

RESOURCES GUIDE FOR RURAL AND SMALL SYSTEMS

As a companion resource to the *Rural and Small Systems Guidebook to Sustainable Utility Management*, this list of resources offers additional information and guidance specific to small systems on the ten key management areas. Resources are identified in the table by the key management areas that they address (abbreviations in the table are identified in the key below). The majority of the resources listed are available free of charge.

WA	Water Resource Adequacy	FV	Financial Viability
PQ	Product Quality	OO	Operational Optimization
CS	Customer Satisfaction	IS	Infrastructure Stability
CE	Community Sustainability & Economic Development	OR	Operational Resiliency
ED	Employee & Leadership Development	SS	Stakeholder Understanding & Support

	WA	PQ	CS	CE	ED	FV	OO	IS	OR	SS
A Drop of Knowledge The Non-operator's Guide to Drinking Water Systems http://www.rcap.org/sites/default/files/rcap-files/publications/RCAP-Non-operator%27s%20Guide%20to%20DRINKING%20WATER%20Systems.pdf <i>Explains in simple, everyday language the technical aspects of drinking water utilities from source to tap. Helpful as an orientation and background guide for new small utility board members and small community decision makers.</i>										✓
ArcGIS for Water Utilities http://solutions.arcgis.com/utilities/ <i>An industry specific configuration of ArcGIS designed to meet common needs of water, wastewater and stormwater utilities and is delivered as module of ArcGIS for Local Government. ArcGIS for Water Utilities is a free download that you can deploy on top of either the entire ArcGIS System or the individual components of the ArcGIS System that your organization licenses.</i>								✓		
ArcGIS for Water Utilities – Water Conservation Dashboard http://solutions.arcgis.com/utilities/water/help/water-conservation-dashboard/ <i>Allows operations managers to view the progress and results of green infrastructure verifications, watering violations, and service shutdown information. Helps managers to understand and ensure the completion of water conservation field operations.</i>	✓						✓			

	WA	PQ	CS	CE	ED	FV	OO	IS	OR	SS
<p>ARRA Registering and Reporting Guide for Water/Wastewater Systems with Loans/Grants from the U.S. Department of Agriculture-Rural Utilities Service http://www.rcap.org/sites/default/files/rcap-files/publications/RCAP%20ARRA%20Registering%20and%20Reporting%20Guide.pdf <i>Walks communities that received loans of American Recovery and Reinvestment Act (ARRA) funds through USDA Rural Utilities Service (RUS) (for water and wastewater projects) through the special reporting processes that must be followed for ARRA funds.</i></p>						✓				
<p>Asset Management: A Handbook for Small Water Systems http://epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_asset_mgmnt.pdf <i>Presents basic concepts of asset management and provides the tools to develop an asset management plan. It is designed for owners and operators of small community water systems (CWSs). CWSs include all systems (both publicly and privately owned) with at least 25 year-round residential customers or 15 year-round service connections.</i></p>						✓	✓	✓		
<p>AWWA Water Audit Software http://www.awwa.org/resources-tools/water-knowledge/water-loss-control.aspx <i>Free software to compile a preliminary audit.</i></p>										
<p>The Basics of Financial Management for Small-community Utilities http://www.rcap.org/finmgmtguide <i>A basic guide that is ideal for a board member of a drinking water or wastewater utility who needs to understand the financial aspects of a utility's operations.</i></p>					✓	✓				
<p>The Big Guide for Small Systems: A Resource for Board Members http://www.rcap.org/boardguide <i>A comprehensive desk reference that is ideal as an orientation and background for new members on a utility's board of directors. Designed for members of the board of a drinking water and/or wastewater system in a small community. In various parts of the guide, sample documents are provided that utilities can take and adapt for use in their own situations.</i></p>			✓		✓					✓
<p>Board Member Training http://msucare.com/water/waterboard/waterindex.html <i>Trains board members in the areas of laws and regulations, duties and responsibilities, ethics, operation and maintenance, management and finance, rate setting, and public relations and customer service.</i></p>										✓
<p>Capital Improvement Plan (CIP) Tool for Water and Wastewater Utilities http://www.efc.sog.unc.edu/reslib/item/user-friendly-capital-improvement-plan-cip-tool-water-wastewater-utilities <i>CIP tool with example data and tools to create easy-to-understand predictions on: financial reserves, rate increases, and capital investment.</i></p>								✓		

