



Assessing Financial Condition

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Session Objectives

- Understanding where your water system is right now financially
- Learning some standard measures that funders will be concerned with



Can You Sleep at Night?

- Is your system self sufficient?
- Are you able to cover your debt service after paying for your day to day operations?
- If your customers stop paying their bills, how long can you maintain operations?
- Can your system meet its short term obligations?
- How much of your utility's expected life has already run out (and how much is left)?

Operating Ratio

Debt Service
Coverage Ratio

Days Cash on
Hand

Current
Ratio

Asset
Depreciation

Whiteboard Video: Financial Benchmarking

<http://www.waterrf.org/Pages/Projects.aspx?PID=4366>





A Tale of Two Systems That Look Similar On Paper...

- **Bavaria** and **Mayberry**
- Two average small town community water systems from the same state

Note: Actual numbers from actual towns



They Serve Similar Populations

Service
Population



Service
Connections





They Have Similar Demographics

MHI



Percent Poverty





...Though Vastly Different in
Financial Indicators (and In
Actual Appearance)



Mayberry



Bavaria



Statement of Net Position

- The assets and liabilities of the water system on the day the financial statements were prepared



Statement of Revenues, Expenses & Changes in Net Position

- Annual operating and non-operating revenues and expenses for the water system
- Also transfers to and from the general fund



Statement of Cash Flows

- Money in and money out of the water system



Notes to Financial Statements

- Explanations, where needed, to the financial statements



Operating Ratio

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

Please calculate two numbers—
one including depreciation, and one
excluding depreciation

Operating Ratio

Including Depreciation

MAYBERRY
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET ASSETS
PROPRIETARY FUNDS
FOR THE YEAR ENDED DECEMBER 31, 2010

	<u>Enterprise Funds</u> <u>Water and Sewer</u>	
OPERATING REVENUES		
Charges for services	\$ 444,231	
Grants	0	
Total operating revenues	<u>444,231</u>	- ①
OPERATING EXPENSES		
Personnel services	178,885	
Contractual services	63,898	
Other supplies and expense	126,202	- ③
Depreciation	<u>142,463</u>	- ②
Total operating expenses	<u>511,448</u>	
Operating income (loss)	<u>(67,217)</u>	



Operating Ratio – Mayberry

Including Depreciation

\$444,231

Operating Revenues (1)

1a.

—————

=

0.87

\$511,448

Operating Expenses (including depreciation) (2)

Operating Ratio Excluding Depreciation

MAYBERRY
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET ASSETS
PROPRIETARY FUNDS
FOR THE YEAR ENDED DECEMBER 31, 2010

	<u>Enterprise Funds</u>	
	<u>Water and Sewer</u>	
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Operating income (loss)	<u>(67,217)</u>	

Operating Ratio – Mayberry

Excluding Depreciation

1b.

$$\frac{\$444,231}{\$368,985} = 1.20$$

Operating Revenues (1)

Operating Expenses (excluding depreciation) (2-3)

OE \$511,448
- DEP \$142,463



Debt Service Coverage Ratio

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

Debt Service Coverage Ratio

MAYBERRY
STATEMENT OF REVENUES, EXPENSES, AND CHANGES IN NET ASSETS
PROPRIETARY FUNDS
FOR THE YEAR ENDED DECEMBER 31, 2010

MAYBERRY
STATEMENT OF CASH FLOWS
PROPRIETARY FUNDS
FOR THE YEAR ENDED DECEMBER 31, 2010

Page 1 of 2

OPERATING REVENUES
Charges for services
Grants
Total operating revenues

OPERATING EXPENSES
Personnel services
Contractual services
Other supplies and expense
Depreciation
Total operating expenses
Operating income (loss)

CASH FLOWS FROM OPERATING ACTIVITIES
Receipts from customers
Payments to suppliers
Payments to employees
Net cash provided by operating activities

CASH FLOWS FROM NONCAPITAL
FINANCING ACTIVITIES
Transfers in (out)
Net cash (used) by noncapital
financing activities

CASH FLOWS FROM CAPITAL AND RELATED
FINANCING ACTIVITIES

Loan proceeds
Purchases of capital assets
Principal paid on capital debt
Interest paid on capital debt
Net cash (used) by capital and
related financing activities

