CDC Safe Water

National Conference of State Legislatures

Legislative Summit
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Los Angeles, California

Brian Hubbard, MPH, Health Scientist
Safe Water Team
Water, Food, and Environmental Health Services Branch
Today’s Agenda

- CDC Division Consolidation and New Branch for NCEH Safe Water Activities
- Branch Focus on Federally Unregulated Drinking Water
  - Safe Water for Community Health Program
  - Safe Water Program Improvement eLearning
  - ChangeLab Solutions
  - Private Water Network
- Other Safe Water Issues
  - Emerging Issues
  - New Opportunities - PFAS
NCEH Division Consolidation

- NEW Division of Environmental Health Science and Practice = Environmental Hazards and Health Effects + Emergency and Environmental Health Services

- NEW Water, Food, and Environmental Health Services Branch
  - *Legionella*
  - Model Aquatic Health Code (MAHC)
  - Safe Water for Community Health (Safe WATCH)
  - Emergency response and recovery
Legionella

- Supporting 14 state and local partners to boost Legionnaires’ disease response and prevention capacity
  - Year 5 of ELC cooperative agreement

- Developing e-Learning on the implementation of *Legionella* Water Management Programs
  - Cooperative agreement with University of Arizona and National Network of Public Health Institutes
Model Aquatic Health Code (MAHC)

- A voluntary guidance document based on science and best practices that can help local and state authorities and the aquatics sector make swimming and other water activities healthier and safer

- The MAHC guidelines are all-inclusive and address the design, construction, operation, maintenance, policies, and management of public aquatic facilities
Model Aquatic Health Code (MAHC)

- 2018 MAHC (3rd edition) released July 2018
  - Cross-reference guide tool also available

- MAHC App (Aquatic Inspector) released March 2018

- e-Learning on the MAHC inspection form will be released in 2018 through the National Environmental Health Association online learning platform
Federally Unregulated Drinking Water

- EPA Public Water Systems defined: Provide water for human consumption through pipes or other constructed conveyances to at least 15 service connections or serves an average of at least 25 people for at least 60 days a year. May be publicly or privately owned.
  - Non-Transient Non-Community Water System (NTNCWS)
  - Transient Non-Community Water System (TNCWS)

- Our focus: Environmental and public health departments that have safe drinking water programs focused on federally unregulated drinking water (systems serving <15 connections -- private wells, cisterns, springs, and trucked water)

https://www.epa.gov/dwreginfo/information-about-public-water-systems
Federally Unregulated Drinking Water: The Problem Defined

- About 1 in 9 American residents get their drinking water from a private well.[1-3]

- About 1 in 5 sampled private wells found contaminants at levels that could affect health.[4]

- From 1971 through 2008, the proportion of illness outbreaks associated with private water sources has increased.[5]

- 56% of local health departments regulate, inspect, or license private drinking water in their community.[6]
Environmental Health Services Support for Public Health Drinking Water Programs to Reduce Drinking Water Contaminant Exposures

Safe Water for Community Health (Safe WATCH)
Safe WATCH Grantees 2015–2020

Tacoma-Pierce County
La Crosse County
Madison County
Delta County
Gaston County
Safe WATCH Successes

Compiled from Years 1–3 Annual Performance Reports and End-of-Year Reports:

- Conducted surveys of well owners and local public health agencies (11 of 19 partners)

- Coordinating with state public health and private laboratories to organize water sampling data (7 partners)

- Identified ~44,263 new well records and entered them in digital format
Safe WATCH Successes (*continued*)

- Distributed ~6,801 free sample kits in well outreach activities in U.S. communities

- Collected 12,328 well water samples

- Identified ~2,310 well water samples serving ~5,831 people where contaminants exceeded acceptable levels
Safe WATCH Successes *(continued)*

- Created or amended 57 educational materials
- Conducted ~315 outreach events
- Presented at ~73 conferences and meetings
- Formed ~120 new partnerships
Safe Water Program Improvement (SWPI) e-Learning

- Includes 9 courses
- Helps operationalize the 10 Essential Environmental Public Health Services for Safe Drinking Water Programs

https://www.cdc.gov/nceh/ehs/elearn/swpi.html
ChangeLab Solutions

- For state and local health department staff who want to understand the role of state and local environmental health in policy development

- Six case stories of how state and local health departments have approached local policy development

The Private Water Network

- WFEHSB contracting with NEHA to create the Private Water Network
  - Support the estimated 50 state and 2,800 local environmental public health programs
  - Support the diverse partners working with EH practitioners to ensure safe drinking water from federally unregulated drinking water systems (e.g., private wells, springs, trucked water)
  - Develop a structure of the network: committee, vision, mission, and goals
The Private Water Network

NEHA published the first in a three-part series that describes the approach for developing a public health network focused on private drinking water systems.

*Journal of Environmental Health*

This series is supported by the Centers for Disease Control and Prevention (CDC) Contract 200-2013-57475.
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<thead>
<tr>
<th>Emerging Issue/Priority</th>
<th>Barriers</th>
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<tr>
<td>Guidance and recommendations on testing of private wells and treatment approaches</td>
<td>Inconsistent recommendations in existing resources</td>
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<td>Aging infrastructure (private and public)</td>
<td>Funding</td>
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<td>Lead</td>
<td>Policy maker awareness</td>
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<td>Environmental justice, health disparity</td>
<td>Low participation from lower SES and minority households</td>
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<td>Accessing rural populations</td>
<td>Lack of trust (work with agencies that have built trust with hard to reach populations)</td>
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<td>PFAS/PFOA - Labs</td>
<td>Lab capacity</td>
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<tr>
<td>PFAS/PFOA in wells</td>
<td>Lack of specific guidance on how to address PFAS/PFOA when found in private wells</td>
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<td>Increase in harmful algal blooms related to drought</td>
<td>Laboratory capacity and cost of shipping samples to reputable lab to obtain results</td>
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What Do We Know about PFOA and PFOS in Community and Private Drinking Water Systems?

<table>
<thead>
<tr>
<th>PFOA + PFOS Concentration</th>
<th># Systems</th>
<th># of People Served (% Population)</th>
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<tr>
<td>Not detected</td>
<td>4,600</td>
<td>225 million (67%–71%)</td>
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<tr>
<td>Detected below 70 ppt</td>
<td>129</td>
<td>10 million (3%)</td>
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<tr>
<td>Detected at or above 70 ppt</td>
<td>65</td>
<td>6 million (2%)</td>
</tr>
<tr>
<td>Not sampled</td>
<td>47,000</td>
<td>33–38 million (5%–10%)</td>
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<tr>
<td>Private wells</td>
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<td>60 million (18-19%)</td>
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Community water systems (CWS) n~51,000

Private wells
PFAS Challenges

- Growing (exploding) community concern
- Need more health information
- Need to expand environmental and biological sampling methods
- Big mixtures problem
- New compounds being created and used
- Water treatment methods need to be developed and evaluated
New PFAS Opportunities

- Statistically-based biomonitoring exposure assessments (EAs) at no less than 8 current or former Department of Defense sites
  - Will include measurement of PFAS in serum and urine, as well as limited environmental (dust and tap water) sampling
  - Short term—completed within 2 years

- A multi-site health study
  - Study design will be informed by data from PFAS Exposure Assessments
  - Long term—completed over the next 5–7 years
REFERENCES: Federally Unregulated Drinking Water: The Problem Defined

[3] Calculated by dividing the number of American residents served by a private well (NGWA) by the 2013 US population (U.S. Census).
THANKS!

Contact Information:

Brian Hubbard
770-488-7098
bnh5@cdc.gov