

Hurricane Irene
August 27 & 28, 2011

Birmingham Township
Chester County

Hurricane Irene 8-27-2011

Executive Summary

- Hurricane Irene and its aftermath could have been much worse.
- Birmingham suffered very little permanent damage and moderate utility disruption.
- Flooding remains the township's #1 threat scenario as demonstrated by Hurricane Irene.

Hurricane Irene 8-27-2011

Event:

- After a minor earthquake tremor on Tuesday, August 23rd, the township received a warning from the National Weather Service (NOAA) and other agencies, that the Brandywine Valley should begin preparing for what promised to be a major storm.
- Birmingham Township EMA began preparations for the impending storm.

Hurricane Irene 8-27-2011

Tuesday, August 23, 2011

- NOAA Weather sends message to Chester County and Birmingham Township that a Tropical Storm named "Irene" is tracked to affect the Northeastern United States.

- Birmingham EMC Roach notifies Birmingham Township of impending storm and its possible impact on the township



Tuesday 8/23

Wednesday 8/24

Thursday 8/25

Friday 8/26

Saturday 8/27

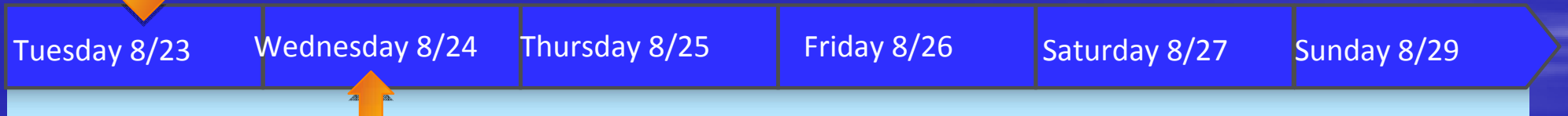
Sunday 8/29

Hurricane Irene 8-27-2011

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Wednesday, August 24, 2011

- Chairman Conklin requests a forecast concerning the planned 325th anniversary of the township. EMC Roach responds that the prognosis for suitable weather is not good for the event.

- Chester County issues the first of three weather briefings intended just for the emergency coordinators. Briefing reports that, now Hurricane Irene is North of Haiti with 90 MPH sustained winds.

Hurricane Irene 8-27-2011

- NOAA predicts that Irene could affect the Delaware Valley as early as Friday evening, August 25th.
- On Wednesday, August 24th, EMC Roach requests that the township secretary post a list of storm preparedness tips for the benefit of the residents on the front page of the township web site. This was completed immediately and was to remain posted until Sunday evening.

Hurricane Irene 8-27-2011

- EMC Roach contacts Deputy EMC's, Langerhans, Hochhaus and Nelling and informs them of these actions and begins photographing key locations in the township, which have been affected by previous weather events.
- The purpose of these photos was to provide a record of "Before" pictures for later analysis.

Hurricane Irene 8-27-2011

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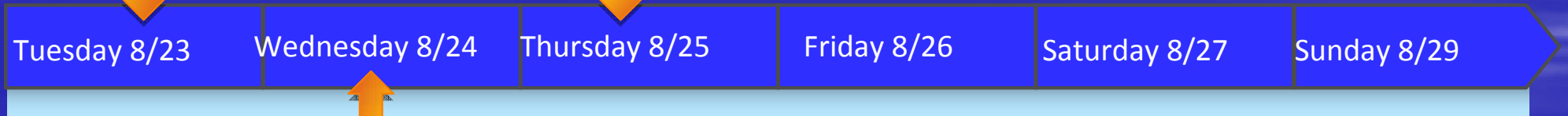
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Thursday, August , 25 2011

- 1205 hrs - Chairman Conklin announces the postponement of the 325th Anniversary event at Birmingham Hill. Two large tents had been erected on Friday. EMC Roach recommended the tents be removed as they may be a hazard in high winds. They were removed on Saturday afternoon.

- 1826 hrs - Chester County Emergency Services announces the opening of the Emergency Operations Center on Westtown Road. The first of eight "Situation Reports" is issued to Birmingham Township. Each of these reports was forwarded by email to the EMC list, which includes all three supervisors.



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Thursday, August 25th

- EMC Roach contacts Pocopson Township secretary, Sue Simone, requesting the name of their new EMC.
- She responded that an EMC had not yet been selected.
- This contact was made to coordinate resources among our neighboring townships.

Hurricane Irene 8-27-2011

August 25th

- EMC Roach received a list of “Talking Points” from the County Emergency Management Public Information Officer, Patti Mains.
- These points were to be used as a resource for any contact with the press or media.
- No press contact was received at Birmingham Township.

Hurricane Irene 8-27-2011

- EMC Roach contacts Lt. Tracy Brown of the Pennsylvania State Police and Chief Thomas Nelling of the Birmingham Township police to coordinate contact information and possible rescue notification if needed.
- EMC Roach initiated an “Incident” page on behalf of Birmingham Township on the State-Wide Knowledge Center database.

Hurricane Irene 8-27-2011

- EMC Roach began forwarding current weather information from the National Weather Service and the National Hurricane Center in Miami to the EMC list.
- The HWN information was also gathered from monitoring the Hurricane Watch Net on 14.325 kHz.
- EMC Roach also checks into the local ARES-RACES Net, then activated in the Chester County EOC.

Hurricane Irene 8-27-2011

- EMC Roach received notice from GETS (Government Emergency Telecommunications department) to test the township's GETS card. This was done at 1501 hours on August 25th.
- The GETS cards enables emergency management officials to make telephone calls on overloaded networks.

