



# Irene, Alfred & Sandy: Three Storms, Two Years, One State's Experience

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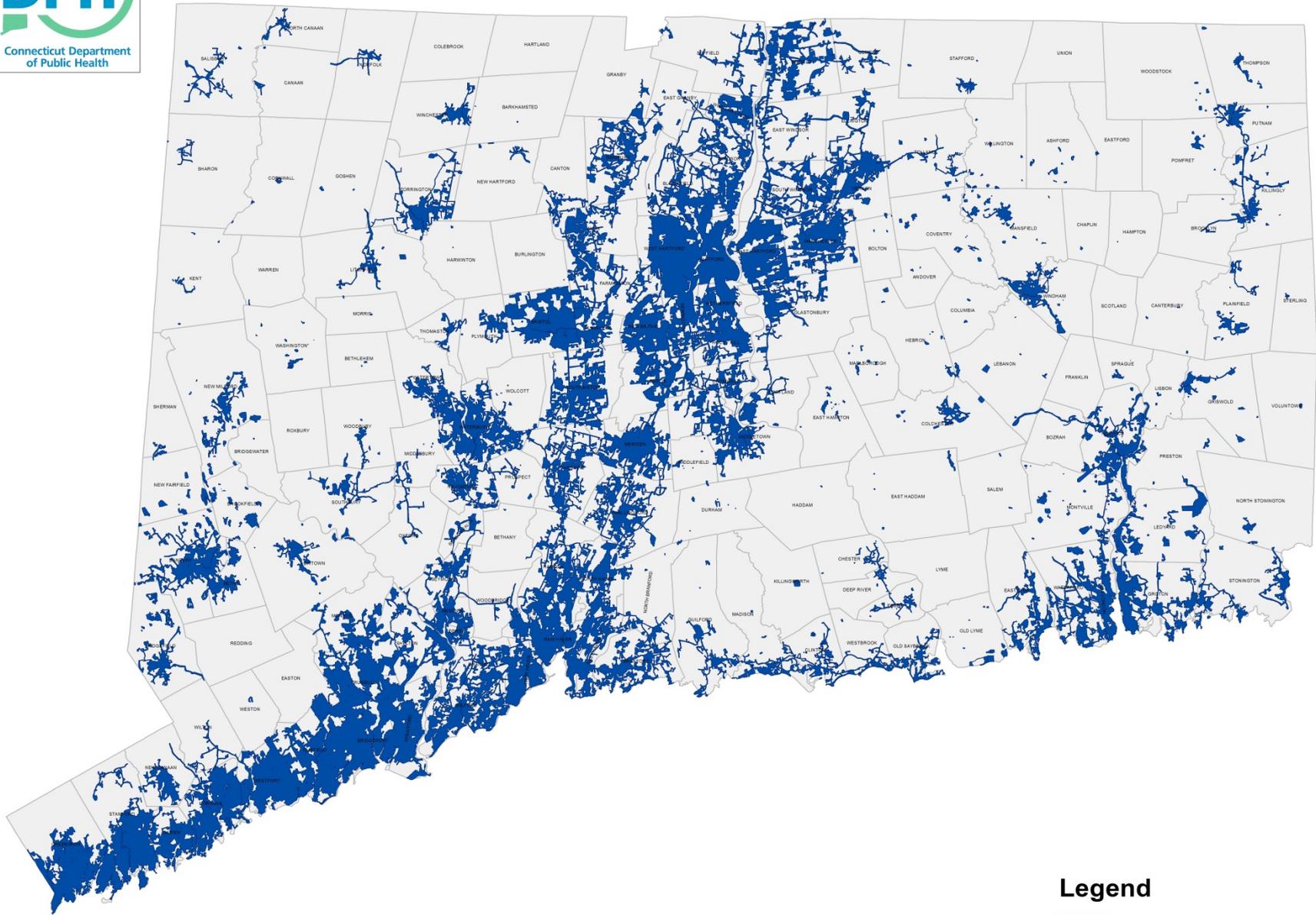


