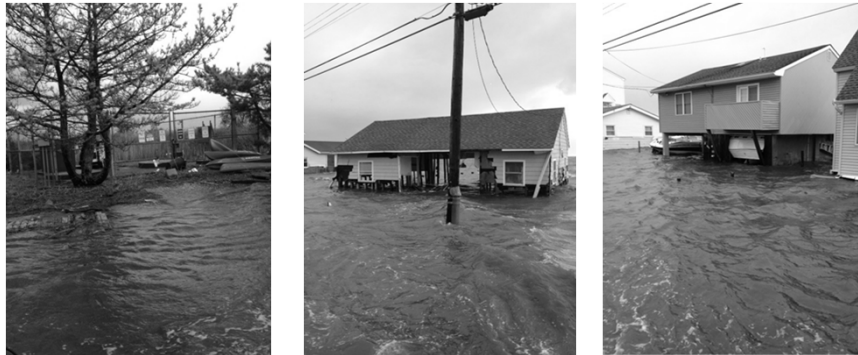


Emergency Resources after “A Major Storm Event”



1

Examples of some of the storms NJ has dealt with over the past 12 years

- Irene Cat 3 storm - August 2011 had 120mph winds and drop 11.22 inches of rain on parts of the State.
- Super Storm Sandy October 29th 2012 90 mph wind Jersey City 11 inches of rain in Wildwood and Storm Surge – 4 meters peak storm tide.
- Nor'easter snow storm Nov 7th 2012 dropped 13+ inches of snow on Freehold
- Ida hit NJ September 1st 2021 dropping 9.5 inches of rain and causing flash flooding
- Remnants if Ian Oct 1-5 2022 heavy rain and Winds in most of the State causing flooding and wind damage.

2

Primary Issue Any Major Storm Event can cause.

- Lose of electric service. Not just to the W/WW utility but to your customers as well.
- Flooding - both coastal and from Rivers and Tributary's. Possible salt water intrusion along the coast from Bay areas to Water/WWTP.
- Pressure lose in distribution system & potential water quality issue resulting in Boil water/do not drink or do not use.
- Sand infiltration into your collection system manholes and piping.
- Generator Failures, Fuel issues (Delivery of full) – Throughout NJ.
- Natural gas supplies turned off for safety reasons in certain areas.

3

You cannot talk about Emergency response without talking about your ERP.

Describes planned actions in an emergency to lessen the impact and protect public health by maintaining a sufficient water supply for potable use and fire fighting

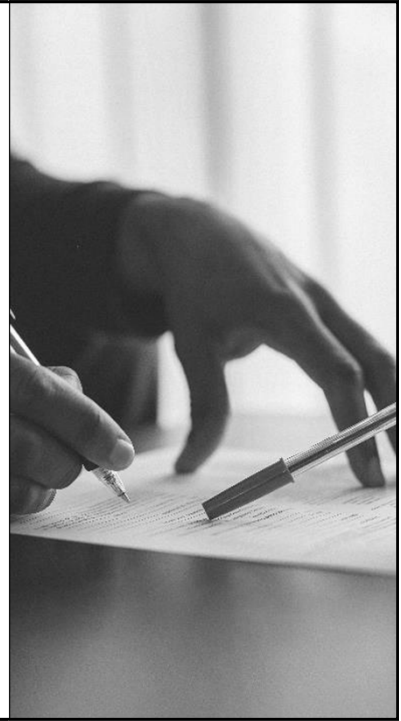


4



State Regulatory Requirements

- Water Supply Allocation Rules
N.J.A.C. 7:19-11.2
- Water purveyors serving more than 3,000 residents and other purveyors when requested by the Department, shall develop and submit Emergency Response Plans to the Department.