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Friday, August 26, 2011

- EMC Roach notifies Chairman Conklin that the township emergency operations center (EOC) will be opened on the afternoon of Saturday, August 27th.

- This is later rescinded as we realize that our email and telephone communication is adequate for decision making.

Hurricane Irene 8-27-2011

- EMC Roach receives several documents from Chester County Emergency Services for the purpose of damage assessment, including ICS-214. These are stored in the township database.
- Message received by EMC Roach from Lt. Jon Brill at the West Chester Area Regional Emergency Management Group regarding sharing resources and communication contact information. Birmingham is a member. EMC Roach is Vice-Chairman of the WCAREMG.

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Saturday, August 27, 2011

- 1200 hrs – EMC Roach, Deputy EMC Langerhans & Deputy EMC Hochhaus begin photographing township trouble spots

- 1234 hrs – EMC Roach sends message to Chairman Conklin recommending that Birmingham Township declare a State of Disaster Emergency. This declaration enables the township to apply for FEMA aid. The commonwealth and county had already declared. The board agreed to make the declaration.

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Hurricane Irene 8-27-2011

- EMC Roach continued to send a series of messages, updates and warnings to the Board of Supervisors from several weather and other early warning organizations.
- EMC Roach requests that Chief Nelling advise patrolling officers to notify EMC of any road blockage and/or rescue incidents.
- At 1611 hours, Birmingham is notified that PECO has opened their EOC.

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- 1200 hrs – EMC Roach, Deputy EMC Langerhans & Deputy EMC Hochhaus begin photographing township trouble spots at the intersection of Route 926 and Creek Road, Wylie Road, Brinton's Bridge Road, The Reserve and several spots along Route 926 and township roads that could result in tree failure.

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IRENE

- Hurricane Irene does not materialize with the winds predicted. However, there was over 6 inches of rainfall measured in Birmingham.
- The rain and wind resulted in severely flooded roads on Wylie, Creek and Route 926. Each of these roads became impassible as the storm progressed.

Birmingham 9/6/2011

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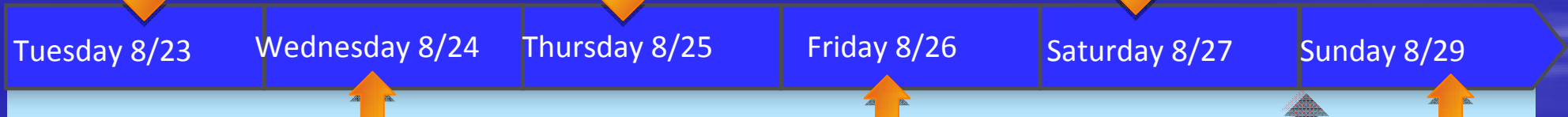
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- By early afternoon the majority of the storm had passed.
- EMC Roach, DEMC Langerhans and DEMC Hochhaus toured the Township and took photos of the storm aftermath in preparation for County wide disaster relief analysis.

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Observations and Recommendations

- The Reserve should explore an alternative high-ground route to the subdivision for emergency evacuation or emergency services during flood events.
- During the recovery phase, residents and visitors generally ignored temporary barriers while PECO worked with high voltage primary wires.
- Electric restoration was long and tedious because of flood damage on Creek Road.

Hurricane Irene 8-27-2011

Post Event Activities - Monday, August 29th

- Damage Assessment Reports were filed with the Department of Emergency Services.
- According to the Township office and the Township Roadmaster, the storm caused no significant damage to the residents or the township infrastructure.
- The recovery phase was concluded at 1730 hours on August 29th.

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Photographic Summary

- The flooding occurred precisely where it is supposed to, in the flood plain. Culverts along Creek Road were clogged with debris and several residents were stranded at their residences until the water receded.

Hurricane Irene 8-27-2011

Creek Road @ PA 926 8/27

Creek Road @ PA 926 8/28



Hurricane Irene 8-27-2011

Submerged Vehicle - Creek Road @ PA 926
8/28



Birmingham 9/6/2011

Hurricane Irene 8-27-2011

**Brintons Bridge Road @
Creek Road 8/27**



**Brintons Bridge Road @
Creek Road 8/28**



Hurricane Irene 8-27-2011

**Brintons Bridge Road @
Creek Road 8/27**



**Brintons Bridge Road @
Creek Road 8/28**



Hurricane Irene 8-27-2011

**Creek Road @
Meetinghouse Road 8/27**



**Creek Road @
Meetinghouse Road 8/28**



Hurricane Irene 8-27-2011

**Brandywine River Nursery
8/27**



**Brandywine River Nursery
8/28**



Hurricane Irene 8-27-2011

Wylie Road between Firethorne Drive and
South Birmingham Road 8/28



Birmingham 9/6/2011

Hurricane Irene 8-27-2011

Creek Road @ Country Club Road 8/28



Birmingham 9/6/2011

Hurricane Irene 8-27-2011

Blocked Culvert - Creek Road at Rondelay



Birmingham 9/6/2011

Hurricane Irene 8-27-2011

Knolls Road 8/28



Birmingham 9/6/2011

Hurricane Irene 8-27-2011

Acknowledgements:

- EMC Roach wishes to express much thanks to the township leadership, Birmingham PD, Birmingham Roadmaster and particularly, Deputy EMCs Langerhans and Hochhaus for their assistance.

Lloyd Bankson Roach

EMC-65

September 6, 2011