



Smart Management for  
Small Water Systems

## Multi-Funding Workshop for Small Water Systems

08/17/17| Springfield, MO

[www.efcnetwork.org](http://www.efcnetwork.org)



UNC  
ENVIRONMENTAL  
FINANCE CENTER



environmental finance center network



American Water Works  
Association

This program is made possible under a cooperative agreement with the U.S. EPA.



# Background

Applying for a grant or a loan?



# **Compare and contrast grants vs loans: sustainable funding sources**



# How the Payments are Made For Infrastructure Projects

- Save in advance and pay
- Pay as you go (current receipts)
- **Pay afterwards (someone loans you money)**
- **Grants**



# About Grants

**FREE Grant Money For You - Message (HTML)**

File Edit View Insert Format Tools Actions Help

Reply Reply to All Forward [Icons]

From: Amy Cornett [suny@easypeasy.com]  
To: jezter@email.unc.edu  
Cc:  
Subject: FREE Grant Money For You

**Qualifying for a free cash grant is easy!**

- ***\$10,000 to over \$500,000 in FREE Grant Money is Available NOW!***
- ***Never Repay***
- ***No Credit Checks***
- ***No Interest Charge***

To see if you meet the requirements,  
please visit our web site: [CLICK HERE NOW!](#)

With best regards,

The Grant Giveaway Team

**NOT a good way to find a grant!**



# Grants Aren't Completely Free Money

- Application for the grant can be expensive – staff time and money
- Applications can take months to process
- Often lots of strings attached
- Often require a percentage match
- Lots of competition
- Difficult to sustain



## In the Old Days...

- Water systems took advantage of the federal government's ambitious construction grants program of the 1970s and 1980s
- It seemed like “free” money



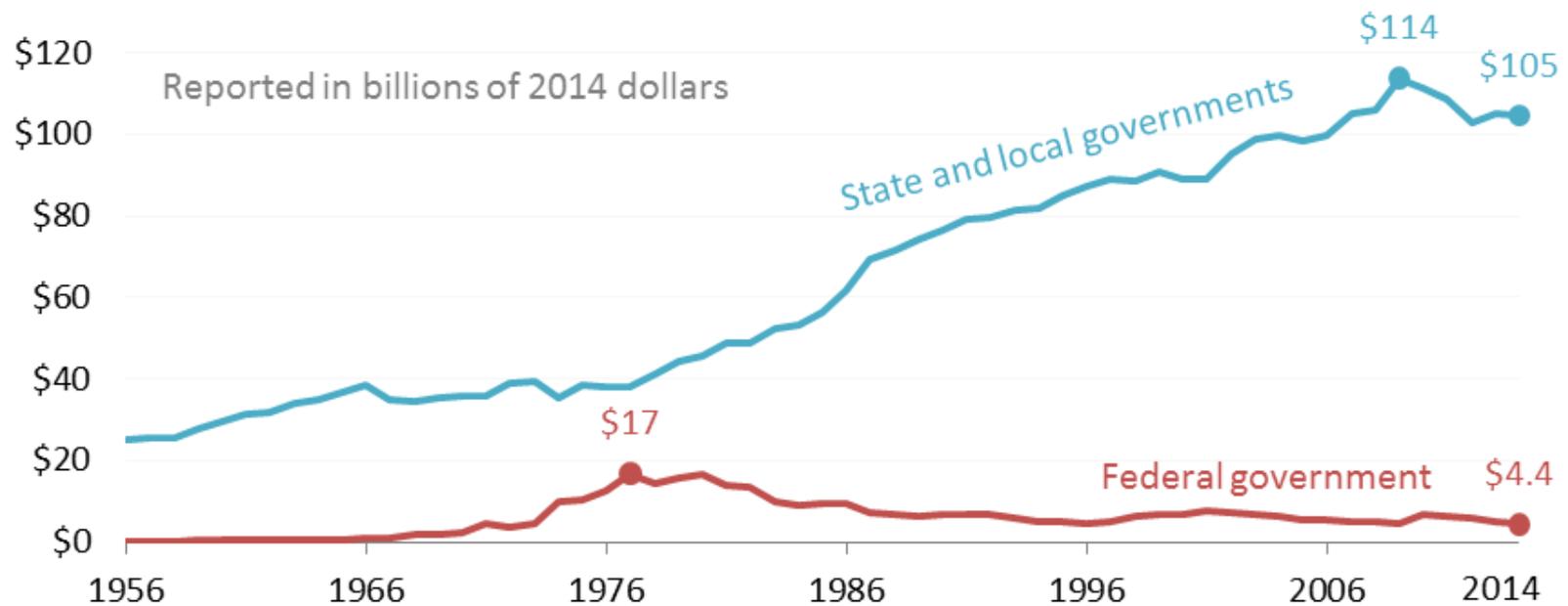
# Capital Finance Today

- The money never really was “free”—it came from tax dollars
- Today, the financial burden has been shifted away from federal and state tax dollars (grants) to funds raised by the water system itself (customer sales and loans). For example...



