Benchmarking Rates and Financial Health in Virginia

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Webinar
Established in 1972, Draper Aden Associates, Inc. is a leading Virginia-based consulting engineering firm with experience in facilities planning and engineering design for municipalities, government agencies, cultural institutions, and private clients. We provide civil, environmental, geotechnical, solid waste, and structural engineering; surveying and subsurface utility engineering; site planning and engineering; and construction inspection services throughout the Southeastern United States.

Offices Located In Blacksburg, Richmond, Charlottesville and Newport News, Virginia

www.daa.com
Dedicated to enhancing the ability of governments and other organizations to provide environmental programs and services in fair, effective and financially sustainable ways.

How you pay for it matters!
Smart Management for Small Water Systems
under a Cooperative Agreement with the US EPA

- The EFCN provides training and technical assistance to small public water systems in all fifty states and five territories to help local water systems achieve and maintain compliance with the Safe Drinking Water Act.

- Workshops, trainings and direct assistance:
  - Asset Management
  - Water Loss Reduction
  - Water System Collaboration
  - Fiscal Planning and Rate Setting
  - Energy Management
  - Funding Coordination, and
  - Managerial and Financial Leadership

- Sign up for direct assistance at http://efcnetwork.org/one-on-one/
Everyone needs safe drinking water!
Objectives

• become familiar with the features and benefits of our Virginia water and wastewater rates dashboard

• learn how to compare one water systems' rates with those of other systems

• learn how to apply several useful financial benchmarks to your system(s).
Geographic representation: All Registrants
Poll Question 1
Draper Aden’s 25\textsuperscript{th} Annual Virginia Water and Wastewater Report

- Mail survey to 268 utilities in Virginia
- Include all municipally-owned water and wastewater systems
- 57% response rate
## Response Breakdown

<table>
<thead>
<tr>
<th></th>
<th>Largest</th>
<th>Smallest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorities</td>
<td>Fairfax Water</td>
<td>Ferrum WSA</td>
</tr>
<tr>
<td>Towns</td>
<td>Town of Leesburg</td>
<td>Town of Glyn Lyn</td>
</tr>
<tr>
<td>Counties</td>
<td>Chesterfield Co.</td>
<td>Powhatan Co.</td>
</tr>
<tr>
<td>Cities</td>
<td>City of VA Beach</td>
<td>City of Norton</td>
</tr>
</tbody>
</table>

### Pie Chart

- **44%**: Authorities
- **25%**: Towns
- **16%**: Cities
- **16%**: Counties

*Based on the number of residential customers.*
Control Group

• 20 utilities in control group
  – 7 Authorities
  – 2 Cities
  – 3 Counties
  – 8 Towns
• Large and Small Utilities
• Rural and Urban
• From across Virginia
Control Group
Residential Water and Wastewater Charges - 5,000 gallons/month

2012 – 2013
4.0% increase – water rates
4.7% increase – sewer rates
## Water Rates (from all respondents)

<table>
<thead>
<tr>
<th>Water</th>
<th>Replies</th>
<th>Average</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td># Residential Connections</td>
<td>144</td>
<td>10,227</td>
<td>2,053</td>
</tr>
<tr>
<td># Non-Residential Connections</td>
<td>142</td>
<td>775</td>
<td>198</td>
</tr>
<tr>
<td>Monthly Residential Charge - 5,000 gallons (Inside of Municipal Boundaries)</td>
<td>150</td>
<td>$30.98</td>
<td>$29.70</td>
</tr>
<tr>
<td>Monthly Residential Charge - 5,000 gallons (Outside of Municipal Boundaries)</td>
<td>65</td>
<td>$45.07</td>
<td>$40.03</td>
</tr>
<tr>
<td>Monthly Non-Residential Charge - 1,000,000 gallons (Inside of Municipal Boundaries)</td>
<td>126</td>
<td>$5,394</td>
<td>$4,907</td>
</tr>
</tbody>
</table>
Average Residential Water Rates by System Size

Inside Municipal Boundaries
- < 5,000 Connections: $32.75
- 5,000 - 50,000 Connections: $27.62
- > 50,000 Connections: $23.87

Outside Municipal Boundaries
- < 5,000 Connections: $46.09
- 5,000 - 50,000 Connections: $42.81
- > 50,000 Connections: $5.00

 UNC ENVIRONMENTAL FINANCE CENTER
## Wastewater Rates (from all respondents)

<table>
<thead>
<tr>
<th>Wastewater</th>
<th>Replies</th>
<th>Average</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td># Residential Connections</td>
<td>136</td>
<td>10,870</td>
<td>1,652</td>
</tr>
<tr>
<td># Non-Residential Connections</td>
<td>132</td>
<td>905</td>
<td>243</td>
</tr>
<tr>
<td>Monthly Residential Charge - 5,000 gallons (Inside of Municipal Boundaries)</td>
<td>142</td>
<td>$39.88</td>
<td>$38.50</td>
</tr>
<tr>
<td>Monthly Residential Charge - 5,000 gallons (Outside of Municipal Boundaries)</td>
<td>52</td>
<td>$61.33</td>
<td>$53.93</td>
</tr>
<tr>
<td>Monthly Non-Residential Charge - 1,000,000 gallons (Inside of Municipal Boundaries)</td>
<td>120</td>
<td>$6,731</td>
<td>$6,016</td>
</tr>
</tbody>
</table>
Average Residential Wastewater Rates by System Size