Enterprise Funds
Water and Sewer

\$ 437,947
(187,296)
(178,885)
71,766

(60,000)
(60,000)

0
(39,841)
(49,655)
(35,128)
(124,624)

} (4)

Debt Service Coverage Ratio

– Mayberry

$$\boxed{\$444,231} - \boxed{\$368,985}$$

Operating Revenues (1) Operating Expenses (2-3)
(excluding depreciation)

OE \$511,448
- Dep \$142,463

2.

$$= \boxed{0.89}$$

$$\boxed{\$84,783}$$

Principal & Interest on Long-Term Debt (4)

P \$49,655
+ I \$35,128



Days of Cash on Hand

$$= \frac{\textit{Unrestricted cash and cash equivalents}}{\textit{(Operating Expenses – Depreciation) / 365}}$$

Days of Cash on Hand

MAYBERRY
STATEMENT OF NET ASSETS
PROPRIETARY FUND
DECEMBER 31, 2010

Enterprise Funds
Water and Sewer

ASSETS

Current assets

Cash
Restricted cash
Receivables, net
Total current assets

107,706

176,424

41,870

326,000

Capital assets

Land and improvements
Distribution and collection systems
Buildings
Less accumulated depreciation
Total capital assets

10,229

5,732,845

503,398

(2,514,933)

3,731,539

Total Assets

\$ 4,057,539

LIABILITIES

Days of Cash on Hand – Mayberry

3.
$$\frac{\$107,706}{\$368,985 / 365} = 107$$

Unrestricted Cash & Cash Equivalents (5)
Operating Expenses (excluding depreciation) (2-3)

OE \$511,448
- DEP \$142,463



Current Ratio

$$= \frac{\textit{Unrestricted cash and cash equivalents} + \textit{Receivables, net}}{\textit{Current Liabilities}}$$

Current Ratio – Mayberry

4.

$$\frac{\begin{array}{l} \$107,706 \\ \text{Unrestricted Cash \&} \\ \text{Cash Equivalents (5)} \end{array} + \begin{array}{l} \$41,870 \\ \text{Receivables, net (6)} \end{array}}{\begin{array}{l} \$108,390 \\ \text{Current Liabilities (7)} \end{array}} = 1.38$$