# CT DPH Drinking Water Section Responsibilities

- Regulate over 2,500 Public Water Systems
  - includes 4,400 sources of supply
  - 2.9 million CT residents served by CPWS (81% of total population)
- 547 CPWS
  - 96 systems serve over 1,000 people
  - 451 systems serve under 1,000 people (small community systems)
- 1,978 Non-Community PWS



# Public Water Supply Service Area



## Legend

 PWS Service Areas



# Emergency Preparedness CT's Public Water Systems

- Risk Communication
- Storm Effects
- Lessons Learned – After Actions
- Preparedness & Communications

# Risk Communication

- Pre-storm notices – Boil Water Advisory SOP, forecasts, other storm advisories
- Governor's Office – system status, twice per day
- Storm Response - messages
  - Press releases, phone calls, conference calls, EPA assistance
  - Web-site, emails and Everbridge
- DWS staff response – 24/7 availability
  - DPH ECC
  - State Armory SEOC

# Storm Irene: August 2011

- 137 small CPWS on Boil Water Advisory (30% of small CPWS)
- 16,624 people affected
- 99% of CT residents retained their community public water
- Majority of large CPWS on shoreline lost street power, however operations not affected due to emergency power capacity, street power restored in a few days, flooding had little effect



UNDERWAY



# Storm Alfred: October 2011

- 121 small CPWS on boil water advisory
- 20,212 people affected
- 98% of CT Residents retained their community public water
- Majority of large CPWS along and north of I-84 lost street power, however operations not affected due to emergency power capacity, street power restored slowly some large CPWS without street power for 8 to 9 days



# Storm Sandy: October 2012

- 109 small CPWS on boil water advisory
- 14,740 people affected
- >99% of CT Residents retained their community public water
- Boil Water Advisory - 36 small CPWS issued for all three storms; Most large CPWS operations not affected due to emergency power capacity
- Large shoreline CPWS – on generators for 8 to 9 days, priority street power restoration a concern







# Storm Effect Community PWS

- Community Public Water System population effected by three storms 4,766 (36 systems)
- Small systems - lack of responsiveness, difficulty with communications (weekend and office closure), lack of planning and preparedness
- Large systems – stable through storms, systems on extended generator power, lack of priority status for power restoration, communication coordination was labor intensive



# Lessons Learned

## Plan, Prevent, & Partner

Public Health Risk Reduction – Proactive Focus

- Preparedness
- Communications
- Planning

# Preparedness

## Small Community PWS

- Develop new regulations -
  - require emergency plans
  - require emergency power capacity
  - asset management planning
- Created DWSRF Focus Point - Small system generator funding – initiated 11/2011
- Develop Training program small system owners – contract with RCAP
- Public Act 14-98 - \$50 million in subsidy to drinking water infrastructure projects



# Communications

## Community PWS

- Regulatory Changes:
  - Update regs re: proper notification to the state DPH
  - Draft regs for new DPH license: Bulk Water Haulers
- Create new communication tool -WebEOC water board for system status updates
- Make sure all CPWS contact info is current
- Promote collaborative continuous training with State Emergency Managers, power companies, local health, and EMDs – include CT Section AWWA Committees and CtWARN

