Working Smarter to Save Money: Finance and Management Tools and Techniques for Small Water Systems

Finance

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Session Objectives

- Learn how to think about your water system as a financial entity

- Understand some basic financial facts about water systems across the country

Let's Start With the Basics

- What does your water system do?

"System" is in the eye of the beholder

1) System serves an important **environmental and health purpose** -- protecting community's water resources and supplying community with highest quality drinking water.

2) System serves an important **public service** – providing community with basic services that everyone in the community can afford.

3) System serves as a well managed **public enterprise –** putting into practice forward-thinking sustainable business practices.

How do you see your system primarily?

1. Environmental and health purpose
2. Public service
3. Public enterprise/business
4. All of the above
5. None of the above

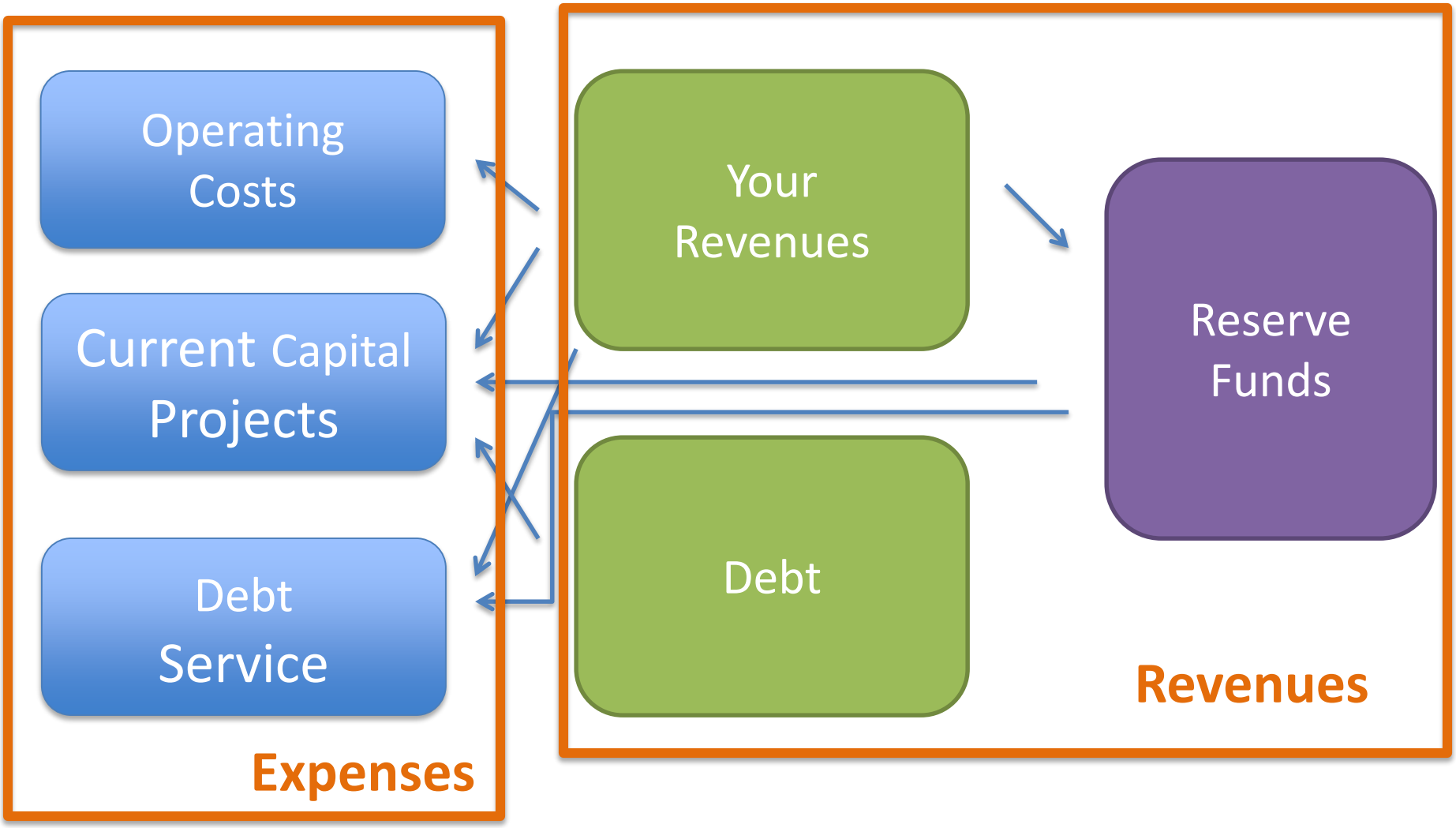
Enterprise Fund

Ideally, your water system is an enterprise fund, i.e., a self-sustaining business unit

How Many of you operate as an enterprise fund?

