Rural Community Assistance Partnership

Improving rural quality of life, starting at the tap
Goals for today

RCAP Background & Impact

Orient RD staff on RCAP’s programs for small drinking water systems

Examples RCAP’s work with systems dealing with lead issues
Services by Region

Lending
Environmental
Housing
Community & Economic Development
Leadership/Capacity Building

Environmental Leadership/Capacity Building/Economic Development

Environmental
Housing
Leadership/Capacity Building

Environmental
Housing/rental assistance
Leadership/Capacity Building

Environmental
Housing
Community Development & lending
Leadership/Capacity Building

Lending
Environmental
Technical Support

Entrepreneurship & Economic Development
Leadership/Capacity Building
RCAP Impact
Some stats driving our work

93.5% of public water systems are serving communities with 3,300 people or fewer.

$74.4 Billion is the U.S. EPA-estimated amount small community water systems need to maintain and update infrastructure. *This need is estimated for systems serving 23.4 million people.

3.68 jobs are added to the national economy to support each job added in the water and wastewater sector.

10-20: Jobs are added in the U.S. for each $1 million invested in water supply and treatment infrastructure.
In Fiscal Year 2018, the RCAP Network – through nationally funded projects – served approximately:

<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5 million:</td>
<td>rural residents</td>
</tr>
<tr>
<td>538,000:</td>
<td>residents living in poverty</td>
</tr>
<tr>
<td>639,880:</td>
<td>residents identifying as people of color</td>
</tr>
<tr>
<td>1+ million:</td>
<td>households</td>
</tr>
<tr>
<td>1,457:</td>
<td>communities</td>
</tr>
</tbody>
</table>
TA Mapped with Per Capita Income (2018)
The Most Projects Aim to Assist Communities with Achieving Compliance with State and Federal Regulations and Financial Sustainability

- Compliance
- Financial Sustainability
- Increased Managerial Capacity
- Improved Public Health
- Improved Environmental Health
- Increased Coordination Among Communities
Leveraged Funds

In FY18, RCAP helped 71 communities in 28 states leverage approximately $145.5M in additional funding. 98% of this total was achieved under USDA-funded TA. 68% was awarded in the form of loans.

Sources of leveraged funds: USDA, CDBG, States and SRFs, Regional.
Overview of RCAP Programs for Small Systems
FY18 TA Projects

Goals for 2019-20:

- Assist at least 780 systems includes tribes
- Present 150 training sessions to at least 1000 system board members and personnel
- Assist in completing 72 vulnerability assessments and 72 emergency response plans
GIS Goals for 2019-20:

Assist 42 communities in the mapping of a water or wastewater system—or both—for communities eligible for USDA’s

Each community will have a working map of their system in the ESRI ArcGIS Online multi-tenant environment under this program

Training of one or more operators, community members, or utility staff such that they have the capacity to sustain the map of their system
The South Berwick (Maine) Water District had old, outdated infrastructure and was in need of asset management planning to help them prioritize and set aside funds for needed system upgrades.

Through USDA Technical Assistance and Training funds, RCAP helped the district develop an Asset Management Plan as well as a Capital Improvement Plan to prioritize projects and set aside funding reserves over time to make the system more financially sustainable as well as avoid rate shock and unaffordability for system customers.

**Goals for 2019-20:**

- Systems determined to be financially unsustainable will **achieve sustainability**

- Systems out of compliance with the SDWA or CWA will **be brought into compliance**

- Systems will **secure at least $80 million in federal, state, and other funding**—for new systems, system replacement, and other facilities improvements
**Purpose:** On-site technical assistance and training with a focus on compliance/health concerns in drinking water systems (serving 10,000 or fewer people)

- 318 on-site technical assistance projects in all 50 states
- 270 customized trainings in all 50 states

**Assistance Types**
- Compliance and Environmental Health
- Operations and Maintenance
Examples of RCAP’s Work on Lead
RCAP’s services related to lead

- Understanding lead issues
- Training
- Technical assistance
  - Lead monitoring plans
  - Inventories
Number of violations by rule for systems serving fewer than 10,000 people, per year

- RTCR
- VOC
- SOC
- PNR
- Stage 2 DBPR
- Nitrates
- GWR
- LCR
- Stage 1 DBPR
- CCR
- TCR
- Radon
- DOC
- Arsenic
- SWTR
- LTIESWTR
- LTIESWTR

- 2013
- 2014
- 2015
- 2016
- 2017
- 2018
Total LCR violations in 2018 by PWS size

- >100,000
- 10,001-100,000
- 3,301-10,000
- 501-3,300
- ≤500

Scale: 0 - 5,000
Health-based vs. monitoring/reporting LCR violations for small systems (population 10K and smaller)
Percent of systems with LCR violations, 2018

<table>
<thead>
<tr>
<th>Category</th>
<th>Health-based</th>
<th>Monitoring and Reporting</th>
<th>Any violation</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤500</td>
<td></td>
<td></td>
<td>3%</td>
</tr>
<tr>
<td>501-3,300</td>
<td>0.5%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>3,301-10,000</td>
<td>0.5%</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>10,001-100,000</td>
<td>0.5%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>&gt;100,000</td>
<td></td>
<td>2%</td>
<td>3%</td>
</tr>
</tbody>
</table>
Training

• RCAP/AWWA compliance training curriculum

• Lead and Copper Rule E-learning (2020)
Training

• RCAP/AWWA compliance training curriculum

• Lead and Copper Rule E-learning (2020)

• Midwest Assistance Project (MAP) Region 8 training
Ohio RCAP - Mapping Lead Service Line Probability in Small Water Systems

Source: Brain Beyeler, Great Lakes RCAP
Ohio EPA Lead (Pb) Rules

All public water systems were required to submit lead service line probability maps in March 2017, and updates will be required every five years.

