



EFFECTIVE UTILITY MANAGEMENT A CASE STUDY OF MANCHESTER, NH

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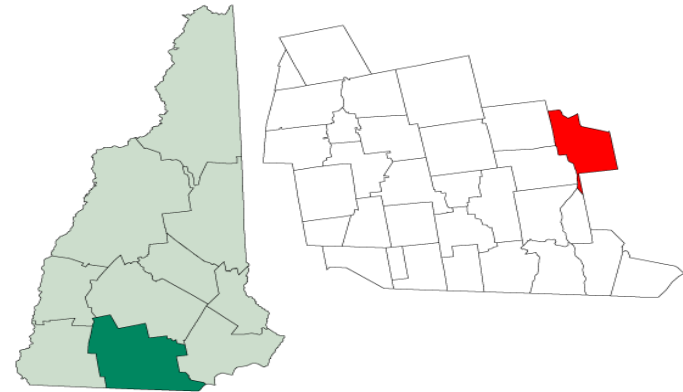
Agenda

- Background
- Wastewater Assets
- Organization
- Effective Utility Management
 - Five Keys
 - Ten Attributes
- What Does this Mean to our Utility?
- How Will We Use This?
- Questions



City of Manchester, NH Background

- Population 109,000
- Industrialized early 1800s
- Amoskeag Mills – Largest Single Mill in the World
- Post Industrial Depression – 1930
- Revitalization – 1990 to Present



Manchester's Wastewater Assets – WWTP

- 42 mgd WWTP
- 15 Acre campus
- 8 Buildings
- Serves four communities
 - Bedford (4.37%)
 - Goffstown (4.11%)
 - Londonderry (10.16%)
 - Manchester (81.36%)
- Metro pop. – 172,000



Manchester's Wastewater Assets – Pipelines

- 385 Miles of sewer
 - 50% “combined” system
 - 11,000 SMHs
 - 15 CSO outfalls
- 100 Miles of pipe, 100 years old or older



Manchester's Stormwater Assets – Pipelines

- 180 miles of drains
 - 14,000 CBs
 - 3,000 DMHs
- Six Urban Ponds



Manchester's Wastewater Assets

Pump Stations

- 12 pump stations
- Constructed from 1973 to 2014
- 68 GPM to 6,000 GPM
- \$6.0 Million Upgrade from 2011 to 2014



Environmental Protection Division

- Created in 1975
- Division of Manchester's Department of Public Works
- An “enterprise”
- Managing over \$1.0 Billion in Assets
- Staff of 43 at 300 Winston Street
 - Administration
 - Operations
 - Maintenance



We have a Monopoly on Business..... and Business is Good!!!!

- Revenues - \$20 million annually
- Operating Budget - \$10 million annually
- CIP - \$10 million annually
- \$\$ in the bank



We are a Business!



Public Utilities are Unique Businesses

- Public Transparency
- Bureaucratic BS
- Guided by Elected Officials
- Regulatory Driven
- Traditionally Underfunded

A dysfunctional business model

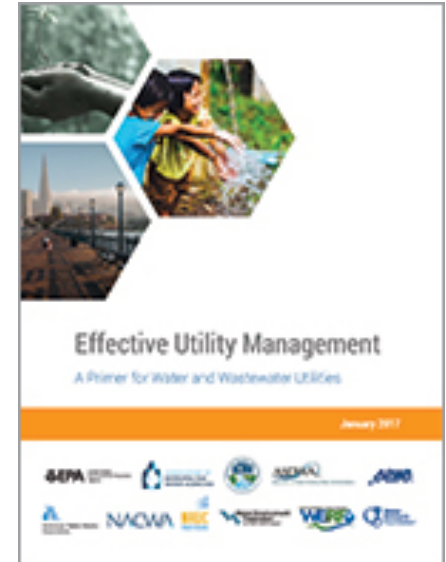


Effective Utility Management

A Primer for Water/Wastewater Utilities

January 2017

- 10 Professional Water Associations
 - WEF AWWA
 - EPA NACWA
 - ACWA WERF
 - APWA ASDWA
- Water Research Foundation
- Association of Metropolitan Water Agencies



