

Water & Wastewater Utility

DRAFT

Board Member Handbook



**for Elected Officials, Board Members,
and Key Utility Staff**

The handbook of modern water and wastewater Utility governance

Florida Rural Water Association

2970 Wellington Circle ~ Tallahassee FL 32309

Telephone: 850-668-2746 ~ Fax: 850-893-4581

e-mail: FRWA@frwa.net



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FLORIDA RURAL WATER ASSOCIATION

2970 Wellington Circle • Tallahassee, FL 32309-6885

Telephone: 850-668-2746 ~ Fax: 850-893-4581

The Water & Wastewater BOARD MEMBER HANDBOOK

The handbook of modern water and wastewater Utility governance

This handbook is written for board members, mayors, city council members, administrators, managers, and key utility employees. This document is a compilation and adaptation of many great resources.¹ The publication is designed for small and medium sized water and wastewater systems and is being circulated throughout the state of Florida. Additionally, it is being used extensively for training sessions and state association conference sessions.

Purposes and Objectives:

- Provide guidelines to governing bodies that serve water and wastewater systems, cities, towns, villages, counties, special districts, authorities, or non-profit member associations.
- Inform Board Members and key utility employees who are stewards of your community's water and wastewater system.
- Emphasize the public trust and fiduciary responsibilities that the Board assumes with providing critical services while protecting the public's investment.
- Offer a self-evaluation and training tool for your Board.
- Provide a reference tool to improve water and wastewater system governance.

Florida Rural Water Association is pleased to present "*The Water & Wastewater Board Member Handbook: for Elected Officials, Board Members, and Key Utility Staff*" to the thousands of Board members across Florida who take time away from family, business, and leisure to help their communities. Let us know what you think . . . this book's for you.

Hereafter when we refer to Water Board Members or just Board Members we are also including Wastewater Board Members – this is for simplicity, legibility, and ease of reading.

¹ See the References and Bibliography at the end of this document.

UTILITY MANAGEMENT CERTIFICATION (UMC)

Utility Managers and Supervisors are encouraged to obtain **Utility Management Certification** and training through the Water University and Florida Rural Water Association, see <http://www.frwa.net/TRAINING/WaterUniversity/WaterUniversityMainPage.htm>.

Water University certification programs are designed to recognize the professional educational achievements of individuals and to market their achievements and skills to increase the value of today's water professionals. Water University highly-recommends the use of study material before taking certification examinations, including the purchase of study guides and attendance of Water University preparation courses. Examinations cover a wide array of topics in great technical detail. 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 FRWA or advanced on-line modules.

Today, the water and wastewater industry is more complex than ever before. Economics, increased complexity in regulatory requirements and a changing society are crafting the water and wastewater systems of tomorrow. As our industry changes, there is a strong need to recognize the individuals who provide management and leadership to the industry and create a standard for the future manager.

Value and Recognition

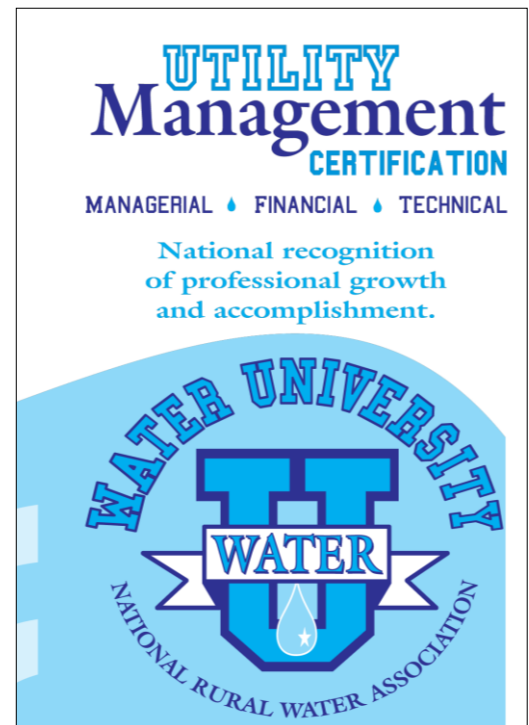
The Water University and its UMC program are supported by the Florida Rural Water Association and National Rural Water Association. This provides state and national recognition of those achieving certification. This designation will be valuable to boards and councils in the hiring process as systems become more complex and available qualified candidates become more scarce due to retirements and the changing workforce.

Secure Your Future

Operator certification is not enough for tomorrow's manager. The future will demand different skill sets that far exceed operations. The UMC designation will document fields of study in public relations, financial planning, ethics, human resources and other skills not covered in today's operator certification programs.

The course has been approved by the Florida Department of Environmental Protection Operator Certification Program to meet the management requirement to take the Class "A" Drinking Water/Wastewater and Class "1" Water Distribution Examinations. Exam questions come directly from the Study Guide and it will continue to serve as a great reference document after you have secured your Utility Management Certificate. For more information on acquiring CEUs for the UMC upon completion, please contact frwa@frwa.net.

We invite you to achieve the recognition of Utility Management Certification for your future and the future of your water and wastewater industry.



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CHAPTER 1

BEING THE BEST BOARD MEMBER

You're a Board Member with a water / wastewater system. Whether you're a new face or old hand, it's vital to know how to be the best Board Member. This Chapter discusses what board members used to do, how the job has changed, and utility governance.

Chapter Overview: Chapter 1 provides an overview of a board member's job description. It includes legal and financial responsibilities, where customers and the public fit in, overseeing staff and services, the special case of physical components and why regulations are so important. Later Chapters expand on these topics.

Definitions:

Board is used to mean any governing body -- that includes non-profit member association, special district, authority, city, town, village, or county, or other utility governing body. Hereafter when we refer to Board Members we also mean Wastewater and/or Water Board Members – this is for simplicity, legibility, and ease of reading.

FDEP is the Florida Department of Environmental Protection.

FRWA is the Florida Rural Water Association.

Manager is the superintendent, operator, manager, administrator, or the responsible party of your water / wastewater system.

Public Water System (PWS) is a system that provides water to the public for human consumption and includes a water source (wells), pumps, storage, disinfection, and distribution / conveyance system.

Staff is any employee or group of employees of the water / wastewater system.

Wastewater System consists of the wastewater treatment plant and a collection system that transports sewage to it. Wastewater systems are responsible for collecting, treating, analyzing, and discharging wastewater, as well as for disposing of sewage sludge, or "biosolids," generated during the treatment process.

THE UTILITY MISSION.

The original mission for creation and ownership public water and wastewater utilities include many compelling objectives.²

The mission is to firstly **protect the health and safety of citizens**. Water and wastewater systems were initially formed to combat public health epidemics of the 19th and 20th centuries. Cholera, typhus, smallpox, dysentery, scarlet fever, and polio are no longer major communicable diseases in large part by the use of chlorinated drinking water, sewage sanitation, and medical advances. Because our drinking water is safer, the number of Americans who contract waterborne diseases has fallen between 5- and 10-fold since the end of the 19th century. Streets are no longer places for sewage and garbage.

Before the era of acid rain and global warming, pollution killed people – lots and lots of people. Deadly diseases were carried by what then qualified as “drinking water” and the lack of public sanitation (proper treatment and disposal of wastewater).³

Secondly, the mission of your utility should be to **protect the environment**. Wells and source water should be safeguarded for future generations. Wastewater disposal should not degrade the environment.

The third or tertiary mission is closely related to its primary and secondary missions, which is to **comply with federal and state requirements and regulations** for safe drinking water and proper disposal of wastewater. Your water and wastewater utility is regulated by the Florida Department of Environmental Protection. FDEP in turn is governed by Florida Statute and by delegation from

The Utility Mission

1. Protect the public health and safety
2. Protect the environment
3. Comply with federal and state regulations
4. Provide fire protection
5. Serve large and small customers
6. Tool to shape, facilitate, or encourage growth
7. Maintain infrastructure in good operating condition
8. Promote home rule and self-determination

² Montana Water Center, (2007).

³ Moore, S. & Simon, J.L., (1999).

the US Environmental Protection Agency under the Safe Drinking Water Act and the Clean Water Act. Compliance with FDEP regulations supports your efforts to protect human health and the environment.

Another important mission, fourthly, is to provide **fire protection for life and property**. Fire protection is an important policy issue for communities and has been since Nero rebuilt Rome in 64 AD, the Great London Fire of 1666 that destroyed over 80 percent of the city, and the Great Chicago Fire of October 1871.⁴ Public water systems which decide to provide fire protection must have finished water storage tanks, reservoirs, pump stations, and other facilities with sufficient capacity for fire flow of a two-hour fire duration or more, and have adequate storage to meet regular demands. Fire protection is optional for water systems. Generally speaking FDEP does not mandate systems to provide fire protection, as this issue is not a water quality issue, but it gets involved with the system components as they are related to water quality, capacity and supply. Water systems that choose to provide fire flow should understand the cost issues (rates and impact fees) related to the additional storage, piping and pump needed.

Fifth, your utility provides **services to large and small customers**. A component of your mission is to be flexible and provide service to all customers – one size to fit all. Large-volume industrial customers, wholesale customers, and other large users tend to be served directly from major treated-water transmission mains, whereas smaller users are served by both large and small mains. Demand patterns of various customers differ, depending on their peak-day and peak-hour rates of demand relative to average demands. Your utility may be concerned with some of the most vulnerable residents; including the aged, the young, those in poor health, the economically disadvantaged, and so forth.

Sixth, water and wastewater systems are an excellent tool for municipalities and counties to **shape, facilitate, or encourage growth**. Practically speaking it is not possible to curb urban expansion by controlling the water and wastewater system since Florida law requires systems to maintain adequate levels of service for public facilities and to anticipate and prepare for growth. You are required to maintain adequate capacity at all times, but you can encourage growth or new connections by the availability of services – so you dictate where, when, and how they are provided. Developers and new customers are influenced by costs of new construction. Water and wastewater impact fees are typically much less than the cost to install a residential well at \$3,000 to \$4,000 or to install a residential septic system and drainfield at \$5,000 to \$6,000. Plus commercial establishments face much higher costs. Many communities without a central sewer system experience a reduced influx of commercial and industrial businesses – so with this tool you can expand the community's tax base.

Seventh, in addition to keeping pace with growth, water and wastewater utilities must **maintain infrastructure in good operating condition**.⁵ This requires adequate funding and continual repair and replacement just to keep up with normal usage and aging.

Having your own utility **promotes home rule and self-determination**. Your community is unique. Your utility must co-exist with local politics and community economics. Having your own water / wastewater system empowers you to provide public services and improve quality of life. You are in control of your destiny and not subject to another public or private entity to provide essential services and setting rates. You can choose how best to cooperate with surrounding utilities for emergency interconnections and mutual aid agreements.

➔ FRWA is here to help you with your mission and any of these challenges – just call us!

⁴ Cote, A., (2008).

⁵ FDEP Rule 62-555.350, FAC.

BOARD MEMBERS PERFORM A VALUABLE COMMUNITY SERVICE!

First of all, thank you for your service to the community! Serving on the board can be demanding. You are providing a vital service. Providing ample, affordable, safe drinking water and wastewater services is essential to your community. This is an awesome responsibility. ⁶

You are one of a team of dedicated professionals concerned with the details of running a water and wastewater utility. ⁷

Water and wastewater systems operate quietly in the background. Few people see or think about the miles of water / wastewater lines underground or visit your water and wastewater plants. It is likely that your system has fewer interruptions in service than most electric utilities. As a result, most of what you do is taken for granted and *out of sight*.

Board members have the ultimate responsibility to ensure that their system provides safe drinking water, handles wastewater to protect the environment, follows the state's laws and cooperates with FDEP.

A Failure to Protect Public Health: E. Coli Contamination at a New York County Fair

In August 1999, an E. coli outbreak at the Washington County Fair in New York led to hundreds of people becoming ill and the deaths of a three-year old girl and an elderly man. According to the New York Department of Health, the likely cause of the outbreak was water contamination caused by either septic system leakage or manure runoff.

Source: State of New York Department of Health, "Health Commissioner Releases E. coli Outbreak Report," 3/31/ 00. Available online, <http://www.health.state.ny.us/nysdoh/commish/2000/ecoli.htm>

BOARD MEMBER BASIC LEGAL AND FINANCIAL RESPONSIBILITIES

Let's start with board member general legal and financial responsibilities. These ARE NOT optional functions; you are responsible to see that the board and staff carry them out.⁸ You will notice that quite a few of these responsibilities overlap with the utility's mission, but pay attention to how your role plays into making the utility run effectively and efficiently. The board member basic legal and financial responsibilities include the following eight items.

1. **Fiduciary Responsibility.** The most important and primary responsibility of a board and board members is a fiduciary accountability to your water / wastewater system, the public, and regulatory entities. Board members have a duty to see that the system supplies safe drinking water; provides responsible wastewater management; protects system assets and interests; and obeys the laws, rule, and regulations. When making financial decisions or when addressing operations and maintenance (O&M) issues the board and board members should soberly weigh these factors in the decision-making process.⁹ The basic board member fiduciary responsibilities are:

- To exercise rights and powers for and on behalf of others with diligence and care.
- To ensure that your water / wastewater system receives, records and spends funds in accordance with modern accounting, purchasing and record-keeping standards.

Fiduciary adjective: of, relating to, or involving a confidence or trust: as a: held or founded in trust or confidence b: holding in trust c: depending on public confidence for value or currency
noun: one that holds a fiduciary relation or acts in a fiduciary capacity

⁶ Eddy, N. (2006). Thornton, G. (1993). *Serving on the Board of a Tax-Exempt Organization: a Guide for New Board Members*

⁷ Knotts, J. (2003).

⁸ Consult with your attorney or Florida Rural Water Association (FRWA) for details about the Florida Department of Environmental Protection (FDEP) laws, regulations and requirements.

⁹ Montana Water Center, (2007). p. 7. Independent Sector. (2005). *Checklist for Accountability*

- To assure that system revenue covers operations plus debt service plus reserves (check your bond loan covenants).

2. **Ethical Responsibilities.** A public office is a public trust. The public have the right to secure and sustain trust against abuse. The board and each board member are expected to use the highest level of integrity in all matters dealing with the decision-making process.

The Florida Constitution, Article II, Section 8, states:

“Any public officer or employee who breaches the public trust for private gain and any person or entity inducing such breach shall be liable to the state for all financial benefits obtained by such actions. The manner of recovery and additional damages may be provided by law.”¹⁰

Board members shall NOT gain financially or otherwise from their service on the board.

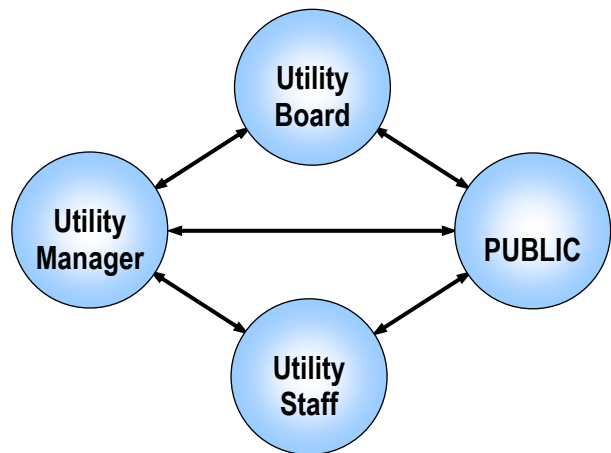
3. **Customers and Customer Relations.** Your system exists to serve the public, and there are three major groups of players to do this and each with very different roles, see Figure 1-1:

- ✓ Board or Governing Body;
- ✓ Manager or Executive; and
- ✓ Utility Staff / Employees.

Notice that each interacts with the public – the Board, the Manager, and Utility Staff! So customer relations need to be foremost. You three have the privilege, opportunity and responsibility to serve and educate customers each time there is an interaction.

➔ Everyone needs to be speaking with one voice about the utility’s mission.

Because you have customers – customer relations need to be foremost. Your customers need you to serve them now, but you must also lay plans for serving them in the future.



**Figure 1-1
Working Relationships between the Board,
the Manager, and the Staff with the Public**

Customers need to understand the system is run like a business and that, as a business, it is expensive to run and maintain. Public water is not a free service -- it’s a privilege to have safe water. On the public relations end, it may not be necessary to go into great detail on issues, but the public does need to understand the associated costs of running a utility – including operators, equipment, storage, power costs, and treatment chemicals. A board needs to be constantly informing its public, and asking the manager and staff to do the same.¹¹

Part of your role as a board member is to educate the public that your system regularly tests for contaminants, courtesy of the Safe Drinking Water Act and Clean Water Act. Results of frequent and never-ending tests are available to the public and regularly reported by the media. You send out annual Consumer Confidence Reports to your customers and/or post them on your website – these reports are also known as annual water quality reports or drinking water quality reports.

The board’s role is to consider big picture customers and customer relations issues, such as: Does your system regularly tell its story through newsletters and internet? Do you send out bill stuffers? Do you have your own website or have you discussed getting one? Do staff or board members speak to civic and/or community groups? Are you getting good articles in the newspaper? If not, you’re missing a golden opportunity that other systems have grasped. The bottom line? People talk! History is written by those who care enough to present their case. If you don’t provide information, the grapevine will take over.

¹⁰ Florida Constitution, Article II, Section 8(c), *Ethics in Government*.

¹¹ Knotts, J. (2003). *Water Boards: How to train them? What to expect from them? How to lead them? What to pay them?*, pp 28-32.

Some boards/councils would love to leave touchy-feely stuff like customer communications to the employees. The better way is to approach public relations as everyone's duty!

4. **Safe Drinking Water and Responsible Wastewater Management.** All board decisions must ensure that the water system will supply adequate and safe drinking water along with handling wastewater services while protecting natural systems. As described in the utility mission above, the board is charged with protecting the health and safety of customers at the same time balancing the environmental impacts. Wells and source water should be safeguarded (from contamination and degraded aquifers) for future generations while not negatively impacting the surrounding environment. Wastewater should be collected, treated, and disposed in a manner that does not degrade the environment.

Your efforts to provide safe drinking water and responsible wastewater management should be viewed as essential – in doing so following the laws, rule, and regulations will be easier. This approach is one of fiduciary accountability and stewardship over public health / safety and environmental impact. Your system will have fewer compliance issues because your focus is on a higher standard.

5. **Laws, Rules and Regulations.** The board ensures compliance with all applicable federal, state and local laws and ordinances. The system can be held liable if it does not meet state and federal requirements – the board is responsible for approving what the system does. At one time water and wastewater systems conducted business less publicly. Now state and federal laws and requirements have put your system in the spotlight – particularly with the annual requirement to public the Consumer Confidence Report.

Is your system keeping up with the regulations? Use the “Regulatory Check Off” below to find out. For information about regulations on conducting system business, see Chapter 8.

Regulatory Check off	
Compliance with state and federal regulations is a major utility test. How are you doing? <i>(Answers are found in Appendix A)</i>	
Yes	No
1. We keep copies of FDEP inspection reports (sanitary surveys) on file.	
2. Our flow, test & sampling records are accurate and submitted to FDEP on time.	
3. FDEP Reports & Test Results are available to the public.	
4. We send out periodic news releases about test results – Consumer Confidence Reports.	
5. We have a library of reference materials, for example, FDEP rules & quick guide to SDWA contaminants.	
6. The manager and staff know where FDEP Reports & Test Records are kept and records go back at least 7-years.	
7. Our water and wastewater System Maps are current and up-to-date. Field personnel also have copies of these maps with their vehicles. ¹²	
8. The Emergency Response Plan is current and up-to-date. ¹³	
9. When we have a regulatory problem, we call for help rather than try to solve it ourselves (for example, FDEP, FRWA Circuit Riders, neighboring system). ¹⁴	
10. Our board understands FDEP & EPA regulations and the consequences of non-compliance.	
11. Our board keeps up-to-date through Manager reports and going to conferences or training sessions.	

¹² FRWA has a program that can help you map your water and wastewater system with GIS devices – contact your Circuit Rider for more info.

¹³ FRWA has free templates and guides for Emergency Response Plans and Assessments, see <http://www.frw.net> and click on Emergency Prep.

¹⁴ Please contact your FRWA Circuit Rider for technical assistance.

