EMERGENCY RESPONSE PLANNING:
WATER & WASTEWATER SYSTEMS

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WHICH IS FROM HURRICANE SANDY?

A.

B.

C.

D. All

E. None
West Virginia chemical spill triggers tap water ban
Up to 300,000 West Virginia residents were told not to drink tap water on Friday after a chemical spill called its safety into question, and health officials said water in the affected area should only be used for flushing toilets and fighting fires.

Police: Ex-employee set car on fire, made bomb threats in WPB, Riviera, Ellington watched flames spread over the car, then officials said he told an employee standing nearby that he had placed bombs at both the sewage plant and the Riviera Beach Utility District, where he also worked until being fired a few weeks ago.

Palmbeachpost.com

EMERGENCY INCIDENTS

- Main Breaks
- Treatment Malfunctions
- Spills/Contamination
- Power Outages
- Vandalism
LARGE SCALE EMERGENCY

- May be any significant event, natural or man-made
- Warrants, by executive order, a declaration of emergency by the Governor. (Emergency Management Act N.J.S.A., Appendix A:9-33)
- Causes widespread and devastating infrastructure damage which significantly disrupts State operations and the lives of residents.

THE IMPACTS

- **Loss of Power**
  - Long term may interrupt the utility’s ability to function
- **Loss of Communications**
  - Disrupts a utility’s operational capacity (SCADA)
  - No communications = inability to notify public of risks
- **Physical Damage to Infrastructure**
  - Loss of primary components = no service
- **Contamination**
  - Unknown contaminants = inability to treat or deliver safe drinking water or treat and discharge wastewater.
RESPONSE ACTIONS

Who? What? How?

COMMON GOALS

- Protect & Preserve Human Health and Safety
- Protect Utility Primary Components & State Critical Infrastructure
- Protect Property
- Preserve Environmental Quality
EMERGENCY MANAGEMENT FRAMEWORK

- Coordinated planning
- Collaborative response & recovery protocols
- Efficient and effective processing & acquisition of resource needs
- Timely & accurate situational awareness through standardized reporting protocols.

CAPABILITIES/EXPECTATIONS

- Ensure appropriate level NIMS/ICS certification
- Ability to provide timely Situational Reports (SitReps)
  - Initial Impact Reports & Damage Assessments
  - Standardized information gathering & reporting protocols
  - Timely & periodic briefings to promote Situational Awareness
- Ensure efficient and effective response and recovery protocols
- Ensure alignment of planning efforts under ESF3
EMERGENCY SUPPORT FUNCTIONS (ESF) – 15 TOTAL

ESFs provide the structure for coordinating State and Federal agency support in response to a large scale emergency incident.

ESF 1 – Transportation
ESF 2 – Communications
ESF 3 – Public Works & Engineering
ESF 4 – Firefighting
ESF 5 – Emergency Management (Planning & Operations)
ESF 6 – Mass Care
ESF 7 – Resource Support
ESF 8 – Public Health
ESF 9 – Search & Rescue
ESF 10 – Hazardous Materials Response
ESF 11 – Agriculture & Natural Resources
ESF 12 – Energy
ESF 13 – Public Safety - Law Enforcement
ESF 14 – Recovery
ESF 15 – External Affairs

THE PLANNING EFFORT

- NJ Office of Emergency Management (NJOEM)
  - State Hazardous Mitigation Plan
  - Event Annex (Hurricane) – 10 Total
    - NJOEM/NJ Dept. of Envir. Protection (NJDEP)
      - ESF3 Annex (Public Works & Engineering)
        - NJDEP
  - Agency Emergency Operations Plan
  - Division Level Emergency Operations Plan

- Municipal Emergency Operations Plans
- Water/Wastewater System
  - Emergency Operations/Response Plan
EMERGENCY RESPONSE PLANS

“ERPs”

WATER/WASTEWATER EMERGENCY RESPONSE PLAN (ERP)

- Is not the Municipal Emergency Operations Plan
- Is specific to the Water/Wastewater System

Regulatory requirements:
- Wastewater Systems: N.J.A.C. 7:14A-6.12 (Function of NJPDES Permits)
### ERP SUBMISSION REQUIREMENTS

<table>
<thead>
<tr>
<th>Water</th>
<th>Wastewater</th>
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<tbody>
<tr>
<td>✅ Water systems serving &gt;3,000 residents</td>
<td>✅ NJPDES Subchapter 6: Conditions Applicable to All NJPDES Permits</td>
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<td>✅ Others when requested by the Department</td>
<td>✅ O&amp;M Manual/Emergency Operation Plan is required</td>
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<td>✅ Submit when requested, or every two years, or whenever there is a significant change to the procedures.</td>
<td>✅ Shall not individually review the ERP as part of the permit issuance process</td>
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<td>✅ ERPs are reviewed for content.</td>
<td>✅ NOTE: This is under review.</td>
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### ...OTHER REQUIREMENTS...

