



NARUC

Winter Committee Meetings

**Committee On
Critical Infrastructure
&
Committee On
Water**



**NEW JERSEY
AMERICAN WATER**

Resiliency Before, During, and After Disruptive Events

NARUC Winter Committee Meetings

February 13th 2017

Kevin Kirwan

VP Operations

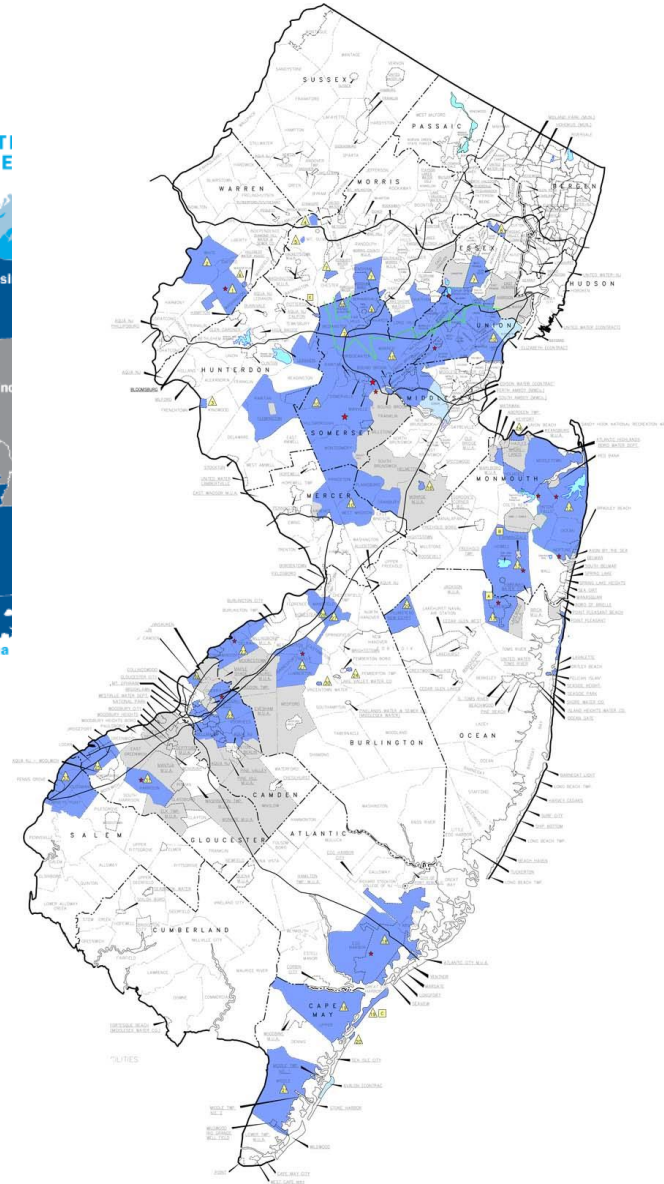
New Jersey American Water



Who is American Water

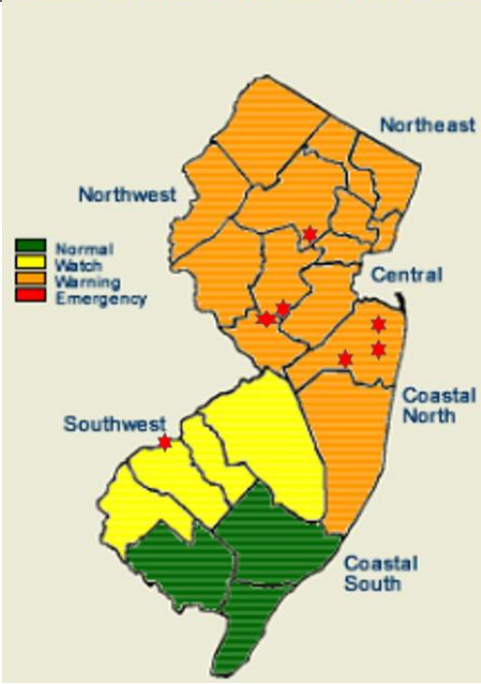
We are the largest publicly traded water and wastewater utility in the United States

