



Monthly Meeting #16

Coordinated Water System Plan Central Region

MDC Training Center; 125 Maxim Road, Hartford, Connecticut | September 20, 2017

Agenda



1. Welcome & Roll Call (5 minutes)
2. Approval of August Meeting Minutes (5 minutes)
3. Review of Formal Correspondence (5 minutes)
4. Presentation by DPH on Revised Water Supply Planning Guidance Related to Public Act 17-211 (15 minutes)
5. Presentation by DPH on Small System Capacity (15 minutes)
6. Integrated Report Module #8 – Satellite Management/Small System Viability (20 minutes)
7. Integrated Report Module #9 – Minimum Design Standards (20 minutes)
8. Integrated Report Module #10 – Future Sources, Raw Well Water Quality, and Acquisition of Land for New Stratified Drift Wells (20 minutes)
9. Public Comment (10 minutes)
10. Other Business (5 minutes)

1. Welcome and Roll Call

- ***What Have We Accomplished?***
 - ✓ Discussed Integrated Report Modules #1 through #7
- ***What Are We Doing Today?***
 - ✓ Presentation by DPH regarding Public Act 17-211
 - ✓ Presentation by DPH regarding Small System Capacities
 - ✓ Discussion of Integrated Report Modules #8 through #10
- ***What's Next?***
 - ✓ Additional Integrated Report Topics

Topic Schedule



WSA	Stat.	Reg.	Task	Jun	Jul	Aug	Sep	Oct	Nov	Dec
			State Water Plan summary	X	X					
			Request and receive data from utilities	X	X	X				
✓			Maintenance and replacement of existing supply sources / asset management (aging infrastructure)	X	X					
✓		✓	Financial Considerations / declining revenue vs. increasing costs		X					
✓	✓		Coordination of planning (between systems, with towns, across ESA boundaries)		X					
✓		✓	Source Water Protection			X				
	✓	✓	Joint Use, Management, or Ownership of Facilities, Shared Resources			X				
✓			Lack of fire protection			X				
✓	✓		Water Conservation / Drought Planning / High volume users / Increasing peaking ratios			X				
✓	✓	✓	Satellite Management / Small System challenges and viability							
		✓	Minimum Design Standards							
✓	✓	✓	Future Sources / Raw Well Water Quality / Acquisition of land for new stratified drift wells							
✓	✓	✓	Future Interconnections and Impact (including WQ) / disjointed service areas / integration							
✓			Impacts of Climate Change							
✓			Impacts of Existing and Future Regulations							
	✓	✓	Potential Impacts on Other Use of Water Resources, including WQ, Flood Management, Recreation, Hydropower, and Aquatic Habitat Issues							
		✓	Regional Population and Service Ratio, Consumption by Demand Category, Safe Yield (Impacts of Streamflow Regulations), Excess Water							
	✓	✓	Compatibility with local, regional, and state plans							
✓			Other issues							

WUCC Time Frame



Data, Mapping & Information Needs



- 2016 raw water withdrawn and finished water distributed by month
- 2016 average day, peak day, and peak month demands
- 2016 water use by user category
- 2016 purchased and/or sold water by month
- Service area population projections for the 5-, 20-, and 50-year WUCC planning periods for each ESA
- Water demand projections for the 5-, 20-, and 50-year WUCC planning periods for each ESA and status of capital planning for such sources
- Planned water purchases for the 5-, 20-, and 50-year WUCC planning periods to serve your ESA

This information is required from each ESA holder within the region by the November 2017 WUCC Meeting.

Data, Mapping & Information Needs



- Proposed plan to serve any currently unserved areas within the ESA boundaries
- Planned interconnections and status of capital planning for such interconnections
- Anticipated impacts (if any) from the streamflow regulations
- List of any joint use/jointly managed or jointly-owned services, equipment, and facilities or the willingness to participate in such arrangements
- Plans for satellite management systems
- Information on how future regulations may impact the utility

This information is required from each ESA holder within the region by the November 2017 WUCC Meeting.

2. Approval of Meeting Minutes

3. Formal Correspondence

Formal Correspondence



Date	From	To	Main Topic(s)
8/16/17	DPH Drinking Water Section	WUCC Co-Chair	CPCN Application Review for New NTNC Water System to serve TTM Technologies – Stafford Springs, CT
8/21/17	Reynolds Engineering Services	WUCC Secretary	Potential NTNC Water System to Serve 6,000 square feet Office Building – Bolton, CT

4. Presentation by DPH – PA 17-211



FREEDOM OF INFORMATION ACT PUBLIC ACT 17-211

Central Water Utility Coordinating Committee
Linda Ferraro
Public Health Services Manager

PUBLIC ACT 17-211

Effective July 1, 2017 - Public Act Number 17-211 makes the following changes to current Freedom of Information Act (FOIA) law:

- Amends § 1-210(b)(19), which is the FOIA section that states which records a public agency may withhold from disclosure when there are reasonable grounds to believe disclosure may result in a security risk
 - The requirements in § 1-210(b)(19) regarding “water company records” have been deleted
- Under new law, all FOIA requirements regarding “water company records” are now found in § 25-32d.

