

City of Winchester

Water System Overview



History

- 1808 First public water system installed.
- 1829 First cast iron water mains installed. Some are still in service.
- 1890 Rouss Spring (by Abrams Delight) used as water source.
- 1956 Percy Miller Water Treatment Plant constructed. Draws water from the North Fork of the Shenandoah River.

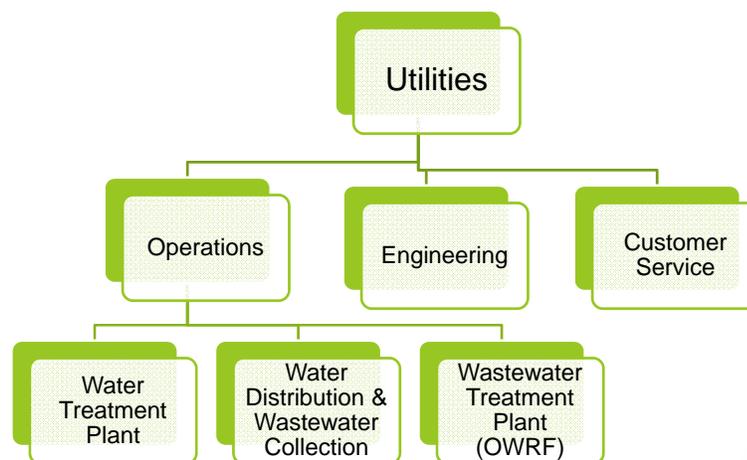
[2]

Current System

- Provide water and sewer service to over 11,000 accounts in City and portions of Frederick County
- Agreements with Frederick County Sanitation Authority and Middletown to supply water
- Enterprise Fund with annual operating budget of \$21.5 million
- 62 Utility employees

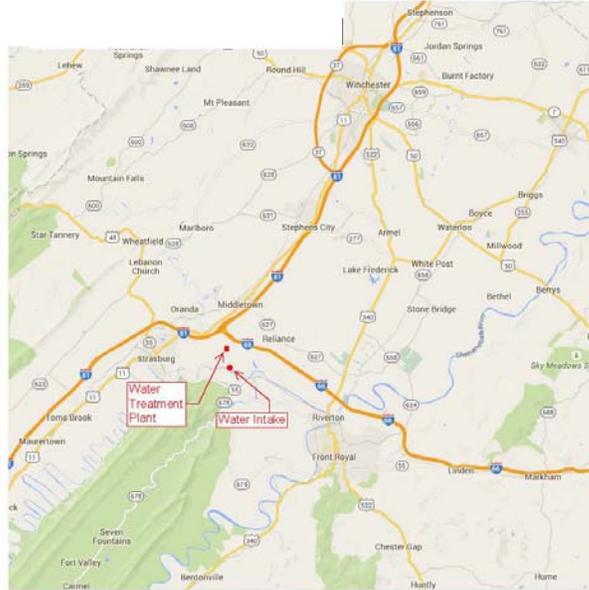
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Organizational Structure



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Water Treatment Plant



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Intake at River



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Water Treatment Plant



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Water Treatment Plant

- “Conventional” Water Treatment Plant
- Capacity is 10 million gallons/day
- Can be expanded to 14 million gallons/day
- Plant is in excellent condition - \$28+ million of improvements (2008 – 2012)

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Water Treatment Plant

Treated Water Pipe

- 30" pipe from WTP to City (15 miles)
- Follows Valley Pike (US 11) through Middletown and Stephens City
- Replaced in 2002
- Project cost was \$19 million

Water Distribution System

- 125 miles of water mains (cast iron, galvanized, and ductile iron)
- 5 storage tanks – 8.1 million gallons
- Two pressure zones
 - High Zone (additional pump station) on west side of City
 - Low Zone
- Biggest Challenge: Replacing old water mains

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Sewer Collection System

- 110 miles of gravity flow sewer mains (clay and PVC)
- Several pump stations
- System experiences significant infiltration during periods of wet weather
- Biggest Challenge: Replacing old infrastructure

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Utility Maintenance Shop



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Wastewater Treatment (Opequon Water Reclamation Facility)

- Facility is owned by Frederick-Winchester Service Authority
- City owns capacity in the facility
- City operates the facility as per an operational agreement (1987)

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Engineering

- Design and construction management of capital improvements
- Stormwater discharge permit administration
- Reviews all new development plans
- Erosion and sediment control program
- Flood program administration
- GIS (mapping)

[13]

Customer Service

- Billing and collections for all accounts
- Approx. 70,000 financial transactions per year
- Currently implementing a new utility billing system
- Significant customer service enhancements coming soon!!
 - Online account access
 - Automatic payments
 - IVR (automated phone system)

[14]

Discussion

