



Challenges with Approving New Treatment Technologies: Connecticut's Perspective

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Lori Mathieu, Public Health Section Chief
Connecticut Drinking Water Administrator
Drinking Water Section
Connecticut Department of Public Health

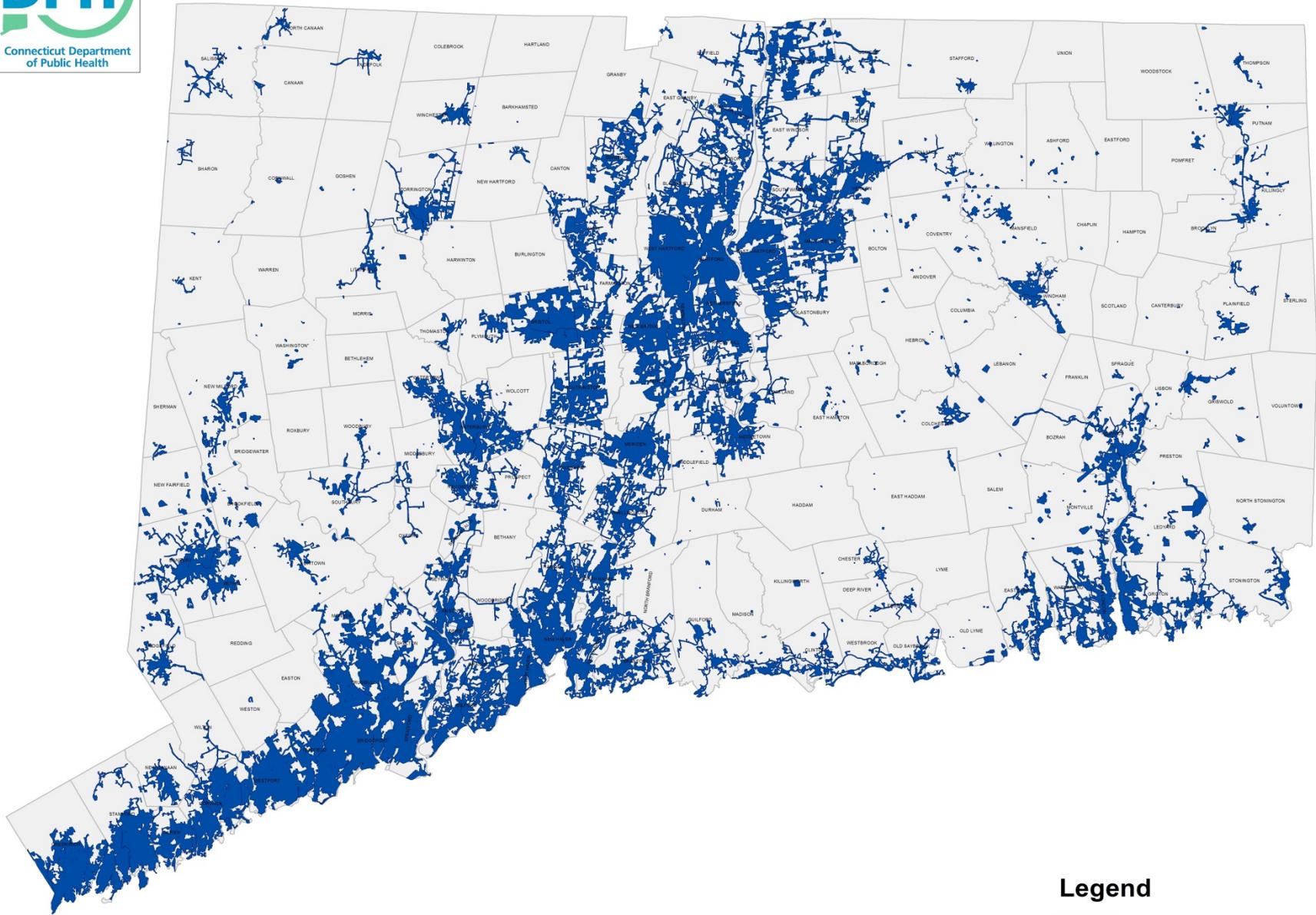


CT DPH Drinking Water Section Responsibilities

- 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
- 2,000 non-community systems



Public Water Supply Service Area



Legend

 PWS Service Areas



CT DPH

Drinking Water Section

- Drinking Water Section typically reviews and approves several hundred project reviews every year.
- Projects range from small scale treatment systems like calcite filters to full scale surface water treatment plants.



Treatment Reviews

- Currently rely on a combination of in house state regulations and technical guidelines to review and approve project submittals.
- Technical Guidelines use Ten State Standards as basis along with other best engineering recommendations.
- The Groundwater Rule has resulted in many public water systems in CT seeking approval to use 4-log disinfection (primarily to avoid source water assessment monitoring).
- Most 4-log treatment proposals utilize chlorination, however, we are seeing an increase in systems wanting to use UV for 4-log disinfection.
- In addition, a PWS with GWUDI sources has requested to install UV to comply with log inactivation requirements under the IESWTR

Consistency & Resources

- UV vendors are aggressively requesting to approve their products.
- Requires a third party validation following the requirements in EPA's UV Disinfection Guidance Manual.
- Some vendors provide validation reports that are a few pages long while others provide very detailed and highly technical ones.
- CT does not currently have the resources nor expertise to review these validation reports and has reached out to EPA and other states for assistance.

Need for Consistency

- Found that there is a wide variation in how states review 4-log UV proposals.
- Some states have dedicated technical staff, in some cases PhDs, that review these projects and validation reports.
- States have different reporting requirements.
- There does not appear to be any unified effort on a national or regional level to standardize the review of 4-log UV treatment systems.
- In the interim we have required systems to submit equivalent approvals from other states that have approved the same UV units with similar water quality.



What is Needed

Consistency

- There needs to be a national and regional effort to standardize the review of new treatment technologies
- For example, for 4-log UV treatment it would help if third party experts could review validation reports and provide technical assistance to states to expedite their reviews
- 4-log UV is the biggest new treatment review challenge in CT, however, other issues arising
- For example, we are discovering variation among states in how they approve baffle factors for contact tanks in 4-log chlorination applications
- With more attention on legionella control, copper silver ionization treatment may be used more frequently



Thank You

- Lori Mathieu, CT Drinking Water Administrator
- Connecticut Dept. of Public Health
- Lori.mathieu@ct.gov
- 860-305-1906