PUBLIC ACT 17-211

- Amends § 1-210(d), by removing the requirements that:
 - State agencies notify Commissioner of DAS when it receives a request for “water company records”,
 - State agencies notify the water company when it receives a request for that “water company records”,
 - that Commissioner of DAS consult with the water company to which the “water company records” relate when determining if a security risk exists
 - that Commissioner of DAS make the determination regarding whether there are reasonable grounds to believe disclosure of a “water company record or records” may result in a security risk.
- Amends § 25-32d, by adding a provision [§ 25-32d (d)]
 - requiring water companies, when **submitting a water supply plan**, or a revision to a water supply plan, to Commissioner of DPH, to also submit a **copy of the plan that is redacted in accordance with the section’s provisions on confidential records**

PUBLIC ACT 17-211

- Under the new law, there is a list in § 25-32d of the records that a public agency must keep confidential. The list includes, but is not limited to:
 - cybersecurity plans, emergency contingency plans, information and communications systems, vulnerability assessments, operational and design specifications of water and sewage treatment facility security systems or risk management plans,
 - Emergency contingency plans and emergency preparedness plans; except drought management and response plans shall be subject to disclosure,
 - Design drawings or maps identifying specific locations, detailed schematics and construction details of wells, source water intakes, water mains, tunnels, storage facilities, water and sewage treatment facilities or pump stations; **provided information regarding general location of water mains, wells and interconnections shall be subject to disclosure,**
 - Dam specifications or dam safety documents,
 - Building floor or structural plans, specifications of structural elements or building security systems or codes;

PUBLIC ACT 17-211

- Under the new law, there is a list in § 25-32d of the records that a public agency must keep confidential. The list includes, but is not limited to (con't):
 - Detailed network topology maps,
 - Distribution system hydraulic models,
 - Specific locations of or specifications regarding electrical power, standby generators or fuel systems for water system facilities, except that **general information** regarding these may be disclosed
 - Operational specifications, schematics and procedures of water and sewage treatment plant processes and associated equipment and chemicals, including, but not limited to, facility use of chlorine gas storage and delivery and the location of chemicals, except that a **general description** of any such treatment plant may be disclosed.

PUBLIC ACT 17-211

- In addition to those records on the list, a public agency is required to keep confidential any other “water company record” if the public agency determines there are reasonable grounds to believe that disclosure may result in a safety risk. No longer requires DWS/DPH to consult with DAS
- “Reasonable Grounds”
 - DAS historic determinations guide DPH FOIA responses - <http://www.ct.gov/dph/cwp/view.asp?a=3139&pm=1&Q=586148>
 - No way to enumerate all issues
 - Further discussion needed

5. Presentation by DPH on Small Systems



Water Supply Planning/DWSRF: Small System Challenges and Viability

Eric McPhee

Supervising Environmental Analyst

Source Assessment/Protection Unit

CTDPH-Drinking Water Section

WUCC Water Supply Assessments

7.3 Interconnections

Development of New Interconnections – New interconnections may be desired where not already present. This can help address water supply imbalances and increase redundancies that are desirable during water supply emergencies or droughts. For example, Heritage Village Water Company is not interconnected with any potential suppliers to the north, west, or south; and Aquarion may benefit from additional interconnections between its separate systems. Some interconnections in Table 2-10 will

7.4 Small Water Systems

Challenges of Operating Small Systems – Many municipalities and privately owned public water utilities, such as Aquarion Water Company and others, own and operate numerous small systems. Operational requirements such as regulatory permitting, technical assessment, system maintenance, infrastructure replacement, and water supply need require a disproportionate amount of time and money compared to the operation of a larger system. In particular, the lack of proper planning and/or asset management planning for many small CWSs (particularly a lack of knowledge regarding the full cost of providing a safe and reliable supply of drinking water) has resulted in systems with limited financial capacity to address public health code issues.

