



Smart Management for
Small Water Systems

Capital Planning for Water Systems and the Drinking Water State Revolving Fund

September 28, 2017 | Great Falls, MT

Montana League of Cities and Towns Annual Conference

www.efcnetwork.org



UNC
ENVIRONMENTAL
FINANCE CENTER



American Water Works
Association

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



About the Environmental Finance Center Network (EFCN)

The Environmental Finance Center Network (EFCN) is a university-based organization creating innovative solutions to the difficult how-to-pay issues of environmental protection and improvement. The EFCN works with the public and private sectors to promote sustainable environmental solutions while bolstering efforts to manage costs.

The Smart Management for Small Water Systems Program

This program is offered free of charge to all who are interested. The Program Team will conduct activities in every state, territory, and the Navajo Nation. All small drinking water systems are eligible to receive free training and technical assistance.

What We Offer

Individualized technical assistance, workshops, small group support, webinars, eLearning, online tools & resources, blogs

The Small Systems Program Team

- Environmental Finance Center at The University of North Carolina at Chapel Hill
- Environmental Finance Center at Wichita State University
- EFC West
- New England Environmental Finance Center at the University of Southern Maine
- Southwest Environmental Finance Center at the University of New Mexico
- Syracuse University Environmental Finance Center
- Environmental Finance Center at the University of Maryland
- American Water Works Association (AWWA)



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MARYLAND
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American Water Works
Association

Areas of Expertise



Asset Management



Rate Setting and Fiscal Planning



Leadership Through Decision-making and Communication



Water Loss Reduction



Energy Management Planning



Accessing Infrastructure Financing Programs



Workforce Development



Water Conservation Finance and Management



Collaborating with Other Water Systems



Resiliency Planning



Managing Drought



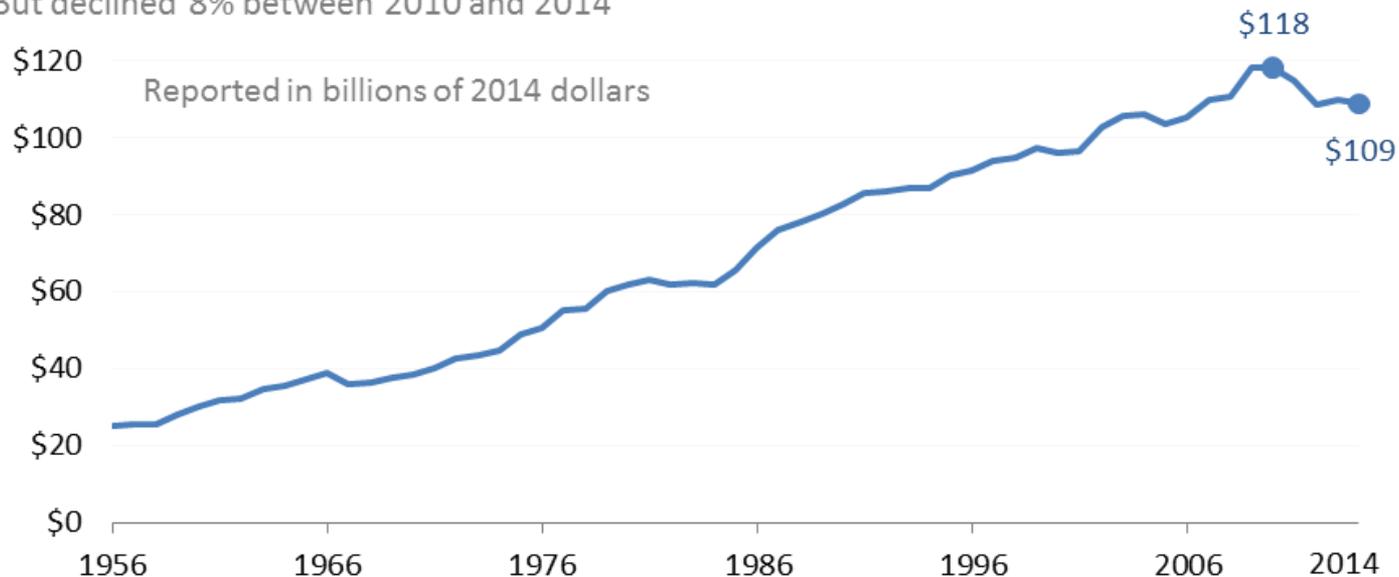
Outline

- The basics of funding capital projects
- Montana's funding sources
- DWSRF requirements

Total Public Spending Has Grown...

Total federal, state and local government spending on water and wastewater utilities grew steadily over time

But declined 8% between 2010 and 2014



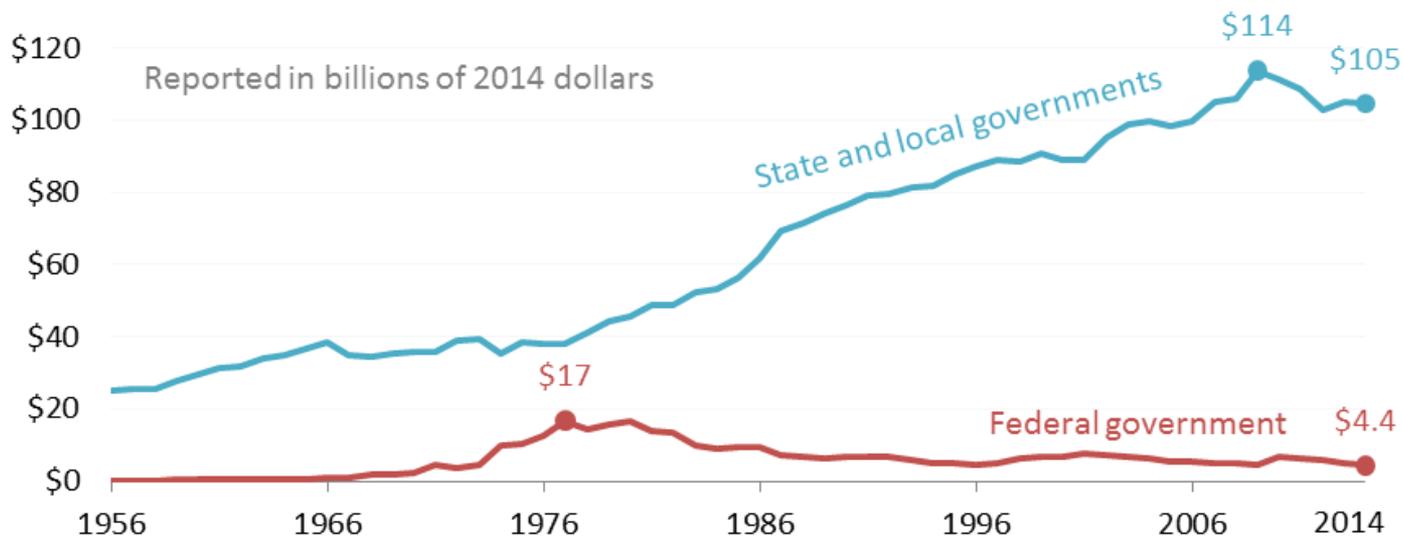
Graphed by the Environmental Finance Center at the University of North Carolina, Chapel Hill.