Small Systems Have to Understand Both The Expenses and Revenue and Their Relationship To Each Other

Water System Finance Diagram



One More Note…

Operating Costs

Current Capital Projects

Debt Service

X

Your Revenues

Debt

Reserve Funds

Understanding Operating Costs

- What you need to run your business day in and day out

- What are your operating cost categories?

Understanding Operating Costs

- Personnel
- Water bulk purchases
- Chemicals
- Office equipment
- Computers
- Supplies
- Repairs
- Spare Parts
- Vehicles
- Sample Costs
- Energy

Understanding Capital Costs

- The “big stuff”
- Rehabilitation & replacement of existing infrastructure
- New infrastructure as needed to serve your customers

Understanding Debt Service

- What you owe on loans and bonds, paid back on a regular schedule

Where does your water system revenue come from?

Revenue From Customers

- Rates
- Fees
- Penalties

Revenue From/To Reserve Accounts

- If revenues exceed costs, the extra money can go into a reserve account specifically for the water system

- If you include depreciation as a cost, this is where that money would go

Why Do You Need a Reserve Account?

- Future Capital Needs
- Rainy Day Fund—what happens if your revenue is decreased?
- Emergency Fund

How Much Do You Need In Your Reserves?

It depends

- Enough to pay for your most expensive piece of equipment?
- Enough to cover your costs if you had no revenue for two months?
- Enough to cover the projects in your capital improvement plan?

Assessing Your Financial Condition

Can You Sleep at Night?

- Is your utility (public enterprise) self sufficient? — Operating Ratio
- Can your utility meet its short term obligations? — Quick Ratio
- If your customers stop paying their bills, how long can you maintain operations? — Days Cash on Hand
- Are you able to cover your debt service after paying for your day to day operations? — Debt Service Coverage Ratio
- How much of your utility's expected life has already run out (and how much is left)? — Asset Depreciation

Where Do We Get Started?

- Audited Financial Statements!

A Tale of Two Systems

Helen, GA

- Service Population: 1,313
- Number of Connections: 505
- MHI in 2011: $30,972
- Percent Poverty: 23%

Woodbine, GA

- Service Population: 1,508
- Number of Connections: 580
- MHI in 2011: $29,891
- Percent Poverty: 27%

Operating Ratio

$$= \frac{Operating\ Revenues}{Operating\ Expenses}$$

Natural Benchmark: > 1.0

A measure of self sufficiency.

The revenue you get from daily operations, divided by the expenditures or expenses you make to keep operations running (see next slides)

This Funny Thing Called Depreciation

- This is an accounting solution to the problem of things getting old

- You have a “cost” every year of your infrastructure wearing out, a percentage of its value

T'mayto, Tahmahto: Operating Ratio

- You may wish to include depreciation in your operating ratio
  - Operating revenues divided by operating expenses including depreciation and the provision for bad debts.

- National Association of Clean Water Agencies
  - Operating revenues divided by operating expenditures (excludes depreciation).

A Tale of Two Systems

Helen, GA

- Operating Revenue (1): $709,972
- Operating Expenses (2) (including depreciation): $671,333
- **Operating Ratio: 1.06**

Woodbine, GA

- Operating Revenue (1): $444,231
- Operating Expenses (2) (including depreciation): $511,448
- **Operating Ratio: 0.87**

A Tale of Two Systems

Helen, GA

- Operating Revenue (1): $709,972
- Operating Expenses (2-3) (excluding depreciation): $459,082
- **Operating Ratio: 1.55**

Woodbine, GA

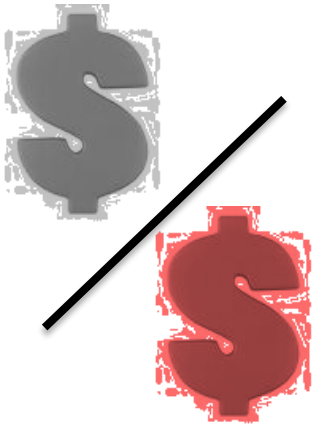
- Operating Revenue (1): $444,231
- Operating Expenses (2-3) (excluding depreciation): $368,985
- **Operating Ratio: 1.20**