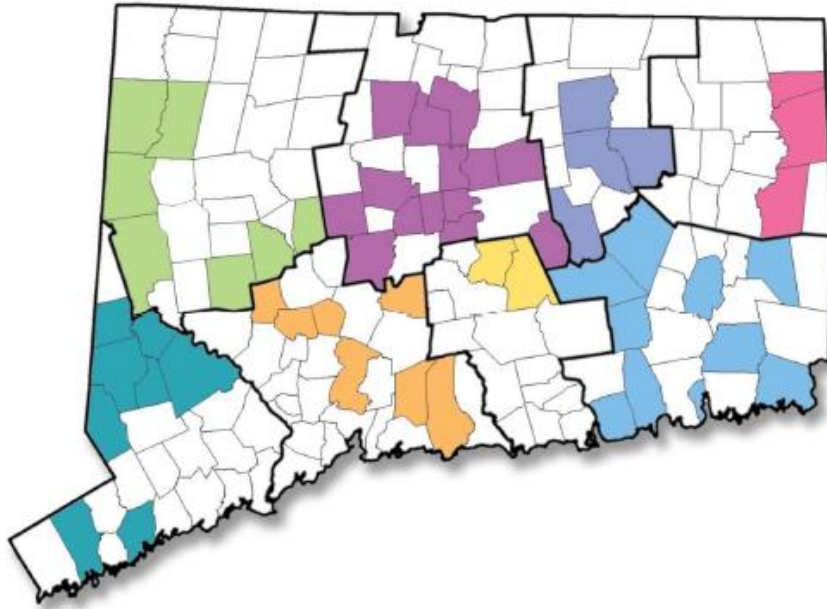
Viability of Small Water Systems – The large number of small public water systems in the region is not viewed as an issue per se. However, the viability of these systems is an issue of concern, particularly in areas where the density of small systems is moderate to high such as Brookfield, parts of Danbury, northern Bethel, and eastern New Fairfield. Additionally, the operation of small water systems immediately adjacent to larger systems can result in a disparity of the cost of water among populations in close proximity, especially when small systems fail to fully fund their water system operations. The cost of interconnecting small systems can be prohibitive or at the very least a disincentive. More fully



DWSRF Program

- The Drinking Water State Revolving Fund (DWSRF) program provides long-term below market rate loans to community and non-profit, non-community public water systems (PWSs) to finance infrastructure improvement projects. Examples include storage tanks, treatment works, and water mains.
- Loans have interest rates at approximately half the market rate and repayment terms can be up to 20 years.
- Certain projects may qualify for Federal or State subsidization as detailed annually in the IUP.
- The program supports and recognizes strong infrastructure sustainability programs that emphasize prevention as a tool for ensuring long term safe and affordable drinking water to Connecticut's residents.
- The program also places an emphasis on providing loans to small water systems and communities most in need. PWSs which serve fewer than 10,000 persons are strongly encouraged to apply.

COMMUNITIES ACROSS THE ENTIRE STATE OBTAINED PROJECT FUNDING OF MORE THAN \$259 MILLION THROUGH THE CONNECTICUT DRINKING WATER STATE REVOLVING FUND SINCE PROGRAM'S INCEPTION



Fairfield County: Bethel, *Brookfield*, Danbury, New Fairfield, *Newtown*, *Norwalk*, Ridgefield, Stamford

Hartford County: *Bristol*, Bloomfield, Enfield (Hazardville Water Company), Farmington, *Manchester*, *Marlborough*, *Metropolitan District Commission (MDC)* (includes Hartford, Bloomfield, Windsor, Rocky Hill, East Hartford, Newington, Wethersfield, West Hartford), *New Britain*, Simsbury, *Southington*

Litchfield County: Cornwall, Kent, *New Milford*, Plymouth, Salisbury, *Sharon*, *Watertown*, *Woodlake Tax District (Woodbury)*, *Woodbury*

Middlesex County: Cromwell Fire District, East Hampton, *Portland*

New Haven County: Guilford, *Meriden*, Middlebury, Naugatuck, North Branford, Prospect, South Central CT Regional Water Authority (RWA) (includes Hamden, North Branford), Waterbury

New London County: Colchester, *East Lyme*, *Griswold*, Lebanon, *Ledyard*, New London, *Norwich*, Old Lyme, Salem, Stonington