## State and local government spending on water and wastewater utilities continued to grow while federal spending declined since the 1980s

State and local governments spent 24 times as much as the federal government in 2014



Graphed by the Environmental Finance Center at the University of North Carolina, Chapel Hill.

Source: Congressional Budget Office supplemental data for the *Public Spending on Transportation and Water Infrastructure, 1956 to 2014* report (March 2015). Displays public spending on supply systems for distributing potable water as well as wastewater and sewage treatment systems and plants. Real spending is shown after adjusting nominal spending to their 2014 dollar equivalent using infrastructure-specific price indexes.



# Loans

- Typically from a bank
- Can be from a government-sponsored program such as the Drinking Water State Revolving Fund



# The Debt Market

- Why Borrow?
- Water infrastructure has a long useful life. You may wish to amortize the loan over the life of the equipment so that the people who benefit from the system pay for it



# Bonds

- A written promise to repay borrowed money (on a definite schedule and usually at a fixed rate of interest for the life of the bond)
- Different types exist:
  - General Obligation (GO)
  - Revenue



Source: bettermondays.com



# When You Need Cash Now: The Debt Market

- Lenders will look at your creditworthiness, your ability to repay the debt, in determining whether to loan to you and your interest rate
- Certain best practices can increase your chances of funding



# Using Metrics from a Rates Dashboard



# Rates Dashboards

Select “Map of Water and Wastewater Rates Dashboards” under the Resources Tab, and click on any state in blue to view its dashboard.

**EFCN** Innovative Finance Solutions for Environmental Services

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🏠 > MAP OF WATER AND WASTEWATER RATES DASHBOARDS

Resource Library  
E-Learning Modules  
Funding Sources by State  
**Map of Water and Wastewater Rates Dashboards**

## Map of Water and Wastewater Rates Dashboards

This map shows Water and Wastewater Rates Dashboards created by the EFCN:

Click a state in blue to view its dashboard



Example  
Dashboard:

