



Tools and Resources for Small Water Systems Finance and Management



Tool



Manual



Checklist



Publication



Spreadsheet



Webinar

VARIOUS TOPICS



Recorded Webinars and Whiteboard Videos

Recorded Webinars: <https://www.youtube.com/user/efcunc/playlists>

Whiteboard Videos: <http://tinyurl.com/whiteboardvideoswater>

Recorded webinars and a series of short animated videos (WaterClips) on various finance and management topics including a webinar series on asset management and water loss.



E-Learning Modules

<http://efcnetwork.org/trainings/e-learning-modules/>

As part of its continued effort to provide resources and training to small water systems, the Environmental Finance Network has created 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.



EFCN Blog

http://efcnetwork.org/small_systems_blog/

The Environmental Finance Center Network Blog provides a wealth of information on a variety of topics related to water finance and management. Blog posts feature lessons learned from our training and technical assistance, descriptions of available tools, and small systems “success stories.”

ASSET MANAGEMENT- WE HAVE AGING INFRASTRUCTURE AND WE WANT TO GET THE LONGEST USEFUL LIFE



AM IQ Evaluation

<http://tinyurl.com/AssetManagementIQ>

An Asset Management IQ Test is used in order to help individuals review the concepts of various core components of Asset Management. Comparing the scores of each of the six sections will show which areas have the biggest gaps in terms of Asset Management activities. The scores can provide information about where efforts should be focused.



Asset Inventory Spreadsheet

<http://tinyurl.com/Aminventory>

This spreadsheet gives you an easy way to track your assets and energy use.



Asset Management Manual

<http://southwestefc.unm.edu/amkan> | Username: amkanwork, Password: krownakma

This manual provides an overview of asset management, including how to determine critical assets, conduct life cycle costing, and create a long-term funding strategy.



Inventory Reference Guide

<http://efcnetwork.org/publication/inventory-reference-guide/>

The Inventory Reference Guide lists assets by category (hydrants, meters, pipes, pumps, etc.). In tabular form, it provides a list of the information you should collect about the asset when completing your asset inventory. The tables suggest what should be collected in the field vs. in the office and also what type of electrical information to collect if the asset uses electricity.



Asset Management - Five Core Components

<http://efcnetwork.org/publication/five-core-components-of-asset-management/>

The Five Core Components of Asset Management is a visual overview showing the questions you should ask about your assets for each of the five core components when using Asset Management. This is a one-page document that quickly shows what the five core components are and what information you will define in each step.



Introduction to Asset Management

<http://efcnetwork.org/publication/introduction-to-asset-management/>

This five-page document introduces you to the concepts of Asset Management. It is a useful tool to share with those that may not be familiar with the terminology or the concept. It includes an introduction, defines the five core components of asset management, provides an example of how asset management can be used in practice, and finally lists resources (with web links) the EFCN has available to assist you.

RATES AND FINANCE - WE HAVE INSUFFICIENT REVENUE TO COVER OUR COSTS



Financial Health Checkup for Water Utilities

<http://tinyurl.com/financialcheckupwaterutilities>

Use this tool to assess the financial performance of your 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.



Water and Wastewater Rates Dashboards

<http://efcnetwork.org/10966-2/>

These interactive rates and financial benchmarking dashboards are designed to assist utility managers and local officials with analyzing residential water and wastewater rates against multiple characteristics, including utility finances, system characteristics, customer base socioeconomic conditions, and geography. Rates dashboards are available for AL, AZ, CO, GA, IL, MA, NC, OH, SC, VA, WI, and TX.



Plan to Pay: Scenarios to Fund Your CIP

<http://www.efc.sog.unc.edu/node/30>

Enter in all capital projects and this tool will project your fund balance (revenues, expenses, and reserves), and necessary rate increases for the next 20 years, and more! Data entry requirements are minimal. Intended for small and medium systems.



Water Utility Customer Assistance Program Cost Estimation Tool

<http://tinyurl.com/waterutilitycostestimationtool>

This tool was developed by the Environmental Finance Center for the Water Research Foundation as part of the Defining Resilient Business Models for Water Utilities project. The tool is designed to help water utilities estimate the costs of implementing a customer assistance program.



Water and Wastewater Rates Analysis Model

<http://www.efc.sog.unc.edu/node/94>

An easy-to-use, simplified cash flow model that projects the water/wastewater utility's fund balance for the next 20 years under existing rates versus proposed new rates. Uniform ("flat") and block rate structures for both residential and non-residential customers can be assessed. Data inputs are minimal and basic. This tool is designed specifically for small water/wastewater systems.



Residential Rates Affordability Assessment Tool

<http://www.efc.sog.unc.edu/node/3651>

This easy-to-use Excel tool guides a utility to obtain a range of Census data on its community in order to assess the relative affordability of its water and wastewater rates on its residential customers using multiple metrics.