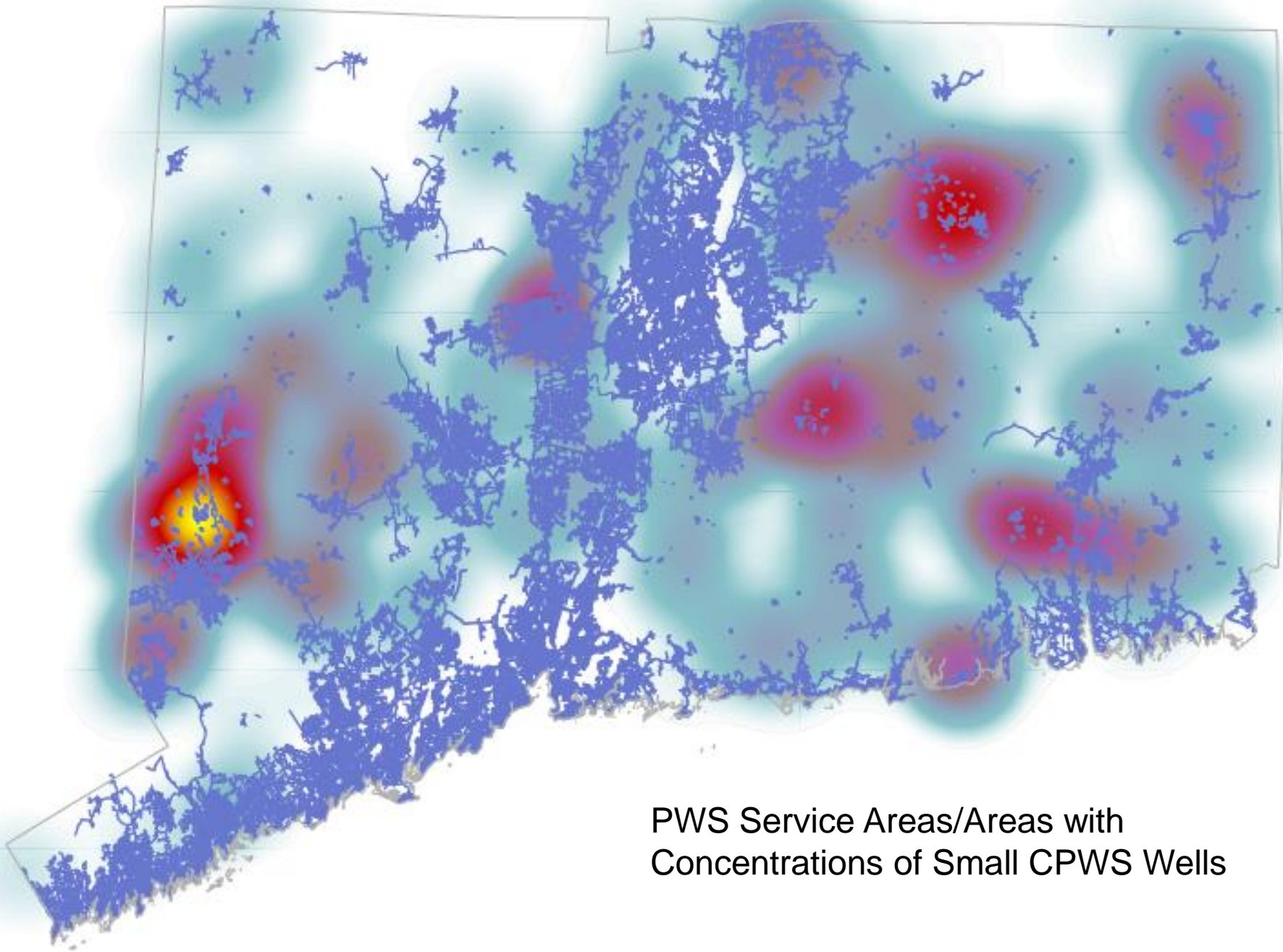
Tolland County: *Coventry*, *Hebron*, *Mansfield*, *Tolland*, *Willington*