- 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





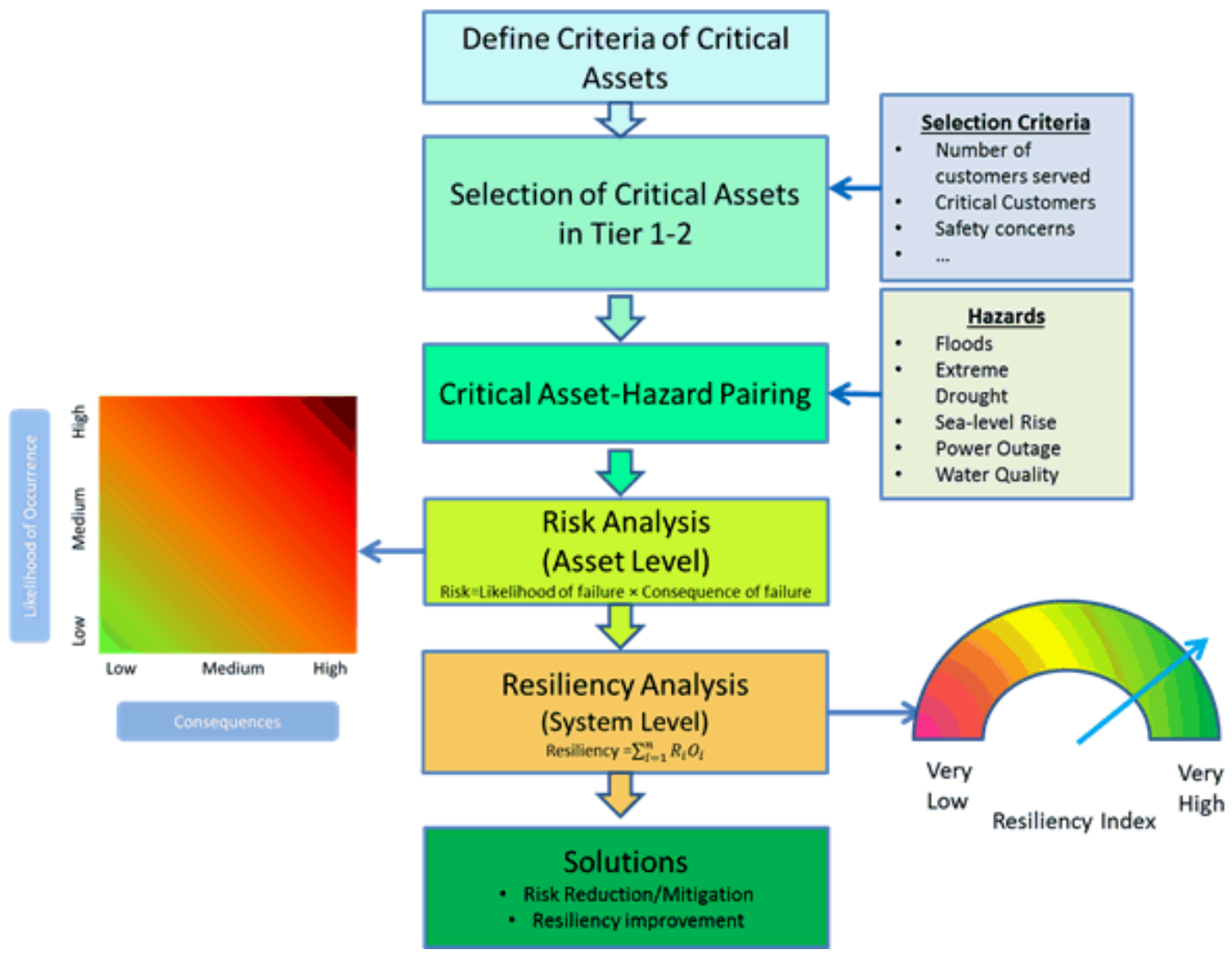
Water Supply Regions
click an area for more status information