Five Keys to Management Success

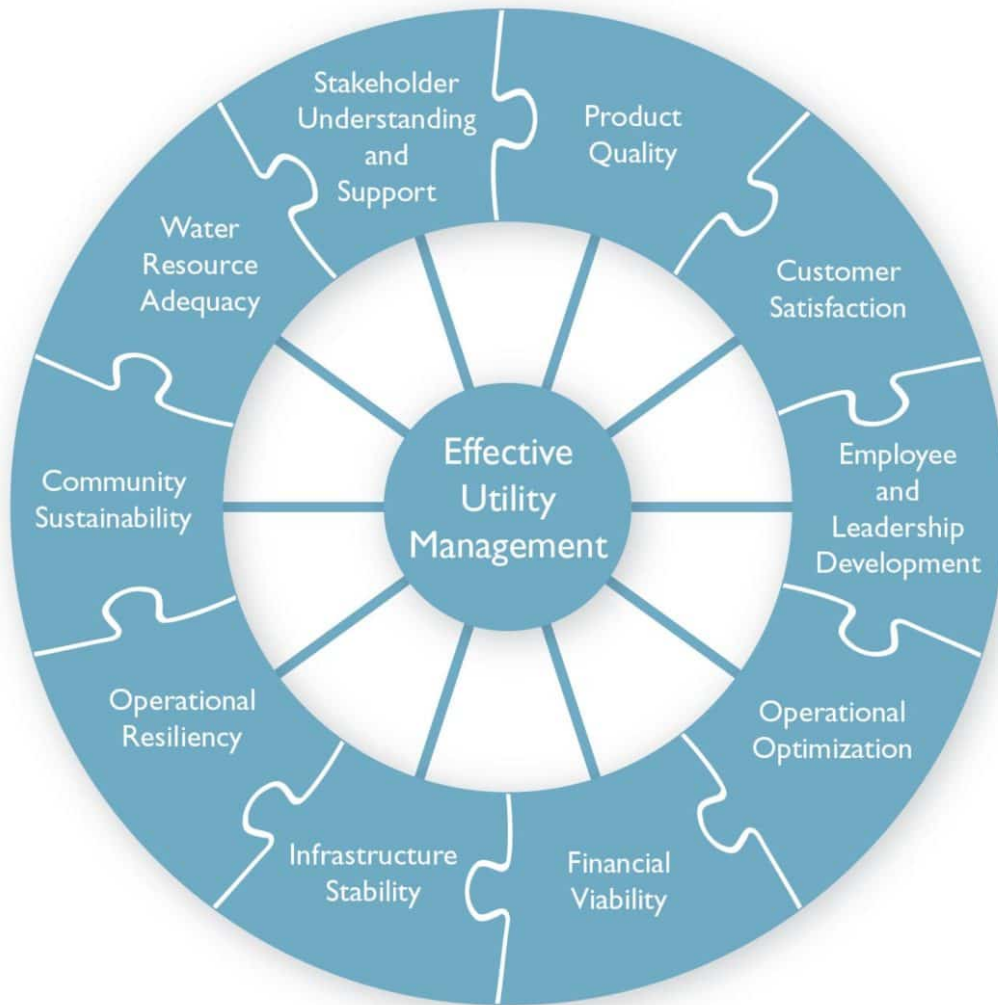
- Leadership
- Strategic Business Planning
- Knowledge Management
- Measurement
- Continued Improvement Management



Ten Attributes of Effectivity Managed Utilities

- Product Quality
- Customer satisfaction
- Employee Development
- Operational Optimization
- Financial Viability
- Infrastructure Strategy/Performance
- Enterprise Resiliency
- Community Sustainability
- Water Resource Sustainability
- Stakeholder Understanding and Support





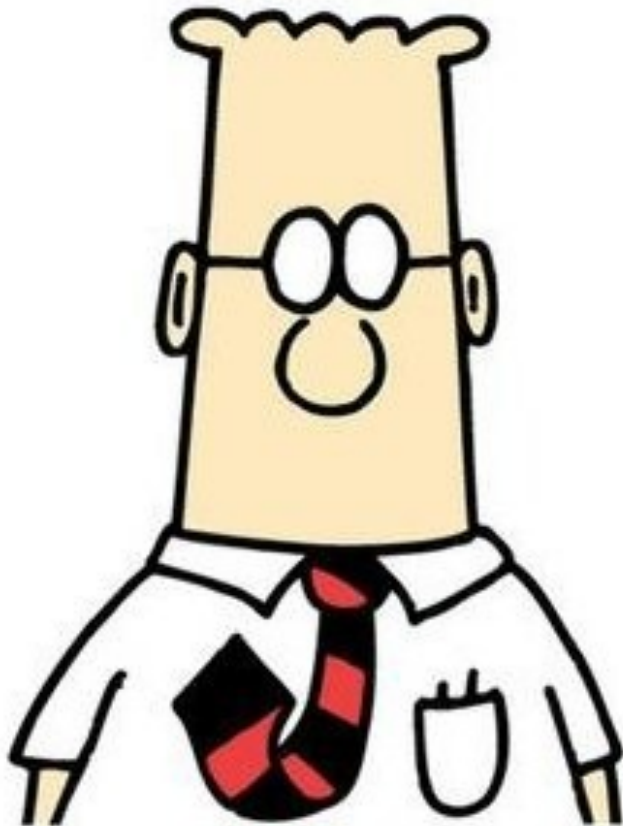
What Does All This Mean?