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.

...Mostly from States and Locals

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

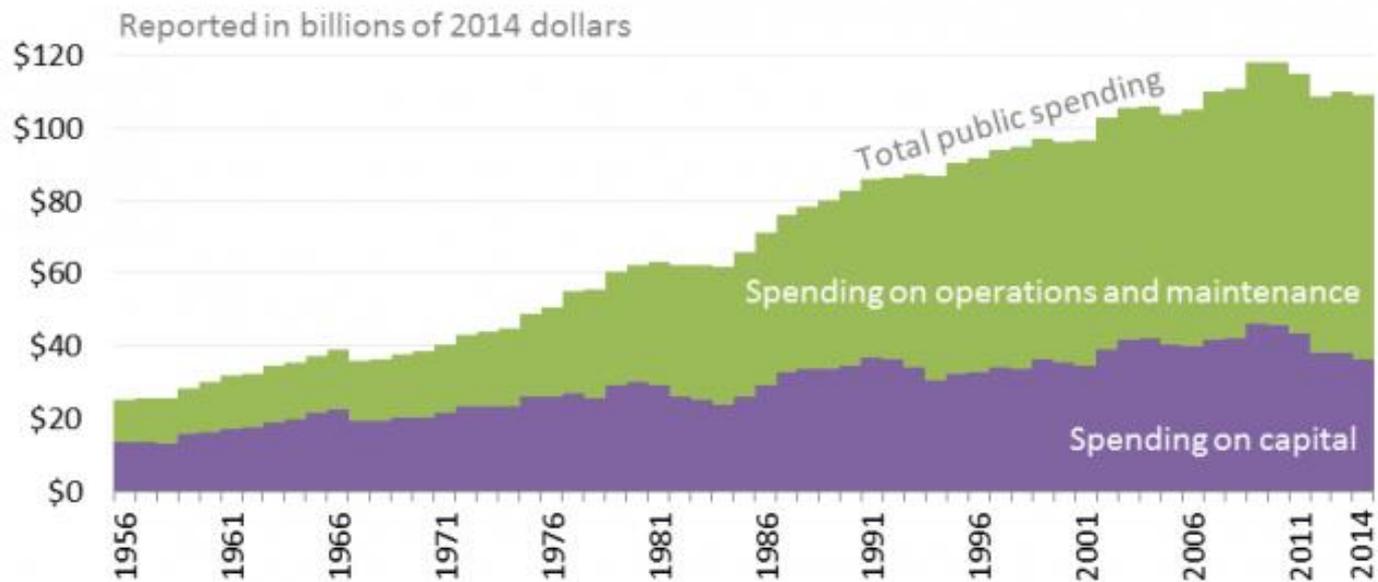


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...And Mostly for O&M, not Capital

Federal, state and local government spending on water and wastewater utilities, 1956 - 2014



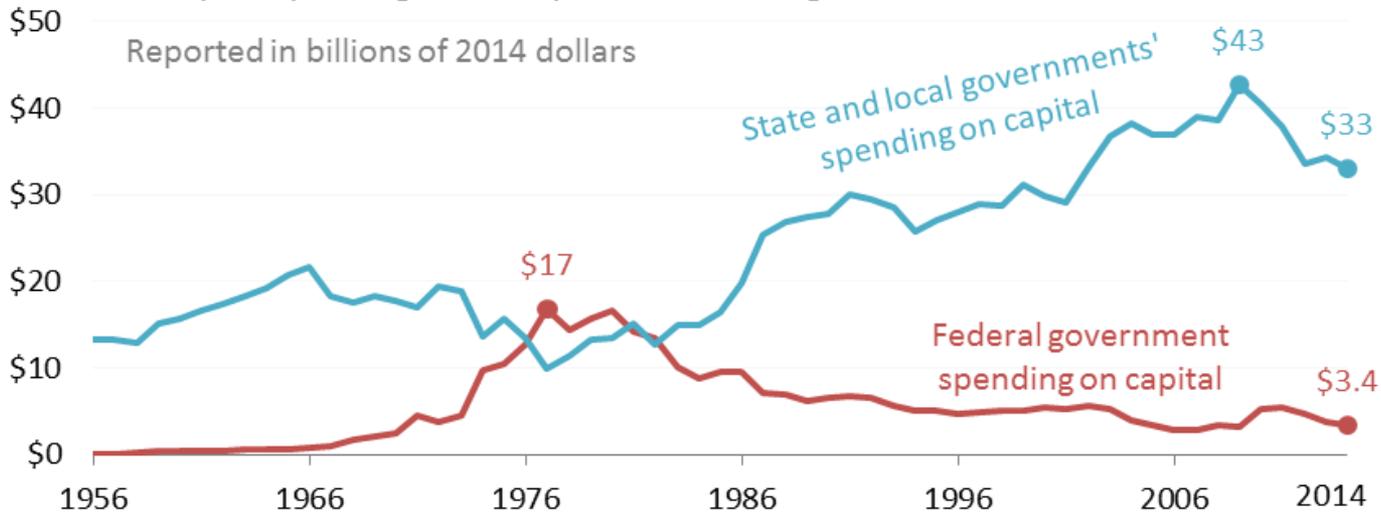
Graphed by the Environmental Finance Center at the University of North Carolina, Chapel Hill.

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.

Feds Used to Spend More on Capital

Spending on capital infrastructure for water and wastewater utilities has increasingly been provided by **state and local governments** while **federal spending on capital infrastructure** declined since the 1980s

Over 90% of capital spending occurs by state and local governments



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.



<http://efc.web.unc.edu/2015/09/09/four-trends-government-spending-water/>

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.