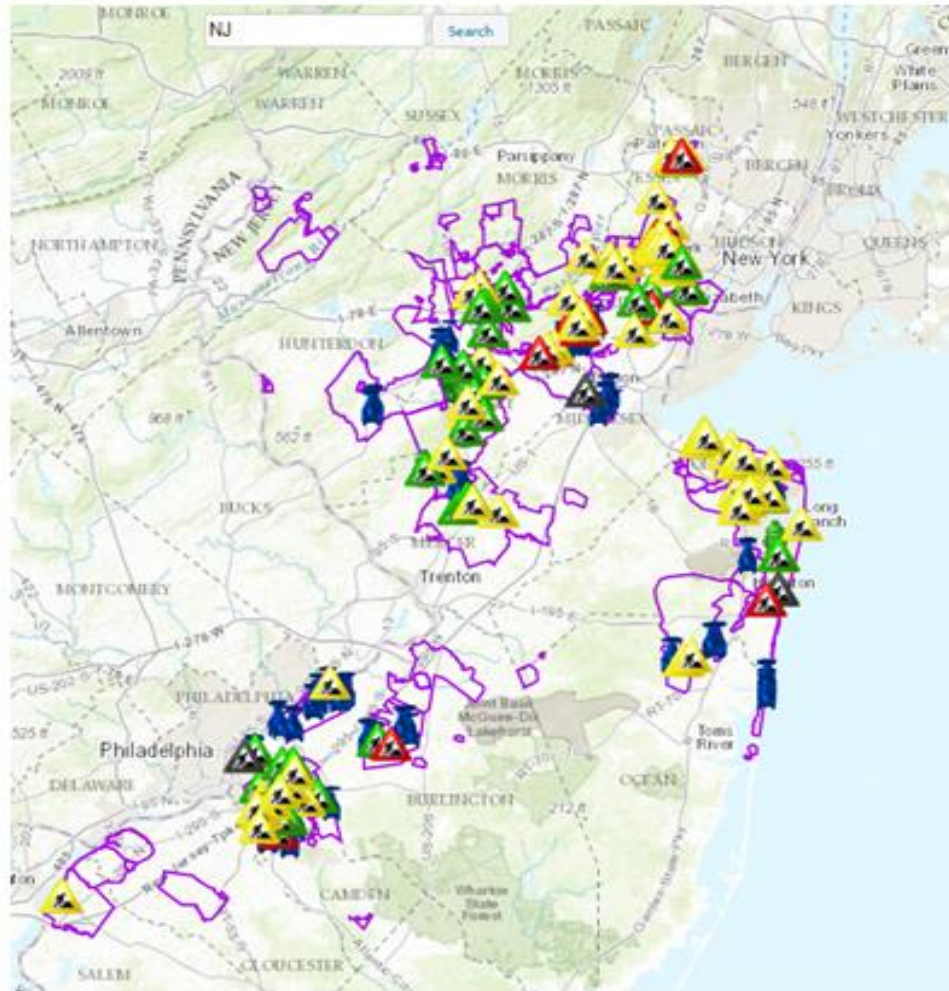
BEFORE



BEFORE: Risk Management Process



Real Time Capturing of Asset, Customer & WQ information



BEFORE: Emerging Water Contaminants - Will Require AWARENESS & AGILITY (Utility & Regulators)



September 2016

Hexavalent Chromium in Drinking Water: Regulatory Update and Treatment Options



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

JON HURDLE | JANUARY 11, 2017

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.

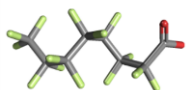
PFNA NJDEP recommends to adopt .013 ppb



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

January 2016

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



Demonstrated agility to permit, design & build in 40 Days



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 water consumers with information about potential health effects from these



