EPA Tools and Guidance for Resiliency

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The Intelligent Water Network Summit
Supporting Resiliency (Panel 3, 11:30)

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Program Design

• Risk types
  – Low probability, high consequences
  – High probability, variable consequences

• Initial focus on terrorism
  – Evolved to all-hazards
  – Natural disasters
  – Creating ‘ready’ utilities
Key Drivers

- CIPAC Water Sector Roadmap (2017)
  - Threats: Natural Disaster, Contamination, Infrastructure Degradation, Cyber Attack
- Activities and workgroups
  - PPD 21, HSPD-9
  - SRS/WLA
- Administration Priorities
  - Core Mission, Cooperative Federalism, Rule of Law
Drinking Water and Wastewater Resilience

Route to Resilience

Assess
- Conduct a risk assessment
- Learn financial and health impacts of a water disruption
- Creating Resilient Water Utilities

Plan
- Develop emergency response plans
- Build hazard resilience
- Build relationships in your community
- Connect to a lab network
- Share resources during an emergency

Train
- Access the All-Hazards Boot Camp
- Develop a training and exercise plan
- Develop and conduct tabletop exercises
- Find other training opportunities

Respond
- Response On-The-Go Tool
- Print a checklist to help you respond
- Monitor severe weather

Recover
- Find federal funding for your utility
- Access decontamination resources
- Get reimbursement tips

Learn About Water Resilience
- Water resilience basics
- Protect your local water supply
- Technical support products and services

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Risk Assessment and Reduction for Drinking Water and Wastewater Utilities

Drinking water and wastewater utilities face threats, from man-made and natural disasters to aging infrastructure. To prepare for the next emergency, you must understand your risks. Start by conducting a risk assessment to find out where your utility stands. Then use our other tools to identify impacts and adaptation strategies for your utility.

Is Your Utility At Risk?

Get Ready for Extreme Weather

How Emergencies Affect You

Manage Small System Assets

- Conduct a risk assessment
- Find out about health and economic impacts
- Learn about Creating Resilient Water Utilities
- Manage your small system assets

Related Information

- Water Resilience

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The Fall RISE of 2017!

• Hurricanes
  – Harvey (5 landfalls, Cat 4, 3, TS)
  – Irma (VI, FL & Caribbean landfalls, Cat 5, 3)
  – Maria

• Wildfires

• Cyber
  – Bowman Dam
  – Kemuri Water Company

• Other
2017 Atlantic hurricane season
Hurricane Harvey TX Counties w/ Declared Disaster 9/5/17

Legend
Federally Declared Counties in Texas
- No Designation
- A|B
- B

US EPA Region 6
FEMA - Texas Counties with Federal Disaster Declarations
Hurricane Harvey Response

7002314
Hurricane Harvey Drinking Water Status 9/5/17

Circles represent PWS of known public health risk (that are on BWN or inoperable) The remaining PWS are either operational, or pending contact/assessments needed.
Hurricane Irma

- Duration: August 30 – Sept 12
- Peak: 185 mph for 37 consecutive hours
- Only tropical storm to have winds that strong for so long.
- Strongest land falling cyclone in the Atlantic
- First time the US has had 2 landfalls of Cat 4 hurricanes in the same season
- Hit Cuba as Cat 5
Hurricane Maria
Hurricane Maria, USVI
WWTP settling tank
Hurricane Maria, non-PRASA drinking water system, PR
California Wildfires
Key Takeaways

• We can’t fight Mother Nature, but we can plan and prepare
  – Know and understand response authorities and frameworks
  – Work w/ states and WARNS
  – Don’t underestimate the resolve and goodness of people

• Technology will continue to evolve
  – Have to stay a step ahead and guard against bad actors

• Risk assessment and other tools are available
  – The Federal and state governments are resources to help empower water sector stakeholders
For More Information
Water Quality Surveillance and Response System Website
https://water.epa.gov/waterqualitysurveillance

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