Four Trends in Government Spending on Water and Wastewater Utilities Since 1956

SEPTEMBER 9, 2015 / SHADI ESKAF / 0 COMMENTS

 Print  PDF

According to data collected and published by the Congressional Budget Office (CBO), federal, state and local governments in the United States spent more than \$2.2 trillion in the last 59 years on operations, maintenance and capital infrastructure of water and wastewater utilities. That equates to more than \$4 131 000 000 000 in 2014 dollars adjusting for inflation of infrastructure-



Capital Finance 40 Years Ago...

Water systems took advantage of the federal government's ambitious construction grants program of the 1970s.

The grants were covered through federal taxes and other federal revenue sources.



Capital Finance Today

Today, mostly finance water systems through revenues, loans, and bonds.

In other words, you (your customers) pay directly.



Capital Finance Today

The reality is that water and wastewater infrastructure is expensive, regardless of the size of your system. Smaller or poorer systems will likely have a hard time paying for capital improvements.



How to Pay for Capital Projects



Two Things All Water Systems Should (or Even Must) Do:

Asset Management Planning

&

Capital Improvement Planning



Ways To Pay

- Pay as you go (current receipts)
- Save in advance and pay
- Pay later (someone loans you money)
- Grants (let someone else pay)

Keep in mind that some projects may need more than one source of funding.



Some projects can be funded by a single source but many require more than one source of funding



Benefits to Multiple Funding

- Can fund a whole project (if one source is not capable)
- Can potentially involve better funding conditions (lower overall interest rates or possibly some grant portion)
- Can allow for a greater range of activities within the project



Challenges with Multiple Funding

- Understanding the funding restrictions for each source
- Determining the deadlines and application process for each funding source
- Completing and submitting applications
- Navigating the reimbursement process



Total Funding Needed

Determine How Much
Internal Funding
Will Be Used

Determine How
Much External
Funding Will Be
Used

Replacement
Reserves

Utility
Expansion
Charges or
Similar

Customer
Rates/Revenues



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



The Debt Market

Two types – loans and bonds

- Loans are universally available, typically from banks, or can be from a government-sponsored program such as the DWSRF.
- Bonds are typically only available to large systems with significant revenues and managerial capacity. Most common are General Obligation and Revenue Bonds.



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.



Why Borrow?

- Often only way to quickly get funding needed for expensive capital projects.
- If done correctly, could slow down and smooth out the rate increases needed to pay for capital.
- 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.
- Some programs have very low interest rates and additional benefits for some communities.

Loan & Grant Programs in MT

Sourced from: <http://dnrc.mt.gov/divisions/cardd/wasact>

Updated Mar 10 2017 FINANCIAL ASSISTANCE PROGRAMS FOR WATER, WASTEWATER AND SOLID WASTE PROJECTS IN MONTANA										
Program Name	Eligible Applicants	Eligible Projects	Local Match Required	Planning Costs Covered?	Amount of Funds Available Per Project	Loan Repayment Period	Ranking Criteria	Funding Cycle (Deadline)	Special Requirements and Additional Information	Program Contact
MONTANA AND FEDERAL AGENCIES ACCEPTING THE UNIFORM APPLICATION										
U.S. Rural Development- US Department of Agriculture (USDA) a. Water and Environmental Loan and Grant Program b. Pre-Development Grants c. Search Grants	a., b., c. Counties & Municipalities, Water/Sewer Districts, Federally recognized Indian Tribes and Non Profits - Associations	a. Water, Wastewater, Storm water, and Solid Waste Systems (Construction, Repair, Expansion) b. Planning c. Planning	a. No b. Yes (25%) c. No	Yes, reimbursement as part of total project costs	a. Ratio dependent upon user rates, no limit or maximum for loans, 75% maximum grant b., c. \$30,000	a. 40 years or life of facility	Priority given to: Under 1,000 in population, Low Income, Health hazards, and Extended service to additional rural users	Open-cycle	Population <10,000. Applicants must be unable to finance the project by use of commercial credit at reasonable rates and terms www.usda.gov	Steven P. Troendle USDA/Rural Development 2229 Boothill Ct. Bozeman, MT 59715 (406) 585-2520 steve.troendle@mt.usda.gov
Montana Department of Natural Resources and Conservation (DNRC) Renewable Resource Grant & Loan Program (RRGL) a. Renewable Resource Grants and Loans b. Project Planning Grants c. Emergency Grant Program	a., b. & c. Governmental Entities (Includes Indian Tribes)	a., b. & c. Renewable Resource Conservation, Management, Development, and Preservation Projects	a., and c. No b. Yes, in some cases.	a. & b. Yes c. No	a. Grants (Public) Up to \$125,000 b. Loans (Public) No maximum c. up to \$30,000	a. (Loans) 20 Years or less.	a. Resource benefits financial feasibility, project management, technical feasibility, b. Resource benefits c. None	a. Applications due on May 15 of even numbered years. b. dnrc.mt.gov c. Open	a. Projects must conserve, manage, develop, or preserve a renewable resource. b. Preliminary engineering, planning, or other activities leading to a renewable resource project. c. Emergency projects that result in property damage or legal liability http://dnrc.mt.gov/divisions/cardd/resource-development/renewable-resource-grant-program	DNRC - RRGL Program 1625 11th Avenue, PO BOX 201601 Helena, MT 59620-1601 Lindsay Volpe (406) 444-9766 lvolpe@mt.gov
Montana Department of Environmental Quality (DEQ) a. Water Pollution Control State Revolving Fund Loan (WPCSRF) b. Drinking Water State Revolving Fund Loan Program (DWSRF) Loans	a. - Municipalities for wastewater projects - Municipalities and private entities for nonpoint source projects. b. All community public water systems.	a. Wastewater projects that solve water quality problems. b. Drinking water projects that achieve compliance with the Federal Safe Drinking Water Act.	a. No b. No	a. Yes b. Yes	a. & b. 100% of eligible project costs can be borrowed; ability to repay loan must be shown. Partial principal forgiveness may apply. a. & b. Up to 3 years for interim financing.	a. 30 years or less. Cannot exceed design life. b. 20 years or less. Qualifying disadvantaged communities are eligible for loan terms of up to 30 years and term cannot exceed the design life. a. & b. Up to 3 years for interim financing.	a. Impairment of water uses, extent project will restore water quality, public health improvement and readiness to proceed. b. Protect public health, comply with the Federal Safe Drinking Water Act, system affordability	a. & b. Open-cycle	a. & b. Projects must be included on the Project Priority List and Intended Use Plan; must demonstrate ability to repay loan. Must meet Federal Davis Bacon Wage and American Iron and Steel requirements. Minority Business Enterprise requirements MAY be required b. Organizational capacity is adequate to maintain compliance with the Federal Safe Drinking Water Act. www.deq.mt.gov	DEQ - State Revolving Fund 1520 E 6th Avenue PO BOX 200901 Helena, MT 59620-0901 a. Paul LaVigne (WPCSRF) (406) 444-5321 plavigne@mt.gov b. Mark Smith (DWSRF) (406) 444-5325 marks@mt.gov
Montana Department of Commerce (DOC) Community Development Block Grant Program (CDBG) a. Public Facility Grants b. Community Planning Grants c. Economic Development and Housing Grants (Federal grant administered by Commerce)	Incorporated cities and towns, and counties. Note: Counties may apply on behalf of water/sewer district and tribal utility authorities.	Water, wastewater, solid waste, hookup fees and assessments, economic development, housing	Yes a. 25% local match (project grant) b. 1 to 3 match (planning grant - approximately 33% match)	Yes, for costs associated with engineer and grant administration.	a. up to \$450,000 b. up to \$50,000 c. Contact the program	Not Applicable	community planning assessment, project need, concept and technical design, community efforts, financial assistance, benefit to low and moderate income	a. Annual competition-spring of the year b. & c. Contact the program http://comdev.mt.gov	a. At least 51% of the beneficiaries of a project must be low or moderate income. b. Planning such as PERs & Growth plans. See website for more eligibility options. http://comdev.mt.gov	Community Development Division Staff 301 S Park Avenue, PO BOX 200523 Helena, MT 59620 (406) 841-2770 doccbg@mt.gov
Montana Department of Commerce Montana Board of Investments INTERCAP Loan Program Loans	Local government units, Special Purpose Districts, Water/Sewer Districts	Water & Wastewater Systems, Solid Waste (Construction, repair, expansion, equipment, vehicles, planning, interim financing)	Yes	Yes	No limitations	Up to 15 years	No ranking criteria. Board examines applicant's financial profile and repayment ability.	Continuous cycle	www.investmentmt.com	MT DOC Board of Investments PO BOX 200126 Helena, MT 59620 Julie Flynn (406) 444-0257 jflynn2@mt.gov Louise Welsh (406) 444-0891 lwelsh@mt.gov
Montana Department of Commerce Treasure State Endowment Program (TSEP) a. Construction Grants b. Infrastructure Planning Grants c. Emergency Grants	Incorporated cities and towns, counties, water, sewer and solid waste districts, and federally recognized tribal governments.	Drinking water systems, wastewater treatment, sanitary or storm sewers, solid waste systems, and bridges.	a. Yes, typically 50%, which can include other grants b. Yes, 50% c. local participation required.	a. Yes, for costs associated with engineer and grant administration.	a. Up to \$750,000 b. Up to \$15,000 c. Typically, no more than \$10,000 determined on a case by case basis	Not Applicable	Health and Safety, financial need, technical design, planning and management, other funding for the project, economic development, and community support.	a. Spring of even numbered years. b. & c. Applications accepted in spring in odd numbered years until appropriation is gone. c. Apply anytime	a. Funding approved by the Legislature b. Funding Approved by Commerce. Infrastructure planning grants (PER or CIP) c. Funding approved by Commerce. Projects intended to respond to emergency situation. http://comdev.mt.gov	Community Development Division 301 S. Park Avenue PO BOX 200523 Helena, MT 59620 (406) 841-2770 docitsep@mt.gov