Now You Calculate For Bavaria



Operating Ratio – Bavaria

Including Depreciation

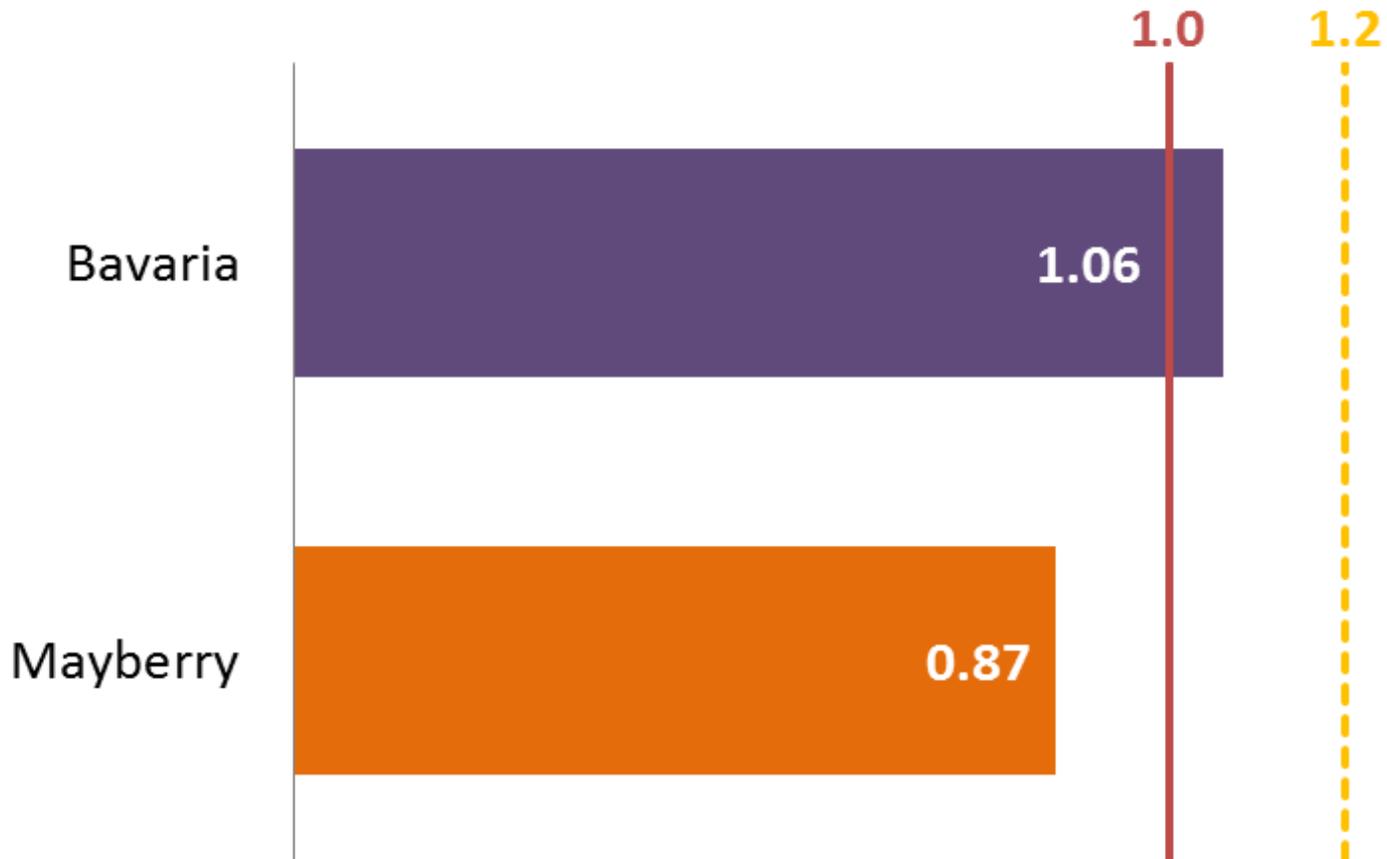
1a.

$$\frac{\$709,972}{\$671,333} = 1.06$$

Operating Revenues (1)

Operating Expenses (including depreciation) (2)

Operating Ratio Including Depreciation



Operating Ratio – Bavaria

Excluding Depreciation

1b.

\$709,972

Operating Revenues (1)