- Required elements for new projects seeking State funding under the New Jersey Environmental Infrastructure Finance Program (NJEIFP)
  - Wastewater - Require a certification that one is in place
  - Drinking Water - Managerial Evaluation (TMF) of a DWSRF project may include the requirement for a water system to have a ERP
| ERP CONTENTS |
|--------------|-------------------------------------------------|
| Emergency Response Team Members | Equipment and Supplies |
| Command structure | Inventory |
| Roles & responsibilities | Suppliers |
| Contact information | Repairers |
| Communication Plan | Include/reference |
| Internal | Operations and Maintenance Plan |
| External | Include Maps and Drawings of facilities, processes, units |

<table>
<thead>
<tr>
<th>ERP CONTENTS CONTINUED...</th>
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<tr>
<td>Vulnerability Assessment</td>
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<tr>
<td>Incident Specific Emergency Action Procedures</td>
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<tr>
<td>Procedure for Damage Assessments</td>
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<tr>
<td>Public Notification / Press Releases</td>
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<td>Procedure for evaluation</td>
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WATER SYSTEM ERP COMPONENTS

- Interdependencies
  - Contact information
  - Prioritization/contingency measures
  - Contract limitations/practical limitations

- Auxiliary Power
  - Primary components
  - Fuel?

- Public Notices
  - Templates
  - Distribution methods

WASTEWATER ERP COMPONENTS

  - Detailed description of each major treatment unit/process with relationship to related units
  - Safe operating procedure for normal operation
  - Common operating problems
  - Safe operating procedures during emergency conditions
  - Any fail-safe features
VULNERABILITY ASSESSMENT

- Industry standards: VSAT, WHEAT
- Looks at all possible hazards:
  - Natural disaster (Hurricanes, Earthquakes, HABs)
  - Civil disorder
  - Criminal/Terroristic action
  - Accidents
- Evaluates possible adverse effects on public health and the environment from that hazard
- Assists in development of Emergency Operations Plans (EAPs) that address each of the hazards identified in the VA

ERP GUIDANCE

- Emergency Response Preparedness/Planning Guidance and Best Practices

- Drinking Water:

- Waste Water:
Available from both Water Supply’s and Water Quality’s webpages

Auxiliary Power Guidance and Best Practices
- The continued flow of power to the primary components is essential
- Must be an integral part of the system.
- Must be able to maintain operations regardless of the duration of the power failure

Infrastructure Flood Protection Guidance and Best Practices
- Critical Infrastructure must be sufficiently protected to remain operational during floods, storm surges, and for long-term viability despite potentially increasing base flood elevations.
- The Guidance identifies:
  - Minimum design requirements for which Federal and/or State funding is provided
  - Clarifies existing State regulations governing recovery or mitigation activities located in floodplains
  - Encourages measures (best practices) to enhance flood resiliency for both existing and new facilities.
**FOOD FOR THOUGHT**

- You need to sample – do you have a plan?
- Your source is unavailable and your only interconnection is with another impacted system...what do you do?
- Discharge is going into water body – how do you alert public/partners?
- You need to call for water conservation – do you have a contact with the local water supplier?

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*We don’t expect you to have perfect solutions for everything.*

*We expect you to acknowledge that and work towards a solution.*
Meet with your partners

NJWARN

“Utilities Helping Utilities”
- Provides a method for utilities to receive emergency aid and assistance from other water and wastewater utilities.

- The USEPA views participation as a key component in promoting a resilient infrastructure

- Mutual Aid and Assistance Agreement
  - Mutually agreed upon by participating utilities.
  - Participation is voluntary, there is no obligation to respond to a request.
  - There is no direct cost to be a member of the Network.

- For more information, visit the NJWARN website http://www.njwarn.org
KEY THOUGHTS

- Command, Communication, and Reporting chains & protocols
- Emergency Response Team
- Training
  - NIMS/ICS
  - ERP
- Cultivating cooperation with other agencies/partners

All of this should be set forth in your system’s ERP

We know we cannot underestimate the importance of emergency planning in our region, nor can we assume we'll have ample warning time. If an earthquake or terrorist attack hits, we won't necessarily have advance alerts or opportunities to double- and triple-check our plans.

Ellen Tauscher
Representative (CA 10th District) 1997–2009