- USDA
- DNRC
- DEQ (SRFs)
- DOC
- US EDA
- USACE
- US IHS
- US EPA

The Montana W²ASACT

MONTANA.GOV
OFFICIAL STATE WEBSITE

SERVICES

AGENCIES

LOGIN

SEARCH MONTANA.GOV



The Montana Department of
**Natural Resources
& Conservation**

DNRC Headquarters
1539 Eleventh Ave. Helena, MT 59601
Phone: (406) 444-2074 | Fax: (406) 444-2684
Questions? Email us

Home Divisions Grants and Loans Licenses and Permits Public Information Land Board Flood and Fire Contact DNRC

Montana Sage Grouse Habitat
Conservation Program

Resource Development Bureau

Conservation Districts Bureau

Financial Bureau

Regional Water Systems

Water, Wastewater and Solid Waste
Action Coordinating Team (W2ASACT)

Legislative Updates

2017 Workshops

2017 W2ASACT Report

Summer Youth Camps

Water, Wastewater and Solid Waste Action Coordinating Team (W2ASACT)



For information about W2ASACT and their workshops, contact Alice Stanley of the Montana Dept. of Natural Resources & Conservation: 406-444-6687, astanley@mt.gov



Montana's Drinking Water State Revolving Fund Loan Program

<http://deq.mt.gov/Water/TFA/srf/dwsrf>

Contact Mark Smith for details: 406-444-5325
marks@mt.gov

Administered by the DEQ and DNRC.





DWSRF characteristics

- Available to all community water systems and non-profit, non-community water systems
- Direct loan or refinancing
- Open application period (but get on Project Priority List before May)
- Up to 20 year loan at or below market interest rates (currently 2.5%)
 - Planning costs covered
 - No local match required
- Disadvantaged communities get extra benefits
- DEQ prepares the Environmental Review documents



Additional Benefits for Disadvantaged Communities

- If water+wastewater bill $>2.3\%$ MHI (or water-only bill $>1.4\%$ MHI).
- Up to half of the loan principal forgiveness, other half at regular interest rate
- Up to a maximum of \$500,000 principal forgiveness
- Could have a loan for up to 30 years instead of 20 years



Types of Projects Funded by DWSRF

- DW projects to achieve SDWA compliance
 - Source development
 - Acquisition of land
 - Treatment
 - Source water protection
 - Storage
 - Distribution
 - Consolidation
 - Engineering
- Priority for protecting public health (documented or potential health risks), proactive measures to comply with SDWA, regionalization, affordability concerns



Applying

1. Complete the DWSRF Survey Form (anytime but preferably before May)
2. Get placed on the DWSRF Project Priority List. DEQ makes determination of allocation of funds in June.
3. Complete the Uniform Application to request SRF (and other?) funding



DWSRF Requirements

- Technical, managerial, and financial resources must be available to maintain compliance with SDWA
- Ability to repay the loan must be shown
- Project must be on the Priority List & Intended Use Plan
- Complete the Uniform Application & supporting documents
- Revenue Bond requires debt service reserve and coverage of 110%



Financial Requirements

- Financial capability to properly operate the system and to repay the loan
- Loan secured by a Bond or Note
- Different bonding & security options exist (Revenue, general obligation, SID, RSID, tax increment)
- Revenue Bond requires debt service reserve and coverage of 110%
- Maintain financial records



How Show Ability to Repay Debt?