Ask the Experts.....

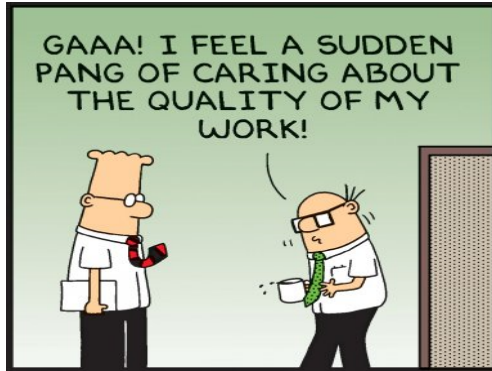
- Administration/Billing
- WWTP Superintendent
- Maintenance Supervisor
- IPP Coordinator
- Env. Permits / Sewer Construction Coordinator
- Chief Engineer

Agenda Item at Monthly Staff Meetings





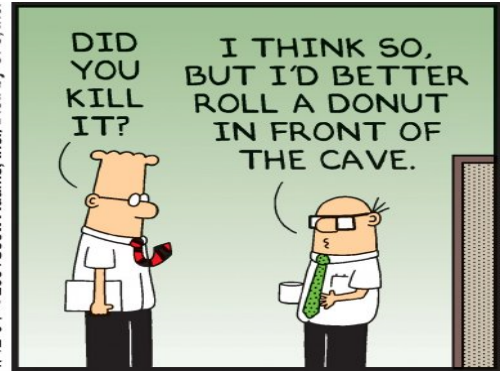
Product Quality



DilbertCartoonist@gmail.com



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- Exceed Permit
- Customer Service
- “You get what you pay for”
- Infrastructure Legacy



Customer Satisfaction



- Various Stakeholders
 - 25,000 customers
 - Industries
 - Member communities
 - Regulators
 - Power Plant
 - City Hall
- Reliable, Responsive, and Affordable service
- Treat customers as you want to be treated



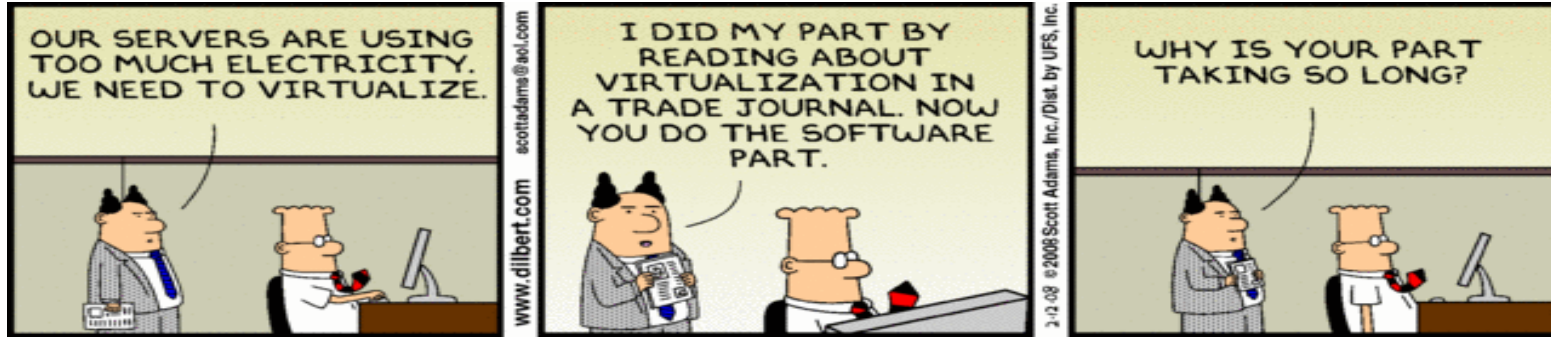
Employee and Leadership Development



- Five staff completed leadership training
 - DES Management Boot Camp
 - UNH Leadership Program
 - Tuck School
- Largest utility = Leadership Responsibilities
- Collaborative Organization
- Grooming next generation of leaders



