2019 Maine Sustainability & Water Conference

Financial Challenges of a Small Community
March 28, 2019

Presented by: Annaleis Hafford P.E., Vice-President
Manager of Operations
Olver Associates Inc.

About Olver Associates Inc.:

- Olver Associates Inc. contract operates 12 wastewater treatment facilities and 7 water systems.
- Most of these systems are considered disadvantaged and are sized at less than 1300 users.
- Our firm also assists many small disadvantaged communities in obtaining funding for municipal infrastructure or utility improvement projects.
- This funding is critical to the communities we serve and essential to their long term sustainability.

Financial Challenges of a Small Community

- Small communities have an insufficient number of users to support major infrastructure improvement projects.
- These communities have difficulty absorbing the ongoing cost increases to comply with regulatory mandates and ongoing operations and maintenance.
- Undersized communities also have difficulty raising sufficient reserves to support required capital improvements.
- We are reaching a time where capital improvements are required now that many of the facilities are 20 to 50 years beyond their initial construction.
- Municipalities are dealing with:
  - New requirements.
  - Higher operation and maintenance costs.
  - Replacement of existing outdated infrastructure.

Financial Challenges of a Small Community (continued)

- Many small communities are not financially disadvantaged according to the required assessment of Median Household Income (MHI).
- Therefore, these communities have difficulty in obtaining grant funding for municipal projects, necessitating excessively large user fees for payment of needed or required improvements.
- In many of these small communities, low-income households are within the community and saddled with unaffordable utility bills.
- Due to pressure from utility users, many public officials require flat budgets in order to minimize the impact to its customers.
- This results in Operation and Maintenance budgets that do not provide sufficient funds for ongoing maintenance.

Annual Sewer/Water Rates for Small Communities

Municipality/ District	Approx. # of Users	Minimum Sewer Rate ($/8000 ft^3)	Minimum Water Rate ($/8000 ft^3)	Total Utility Minimum Cost	Median Household Income (MHI)	Sewer Rate % of MHI
Calais	1,038	$830	$360	$1,190	$34,845	2.38%
Castine	380	$1,704	$1,109	$2,813	$48,036	3.55%
Corinna	215- sewer 27- water	$400 pending increase	$400	$800	$36,719	1.09%
East Machias	62	$853	N/A- wells	$853	$40,917	2.08%
Machias	654	$567	$404	$971	$20,156	2.81%
Stonington	202	$680	$896	$1,576	$40,375	1.68%
Winterport	321	$980	$835	$1,815	$40,000	2.45%

Some Key Issues for Small Communities

TOWN	KEY ISSUES
Calais	Combined sewer overflow (CSO) community needing a minimum of $6 to $10 million more to complete CSO program improvements after spending $14 million to date. This does not include the extensive funds spent on upgrading the City's treatment plant and water system. Calais is challenged with a shrinking user base with a large elderly population and low income. Extremely old water infrastructure with extensive ongoing needs.
Castine	Extensive treatment plant upgrade, sewer system and water system work completed, driving rates extremely high. Issues with insufficient source water ongoing along with aging sewer system and distribution piping needing replacement.

Some Key Issues for Small Communities
(continued)

TOWN	KEY ISSUES
Corinna	Extremely small customer base. Sewer system reconstructed in 2010 due to DEP requirement to relocate discharge out of stream. Lagoon system is nearing time to remove sludge. Water system only serves 27 users, more should be served but extension costs are expensive. Water system was developed due to hazardous contamination and originally funded primarily from the US EPA Superfund Program. DEP Program funding of $20,000 per year ended in 2004 leaving 27 (low to moderate income households left to pay for the system).
East Machias	Overboard Discharge System- Overall sewer system and treatment improvements. Approximate cost of $500,000. Original design of system requires more operational attention than was anticipated. There is very little user base available to pay for needed improvements.

Some Key Issues for Small Communities
(continued)

TOWN	KEY ISSUES
Machias	Combined sewer overflow community needing a minimum of $2 million more to complete CSO program after spending over $10 million to date. Other immediate needs include sludge handling or processing improvements. This community is one of the poorest in the State of Maine with an MHI of around $20,156.00. The combination of existing sewer and water bills is over 4.8 percent of the MHI.
Stonington	Primary WWTP- Future flood concerns for pump stations, needed sewer extension due to septic systems contaminating groundwater, insufficient water supply, failing transmission line and water tank. (Approximate cost of $5 million). The majority of users in this community are also considered Low to Moderate Income and prior to any of this work being funded they are paying 3.9% of their income for utility bills.

Some Key Issues for Small Communities
(continued)

TOWN	KEY ISSUES
Winterport	Primary WWTP- Consent Agreement to upgrade to secondary at an estimated cost of $15 million. The District currently has a failing primary treatment system with no ability to take it off line to complete repairs. To-date there has not been any ability to fund this project with a package that the District users could afford.

Winterport Case Study-Upgrade to Secondary WWTP

- District is under a Consent Agreement to upgrade its plant to secondary treatment at a cost of around $15 million. This is no fault of the District as both DEP and EPA approved primary treatment when the plant was constructed.
- Rates are already considered high compared to the state average.
- The overall average customer's income is not considered at poverty level, making it difficult to obtain adequate grant funds.
- District cannot afford to raise rates to pay for entire upgrade with only 308 users.

Winterport Case Study-Upgrade to Secondary WWTP (continued)

- If District had to pay for half of the upgrade, its rates for sewer alone would reach nearly $2,850 per year or 7.12% of the Median Household Income. Combined with the already high water rates this would result in an overall utility bill of 9.21%.
- The upgrade will also significantly increase operations and maintenance costs, which will further increase rates.
- Funding even 50% of this project through the District's customers alone is NOT POSSIBLE.
- The customers will not be able to afford these rates and it will be impossible to obtain local approvals without substantial grant funds.

Summary

- Many small communities are faced with extensive capital costs now that their utility systems are reaching the end of their useful life.
- Operation and Maintenance budgets are often not able to sustain the level of funds required for large capital improvements.
- Facilities are faced with new regulatory requirements at the same time their systems need upgrading due to age.
- For small systems to be sustainable, a better way to fund capital improvements is needed.