- Part of the Uniform Application. See instructions and examples on pages 22-30.
- Show current rates, changes to number of dwelling units, debt service payment calculation (including buffer), changes to expenses, and then dividing the changes onto customers and determining new rates.

Visit the EFCN Website – *www.efcnetwork.org*

for more information on upcoming events, funding, and resources.



Innovative Finance Solutions for Environmental Services

[HOME](#) [ABOUT](#) [WORKSHOPS & WEBINARS](#) [ASSISTANCE](#) [RESOURCES](#) [BLOG](#) [ARCHIVES](#) [Q](#)



Get Free Help Now!

Small water systems can request free technical assistance from our experts on finance and management challenges.

"The thing about working with the EFCN is availability; I can call anytime with a quick question or to get outside advice."



Upcoming Events Calendar

Select “Upcoming Events” under the Workshops & Webinars Tab.



Upcoming Events





= In Person Event

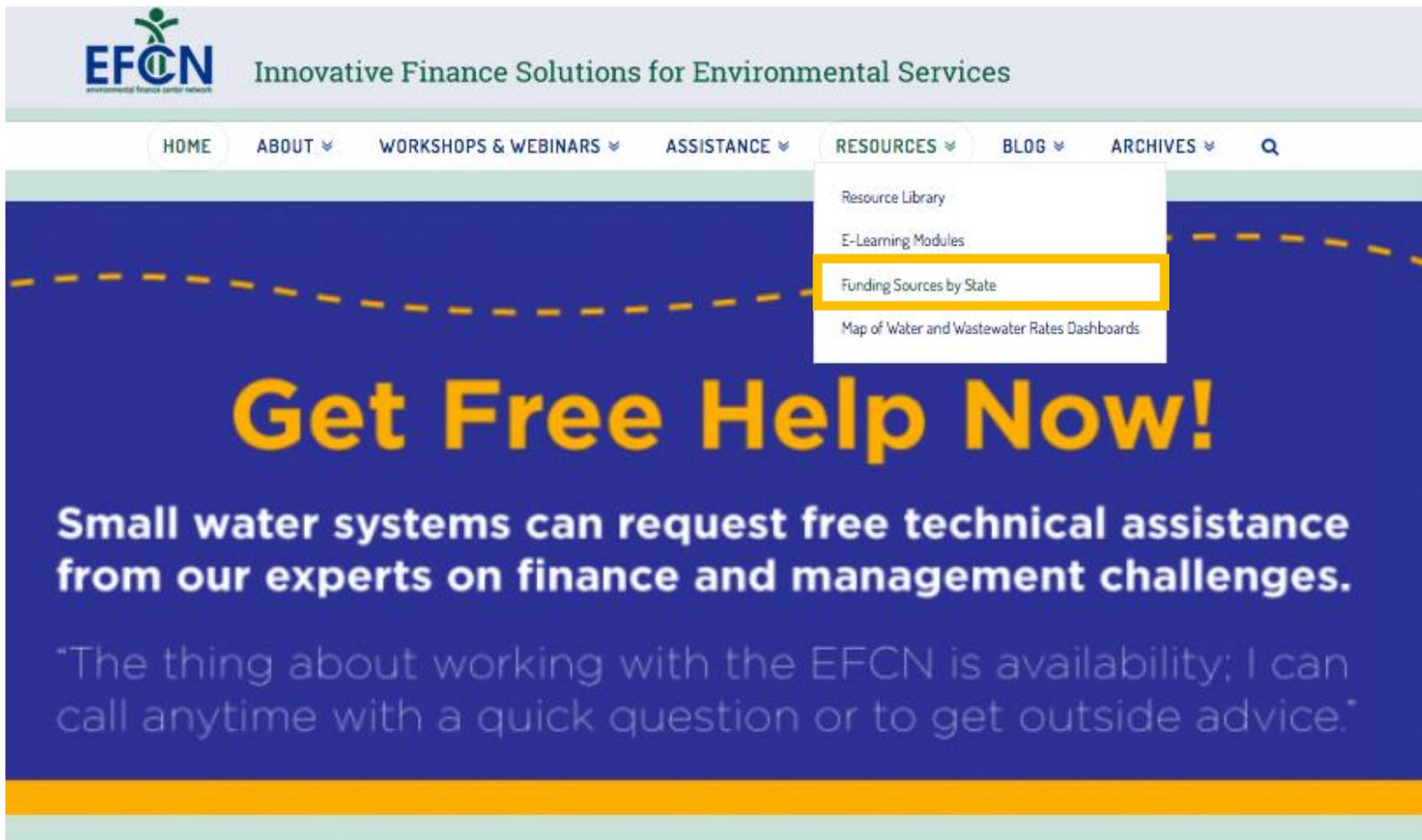


= Webinar

Type	Date/Time	Event
	03/09/2017 2:00 pm - 3:00 pm	WEBINAR Preparing Winning Financing Applications for Water Infrastructure Projects
	03/22/2017 2:00 pm - 3:00 pm	WEBINAR Water Audits and Water Loss Control: Entering Your Data into the Spreadsheet
	03/30/2017 9:00 am - 4:30 pm	Maryland Rates and Finance Workshop for Small Water Systems <i>Easton Utilities, Easton MD</i>
	04/04/2017 1:00 pm - 2:00 pm	WEBINAR: Workforce Development: An Overview of Key Components
	05/11/2017 9:00 am - 4:30 pm	Virginia Rates and Finance Workshop for Small Systems <i>The Institute for Advanced Learning and Research, Danville Virginia</i>
	05/25/2017 9:00 am - 4:30 pm	Arkansas Rates and Finance Workshop for Small Water Systems <i>Beaver Water District, Lowell AR</i>
	09/13/2017 9:00 am - 4:30 pm	Pennsylvania Rates and Finance Workshop for Small Water Systems <i>Pennsylvania American Water Co, New Castle PA</i>

Funding Tables By State

Select “Funding Sources by State” under the Resources Tab.