=

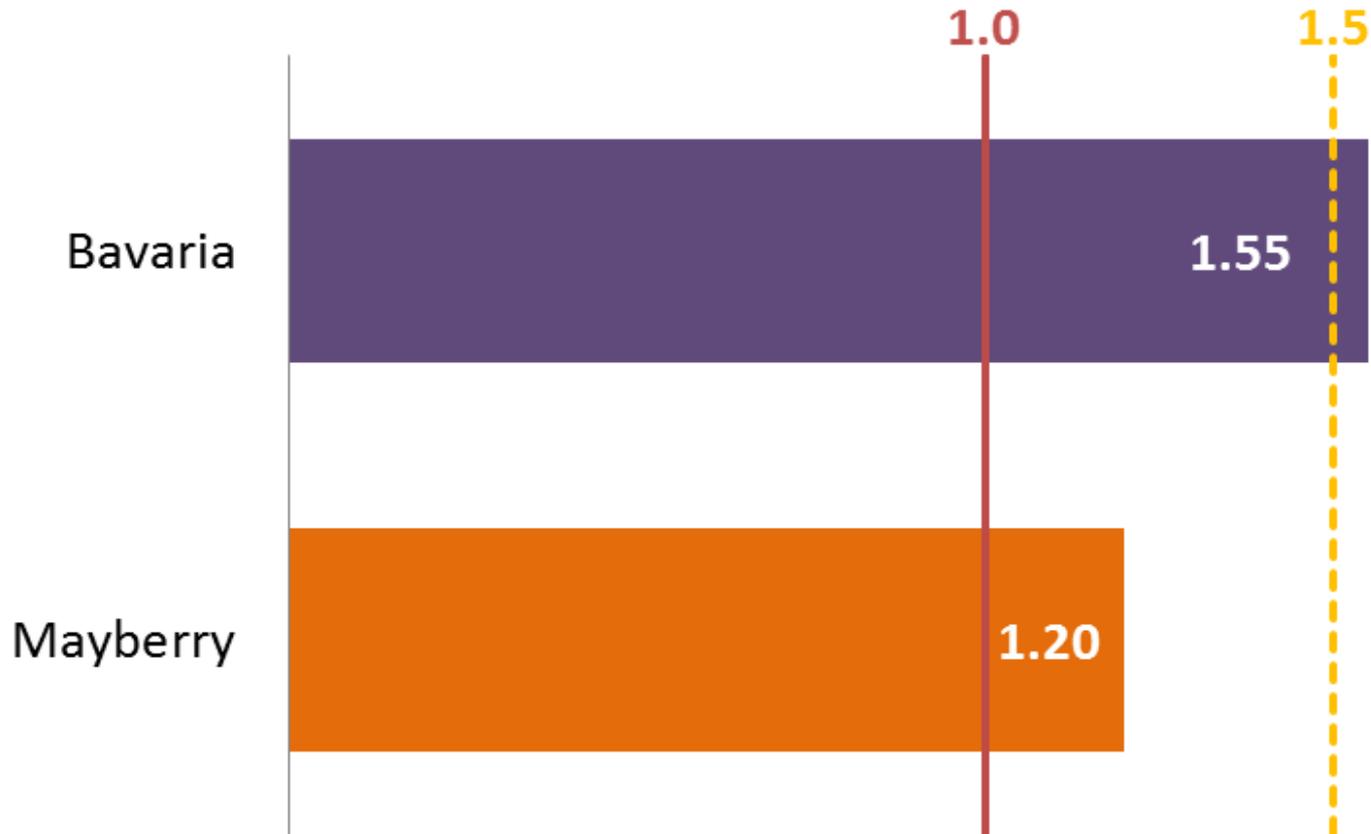
1.55

\$459,082

Operating Expenses (excluding depreciation) (2-3)

OE \$671,333
- DEP \$212,251

Operating Ratio Excluding Depreciation



Debt Service Coverage Ratio – Bavaria

$$\boxed{\$709,972} - \boxed{\$459,082}$$

Operating Revenues (1) Operating Expenses (2-3)
(excluding depreciation)