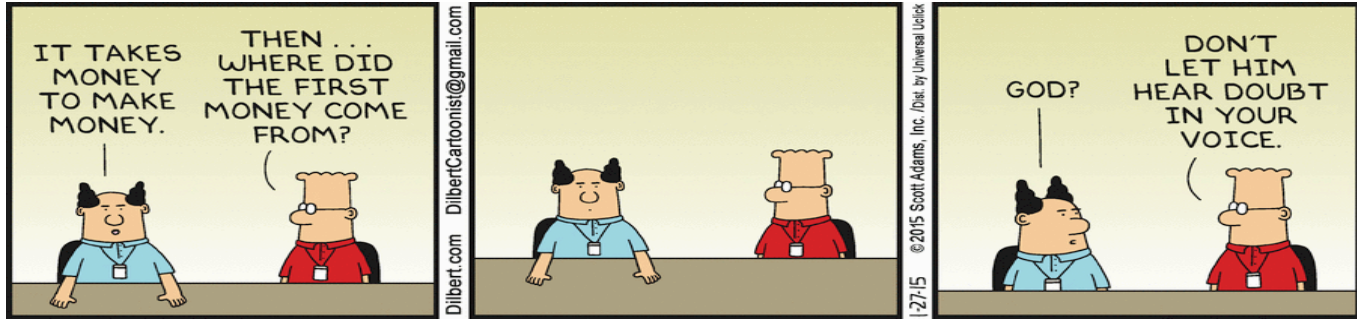
Operational Optimization



- SCADA / Laptops / Daily & Monthly Process Spreadsheets
- Cross training of Admin. / Tech. Staff
- Asset Management
- Emergency work allowance in every construction contract



Financial Viability



- Rates must be sustainable
- Diversified revenue sources
 - Grants
 - Loans
 - Energy Rebates
 - Septage
 - Reuse
 - Legislation
- Long-term Financial Forecast



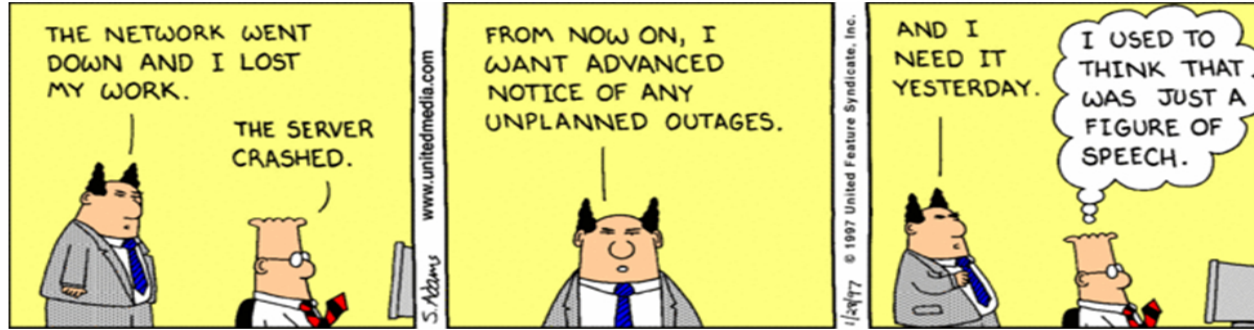
Infrastructure Strategy and Performance



- Master Planning
 - WWTP
 - Pump Stations
 - CMOMs
- Asset Management
- Record Keeping
- Climate Change
- Infrastructure Legacy



Enterprise Resiliency



- Financially healthy
- Regulatory driven
- Long-term planning
 - Infrastructure
 - Financial
- Next generation of leadership



Community Sustainability



- Collaborative Infrastructure Upgrades
- School Field Trips
- Green Infrastructure
- Urban Ponds Cleanup
- Environmental Justice



Water Resource Sustainability



- Merrimack River downstream provides drinking water to 500,000 people
- Cohas Brook Sewer Project
 - \$30 million to sewer Lake Massabesic watershed
- Climate change
- Pretreatment



Stakeholder Understanding and Support



- Various Stakeholders – 25,000 Customers
 - Member Communities
 - Industries
 - Watershed Associations
 - Regulators
 - Power Plant
 - City Hall
- Education and Outreach
 - School Trips
 - PBS Documentary
 - Professional Associations



Where do we go from here?



Next Steps of Effective Utility Management

- Self Assessment
- Graph Results
- Choose Attributes to work on
- Develop an improvement plan
 - Specific performance objectives
 - Measureable results
- Implementation



Lessons Learned

1. This is a Dysfunctional Business
2. Financial Sustainability
3. Long-term Infrastructure Sustainability
4. Education of Stakeholders
5. Collaborative Approach
6. Legacy







Thank You!

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