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



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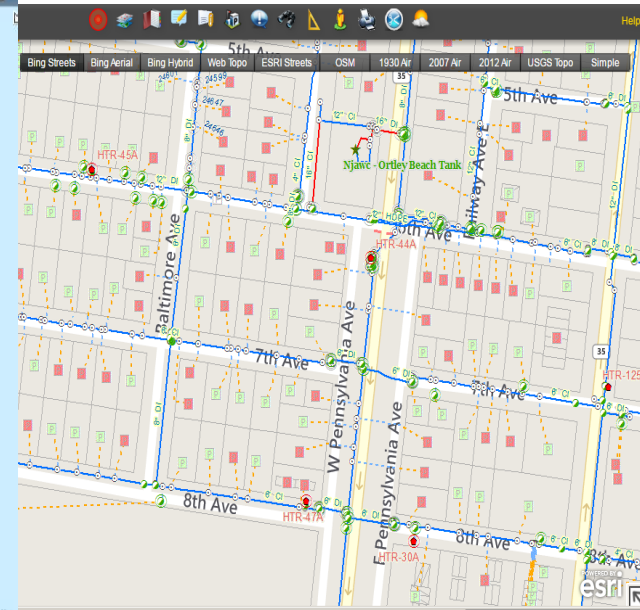
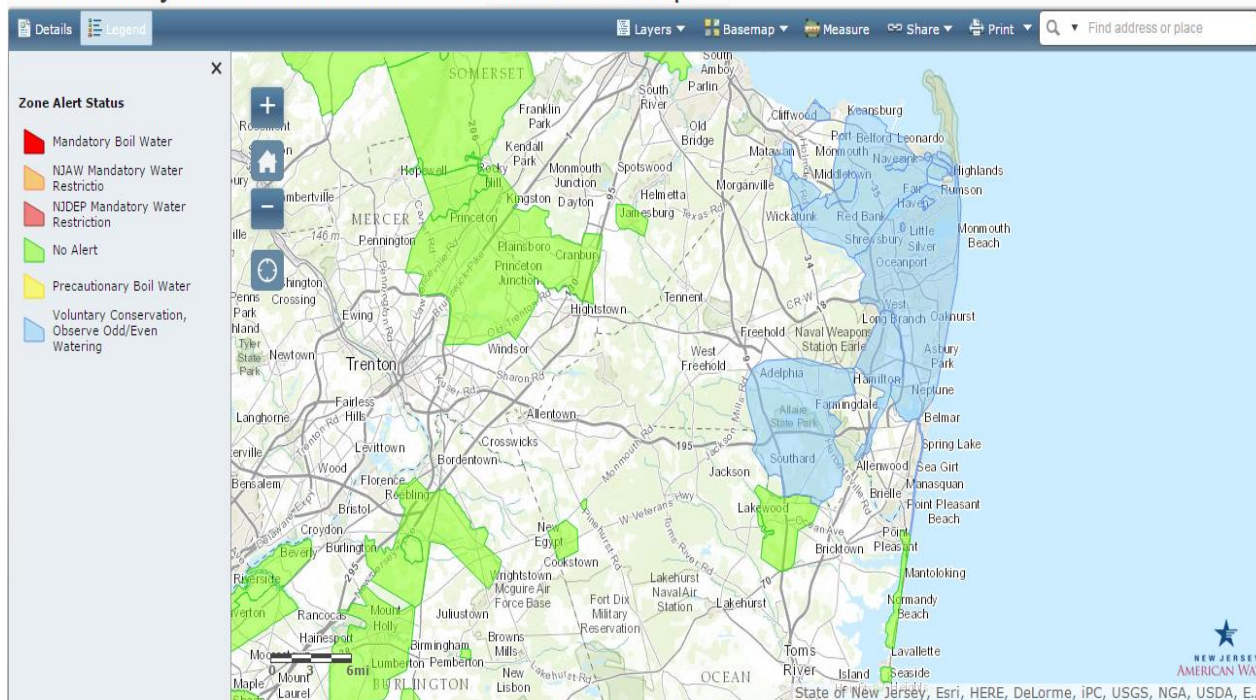


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New Jersey American Water Customer Alert Map