OE \$671,333
- Dep \$212,251

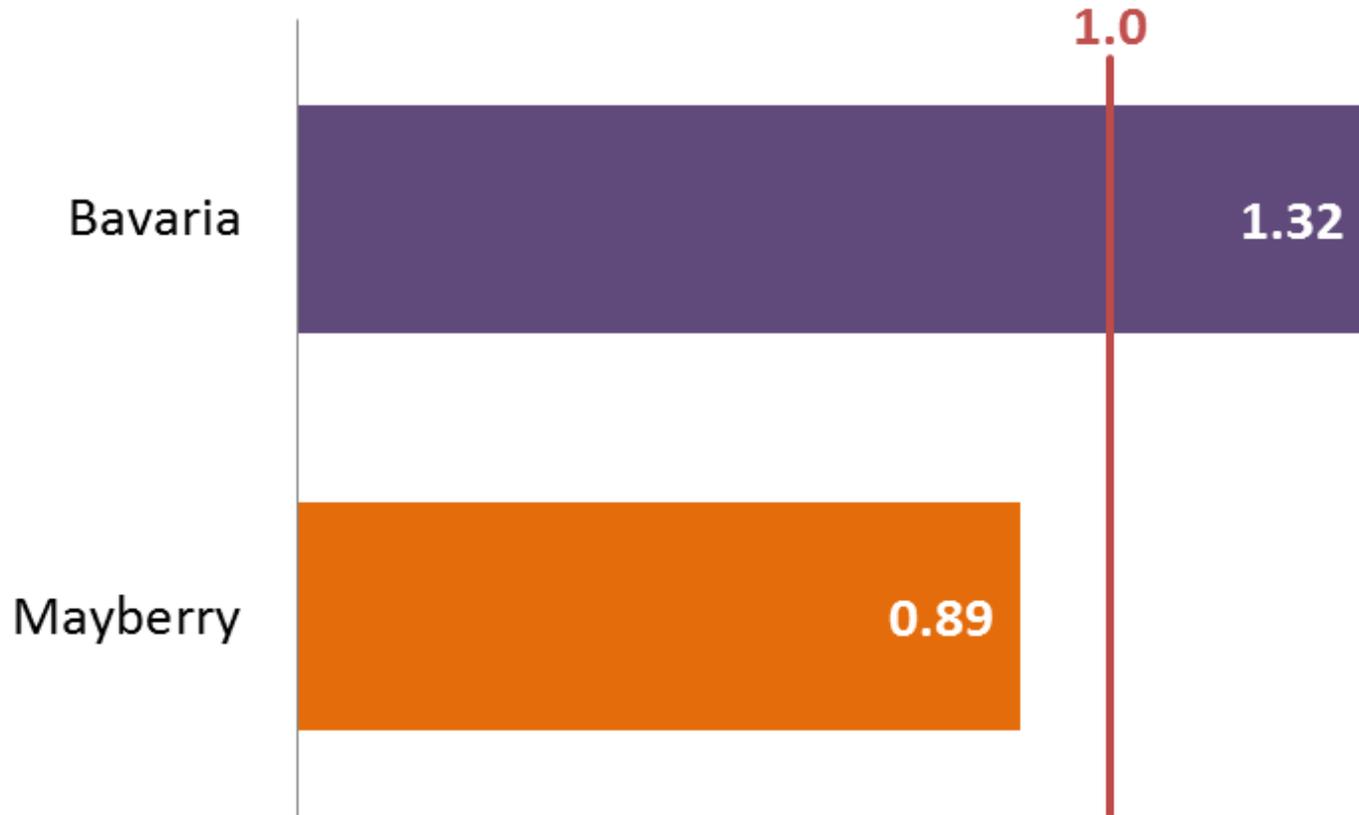
2.

$$\boxed{\$190,633}$$

Principal & Interest on Long-Term Debt (4)

= $\boxed{1.32}$

Debt Service Coverage Ratio



Days of Cash on Hand – Bavaria

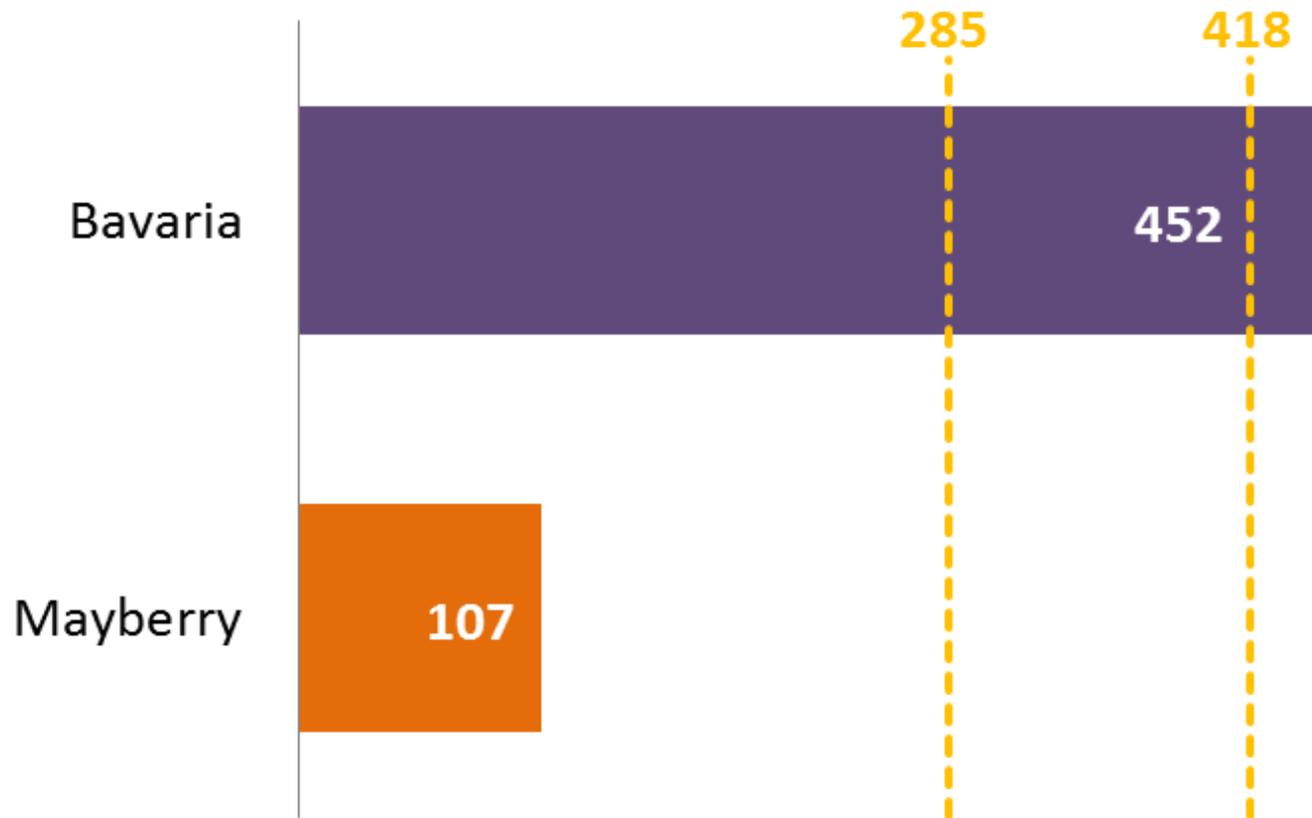
3.
$$\frac{\$568,061}{\$459,082 / 365} = 452$$

