of the aid provided by FEMA, New Castle County must show a minimum of \$1.85 million in all of the FEMA expense categories. The City estimate alone, obviously, is well over the threshold needed by the County.

We will continue to move through the post-storm processes to restore the City to "normal" conditions, and also work with all parties to ensure the City is provided with the top limit of financial aid available from all sources.

Finally, the words "thank you" cannot begin to express the gratitude the City has for all the individuals and entities who have assisted the City during this difficult period. A number of them are acknowledged above in this report, but there remain countless others, some of whom are even anonymous, who have helped in some small, and some not so small ways. We could not have managed all this without them, and for that we are sincerely appreciative!

Respectfully submitted,

Cathryn C. Thomas, City Administrator