Yes No 12. Our manager and operations staff keeps up-to-date Operation & Maintenance Manuals and has a proactive Preventive Maintenance Program.¹⁵

¹⁵FRWA has free templates for Operation & Maintenance Manuals and Preventive Maintenance Program at <http://www.fwa.net/GENERAL%20INFORMATION/FRWA-O&MPreventativeManual-020806.pdf>

6. **Strategic Planning, Operational Policies, and Procedures.** The board conducts strategic planning, sets policy, and sees that the system follows the operational policies and procedures – this process is also known as governance. Please see Appendix B for a sample table of contents of a by-laws, policies and procedures manual – FRWA has several sample manuals available at your request. The board’s role is one of leadership, strategic planning, and looking at the big picture – setting the tone and mission. You should ask your manager to organize special workshops or retreats for developing your system’s strategic plan and policies. There are consultants that can help you with these retreats or FRWA would be happy to facilitate the process – just call.

Strategic planning is an organization's process of defining its strategy, or direction, and making decisions on allocating its resources to pursue this strategy. In order to determine the direction of your system, it is necessary to understand its current position and the possible avenues through which it can pursue a particular course of action. In many utilities, this is viewed as a process for determining where the system is going over the next three to five years, although some extend their vision to 10 years. See Chapter 12 for more on the strategic planning process.

A policy is a principle or rule to guide decisions and achieve rational outcomes – the board is the best place for this to happen. A policy is a statement of intent, and is implemented as a procedure or protocol. Policies are generally adopted by the board whereas procedures or protocols would be developed by the manager and approved by the board.

Using your strategic plan and utility policy statement, the manager develops and fine tunes operational policies and procedures for day-to-day system operation. Utility policies can assist in both subjective and objective decision making. Policies to assist in subjective decision making would usually assist your manager and key management with decisions that must consider the relative merits of a number of factors before making decisions and as a result are often hard to objectively test e.g. personnel or work-life balance policies. In contrast policies to assist in objective decision making are usually operational in nature and can be objectively tested e.g. water / wastewater connection and disconnection policies.

Governance is the act of governing.

It relates to decisions that define expectations, grant power, or verify performance. It consists of either a separate process or part of decision-making or leadership processes.

In the case of utilities, governance relates to consistent management, cohesive policies, guidance, processes and decision-making for a given area of responsibility.

7. **Board Conducts Business as a Quorum.** A quorum is the minimal number of officers and members of a board, usually a majority, who must be present for valid transaction of business. Individual members cannot make contracts. It is illegal for individual governing body members to use their “apparent authority” to make contracts. It is not appropriate to speak for or represent the board without specific authorization.
8. **Records, Minutes and Notices.** The board is responsible to see that all decision-making is conducted in the sunshine and complies with the Florida Statutes. The law requires that the public shall have access to (1) all public entity meetings, not just scheduled regular meetings, and (2) public records. Each board member needs to have read and understood the Florida Government in the Sunshine & Freedom of Information Act requirements. The board is responsible to see that all records, minutes and notices are created, maintained and made available according to federal and state law. While you may charge a citizen a reasonable amount for finding and copying minutes and records, there is no doubt as to her or his right to request and receive them, see Appendix I. , see Chapter 4 and Appendix I for more information

What happens if you don’t carry out these basic responsibilities? Over time, the lack of financial and managerial accountability weakens your water / wastewater system. There are other consequences: ¹⁶

- An individual or Board’s deeds or misdeeds may be legally actionable.
- Legal and fiduciary responsibilities are codified in a system’s operational policies and procedures manual. For all but the smallest systems (where boards also help operate the system), it’s up to the employees to carry out those policies.

¹⁶ Carver, J. (1990). *Boards That Make a Difference*.

THE UTILITY BALANCING ACT.

Serving on a board is a great balancing act. The decisions you make represent the tension between the necessary exercise of power and accountability to the public. Many board members serve voluntarily or on a part-time basis, but must make policies, handle financial decisions, understand basic water and wastewater matters, deal with personnel issues, and set rates, all while providing outstanding customer service.



Customer Needs / Wants	System Needs
<ul style="list-style-type: none"> ▪ Ample supply of safe and high quality drinking water free of objectionable color, odors, taste, or contaminants ▪ Provide wastewater services while protecting the environment ▪ Affordable utility services ▪ Services are uninterrupted– water runs when the tap is turned on and sewage flushes away each time. ▪ Assurances that the utility is responsive and being run professionally (particularly when they have a question or complaint) 	<ul style="list-style-type: none"> ▪ Utility must comply with ever increasing FDEP and federal rules and regulations ▪ Revenues must cover operation and maintenance costs ▪ Reserves must cover infrastructure replacement ▪ Utility must be ready for emergencies, such as hurricanes ▪ Planning for the future

Being the Best Board Member Case Studies

How would you handle these problems at your Board? *(Answers are found in Appendix A)*

1. Board member Emma has suggested a strategic planning retreat. Everyone is very busy, it's difficult to plan around everyone's schedule, and might be too costly. The manager talked to a consultant to facilitate the retreat and obtained a quote for several thousand dollars.
2. Rates and fees have not been adjusted for over seven years. A recent rate study showed that the utility expenses currently exceed revenues and as a result essential infrastructure repair and replacement projects have been placed on indefinite hold. Several board members were reelected on promises to continue to hold the line on tax or rate increases.
3. New board members Ethan and Samantha were elected on an anti-development – no growth agenda. They promise to curb all water and wastewater system projects and expansion activities. The remaining board members are unsure how to proceed.
4. The board has been presented with an invoice of \$15,000 for work that councilperson Maria verbally authorized. The work was needed but could have been completed some other time – it is clear that this wasn't an emergency situation. At the time the manager was out of town and no other board members were included.
5. For years, office manager Katherine has done the bookkeeping at home. Your new chairperson, Jeff, wants all financial records to be maintained and kept in the office in a secure file cabinet -- along with monthly financial update reports. Other board members are unsure what's best.

LOOKING AT THE UTILITY PLAYERS

The Board, the Manager, and Utility Staff are a team working to accomplish the utility's mission – to provide water and wastewater services. It's the Board's job to see that all players do their part well and on time so that customers are well served, see Figure 1-2 below.

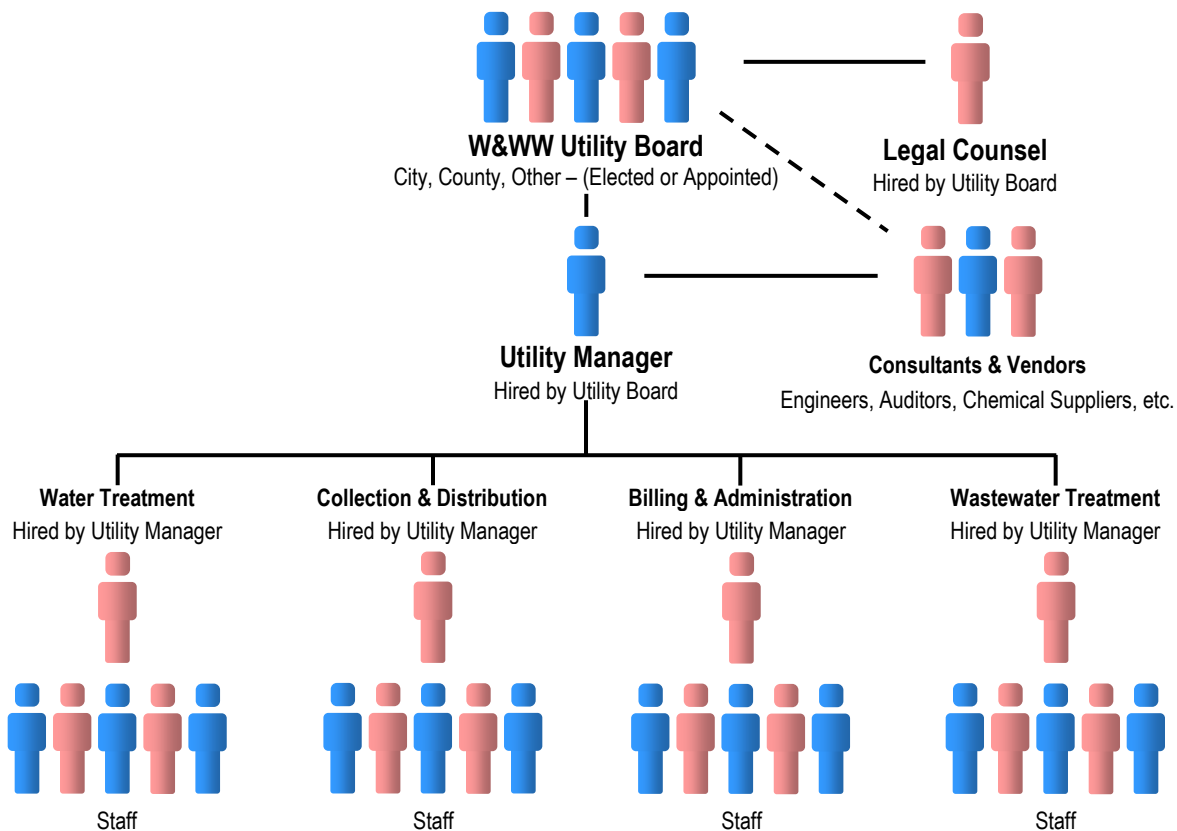


Figure 1-2
Typical Utility Organizational Chart

The Board (Governing Body). This group's role is to focus on ends (the mission) while setting guidelines for the means (policies, meeting legal requirements, etc.). The board is responsible for hiring, evaluating, compensating and terminating the Manager. The board does not “run” the utility or micro-manage.

The Manager (Executive). This person's role is to develop and carry out means (procedures, standards, etc.) that fit board guidelines on a day-to-day basis. Depending on statutes, she or he may be responsible for hiring, evaluating, compensating, supervising, and terminating other employees. In other cases, the Manager evaluates and supervises.

The Staff (Employees). Their role is to perform tasks that were developed as means to the systems ends (mission).

The Supporting Cast. Assisting you with the utility mission are the following players who do not directly interact with the public.

Legal Counsel. Water and wastewater utilities are legal entities and the board needs legal counsel to carry out its "fiduciary" responsibility, taking actions, handling legal matters, or when addressing issues requiring legal clarification.

Consultants & Vendors. Engineering consultants, auditors, rate consultants, chemical suppliers, and so forth support you (the Board, the Manager, and Utility Staff) with carrying out the utility's mission. See Chapter 9 for recommendations about hiring and handling consultants and vendors.

THE MANAGER AND STAFF

Modern utility leadership demands that the governing body attend to all aspects of its responsibilities (see discussion above) while leaving the manager and staff free to carry out their duties. You steer the ship while they handle its running. The board hires the manager and is responsible for the manager's success. The formula for breeding success is followed by all the best organizations is described as follows:



- Hire the best talent you can find,
- Share your vision / direction with the manager,
- Empower your manager with the tools and authority to accomplish your mission, and
- Provide accountability and positive rewards.

The dysfunctional utility governance follows a different track for breeding mediocrity:

- Hire good talent,
- Micromanage (control) the manager,
- Second guess each decision,
- Brown beat your manager at every opportunity,
- Watch her / him leave out of frustration,
- Fill the void with mediocre talent (they're easier to find, manage, and they're happy being mediocre), and
- Continue to punish the new manager for everything that goes wrong.

The board sets the tone – you get to choose which it is, micromanagement or the leadership approach.

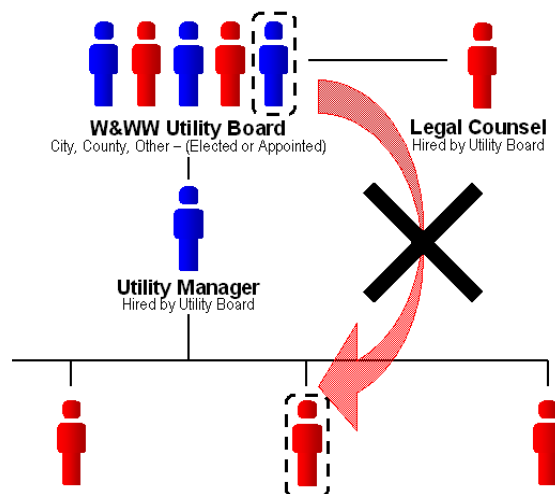
The Board is NOT the Manager!

Whether you're a new or experienced Board member, it's vital to recognize the difference between governing (your job) and managing (the Manager's job).

- *"Don't become the system manager; you've already hired one -- don't get in his / her way,"* stated one veteran board chairperson.
- Don't go around the Manager and communicate with employees about system business.
- Don't act independently, speak for, or represent the board without board sanction or approval.

Board members should focus on what they can personally contribute to the betterment of the community through their role on the board, and make the commitment to themselves to do their homework in order to do a good job.

"You have to keep the good of the community and of the ratepayers as your focus. That will help avoid the bickering that comes with individual groups' or individuals' needs," also urged the veteran board chairperson.



PHYSICAL COMPONENTS

Since water and wastewater utilities are capital intensive entities (more so than any other utility) replacing water and wastewater infrastructure is economically and politically challenging. As a result, public utility boards

allowed infrastructure replacement surcharge programs as an innovative solution for encouraging needed water and wastewater infrastructure investment in a cost efficient manner.

A system's physical components - wells, pump houses, mains, storage tanks, back-hoes, loaders, etc. – are a special board responsibility. As big ticket items, they require the board to make very sure that what's planned is what's needed. Indeed, sometimes the Board and Manager get carried away by glowing engineering reports and plans. A pumping station or new reverse osmosis treatment plant which requires high tech maintenance or excessive power use may not be practical for a community of 500 persons. Sorting out what appears to be the best option may require some second opinions -- try contacting the Florida Rural Water Association, a neighboring system or FDEP.

FINAL THOUGHT ... THE BOARD'S ROLE

To focus on ends while setting guidelines for the means. It's up to the Manager to develop or improve the means - and to supervise the rest of the employees. That division of labor between the Board and Manager frees you up to carry out your legal, fiduciary and leadership responsibilities, see Figure 1-3 below. In the next chapter, you'll review ways to carry out those responsibilities. A water system's organization can be divided into three parts:

- **Governance** focuses on accountability and provides direction to and oversight of, the overall operation and management of the water system.
- **Management** focuses on responsibility and controls the day-to-day operation and management of the system. Strategic planning is a function of management.
- **Operations** focus on performance and must meet certain performance standards.

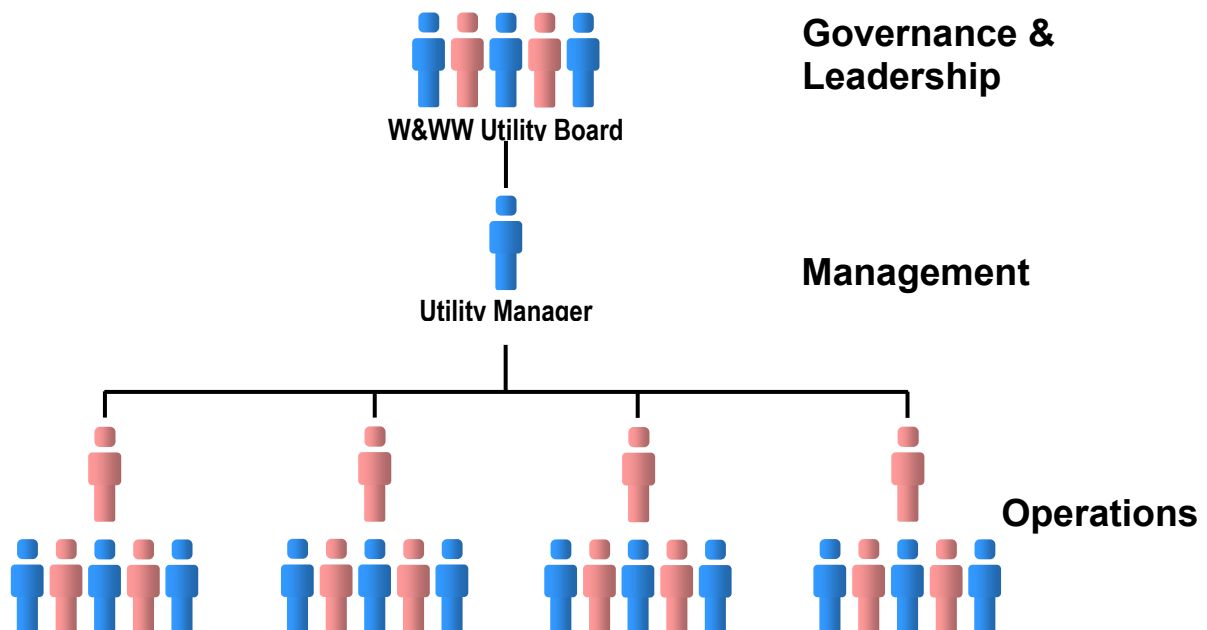


Figure 1-3
Division of Labor between the Board and Manager

How long has it been since you brought home a report card? Here are some major Board responsibilities. Find out how well you -- and your water / wastewater system -- are handling them.

Report Card

Carrying Out Board Responsibilities

Give yourself and System a Grade between A through F for each category. (Answers are found in Appendix A)

Board Knowledge, Efficiency, and Effectiveness

- A B C D F 1. I have read and understand the by-laws, procedures, and purchasing guidelines.
- A B C D F 2. I have read and understand the Florida Government in the Sunshine & Freedom of Information Act requirements, see Appendix I.
- A B C D F 3. FRWA has conducted the Utility Board Workshop for us.
- A B C D F 4. We publish a meeting agenda at least three or four days before Board Meetings.
- A B C D F 5. We stick our agendas – our meetings are efficient and effective. Bloviating and posturing is discouraged.

Legal

- A B C D F 1. We have up-to-date, relevant By-Laws, Operational Policies and Procedures Manual.
- A B C D F 2. I understand which federal, state, and local laws and ordinances apply to us.
- A B C D F 3. Our system complies with all of those laws and ordinances.
- A B C D F 4. We understand individual board members can't enter contracts.
- A B C D F 5. We follow Florida Sunshine Laws concerning meetings, public access to minutes.

Financial

- A B C D F 1. I understand my rights and powers as a board member.
- A B C D F 2. Our water / wastewater system has modern bookkeeping and accounting systems.
- A B C D F 3. We conduct annual audits and come through with flying colors.
- A B C D F 4. Our rates cover operations, debt service, infrastructure replacement, and reserves.
- A B C D F 5. We maintain an adequate contingency fund for emergencies.

Customers and the Public

- A B C D F 1. Board members bring customer concerns back to our meetings.
- A B C D F 2. Customer service is important to me.
- A B C D F 3. We communicate regularly with customers (newsletter, bill stuffer, etc.)

Staff and Operations

- A B C D F 1. We have knowledgeable, effective employees.
- A B C D F 2. We are up-to-date with FDEP Rules and Regulations
- A B C D F 3. We maintain up-to-date O&M Manual, and Emergency Plan.
- A B C D F 4. We are active members of Florida Rural Water Association.

Physical System Components

- A B C D F 1. We do preventative maintenance on a regular basis.
- A B C D F 2. We plan at least three years ahead for capital projects.
- A B C D F 3. I have taken a tour of our office and facilities within the past two years.
- A B C D F 4. We have up-to-date maps of our system.
- A B C D F 5. Equipment maintenance files are current and complete.

Regulatory Requirements

- A B C D F 1. Our Board takes Safe Drinking Water Act (SDWA) requirements seriously.
- A B C D F 2. We are rarely out of compliance with the Safe Drinking Water Act / FDEP Rules.
- A B C D F 3. We support FRWA and use the Circuit Riders to comply with FDEP Rules.
- A B C D F 4. We encourage board and staff to attend job-related training sessions regularly.

CHAPTER 2

NEW WAYS OF RUNNING AN OLD BUSINESS

As a Board Member, sometimes it feels as though you're drowning in details instead of focusing on running the water and wastewater Utility as a good solid business. Agendas, reports, presentations, numbers, endless pages to read, (sometimes) endless meetings to attend -- does anybody see the big picture? It's absolutely essential for governing body members to oversee their organization. For today's utilities, it's a board "must do." So where to begin?

Chapter Overview: Chapter 2 describes that water and wastewater Utilities are enterprises (for the public good) and operate on sound business principles. These principles can be grouped into three basic elements that characterize strong healthy utilities: Technical, Managerial, and Financial (TMF) Capacity. Understanding Technical, Managerial and Financial elements gives board members a good perspective for decision-making. By carrying out the TMF Capacity elements -- the Board oversees all aspects of its water / wastewater system and performs short-term and long-term planning, and visioning. Several supporting responsibilities are discussed, along with board member do ~ and don'ts.

WATER & WASTEWATER UTILITIES ARE ESTABLISHED FOR THE PUBLIC GOOD.

