



# *Reenergizing Small Community System Capacity in Connecticut*

*Connecticut Department of Public Health*

*Drinking Water Section*

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# Presentation Outline

## *Capacity – Small Systems*

- Issues
- Analyze and understand the variety of concerns
- Tools being developed
- Focus areas



# Presentation Outline

- Focus - 332 small community systems
- Storm Effect – Boil Water Advisories
- Tank Explosion – North Stonington
- Initiatives – DWSRF, Asset Management RCAP contract, Scorecard, Aging Infrastructure legislation, Emergency Plan and Generator regulations, etc

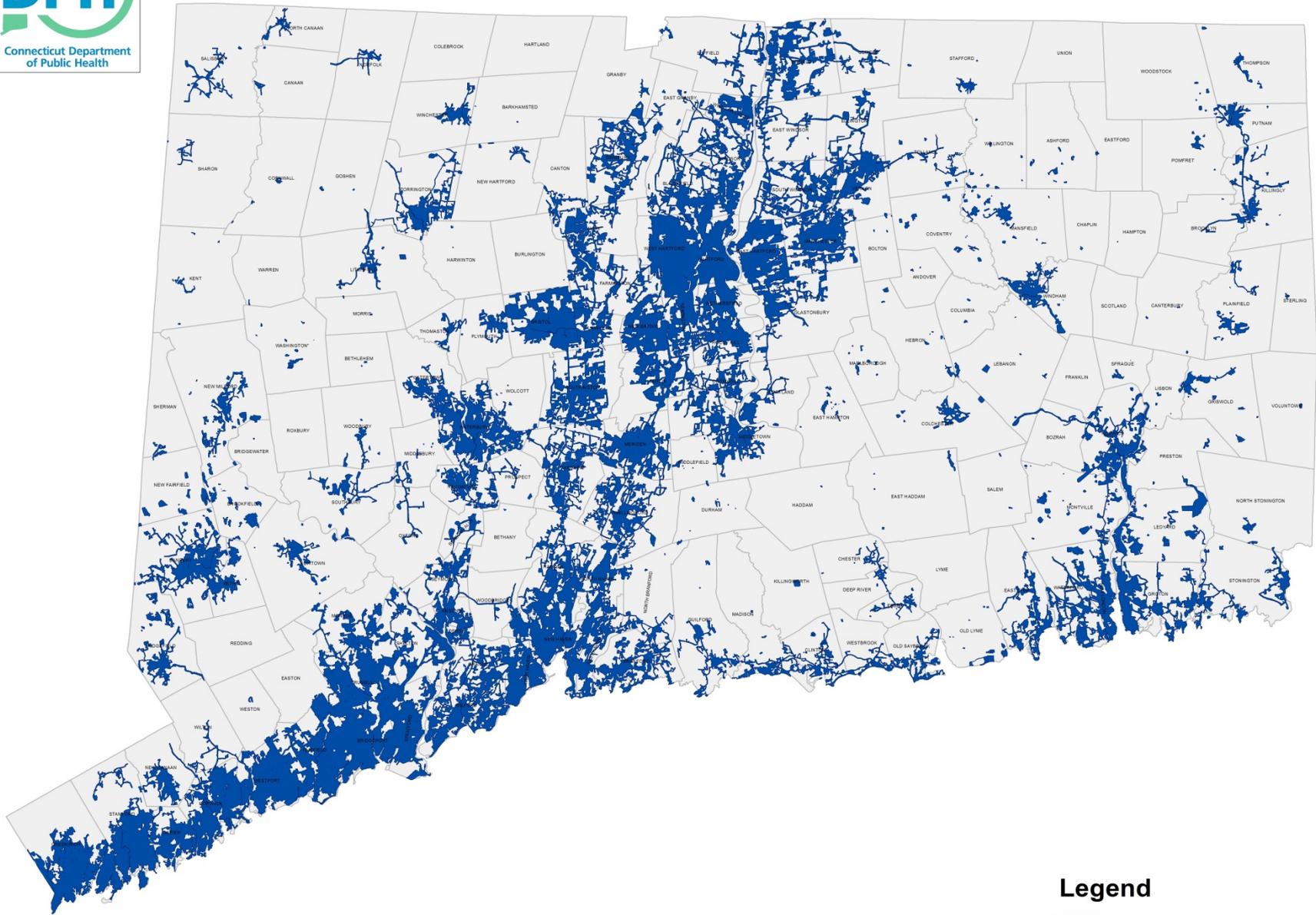


# CT DPH Drinking Water Section Responsibilities

- 50 staff regulate over 2,500 Public Water Systems with 4,400 sources
- 2.8 million CT residents served – 3.5 million total population
- 96 systems serve over 1,000 people
- 460 systems serve under 1,000 people - small community systems
- 332 small community systems
- 2,000 non-community systems