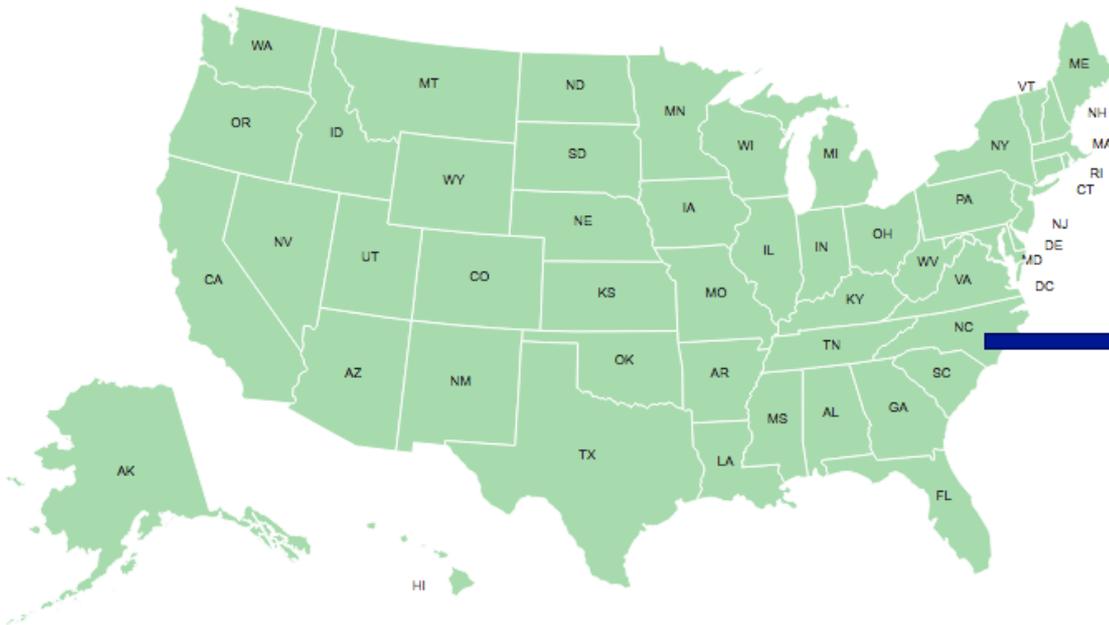
The image shows a screenshot of the EFCN website. The header features the EFCN logo (Environmental Finance Center Network) and the tagline "Innovative Finance Solutions for Environmental Services". The navigation menu includes links for HOME, ABOUT, WORKSHOPS & WEBINARS, ASSISTANCE, RESOURCES, BLOG, and ARCHIVES, along with a search icon. The RESOURCES dropdown menu is open, and the option "Funding Sources by State" is highlighted with a yellow border. Below the navigation, a large blue banner contains the text "Get Free Help Now!" in yellow, followed by "Small water systems can request free technical assistance from our experts on finance and management challenges." and a testimonial quote: "The thing about working with the EFCN is availability; I can call anytime with a quick question or to get outside advice."



Funding Sources by State

Note: Some states may have additional resources listed below the map.

Click on the map below to view funding sources for each state:



Click on an individual state to view funding table.

Oregon Water and Wastewater Funding Sources
Compiled by the OWR, March 2014

Organization	Program / Project	Purpose or Use of Funds	Application Dates	Website	Contact
Oregon Water Solutions	Water Infrastructure Financing Fund	Provide a guaranteed investment grade bond and non-refundable loan guarantee to help finance water infrastructure projects, including water supply, drinking water, and wastewater treatment.	Open to multiple entities, including public utilities, water districts, and other public entities.	http://www.oregonwatersolutions.com/financing-fund	John S. Brown Director 1-800-452-6262 jsbrown@oregonwatersolutions.com
	Water Infrastructure Financing Fund	Provide a guaranteed investment grade bond and non-refundable loan guarantee to help finance water infrastructure projects, including water supply, drinking water, and wastewater treatment.	Open to multiple entities, including public utilities, water districts, and other public entities.	http://www.oregonwatersolutions.com/financing-fund	John S. Brown Director 1-800-452-6262 jsbrown@oregonwatersolutions.com
Northwest Water Solutions	Water Infrastructure Financing Fund	Provide a guaranteed investment grade bond and non-refundable loan guarantee to help finance water infrastructure projects, including water supply, drinking water, and wastewater treatment.	Open to multiple entities, including public utilities, water districts, and other public entities.	http://www.nwwatersolutions.com/financing-fund	John S. Brown Director 1-800-452-6262 jsbrown@nwwatersolutions.com
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Oregon Water and Wastewater Solutions	Water Infrastructure Financing Fund	Provide a guaranteed investment grade bond and non-refundable loan guarantee to help finance water infrastructure projects, including water supply, drinking water, and wastewater treatment.	Open to multiple entities, including public utilities, water districts, and other public entities.	http://www.oregonwatersolutions.com/financing-fund	John S. Brown Director 1-800-452-6262 jsbrown@oregonwatersolutions.com
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Request Technical Assistance

Select “Request Assistance” under the Assistance Tab off the EFCN homepage to access and submit the TA request form electronically.



REQUEST ASSISTANCE

A screenshot of the "Technical Assistance Request Form" page on the EFCN website. The page features a header with a collage of images related to water management and a small EFCN logo. The main heading is "Technical Assistance Request Form". Below the heading, a paragraph states: "The EFCN offers free help on financial and managerial topics to systems serving 10,000 or fewer people. Examples of assistance we can provide include:". This is followed by a bulleted list of services: "Creating an Asset management plan", "Near-term financial planning and rate setting", "Analyzing your revenues and expenses", "Offering ideas on how to effectively budget", "Long-term capital planning", "Assessing options for lowering energy use and/or water loss", "Identifying sources of outside funding", "Collaborating with other water systems", and "Resiliency Planning". At the bottom, a paragraph begins: "If you are interested in requesting assistance from our experts, please fill out the form below. You will be asked a few questions to help us understand your water system and what kind of assistance you need."

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.