Whether your utility is a non-profit member association, special district, municipality (city, town, village), or county it was established for the promotion of the public health, safety and welfare.¹⁷ These utilities are meant to be self-supporting entities or enterprises funded by and supported by its users.¹⁸ Rates and fees must be just and equitable -- based on the use of the utility by each customer.

Like any public good issue, scarce resources should be targeted according to carefully thought out priorities (are we spending money on the right things?) and with recognition of the real limits of the local community's *Technical, Managerial and Financial Capabilities*.

Public utilities are a public trust. Enterprise fund monies constitute a public trust. The primary benefit for public ownership of water and wastewater Utilities is the ability to return any excess funds (profits from a business perspective) ordinarily collected by a private entity to the customer in the form of lower rates. The question for a governing board to address is what constitutes a reasonable return and what does the utility need for its proper long-term operation. As an issue of public trust and accountability, revenues collected from water and wastewater ratepayers should be spent on utility operations not transferred to the general fund to make up for tax revenues (ad valorem taxes).¹⁹



- Simply stated, ratepayers should get what they pay for, services -- water and wastewater services.

Transfers of those monies from utilities (which are supported by user fees) into to general fund pose a problem of accountability for the entities and elected officials. Monies collected for a specific public service and then redirected for unrelated purposes should naturally become a subject of public scrutiny and debate. FRWA strongly advises against this practice as it weakens the utility and robs the ratepayers.

Trust and Accountability Regarding Water and Sewer Revenues. Florida Rural Water Association believes the public is best served by self-sustained enterprises adequately financed with rates based on sound engineering and economic principles. The analysis should identify the true costs of providing services in the long-term. Rates and fees collected must be sufficient to maintain level of service, cover expenses, fund capital outlays, retire debt, and support reserves (debt-service, repair and replacement, minor capital projects, infrastructure reinvestment, and emergencies).

What is an Enterprise Fund? An enterprise fund is meant to be a separate accounting and financial reporting mechanism for municipal or county services for which a fee is charged in exchange for goods or services, such as a public-owned water and wastewater Utility. See chapter 6 for more discussion on enterprise funds and accounting.

¹⁷ Water or Sewer Utilities service the public good per F. S. 153.04 for Counties, per F. S. 180.136 for Cities.

¹⁸ Rates and fees must be just and equitable -- based on the use of the utility by each customer per F. S. 180.13 and 153.11

¹⁹ Carroll, (2008a), p. 11

PERCEPTION IS REALITY!

The First Law of Government Management: Perception is Reality!

Public Perception

- With regard to a utility system, what does this mean?

- Discussion...

Perception issue #1

- If water is clear, is it safe to drink?

Answer to #1

- Reclaimed water is always clearer than raw or tap water. Health officials will tell you water must be aesthetically pleasing or people will tend to use less safe sources (i.e., why we have secondary parameters to meet)

Perception issue #2

- If the plant is dirty, is the water quality coming out OK?
- If the plant is very clean, are the discharge standards being met?
- Are there regulatory requirements for house-keeping at treatment facilities?

Answer to #2

- Good housekeeping is typically a requirement in permits.
- This is a major issue in recharge programs...how clean is clean?

Perception Issue #3

- Question:

How much arsenic is OK in your

- utility's tap water?

Are you willing to say the answer to the camera with a straight face, assuming you are not an arsenic researcher?

Public Perception

- With regard to a utility system, what does this mean?

- Discussion/listing of perceptions

Your Community Faces Many Challenges:

- Changing economic base
- Changing service demands
- Water resource shortage
- Regional pressures
- Fiscal constraints
- Global competition
- Workforce shrinkage

Outputs – Policy Function

- “Cohesive set of strategies to pursue”
- Community buy-in & communication
- Utility “Vision”

Planning is a way to reach your chosen future “vision”...

- But it is rarely short-term, so elected officials and executive management need to sell the plan to the electorate for which the benefits will occur after their term is up!!!

Outputs of Planning Process

- Capital Component of Reinvestment
- Policy Issues
- Direction

How to Figure out

the Capital Component

- Deferred needs
- Growth needs
- Repair/replacement needs

System Investment with Time

It Should, but this is Typical – No One Wants the Highest Rates So...

- Many small utilities skip maintenance...
- In this situation all the cities had deferred maintenance obligations...
- Which ones were worst?

Deterioration of Infrastructure

Sand Production in Wells

Iron Bacteria on Fiberglass Column Pipe

THE BIG PICTURE – TECHNICAL, MANAGERIAL AND FINANCIAL CAPACITY

Capacity describes the capabilities of your water / wastewater system to function well and meet regulations and standards. There are three general and necessary types of capacity as we've described above, these are:

1. Technical Capacity,
2. Managerial Capacity, and
3. Financial Capacity.

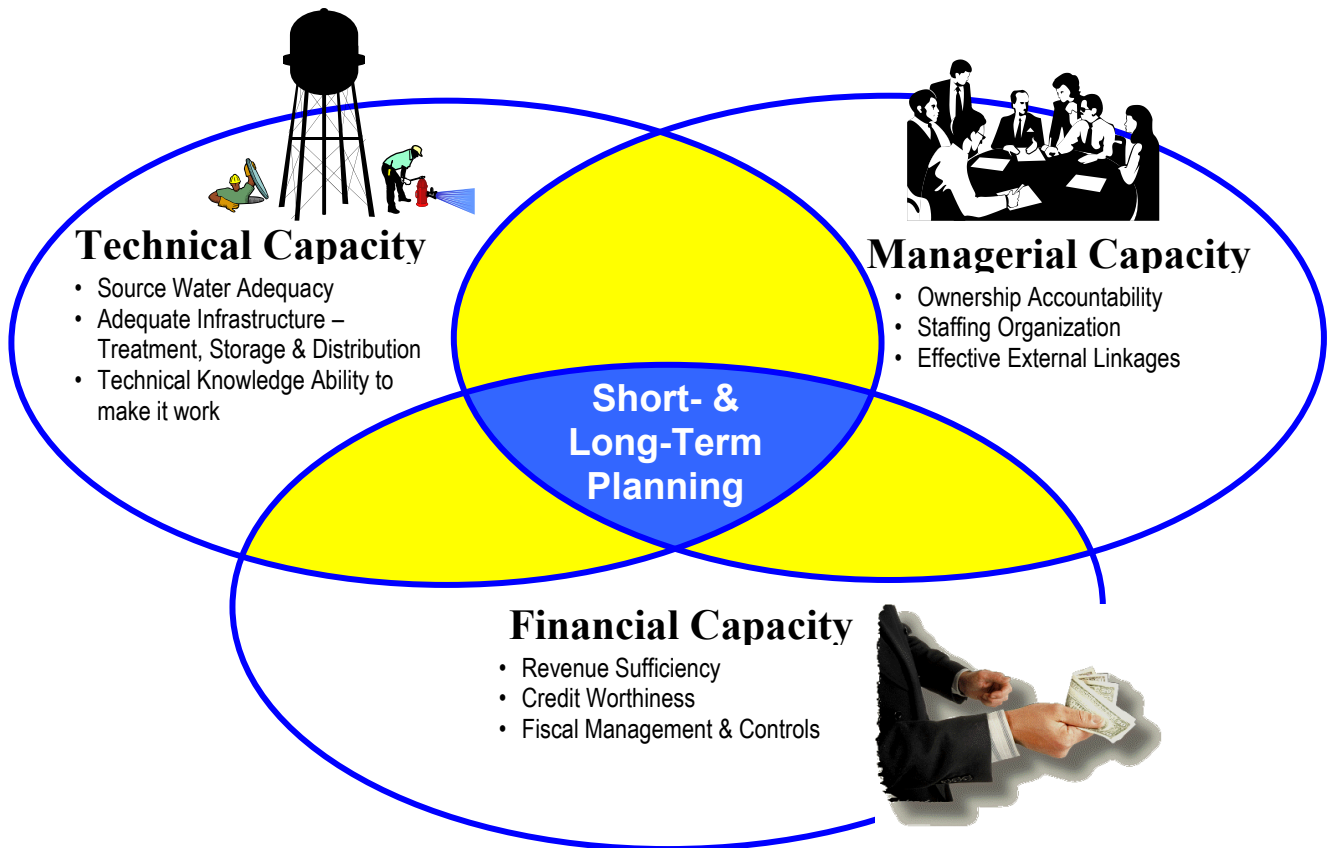


Figure 2-1 ~ Elements of System Capacity Development²⁰

²⁰ Source: USEPA <http://water.epa.gov/type/drink/pws/smallsystems/basicinformation.cfm>

The 1996 Safe Drinking Water Act (SDWA) emphasizes developing the capacity of water systems. The fundamental goals of capacity development are:

- To protect public health by ensuring consistent compliance with drinking water standards, including Federal and State regulations and other applicable standards of performance;
- To enhance performance beyond compliance through measures that bring about efficiency, effectiveness, and service excellence; and
- To promote continuous improvement through monitoring, assessment, and strategic planning. All water systems, regardless of size or other characteristics, can benefit from a program of continuous improvement.

The basic premise of capacity development is that capable water systems are better positioned to consistently comply with applicable standards and provide customers with safe and reliable water service. Capable systems also are better positioned to meet other standards of performance that are generally accepted in the industry or required by other regulatory agencies; these may include the aesthetic quality of water (taste, color, and odor), water pressure, water losses, or other measurable aspects of performance.

Each system, board member, manager, and key staff member should understand, consider, and address these three basic measures of a system's capabilities and capacity.

TECHNICAL CAPACITY

Technical Capacity includes the physical infrastructure of the water and wastewater system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

Board members need to be familiar with the technical processes involved in providing water and wastewater services to their customers. This involves understanding the necessary measures required to stay in compliance with federal and state regulations and how managerial decisions can impact water quality and technical capacity.

Board members must rely heavily on the utility's managers operators, and technicians to ensure adequate technical capacity. While most managers will have oversight of the utility's operations, it will be difficult for them to provide necessary guidance without understanding the laws that govern technical capacity and the procedures that help ensure compliance. In addition to system operators, managers must be able to identify situations where professional assistance from engineers, attorneys or technical assistance is required.

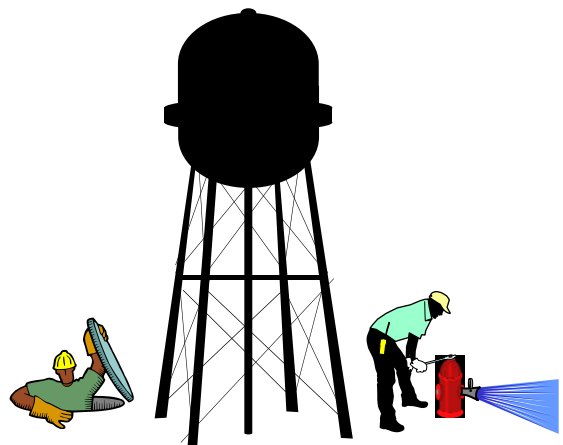
Source Water Adequacy

Your system's source is adequate to meet current demands and anticipated growth, meets all applicable water quality standards, and is appropriately sampled and protected.

- The Consumptive Use Permit, well yield, and well pump capacity are adequate for your system's needs.
- The wellhead protection plan is being used to protect your water source by planning, ordinances and other land use controls.

System Operations

- You have certified operator(s) who:
 - Understands the benefits of public health protection.
 - Knows the applicable drinking water standards.
 - Understands the system's technical and operation characteristics.



- Attends training to assist them in maintaining their skills at their highest level and to increase certification levels
- Successfully implements an Effective Operation and Maintenance (O&M) Program.
- Proactive O&M programs protect your system from unnecessary infrastructure degradation.
- Up-to-date / accurate maps and service manuals
- Emergency plans are a must for times of crisis or hurricanes.
- Safety programs designed to protect employees and the public.

Infrastructure Adequacy

- Water Treatment, Distribution & Storage. The system can reliably produce, store, and deliver an adequate supply of water that meets all drinking water standards. This is because its infrastructure, from source through distribution, is in good condition, and hasn't exceeded its useful life.
- Wastewater Collection, Treatment, Effluent Disposal & Residuals Handling. The system can reliably handle wastewater that meets all clean water standards – because infrastructure, from customer through disposal, is in good condition, and hasn't exceeded its useful life.

MANAGERIAL CAPACITY

Managerial Capacity involves the management structure of the water system, including but not limited to ownership accountability, staffing and organization, and effective linkages. In simpler terms, do you have an effective management structure? Do you have a capable and trained staff?



Ownership Accountability

- Responsibilities of the governing board and operator / manager are clearly identified and communicated to prevent confusion and mistakes in the daily operation of the system.

Planning and Performance Measurement

- The governing board develops and periodically revisits strategic plans, including source water protection, water rights, emergency preparedness, future growth demands, finances and asset management (including short- and long-term capital investment), and service policies.
- The governing board identifies and implements accountability and performance measures.

Staff Knowledge and Training

- System personnel have adequate knowledge to manage operations, understand applicable regulatory requirements, and have the necessary licenses and certifications.
- Owners, managers, and operators receive ongoing training to stay current on regulatory requirements and best practices.

Effective External Linkages

- System personnel interact regularly with their customers and regulatory agencies.
- System personnel build relationships with their customers, technical assistance providers, and regulatory agencies to increase their ability to solve problems quickly.

FINANCIAL CAPACITY

Financial Capacity encompasses the financial resources of the water system, including but not limited to the fiscal controls, revenue sufficiency, and ability to access funds when needed. Basically, does your system have a budget and enough revenue coming in to cover costs, repairs, and replacements?



Revenue Sufficiency

- Rates, fees, and other water system charges cover the full cost of service.
- System personnel know and can measure all costs and revenues.
- Reserves or savings are available for unexpected expenses.
- The city is not transferring any excess funds needed for infrastructure reinvestment into its general account.

Fiscal Management

- System personnel keep adequate books and records, use appropriate budgeting, accounting, and financial planning methods, and manage revenues effectively.

Credit Worthiness

- The system has an established credit rating to allow personnel to access funds for an emergency or for implementation of a capital improvement plan.
- System personnel can access capital for the system through public or private sources.

Technical, Managerial and Financial Capacity Checklist. A detailed checklist is available in Appendix C for evaluating your system’s technical, managerial and financial capacity.

Please complete this evaluation and send a copy to Florida Rural Water Association:²¹

- ➔ We will prepare a program to assist you and your system in increasing your capacities and planning for the future needs of your system!
- ➔ We will provide board workshops tailored to your needs.
- ➔ We can help you with visioning and planning.
- ➔ **FRWA is here to help you with all of these challenges – just call us!**

Appendix C ~ Evaluating your Technical, Managerial and Financial Capacity

Technical, Managerial and Financial (TMF) Capacity. Each system, board member, manager, and key staff member should understand, consider, and address these three basic measures of a system’s capabilities and capacity. Please complete this evaluation and send a copy to Florida Rural Water Association – we will prepare a program to assist you and your system in increasing your capacities and planning for the future needs of your system.

Name of Water / Wastewater System: _____
 County: _____ PWS ID: _____
 Name of Person Completing the Survey: _____ Date: _____
 Email Address: _____

Technical Capacity includes the physical infrastructure of the water system, including but not limited to the source water adequacy, infrastructure adequacy, and technical knowledge. In other words, does your treatment system work the way it is supposed to? Are you providing the safest and cleanest water possible and required by law to your customers right now, and will you be able to in the future?

1. What are the sources of raw water for your water system? (Check any that apply)
 - Groundwater from a well
 - Groundwater from a spring
 - Surface water (includes groundwater under the direct influence of surface water)
 - Purchased water requiring treatment
 - Purchased water from another public water system which requires no further treatment
 - Don't know
2. Does your water system have an emergency or supplemental water supply available such as an inter-connection with a neighboring system for emergency water flows?
 - Yes
 - No
 - Don't know.
3. What is the status of your Consumptive Use Permit? The water management district authorizes water to be withdrawn from surface and groundwater supplies for reasonable and beneficial uses such as public supply (drinking water), agricultural and landscape irrigation, and industry and power generation. This permit is known as a Consumptive Use Permit (CUP) or a Water Use Permit (WUP).
 - I have a Consumptive Use Permit (CUP) or a Water Use Permit (WUP).

²¹ FRWA Engineering Staff or Financial / Management Circuit Riders can come to you and provide workshops, visioning, and planning.

MEASURING SYSTEM PERFORMANCE

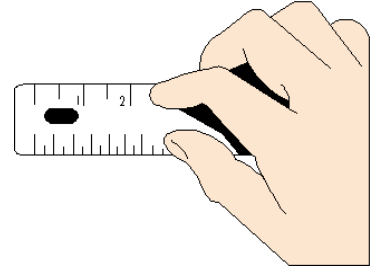
It's not easy for the board to gauge system performance. Typical methods include:

Statistics. Be sure to get monthly reports on measures such as actual revenue and expenditures vs. budgets, percentage of unsold water (shouldn't exceed 15 percent), cost of producing water vs. revenue received and delinquent accounts.

These reports must be in writing and should provide last month, last year and year-to-date numbers -- and percentages (who has the time to spend calculating percentages by hand?).

Customer Input. While many water and wastewater systems still rely solely on random conversations at the local diner and tailgate parties for customer feedback, more are utilizing opinion surveys. A statistically reliable survey can provide the perfect antidote to those chronic complainers and whiners. It gives boards hard data, not impressionistic or anecdotal data.

Audits. Financial audits are commonplace and important; be sure to use certified personnel. But other audits can help the board assess system performance. Audits concerning water loss and energy consumption, often performed by the state water and wastewater organization, provide important information to governing bodies, see Chapter 6 for more information.



PLANNING AND VISIONING



With an evaluation of your system's Technical, Managerial and Financial Capacity in hand you are in excellent condition to make plans. An objective system evaluation shows your system's strengths and weaknesses. An honest evaluation is a vital decision making tool – know where you are, you know where to start, and you know where you need to go.

Let the planning and visioning process begin!

Planning. The board's job is to set goals and objectives for the utility. The board can describe major approaches to achieve those goals. Plans can be short-term (e.g. next week's work schedule), mid-term (such as your annual business plan) or long-range (five-year strategic plan).²²

Visioning. Visioning is looking ahead 10 or more years at your system's viability. That includes revisiting current assumptions about your mission, the local economy, population served, ways to improve productivity (for example, joint management or system's viability, see

operations) and even examining the Chapters 11 and 12.

Self Evaluation: When was the last time your board had a planning or visioning session?
Last month? Last year?
Don't remember?

POSITIONING FOR THE FUTURE

For many governing bodies, it's hard enough to keep up how's a body supposed to think about the future? By taking issues.

with daily crises. So time out from daily board

You run a monopoly. Unlike other public entities such as school and library districts, there is virtually no practical option for dissatisfied or unserved customers. They can send children to private schools or do home schooling. They can buy books, new or used. But they *must* drink, use the water, and flush the toilet. Your customers have no practical alternatives.

²² USEPA. (2003). Strategic Planning: A Handbook for Small Water Systems.

Here are some ways your board can help position itself for the future.

- **Economic scenarios.** Get local or regional economic experts to discuss long-range projections for your community and county. Invite them to board meetings; attend some of their meetings. Your vision for the system must be made within the probabilities of your community's future.
- **Vision.** Whether acting alone or including community input, the board develops a vision of its mission, customers and services 10 or more years from now. This can't be done at regular board meetings; schedule several sessions to discuss alternative visions and don't forget to include staff.²³ Call FRWA to help you with this process.
- **Support.** Increase support for and advocacy of your board's vision. Advocacy means one person adopting the views of another as his or her own. It's vital if you're going to win acceptance of higher rates, bond issues or other steps financed by customers and/or the community. Do target officials, civic influentials and the media; they carry weight with others.
- **Communications.** Your water / wastewater system exists to serve customers. It's time to improve your communications through two-way dialogue.

Communications isn't a "touchy-feely" activity; it's an essential part of modern utility management. If you don't define your reality, the grapevine will.

Customer newsletters, chairperson's letters, press releases, presentations at civic groups, co-sponsoring school and community events, customer opinion surveys, customer relations practices --there are dozens of proven ways to establish and maintain communication with your constituents.

It is your duty as a board member to keep in touch with customers and the public. That means both listening and talking.

RUNNING YOUR UTILITY LIKE A GOOD BUSINESS

The original reason for beginning the utility was for the public's health and safety. This is its mission. It is a public trust that must be safeguarded and operated using sound business principles and accountability. Ratepayers should get what they pay for, services. Enterprise funds should support the utilities operations and have reserves for the future.