# Public Water Supply Service Area



## Legend

 PWS Service Areas

# Significant Events

## Community PWS

- Extreme Weather events of 2011 & 2012 effected hundreds of small systems –
  - lack of responsiveness
  - 100s of Boil Water Advisories
  - Impossible or difficult communications
  - lack of capacity
  - lack of planning
  - lack of preparedness
  - over 50% of small systems negatively effected
  - Legislative concerns



# Three Storm Strategy

- Assure sustained water supply for all CPWS
- Provide current and accurate large system status shared across WebEOC
- Work to develop mechanisms to prioritize restoration of street power to CPWS and priority facilities
- Assure that small community public water systems are well prepared to proactively address emergency situations
- Assure system capacity
- Assure adequate certified operator oversight
- Assure adequate review and oversight of public water systems
- Work toward more resilient CPWS through enhanced water supply planning



# Develop a Three Storm Strategy

- Focus on:
  - Training – emergency plan development
  - Regulation – emergency generators/plan & asset management
  - Funding – DWSRF Generator Program
  - Technical Assistance – TA providers, RCAP, sanitary surveys, certified operators

# Significant Events

- Multiple Systems are failing due to:
  - Poor management
  - Absentee owners
  - Lack of responsible/knowledgeable owners
  - Certified Operators not responsive or lack of direct responsible charge
  - Lack of appropriate rates/no rates
  - Lack of financial oversight
  - Volunteers left to manage water system
  - General lack of understanding

# Tank Explosion

- June 2015
- Small System in southeastern CT
- Services 2,000 people
- 50 year old 10,000 hydro-neumatic tank
- Aged and spot welded
- Never inspected
- Under Normal operating pressure









# Tank Explosion

Pump house walls and roof were totally blown off the foundation and splintered

800 pound tank cap found 200 feet in the woods

Several 200 pound valves over 200 feet away







# Tank Inspection Report Causative Factor

- The lack of an internal seal weld was a causative factor of the failure event
- The weld design was a causative factor of the failure event

# Tank Explosion

- Most Hydropneumatic tanks never inspected, no requirement
- 100s of old tanks, similar construction
- In CT requirement to inspect atmospheric tanks every 10 years



# Analyze and Understand the Variety of Issues



# Scorecard

- Collection of technical, managerial and financial information
- 332 small community systems
- Scorecard Outcome Report to be prepared to evaluate need
- Assist to refine areas of focus/tools



# Scorecard

- Financial Questions: budget, rates, by-laws, authority, asset management, full cost pricing
- Management: plans for sufficiency, unaccounted for water, operator direct recharge



# Tools Under Development



# Aging Infrastructure

- New legislative proposal
- 2016 legislative session
- Require Asset Management Plans for small community public water systems
- Focused effort to review & address Hydropneumatic tanks



# Asset Management

- RCAP Contract – 3 year initiative, start in Summer 2015
- Develop asset management plans
- Develop Financial Plans
- Hold training events



# Connecticut Public Act 14-98

- \$50 million dollars in state bond funds to assist to subsidize DWSRF loans
- Small systems 50% subsidized loan
- Larger systems 30% subsidized loan
- Not for profit
- Require asset and financial plans
- In legislation, not yet approved through State Bond Commission

# Preparedness

- Developed new regulations
- Require emergency plans and emergency power capacity
- Created DWSRF Focus Point
- Generator loans subsidized up to 45% - over 40 generators funded



# Ownership

- Update inventory database
- Small system license
- Compliance & Enforcement – water quality and survey violations



# Certified Operators

- Draft regulations – direct responsible charge
- Provide continuous focused training
- Enhance enforcement and investigation



# Regional Water Supply Planning

- Water Utility Coordinating Committee process
- Complete statewide water supply plan
- System assessment and consolidation – to use scorecard information



# Acquisition Process

- Revise and update current law
- Link to Regional Plan
- Need more timely process

# Timeline

- Aging Infrastructure Legislation – drafted & moving forward
- RCAP Training - continuous and ongoing
- DWSRF - Focus Point continuous for generator purchase & emphasize small systems
- Complete Scorecard



**Thank You**