Region	System Name	System ID	Population	Source	Treatment	Distribution	Com	Power Issues	Water Advisory	Sig. User Impact	Physical Damage	Accessibility	Resource Staffing	Drought Status	Assistance Required	Last Update
Region 3	166 & 180 Boston Turnpike	CT0121051	31	Out	Limited	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	05/29/2014 14:15:38 <a href="#">Edit Facility</a>
Region 1	27-39 Maple Drive	CT0859071	28	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	10/29/2013 11:59:12 <a href="#">Edit Facility</a>
Region 3	300 -302 Albany Turnpike	CT0231011	28	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	10/29/2013 11:59:12 <a href="#">Edit Facility</a>
Region 5	39 Hop Brook Rd - Apt Complex	CT0189971	36	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	10/29/2013 11:59:12 <a href="#">Edit Facility</a>
Region 2	Aaron Manor Nursing & Rehab Center	CT0261001	81	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	10/29/2013 11:59:12 <a href="#">Edit Facility</a>
Region 3	Abby Water LLC	CT0670021	100	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	10/29/2013 11:59:12 <a href="#">Edit Facility</a>
Region 4	Alta Properties, LLC	CT1120041	66	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	10/29/2013 11:59:12 <a href="#">Edit Facility</a>
Region 3	Apple Valley Village	CT1310031	70	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	10/29/2013 11:59:12 <a href="#">Edit Facility</a>
Region 5	Aqua Vista Assoc, Inc - Lower System	CT0347051	128	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	10/29/2013 11:59:12 <a href="#">Edit Facility</a>
Region 5	Aqua Vista Assoc, Inc - Upper System	CT0340111	260	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	10/29/2013 11:59:12 <a href="#">Edit Facility</a>
Region 5	Aquarion Water Co - Ball Pond	CT0910011	792	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	12/03/2013 11:12:25 <a href="#">Edit Facility</a>
Region 5	Aquarion Water Co - Ball Pond	CT0189841	264	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	12/03/2013 12:47:02 <a href="#">Edit Facility</a>
Region 1	Aquarion Water Co - Ball Pond	CT0150011	341,421	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	12/03/2013 11:18:36 <a href="#">Edit Facility</a>
Region 5	Aquarion Water Co - Ball Pond	CT1189171	225	Normal	N/A	Normal	Normal	Normal	Not Necessary	No	None	Normal	Normal	Normal	None	12/03/2013 10:41:53

# Update PWS: 166 & 180 Boston Turnpike / CT0121051

Reset Form Save Spellcheck Cancel Print

[PWS Demographics](#) - [PWS Status](#)

PWS Demographics				
PWS Company	Non-Company <input type="button" value="v"/> *Required	Remove:	<input type="checkbox"/>	
PWS ID:	CT0121051 *Required	PWS Name:	166 & 180 Boston Turnpike <input type="button" value="v"/> *Required	Class: C <input type="button" value="v"/> Population: 31 <input type="button" value="v"/> Primary Source: <input type="checkbox"/>
Region:	Region 3 <input type="button" value="v"/>	Significant/Priority Users:	<div style="border: 1px solid gray; height: 40px;"></div>	
PWS Contact Name	Phone 1	Phone 2	Email Address	
Mr. Charles J. Minicucci	860-649-2871	860-798-0622		
Operator Name	Operator Phone 1	Operator Phone 2	Operator Email Address	
Victor N. Nigro Jr.	860-684-5349	860-684-4379	office@aquapump.necox	
Comments:			<div style="border: 1px solid gray; height: 40px;"></div>	

PWS Status	
Source:	Out <input type="button" value="v"/> ?
Comments:	<div style="border: 1px solid gray; height: 20px;"></div>
Treatment:	Limited <input type="button" value="v"/> ?
Comments:	<div style="border: 1px solid gray; height: 20px;"></div>
Chemical Supply/Availability Concerns:	<input type="radio"/> Yes <input type="radio"/> No
Distribution:	Normal <input type="button" value="v"/> ?
Comments:	<div style="border: 1px solid gray; height: 20px;"></div>
Pressure Concerns:	<input type="radio"/> Yes <input type="radio"/> No
Communications:	Normal <input type="button" value="v"/> ?
Comments:	<div style="border: 1px solid gray; height: 20px;"></div>
Power Issues:	Normal <input type="button" value="v"/> ?
Comments:	<div style="border: 1px solid gray; height: 20px;"></div>
Fuel Availability Concerns:	<input type="radio"/> Yes <input type="radio"/> No
Water Advisory:	Not Necessary <input type="button" value="v"/> ?
Comments:	<div style="border: 1px solid gray; height: 20px;"></div>
Advisory Start/End Dates:	Start: <input type="text"/> End: <input type="text"/>



# Planning Internal Issues

- Data Management is key!
- Sanitary Survey Focus
- Internal Communications
- Update Boil Water Advisory Template/SOP
- Organizational Response Structure
  - DWS > DPH ECC > SEOC

# Timeline

- Regulations – drafted & moving forward
- Training - continuous and ongoing
- DWSRF - Focus Point continuous for generator purchases
- Future Initiatives:
  - priority power restoration lists
  - WebEOC rollout
  - analyze policies for system sustainability, consolidation, & ownership transfer



**Thank You!**

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