Asset Management Workshop
April 21, 2015

Presentation Outline
- What is Asset Management?
- Present results of facilities evaluation
- Discuss funding scenarios
- Effort funded with 50% grant from NHDES

Preface

What is Asset Management?
- Determine the current state of system assets
- Identify assets that are critical to system operation
- Determine asset life-cycle costs
- Develop long-term funding strategy
- Maintain desired level of service
- Living document
- EPA and NHDES driven methodology to replace “utilize to failure/bond for capital improvements” approach

Preface

Benefits of Asset Management
- Increase Asset Life
  - Focus on asset rehabilitation and repair
- Identify Critical Components
- Analyze Rate Structure
  - Fund future improvements & operating expenses
- System Sustainability
  - Paradigm shift - funds needed in present vs. future
  - Meet level of service & improve system knowledge

Preface
Draft Level of Service Statement

- The Ashland Water & Sewer Department (the Department) has steadily improved the quality, quantity and reliability of the water supply and system under their management. The level of service the Department strives for is providing its water customers with the best water quality and service possible with the water system and funds available to them. Water quality is of paramount importance and shall be held to the following standards:
  - Meet all National and State Primary Drinking Water Regulations 100% of the time.
  - Meet secondary, non-regulated drinking water standards when possible.
- To achieve a high standard of water quality, the water system needs to be properly funded through customers’ water rates. Water rates should be set to not only cover the current costs, repairs and maintenance of the water system but should also include an appropriation to fund future water system capital improvements.

Project Timeline

- November 2013
  - Applied for NHDES Grant (1 of 10 recipients)
- July 2014
  - NHDES grant award
- November 2014
  - Town contracted Weston & Sampson
- February 2014
  - Level of service determination meeting / Facilities Walkthrough
- March – April 2015
  - Asset management database development
  - Financial planning analysis

Facilities Walkthrough

- February 17, 2015
  - Asset condition
  - Service history
  - Importance to system
  - Redundancy
  - Criticality

Thanks Eli & Rusty!

Asset Management Database

<table>
<thead>
<tr>
<th>Asset</th>
<th>Year Constructed</th>
<th>Condition</th>
<th>Service History</th>
<th>Expected Useful Life</th>
<th>Revised Useful Life</th>
<th>Age Remaining Useful Life</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water Treatment Building</td>
<td>1997</td>
<td>Good</td>
<td></td>
<td>10</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Electric</td>
<td>1997</td>
<td>Good</td>
<td>Rope water softener in 2014</td>
<td>20</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Water Treatment</td>
<td>1997</td>
<td>Good</td>
<td>CRT’s do not get general service, all changed annually</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Chlorination Plant</td>
<td>1997</td>
<td>Good</td>
<td></td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Chemical Feed (2% NaOH)</td>
<td>2013</td>
<td>Good</td>
<td></td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Pump 1</td>
<td>2013</td>
<td>Good</td>
<td></td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Transfer Pump</td>
<td>2013</td>
<td>Excellent</td>
<td>Replaced in 2015</td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Bulk Tank</td>
<td>2007</td>
<td>Fair</td>
<td></td>
<td>20</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Day Tank</td>
<td>2007</td>
<td>Fair</td>
<td></td>
<td>20</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Chemical Feed (1% sodium)</td>
<td>2015</td>
<td>Good</td>
<td></td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Pump</td>
<td>2015</td>
<td>Good</td>
<td></td>
<td>10</td>
<td>10</td>
<td>0</td>
</tr>
<tr>
<td>Day Tank</td>
<td>2015</td>
<td>Good</td>
<td></td>
<td>20</td>
<td>20</td>
<td>0</td>
</tr>
<tr>
<td>Chlorine Feed (poly phosphorus)</td>
<td>2015</td>
<td>Good</td>
<td></td>
<td>10</td>
<td>10</td>
<td>0</td>
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</tbody>
</table>
### Asset Management Database