Debt Service Coverage Ratio

$$= \frac{Operating\ Revenues - \ Operating\ Expenditures\ (excludes\ depreciation)}{Principal + Interest\ Payments\ on\ Long\ Term\ Debt}$$

Natural Benchmark: > 1

A measure of the ability to pay debt service with operating revenue: Operating revenue left over after daily operation expenditures, divided by debt service



A Tale of Two Systems

Helen, GA

- Operating Revenue (1): $709,972
- Operating Expenses (2-3) (excluding depreciation): $459,082
- P & I (4): $190,633
- **Debt Service Coverage Ratio: 1.32**

Woodbine, GA

- Operating Revenue (1): $444,231
- Operating Expenses (2-3) (excluding depreciation): $368,985
- P & I (4): $84,783
- **Debt Service Coverage Ratio: 0.89**

Quick Ratio

$$= \frac{Quick\ Assets\ (unrestricted, excluding\ Inventories\ and\ Prepaid\ Items)}{Current\ Liabilities}$$

Accepted Benchmark: > 2

A measure of short-term liquidity: ability to pay your current bills

A Tale of Two Systems

Helen, GA

- Current Unrestricted Assets (5):
  $634,407
- Current Liabilities (6):
  $898,474
- **Quick Ratio:**
  0.71

Woodbine, GA

- Current Unrestricted Assets (5):
  $326,000
- Current Liabilities (6):
  $108,390
- **Quick Ratio:**
  3.01

Days Cash on Hand

$$= \frac{Unrestricted\ cash\ and\ cash\ equivalents \times 365}{Operating\ Expenses - Depreciation}$$

Benchmark? At the very least, enough to last a billing cycle or when you expect a substantial inflow of cash

A measure of the ability of the utility to weather a significant temporary reduction in revenue to continue paying for daily operations

A Tale of Two Systems

Helen, GA

- Unrestricted cash & cash equivalents (7): $568,061
- Operating Expenses (2-3) (excluding depreciation): $459,082
- **Days Cash on Hand: 452**

Woodbine, GA

- Unrestricted cash & cash equivalents (7): $284,130
- Operating Expenses (2-3) (excluding depreciation): $368,985
- **Days Cash on Hand: 281**

Asset Depreciation*

$$= \frac{Accumulated\ Depreciation}{Gross\ Plant\ and\ Equipment}$$

Benchmark? Don't get close to 1.0

A measure of how much of your total assets have already depreciated. As you approach 1.0, your system is near the end of its expected life.

*Caveat – This indicator is only as good as your depreciation schedule and even then historic pricing is likely to distort the results.

A Tale of Two Systems

Helen, GA

- Accumulated depreciation (8): $2,670,974
- Total Capital Assets (9): $7,480,208
- **Asset Depreciation: 36%**

Woodbine, GA

- Accumulated depreciation (8): $2,514,933
- Total Capital Assets (9): $6,246,472
- **Asset Depreciation: 40%**

Transfers to the General Fund

- Generally, your water system should not be subsidizing other governmental services and vice versa

- However, if you receive services from the local government, it is appropriate for you to pay for them (time of town manager, attorney, payroll, etc.)

Why Care About This?

- Funders care about this

- As you think about the future needs of your system, you have to know where you are starting from

Debt Ratios

FitchRatings
KNOW YOUR RISK

Public Finance

Key Ratios Used in the 10Cs Rating Process — 2008 Medians

	Rating Category			
	AAA	AA	A	All Credits
Capital Demands and Debt Policies				
Total Outstanding Long-Term Debt Per Customer ($)	1,121	1,168	1,375	1,185
Projected Debt Per Customer — Year Five ($)	1,793	1,680	1,926	1,808
Coverage and Financial Performance/Cash and Balance Sheet Considerations				
Three-Year Historical Average Senior Lien ADS Coverage (x)	3.0	2.8	2.3	2.7
Current Senior Lien ADS Coverage (x)	2.8	3.0	2.5	2.8
Minimum Projected Senior Lien ADS Coverage (x)	1.7	2.0	1.7	1.9
All-In ADS Coverage (x)	2.4	2.3	2.2	2.2
Operating Margin (%)	41	36	35	36
Days Cash on Hand	571	318	282	313
Days of Working Capital	594	305	319	316