Windham County: *Killingly*, Plainfield, Putnam

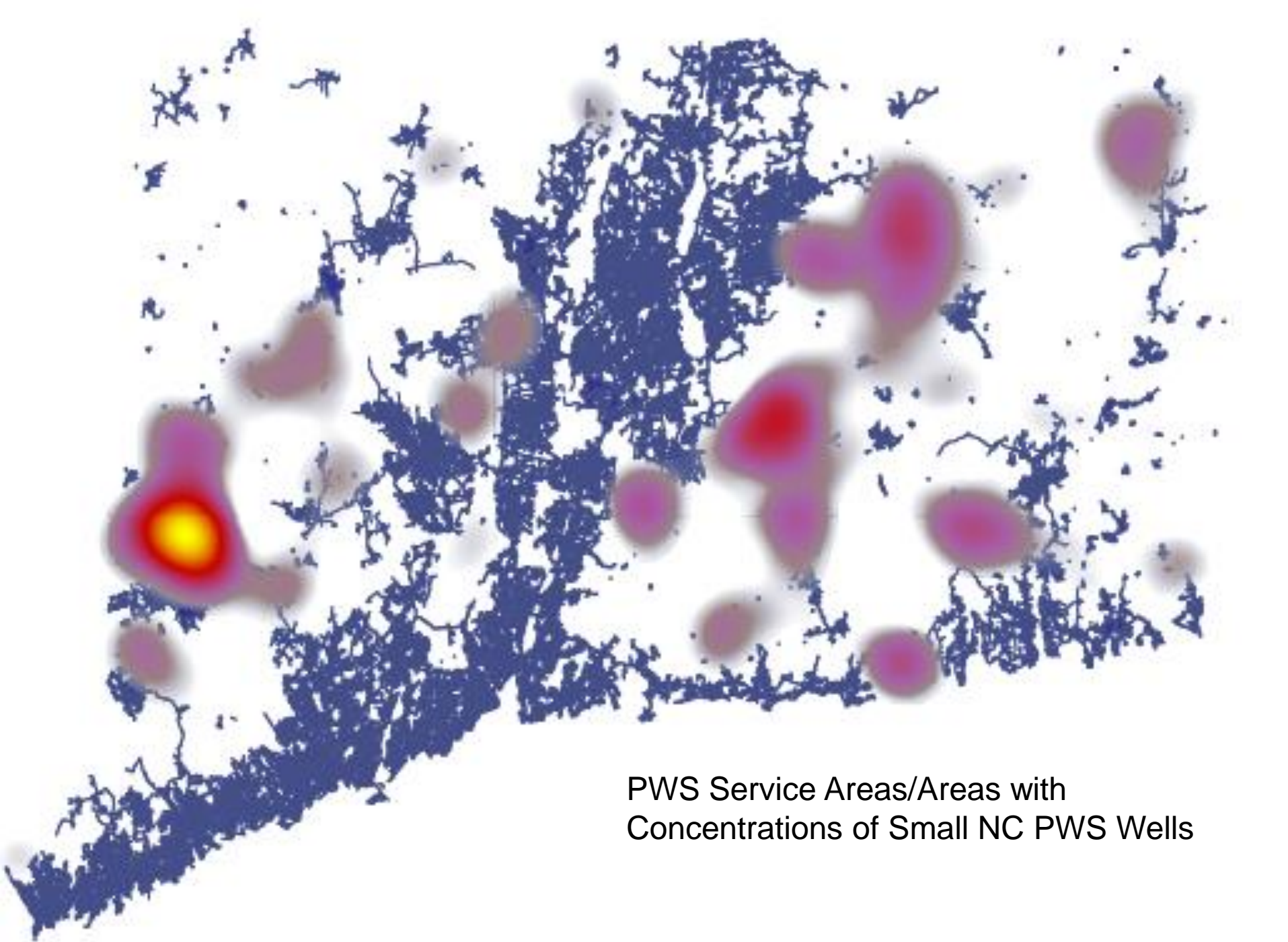
Bold and italic Towns received multiple loans

Can the DWSRF Program assist?

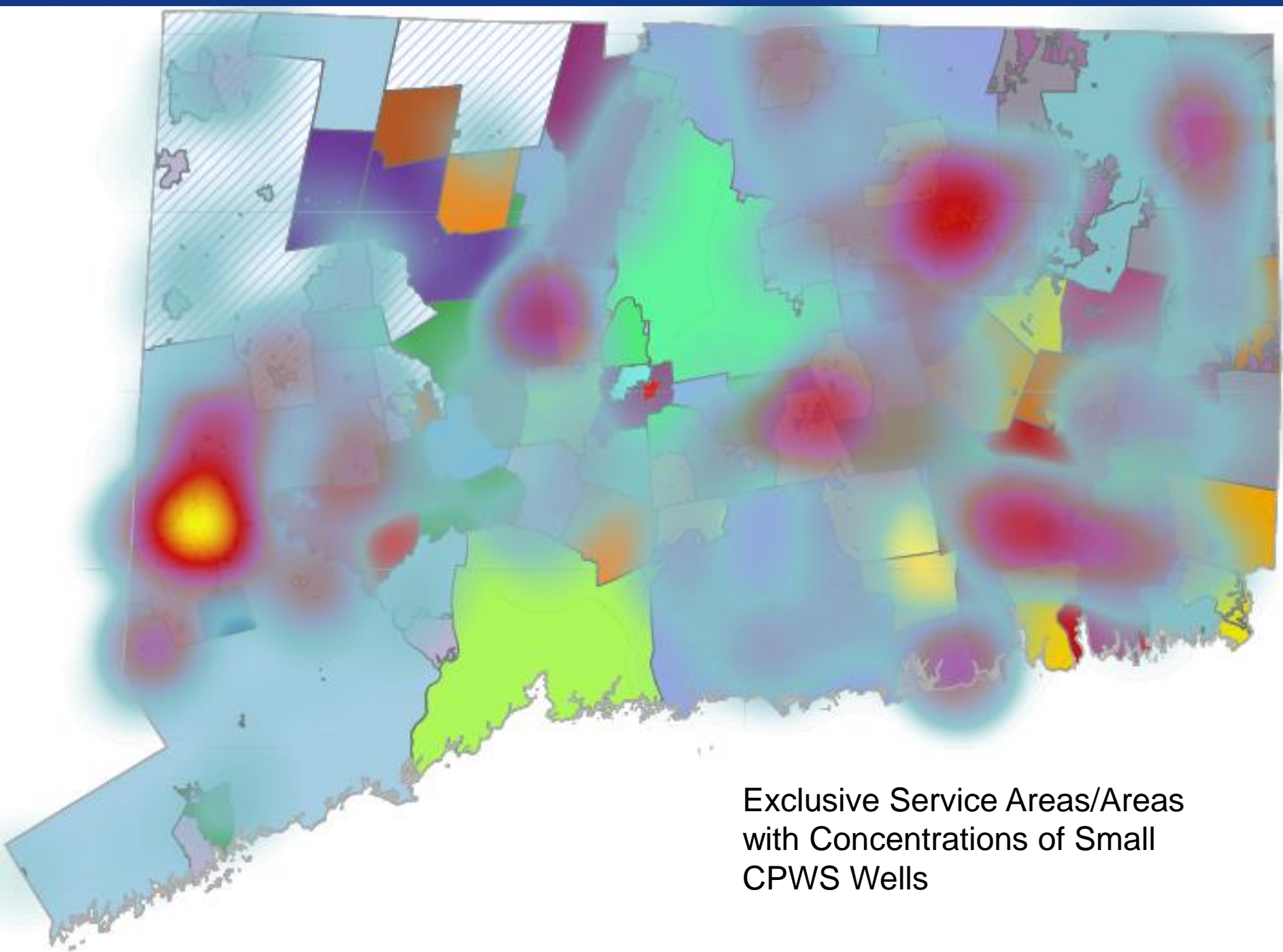
- Small systems are encouraged to apply
- Can fund interconnections (redundancy/resilience)