AFTER

- Conduct After Action Reviews & Execute identified improvements

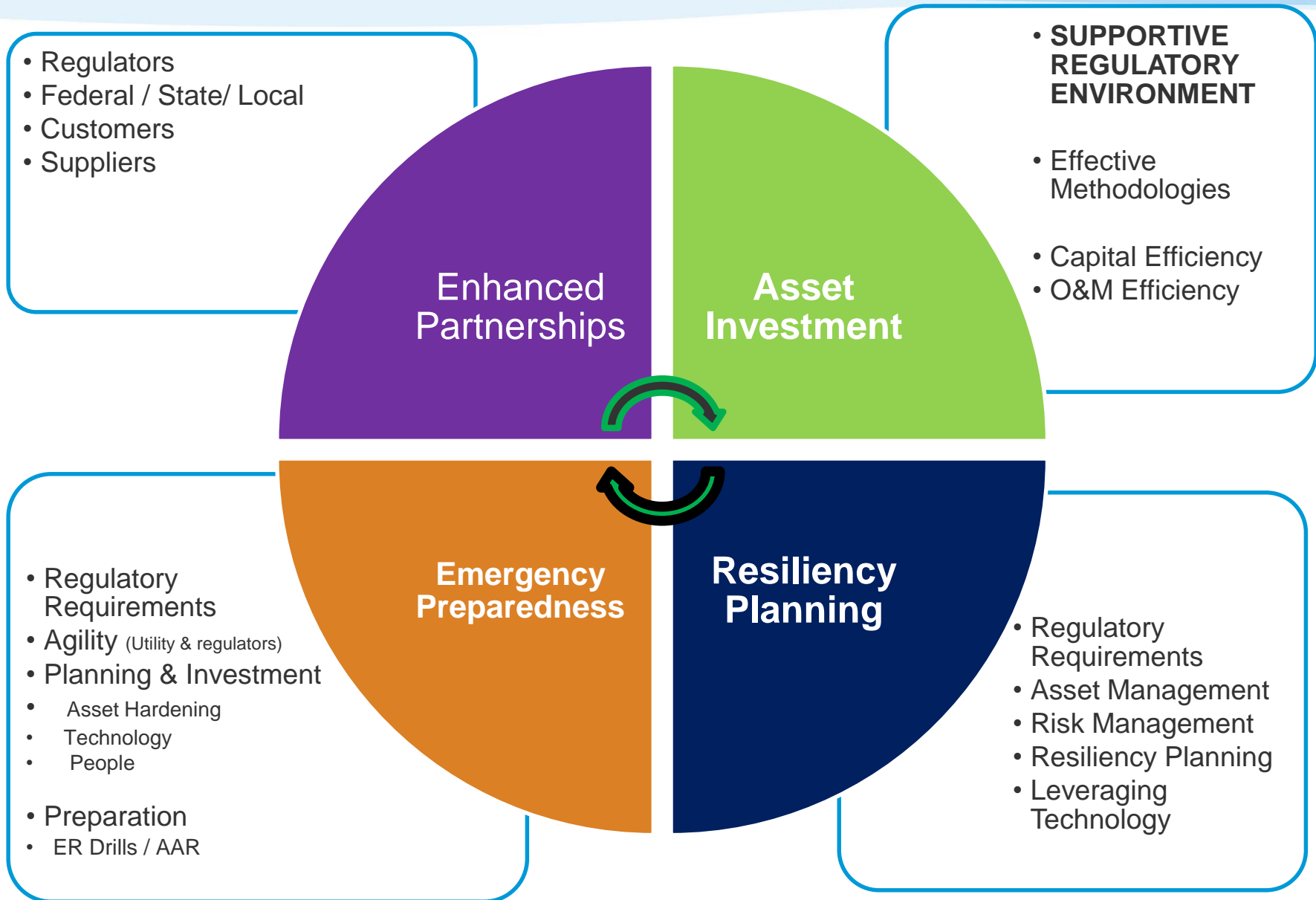
RM WTP Flood Wall



AFTER: After Action Review

(Hurricane Sandy) Best Practice GPS





Continuous Cycle



AMERICAN WATER



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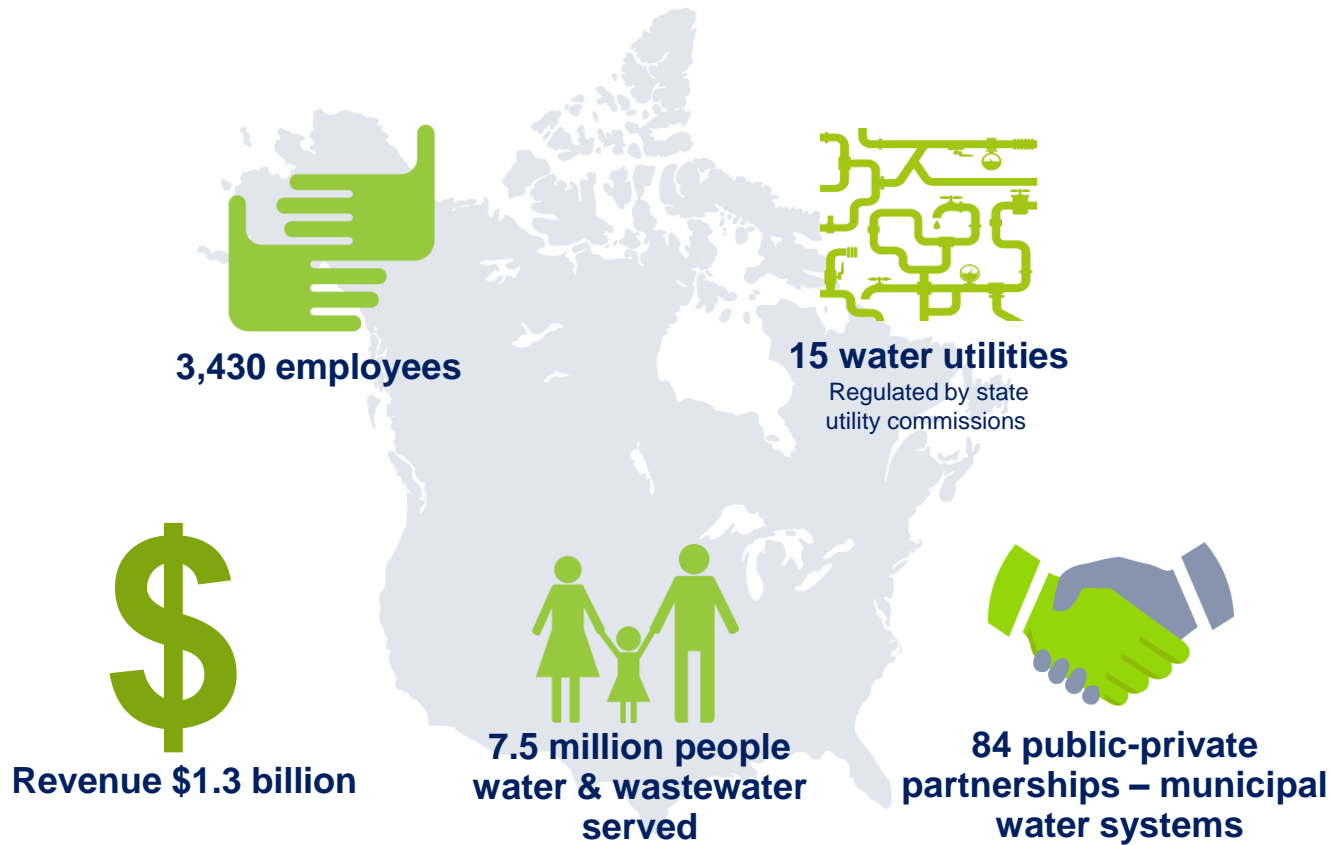