The elements of running your utility like a good business include:

1. Strong Technical, Managerial, and Financial Capacities.
2. Evaluating System Performance
3. Planning, Visioning and Positioning for the Future

²³ Start with this document and expand from there. USEPA. (2003). Strategic Planning: A Handbook for Small Water Systems

CHAPTER 3

GOOD BOARD MEETINGS

If there's one quick measure of a Board, it's the regular meeting. A written agenda sent in advance, staying on topic, making needed decisions, asking questions -- there are many benchmarks for measuring a governing body's effectiveness. This Chapter reviews board meetings and how you can make yours more productive.

Chapter Overview: Chapter 3 shines a spotlight on Board meetings. They are the litmus test of an effective board. This Chapter reviews preparing for the meeting, making sure it's legal, actions during the meeting and follow-up. It discusses agendas, minutes and Florida Sunshine Laws. Public access requirements under the Americans with Disabilities Act, a revolutionary federal piece of legislation, are briefly summarized.

PREPARATION

Let's start at the beginning, the written agenda and attachments sent out several days in advance of the monthly meeting. A recent informal survey of five states found that 91-percent of Board Meetings have a written agenda, and that 85-percent send the agenda out either three or four days in advance of the meeting. If you don't have a written agenda sent out ahead, start NOW. That's so members can review materials and list questions or concerns. Preparing ahead of time saves time in your monthly meeting.

- Prepare an agenda at least one-week before the meeting
- Provide the board members with a complete agenda package at least three to five days before the meeting – *as a Board you should discuss with the Manager how much time you need to be prepared before the meeting.*
- Post the agenda at least three days before the meeting

The unprepared member. Sometimes one or two members don't prepare adequately. You can tell because they ask unnecessary questions, fumble through papers and don't seem "on-track." The result is that the entire board spends more time than needed on each agenda item.

Help these Board members to understand the importance of preparing ahead. Whether it's a confidential suggestion after a board meeting, a telephone call or over a cup of coffee, help them understand that it's part of every board member's job description. No, it's not being pushy to bring this up. Instead, you're helping your board team be more effective.

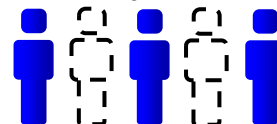
Input. Some agenda items suggest getting input from customers, neighbors and civic leaders. As the public's representative to help oversee your system, don't hesitate to pick up the phone or strike up a conversation. While this information is informal -- as opposed to a statistically valid opinion survey, for example it gives board members a sense of what people think.

It's one thing to gather input from your community. It's entirely another to embark on a media campaign to help sway public opinion. **Horror stories abound of the "loose cannon" board member who talks with the media regularly, bypassing the Manager or board chairperson or mayor who are the normal system spokespersons.** What's the result? Governing body members being played against each other in the media. There is no surer recipe for a loss of public confidence.

KEEPING MEETINGS LEGAL

QUORUM

It's simple: know the quorum your Board needs to transact business. An easy rule of thumb is to delay the start of the meeting until you have a quorum, because usually the first item of business -- and a vote -- is approval of the last meeting's minutes. If you have chronic problems assembling a quorum, you've got problems. Whether it's due to lack of interest or feelings that board or council meetings just waste time, this one must be solved. Talk to offenders, asking them to attend and be on time. If persuasion and peer pressure don't work, take a look at your *Policies and Procedures Manual*. There may be a provision for the involuntary resignation of non-participating board members. If there isn't, better adopt one ... and quick!



PUBLIC NOTIFICATION AND PUBLIC ACCESS

The philosophy behind today's laws and norms about notification and access is straightforward. Public business must be conducted in public.

Florida Sunshine Laws. Typically state sunshine laws cover (1) all public entity meetings, not just scheduled regular meetings and (2) public access to records. While you may charge a citizen a reasonable amount for finding and copying minutes and records, there is no doubt as to her or his right to request and receive them, see Appendix I.

“Thirty years ago, Florida enacted the Sunshine Law, Chapter 286 of the Florida Statutes. It established a basic right of access to most meetings of boards, commissions and other governing bodies of state and local governmental agencies. The Sunshine Law, Chapter 286 of the Florida Statutes, requires that government decision-making take place in public. The Sunshine Law prohibits elected officials from meeting behind closed doors to decide matters that affect the citizens they represent in the absence of a specific exemption approved by the Legislature. The basic requirements of the law are that meetings of any public decision-making body must be open to the public, reasonable notice of such meetings must be given and minutes of the meeting must be taken... The Public Records Law, Chapter 119 of the Florida Statutes first passed in 1909, provides that citizens shall have virtually unlimited access to records made or received by any public agency in the course of its official business, unless specifically exempted by the Legislature. Chapter 119 mandates that custodians of these records shall permit them to be inspected and examined by any person desiring to do so, at any reasonable time.”²⁴

Public Notices and Hearings are Required. Virtually all cities, rural water and wastewater, and other public systems are required by state law to publicize their meetings. Notification can range from newspaper legal notices to posting in a commonly used public place. However you're supposed to do it, do it!

EVALUATION OF BOARD MEETING EFFECTIVENESS				
Take this quiz about your Board Meetings - Tally your score to see how you did in Appendix A.				
Every Mtg	Occa- sionally	Never	Dumb Idea	
6	3	0	-1	1. The agenda, attachments go out at least three days early
6	3	0	-1	2. We start on time.
6	3	0	-1	3. We minimize small talk.
6	3	0	-1	4. Our agenda permits comments from the public.
6	3	0	-1	5. Members abstain from voting if there is a conflict of interest.
6	3	0	-1	6. Board members are prepared for meetings.
6	3	0	-1	7. Our decisions are timely and thoughtful.
6	3	0	-1	8. Minutes are available to the public.
6	3	0	-1	9. Our board meeting place is accessible to the disabled.
6	3	0	-1	10. Our chairperson/mayor uses parliamentary procedure effectively.
6	3	0	-1	11. All board members actively participate in meetings.
6	3	0	-1	12. We require regular reports on compliance
6	3	0	-1	13. Meetings last three hours or less.
6	3	0	-1	14. We use executive session appropriately.
6	3	0	-1	15. We support the Manager's decisions.
				Total (see Appendix A to see how you did)

Public notices and hearings are required by Florida Statute – “Before a local government water or sewer utility increases any rate, charge, or fee for water or sewer utility service, the utility shall provide notice of the proposed increase to each customer of the utility through the utility's billing process. The notice shall state the date, time, and place of the meeting of

²⁴ Excerpted from the University of Florida Brechner Center for Freedom of Information <http://brechner.org/resources.asp>, see Appendix I

the governing board of the local government at which such increase will be considered. The notice required in this section is in addition to any notice and public meeting requirements for ordinance adoption as provided by general law.”²⁵

Impromptu Meetings – Verboten. But what about coffee every morning at Joe’s Cafe? Most of the Board shows up; often talk is water board business. Isn’t that OK? NO, IT’S NOT! If two or more board members are present, you’re violating Florida Sunshine Laws. Remember, public business is to be conducted in public -- not in a closed setting.



Public Access to Meetings. The Americans with Disabilities Act (ADA) requires access by the handicapped and disabled to public places. Title II applies to “Public Entities,” meaning any state or local government. Those public entities may not exclude or discriminate against a qualified individual with a disability.

Title III deals with access to a place of public accommodation. It appears that municipalities and water and wastewater systems would fall under Category Six, service establishments. That’s due to holding meetings where the public is invited to attend and to having offices open to the public. But what if there are physical or other barriers to public access? Whether a Water Utility operates out of a three-story office building or a home, it must be accessible if that status is readily achievable. “*Readily achievable*” means without much difficulty or expense.

Possible remedies to barriers include installing ramps, ramping steps, widening doors, removing high / low density carpets and adding flashing lights to alert systems. The new construction and alterations portion of Title III went into effect in 1993.

For further information about Florida Sunshine Laws or ADA, check with Florida Rural Water Association or attorney general.

ONCE or Twice-Monthly Meetings do the Job

Getting information to council members is a top priority for City Mayor Arlene Pritchard. Agendas are sent out the Thursday before a Tuesday night meeting. *“It’s hard to keep the council as informed as possible. When we send out agendas, we also include any correspondence,”* Pritchard stated. The meeting itself starts by approving minutes and paying disbursements (done monthly).

Next is an open agenda for the public. *“We’re not too big to allow people to come in,”* she said. *“Sometimes they don’t want to talk on the phone.”* Usually there aren’t any time limits on public comments, but for some controversial items we place a time limit of 3-minutes so everyone has a chance to speak. If a decision is made, the citizen is called the next day and receives a confirming letter.

Unfinished business and new business come next. Council members may bring up items related to their specific responsibility, such as streets or storm sewers. The meetings, usually lasting about two hours, are taped. Is it hard to keep council discussion on track? Not a bit. *“I just say Let’s get back to business’ and that’s all I need to do,”* stated Pritchard, mayor for seven years and a 16-year council member.

²⁵ Florida Statute 180.136 Water or Sewer Utilities; Notices

TYPES OF BOARD MEETINGS

There are five types of meetings that boards participate in regularly: Regular Board Meetings, Special Board Meetings, Public Hearings, Work Sessions and Executive Sessions. Each type of meeting is designed to accomplish certain tasks that will achieve the goals of the board.²⁶

1. **Regular Board Meetings.** Board members handle general business and enact ordinances during Regular Board Meetings. These meetings can be frustrating if they are not well managed, so this chapter will provide suggestions on how to keep your meetings efficient and effective.²⁷
2. **Special Board Meetings** may be called on occasion to address business that cannot be postponed or issues that affect the majority of the customers. Board members should always think twice when proposing special meetings, as it's easy to get caught up in the presumed urgency of an issue, only to realize later that the issue was not so urgent after all. A Special Meeting has a more limited agenda than a Regular Meeting, but both are always open to the public. As a result, it is important that the time and place of Special and Regular Meetings be announced in advance to the media and the general public. Review your state regulations to determine the timeframe required for announcing a Special Meeting and notifying the public.
3. **Public Hearings** are forums for citizens to express opinions and for board members to explain their positions to the public. Hearings are most effective when they focus on only one set of issues, for example, the budget, or zoning, but not both.
4. **Work Sessions** are informal meetings, generally called for the purpose of conducting an in-depth study of a limited number of topics. These sessions provide the time needed to explore important issues in detail.
5. **Executive Sessions** are closed to the public in most states, and are usually limited by state law or local ordinance to consideration of a few specified topics. The major reasons for executive session are:
 - ✓ Personnel matters
 - ✓ Matters privileged in the client-attorney relationship
 - ✓ Preliminary discussion relating to the acquisition of real property



Be sure to ask your legal counsel what constitutes an Executive Session, and what kinds of issues may be discussed at such a meeting. Issues that typically are discussed in closed sessions. One thing can safely be said about executive sessions: they are sometimes misused and even abused. Typically there are a few allowable reasons for going into executive session ... and thereby excluding visitors and the media.

GETTING DECISIONS MADE

There are only two basic reasons for Board meetings: discussing and deciding. It's usually a lot easier for governing bodies to discuss agenda topics. It's much more difficult to reach decisions.

- After all is said and done – more is said than done!



²⁶ Montana Water Center, (2007). Small Utility Board Training Course and CD. Montana State University, p. 12-13

²⁷ League of Minnesota Cities. (2013).

Factors Affecting Board and Council Decision-Making

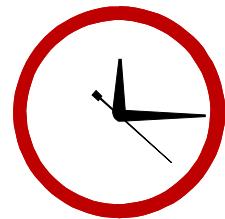
Action.....Consequences

- Agenda sent in advance.....Being able to prepare ahead saves time in the meeting
- Poor parliamentary procedures.....Hard-to-follow motions and amendments
- Board members come preparedImproves time management; shows respect for colleagues
- Meetings start lateLack of consideration about others' needs to finish
- Good time managementSense of achievement, success with this agenda
- Too much chitchatMembers don't take this meeting seriously
- Meetings last too longFatigue, poor decisions, impatience
- Agenda is too longSpend too much time on smaller, earlier items
- All members participateMembers are equal partners who share responsibilities
- Details get too much attentionMicro-managing operations that ought to be left to the Manager and Staff
- Unscheduled topics take over.....The agenda gets ignored, longer meetings
- Few decisions get madeLack of accomplishment, frustration

TIME MANAGEMENT

The presiding officer plays a key role in decision-making. His or her time management is essential. Proven time management techniques include:

- ✓ **Using an agenda with “consent” items** as well as discussion items. A consent agenda may consist of a few or several items, all of which are explained in materials attached to the agenda. They are not discussed but voted on as a block. If needed, an item may be removed from the consent agenda for discussion and separate vote.
- ✓ **Sticking to the agenda.** The skillful presiding officer keeps people on the topic. If the board strays, she or he may use phrases such as, “Let’s get back to the topic,” or “It was agenda item number five that started this line of thought.” Of course, other board members can also help pull the group back to the agenda.
- ✓ **Drawing discussion to a close** after a reasonable amount of time. “We need to move on now” and “We’ve spent almost 20 minutes discussing item number three” are possible comments.
- ✓ **Punctual starting and stopping times.** Set specific times, such as 7:00 p.m. - 9:00 p.m., for your meeting. It’s up to the presiding officer to cover the agenda in the time allotted. Boards that regularly finish their business within time limits often feel more successful.



The individual Board member ***DOES:***

- Read agendas, materials before meetings
- Arrive on time
- Participates in discussion
- Help keep discussion on track
- Help with time management
- Take bylaws, Policies and Procedures Manual seriously
- Vote thoughtfully
- Keep board business confidential
- Review draft minutes

The individual Board member DOESN'T:

- Come unprepared
- Arrive late and leave early
- Distract others
- Check email and text during meetings
- Ignore bylaws, *Policies and Procedures Manual*
- Put down other board members, staff
- Gossip about board business

PARLIAMENTARY PROCEDURE

Parliamentary procedure frightens many Board members. They equate it with complex rules and slippery -maneuvering. Other governing body folks see it as a set of practical operating rules for moving discussion and decisions along.

Robert's Rules of Order is the best-known model for conducting meetings, see Appendix D for key aspects of parliamentary procedure. Its drawbacks include being originally designed for large meetings, **not small governing bodies**, and the difficulty in understanding and applying its hierarchy of motions and actions.

However, there are other methods. One is **CONSENSUS**... every person speaks to the agenda item; the decision represents a compromise reflecting all points of view. Another is **SELF-DEFINED**... the board decides on its own rules of procedures, typically focused on motions, amendments and votes in which the majority prevails.

You do NOT have to use Robert's Rules of Order!

PERSONAL PARTICIPATION

Time management, good agenda, and meeting legal requirements are important. But the fact is, without high quality board member participation, your board won't work right.

Symptoms of Poor Personal Participation, include:

1. **Sporadic Attendance at Meetings.** Antidote: adopt a bylaw saying more than three unexcused absences in a year constitutes resignation from the board.
2. **Being Unprepared.** Antidote: board members let the offender know that she or he is not helping the system and is hurting meeting effectiveness.
3. **Constant Wisecracks, Side Conversations.** Antidote: presiding officer stops this behavior immediately by asking for everyone's attention to the agenda.
4. **Lack of Participation, Tuning Out.** Antidote: presiding officer announces that as a new guideline, silence means agreement. From time to time, the chairperson also specifically asks for member comments.
5. **Dominating Personality.** Antidote: presiding officer and/or member with most seniority thanks this person for her or his comments and then goes around the table asking others for their input. Privately, the chairperson alerts the dominator that the board is stronger when all people speak up, and that she or he intimidates some colleagues.
6. **Unethical Behavior.** Antidote: nip this one in the bud. At least annually, spend time in a meeting to review your *Policies and Procedures Manual* concerning conflicts of interest, etc. If the *Rules* aren't adequate, adopt stronger ones. For example, abstain from voting on items in which a board member has a conflict of interest.

It's tempting to duck the issue of poor personal participation. However, your board is only as good as its individual members. Your job is to do your best while helping your fellow board members be even more effective.

AFTER THE MEETING

There are two major tasks for Board members after the monthly meeting: reviewing minutes and keeping business confidential.

Why bother reviewing minutes? Because they are the official record of decisions. Should personnel grievances or lawsuits come, those minutes will define reality. Taking a few minutes to square the draft minutes with your notes or memory is a “must do.”

Keeping Board business confidential is much harder, because it takes self-discipline. While it’s natural for leaders to be proud of their organization, there’s a clear line between talking about achievements and plans vs. spilling the beans about confidential matters. There is no surer slap at fellow board members than loose lips that negate teamwork.

FINAL THOUGHT... BOARD MEETINGS ARE THE LITMUS TEST

Boards must prioritize what they do. Improving your meetings ought to be near the top of the list.

Putting time and effort into board meeting management pays off handsomely. Shorter meetings, more thorough discussions and timely, thoughtful decisions are some likely outcomes. The next Chapter reviews the vital role that your officers play.

BOARD MEETING CASE STUDIES

How would you handle these problems on your Board? (See answers in Appendix A.)

1. Board member Jim has missed two of the last three meetings with unexcused absences. Your *Policies and Procedures Manual* and bylaws don’t cover this topic.
2. Council members Carl, Sue and Billy Bob meet every day at Billy Bob’s cafe for coffee. You know that they often talk system business.
3. Chairperson John wants to sell some property to the board and doesn’t think it’s a conflict of interest.

CHAPTER 4

BOARD MEMBER & OFFICER DUTIES

Each board member has duties and responsibilities. Board Officers are the team within a team. They have essential responsibilities in two areas: official duties and being an example for other board members.

Chapter Overview: Chapter 4 reviews common duties for board member, in general, the mayor/chairperson, vice chairperson, clerk/secretary and treasurer: From both a practical and legal standpoint, the officers constitute the board leadership -- but they must know what they are supposed to do. The chapter also discusses officer term limits and that very difficult situation: the divided board.

BOARD MEMBER ROLES & DUTIES

As described in Chapter One, the utility board is the governing body for the water and wastewater system. Board members look after the affairs of the system, and are in a position of trust. They might abuse their position in order to profit at the expense of their system, and, therefore, at the expense of the customer of the system. The role of the board member is to:

- Board members must always exercise their powers for a 'proper purpose' – that is, in furtherance of the reason for which they were given those powers by the customer.
- Board members must act in good faith in what they honestly believe to be the best interests of the system, and not for any collateral purpose. This means that, particularly in the event of a conflict of interest between the system's interests and their own, the directors must always favor the system.
- Board members must act with due skill and care.

Establish the Utility Mission and Values

- Determine the system's vision and mission to guide and set the pace for its current operations and future development.
- Determine the values to be promoted throughout the system.
- Determine and review system goals.
- Determine system policies

Set Strategy and Structure

- Review and evaluate present and future opportunities, threats and risks in the external environment and current and future strengths, weaknesses and risks relating to the system.
- Determine strategic options, select those to be pursued, and decide the means to implement and support them.
- Determine the business strategies and plans that underpin the corporate strategy.
- Ensure that the system's organizational structure and capability are appropriate for implementing the chosen strategies.

Delegate to Management

- Delegate authority to management, and monitor and evaluate the implementation of policies, strategies and business plans.
- Determine monitoring criteria to be used by the board.
- Communicate with senior management.
- Ensure that internal controls are effective and accurate accounts are kept.

The board does not "run" the utility or micro-manage.

Exercise Accountability to Customer and be Responsible to Relevant Members

- Ensure that communications both to and from customer and relevant members are effective.
- Understand and take into account the interests of customer and relevant members.
- Monitor relations with customer and relevant members by gathering and evaluation of appropriate information.
- Promote the goodwill and support of customer and relevant members.

BOARD OFFICER ROLES & DUTIES

It's natural for new officers to want to know their duties. Start with your Policies and Procedures Manual or bylaws; often there is brief information about the duties of each officer. The problem? Usually it's too short to be of much practical help, sometimes merely citing applicable state law that requires the position.

That's where job descriptions come in. An officer's job description may be a half-page or even longer. Often, it quotes from the bylaws or Policies and Procedures Manual and then lists more specific duties.

One main advantage of the officer job description is that it sets up expectations about what has to be done and how much time it will take. Too often, talented officers get overburdened with unexpected tasks and burn out. One tip: the job description is a big help when recruiting candidates for your board.

THE CHAIRPERSON / MAYOR

Chairperson responsibilities cover a lot of territory. Here are some major items.

Meetings. As the name suggests, chairpersons preside over board meetings. "Presiding" has many parts, including time management, seeing that all agenda items are addressed, keeping discussion on the topic and helping all members to join in discussion. (See Chapter Three, meetings, for more details.)