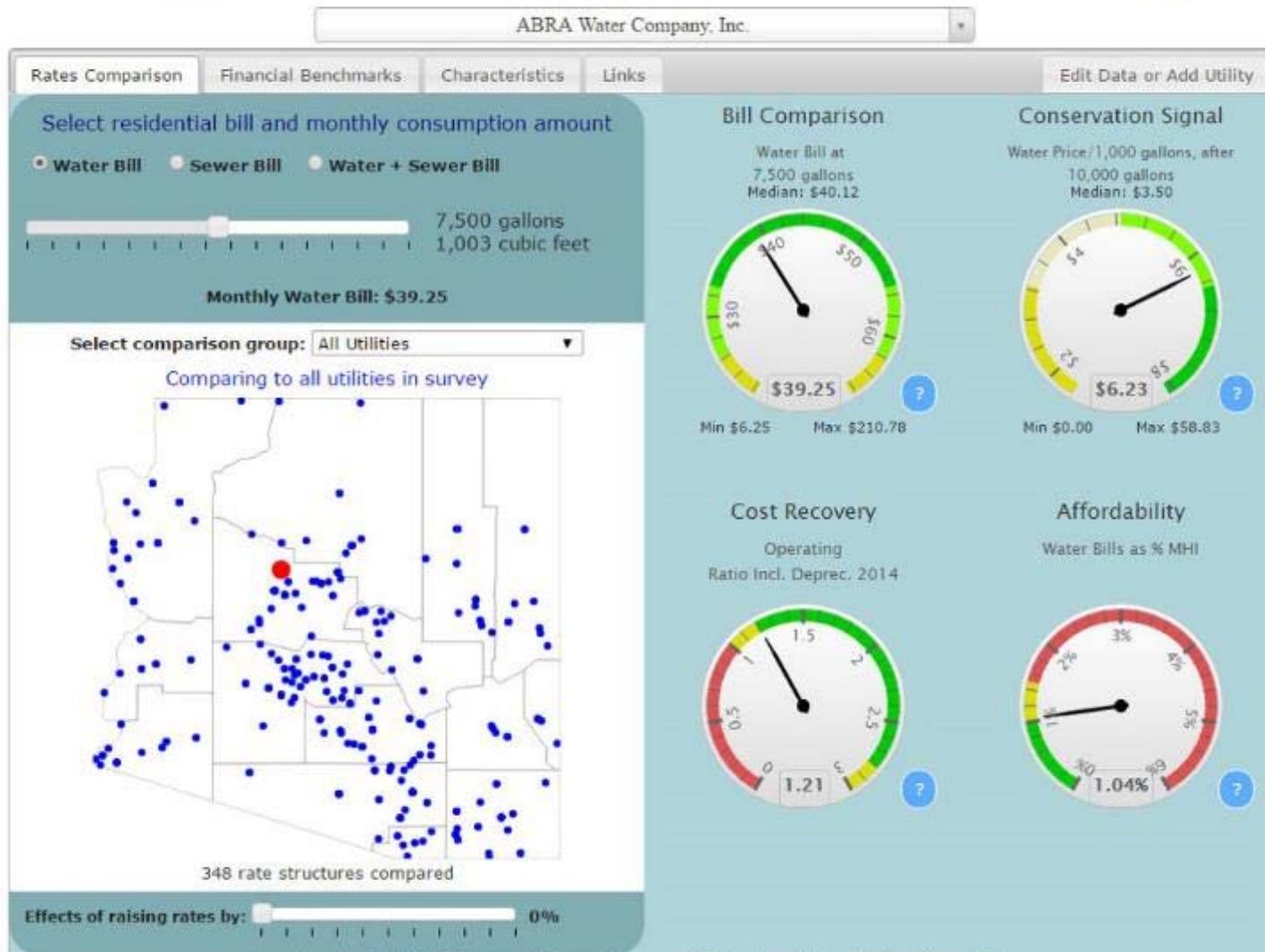


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## AZ Water and Wastewater Rates Dashboard

Rates as of April 2015

Last updated: September 9, 2015





Example  
Dashboard:



# AZ Water and Wastewater Rates Dashboard

Rates as of April 2015  
Last updated: September 9, 2015



ABRA Water Company, Inc.

- Rates Comparison
- Financial Benchmarks
- Characteristics
- Links
- Edit Data or Add Utility

Select service provided. (Display will not change if the utility has a combined water and sewer enterprise fund.)

- Water Bill
- Sewer Bill
- Water + Sewer Bill

### Ability to cover expenditures and debt service

Op. Rev. / Op. Expend.



### Measures of liquidity

Days Cash on Hand



### Cost Recovery

Operating Ratio (Incl. Dep.)





# Benchmarking



# Can You Sleep at Night?

Is your system self sufficient?

Operating Ratio

Are you able to cover your debt service after paying for your day to day operations?

Debt Service Coverage Ratio

If your customers stop paying their bills, how long can you maintain operations?

Days Cash on Hand

Can your system meet its short term obligations?

Current Ratio

How much of your system's expected life has already run out?

Asset Depreciation



# Whiteboard Video: Financial Benchmarking for Water Utilities

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





## Quick Review of Key Financial Indicators

Operating Ratio

Current Ratio

Debt Service  
Coverage Ratio

Days of Cash  
on Hand

Asset Depreciation



**Is your system self-sufficient?**



# Operating Ratio

**OPERATING REVENUES**



**OPERATING EXPENSES**



Include or  
Exclude

**DEPRECIATION**

ANNUAL COST OF WEAR  
AND TEAR ON THE SYSTEM

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



**Are you able to cover your debt service after paying for your day to day operations?**



# Debt Service Coverage Ratio

**OPERATING REVENUES – OPERATING EXPENSES**  
(EXCLUDING DEPRECIATION)

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**PRINCIPAL + INTEREST PAYMENTS**  
ON LONG TERM DEBT

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



**Can your system meet its short  
term obligations?**



# Current Ratio

**UNRESTRICTED CURRENT ASSETS  
EXCLUDING INVENTORIES AND  
PREPAID ITEMS**

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**CURRENT LIABILITIES**

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



**If your customers stop paying  
their bills, how long can you  
maintain operations?**



# Days Cash on Hand

**UNRESTRICTED CASH AND INVESTMENTS**

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**OPERATING EXPENSES EXCLUDING  
DEPRECIATION & AMORTIZATION / 365**

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



**How much of your system's  
expected life has already run out?**



# Asset Depreciation

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

Caveat: this indicator is only as accurate as your depreciation schedule, and even then historic pricing is likely to distort the results.



# Where Do We Get Started?

- Local governments: audited financial statements
- Non-governments: balance sheets, shareholder reports, annual reports, etc.