Resiliency Before, During & After Disruptive Events

Laurent Carrot

February 13, 2017

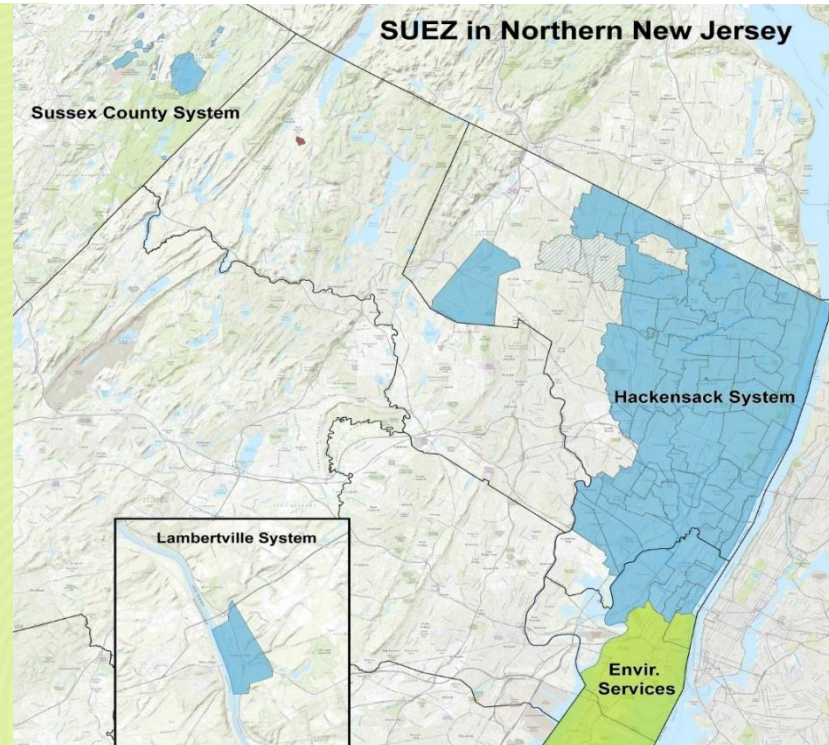


SUEZ in North America



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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