- HOME
- ABOUT ▾
- WORKSHOPS & WEBINARS ▾
- ASSISTANCE ▾
- RESOURCES ▾
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- Q

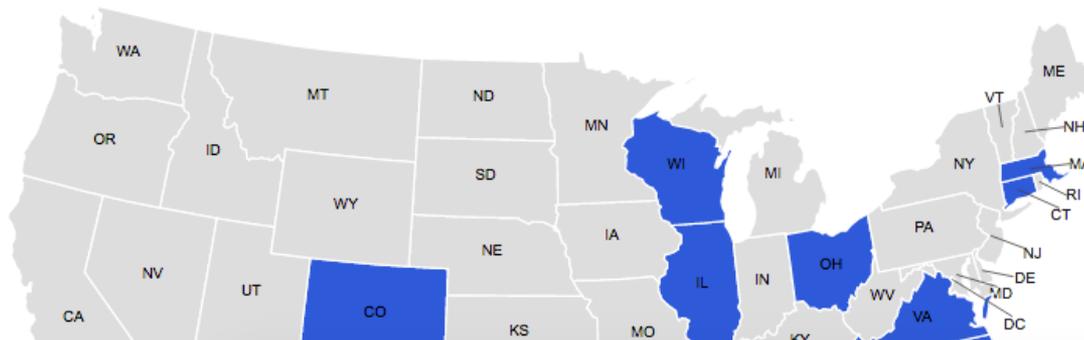
🏠 > MAP OF WATER AND WASTEWATER RATES DASHBOARDS

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

Map of Water and Wastewater

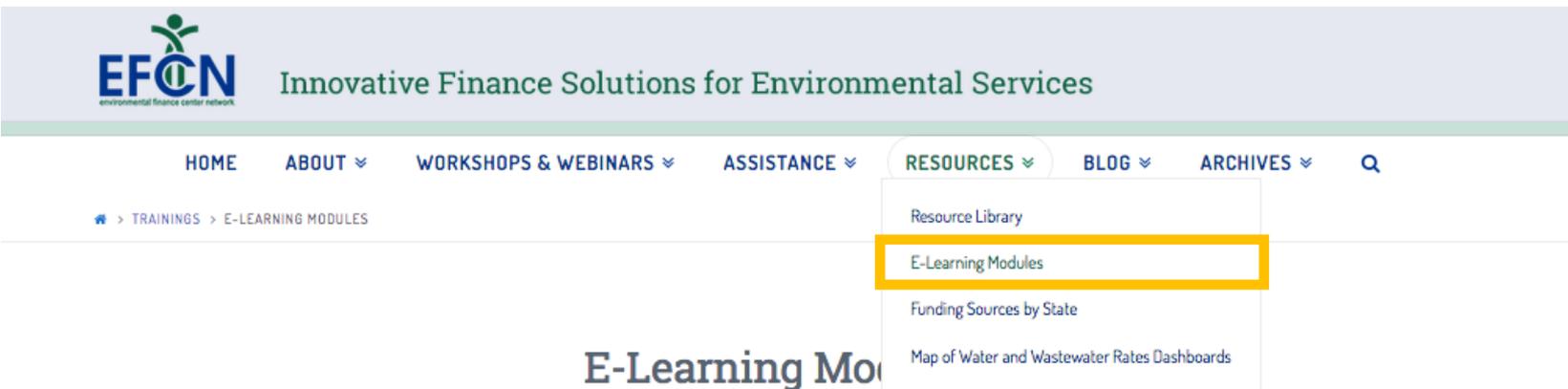
This map shows Water and Wastewater Rates Dashboards created by the EFCN:

Click a state in blue to view its dashboard



E-Learning Modules

Select “E-Learning Modules” under the Resources Tab off the EFCN homepage.



The screenshot shows the EFCN website header with the logo and tagline "Innovative Finance Solutions for Environmental Services". The navigation menu includes HOME, ABOUT, WORKSHOPS & WEBINARS, ASSISTANCE, RESOURCES, BLOG, and ARCHIVES. The RESOURCES dropdown menu is open, highlighting "E-Learning Modules". Below the navigation, the breadcrumb trail reads "HOME > TRAININGS > E-LEARNING MODULES". The main heading "E-Learning Modules" is partially visible.

As part of its continued effort to provide resources and training to small water systems, the Environmental Finance Network is creating E-Learning modules on finance and management topics for system managers.

E-Learning modules provide training through pre-recorded content. You will be able to access the content, watch presentations, complete quizzes and exercises, and access tools and resources at your own pace.

Financial Sustainability for Small Systems

[Click Here to Access the Course on AWWA's website](#)

This eLearning course is made possible through a USEPA grant for small systems training in conjunction with the EFCN's training partner, AWWA.

Resource Library

Select “Resource Library” under the Resources Tab off the EFCN homepage.



The screenshot shows the EFCN website header with the logo and tagline "Innovative Finance Solutions for Environmental Services". The navigation menu includes "HOME", "ABOUT", "WORKSHOPS & WEBINARS", "ASSISTANCE", "RESOURCES", "BLOG", and "ARCHIVES". The "RESOURCES" dropdown menu is open, and the "Resource Library" option is highlighted with a yellow box. Below the navigation, a breadcrumb trail shows "RESOURCE LIBRARY". The main heading "Resource Libr" is partially visible.

[View All Tools](#) | [View All Publications](#) | [View All Posts](#)

For an overview of some of the tools and resources available in our Resource Library, please view our [Tools and Resources flyer](#).

What does your system need help with?

+ We treat more water than we sell.



Resource Library Continued...

Click on a what your system needs help with to reveal tools and publications related to that topic.

✖ We have insufficient revenue to cover our costs.

Tools

February 16, 2017

[Online Water Rate Checkup Tool](#)

February 17, 2016

[Water Utility Customer Assistance Program Cost Estimation Tool](#)

September 3, 2014

[Water & Wastewater Residential Rates Affordability Assessment Tool](#)

December 16, 2012

[Plan to Pay: Scenarios to Fund your C.I.P.](#)

November 15, 2012

[Dashboard for Using Capital Reserve Fund to Avoid Rate Shock](#)

November 7, 2016

[Modelo de Análisis para las Tarifas de Agua y Aguas Residuale](#)

January 26, 2016

[Financial Health Checkup for Water Utilities](#)

August 15, 2013

[Rates and Financial Benchmarking Dashboards](#)

November 20, 2012

[Water & Wastewater Rates Analysis Model](#)

November 4, 2012

[Loan Analysis Tool](#)

Publications

April 14, 2014

[Rural and Small Systems Guidebook to Sustainable Utility Management](#)

August 29, 2013

[Asset Management: A Handbook for Small Water Systems](#)

August 29, 2013

[Setting Small Drinking Water System Rates for a Sustainable Future](#)

August 27, 2013

[Designing Rate Structures that Support Your Objectives](#)

Plan to Pay: Scenarios to Fund your C.I.P.