Preparing agendas. Typically, the chairperson and Manager work together to prepare the agenda for an upcoming meeting. Many boards also encourage input from other members, too.

One added bonus: in addition to seeing that needed short-range items are covered, shaping the upcoming agenda helps the board keep an eye on the big picture. That's how the board assures that the mission is being carried out in accordance with legal and other requirements.

Mr. or Ms. Chairperson / Mayor, be sure to put these items on your agendas:

Statistics (measures of performance). This could include revenue received vs. cost of water produced, percentage of delinquent accounts, compliance track record and budget vs. expenditures. To save board time, statistics should be year to date and compare with last year.

Consent Items (saves board time). These are smaller items that are attached to the agenda but handled as a block without discussion prior to voting. How can that be done? Because it's assumed that board members read their agenda and attachments thoroughly. If nobody disagrees, there's no need to waste time discussing. The consent items could include last meeting's minutes, the treasurer's report and a summary of new or renewed contracts.

Big Picture (management model). It's very easy for water and wastewater boards to spend most of their time on operational issues. Yet operations are only one element of planning and visioning, see Chapter Two for more discussion about this.

Planning and Visioning. While operations and resources will likely be on every agenda, it's important to schedule the other planning and visioning elements. For example, get a report on community outreach at least semi-annually (communications). Set aside time annually for goal setting (planning). And make sure that the Manager gets an annual review in writing from the board (staffing).

Board Spokesperson. Often, it's the Manager who is the system spokesperson. That usually works well since she or he knows the most about daily operations and how to solve problems. During the recent hurricanes, water and wastewater

systems were in the media daily, see Chapter Ten for more about the FlaWARN / FRWA Best Management Practices for Hurricanes and other emergencies.²⁸

However, the need for a *governing body* spokesperson may arise -- and it should be the presiding officer. Likely situations include controversies about the board, its policies or the Manager. For example, what if your board is considering raising water rates 76 percent? If your board chairperson can't or won't defend that increase, why in the world should customers accept it?

Being the board spokesperson doesn't necessarily mean on-camera interviews or talk shows. Instead, it may mean a semi-annual chairperson's letter to all customers. Don't forget speaking to civic, church and fraternal groups -- that's a good place to lay out the reasons for the upcoming increase.

Role model. The fact is, chairperson or mayoral words, body language and actions influence other board members. For new board members, they send a message about what's allowable. For experienced members, the chairperson's actions and tone send a clear message about his or her commitment and focus.

In a nutshell, the chairperson's behavior and attitudes define the board's culture. By example, the presiding officer sets up expectations about importance of preparing for meetings, sticking to business, thoughtful discussion, making decisions rather than postponing them and confidentiality about board matters.

Board members have busy lives. If their presiding officer doesn't take her or his job seriously why should others? One of a chairperson's most important jobs is that of a role model.

The Basics of Presiding

What does it take to be a good presiding officer? Honesty and good listening, according to a veteran chairperson. "If a customer asks you a question and you don't know the answer, then tell them you don't know... and get back to follow up." Four excellent rules of thumb for chairpersons:

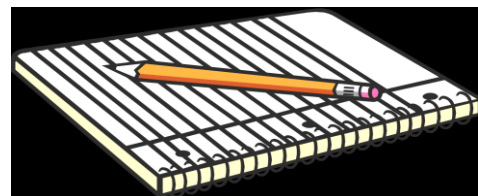
1. Be open-minded; weigh the circumstances.
2. In board meetings, bring the member who gets on the wrong track back to the right direction, let all board members that wish to speak have their say, and vote on the issue at hand. Call the question.
3. Urge board members to attend seminars. "By attending training sessions, they will be more educated to answer questions customers have."
4. Counter misinformation with facts, quickly. Prepare written logs of all phone calls and other types of misinformation -- the superintendent or chairperson can then quickly follow up. Well-informed board members are a key component in providing factual information.

VICE CHAIRPERSON

For most boards, the vice chairperson is the "chairperson in training." Typically, duties call for presiding over meetings and carrying out other activities in the chairperson's absence. The vice chairperson provides management backup. Often, the vice chairperson is informally influential. His or her comments carry weight because everybody knows that soon she or he will occupy the presiding chair. For city councils, another person is authorized to chair the meeting in the mayors absence.

CLERK / SECRETARY

This duty may take the most work to fulfill. On most Boards / Commissions, it falls to the clerk/secretary to fulfill legal requirements about recording, amending and maintaining minutes. Since the minutes are the official and legal history of discussions and decisions, the



²⁸ FlaWARN / FRWA Best Management Practices for Hurricanes is found at www.frwa.net click on "Emergency Prep"

clerk/secretary must concentrate on both the letter and spirit of applicable legislation, Florida Sunshine Laws, bylaws and *Policies and Procedures Manual*.

That attention to detail can irk board members. Just remember this: the minutes may well be your last and best defense in lawsuits, employee job actions and grievances. Your clerk/secretary isn't being an obstructionist when she or he insists on doing it right. Rather, your clerk/secretary is protecting your board from its sometimes too casual ways.

How to get the minutes right? Boards use a variety of methods to record meeting minutes, such as:

- Handwritten notes
- Stenographer who takes shorthand
- Recording devices
- Court reporter

Some boards, especially those involved in controversies, use more than one method. One tip: be sure to send draft minutes from the last meeting out with the agenda! This lets board members take whatever time they need to compare their memory or notes with the draft minutes.

TREASURER

Because the vast majority of water and wastewater systems use nationally accepted bookkeeping and accounting standards, this job is usually straightforward. Often a bonded position by state law, the treasurer is to keep records of all monies received and disbursed.

In cities, the treasurer is usually a paid position. She or he is not a member of the governing body. In practice, the work is often done by system employees. The job then becomes review of statements, vouchers, etc. and signing of appropriate documents.

It boils down to the treasurer's signing those documents *with understanding*. Your water or wastewater system may be one of the biggest businesses in town. That means that the treasurer has an even larger responsibility to assure that customer and/or public funds are being used in accordance with legal and other requirements.

RESPECT, DECORUM, CIVILITY

As Board Members you are leaders and set examples in the community and for the water and wastewater system. It is important to act your part. Whether your personal style is formal or more informal you can still bring dignity to the utility and board by your actions and demeanor!

DECORUM: propriety and good taste in conduct or appearance or orderliness.

You likely have a very diverse Board and staff – it is important to appreciate everyone and what they bring to the table. You will have differences from time to time and honest differences can be handled civilly while honoring the opinion of others.

It starts with you and filters its way down to the manager, staff and customers. A lack in civility is common in our everyday lives. You have a choice. You can either become part of the problem or take a principled stand and show honor and civility to others. If you are not polite to each other how can you expect the public to be polite to you when addressing the board?

Each Board Member should cooperate with the chair in preserving order and decorum. No member should, by conversation, looks, or otherwise, delay or interrupt the proceedings of the board nor disturb any member while speaking.

The Chairperson has a duty to monitor the conduct of public during meetings and addressing the board. Any person who disturbs the peace of the board, make offensive or abusive remarks or conduct himself or herself in a boisterous manner while addressing the board shall be forthwith asked to leave by the presiding officer. If you expect a ruckus crowd for public hearings you might wish have a local law enforcement officer in attendance to help.

- Respect, decorum, and civility may be issues you might wish to include in your policy manual.

DISAGREE WITHOUT BEING DISAGREEABLE

We all have comfort zones. We do the things we enjoy, that feel good, that come easily. That is why many people surround themselves with people who agree with them, think like them, and support them.

When your organization's culture allows people to challenge ideas, suggestions, and plans, you create an organization of thinking, committed people capable of producing the kind of innovation and productivity required to succeed today. However, if your system culture does not allow dissent, if people who suggest alternatives are castigated for not being "team players", you produce an environment of fear, stagnation, and antipathy.



Instead foster a culture where differing perspectives are encouraged. Avoid the temptation to only listen to individuals who are so similar to you that they cannot offer a different perspective. Don't surround yourself with people who are so afraid that they won't dissent. Reward creativity and original thought in your decision-making process. Hang on to those people who have mastered the art of disagreeing without being disagreeable. Maybe then you can avoid being blindsided by events.

Discuss and debate up to a point. The board needs to discuss issues openly, frankly, and with the best interests of utility in mind. You need to consider the information and options before the board. You should not be afraid to politely debate for what you believe to be right course of action. Be professional about it, but be candid too.

However, once the motion has been made and voted on, the discussion and arguing and dissent must stop. The board can only act by a majority vote. Once the decision has been made you have an obligation to support your board in that decision. You will expect it if the vote goes your way; you should do the same if it does go the way you might like.

Once the motion has been discussed and voted on, and the decision has been made the discussion stops.

Move on!

The board acts only by majority vote and you have an obligation to support the board in that decision.

Disagree Without Being Disagreeable. You think your position is right. You want what is best for your water and wastewater system. You want things done in the way that works best for your customers. So you argue your points strongly. That is good, that is okay, but do not overdo it. You won't win every battle. After all, the other board members are also looking after the best interest of the system and customers. Recognize the aspects of negotiation involved. Do not burn bridges by losing your cool. Remember you will be working with these board members again next meeting and for those reasons it is important that you "disagree without being disagreeable".

THE SPLIT BOARD OR COUNCIL

A split board means reaching consensus is difficult. This decision-making difficulty affects two critical areas: (1) board effectiveness, and (2) public image. This can often occur when newer board members are elected or appointed that have a different vision for the water and wastewater system than the incumbent board members. Sometimes these new board members are younger and reflect changing community demographics and attitudes.

- These new board members may be energized, concerned, or upset about:
- Recent rate or fee increases,
- A new construction project decision (i.e. line extensions, expanding the wastewater treatment plant),
- Repeated water outages / low pressure problems,
- Water quality issues (i.e. disinfection by-products, boil water notices),
- The management, or
- Customer service.



In this case, a major burden falls on the chairperson. He or she has the obligation to see that all members participate in discussions, that all sides of an issue are covered before voting. The chairperson must also help the board look at the big picture, which assumes agreement on what that picture is.

That's where board orientation of new members can be helpful. Tours, presentation packets or notebooks of key documents, and meetings with the chairperson and Manager are all ways of informing new members -- and of setting their expectations.

With a split Board, it is especially important for the chairperson to remind all parties to handle board business professionally NOT PERSONALLY – use *respect, decorum, and civility* during and outside of board meetings, see the previous page for suggestions. Leave differences of opinion in the board chambers. The chairperson must be vigilant and remind board members that they can *disagree without being disagreeable*. Back stabbing and gossiping outside of board meetings will not help. Rather they reinforce the public's general view that most governing bodies are inept, self-serving and/or crooked.

If the split is obvious enough, the Board will experience new levels of media attention. Rather than let old members to criticize newcomers for "getting us in the newspapers," it's part of the chairperson's job to help the entire board understand that the media often focuses on the controversy and tends to ignore in-depth coverage of issues. Generally, media coverage of split boards goes with the territory.

Overcoming a split board is a hard job. Sometimes it can't be done; members resign or are replaced at election time. It is up to the officers, especially the chairperson, to achieve an acceptable level of board functioning so that the interests of customers and the public are being protected.

BOARD MEMBER CASE STUDIES, PART 1

How would you handle these problems on your Board? (See answers in Appendix A.)

1. The Mayor isn't handling an ongoing conflict between two members. The media has started coming to your council meetings.
2. The Manager drafts the agenda without input. You spend too much time on operational details.
3. Your council disagrees with the clerk/secretary about minutes, saying she's too much of a stickler for rules. Your city has never had a lawsuit, employee job action or grievance.
4. Councilperson Yvette is asking for certain discussion items to be struck from the minutes even though these items were discussed although no action was performed.

VERY SMALL SYSTEMS

Often governing bodies hear that their major role is to set policy, while leaving operations to the employees. There are exceptions, of course. In some very small water systems with part-time or volunteer staff, the board helps operate the system, Chapter Five addresses that situation.

FOUR MAJOR POINTS ABOUT POLICIES: ²⁹

Yes, in general, boards and councils set policy. But about what? Policy scope can vary tremendously ... from price limits on office supplies to criteria for lowest responsible bid to easements.

1. They serve as *guidelines* for staff, who in turn prepare procedures.
2. To streamline board discussion, distinguish between *broad policies* (for example, "We are an equal opportunity employer") and *specific policies* (for example, "The district shall have the right to enter the user's premises during reasonable hours for the purpose of meter reading, inspection, repair and service.")

²⁹ Conners, T.D., (1993). *The Nonprofit Management Handbook: Operating Policies and Procedures*.

3. Check staff recommendations about procedures or programs against the appropriate policy.
4. Keep policies up-to-date. Many organizations have one policy manual that covers all aspects of the organization--from employees to customers to board responsibilities. For the water industry, often those policies are spread in several documents, such as *Policies and Procedures Manual*, *Operations Manual*, *Personnel Manual* and *Emergency Plan*.³⁰

Appendix B shows the table of contents of a sample unified policy manual. There are three major advantages of having one policy manual:

- The policies are all in one place
- It's easier to identify gaps, what's missing
- It's simpler to delete old pages and add new ones

The individual Board Member DOES:

- Accept legal and fiduciary responsibilities and duties
- Support the system's mission
- Allot enough time to prepare for and attend board meetings, take and make phone calls, and go to training and conferences
- Be on time for board meetings; stay until the end
- Follow Florida Sunshine Laws concerning a quorum for either discussion or decisions
- Abstain from actions that might be a conflict of interest
- Keep board matters professional

The individual Board Member DOESN'T:

- Exert "apparent authority" to make contracts
- Receive undue compensation
- Get involved in conflicts of interest
- Make decisions for personal enrichment or advantage
- Let board matters become personal
- Get involved in employee activities and conflicts

THE MANAGER

It's often said that a Board / Commission has just one employee: the Manager (in very small systems this individual wears several hats such as Superintendent-Operator-Manager). It is up to that person to manage the rest of the staff. That means delegating to him or her appropriate authority and responsibility to hire, fire and direct the employees.

Governing bodies recruit, select, compensate, appraise and (if necessary) terminate the (Manager). While Chapter Five covers board relations with this employee in detail, keep these points in mind:

- She or he and the governing body make up the system ~ management team.
- Treat Managers as the professionals they are.
- Don't let the board micro-manage, which means getting into operational matters.
- Support the Manager by keeping a distance from other employees.

³⁰ FRWA has free templates available on-line at www.frwa.net

- Make sure the Manager has been delegated appropriate authority and responsibility.
- Annually, evaluate the Manager in writing.

Try to provide the best possible compensation package (salary, benefits, continuing education, etc.) consistent with other employee compensation.

BOARD MEMBER CASE STUDIES, PART 2

How would you handle these problems on your board council? *(See answers in Appendix A.)*

1. Board member Bill has just come back from the leagues of cities training. Fearing lawsuits, he wants to have a personnel policy manual written immediately. Other board members see it as a low priority because there is such low turnover.
2. Due to an article in the local paper criticizing the new water rates, councilperson Fran says that she wants to exclude the media from any city council meetings for six months.
3. The city council has always handled all water department employee matters: hiring, raises, assignments and firing. The first utility manager is soon to be hired. The preferred candidate says she believes those responsibilities should be part of the utility manager's job.

OTHER RESPONSIBILITIES

In addition to the above basic responsibilities and duties, here are some that crop up from time to time:

Act in Crises. Hopefully, your system has an up-to-date *Emergency Plan*. It would have everything from daytime and nighttime phone and fax numbers to utilizing the media to get a “boil order” out.³¹

Board and council members need to know their roles, especially in regard to the Manager. This is NOT a time to get in each other's way! One tip: have only one spokesperson throughout the crisis.

Board Effectiveness. Being an effective governing body is like a Superbowl victory: it's a team effort. If you let other members struggle to understand the consequences of non-compliance with the Safe Drinking Water Act, you're not playing your position. Chapter Three discusses board meetings and Chapter Four covers officers, two major aspects of board effectiveness. A caution: don't let your board confuse “we get along wonderfully” with “we're effective.”

Advice. From time to time, the Manager will need board advice on topics ranging from employee relations to individual customers to potential operational problems. her or his comments will help alert the board to possible customer or media issues; Board / Commission members often have suggestions based on their years of service. However, be alert to this happening too often ... it can invite micro-management by the board.

SAFEGUARDING AGAINST CONFLICTS OF INTEREST

When the personal or professional concerns of a board member or a staff member affect his or her ability to put the welfare of the utility before personal benefit, conflict of interest exists. Board members are likely to be affiliated with many organizations / businesses in their communities, both on a professional and a personal basis, so it is not unusual for actual or potential conflict of interest to arise.

Board service with water and wastewater systems carries with it important ethical obligations. Utilities serve the broad public good, and when board members fail to exercise reasonable care in their oversight of the system they are not living up to their public trust. In addition, board members have a legal responsibility to assure the prudent management of the utility's resources. In fact, they may be held liable for the system's actions.³²

³¹ FRWA provides free templates and guides for Emergency Response Plans at www.frwa.net.

³² A 1974 court decision known as the “Sibley Hospital case” set a precedent by confirming that board members can be held legally liable for conflict of interest because it constitutes a breach of their fiduciary responsibility.

Does conflict of interest involve only financial accountability?

No. Conflict of interest relates broadly to ethical behavior, which includes not just legal issues but considerations in every aspect of governance. Three levels of ethical behavior includes: (1) obeying the law; (2) decisions where the right action is clear, but one is tempted to take a different course; and (3) decisions that require a choice among competing options.³³

The third level of behavior can pose especially difficult ethical dilemmas for utility board members.

What can we do to prevent conflict of interest situations?

Self monitoring is the best preventative measure. Institute a system of checks and balances to circumvent actual or potential conflict of interest, beginning with well defined operating policies on all matters that might lead to conflict. Most important, create a carefully written conflict of interest policy based on the needs and circumstances of the utility. Ask each board and staff member to agree in writing to uphold the policy. A conflict of interest policy should be reviewed regularly as part of board self assessment.

What should be included in a conflict of interest policy? A policy on conflict of interest has three essential elements:

1. **Full Disclosure.** Board members and staff members in decision-making roles should make known their connections with groups doing business with your system. This information should be provided annually.
2. **Board Member Abstention from Discussion and Voting.** Board members who have an actual or potential conflict of interest should not participate in discussions or vote on matters affecting transactions between the utility and the other group.
3. **Staff Member Abstention from Decision-Making.** Staff members who have an actual or potential conflict should not be substantively involved in decision-making affecting such transactions.

What are some examples of actual and potential conflict of interest?

- System policy requires competitive bidding on purchases of more than \$1,000, but a printing firm owned by a board member's spouse receives the \$25,000 contract for the annual report and no other bids are solicited.
- One of several sites being considered for a new wastewater treatment plant is near to property owned in part by a board member, which might affect the property valuation poorly.
- A water line extension is being planned down a road where a staff member's property lies, which might increase the property valuation.

Should your utility contract with a board member for professional services, such as legal counsel or accounting?

- Attorneys, accountants, and other professionals can contribute valuable expertise to a board. Due to the potential for conflict of interest, their contributions should be voluntary. At the very least, a board member who is associated with a firm competing for a contract should abstain from discussion and voting in the selection process. If a competitive bidding process results in the selection of that board member's firm, he or she should disclose the affiliation and abstain from voting on future board actions connected with that firm's contract with the system.

RECRUITING NEW BOARD MEMBERS

Whatever your situation, it's imperative that you get the right people who care about the community and are willing to serve. Here are some aspects of "right" for Board folks:

Commitment: to your mission, to mastering complex issues, to putting in long hours.

Understanding: why you're on the board and what being a public figure means.

Experience: jobs, working with people, listening to people.

Strength: stamina for long hours and meetings, to carry on when overburdened.

³³ Independent Sector. (2005). Checklist for Accountability

Tolerance: of different points of view (sometimes vividly or angrily expressed), and of people who have a different perspective.

Recruit potential Board members carefully. They may serve for many years. Here are some proven steps for recruiting:

1. **Potential pool.** Look at groups that may have water or wastewater interests, such as the League of Women Voters, church/civic discussion groups, chamber of commerce leadership program, or sponsors of the local high school science club. New development: some utilities are using public discussion groups; graduates move on to governing body positions.
2. **Test assignment.** “Try out” the candidate through assignments such as a short-term committee, blue-ribbon panel or other group activity. The candidate would only be a member; the chairperson would be from your Board. Whether it’s planning an annual meeting or serving on a bond issue committee, both sides get to see the other. The candidate assesses your Board’s effectiveness; you get to see her or his abilities and limitations.
3. **Informal meeting.** Coffee or lunch is a good way to feel out candidates. Tell them what being a Board member means. Take along a packet of materials for them to review, such as board job description, board notebook and a sample meeting agenda (see appendices for some samples). Speak frankly about the rewards and the cost of being a member.