Unrestricted Cash & Cash Equivalents (5)

Operating Expenses (excluding depreciation) (2-3)

OE \$671,333
- Dep \$212,251

Days of Cash on Hand



Current Ratio – Bavaria

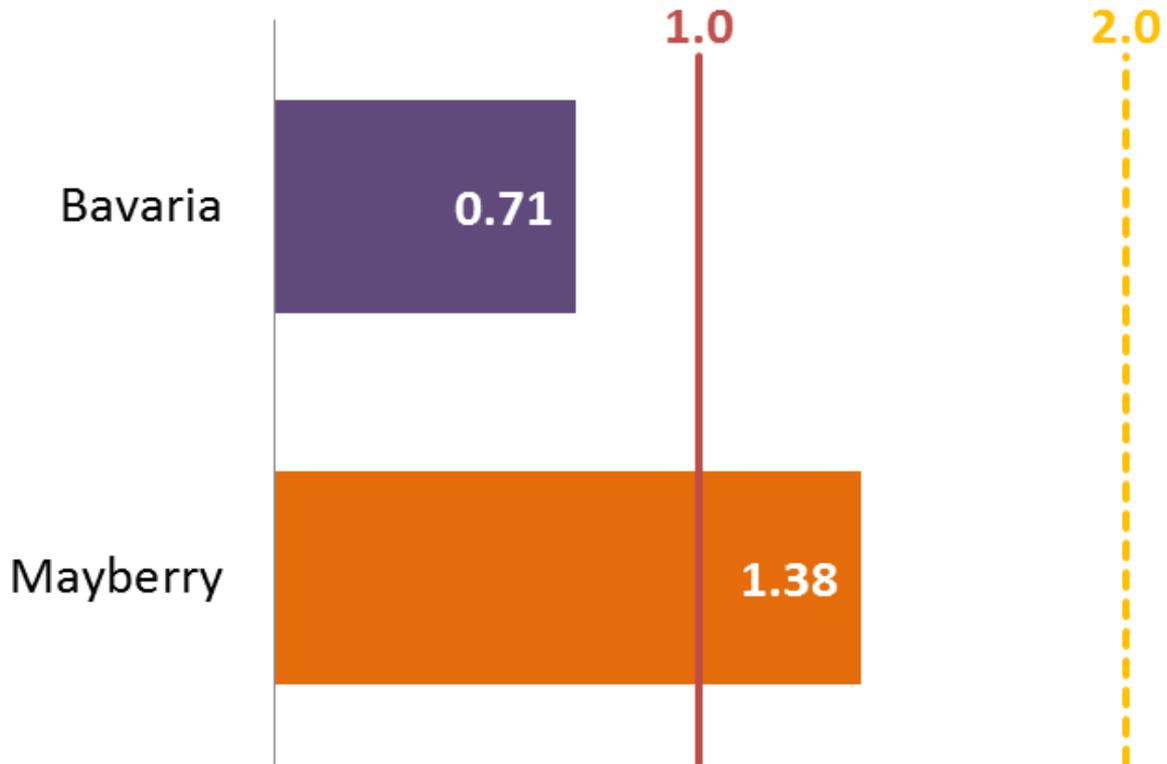
4.