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

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

Free, simplified Excel tool allowing you to list your capital projects and plans for funding them, and automatically estimates rate increases

Tool developed by

Plan to Pay: Scenarios to Fund your C.I.P. (Capital Improvement Plan)
 Version 2.6 (Updated November 2015)

20-year capital planning Debt and/or capital reserve financing options Guided data inputs Simple data needs
 Financial dashboard outputs Estimates necessary rate increases over time to pay for capital projects

Start

1) Use tabs at bottom of screen and buttons to navigate to different pages.

2) In "Data Input 1", enter utility characteristics, rates and usage information in blue cells.

3) In "Data Input 2", enter details on capital improvement projects in the light blue cells. Each row is a different project.

4) In "20-Year Projections", view your fund balance projections for 20 years and observe the estimated rate increases needed each year to pay for your Capital Improvement. No data entry required on this page.

5) After all your utility information and capital improvement project details are entered, go to the "Dashboard" to view long term trends in your financial reserves, rate increases and average bills, and capital investments.

INSTRUCTIONS

FINANCED
 \$ 950,000
 et 750,000

Pre-Exist
 Input amount incurred for the year

Capital Improvement Projects - 20 Years

Project Name	Project Completion Year	Project Expenditure Commitment Period (Years)	Estimated Construction Cost (in \$)	Annual Contribution Factor (FY00)	Estimated Cost in the Start Year	End Year
Project 1 - Water Treatment Plant	2015	5	1,000,000	2.0%	1,000,000	2015
Project 2 - Sewer Treatment Plant	2017	5	2,500,000	3.0%	2,500,000	2017
Project 3 - Capital reserves replacement program	2015	5	1,000,000	1.0%	1,000,000	2015
Project 4 - Infrastructure project, Street work	2015	5	200,000	0.5%	200,000	2015
Project 5 - unknown CIP	2020	5	3,000,000	2.0%	3,000,000	2020

Expected Revenues and Expenses FY15

Annual Operating and Non-operating Revenues: \$ 5,810,000
 Annual Non-Capital Expenditures (DM, Admin, etc.): \$ 4,520,000
 Expected Annual Balance of Expenditures (FY15): 2.2%

Water and Sewer Rates in FY15

Input the residential customer water & sewer rates at 5,000 gallons/month of use and 2 customers. Convert to monthly rates.
 Volumetric Rate at 5,000 gallons/month (\$/1000 gallons): \$ 5.42
 Monthly Rate Charge ("Minimum Charge"): \$ 17.24

Usage billed to Customers in FY15

Residential: 2,000
 Non-residential: 200
 Total Monthly Use (1,000's of gallons): 2,200
 Annual Customer Rate (Monthly Rate x 12): 65.04

Estimated Rate Changes Needed to Maintain the Fund Balance

	FY15	FY16	FY17	FY18
5 Year Increase (Decrease) in Rate (Water and Sewer)	N/A	0.0%	0.1%	2.0%
Increase (Decrease) in the Monthly Bill for 5,000 Gallons	N/A	\$0.00	\$1.51	\$0.79
Increase (Decrease) in the Monthly Rate Charge	N/A	\$0.00	\$0.61	\$0.34
Monthly Rate Charge ("Minimum Charge")	\$12.34	\$12.34	\$12.96	\$13.31
Volumetric Rate at 5,000 gallons/month (\$/1000 gallons)	\$5.42	\$5.47	\$5.47	\$5.11
Volume Included with the Base Charge (1,000's of gallons)	2	2	2	2
Approximate Monthly Charge for 5,000 gallons (\$)	\$29.35	\$29.35	\$30.94	\$31.65

Projected Fund Balance

	FY15	FY16	FY17	FY18
Total Revenues	\$ 5,810,000	\$ 6,003,000	\$ 6,238,367	\$ 6,564,000
Base Charges	\$ 1,710,000	\$ 1,796,322	\$ 1,907,200	\$ 1,989,720
Usage Charges	\$ 3,120,000	\$ 3,094,596	\$ 2,916,000	\$ 2,801,760
Interest Earned from Previous Year's Positive Balance	\$ -	\$ 9,400	\$ 9,107	\$ 9,007
Revenues from Other Sources (Reserve Charges)	\$ 100,000	\$ 100,000	\$ 100,000	\$ 100,433

Financial Reserves (End of Year)

Line graph showing Annual % Increase (left axis, 0% to 10%) and Rate Increases (right axis, \$0.00 to \$10.00) from FY15 to FY20. Rate increases are projected to rise from 2.2% to 4.0%.

Total Capital Expenses

Bar chart showing Total Capital Expenses (in \$) from FY15 to FY20, with a significant spike in FY15 and FY17.

Total Cumulative System Investment

Line graph showing Total Cumulative System Investment (in \$) from FY15 to FY20, showing a steady upward trend.

Small Systems Blog

Learn more about water finance and management through our Small Systems Blog! Blog posts feature lessons learned from our training and technical assistance, descriptions of available tools, and small systems “success stories.”

efcnetwork.org/small_systems_blog/



Blog



Magdalena, New Mexico: A Success Story from the Smart Management for Small Water Systems Project

Written by: Allison Perch Allison Perch is a Program Coordinator with the Environmental Finance Center at the University of North Carolina. What can a small town do when the financial health of its water system is at risk? This is the question that Stephanie Finch, the town clerk and treasurer for the ...



The Virtuous Cycle: Internal Energy Revolving Funds for Small Water Systems

Written by: David Tucker David Tucker is a Project Director with the Environmental Finance Center at the University of North Carolina. How can small (and large) water systems pay for energy efficiency and renewable energy, helping cut utility costs? As energy is often the largest variable expense in a water system's operating ...



Smart Management for Small Water Systems Program Newsletter | Fall 2015

View Full Issue The Environmental Finance Center Network has published the third issue in a series of quarterly newsletters. The Fall 2015 Program Newsletter announces



Smart Management for
Small Water Systems

Thank you.

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