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Care and Conserve Sewer Line Repairs http://www.cleanwateratlanta.org/environmentaleducation/CareConserve.htm <i>Sample program for low income assistance.</i>						✓				
Check Up Program for Small Systems http://epa.gov/safewater/cupss/ <i>Provides a simple, comprehensive approach based on EPA's highly successful Simple Tools for Effective Performance (STEP) Guide series. Use CUPSS to help you develop: a record of your assets, a schedule of required tasks, an understanding of your financial situation, and a tailored asset management plan.</i>						✓	✓	✓		
Circuit Rider Program http://nrwa.org/initiatives/training-and-technical-assistance/ <i>Provides technical assistance for the operations of rural water systems. Rural Utilities Service through contracting, has assisted rural water systems with day-to-day operational, financial, and management problems. The assistance may be requested by officials of rural water systems or RUS. The program compliments the loan supervision responsibilities for RUS. The National Rural Water Association has entered into a contract with RUS to provide this service. National Rural Water Association - State Affiliates do the work in their states.</i>					✓	✓		✓	✓	
Control and Mitigation of Drinking Water Losses in Distribution Systems http://water.epa.gov/type/drink/pws/smallsystems/upload/Water_Loss_Control_508_FINALDEC.pdf <i>Information on establishing water loss control programs.</i>	✓	✓		✓			✓	✓	✓	
Drinking Water Security for Small Systems Serving 3,300 or Fewer Persons http://water.epa.gov/infrastructure/watersecurity/upload/2005_12_12_smallsystems_very_small_systems_guide.pdf <i>Presents basic information and steps you can take to improve security and emergency preparedness at your water system.</i>									✓	
EFC Financial Dashboard http://www.efc.sog.unc.edu/project/utility-financial-sustainability-and-rates-dashboards <i>Free, interactive rates dashboards that are designed to assist utility managers and local officials analyze water and wastewater rates against multiple characteristics.</i>						✓	✓	✓		
eLearning – Leadership & Management Courses http://www.awwa.org/conferences-education/distance-learning/elearning.aspx <i>AWWA's online courses on leadership and management.</i>					✓					
eLearning – “Water Basics for Decision Makers” http://www.awwa.org/store/productdetail.aspx?productid=6655 <i>Document for decision makers in water or wastewater utilities, or for those who regularly interact with professionals but don't clearly understand how water is distributed and treated.</i>										✓