- Lead and copper sampling
- Map distribution systems
- Identify all potential lead sources
- Map public and private service lines
- Description of buildings
- Protection of residents

https://epa.ohio.gov/ddagw/pws/leadandcopper/map
Process

- Meet in person or via video conference
- Complete interview questions
- Review map with parcel or address data
- Review records
The Data Dilemma

Sources:

• As-builts/drawings
• Tap cards
• Operator knowledge
• Building permits
Process

1. Find Data
2. Join data to GIS
3. Symbolize by year built
4. Assign value to known
5. Assign probability value to unknown
Data Analysis

1. Find Data
2. Join data to GIS
3. Symbolize by year built
4. Assign value to known
5. Assign probability value to unknown
Data Analysis

1. Find Data
2. Join data to GIS
3. Symbolize by year built
4. Assign value to known
5. Assign probability value to unknown
## Results

### Public Service Line Lead Probability

<table>
<thead>
<tr>
<th>Possibility of Lead</th>
<th>Public Lines #</th>
<th>% of System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Likely or Verified Lead</td>
<td>64</td>
<td>9.10%</td>
</tr>
<tr>
<td>Non-Lead</td>
<td>83</td>
<td>11.81%</td>
</tr>
<tr>
<td>≤ 8% Lead Alloy</td>
<td>35</td>
<td>4.98%</td>
</tr>
<tr>
<td>Very High Probability</td>
<td>225</td>
<td>32.01%</td>
</tr>
<tr>
<td>Moderate Probability</td>
<td>206</td>
<td>29.30%</td>
</tr>
<tr>
<td>Low Probability</td>
<td>37</td>
<td>5.26%</td>
</tr>
<tr>
<td>No Data</td>
<td>53</td>
<td>7.54%</td>
</tr>
</tbody>
</table>

### Private Service Line Lead Probability

<table>
<thead>
<tr>
<th>Possibility of Lead</th>
<th>Private #</th>
<th>% of System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Likely or Verified Lead</td>
<td>64</td>
<td>9.10%</td>
</tr>
<tr>
<td>Non-Lead</td>
<td>6</td>
<td>0.85%</td>
</tr>
<tr>
<td>≤ 8% Lead Alloy</td>
<td>35</td>
<td>4.98%</td>
</tr>
<tr>
<td>Very High Probability</td>
<td>266</td>
<td>37.84%</td>
</tr>
<tr>
<td>Moderate Probability</td>
<td>239</td>
<td>34.00%</td>
</tr>
<tr>
<td>Low Probability</td>
<td>40</td>
<td>5.69%</td>
</tr>
<tr>
<td>No Data</td>
<td>53</td>
<td>7.54%</td>
</tr>
</tbody>
</table>
Results

To comply with Section 6108.121 of the Ohio Revised Code, enacted in September 2016, the Village of Bellaire in Belmont County, Ohio has created the following report and attached map to identify known and potential components of water service lines that contain lead (Pb).

RCAP staff and the Village of Bellaire Water Department met on February 10th, 2017 to review a map of the service area. A list of known locations of lead service lines (LSLs) that are still being used, and locations where LSLs have been replaced were compiled by the Village of Bellaire Water Department. That list only accounted for about 5% of the service lines in the system. No applicable historical maintenance and operation records, tap cards, or epitaphs were available to identify other LSL locations.

Public and Private Ownership of Service Lines

The Village owns and maintains service lines from the water distribution mains up to the curb stop. The remainder of each service line from the curb stop to the building is considered private property and is the responsibility of the property owner.

Known and Probable LSLs

The tables below provide information about the estimated number of LSLs serving the customers of Bellaire Water. The year the structure was built, the year plumbing material was installed, or staff knowledge determines which category it falls into.

<table>
<thead>
<tr>
<th>Value</th>
<th>Public LSLs #</th>
<th>% of System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Lead</td>
<td>646</td>
<td>58.47%</td>
</tr>
<tr>
<td>5% Lead Alloy</td>
<td>45</td>
<td>4.15%</td>
</tr>
<tr>
<td>Very Low (1991-1997)</td>
<td>72</td>
<td>6.53%</td>
</tr>
<tr>
<td>Mid (1991-1980)</td>
<td>119</td>
<td>10.7%</td>
</tr>
<tr>
<td>Moderate (1971-1950)</td>
<td>291</td>
<td>26.56%</td>
</tr>
<tr>
<td>Unconfirmed Public LSL (1921-1920)</td>
<td>1002</td>
<td>44.14%</td>
</tr>
<tr>
<td>Confirmed Public LSLs</td>
<td>47</td>
<td>2.07%</td>
</tr>
<tr>
<td>No Data</td>
<td>55</td>
<td>4.93%</td>
</tr>
</tbody>
</table>
Updating Service Lines with Mobile Apps

• Collector Application
Discussion

RCAP Contacts:
Ted Stiger
Sr. Director of Government Relations & Policy
tstiger@RCAP.org

Jeff Oxenford
Director of Technical Services & Training
joxenford@rcap.org