<table>
<thead>
<tr>
<th>Asset Type</th>
<th>Condition</th>
<th>Treatment</th>
<th>Criticality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment Building</td>
<td>Poor</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Reservoir</td>
<td>Fair</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Storage tanks (B/C)</td>
<td>Poor</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Ventilation (HVAC)</td>
<td>Fair</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Chemical feed (poly phosphate)</td>
<td>Fair</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Transfer pump</td>
<td>Fair</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Backup pumps</td>
<td>Poor</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Area tanks</td>
<td>Poor</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Chemical feed (poly phosphate)</td>
<td>Poor</td>
<td>None</td>
<td>0</td>
</tr>
<tr>
<td>Recovery</td>
<td>Poor</td>
<td>None</td>
<td>0</td>
</tr>
</tbody>
</table>

### Database Interpretation

- **Condition Assessment**
  - Overall, assets are in good condition
- **Remaining Useful Life**
  - Treatment building chemical tanks
  - Electrical & instrumentation update

- **Redundancy**
  - Most major components have redundant units
  - Only one storage tank
  - Redundancy of wells vs. adjacent location

- **Criticality**
  - Few items receiving high criticality rankings
  - Positive aspect!

### Financial Planning

- **Expense and Revenue Assessment**
  - Fiscal years 2011-2013
- **Current Rate Structure Analysis**
- **Long-Term Funding Strategy**
Expense & Revenue Assessment

<table>
<thead>
<tr>
<th></th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments to Suppliers</td>
<td>$102,075</td>
<td>$121,741</td>
<td>$116,887</td>
</tr>
<tr>
<td>Payments to Employees</td>
<td>$22,950</td>
<td>$22,557</td>
<td>$17,833</td>
</tr>
<tr>
<td>Total Expenses:</td>
<td>$125,025</td>
<td>$144,298</td>
<td>$134,720</td>
</tr>
<tr>
<td>Receipts from Customers</td>
<td>$167,281</td>
<td>$185,344</td>
<td>$179,325</td>
</tr>
<tr>
<td>Total Revenues:</td>
<td>$167,281</td>
<td>$185,344</td>
<td>$179,325</td>
</tr>
<tr>
<td>Net Income:</td>
<td>$42,256</td>
<td>$41,046</td>
<td>$44,605</td>
</tr>
</tbody>
</table>

**Expense & Revenue Assessment**

- **Major Findings**
  - Revenues/Expenses are consistent
  - Depreciation was not included when considering water system expenses
    - Cash-based vs. accrual-based accounting

**Additional Reserve Funding**

- Annual valuation of ~$55,000 for all system assets
  - Total cost to replace asset vs. remaining useful life
- 2011-2013 average net income: ~$42,500
- Additional funding up to ~$12,500/year
  - To provide an economy of scale for total system value

**Water Rate Structure**

- Current Rate Structure (Residential User)
  - $60 base charge, annually
  - $3.85 per 1,000 gallons usage charge
- 2012 NHDES Water Rate Survey
  - 67,389 gallons/year residential usage
  - $423.02 average annual water bill – NH residential customer
**Rate Structure**

- Comparison to State Average:
  - $406.86 Town of Ashland
  - $423.02 NH State Average

**Long-Term Funding Strategy**

- Grants & outside funding
  - State Revolving Fund (SRF)
  - NH Community Development Finance Authority
  - U.S. Economic Development Administration
  - USDA – Rural Development
  - NHDES - Water Supply Land Acquisition Grants
- System buildout costs
  - New fees for connection & system extension
- Rate adjustment
  - $12,500/year to reserve fund
  - 570 service connections
  - Additional annual cost of $21/service connection
  - Comparable to 2012 NH state average

**Summary**

- Asset Management Plan
  - Increase asset life
  - Focus on asset rehabilitation and replacement
  - Identify critical components
  - Sustainably fund future improvements
  - Meet level of service & improved system knowledge
- Living Document
  - To be updated and improved whenever possible

**Conclusion**
Summary

- **Asset Inventory**
  - Good asset condition
  - Relatively high remaining useful life
  - System redundancy reduces number of critical assets

**Financial Assessment**

- Consistent expenses & revenues
- Net income is consistent
- Rates comparable to NH state average
- Develop long-term funding strategy for water system

**QUESTIONS?**