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Energy Audit Webcast http://www.rcap.org/energyauditswebinar <i>The Association of State Drinking Water Administrators (ASDWA) and RCAP partnered to host an energy audit webinar for state drinking water program staff. The webinar covers a “how-to” plan for conducting energy audits for small water utilities and outlined a national training effort to bring an energy audit approach to all RCAP offices including undertaking a pilot initiative involving selected small water systems.</i>							✓			
ENERGY STAR for Wastewater Plants and Drinking Water Systems and Portfolio Manager Tool http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager <i>An interactive energy management tool that allows you to track and assess energy and water consumption across your entire portfolio of buildings in a secure online environment.</i>							✓			
Energy Use Assessment Tool for Water and Wastewater Systems (includes User Guide, Tool and Example) http://water.epa.gov/infrastructure/sustain/energy_use.cfm <i>An Excel-based tool to help small and medium sized water and wastewater utilities assess their current energy usage and help identify possible ways to use energy more efficiently.</i>				✓			✓	✓		
Financial Management Courses http://www.newwa.org/NetCode/courseDesclList.aspx <i>Search under course category “Management.”</i>						✓				
Financial Planning: A Guide for Water and Wastewater Systems http://www.nmenv.state.nm.us/dwb/Documents/Public%20Info/RCAC%20Financial%20guide_final_6.pdf <i>Guidebook that walks a utility through the annual budgeting process, the rate setting process, and creating a 6-year financial plan.</i>						✓				
Formulate Great Rates: The Guide to Conducting a Rate Study for a Water System http://www.rcap.org/rateguide <i>A guide to developing a fair and equitable rate structure in a small drinking water or wastewater system.</i>		✓	✓			✓				
Getting in Step: A Guide for Conducting Watershed Outreach Campaigns http://water.epa.gov/type/watersheds/outreach/upload/gettinginstepedition3.pdf <i>Provides some of the tools needed to develop and implement an effective watershed outreach plan. For a watershed practitioner trained in the sciences, this manual will help you address public perceptions, promote management activities, and inform or motivate stakeholders.</i>										✓

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<p>Getting Your Project to Flow Smoothly: A Guide to Developing Water and Wastewater Infrastructure http://www.rcap.org/sites/default/files/rcap-files/publications/RCAP%20Getting%20Your%20Project%20to%20Flow%20Smoothly.PDF <i>A comprehensive guide on all the steps a project owner (governing body of a utility) should go through in planning, designing and constructing infrastructure.</i></p>	✓			✓		✓	✓	✓		✓
<p>Local Safe Disposal Programs: Ex. Safe Medicine Disposal for Maine http://www.safemeddisposal.com/ <i>The Safe Medicine Disposal for ME program provides Maine's residents with a safe disposal option for unused and unwanted medicine. Free medicine mail-back envelopes are available at participating sites.</i></p>										✓
<p>Mutual Aid Networks http://www.epa.gov/mutualaid or www.nationalwarn.org <i>Describes how small systems can participate in WARN to share resources with neighboring utilities during an emergency.</i></p>									✓	
<p>National Rural Water Association Job Network http://nrwa-jobs.jobtarget.com/c/search_results.cfm?site_id=678 <i>Helps to connect the most skilled professionals in the fields of drinking water, wastewater, source water protection, utility management & engineering to potential employers.</i></p>										
<p>National Rural Water Association Technical Training and Assistance Program http://nrwa.org/initiatives/training-and-technical-assistance/ <i>Click on your state for contact information to obtain services under the Technical Assistance and Training Program. National Rural Water Association provides training and on-site technical assistance to waste water systems in the contiguous 48 states, Alaska, Puerto Rico, and Hawaii. The training is provided to help reduce exposure to waste related health and safety hazards and enhance the sustainability of wastewater systems in rural and small communities.</i></p>		✓					✓			
<p>National Rural Water Association Website www.nrwa.org <i>Website of the National Rural Water Association, the largest water and waste water utility membership association.</i></p>										
<p>Only Tap Water Delivers Campaign http://www.awwa.org/resources-tools/public-affairs/communications-tools/only-tap-water-delivers.aspx <i>A public outreach campaign that is available to AWWA utility members free of charge. The materials are available in a CD toolkit, and can be adapted to meet local needs.</i></p>										✓
<p>Pipe Repair Checklist http://www.awwa.org/Portals/0/files/resources/water%20knowledge/rc%20small%20systems/piperepairchecklist.pdf <i>AWWA small systems pipe repair checklist.</i></p>							✓			