Designing Rate Structures that Support Your Objectives: Guidance Document

<http://www.efc.sog.unc.edu/node/229>

These guidelines provide step-by-step instructions and necessary information to assess every component of a rate structure design to allow water and wastewater utility managers to optimize their rate structures in a way to support the utility's policy goals, such as encouraging conservation, maintaining affordability, or creating incentives for businesses. Each element of rate structure designs is analyzed in the context of various competing utility objectives, with specific scenarios and examples.

ENERGY MANAGEMENT - HOW CAN WE USE LESS ENERGY BUT MAINTAIN OUR LEVEL OF SERVICE?



Water & Wastewater Energy Management Practices Handbook (NYSERDA)

<http://tinyurl.com/WaterWastewaterManagement>

The Energy Management Best Practices for water and wastewater systems are sequentially numbered for easier use. Each Best Practice is self standing, so you can start at the beginning and work your way through until you have covered the whole facility, or search only for practices applicable to your facility.



Ensuring a Sustainable Future: An Energy Management Guidebook for Wastewater and Water Utilities (EPA)

<http://tinyurl.com/EnsuringSustainableFuture>

Developed by the US EPA, the Guidebook will show you how to set, manage, and achieve energy efficiency goals for your utility through the development and implementation of a focused energy management program.



Water Check List (NYSERDA)

<http://tinyurl.com/waterchecklist>

The Water Checklist from the New York State Energy Research and Development Authority has been designed to assist smaller facilities with identifying opportunities for energy efficient improvements.



Tech Brief on Pump Curves (National Environmental Services Center)

<http://efcnetwork.org/publication/tech-brief-reading-centrifugal-pump-curves/>

Reading and understanding centrifugal pump curves is key to proper pump selection, and to their reliable and efficient operation. This Tech Brief examines how pump curves can provide data about a pump's ability to produce flow against certain head, shows how to read a typical centrifugal pump curve, and provides information about pump efficiency and brake horsepower.



Portfolio Manager (EPA)

<http://tinyurl.com/energyportfoliomanager>

The US EPA's online energy management and tracking tool is for eligible commercial and institutional buildings, such as K-12 schools, office buildings, and many others. Portfolio Manager allows you to track improvements over time, compare similar buildings within a portfolio, generate reports, and quantify greenhouse gas emissions. Some additional features may be available for wastewater systems.

FUNDING COORDINATION - WHERE CAN WE FIND OUTSIDE FUNDING TO SUPPORT OUR WATER SYSTEM?



Funding Matrices for all US States and Territories

<http://efcnetwork.org/funding-sources-by-state/>

This tool is an easy and accessible way to find funding sources for each state and territory. It provides the funding organization, the program, purpose of the funds, application dates, contact information, and web links.

WATER LOSS - WE TREAT MORE WATER THAN WE SELL



Best Practice in Water Loss Control: Improved Concepts for 21st Century Management (AWWA)

<http://tinyurl.com/bestpracticeswaterloss>

This flyer from the American Water Works Association explains the departure from obsolete best practice methods and articulates key points and best practices in water loss control today.



Leak Repair Data Collection Guide (Water Research Foundation)

<http://tinyurl.com/leakrepairdatacollection>

The Leak Repair Data Collection Guide is an open source MS Office Excel spreadsheet designed to aid the industry in collecting consistent failure data. This tool offers guidance to water utilities in the form of a standardized format to document failure events; thereby generating the appropriate data to execute a reliable leakage component analysis. Utilities that carefully document all failure events have a means to define failure trends occurring in their system.



Water Research Foundation Leakage Component Analysis Model

<http://tinyurl.com/componentanalysisistool>

The Leakage Component Analysis (LCA) Model was developed to provide the water industry with a computer-based model for leakage component analysis, failure frequency analysis, economic leakage control intervention strategy evaluation, and display of key water loss performance indicators. The LCA Model is a complementary analysis tool to the AWWA Free Water Audit Software and was designed using a standard Microsoft Office Excel software program. The model was developed with the needs of utility users in mind to provide a water loss analysis software tool that is accessible, user-friendly, and has a reasonable level of complexity.



AWWA's Water Audit Software

<http://www.awwa.org/resources-tools/water-knowledge/water-loss-control.aspx>

Water loss control represents the efforts of water utilities to provide accountability in their operation by reliably auditing their water supplies and implementing controls to minimize system losses. Log in to access the Water Audit Software.



The Water Audit Handbook for Small Drinking Water Systems (AWWA)

<http://tinyurl.com/Water-Audit-Handbook>

The main purpose of this handbook is to simplify the process of using the AWWA/IWA Water Audit by grouping information and data entry into separate sections for System Input Volume, Authorized Consumption, and Water Losses.

MANAGEMENT - HOW CAN WE WORK WITH OTHER WATER SYSTEMS TO LOWER COSTS?



Crafting Inter-Local Water Agreements: Tips Relating to Issues You May Not Have Thought Of or that You Were Hoping to Avoid

<http://tinyurl.com/craftingagreements>

Based on a comprehensive review of inter-local water agreements in North Carolina, this guidance document reviews tips relating to issues utility managers need to be aware of before and while entering into an agreement with another utility. Many of these tips apply to creating a water purchase agreement, whether for regular use or for emergency use.