$$\frac{\$568,061 + \$66,346}{\$898,474} = 0.71$$

Unrestricted Cash & Cash Equivalents (5) *Receivables, net (6)*

Current Liabilities (7)

Current Ratio





What Happened to **Bavaria**?

Or

Why the Notes to Financial Statements are Crucial

The accompanying notes are an integral part
of these financial statements.

Bavaria corrected

C \$568,061
+ G \$460,005

$\$1,028,066$ + $\$66,346$
Unrestricted Cash & Cash Equivalents (5) Receivables, net (6)

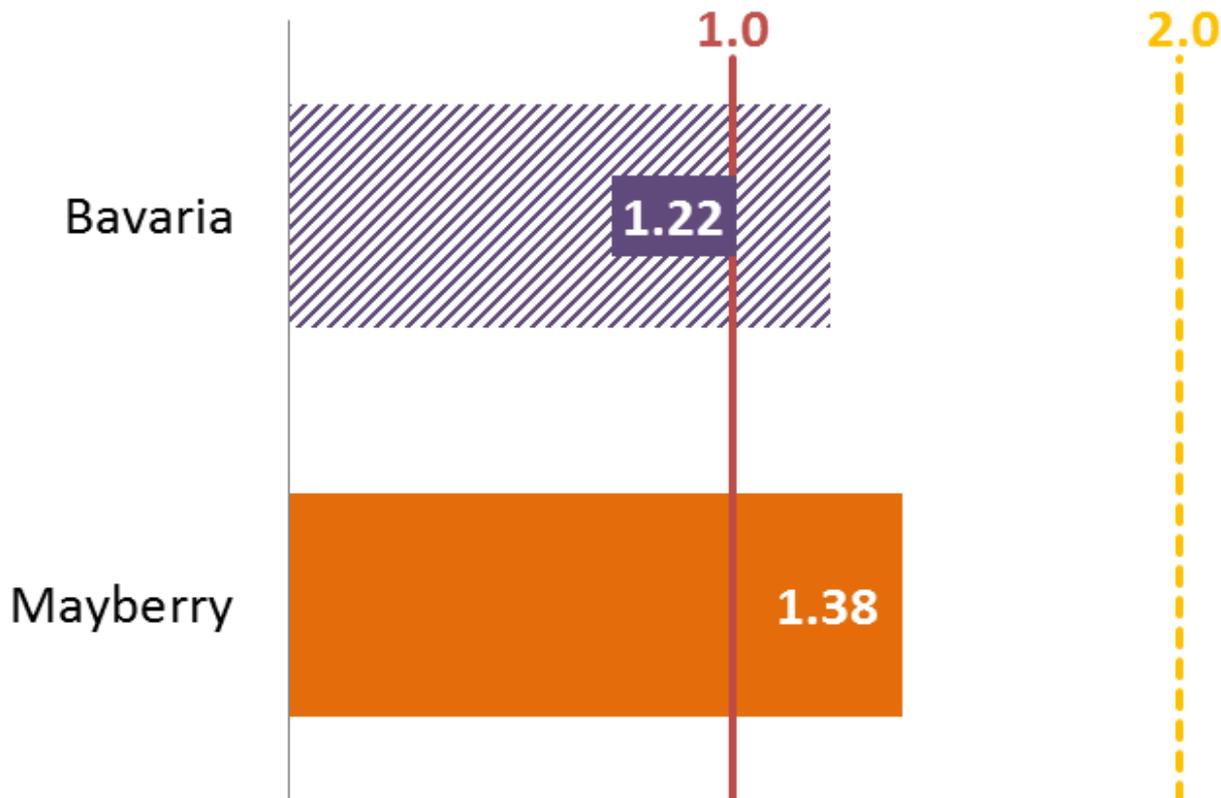
4.