By this time, both you and your candidate should know enough to decide whether to continue. And even if the timing isn’t right for this round of elections or application, it might work out later.

Working with other entities to serve the public

When opportunity knocked, the ABC Public Service District knew how to take advantage! The neighboring county asked the water and wastewater system to provide drinking water to the area around ABC, *“it was part of a county-wide planning study,”* reported the Board Chairperson. *“People were hauling water. The commissioners asked us to provide service and citizens came to see us.”*

The result was 15 miles of new lines financed by a tax levy (passed on the first try), Community Development Block Grants (CDBG) from the Governor’s office and USDA Rural Development. Recently, ABC’s engineer made an offer that was irresistible. *“For \$8,000, it was a bargain,”* said the former chairperson “off and on” for the past 10 years. *“He’s doing it for other utilities, too. We are going to get costs, proposed drawings and phases we could pursue.”* The study will take about six months to complete.

FINAL THOUGHT... BOARD OFFICERS SET THE TONE

The fact is board officers and members are the official leaders. You have only one job as a Board member: to protect and serve the public. It’s a tough job, full of long hours and high visibility. While the mayor and chairperson play a special role in setting expectations about attitudes, behaviors and words, the rest of the officers send messages, too. Simply put, all officers communicate their own values and commitment -- to colleagues on the board, to the media, to the public and to staff. In the next Chapter, we will discuss how the board deals with its sole employee, the Manager.

CHAPTER 5 OVERSEEING THE MANAGER

The Manager -- of all the many Board jobs, overseeing the full-time the -Manager is one of the most important. That's because she or he is in charge of implementing board policies. You don't have any full-time employees? Your board or council helps run the system? Check the last part of this Chapter.

Chapter Overview: Chapter 5, the board has only one employee: the full-time Manager. This Chapter discusses how to hire, nurture, evaluate and work with her or him. It also discusses those cases where there is no full-time employee and the Board helps operate the water and wastewater system. Each board member has duties and responsibilities. Board Officers are the team within a team. They have essential responsibilities in two areas: official duties and being an example for other board members.

ONLY ONE EMPLOYEE

Let's start at the beginning. Boards have only one employee, the full-time the Manager (in very small systems this individual wears several hats such as Superintendent-Operator-Manager). The rest of the employees (whether full-time or part-time) report to the Manager.

"Not true," you might counter. "Our board supervises all staff; the Manager is just somewhat more senior than the others. In fact," some might whisper, "our Manager really isn't capable of supervising the staff."

To compensate for the Manager's deficiencies (real or imagined), your board or council is probably micro-managing: meddling in day-to-day operations. It is not doing its primary jobs of seeing that the mission is carried out and setting policy. If your board micro-manages, why bother hiring a full-time, professional Manager?

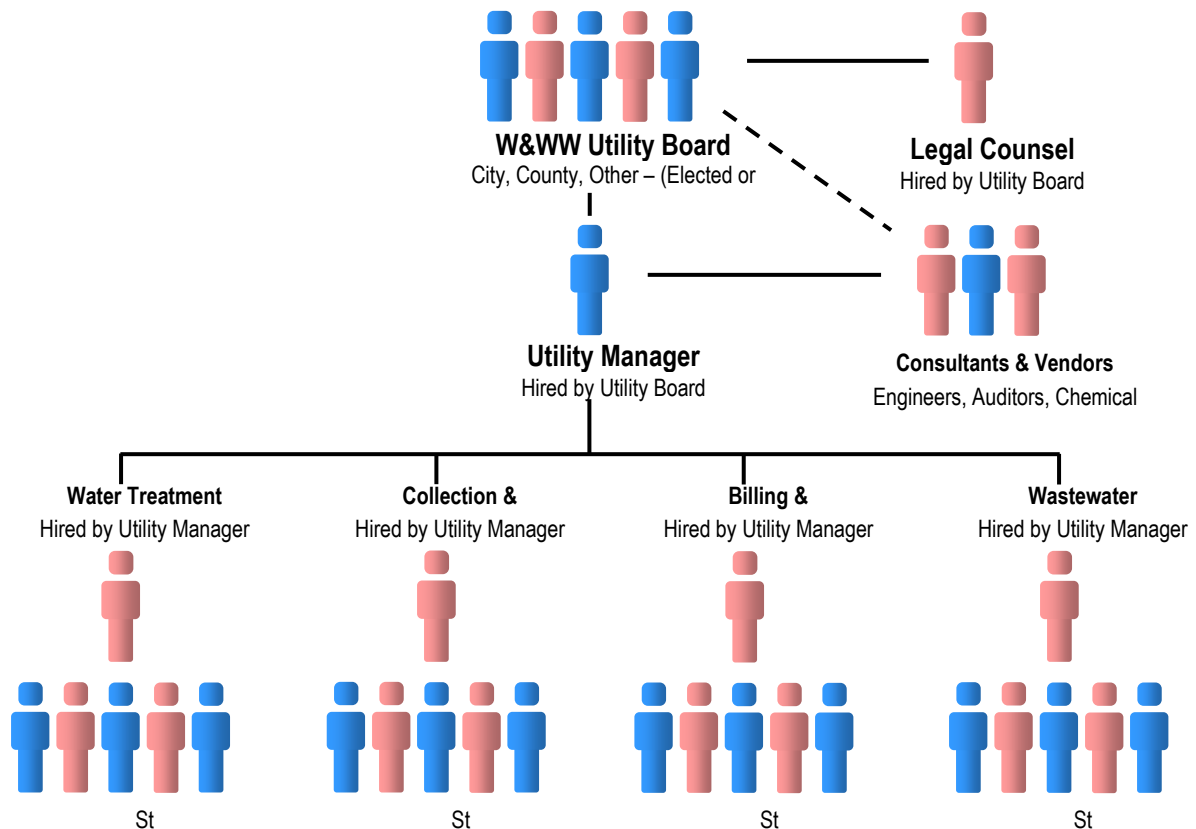


Figure 5-1
Typical Utility Organizational Chart

This Chapter assumes that your Board hired a Manager capable of supervising your staff. In turn, your job is to supervise the Manager according to a sensible division of labor: you stick to policy that achieves your mission and he or she sticks to implementation and recommendations.

GETTING THE RIGHT PERSON ~ HIRING

There are several facets to hiring the right person.

1. **Job Description.** Start the hiring process with an up-to-date job description (see Appendix D). One way is having all employees add their comments about the Manager's job. Also get the outgoing Manager's comments during the exit interview
2. **Advertise.** Advertise as widely as possible, especially in Florida Rural Water Association magazines (FRWA, AWWA, Florida League of Cities, Florida Association of Counties, etc.). They are read by potential candidates.
3. **Selection Criteria.** You may get several resumes from your ads. But how to evaluate them? Selection criteria let the Board agree in advance on the weight you'll assign to formal education, years in the industry, supervisory experience, size/diversity of employers and other factors. These criteria save a lot of wrangling once the resumes come in.
4. **Interviews.** There are many legal restrictions on interviews these days (for more information, see Chapter Eight). Why? To avoid screening out of women, minorities and/or the disabled.

You may ask questions that are necessary to judge competence in job performance. You can't ask about:

- Race, religion, national origin
- Education other than -what is specifically needed for the job in question
- Arrest and conviction records unless you demonstrate a "business necessity"
- Sex, marital and family status
- Physical requirements information unless its necessary for performing a specific job
- Age



Minimize the likelihood of complaints by having only a knowledgeable person (this means trained and up-to-date) do all interviewing. Otherwise, you could face an Equal Employment Opportunity Commission (EEOC) action.

5. **The Compensation Package.** Salary is just one aspect of compensation. Other parts of the package include health and other insurances, retirement benefits, use of system vehicles, travel and other allowances, and time/funds for courses and conferences. Put together the best compensation possible that is consistent with the candidate's experience and other employees' packages. One tip: there is no surer cause of staff infighting than to bring in the Manager at either too high or too low a level.

PERFORMANCE EVALUATION

City councils and boards, you can't wiggle out. One of your major jobs is to evaluate the Manager's performance annually, and in writing! Many members say, "We talk all the time," "Sam knows how he's doing," or "We don't have time."

Certainly, individual Board members do give informal feedback regularly to the Manager. It's helpful, but is difficult to utilize. Only a few members may make comments; others are silent. Feedback may fall in a few areas, such as operations -- not in all areas of the Manager's responsibilities. Worse, informal comments often seem to be elective; it's up to the Manager to take action or not.

Typically, the evaluation process starts with a discussion in executive session about the Manager's performance. Be sure to cover both strengths and areas that need improvement.

You can break those two large topics down into areas such as operations, finances, physical facilities, customer relations, community relations and professional activities.

Teamwork Pays Off

There are no surprises when the Sewer Board Chairperson Sybil meets each Monday with Superintendent Chuck. The upcoming week's work fits in with the board's first five-year long range plan, except for emergencies. One example is a recent sewer project that should provide service to 150 more customers.

In addition to supervising operations and improvements, Chuck evaluates the other two employees quarterly. *"We not only use these evaluations at the end of the year for salary increases, but during the year,"* said Sybil. She reviews the evaluations, adding her perspective.

Sybil, Chuck and the office manager work closely together to provide services to the system's population of 2,500. *"The office manager should be made aware of everything that goes on,"* Chuck concluded. *"The superintendent, chairperson and office manager are a team."*

Effective staff supervision is always of special interest. Ask questions such as:

1. How often are staff meetings held? Are all staff involved?
2. How many hours of training did each employee receive in the past year?
3. Has each employee been evaluated in writing this year? (get copies, but keep them confidential)

Typically, the discussion is then written up on your standard form (see Appendix E for a sample) by the chairperson, and circulated as a draft to the rest of the board.

After the evaluation has been finalized, the chairperson and Manager review the document together. An alternative is to have the entire board meet with the Manager. One caution: be sure to avoid ganging up on the Manager! In that instance, he or she will pay attention only to the threatening group dynamics, not to the board's feedback.

Manager Written Evaluation: Worthless Or Worth It?

Pros:

- Board focuses on its key employee
- Gives helpful, specific feedback to Manager
- Treats Manager as a professional
- Provides documentation should lawsuits arise

Cons:

- Requires board time to discuss and write up
- Might lead to conflicts
- Board has to adopt a standard form
- Board doesn't like to criticize

Reasons for doing annual, written performance evaluations include:

1. **Protection.** In the case of job actions or lawsuits, these written records document the Board's opinion of Manager performance. These records would be prime evidence of the Manager being told of shortcomings and advised on specific steps she or he should take.
2. **Board consensus.** The Board hired this Manager. It's appropriate to measure the degree to which its great expectations are being met. The annual performance review, conducted in executive session without the Manager present, allows the board to examine his or her strengths and areas needing improvement.

The outcome should be a renewed Board consensus that it made the right decision in hiring this person -- even though some improvements might be needed. Reconfirming the board's hiring decision goes a long way in preventing backstabbing outside of the board meeting about the Manager and/or board members who voted to hire.

3. **Feedback.** As a professional, the Manager is keenly aware that he or she always has areas that need to be improved. Rather than hearing informally from one or two verbal board members, the annual evaluation lets the Manager get feedback from all members. It also permits the Manager to identify training that will help him or her improve.

CONTINUING EDUCATION

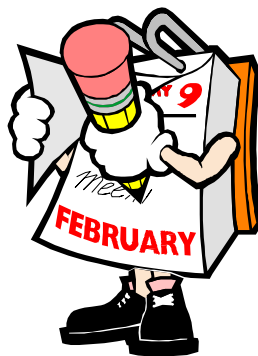
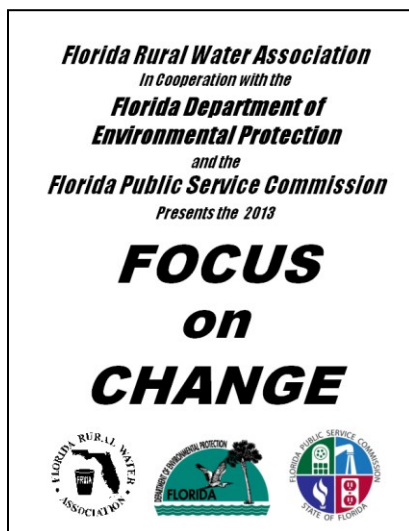
It's vital that your Manager maintain current up-to-date industry knowledge for the benefit of your water and wastewater system. This knowledge is essential to a well-run organization. The Florida Rural Water Association, Florida Section of the AWWA, Florida Water Resources, Florida Environmental Association, Florida Water and Pollution Control Operators Association, and other conferences are not junkets, but opportunities to provide your system with well-trained leadership.

It's not a frill to pay for your Manager to attend training. Love it or hate it, the answer lies in regulations and rules. New federal, state and local government requirements come so quickly nobody can keep pace.

How to find out what's going on? Go to the FRWA conferences and training. Board members, you need to use every tool available to keep current on new regulations -- and to understand the consequences of non-compliance. Also read your national and Florida Rural Water Association publications. As Chapter 8 points out, ignorance about laws, rules and regulations is no excuse for a governing body!

“Focus on Change” Seminars

Mark your calendars each February to attend the “Focus on Change” Seminar!



Six seminars are held each year around the state – one should be close to your system.

For nearly twenty-five years Florida Rural Water Association has presented the “Focus on Change” Seminar in conjunction with the Florida Department of Environmental Protection – this year the Florida Public Service Commission joins us.

These sessions are designed to provide the most current regulatory information available to utilities.

There is no charge for admittance but you must pre-register as seating is always limited. There is a processing fee will apply for operators wishing to receive Continuing Educational Units (CEUs) for attendance or engineers wanting Professional Development hours (PDHs) for the session.

Watch the FRWA website at www.frwa.net for dates and locations in February.

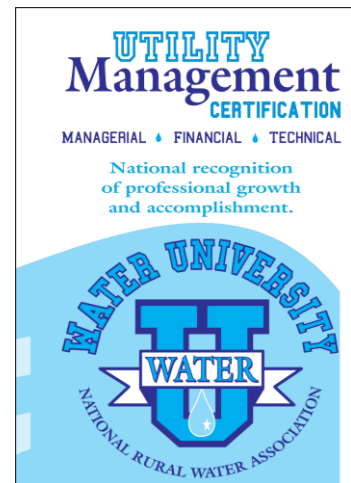
When you go to Florida Rural Water Association conferences and training, you'll find out how others solve problems. You'll also learn:

1. What new rules and regulations are coming -- and when
2. What other cities and systems are doing to comply
3. The penalties for non-compliance
4. Specific ways to work smarter not harder

Utility Management Certification.

Utility managers are strongly encouraged to obtain their Utility Management Certification through the Water University and Florida Rural Water Association, see www.wateruniversity.org.

The Water University certification program is designed to recognize the professional educational achievements of individuals and to market their achievements and skills to increase the value of today's water professionals. Water University highly-recommends the use of study material before taking certification examinations, including the purchase of study guides and attendance of Water University preparation courses. Examinations cover a wide array of topics in great technical detail. 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 FRWA or advanced on-line educated modules.

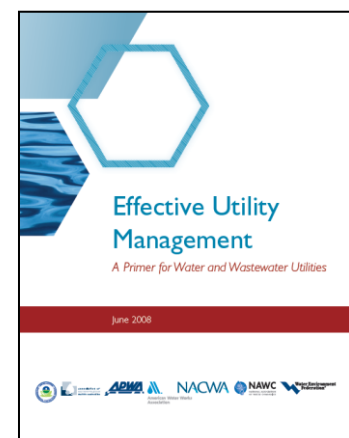


Effective Water Utility Management.

EPA working collaboratively with national organizations has developed a series of Ten Attributes of Effectively Managed Water Sector Utilities.³⁴ The goal of the Effective Utility Management (initiative is to help utilities address a full range of challenges and help them move toward sustainable operations and infrastructure.

Ten Attributes of Effective Utilities

1. Product Quality
2. Employee and Leadership Development
3. Financial Viability
4. Community Sustainability
5. Stakeholder Understanding and Support
6. Customer Satisfaction
7. Operational Optimization
8. Operational Resiliency
9. Infrastructure Stability
10. Water Resource Adequacy



EPA and partnering organizations developed a series of tools to help utilities adopt the Attributes and in 2008, released the Effective Utility Management Primer.³⁵ This document provides utilities with a series of steps to assess their operations using the attributes and a series of suggested utility performance measures based on the Attributes. The assessment allows utilities to gauge progress over time.

The Effective Utility Management website at <http://www.watereum.org> contains some valuable resources, however many of these are NOT free. Ten Attributes of Effectively Managed Water Sector Utilities provide useful, concise reference points for utility managers seeking to improve organization-wide performance. The Attributes describe desired outcomes that are applicable to all water and wastewater Utilities. They include a comprehensive management framework related to operations, infrastructure, customer satisfaction, community sustainability, natural resource stewardship and financial viability. Water and wastewater Utilities can use the Attributes to select priorities and measurable objectives for improving their performance based on each organization's strategic objectives and the needs of the community it serves.

³⁴ USEPA, et al. (2008) *Effective Utility Management - A Primer for Water and Wastewater Utilities*.

³⁵ See <http://www.watereum.org/about/> to download this document.

Continuing education: *so who needs it?*

Boards and councils, it's time to dump an honored myth about continuing education. It's not just for rich or big water or wastewater systems. The fact is, the smaller you are, the more you will benefit. Whether it's training sessions in your county or the annual state conference, attend, listen and take notes.

Continuing education not only keeps the Board and Manager up-to-date. It's an essential way for your city clerk, bookkeeper, office manager and field staff to find out about new requirements.

It also helps your staff learn ways to save money, by seeing how other folks manage on a small budget. Whether the session is on inventorying parts, excel spreadsheets, or customer relations, it will help your employees do their jobs better.

Quit giving lip service to a more professional staff. Take the first step and send each one to at least one continuing education activity annually. Be sure to invite them to the next board meeting for a brief report. As the decision-maker, you'll learn, too!

PRODUCTIVE BOARD – MANAGER RELATIONSHIPS

When the Manager and the Board are working in concert to meet the mission of the water and wastewater system it's a beautiful thing. It sets the groundwork for a productive relationship and fruitful results. Understanding the expectations shared by the Board and Manager makes all the difference.

Board expects the Manager to:	Manager expects the Board to:
<ol style="list-style-type: none">1. Implement and execute all policies2. Select, supervise rest of staff3. Be a professional advisor4. Provide full, accurate information5. Help board save time in meetings6. Advise on politically important items7. Assure cost-effective daily operations8. Be alert about new regulations, compliance9. Participate in community activities10. Use standard methods to control funds11. Be accountable12. Be professional13. Keep disagreements confidential14. Help board see the big picture	<ol style="list-style-type: none">1. Adopt policies; provide implementation guidelines2. Delegate responsibility; don't meddle3. Take recommendations seriously4. Take the time to study, understand information5. Study agenda and handouts sent out ahead; keep to the topic6. Keep in touch regularly with customers & public7. Have an open mind about changes8. Take new regulations, compliance seriously9. Listen to community needs; give feedback10. Know its fiduciary role as trustee for the public11. Give regular feedback; do an annual written performance evaluation12. Support actions, judgments13. Keep disagreements professional14. Spend time on the big picture

Essential Steps for Positive Board – Manager Relationships. You hired the best candidate and it is important to use every possible technique to help her or him be successful for your system.

1. **Annual Review.** Do an annual performance review in writing, discussing both strengths and areas needing improvement (see Appendix F for sample formats). Be specific about those improvements, such as:

“In order to perform its fiduciary duties, the board requires monthly financial status reports about accounts receivable (especially delinquent accounts) and quarterly budget spreadsheets -- Jim must provide these each month with the board package at least 3-days before each meeting.”

“Improvement in customer service and telephone skills is needed for the Manager Joan and office staff. The Board requests that you obtain assistance, such as from FRWA training, to remedy this situation. The board will review this important area of your performance within six months.” Note: it lends credence to the Board’s concern to offer to pay for training, meals, travel costs, and allow time off with pay for it.

“The Board requests a Visioning Retreat within the next three months time to complete its initial discussions about utility mission, goals, and strategic planning. Chuck is directed to make arrangements, find the venue, and find a date that is acceptable with each member. Florida Rural Water Association has offered to facilitate the session, please call the FRWA Financial / Management Circuit Rider to schedule him to attend.”

