NARUC
Winter Committee Meetings

Committee On Critical Infrastructure & Committee On Water
Resiliency Before, During, and After Disruptive Events

NARUC Winter Committee Meetings
February 13th 2017

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VP Operations
New Jersey American Water
Who is American Water

We are the largest publicly traded water and wastewater utility in the United States

- Broad national footprint and strong local presence & ability to leverage resources

- Services to an estimated 14 million people in more than 1,500 communities in more than 40 states and parts of Canada

- Approx. 6,600 dedicated and active employees

- Treats and delivers more than one (1) billion gallons of water daily
BEFORE
BEFORE: Risk Management / Mitigation

- Enhanced Partnerships
  - WARN Systems
  - Stakeholder & Regulator Engagement
  - Communications
  - Partnerships

- Asset Investment
  - Asset Renewal & Reinvestment
  - Enhanced Monitoring & Inspection
  - Water Storage & Interconnections
  - Safety Improvements

- Emergency Preparedness
  - Tabletop Exercises
  - Emergency Response Plans
  - Response Time Evaluations

- Resiliency Planning
  - Strategic Stock
  - Mobile Equipment
  - Source Water Awareness
  - GIS/SCADA & Models
  - Mitigation Plans
  - Capital Plans
BEFORE: Risk Management Process

1. Define Criteria of Critical Assets
2. Selection of Critical Assets in Tier 1-2
3. Critical Asset-Hazard Pairing
4. Risk Analysis (Asset Level)
5. Resiliency Analysis (System Level)
6. Solutions
   - Risk Reduction/Mitigation
   - Resiliency improvement

Selection Criteria:
- Number of customers served
- Critical Customers
- Safety concerns
- ...

Hazards:
- Floods
- Extreme
- Drought
- Sea-level Rise
- Power Outage
- Water Quality
Real Time Capturing of Asset, Customer & WQ information
BEFORE: Emerging Water Contaminants - Will Require AWARENESS & AGILITY (Utility & Regulators)

DEP ACCEPTS PLAN TO CURB TOXIC CHEMICAL IN NJ’S DRINKING WATER

DEP accepts plan to curb toxic chemical in NJ’s drinking water

Surveys have shown the presence of PFNA in New Jersey’s public water systems is much higher than the national rate.

New Jersey is on the way to implementing a tough new standard on the presence of a toxic chemical in drinking water, adopting the recommendation of a state scientific panel for the first time in more than six years.

Department of Environmental Protection Commissioner Bob Martin has accepted a proposal by the Drinking Water Quality Institute to establish a Maximum Contaminant Limit (MCL) of 0.013 parts per billion for perfluorononanoic acid (PFNA), said DEP spokesman Bob Considine, some 20 months after the panel made the recommendation.

PFNA NJDEP recommends to adopt .013 ppb

Demonstrated agility to permit, design & build in 40 Days

The Third Unregulated Contaminant Monitoring Rule (UCMR 3):
Data Summary

EPA uses the Unregulated Contaminant Monitoring Rule (UCMR) program to collect data for contaminants suspected to be present in drinking water, but that do not have health-based standards set under the Safe

FACT SHEET
PFOA & PFOS Drinking Water Health Advisories

Overview
EPA has established health advisories for PFOA and PFOS based on the agency’s assessment of the latest peer-reviewed science to provide drinking
BEFORE: Emergency Response Drills

NJAW Drills / Conducted & Scheduled 2016 & 2017

- **2016- Oct Conrail Train Derailment** – Source Water Impact & Gas release
  - Multi Agency (Conrail, State, County, Municipal OEM, Homeland, BPU, NJDEP)
  - Cascading Impact identified
  - Source of Supply - Improvement project identified

- **Cyber Attack @ WTP** – Process Control Disruption scenario
  - NJBPU Requirement: Annual Risk Assessment & workshop includes a Cyber Response Tabletop Exercise
  - Monthly : Cyber risks are reviewed by a cross functional team (Security, IT, SCADA etc)

- **Long Duration Power Failure @ 200 MGD WTP** – FUEL SUPPLY - logistics

- **System Chemical Contamination (claim of)**
  - Wide Scale Sample Collection / data management / analysis visualization
  - Customer communications

- **Wastewater Lift Station Failure** – Test bypass pumping response & service / environmental impacts

- **Critical Asset Failure** – Impacts the systems ability to meet peak demands
DURING
DURING: a Disruptive Event / Drill

- SAFETY #1
- COMMUNICATIONS - Timely & Relevant
  - Customers (R911, radio, web, tv, text social media)
  - Regulators (BPU / DEP) (establish POC’s)
  - Municipal Leaders / OEM (establish POC’s)
  - Employees

New Jersey American Water Customer Alert Map

Check Us Out at: www.NJamwater.com
Like Us at: www.facebook.com/NJamwater
Follow Us at: www.twitter.com/NJamwater
Watch Us at: www.youtube.com/NJamwater
AFTER
• Conduct After Action Reviews & Execute identified improvements
Meeting Future Resiliency Challenges

Enhanced Partnerships
- Regulatory Requirements
- Agility (Utility & regulators)
- Planning & Investment
  - Asset Hardening
  - Technology
  - People
- Preparation
  - ER Drills / AAR

Asset Investment
- SUPPORTIVE REGULATORY ENVIRONMENT
  - Effective Methodologies
  - Capital Efficiency
  - O&M Efficiency

Emergency Preparedness

Resiliency Planning
- Regulatory Requirements
- Asset Management
- Risk Management
- Resiliency Planning
- Leveraging Technology

Continuous Cycle
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Laurent Carrot

February 13, 2017
SUEZ in North America

- 3,430 employees
- 15 water utilities regulated by state utility commissions
- 7.5 million people water & wastewater served
- Revenue $1.3 billion
- 84 public-private partnerships – municipal water systems
SUEZ in New Jersey

- Serves more than 850,000 residents in over 70 towns
- 2,300 miles of mains
- 350 employees in 4 locations
Disruptive events
Super Bowl XLVIII: Seahawks vs. Broncos

- **Game-day details**
  - February 2, 2014
  - 82,529 attendees
  - Max temp: 54°F; Min temp: 28°F
  - Level 1 security event
    - May require extensive Federal interagency security and incident management preparedness

- **Pre-game planning**
  - Assure adequate and uninterrupted pressure and quality in the week leading up to the game and on game day
  - Be prepared to quickly isolate and repair main breaks
  - Monitor water quality for any potential contamination event
Pre-event planning: Key to success
Opportunities for partnership
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