PWS Service Areas/Areas with Concentrations of Small CPWS Wells



PWS Service Areas/Areas with
Concentrations of Small NC PWS Wells



Exclusive Service Areas/Areas with Concentrations of Small CPWS Wells

Moving Forward

- Resiliency, Reliability
- Can DWSRF encourage regionalization and offer opportunities for small systems to interconnect?
- Opportunity: Link Integrated Reports, CIRCA Resiliency Study, State Water Plan with ESAs and WUCC Planning
- Bring small systems to the table (separate meeting?)

6. Integrated Report Module #8

Situation

- Approximately 165 small community water systems are located in the Central region
- Many are satellite systems owned by one of the larger utilities and therefore do not lack resources; these are included in water supply plans
- Many other small systems are not owned by larger utilities and are not subject to water supply planning
- The Integrated Report must list and describe water utilities that are willing to acquire or operate small or satellite systems, and list the small systems that are willing to be acquired or operated by others

***Coordinated
Water System
Plan
regulations
require a
“plan for
satellite
management
or transfer of
ownership”
25-33h-1(d)(C)(vi)***

Module #8 - Satellite & Small Systems



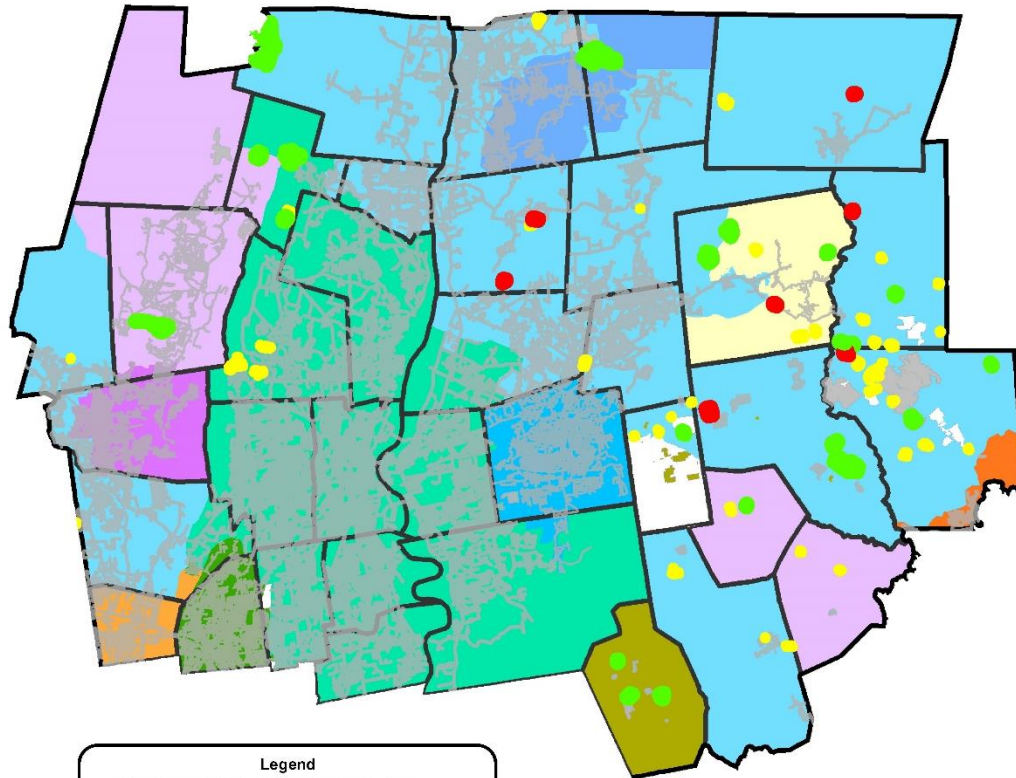
Challenges

- Operating Existing Small Systems
 - Permitting, technical assessment, system maintenance and repair, infrastructure replacement, and water supply require a disproportionate amount of resources compared to the operation of a large system
 - Lack of knowledge regarding full cost of providing a safe and reliable supply of drinking water has resulted in systems with limited capacity to address problems