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<p>Preventive Maintenance Card File for Small Public Water Systems Using Ground Water http://www.epa.gov/ogwdw/smallsystems/pdfs/booket_smallsystems_prevent_maint.pdf <i>Schedules for maintenance tasks and checklists and logs for easily recording your findings.</i></p>							✓			
<p>Protecting Your Community's Assets: A Guide for Small Wastewater Systems http://www.nesc.wvu.edu/subpages/WW_manage_plan.cfm <i>Helps utility managers, operators, and local officials improve security and plan for emergency situations affecting wastewater treatment systems.</i></p>		✓						✓	✓	
<p>Public Communications Toolkit http://www.awwa.org/resources-tools/public-affairs/communications-tools/public-communications-toolkit.aspx <i>Website with and online toolkit of various resources for water professionals related to public communication.</i></p>										✓
<p>Public Education and Outreach on Stormwater Impacts http://water.epa.gov/polwaste/npdes/swbmp/Public-Education-and-Outreach-on-Stormwater-Impacts.cfm <i>EPA's website for local officials and communities to conduct education and outreach about stormwater, what it is, who contributes to it, and best practices related to stormwater.</i></p>										✓
<p>Quality On Tap! Public Relations Campaign http://nrwa.org/initiatives/quality-on-tap/ <i>A nationwide, grassroots public relations and awareness campaign designed especially for the drinking water industry. Quality On Tap is the first practical "hands-on" guide to better public relations for small water utilities. It contains the tools small water systems need to do the most important job of all - spreading the truth to the public of the quality of work they do and the quality water they produce.</i></p>										✓
<p>Record Keeping Rules: A Quick Reference Guide http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_records_08-25-06.pdf <i>A rule-by-rule summary of requirements for keeping monitoring, public notice, and other records, as well as helpful tips on record maintenance and security.</i></p>		✓					✓			
<p>Recruiting and Training Veterans Brochure: For Careers in the Water Sector http://www.workforwater.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=2147483686 <i>The Department of Veterans Affairs and Department of Labor administer programs to assist Veterans in their transition to civilian careers and oversee funding to pay for education and job training. The Environmental Protection Agency, American Water Works Association and Water Environment Federation are working with these agencies to promote water sector careers nationally.</i></p>					✓					

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Restructuring and Consolidation of Small Drinking Water Systems http://www.epa.gov/safewater/smallsystems/pdfs/compendium_smallsystems_restruct.pdf <i>Contains information on restructuring and consolidation authorities for public drinking water systems. It provides an individual summary for each state by listing available statutes, regulations, or policies that encourage or require consolidation or restructuring of drinking water systems.</i>		✓	✓	✓		✓	✓	✓	✓	
Revolving Loan Fund Program http://nrwa.org/initiatives/revolving-loan-fund/ <i>The NRWA Revolving Loan Fund was established under a grant from USDA/RUS to provide financing to eligible utilities for pre-development costs associated with proposed water and wastewater projects. RLF funds can also be used with existing water/wastewater systems and the short term costs incurred for replacement equipment, small scale extension of services or other small capital projects that are not a part of your regular operations and maintenance.</i>						✓				
Rural Community Assistance Partnership Website www.rcap.org <i>Aims to provide technical assistance and training services to rural communities develop and sustain critical infrastructure and promote economic opportunity.</i>										
Rural Water Supply and Sewer Systems: Background Information http://nationalaglawcenter.org/wp-content/uploads/assets/crs/98-64.pdf <i>CRS report for congress.</i>										
Security and Emergency Management System (SEMS) http://semstechnologies.com/RAMCAP.asp <i>Software to assist small water systems in completing a vulnerability self-assessment.</i>								✓	✓	
Security and Emergency Response Planning Toolbox for Small Water and Wastewater Systems http://www.rcap.org/toolbox <i>Consists of five core modules, appendices, and introductory text that relate security and emergency preparedness to best practices of system operation and management.</i>								✓	✓	
Setting Small Drinking Water Rates for a Sustainable Future http://www.epa.gov/owm/waterinfrastructure/pdfs/final_ratesetting_guide.pdf <i>A step-by-step rate setting guide for small utilities for assessing annual costs, revenue needs, and reserve requirements and setting appropriate rates.</i>						✓				✓
Small Drinking Water Systems Handbook A Guide to “Packaged” Filtration and Disinfection Technologies with Remote Monitoring and Control Tools http://nepis.epa.gov/Adobe/PDF/100046K6.pdf <i>Provides information to the small system operator, manager, and/or owner about different approaches to providing safe and affordable drinking water to your community.</i>		✓						✓		

