Hurricane Season 2017: Lessons Learned, Future Changes and Operator Feedback

Focus on Change
2018
Overview

- 2017 Hurricane Season Overview
- Hurricane Irma landfall/post landfall impacts
- Lessons Learned
  - DEP Call Center
  - StormTracker
  - Communication
- Proposed Changes to StormTracker
- FlaWARN/FRWA Response
- Emergency Response Plan
- Operator Survey
Emergency Communication

• The community of customers we serve expects public drinking water and wastewater utilities to function and protect public health.

• Effective response and recovery operations depend upon clear, timely communications to expedite return-to-service activities.

• Communicating your facility operational status, making requests for assistance, conveying pertinent issues or consequences to your organization, customers and response partners are crucial to expediting return-to-service.
2017 Hurricane Season

• June 1 to November 30

• 17 named storms
  ▪ Ten Hurricanes
  ▪ Of the ten, six were major hurricanes

• Most active season since 2005, and the 7th most active on record, behind years 1893, 1926, 1933, 1995, 2004 and 2005
Hurricane Irma

• Hurricane Irma hit Florida Sept 10 with 130 mph winds, striking the Florida Keys and Miami, then moved up the state.

• It entered the state as a Category 4 hurricane, and left as a still-powerful tropical storm

• More than 6 million Floridians ordered to evacuate
Post Hurricane Irma

- Over half the state without power
- Approximately 85% of drinking water and wastewater facilities impacted
- 500 Boil Water Notices reported
- Approximately 600 sewer system overflows
Call Center formed after Hurricane Irma made landfall in response to overwhelming impacts to both drinking water and wastewater facilities.

The purpose of the Call Center was to respond to need requests and reach out to water and wastewater facilities who may not have the ability to update their status in StormTracker.

Partnership developed between Department of Environmental Protection (DEP), U.S. Army Corps of Engineers (USACE), Federal Emergency Management Agency (FEMA), Florida Rural Water Association (FRWA), Florida’s Water/Wastewater Agency Response Network (FlaWARN) and Environmental Protection Agency’s (EPA).
Strengths: Call Center

• Beneficial to have all parties in a centralized location for questions, coordination, and to delegate workload.

• Federal staff “folded in with the state staff” to provide a seamless, joint response.

• EPA’s regulatory/oversight role “left in Atlanta” – staff was there to assist.

• Only focus was on water and wastewater.
• StormTracker is the DEP web-based tracking and recovery management platform for drinking water and wastewater facilities.

• Developed to provide a common nexus for utilities/operators to report operational status and request recovery assistance.

• StormTracker offers four interface portals:
  ▪ Regulated water/waster facilities
  ▪ Regulatory offices and SERT liaisons
  ▪ Administrative
  ▪ View only
Lessons Learned: StormTracker

• Hard for operators to log-in and report their operational status

• Delay in status update created slower response time to facility needs

• Difficult to understand and request assistance through website for facility’s needs (e.g., generators, fuel, etc)

• Database did not provide complete picture of Florida’s drinking water and wastewater status. Historic tracking of facilities >3300 or 100,000 mgd. Data generated is reported both internally and externally for assistance

• DEP re-evaluating the facilities currently in the system
  - Include all active drinking water systems and update wastewater systems to include only priority domestic wastewater facilities
Lessons Learned: Communication

• Need for additional pre-season and pre-event guidance/training from DEP for Districts/ACHDs and Utilities.

• Improved Communication Plan between Division and District offices.

• Need to update point(s) of contact for each system, pre-season and pre-storm; should have key personnel's cell phone number and back up(s) available.

• Need to allow Districts/ACHDs to triage and prioritize; DEP Division ready to provide assistance where and when it is needed.
  ▪ Provide technical assistance to Districts and facilities when requested
  ▪ Annual call with Districts prior to hurricane season to go over newly created communication plan
Proposed Changes to StormTracker

- Create a mobile friendly view so status updates and need requests can be sent using smartphones
- Update format for entering BWN and assistance requests
- Create a way to report sewer system overflows through the system
- Link StormTracker BWN reporting to DOH’s BWN reporting
- Link StormTracker Assistance Request to FlaWARN to expedite response
- Establish a designated “Event Contact” for the facility
- Create a GIS overlay to visually see facility status, BWN, power outages
FlaWARN: Formalized system of “utilities helping utilities.”

- Secure web-based data bank of available resources
- Practical mutual aid agreement
- Fills response gap between event impact and state or federal emergency declaration
- After declaration, FlaWARN continues engagement as a SERT first response partner
- FlaWARN chairs a liaison position at the SEOC-ESF10

http://flawarn.org/
Just before Hurricane Irma hit Florida, the Florida Department of Environmental Protection and the Florida Rural Water Association (FRWA) jointly purchased a Vermeer trailer mounted vacuum excavator.

