



WSSC's Tale of Two Storms (Derecho vs. Sandy)

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National Capital Area Case Study Workshop
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Pre-Storm Conditions

Derecho

- Temp - 103° F (High)
- Water Usage - High Demand (206 MG of water produced)
- Electrical Usage – PJM load curtailment was called

Sandy

- Temp – Normal
- Water Usage – Normal
- Electrical Usage - Normal

Pre-Storm Conditions

Derecho

- Storage - 114 of 174 MG
- Storm struck when storage was at the lowest point of the day before refilling

Sandy

- Storage - Full

Status at Midnight

Derecho

- Potomac WFP offline
- Patuxent WFP offline due to loss of power at Raw Water Pumping Station
- 50 facilities without power in PG and Mont. Counties

Sandy

- Potomac WFP – OK
- Patuxent WFP – OK
- Much less, none critical

Immediate Actions Taken

Derecho

- Emergency Response personnel called in
- Contacted electric utilities
- Small portable generators at several sites in Montgomery Co. to get level readings (batteries running low)

Sandy

- Emergency Response personnel already at work
- Electric utilities already contacted
- Not needed

Information Exchanges

Derecho

- Discussions with PEPCO Operational Control Center - frequent
- Discussions with Montgomery Co. EOC - frequent
- Fire Departments (both counties) - frequent

Sandy

- Discussions with PEPCO Operational Control Center - infrequent
- Discussions with Montgomery Co. EOC - infrequent
- No discussions

Information Exchanges

Derecho

- Montgomery County EOC requested WSSC at EOC – June 30th, 3:30 AM
- Updates to Executive Branch and EOC throughout the night

Sandy

- WSSC reported in the morning as scheduled
- Updates to Executive Branch and EOC throughout the night

Information Exchanges

Derecho

- Discussions throughout the day with PEPCO concerning power at Wheaton WPS
- Discussions with Fire Dept and EOC regarding water storage

Sandy

- No discussions needed
- No discussion needed

Mandatory Water Restrictions

Derecho

- Restrictions in both counties due to power outages and low water storage
- Water Restriction Press Release – June 30th at 6:00 AM

Sandy

- No water restrictions issued
- No water restrictions issued

Actions

Derecho

- Lost power most places Friday, June 29th, 10:30 PM
- Power returned to Potomac WFP Saturday, 9:15 AM (out for 10 hr, 49 min)
- Discussions with Fire Dept regarding system recovery
- Wheaton WPS power recovered Saturday, 9:30 PM.

Sandy

- No power outage
- None needed
- No power outage

Lifting Water Restrictions

Derecho

- Early Sunday, July 1st Fire Dept was notified that Mont. County High Zone was in good shape
- System response was verified
- Restrictions lifted at noon on July 1st

Sandy

- No water restrictions

Electrical Reliability at WSSC

- After the July 2010 storm/electrical outage, WSSC met with PEPCO to inform staff of the importance of water supply to the region and the vitally important role Potomac WFP plays.
- After Derecho, PEPCO and BGE agreed to make water plants and related facilities their #1 priority.
- PEPCO trimmed many trees along both electrical supply routes to Potomac WFP.

Electrical Reliability at WSSC

- WSSC, with the assistance of PEPCO, removed approximately 60 trees at Potomac WFP.
- WSSC WUERM was given direct phone access to PEPCO Operational Center.
- There is currently an electrical reliability study underway to look at all of WSSC's critical facilities. It is expected to be complete in June 2013.

Electrical Reliability at WSSC

- WSSC has six mobile generators and are in the process of purchasing three additional mobile generators. These range in size from 450 KW to 40 KW which are capable of providing power to some our smaller facilities and ancillary equipment.
- It requires a minimum of 10 megawatts to run critical processes at Potomac WFP.

Water System Reliability

- More storage to be constructed:
 - Laytonsville ET (500,000 gal), est. in service 2013
 - Clarksburg ET (750,000 gal), est. in service 2017
- Investigating potential for redundant pumping station to northern-most Montgomery County facilities.

Potomac WFP Recent Power Outage Events

Mar. 2008 - Feb. 2010	Loss of single feeder only
Feb. 6, 2010	3 hours, 58 minutes
July 25, 2010	13 hours, 35 minutes
Feb. 25, 2011	7 hours
June 29, 2012	10 hours, 49 minutes

Gaps

- WSSC Group Leaders should be *permanently* authorized to purchase food, hotel rooms, etc.
- Educate/inform emergency and off-hours staff of IT Emergency Hotline to reset computer access.

WSSC Costs

Derecho

\$75,000

Sandy

\$500,000

What Has Changed?

- Adding a 10 MW Generator at the Potomac WFP is under consideration
- WSSC and Montgomery County EOC to hold planning meetings prior to the storm season next year.

Final Thoughts

Even though mandatory water restrictions were enacted for 36 hours due to low system levels during Derecho, no customers were without or had to boil water.

Questions or Comments?