2. **Feedback.** Specifically tell the Manager that she or he needs to improve in the areas noted.
3. **Follow Up.** As arranged or at the next performance review, discuss how the Manager has done in those areas needing improvement identified earlier. Let him or her know whether there has been satisfactory progress, or not.
4. **Logs.** Keep a log of milestone, successes, and challenges. It needs to give specifics: event, time, place, date, who was involved... and the Board’s responses to the Manager. This is a key document, because it shows that the board was concerned enough to both keep a record and to advise the Manager immediately thereafter that the behavior wasn’t appropriate.

BUT OUR BOARD OPERATES OUR SYSTEM

Some very small cities, districts and boards have no full-time water or wastewater employees. The Manager / Operator is a jack-of-all-trades, in charge of everything from trash pickup to putting up holiday lights. For the smallest systems, there are no employees at all; board members do it all.

Here’s what other systems have done:

1. **Qualified staff.** Small water and wastewater Utilities may need to share an employee with a neighboring system or hire the expertise of a contract operator. If you’ve too small to afford your own certified employee, try sharing one with a neighboring system or hiring the expertise of a consulting firm. He or she only does testing and reviews results.
2. **Contract Operations.** If you use a contract operator, it is important to use the FRWA Contract Operations Checklist³⁶ to be sure that duties and responsibilities are clearly spelled out and understood by both parties. There are duties that remain your responsibly per Florida Statute and cannot be delegated to a contract operator. Often the language in some of these written agreements is very vague or even silent as to which party provides housekeeping, mows the lawn, lubricates equipment, reports to FDEP, or pays FDEP fines.
3. **Special skills.** Often, the city clerk may act as the office manager and bookkeeper. However, this assignment can easily overwhelm your city clerk. It spans a huge area, from compliance with Florida Sunshine Laws to customer relations. To avoid burnout and errors, make sure this is part of the job description when hiring and provide as much support (computers, software, temporary help, etc.) as possible.
4. **Pick a job.** Many board or council members divvy up the system’s duties. That helps reduce getting in each other’s way and forgetting essential items. However, this makes it truly difficult to distinguish between operations and governing issues, much less to see the big picture. One recommendation: at least every two years, devote one meeting to nothing but measuring progress and looking to the future.
5. **Shared services.** Increasingly, systems share administrative services such as a single billing system and cooperative purchasing of supplies. Of course, you’ll need adequate administrative and quality controls. Where to start? Call Florida Rural Water Association for local examples.

³⁶ Secoy, W. (2012) Contract Operations and Agreements, Important Issues to Be Included and Considered In Your Contract. retrieved from www.frwa.net

It's hard being a very small system ... and it'll get harder. The costs of complying with regulations are sure to increase. The pressure for demonstrating your long-term viability will likely grow, too.

To help keep control of your future, now is the time to seek partners for new relationships. It may be your major key to survival as a separate entity.

PERSONNEL CASE STUDIES

How would you handle these problems on your boards? *See Appendix A for possible answers*

1. Dwight, an 18-year employee who got passed over for the position, is bad-mouthing Kevin, the new Manager. Council member Rita, Dwight's sister-in-law, has asked for an executive session to review Kevin's performance.
2. With the retirement of your current Manager coming up, the board has placed an ad in the local newspapers. Some board members want to increase the salary by at least 25% so as to attract the best person possible.

FINAL THOUGHT...THE MANAGER IS YOUR ONLY EMPLOYEE

For some boards, it's hard to believe: they should have only one employee and it's the Manager. The Board provides policies as well as guidelines for their implementation. After that, it's up to the Manager.

She or he was hired to run the system. That covers a lot of territory, including hiring and supervising all other staff. It's through delegating full authority and responsibility to the Manager and not micro-managing that boards/councils get their money's worth. In the next Chapter, we'll look at two important Manager tools, budgets and audits.

CHAPTER 6

BUDGETS, AUDITS, RATES, AND FEES

Money, Money, Money. Your Board has an important responsibility to see that your water / wastewater system has the financial resources to remain viable. One can make budget, audits, rates and fees work for you in governing your utility. Isn't that hard. You have a lot of helpers, from your lenders to Florida Rural Water Association. .

Chapter Overview: budget, audits, rates and fees are more than a duty. They can help your council and board see the all-important big picture. This Chapter reviews several types of each of these financial tools -- and how they can help your board do a better job. Check out five steps for increasing your return from budget making and take the Financial Pop Quiz.

USING BUDGETS TO GOVERN

Budgeting can be viewed as a formality, duty, or opportunity. The USDA Rural Development and the FDEP State Revolving Fund have annual budgeting part of its loan requirements. Understandably, lenders wanted its borrowers to utilize prudent financial management that assured adequate income to cover debt service as well as operations. The result was better than anyone could have imagined: over the years, a less-than-one-percent (1%) USDA Rural Development default rate nationally!

Today, more and more systems understand that budgets -- and budget-making -- help them manage better by:

- Comparing their mission against operational and capital budgets
- Seeing if expenditures get desired results
- Assuring the proper proportion of funds spent in different budget categories
- Comparing revenues vs. expenditures on operations, debt service and reserves
- Monitoring key measures of performance such as bill payment, unsold water costs of production, etc.

Budgets are used to project both revenue and expenditures. Generally speaking, expenditures are not to exceed your revenues except in certain carefully defined cases. Monthly, the Board should get a status report comparing its projections to actuality

There are four major types of expenditure budgets used by water and wastewater systems:

1. **Operations.** This covers daily system operations, from salaries to paper clips.
2. **Capital.** This is for items expected to last more than three years, such as pipeline upgrades, new or replacement water tanks and improved treatment facilities.
3. **Reserve.** Reserves include debt-service, repair and replacement, minor capital projects, and infrastructure reinvestment.
4. **Contingency.** This budget is intended for use only in emergencies.

BOARD REVIEW OF THE BUDGET.

Typically, the Manager and staff prepare a draft budget for Board review. What's not so typical is for the board to carefully examine the programs and services it supports. Too often, boards and councils rubber-stamp the draft budget or pour over each and every line item in minute detail.

Instead, they should ask questions that help them carry out their fiduciary responsibility as a trustee for the public's ownership of the system. Questions to ask include:

- Are the revenue and expenditure assumptions realistic?
- Is the budget hiding poor business practices, such as too many delinquent accounts or too much unsold water?

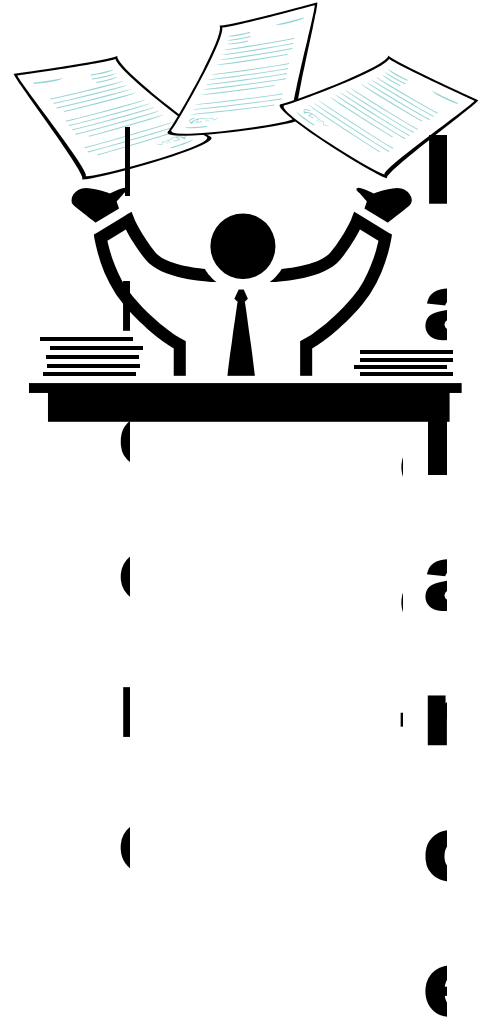
- Is the miscellaneous category a catchall for poor planning?
- Does the budget comply with all outside requirements, such as the debt service coverage ratios?

FINANCIAL REPORTS.

The picture of your water / wastewater system's financial health cannot be understood without using the three primary financial statements for any business or enterprise unit are the Cash Flow Statement, Income Statement (profit and loss or P&L), and the Balance Sheet. A full picture of your utility's finances can only be gained from comparing at least two balance sheets and what has happened during the time in between them. Together, the three statements provide information, each from a different viewpoint.

The Balance Sheet. A Balance Sheet provides a snapshot of a business' situation at a particular point in time. The snapshot may be taken:

- At the end of the year (or financial year),
- At the end of every quarter,
- Each month
- At any other given moment.



Assets (Left side of the Balance Sheet)	Liabilities (Right side of the Balance Sheet)
<ul style="list-style-type: none"> ▪ What the system owns (equipment, cash, money due from customers, inventories) ▪ Represent the utility's funds and use of funds (what it has done with the money it has received) 	<ul style="list-style-type: none"> ▪ What the utility owes (receivables, to the lender, to suppliers) ▪ Show the system's sources of funds, liabilities (where the money has come from)

It is useful to compare two balance sheets to see the changes between them. A balance sheet, also called a statement of financial position, is an overview of the state of a business's finances at a specific point in time. Balance sheets are usually compiled at the beginning of a financial period. If a utility runs on an annual reporting cycle, then the balance sheet would contain information about the state of the utility's finances at the end of the fiscal year.

Income Statement (Profit & Loss). The Income Statement shows the results achieved by a utility over a period of time. The Profit & Loss Statement answers the question: "Did the system make or lose money during this period?"

- Revenues – Expenses = Net Income

Income statements may be generated several times within a budget or financial reporting cycle to gauge how well a business is progressing toward its financial goals and to make adjustments if necessary. The income statement is the primary financial report used to gauge a business's financial standing over a period of time. This is especially important to potential lenders or investors who will use this report to come to a financial decision regarding a utility with which they plan to do business.

Cash Flows Statement. This statement records the movement of money during the period between two balance sheets. The statement of cash flows is a representation of positive cash flows coming into the utility and negative cash flows, i.e. expenses going out. Having enough cash in the checkbook each day to run the utility is very important – just like at home. Cash in these statements mean cash and cash equivalents. Cash equivalents are non-cash items that are easily converted into cash, like short-term certificates of deposits. Most cash flow statements contain three categories of activities that generate or apply cash: operating activities, investment activities and financing activities.

P&L Statement
Revenues
– Expenses

Net Income

BUDGETING.

Line-Item Budget.. The most familiar for water and wastewater Utilities is the line-item budget. It shows categories of expenses, such as:

- Wages and salaries
- Employee benefits (e.g., overtime, insurances, etc.)
- Professional services (e.g. engineer; auditor; legal)
- Utilities
- Supplies
- Equipment (non-capital)
- Postage
- Conference and training fees

Precisely because it's so widely used, boards / councils find the line item budget convenient. Its drawback is not showing which programs or services are carried out – outcome based.

Solve that problem with the program budget. Each program would show the appropriate line items and amounts.

Examples of programs for a water or wastewater system might include:

- Pumping and treatment
- Distribution
- Testing and records
- Customer service
- Staff and board continuing education
- Community and public relations

The program budget helps the Board carry out its governance function by seeing the proportion of all funds --regardless of source or special purpose -- that is spent on the key functions.

A major part of your fiduciary responsibilities as trustee for the public revolves around prudent expenditures.

Budgeting: A Team Event

For the Water & Sewer District the budget making brings all the key players together. The same process is used for both capital and operations budgets. It starts when Manager Pat sits down with her staff to discuss last year's needs for the water system and those for next year. She also gets input from their auditing firm and FRWA.

Next comes a board work session, usually lasting two to three hours. *"We go through each budget item,"* pat reported. *"We have a real working relationship between the board and employees."* A new computer system provides detailed comparisons between this year's actual figures and next year's projections.

At the next board meeting, either board or staff may recommend changes. Then the budget is adopted. Monthly, the secretary-treasurer receives reports showing month-to-date and year-to-date expenditures vs. budgeted amount. The full board receives that information quarterly.

How does it work? *"The board is depending on the staff to operate the system and stay within financial guidelines,"* Pat said, *"If we have a problem, it's our responsibility to notify the board."*

LEVERAGING YOUR BUDGET-MAKING PROCESS

You have to make budgets anyway. Why not get the maximum return on your investment of Board and staff time? Here are five steps for leveraging your budget process to get even more results:

1. **Mission.** Assess how well the budget supports your mission. (Of course, it's harder to do this if you don't have a mission statement.) Your budget was not developed to keep your system operating. Rather it was established to accomplish ends that benefit customers.

2. **Policies.** Make sure that your Manager has adequate policies that provide do's and don'ts about managing budgets and funds. An example is that only bonded personnel handle money. Another is that the lowest *responsible* bid wins -- not just the lowest bid.
3. **Debt.** Consider whether to pay off debt or to incur more. During the early 1990s, interest rates and the cost of indebtedness are extraordinarily low.
4. **Monitoring.** What kinds of performance measures does the board receive? Assess your monthly statistics to see if they are the right ones at the right frequency
5. **Categories.** Compare your budget categories with actual practices. If you find your system regularly leasing vehicles instead of buying, better add that category instead of shoehorning it into "miscellaneous."
6. **What IF's.** If you are computerized, use your budget to ask "what if" questions and to spot trends. An example might be the impact of a four percent population growth or a 13 percent water rate increase. One tip: copy the budget as a "sample file" before fiddling with the computer data! That way, you keep the original data clean.

The bottom line? By looking more closely at your Board's budgeting process and assumptions, you'll get more and better results. Most important, you'll do a better job carrying out your fiduciary responsibilities as trustee for the public.

Budget and Audit Pop Quiz

Mr. or Ms. Board Member budgets and audits go with your territory.
So how are you doing? *(see Appendix A to see how you did)*

Budgets

Yes	No	Not sure	1. Our Manager gets input from staff before preparing the draft budget.
Yes	No	Not sure	2. The Board compares the draft budget to our mission.
Yes	No	Not sure	3. We check the Managers assumptions about income and expenditures.
Yes	No	Not sure	4. Our revenues cover operations, debt service and reserves.
Yes	No	Not sure	5. We have a special board meeting devoted solely to the budget.
Yes	No	Not sure	6. We have adequate supporting policies, such as lowest responsible bid wins, not just the lowest bid.

Audits

Yes	No	Not sure	1. We always file required financial audit forms on time.
Yes	No	Not sure	2. At least every two years, we do a water loss audit.
Yes	No	Not sure	3. At least every two years, we do an energy audit.
Yes	No	Not sure	4. Our financial auditor uses standards adopted by the American Institute of Certified Public Accountants.
Yes	No	Not sure	5. Our financial audit meets all state and legal requirements.
Yes	No	Not sure	6. We tell our customers and staff about the outcome of all audits.

_____ Total = 3 pts for Yes, – 2 pts for No, and 1 pt for Not sure

RATIOS

Financial assessment tools such as ratios help you analyze your water system's financial condition, assess the true costs of financing your public water system, as well as look for trends and find ways to make improvements.³⁷

³⁷ Environmental Finance Center. (2001) *Financial Ratio Analysis for Water Systems: Ratio 8*

Operating Ratio. The Operating Ratio compares revenue versus expenses for a utility.

$$\text{Operating Ratio} = \frac{\text{Utility Operating Revenues}}{\text{Utility Operating Expenses}} > 1.1$$

The absolute minimum standard for an operating ratio for a utility system is 1.0, meaning there is enough operating revenue to cover operating expenses -- anything less than one means that revenues do not cover expenses. A financially healthy utility system needs to maintain an ongoing operating ratio of greater than 1.1

Liquidity Ratio. The Liquidity Ratio compares current assets versus liabilities. This is a measure of short-term solvency and demonstrates a utility's ability to meet its current obligations in a timely manner.

$$\text{Liquidity Ratio} = \frac{\text{Utility Assets}}{\text{Utility Liabilities}} > 1.1$$

For many business enterprises and operations a liquidity ratio of 2.0 or higher indicates a strong financial condition. Many successful water / wastewater Utilities have a liquidity ratio greater than 1.0. To accomplish this, you might use a cash budget, an amount of money budgeted in excess of operating expenses for cash management purposes. It is recommended to have a cash budget of 1.5 months worth of operating expenses.

Debt Ratio. The Debt Ratio measures to what extent a utility's assets are financed through loans. A low ratio is most favorable.

$$\text{Debt Ratio} = \frac{\text{Total Liabilities}}{\text{Total Assets}} = \text{The lower the better}$$

RESERVE & CONTINGENCY POLICES

Reserves and contingencies are often neglected part of utility operation and the items that first "get the axe" during budget cutting – it is frequently forgotten when revenues rebound. Cuts to reserves and contingencies damage the long-term viability of the infrastructure. Reserves include debt-service, repair and replacement, minor capital projects, and infrastructure reinvestment. Contingencies are intended for use only in emergencies.³⁸

Reserve funds are normal operating accounts that are funded in anticipation of contingencies and the actual costs of running a utility.³⁹ The steps in adequately and consistently providing high-quality drinking water are: (1) having sufficient revenues to cover operation and debt services expense; (2) taking care of facilities and equipment; and (3) planning for any needed repairs and replacements. The last two items are critical components for ensuring that you can provide safe drinking water and wastewater serves year after year. Reserves help you cover the costs for infrastructure rehabilitation, replacement, and emergencies.

Reserve monies should be placed in separate *restricted* accounts and funds should only be used when approved by the governing board. Revenue requirements for the water and sewer systems typically include Debt-Service Reserves and other required to provide for normal utility operation routine Repairs and Replacements (R&R); Line Extensions (and other minor capital projects); Depreciation (Infrastructure Investment and unexpected Major Repairs and Replacements) and Emergencies, like hurricanes, fire or famine.

Debt-Service Reserve. Debt Reserves are typically established by the lender and is often ten-percent (10%) of annual debt service. Reserves are collected until it equals one year of debt service. Reserves can be placed in the same Debt Service Account. The utility can earn interest on those funds but the funds should only be used after the debt is retired.

Repairs and Replacements (R&R) Reserves. Renewal & Replacement Reserves need to be at least three to five-percent (3% to 5%) of revenues for general repairs and maintenance. R&R includes Short-Term Reserves, these are items that require replacement or repair every one to five years (parts, water meters, valves, electrical components, vacuum sewer, small submersible sumps, spray nozzles, vehicles, chemical components, etc). Long-Term Reserves are items that require replacement after ten or more years pumps, motors, standby power generation, blowers, fences, etc. See Water Loss

³⁸ USEPA. (2006).

³⁹ AWWA. (2000), p. 4

Audits, Inflow & Infiltration Studies, and Impending Infrastructure Costs Sections below that also discuss renewal & replacement issues.

Line Extensions (and other minor capital projects). Line extensions (and other minor capital projects) can be estimated on system need year-to-year but a good rule of thumb is three to ten-percent (2% to 5%) of normal operation for minor capital projects - mains, valves, pumps, etc.

Depreciation Reserve (Infrastructure Investment and unexpected Major Repairs and Replacements). The depreciation reserve funds capital projects and replacement and protects the long-range sustainability of utility services. Ratepayers have made a significant investment in the capital infrastructure and it is good stewardship to set aside funds for major component replacement (pipelines, lift stations, tanks, buildings, wells, plants, etc.) Depreciation of capital assets is the one line item that most systems do not typically fund. The Governmental Accounting Standards Board Statement No. 34 – Basic Financial Statements and Management's Discussion and Analysis for State and Local Governments, or more commonly known as GASB 34 establishes the accounting methods for calculating annual depreciation and funding reserves for capital replacement.⁴⁰ Reliance on growth for plant expansion and upgrade is not a sustainable policy.

Emergency Contingencies. Emergency Contingencies need to be at least five to ten-percent (5% to 10%) of revenues for emergency operations during natural or manmade disasters -- hurricanes, storm surges, fires, floods, vandalism, sabotage, drought, hazardous material release, or other catastrophes. This is vital for any utility in Florida!

AUDITS

Financial Audits. Audits are a review of a company's financial statements. Audits provide credibility to the claims a business makes in their financial statements. Audits result in an opinion or published statement of accuracy that is made available to interested parties -- customers, lenders, investors, media, and general public. The USDA Rural Development and the FDEP State Revolving Fund require annual Audited Financial Statements prepared and certified by a Certified Public Accountant in accordance with the generally accepted auditing standards (GAAS) and generally accepted government auditing standards (GAGAS).