5

NJDEP ERP Template

- The NJDEP has developed an ERP Template to guide/assist CWS in the preparation of their Emergency Response Plan

<http://www.nj.gov/dep/watersupply/emergency.html>

EMERGENCY RESPONSE PLAN
DRINKING WATER SECTOR

Public Water System Name: PWSID No:
Physical Address:
City:
State:
Zip Code:
General Phone Number:

6

ERP Template Is

- The ERP Template is provided as Guidance only and establishes the minimally acceptable content of information that should be contained in an ERP
- ERP Template should be modified as necessary to reflect the specifics of your system.
- The completed ERP Template is a Highly Sensitive document that must be maintained as confidential



7

Confidentiality



Emergency Response Plans are sensitive and confidential and deemed NOT to be a public record under the Open Public Records Act (OPRA)

This means that an ERP is not subject to public inspection, copying or examination due to the potential to interfere with the State's ability to protect and defend the State and its citizens against acts of sabotage or terrorism

8

Now lets talk about how your O&M plan works along with your ERP

- In A Storm Event a utility is either trying to maintain their system operating or having to get their system back up and running extreme Emergency conditions.
- They will have to do this by use of emergency power (back up generators) or Emergency bypass pumping or possible interconnection with another Town or Private water system..
- Your O&M Plan should include inventory of repair parts, Back up pumps and generator and a list of vendors you currently use.
- The O&M plan and your ERP should mirror each other with the inventory for repair parts, back up Equipment and a list of vendors you currently use, Example Electricians, well drillers, pump repair companies and Rental Companies.

9

Some Equipment you may have on hand or Rent:



10

Bypass set Equipment staged before a storm threat.



11

O&M Plan should have the following:

- Scheduled maintenance for all Equipment you have.
- This means Equipment from you largest pump all the way down to your smallest piece of equipment like the chain saw you may need to use to remove downed trees in front of you treatment plant or well.
- The biggest issue during a storm event is needing a piece of Equipment during the storm event and it not working. Lacking of proper maintenance.
- We have learn from the major storms we have had over the past 12 years that Electrical outages requiring back up generators may need to run for days or weeks at a time and flooding causing a utility to have to rely of Emergency diesel powered back up pumping systems.

12

O&M plans cont.

- Back up Generators and small Equipment testing - Example back up generators being exercised month under load and at least quarterly starting small equipment like portable pumps and chain saws.
- Annual service and inspection of Emergency generators buy a certified mechanic. If you have Automatic transfer switches make sure you have someone who has the software or qualifications to work on them on your list of vendors.
- For Wastewater systems making sure you by pass pumping set up works. Do you have all the right fittings and hoses. Is the pump big enough to do the job? Do the valves in your valve pit operate???? Do the valves close and hold/

13

Emergency Back Up Generators



14

Two mobile generators.



15

O&M plan Inter connection

- Water system's should have a written agreement with the entity they have the emergency interconnection with, Usually they are 10 year agreements. Make sure you keep an eye on when the agreement ends so it can be renewed.
- Inspections must be document and kept as part of your records.
- Annual physical inspection of the interconnection vault including values, back flow devices, meter and any standing water that may be in the vault.
- Flow testing the water through the interconnect making sure back flow valve open, Meter seems to read and that you are getting water out of the closed hydrant.

16

ERP and O&M plans only work if:

- The Utility has gone over these documents with their Employees!!!
- The Employees need to know the Who, What and Where with both documents.
- They need to know their Roles in the advent of an Emergency.
- I know that most small utilities cannot do a large scale table top exercise.
- They can set aside time and talk to their employees and at least have the employee read both documents and sit down to answer any question.
- Things like teaching the staff to trip a main breaking in a plant or pump station so they can see the auto transfer of a back up generator work.
- Showing staff which portable generator or pump goes to what facility and any accompany wiring, fittings or hoses go as well.

17



18

Securing of equipment in an Elegancy

- If you have plenty of notice like when we have a hurricane you can rent equipment prior to the storm event. As part of your ERP and O&M plan you should have a list of a couple of Rental companies you can Rent from.
- Inter local agreements. The issue with this is they may need their equipment because they maybe facing the same Emergency as you in a large storm event.
- NJWARN no longer exists.
- OEM - Local, County and State can be a major resource when you need to request equipment.

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Thank you

Resources:

- NJDEP ERP Template:
<http://www.nj.gov/dep/watersupply/emergency.html>
- The Water and Waste Water Sector Security Resiliency Working group. They can help find resources for Utilities in need. Rick Howlett.
- EPA: <https://www.epa.gov/waterutilityresponse>.
- National Rural Water Association:
<https://nrwa.org/issues/disaster-response/>

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