BAVARIA STATEMENT OF NET ASSETS PROPRIETARY FUND JUNE 30, 2011	
	Water and Sewer Enterprise Fund
<b>Assets</b>	
Current Assets:	
Cash - operating	\$ 568,001
Accounts Receivable (Net)	60,346
Prepaid Insurance	5,856
Total Current Assets	640,203
Noncurrent Assets:	
Restricted cash	177,208
Capital assets	
Land	209,556
Buildings	22,982
Improvements other than buildings	5,873,769
Machinery and equipment	896,073
Construction in progress	1,454,079
Less: Accumulated depreciation	(2,883,225)
Deferred Charge	39,833
Total noncurrent assets	5,781,215
Total Assets	6,421,418
<b>Liabilities</b>	
Current Liabilities:	
Accounts Payable	21,090
Accrued Expenses	2,767
Due to Other Funds	8,176
Customer Deposits	62,625
Deferred Subsidy Revenue	460,505
Current Portion of Long Term Debt	343,811
Total Current Liabilities	899,474
Noncurrent Liabilities:	
Compensated Absences	15,605
Revenue Bonds (Net of current portion)	233,357
Notes Payable (Net of current portion)	646,823
Total Noncurrent Liabilities	895,825
Total Liabilities	1,795,299
<b>Fund Net assets</b>	
Invested in capital assets, net of related debt	4,355,133
Restricted for debt service	114,583
Unrestricted	163,361
Total fund net assets	\$ 4,633,077



# Financial Health Checkup for Water Utilities

<http://efc.sog.unc.edu> or <http://efcnetwork.org>

Find the most up-to-date version in Resources / Tools

### Financial Health Checkup for Water Utilities



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



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>

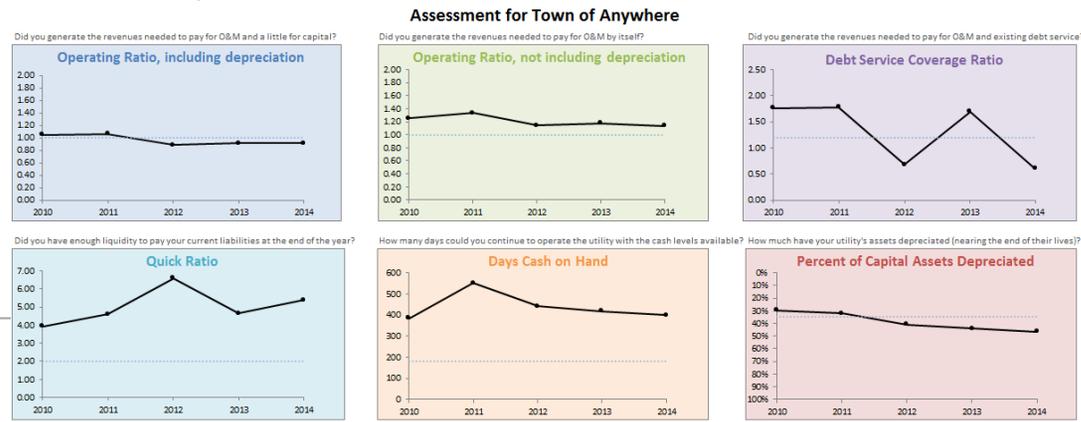
**What does this tool do?**  
This tool assists in the assessment of the financial performance of a water (and/or wastewater) utility fund. Financial data readily available in annual financial statements are copied into this tool, which computes key financial indicators that measure a variety of important 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  
Set your own targets  
Assessment of last year's financial ratios, improvements since previous year, and five-year trends  
Guided navigation through hyperlinked images

**What are financial indicators?**  
Watch a whiteboard video explaining financial performance indicators in lay terms.



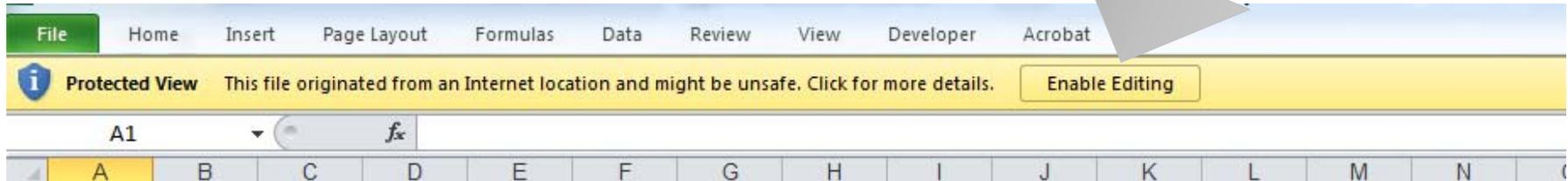
Excel®- based tool  
Free to use



Created by the Environmental Finance Center at the University of North Carolina, Chapel Hill's School of Government  
A resource for water systems from the EFCN's Smart Management for Small Water Systems project  
funded under a cooperative agreement with the U.S. E.P.A.



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# 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



## So....

- Now that we know where we are, let's decide where we are going...
- How do we estimate the future costs and revenues?



**BREAK**