Capacity	# of CWSs
High Risk (Technical Score 0-39)	10
Moderate Risk (Technical Score 40-69)	65
Low Risk (Technical Score 70-100)	54
Total	129

Recall that score cards were reviewed in October 2016

Module #8 - Satellite & Small Systems



Central WUCC
Northern Towns



Module #8 - Satellite & Small Systems

Central WUCC
Southern Towns



Module #8 - Satellite & Small Systems



Possible Solutions for Faltering Small Systems

- Technical
 - Development of interconnections where feasible
 - Encouraging flow of information from small system operators to DPH
- Managerial
 - Additional training on small system ownership, held at times convenient for small water system owners
 - Requiring new C systems to consolidate similar to NCs when water main becomes available
 - Improvements to the takeover process
- Financial
 - Development of a grant program to pay for small system consolidation, or other method to recoup expense
 - Additional training on determining the full cost of service, held at times convenient for small water system owners
 - Make it easier for small systems to access DWSRF

Module #8 - Satellite & Small Systems



Module #8 Questions

1. Describe the challenges for owning and operating a small water system.
2. Have you ever taken over or assimilated a small system? If so, describe any lessons learned.
3. Do you operate any community water systems that you do not own? If so, describe any lessons learned.
4. Do you plan to purchase other small water systems to own and operate? Describe why you are interested (or not) in operating small water systems.
5. Do you utilize a contract operator to operate all or portions of your system? If so, describe the biggest challenges to working with contract operators. If not, describe why you do not utilize a contract operator.

Module #8 Discussion



7. Integrated Report Module #9

Module #9 – Minimum Design Standards



Situation

- Minimum design standards are set forth in RCSA 19-13-B-102 for system components and RCSA 16-262m for new community water systems, among others
- Many water systems have established additional design standards that require certain types of piping or equipment to be utilized for main extensions and service connections (e.g. to ensure consistency with the existing system)
- Large water systems that operate satellite systems typically have additional design standards related to new community water systems
- The former Southeastern WUCC outlined recommendations for exceeding the minimum state standards, but left imposition of the provisions to individual utilities

Coordinated Water System Plan regulations require “provisions for minimum design standards applicable to all water system improvements and all new PWS” RCSA 25-33h-1(d)(C)(vii)

Module #9 – Minimum Design Standards



Challenges

- Although the WUCC is charged with generating provisions for minimum design standards, its charge is largely advisory and not regulatory.
- System age, components, construction, and manufacturers vary between systems.
- Developers need to understand all requirements upfront prior to starting CPCN process; entertaining new requirements in the middle of a costly process is undesired.
- Expansion of a small system adding two or three customers (5% expansion) could trigger the need for a CPCN, which could lead to different design standards applied within an existing system.

Module #9 – Minimum Design Standards



Possible Solutions

- Continue to recommend standards but leave at discretion of utilities
- Provide for a streamlined regulatory review for small systems (15 - 250 customers) needing to expand under the CPCN
- Ensure utility design standards are incorporated into any agreement for services or screening response related to the CPCN

Module #9 – Minimum Design Standards



Module #9 Questions

1. Does your system have minimum design standards that are unique from the state design standards? If so, in what ways do they differ (what utility requirements exceed the state requirements)? What design standard is believed to be the most critical for your utility?
2. How are your minimum design standards communicated to developers, contractors, and customers within your exclusive service area?
3. Do you have specific recommendations for improving minimum design standards related to safe yield, source protection, water quality, fire protection, treatment, or distribution system components? If so, what was the rationale for developing these minimum design standards?

Module #9 Discussion



8. Integrated Report Module #10

Module #10 – Future Sources, etc.



Situation

- Water utilities must plan ahead to ensure sufficient supply is available over short (5-year), medium (20-year), and long term (50-year) planning horizons
- Water utilities face significant uncertainty regarding the timing of future water need
- Development of new sources of supply can take several years and be very costly
- Implementation of releases in accordance with the Streamflow Standards and Regulations may accelerate the need to enhance the yield of existing supplies or to develop new supplies
- In many cases, limited land is currently controlled by utilities for new source development

***Coordinated
Water System
Plan regulations
require
“evaluation...of
alternative
water sources
recommended to
supply future
areawide water
system needs”
RCSA 25-33h-1(d)(C)(iii)***

Module #10 – Future Sources, etc.