$\$898,474$
Current Liabilities (7)

= 1.22

Current Ratio

Bavaria Corrected for Missing Grant Funds





One More to Mention: Asset Depreciation*

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

Benchmark? Don't get close to 1.0

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



Why Care About This?

- Funders and ratings agencies care about this
- As you think about the future needs of your system, you have to know where you are starting from

<https://efc.sog.unc.edu/resource/financial-health-checkup-water-utilities>



Financial Health Checkup FOR WATER UTILITIES



UNC

ENVIRONMENTAL FINANCE CENTER

Developed by the Environmental Finance Center
at the University of North Carolina, Chapel Hill
<http://efc.sog.unc.edu>



Smart Management for
Small Water Systems



A resource for water systems through the Environmental Finance Center Network's
Smart Management for Small Water Systems project, funded under a cooperative
agreement with the U.S. Environmental Protection. <http://efcnetwork.org>

Begin

What does this tool do?

This tool assists in the assessment of the financial performance of a water (and/or wastewater) utility fund. Financial data readily available in annual financial statements are copied into this tool, which computes key financial indicators that measure a variety of important metrics, such as the ability to pay debt service, availability of cash to pay for operations and maintenance, the sufficiency of revenues generated, etc. Each metric is compared against targets that are specified by the user. The tool demonstrates the financial strengths and weaknesses of the utility fund in the past 5 years.

Features:

- Simple data entry (uses data already reported in your audited financial statements)
- 6 financial performance indicators with explanations

Instructions

Enter Financial Data

Key Financial Indicators

View Graphs

Example Statements

Blank worksheet



Set targets, enter five years of data, and see
your system's financial health trends over time

<http://efc.web.unc.edu/2015/02/27/operating-ratio/>



Key Financial Indicators for Water and Wastewater Systems: Operating Ratio

FEBRUARY 27, 2015 / GLENN BARNES / COMMENTS OFF ON KEY FINANCIAL INDICATORS FOR WATER AND WASTEWATER SYSTEMS: OPERATING RATIO

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In previous posts, we have discussed where to find [data](#) to help water and wastewater systems make smart financial and managerial decisions. Another vital data source for any water and wastewater system is its own financial

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<http://efc.web.unc.edu/2015/04/23/debt-service-coverage-ratio/>



Key Financial Indicators for Water and Wastewater Systems: Debt Service Coverage Ratio

APRIL 23, 2015 / GLENN BARNES / COMMENTS OFF ON KEY FINANCIAL INDICATORS FOR WATER AND WASTEWATER SYSTEMS: DEBT SERVICE COVERAGE RATIO

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In a previous post, we outlined how to use the financial statements of a water or wastewater system to calculate the **key financial indicator** of **operating ratio**, a measure of self-sufficiency. Another **key financial indicator** is **debt service**

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<http://efc.web.unc.edu/2015/06/24/days-cash-on-hand/>



Key Financial Indicators for Water and Wastewater Systems: Days of Cash on Hand

JUNE 24, 2015 / GLENN BARNES / COMMENTS OFF ON KEY FINANCIAL INDICATORS FOR WATER AND WASTEWATER SYSTEMS: DAYS OF CASH ON HAND

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In previous posts, we outlined how to use the financial statements of a water or wastewater system to calculate the [key financial indicators](#) of [operating ratio](#) (a measure of self-sufficiency) and [debt service coverage ratio](#) (a measure of a

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<http://efc.web.unc.edu/2015/10/01/key-indicator-current-ratio/>



Key Financial Indicators for Water and Wastewater Systems: Current Ratio

OCTOBER 1, 2015 / GLENN BARNES / 0 COMMENTS

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In previous posts, we outlined how to use the financial statements of a water or wastewater system to calculate the [key financial indicators](#) of [operating ratio](#) (a measure of self-sufficiency), [debt service coverage ratio](#) (a measure of a system's ability to pay its long-term debts) and [days of cash on hand](#) (a measure of a

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