Inside Municipal Boundaries
- < 5,000 Connections: $40.58
- 5,000 - 50,000 Connections: $36.75
- > 50,000 Connections: $37.81

Outside Municipal Boundaries
- < 5,000 Connections: $63.09
- 5,000 - 50,000 Connections: $51.73
- > 50,000 Connections: $51.73
Connection Fees

“charges for tapping into the water main and running a line to the water meter or tapping into a sewer line and installing a service line to the property line”

Capital Recovery Charges

“charges for buying into the existing system or charges that recognize the cost of adding capacity to the system”

Also called “facility fees”, “system development charges”, etc.
Water – Connection and CRC Fees

<table>
<thead>
<tr>
<th>Connections Range</th>
<th>Connection Fee</th>
<th>Capital Recovery Charge</th>
<th>Connection and CRC Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 5,000 Connections</td>
<td>$2,193</td>
<td>$3,339</td>
<td>$5,532</td>
</tr>
<tr>
<td>5,000 - 50,000 Connections</td>
<td>$2,427</td>
<td>$4,038</td>
<td>$6,465</td>
</tr>
<tr>
<td>&gt; 50,000 Connections</td>
<td>$2,784</td>
<td>$5,324</td>
<td>$8,108</td>
</tr>
<tr>
<td>All Responses</td>
<td>$2,284</td>
<td>$4,375</td>
<td>$6,659</td>
</tr>
</tbody>
</table>
Wastewater–Connection and CRC Fees

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<td>$5,733</td>
</tr>
<tr>
<td>5,000 - 50,000 Connections</td>
<td>$2,607</td>
<td>$18,81</td>
<td>$21,415</td>
</tr>
<tr>
<td>&gt; 50,000 Connections</td>
<td>$4,988</td>
<td>$6,493</td>
<td>$11,481</td>
</tr>
<tr>
<td>All Responses</td>
<td>$3,161</td>
<td>$5,583</td>
<td>$8,744</td>
</tr>
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</table>
Residential Demands

What is the average monthly water consumption of your residential customers?

- 5%: More than 5,000 gallons
- 5%: Approximately 5,000 gallons
- 13%: Approximately 4,000 gallons
- 18%: Approximately 3,000 gallons
- 34%: Less than 3,000 gallons
- 24%: Don't Know
Residential Demands

How has the average residential consumption changed over the past 10 years?

- Increased: 38%
- Decreased: 13%
- Stayed the Same: 34%
- Don't Know: 15%
Residential Demands

Do you think declining demands are a temporary pattern or the new normal?

- Temporary: 4%
- New Normal: 89%
- Don't Know: 7%
If average residential consumption has decreased, which of the following contributed to the decrease?

- Installation of Low-Flow Fixtures/More Efficient Appliances
- Concerned Customers are Conserv ing Resource
- Customers are Cost-Conscious
- Economic Downturn
- Customers have Changed Outdoor Water Use Patterns
- Utility has Encouraged Customers to Reduce Water Use
- Rainwater Harvesting
- Don’t Know
- Other
Benchmarking Rates
Rates in Virginia

Check out our Virginia Rates Dashboard

• On the Draper Aden Website:
  • http://www.daa.com/publications/dashboard/

• On the EFC Website
  • Go to http://efc.sog.unc.edu and search for “Virginia Water and Wastewater Rates Dashboard”
Once again, the City of [insert city name] Water Department proved to have some of the lowest water and sewage rates in the state. A recent statewide comparison was conducted among 63 water providers to evaluate the rates residents pay for their water and sewage on a monthly basis. The City of [insert city name] is proud to say, based on 7,000 gallons, the average monthly usage per household, the City has the third lowest water and sewage rates statewide, with an average water bill of $15.38, and sewage bill of $10.36. As a result, [insert city name] proved to have the third lowest combined residential water and sewage rates, of the 63 polled.
Comparing rates – the old way

Source: NC Triangle J Council of Government
What’s wrong with it?

- Poor sample selection (number, types of systems)
- Comparing only one bill amount
- Comparing nothing besides rates
  - pressure to keep rates low …
  - … regardless of financial condition of utility
  - ignores customers’ ability to pay
  - ignores price signals and utility’s policies
Solution: provide more information?

185 pages of wonderful tables, full of data you can use!
Demonstrate the Dashboards

http://efc.sog.unc.edu
Rates Dashboards

- Created for VA, CO, GA, NC, NJ, and TX.
- AZ coming soon!
- Free, online, open to the public
- Compares rates against multiple characteristics:
  - Utility finances; System characteristics; Customer base socioeconomic conditions; Geography; History
- Compare to similar utilities (large samples):
  - All utilities; same size (accounts); same ownership type; same river basin; same customer income levels; within 50 miles; same planning districts
Some EFCN Resources

Tools, trainings, assistance and resources for small water systems: [www.efcnetwork.org](http://www.efcnetwork.org)

**Environmental Finance blog (EFC UNC)**
[efc.web.unc.edu/](http://efc.web.unc.edu/)

**EFC Boise State University newsletter**
[http://efc.boisestate.edu/Publications/tabid/59/Default.aspx](http://efc.boisestate.edu/Publications/tabid/59/Default.aspx)

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Poll Questions 2, 3 and 4; and Qualtrics survey link
Thank you!

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