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Small System Guide to Safe Drinking Water Act Regulations http://epa.gov/safewater/smallsystems/pdfs/guide_smallsystems_sdwa.pdf <i>A resource for understanding current and anticipated drinking water regulations with which utilities need to comply.</i>		✓								
Source Water Collaborative http://www.sourcewatercollaborative.org/ <i>A web forum about where America's safe drinking water begins – the lakes, streams, rivers, and aquifers we tap for public water systems. The Collaborative is a web portal of 25 national organizations that have united to protect America's sources of drinking water.</i>	✓	✓								
Strategic Planning: A Handbook for Small Water Systems, Simple Tools for Environmental Protection (STEP) Guide http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_stratplan.pdf <i>Presents basic concepts on strategic planning for small water systems and explains how this process can help improve your technical, managerial, and financial capabilities. It provides background information on the process of strategic planning and a series of worksheets to use in developing a written strategic plan.</i>				✓		✓	✓	✓	✓	
Stakeholder Analysis http://www.sswm.info/category/planning-process-tools/exploring#Stakeholder Analysis <i>A portion of the Sustainable Sanitation and Water Management online Toolbox.</i>										✓
Survival Guide: Public Communications for Water Professionals www.wef.org/WorkArea/DownloadAsset.aspx?id=7120 <i>A guidebook to help utilities learn how to communicate effectively with their community and customers. It provides an overview focused on the learning the basics of public communication and different public communication scenarios.</i>										✓
Sustainable Infrastructure for Small System Public Services: A Planning and Resource Guide http://www.rcap.org/sites/default/files/rcap-files/publications/RCAP%20Sustainable%20Infrastructure%20Guide.PDF <i>Provides worksheets, examples, case studies and resources on water conservation, energy efficiency and renewable energy resources for small utilities.</i>				✓		✓	✓	✓	✓	
Tabletop Exercise Tool for Water Systems http://yosemite.epa.gov/ow/SReg.nsf/description/TTX_Tool <i>A PC-based tool that contains materials to assist those interested in planning and facilitating tabletop exercises that focus on Water Sector-related issues. The updated TTX Tool contains fifteen scenarios that address an all-hazards approach to emergency preparedness and response, including natural hazards and manmade incidents, as well as introduces users to the potential impacts of climate change.</i>									✓	

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<p>Taking Stock of Your Water System: A Simple Asset Inventory for Very Small Drinking Water Systems http://www.epa.gov/ogwdw/smallsystems/pdfs/final_asset_inventory_for_small_systems.pdf <i>Helps very small water systems, such as manufactured home communities and homeowners' associations, assess their condition by preparing a simple asset inventory.</i></p>						✓		✓		
<p>Talking to Your Decision Makers: A Best Practices Guide http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsys_decision_makers_08-25-06.pdf <i>Tips for working successfully with decision makers in your community to meet your water system's needs.</i></p>										✓
<p>Talking to Your Customers About Chronic Contaminants in Drinking Water: A Best Practices Guide http://water.epa.gov/drink/contaminants/upload/2007_11_02_contaminants_guidelines_chronic_talkingtocustomers.pdf <i>Guidelines for effectively communicating with customers about the dangers of chronic contaminants and how water systems protect against contamination.</i></p>			✓	✓						✓
<p>Technitrain Program http://www.rcap.org/technitrain <i>Helps to protect public health and foster economic development in targeted rural communities throughout the United States and its territories by providing onsite, community-specific technical assistance and training that: identifies and evaluates solutions to water and waste disposal problems, assists communities in preparing funding applications for their water and waste projects, and improves operation and maintenance of existing water and waste-disposal facilities. It is part of RCAP's overall mission of working with small, rural communities to increase local capacity.</i></p>				✓	✓	✓				
<p>USDA Rural Utilities Service Borrower's Guide: A How-to for Water and Wastewater Loans from USDA Rural Development http://www.rcap.org/pubs/usdaborrowguide <i>Summarizes the managerial and financial requirements for communities that are receiving U.S. Department of Agriculture Rural Utilities Services (RUS) loan funds for their water or wastewater utility.</i></p>						✓				
<p>Vulnerability Self-Assessment Tool (VSAT) http://water.epa.gov/infrastructure/watersecurity/techttools/vsat.cfm <i>A risk assessment software tool that assists drinking water and wastewater utilities in assessing security threats and natural hazards and updating utility Emergency Response Plans; appropriate for any water system size or type.</i></p>								✓	✓	
<p>Water and Environment Programs - Engineering Success Stories http://www.usda.gov/rus/water/ees/englib/success.htm <i>The information in these stories is provided by Rural Development, Water and Environmental Programs as a service to all those persons looking for alternative, innovative, or just plain successful approaches to rural water and waste problems.</i></p>							✓			