Challenges

- New source development is costly
- Public water supply is one of many competing needs within a flow regime
- Permitting restrictions may reduce a project's cost-effectiveness, but the exact magnitude of the restrictions are difficult to predict before the source is developed
- Many available sites that could be viable in terms of quantity are coincident with areas that are – or may be – degraded in terms of quality
- Several different ways to predict future needs

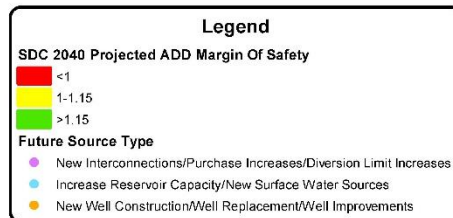
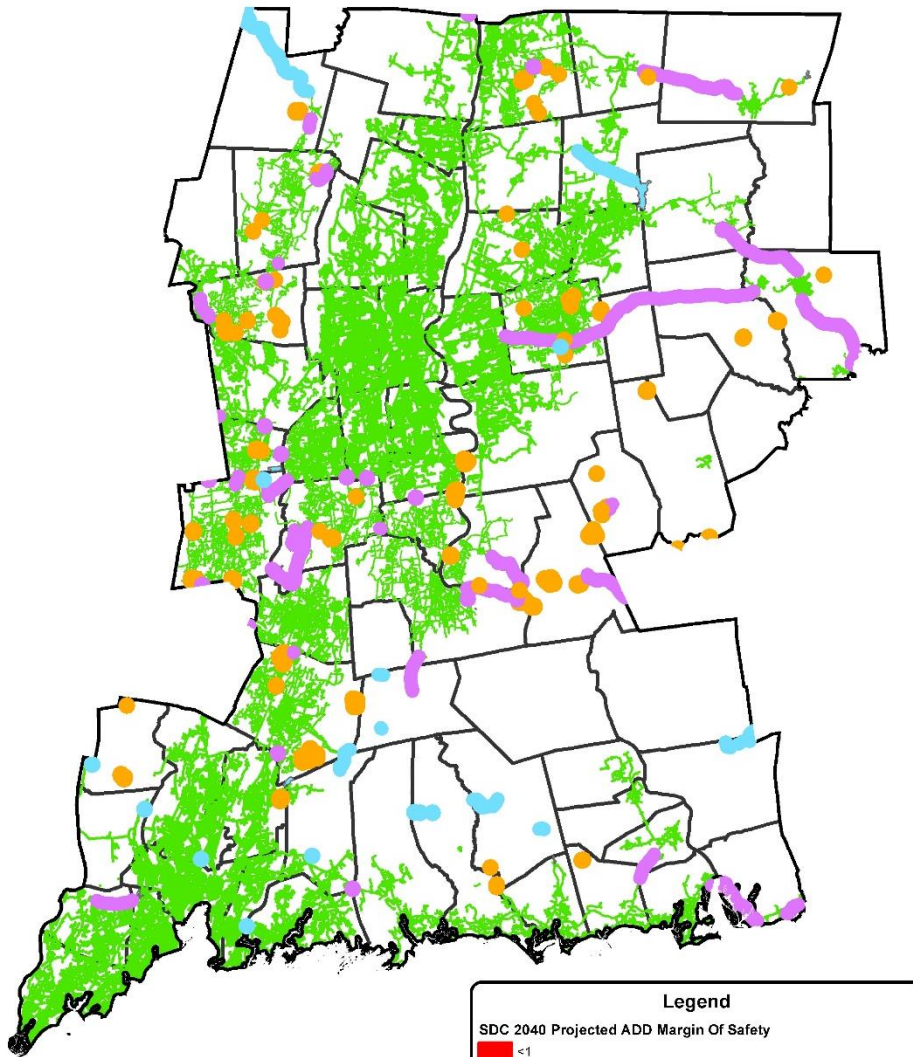
Module #10 – Future Sources, etc.



Possible Solutions

- Encourage joint development of new sources of supply where water could be reasonably shared between parties
- Work with DEEP and DPH prior to new source development to determine feasibility of a particular site in regards to existing known resources and water budget
- Work with municipalities, health districts, COGs, The Nature Conservancy, and others to protect potential source water areas for future source development

Future Sources & ADD MOS (2040)



Module #10 – Future Sources, etc.



Module #10 Questions

1. Do you forecast that your system will require additional sources of supply (wells or reservoirs) in the WUCC planning periods? If so, what planning has your system undertaken to date for their development?
2. Are you experiencing, or have you experienced in the past issues relating to raw water quality or quantity? If so, how are you/have you addressed them?
3. If you identify potential new sources of supply in your Water Supply Plan, what are the barriers to developing those specific sources?
4. What do you perceive as the three biggest obstacle(s) to procuring or developing new sources of supply in general?

Module #10 Discussion



9. Public Comment

10. Other Business