In the aftermath of Irma, we learned what a valuable piece of equipment it really was.
What Can You Do?
• Emergency Response Plan = the Keystone of Your Response!

• Update Annually
  ▪ Response protocols
  ▪ Critical asset list
  ▪ Key contacts list

• Include:
  ▪ FlaWARN
  ▪ StormTracker

• Train & Exercise
  ▪ Train key personnel
  ▪ Exercise your ERP
  ▪ Engage stakeholders in collaborative “What if” discussions
• We value input from drinking water and wastewater operators about StormTracker.

• How can DEP make it easier to report the facility’s status during an event?

• Please take the clicker in your hand and help us answer these following questions.
Have you heard of StormTracker?

1. Yes
2. No
Is StormTracker easy to use?

1. Yes
2. No
What is the number of hurricanes that you have experienced while working as an operator?

1. 1
2. <5
3. 6-10
4. > 11
During Hurricane Irma, did you have trouble updating your facility’s status?

1. Yes 50%
2. No 50%
Who updated the facility status in StormTracker?

1. Operator
2. Owner
3. Admin Staff
4. Other
If you were on a boil water notice, did you update the StormTracker website in addition to contacting the Department of Health (DOH)?

1. Yes
2. No
Information Screen For Drinking Water Facility

**FACILITY INFORMATION**

ID: 3054015  
Name: Southern Comfort Mlp  
Address: 2050 South U.S. 1  
City: Malabar  
Facility Type: Community  
Population Served: 112  
Sells To: 0  
Primary Source: Ground

**FACILITY INFORMATION**
(Click here for STATUS DEFINITIONS)

Describe Current Treatment:  
Facility Operational Status: OPERATIONAL

- Facility Operating  
- On Backup Power?  
- Do you want DEP to contact you for followup details?  
- Are all plants operational?

**PLANT STATUS OF THIS SYSTEM:**

- Total # of Plants: 1  
- Total # of Plants With Full Power:  
- Total # of Plants On Backup or Emergency Power:  
- Total # of Plants Without Power:

**BOIL WATER NOTICE**

Begin Date:  
Date Rescinded:

**FACILITY CONTACT INFORMATION**

Contact Name: JOHN WILSON  
Phone #: (321) 726 - 5993  
Phone #2: (not available)

**FRWA/FiawARN INFORMATION**

- Priority Scale Labor Needed  
- Top:  
- Medium:  
- Low:  

- Priority Scale Equipment Needed  
- Top:  
- Medium:  
- Low:  

*** Materials Needed ***

- Pipe: No  
- Fittings: No  
- Chlorine: No  
- Chain Saws: No  
- Electrical Lugs: No
Do you find the StormTracker’s operational status and definitions easy to understand?

1. Yes
2. No
Were you aware you can request assistance for your facility through the StormTracker website?

1. Yes
2. No
**FRWA/FlaWARN FACILITY ASSISTANCE INFORMATION**

<table>
<thead>
<tr>
<th>Priority Scale</th>
<th>Labor Needed</th>
<th>Equipment Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Top</strong></td>
<td>MAINTENANCE/DISTRIBUTION SYSTEM TECH</td>
<td>GENERATORS</td>
</tr>
<tr>
<td><strong>Medium</strong></td>
<td>INSTRUMENT TECH</td>
<td>-Please Select-</td>
</tr>
<tr>
<td><strong>Low</strong></td>
<td>ELECTRICIAN</td>
<td>-Please Select-</td>
</tr>
</tbody>
</table>

**Materials Needed (check all that apply)**

- Pipe
- Chlorine
- Electrical Lugs
- Fittings
- Chain Saws
Did you request assistance through the StormTracker website?

1. Yes
2. No
What was your facility’s biggest need after the storm passed?

1. Generators
2. Fuel
3. Support
4. Other
Emergency Support Staff

Kelly Fannon
Emergency Coordinator
Division of Water Resource Management
Kelly.fanon@dep.state.fl.us
850-245-8607

Katie Downey
Emergency Coordinator
Drinking Water Section
katie.downey@dep.state.fl.us
850-245-8631
Joni Synatschk, MPH, CPM
Program Administrator
Drinking Water and Aquifer Protection Program
Division of Water Resource Management
Florida Department of Environmental Protection
Bob Martinez Center, Room 572-C
Tallahassee, FL 32399-2400
Joni.Synatschk@dep.state.fl.us
(850) 245-8599