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Water System Operator Roles and Responsibilities: A Best Practices Guide http://water.epa.gov/type/drink/pws/smallsystems/upload/2008_07_01_smallsystems_guide_smallsystems_operator_08-25-06.pdf <i>Helps to understand: (1) Roles and responsibilities in delivering safe drinking water to system's customers; (2) Additional responsibilities, which can vary depending on size, characteristics, managerial structure, and regulatory requirements.</i>		✓			✓				✓	
WaterPro Conference Website http://www.waterproconference.org/ <i>WaterPro is the annual conference of the National Rural Water Association. It takes place in even numbered calendar years. WaterPro is designed to bring together water and wastewater utility systems - large and small, municipal and rural - for sessions in operations, management, boardmanship and governance.</i>										
WaterSense http://www.epa.gov/WaterSense/ <i>EPA's program to promote water efficiency and conservation. Provides information for consumers to identify products and practices that save water. Utilities and local governments can partner with EPA to receive access to a network of partners working on water conservation and promoting the value of water and using it wisely.</i>			✓							✓
Water System Owner Roles and Responsibilities: A Best Practices Guide http://www.epa.gov/ogwdw/smallsystems/pdfs/guide_smallsystems_owner_08-25-06.pdf <i>A summary of system owners' key duties in protecting public health, overseeing system operation, and working with local officials.</i>					✓					✓
Water Quality in Small Community Distribution Systems http://nepis.epa.gov/Exe/ZyPDF.cgi/P1000OY3.PDF?Dockey=P1000OY3.PDF <i>Assists the operators and managers of small- and medium-sized public water systems. Provides a comprehensive picture of the impact of the water distribution system network on distributed water quality.</i>		✓						✓	✓	
Water University http://www.wateruniversity.org/ <i>The intent of Water University and the National Rural Water Association is to provide the highest level of instruction, education, training and discussion to the largest audience possible. To meet that goal, most of the webinar/lecture portions of these courses are presented at low or no cost. In addition to providing information to the entire water industry, Water University provides a method for licensed water professionals to earn their necessary Continuing Education Units through our advanced on-line educated modules. Access to these modules requires enrollment fees, but these fees are still very affordable compared to in-person training.</i>										

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Water & Wastewater Pricing http://water.epa.gov/infrastructure/sustain/Water-and-Wastewater-Pricing-Introduction.cfm <i>EPA Website on water and wastewater pricing, explaining the concept of pricing and water conservation, as well as supplying tools, guides, and reports on pricing.</i>						✓				
Work for Water Website http://www.workforwater.org/ <i>Materials to encourage careers in the water sector, where opportunities to protect and preserve water resources are virtually unlimited and the chance to make a difference is unmatched.</i>					✓					