Audit Checklist

- The Audit was completed well within 9 months of the end of our fiscal year?
- The Audit covers a 12-month period?
- The auditor signed and dated the Auditor's Report?
- The Auditor's Report includes a statement that the audit was conducted in accordance with generally accepted auditing standards (GAAS) and generally accepted government auditing standards (GAGAS)?
- The Auditor's Report includes a statement that the financial statements were prepared in accordance with generally accepted accounting principles (GAAP)?
- Did the auditor issue an unqualified opinion?
- Did you submit a complete set of financial statements to USDA / SRF?
 - a. Balance Sheet / Statement of Financial Position;
 - b. Statement of Revenue and Expense / Statement of Activities;
 - c. Statement of Cash Flows.
- Does a review of the financial statements disclose any items that require follow-up by Rural Development / SRF (i.e., unusual items, negative balances, etc.)?
- Does the audit report contain any of the following supplemental reports that require your follow-up, attention, or action? If yes, did you submit a corrective action plan that addresses each audit finding?

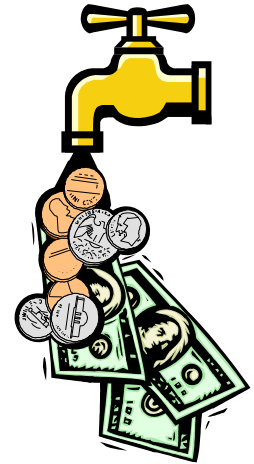
⁴⁰ GASB White Paper: Why Governmental Accounting and Financial Reporting Is -- And Should Be -- Different, www.gasb.org/white_paper_mar_2006.html, p. 26-27

→ Florida Rural Water Association strongly recommends that Financial Audits be conducted ANNUALLY and by a DISINTERESTED THIRD PARTY not associated with or related to board members or employees.

Water Loss Audits. Florida Rural Water Associations offers on-site water loss audits. Working side by side with system employees, needed data is gathered. Then the percentage of loss is calculated. Finally comes the search for possible causes. Often this requires several days and nights surveying the system.

Water Losses might include:

- Undetected and unrepaired water leaks
- Theft of water
- Abandoned water lines that aren't on maps
- Unmetered connections at public buildings and other locations
- Improperly installed master meters
- Meter inaccuracies
- Overflowing storage tanks
- Leaking hydrants, valves and curb stops
- Improper backwash of filters
- Malfunctioning check valves that allow water to flow back into wells or around pump stations



Does water loss cost you? You bet! For example, recent audits by FRWA showed that a system with about 1,000 connections and 10% water loss incurs approximately \$100,000 in lost revenues each year!

Water Meters are the Utility's Cash Registers.⁴¹ Water meters register the flow delivered to customers -- residential, commercial, and institutional customers. The meters are read, bills are sent, and payments are received for water and sewer. The revenues provide funds to pay salaries, build, operate and maintain utilities -- both water and wastewater. Many utilities charge sewer fees based on potable water consumption, so more accurate metering increases wastewater revenues.



AWWA's Manual M6 on water meters offers this statement,

*"Accurate water measurement is the means by which Water Utilities produce revenue to cover expenses, charge each customer equitably, prevent waste of water, and minimize the load on wastewater facilities. This concept is universally accepted today, but thousands of years were required to develop the science of water supply and distribution to its present state."*⁴²

Residential & Commercial Water Meter Replacement / Testing Frequency⁴³

The most frequently used intervals for displacement meter tests are based on meter size.

Meter Size	Years Between Tests and/or Replacements
½-inches & 5/8-inches	7 to 10-years
¾-inches	6 to 8-years
1-inch	6-years
1½-inch and larger	3 to 5-years

The revenue loss from inaccurate meters can be staggering to the system. The utility may not be aware of how much money it's losing from under-registered water meters. This is a case of out of sight out of mind, and a large number of meters significantly under-registering can be financially devastating.

FRWA recommendations for water meter testing and replacement:

⁴¹ Carroll, S.L., (2011).

⁴² AWWA. (1999) *Water Meters -- Selection, Installation, Testing, and Maintenance*. AWWA Manual M6, Third Edition. Denver CO. p. 1

⁴³ Modified from AWWA Standard C700-09, Cold Water Meters - Displacement Type, Bronze Main Case

1. Utilities should perform annual water audits to assess water loss and non-revenue water condition. Based on these results, if a significant amount of revenue loss isn't associated with real losses through system leakage, a high probability exists for losses caused by metering inaccuracy.
2. Water systems should check, clean, and calibrate displacement water meters at least every 4 to 10 years based on meter size as recommended by AWWA, see table below. Utilities with high levels of unaccounted for water should be on a more aggressive schedule. Utilities should test water meters to determine accuracy and then perform a financial calculation to see what the payback time will be for a meter replacement program.
3. Small systems with limited resources should consider a regular meter replacement schedule, replacing some percentage of meters in a given year until all meters are addressed within a cycle corresponding to the intervals.
4. Begin your meter replacement program starting with the oldest meters and biggest users. Always replace a meter that isn't registering or is under-registering 10% or more. Many utilities buy new residential meters rather than repair them.
5. Meters should be properly sized for accurate measurement per AWWA Manual M22: Sizing Water Service Lines and Meters.
6. Utilities should keep good records of meter inspection, repair, and replacement and follow FDEP Rule 62-555.350(13), FAC.

➔ FRWA is here to help you with Water Audits – just call your FRWA Water Circuit Rider!

Inflow & Infiltration (I&I) Studies.⁴⁴ Inflow & Infiltration is a silent problem for most wastewater systems and taxes your system unnecessarily. A large portion of inflow can be reduced with continual sewer system maintenance and observation and at relatively low costs. Infiltration is more costly but utilities can easily focus on those areas with high inflows to replace old and cracked sewer lines and manholes to maximize effort and stretch funds.

➔ Call your FRWA Wastewater Circuit Rider for technical assistance and advice.

Inflow occurs when rainwater is misdirected into the sanitary sewer system instead of storm sewers. As much as 40 percent of inflow comes from rain leaders and sump pumps that are improperly connected to the sanitary sewer system. The remedy for inflow is to remove improper connections to the sanitary sewer system -- points of inflow can be found by smoke testing and observation.

Infiltration occurs when ground water seeps into the sanitary sewer system through cracks or leaks in sewer pipes. The cracks or leaks may be caused by age related deterioration, loose joints, damage or root infiltration. The remedy for infiltration is repairing or replacing the leaking infrastructure -- points of infiltration can be found by televising your sewer lines.

Inflow and infiltration overtaxes your wastewater treatment plant and uses up capacity unnecessarily. By reducing I&I your plant will have more capacity now and in the future for new customers – you will not have to replace your plant as quickly.

Inflow and infiltration are also major causes of sanitary sewer overflows that release raw sewage into stormwater ponds, lakes, streams, streets, and wetlands. Sewer back-ups into homes may result in protracted litigation and potential liability for systems. Sanitary sewer overflows may also have significant environmental costs. In addition, excess storm water entering the sanitary sewer system through inflow and infiltration may result in increased wastewater treatment costs, which are passed on to the ratepayers. These costs make it imperative for utilities to address inflow and infiltration problems.

CAUTION -- FRWA finds that engineering consultants frequently recommend plant expansion or building a new plant and do not consider I&I. In these instances a majority of existing plants have more than adequate capacity if inflow and infiltration were reduced. It is important to remember -- consultants typically don't get large fees for rehabilitation work.

Energy / Electrical audits. These audits show the amount of electricity used at key points such as wells and pumps. Typically, they focus on ways to (a) reduce electrical energy use and costs and (b) correct electrical hazards and other

⁴⁴ Chamberlin, T. (2008).

electrical maintenance problems. Operations audits such as energy and electrical should be reviewed monthly *The key? Gallons produced or pumped per kWhr consumed.*

One system reported on steps it had taken after an energy audit. By establishing new procedures and installing a new control system, electric bills were reduced 33 percent, “at savings far exceeding the conversion cost.”

Other Efficiency Studies. When you think “audit,” don’t stop with the annual financial audit. Consider other careful studies that help your system analyze facilities and procedures. You could save money and time.

CRUMBLING INFRASTRUCTURE & IMPENDING COSTS

Leading industry experts and authorities warn about the coming challenges facing utilities small and large of Aging Infrastructure. This mounting problem of old pipe and plants will be faced by all utilities in Florida during the coming decades.

A number of factors contributing to the impending infrastructure spending gap are⁴⁵:

- Combined aging of water and wastewater piping – reaching the end of useful life;
- Reduced function of treatment facilities and increased need for replacement;
- Substantial decline in federal and state grants in meeting mandates;
- Population growth;
- New consumptive use restrictions implemented by state Water Management Districts; and,
- New, more costly, and more complex federal rules and regulations – unfunded mandates.

Florida’s water and wastewater infrastructure represents more than a century of investment, substantially funded by local ratepayers. A significant of Florida’s infrastructure dates from the period just following World War II. Florida’s population boom followed the advances in affordable of air conditioning and improved mosquito control making Florida a desired location.⁴⁶ All of this means the newest of Florida’s systems are now over 50 years old and a considerable number of city systems have pipes approaching 100 years old – nearing the end of their useful life.

America’s water and wastewater Utilities are now faced with aging infrastructure and the future will be more challenging. This mounting problem of old pipes, pumps, and plants will be faced by all utilities in Florida during the coming decades. The factors for the impending infrastructure spending gap includes: combined aging of water and wastewater piping – reaching the end of useful life; reduced function of treatment facilities and increased need for replacement; substantial decline in federal and state grants in meeting mandates; population growth; new consumptive use restrictions implemented by state water management districts; new, more costly, and more complex federal rules and regulations (unfunded mandates) and; potential impacts from global climate change.⁴⁷

The cumulative replacement costs water systems alone is estimated at \$10,000 per household, but while replacement cost are increasing federal funds are decreasing. The solution for utility professionals and governing board will be to keep ahead of the problem – the estimated price to ramp up for infrastructure reinvestment, rehabilitation and replacement may be as much as 3% above the rate of inflation (consumer price index).

The estimated price to ramp up for aging infrastructure rehabilitation or replacement may be as much as **2% to 4% above the rate of inflation** – quite a cost commitment!

⁴⁵ Tobey, B. (2001)

⁴⁶ Walker, R. & Solecki, W. (2004)

⁴⁷ Carroll, S.L., (2008d).

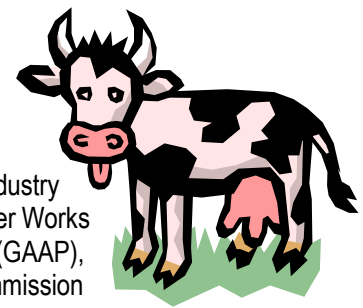
RATES AND FEES

User rates and fees support your water and wastewater Utility. Rates and fees are charged in exchange for goods or services -- water and wastewater services. This is why public-owned utilities operate under the enterprise fund concept and use separate accounting and financial reporting mechanisms than for tax-based municipal or county services. Enterprise fund monies constitute a public trust. This is also why FRWA recommends against transfers of those monies from utilities into to general funds -- it does not conform to the enterprise fund concept (public trust) and poses a problem of accountability for the entities and elected officials. ⁴⁸

Rates and fees must: ⁴⁹

- Be financially adequate to maintain and meet future customer needs;
- Equitably cover the costs of service for each class of customer;
- Be equitably allocated to the various classes of customers;
- Be based on sound engineering and economic principles; and
- Be based on principles that are generally accepted and widely followed throughout the industry.

One utility director privately remarked at the ever-increasing transfers to the general fund as, "*the city has found its cash cow. Now it's going to milk it dry until the marrow is sucked out the bones.*"



Rate Study Standards. FRWA recommends that your system follow contemporary industry standards for recommending and establishing utility rates, these include: American Water Works Association (AWWA) Manuals of Practice, Generally Accepted Accounting Principles (GAAP), Governmental Accounting Standards Board (GASB), and Florida Public Service Commission guidelines.

FRWA Rate / Fee Studies. Rate consultants can charge anywhere from \$15,000 to \$50,000 for rate / fee studies, and by requesting a Florida Rural Water Association rate study you can save this money and be prudent with ratepayer money. Consultant reports are much thicker in part to justify the fees, explain the results, and build a case for additional services, which means more consulting fees.

Rate Study Objectives. Ideally utility rate setting should meet a number of goals and objectives. *The single most important goal of the study is to develop proposed utility rates that meet the projected expenditure requirements of the utility system in order to maintain sound financial operations and to fund the anticipated capital needs of the system.* The other goals and objectives considered in the study include the following: ⁵⁰

- ✓ Proposed rates should be equitable among customer classes;
- ✓ Proposed rates should minimize "rate shock" to customers if possible;
- ✓ Proposed rates should promote the conservation of utility resources; and
- ✓ Proposed rates should maintain adequate reserves for emergencies and unforeseen capital.

Determination of Utility Revenue Sufficiency. The various components of costs associated with operating and maintaining a utility system, as well as the costs of financing the renewals and replacements of existing facilities and the capital improvements for upgrades and expansions, are generally considered the revenue requirements of a public utility such as the water and wastewater system. The sum of these costs, after adjusting for other income and other operating revenues available to the utility, represents the net revenue requirements to be recovered from rates.

Operating Expenditures – These expenditures include the cost of utilities, chemicals, salaries and benefits, materials and supplies, allocated administrative charges, and other items necessary for the daily operations and maintenance of the water and wastewater systems

⁴⁸ Carroll, S.L., (2008c). *Ratemaking Decisions in Floridas Public Water and Wastewater Utilities*

⁴⁹ AWWA. (2000). *AWWA Manual M1 – Principles of Water Rates, Fees and Charges*

⁵⁰ USEPA. (2006). *Setting Small Drinking Water System Rates for a Sustainable Future*

Debt Service – Debt Service includes the principal and interest of the system’s current loans from USDA Rural Development, Florida State Revolving Fund and bank financing for the utility trucks and equipment.

Renewal and Replacement Fund / Capital Replacement (Deprecation) Account – This component of cost includes:

- Funding of the utility’s renewal and replacements as defined in AWWA M26 manual of practice, it is recommended that this fund should be obtained from an analysis of system assets⁵¹, or at least 5% to 15% of the total system budget.
- Funding of an ongoing capital replacement account to provide for the continued renewal, upgrade, and betterment of utility system assets. These requirements are funded annually from utility rates and have been identified as a separate revenue requirement for rate determination purposes.⁵²
- These funds should be placed in a separate restricted account and must be used for capital projects only and not used to support the day-to-day water and wastewater system operations.

Other Revenue Requirements – This component of cost includes other expenditures incurred by the system. These include, but are not limited to:

- Other capital improvement financed from system revenues including departmental capital such as vehicles, equipment and furniture;
- Distributions for staffing time and expenses that directly support enterprise fund activities.⁵³

Customers, Sales, Revenues, and Expenses. Forecasting of new development and new connections changes year by year and so utilities need to revisit growth predictions and revenue / expense forecasts often at least each year or two.

Additionally costs are going up for everyone! Energy, chemical, and salary costs mean trying to do more with less and less. Your water and wastewater system and operations staff should be congratulated -- with unfunded mandates continually rolling down from state and federal governments along with the aging of pipes, pumps and plants. In the past years you have risen to the challenge and continue to operate the system providing safe drinking water and consistent sewer services. To make a very difficult job, more difficult, revenues have lagged behind expenses.

Utility boards, managers, and operators have done more with less each year, as measured in real dollars. They have shouldered the responsibility of running the system in a responsible manner and in compliance with state rules and regulations.

When you revisit the revenue and expense predictions, current financial position and, other indicators during the annual budget approval process. One of three things will happen:

1. If the predicted and current financial positions match closely, and if future needs are like those anticipated in the analysis, the board should increase rates by the factors recommended in the analysis. The water / wastewater system manager provides the recommended rate adjustment. This is a very easy adjustment.
2. If the two diverge modestly, the council should adopt rates that will get the system back on track. The manager does the simple math and provides the recommended rate adjustment. This is only slightly more complex than for adjustment in item 1.
3. If the predicted financial performance diverges wildly from the actual, a simple math calculation won’t do. It’s time for a new comprehensive analysis – please call FRWA to assist you and run the numbers, we are only too happy to do this for your system. The analysis is complex but the board’s part is still easy to perform.

51 Analysis of system assets for state and local governments per Governmental Accounting Standards Board (GASB) 34. *GASB White Paper: Why Governmental Accounting and Financial Reporting Is -- And Should Be -- Different*, www.gasb.org/white_paper_mar_2006.html, p. 26-27

52 GASB 34 “requires that governments report their capital assets in a statement of net assets and requires that the report show the depreciation in value of those assets. Specific asset reporting requirements include: (1) depreciation of assets must begin when the asset, equipment or facilities are acquired or put into service; (2) accumulated depreciation for all assets must be reported; and (3) assets acquired or built prior to 1980 are not required to be reported.” Lee, et. al., *Public Budgeting Systems, 8th Edition*, (Jones & Bartlet Publishers) 2006, Table 2-4, p. 510-513

53 Legitimate expenses include items such as computer support, billing, accounting, fleet maintenance, office space, or other activities “provided for water utility operations, and the like. Since inclusion of expenses for such services in the total revenue requirements would be proper if the utility were operating independently, it is also appropriate when the services are furnished by an associated government entity” *Water Rates*, AWWA Manual M1, Fourth Edition, 1999, American Water Works Association, p. 2

Rate Study Findings and Recommendations. FRWA is happy to come to your board meeting to explain the analysis and report. We anticipate that you will have questions to discuss and options to consider. The study and recommendation presentation is often between 20 to 30-minutes in length, which would be followed by board discussion. This activity typically takes about 60 to 90-minutes and can be held during a special workshop or a normal board meeting. This is an informative meeting and decisions about rates are usually taken at subsequent meetings. It is important that all board members be in attendance since the adoption of rate increases can produce public comment.

Adopting Rate Study Recommendations. Adoption of rate increases often requires two public hearings and a rate ordinance, your attorney typically drafts this ordinance, however we are available to help you with this at your request.

Adjusting your own Rates in the Future. It is FRWA's goal to provide enough documentation and rate study tools (spreadsheets) so you can review your budget for water and wastewater and adjust the rates for yourself in the future.

Sync Rates to an Annual Cost-Of-Living Index. It is prudent utility practice to sync water and wastewater rates with annual cost-of-living adjustments for the utility to keep pace with incremental costs into your rate ordinance – make this adjustment automatic based on a verifiable index. Use either the Engineering News Record (ENR) Construction Consumer Index⁵⁴, the Florida Public Service Commission 2009 Price Index⁵⁵, or the United States Department of Labor Consumer Price Index (CPI).⁵⁶

To make this part of your rate structure ordinance or policy, you only have to vote on it once. These small adjustments are easier to defend and less painful than keeping the rates flat for ten years and then having to increase them by 50% or more. The later large increase may customers the impression that the utility has not been “awake at the wheel.”

Which public hearing would you prefer to sit through?

One hearing based on rates tied to an annual cost-of-living index or the hearing for a 50% increase after ten years of no adjustments?

PURCHASING POLICIES.

Among many of the policies that you should have is an adequate purchasing policy to ensure that proper procedures are followed. This will provide staff that handles the purchasing function an understanding of their responsibility and duties, and limitations within organization. It also establishes reasonable standards against which the Auditors can measure the your utility's performance. Importance of purchasing policies includes:

- ✓ Limiting fraud, collusion, etc. by board members, the manager or employees.
- ✓ Setting standards and financial limits when notices must be published requesting Competitive Sealed Bids or directly soliciting bids from pre-qualified vendors. Obtaining good bids to furnish labor, material or supplies (usually requiring three to five bids).
- ✓ Setting procedures for engineering requests for proposals, see Chapter Nine for more about hiring consultants.
- ✓ Assuring that bidders and contractors are appropriately experienced or certified to furnish labor, material or supplies – *responsible bids*. Responsible bidders are those that will deliver quality labor, material or supplies according to your specifications, not just any substandard off-the-shelf material that will breakdown in weeks or months.
- ✓ Deterring the potential of collusion, bribery, etc., by contractors or vendors.
- ✓ Board approval of the lowest responsible bidder, entering into, and assigning of contracts and notices to proceed.
- ✓ Handling complaints and contractor / bidder claims.
- ✓ Approving work completed and processing payments.
- ✓ Sole Source vendors when it is determined that there is only one source for the required supply or service or the supply or service is unique and not subject to competition.

⁵⁴ Engineering News Record (ENR) Construction Consumer Index is found at <http://enr.construction.com/economics/FAQ.asp>

⁵⁵ Florida Public Service Commission Price Index is found at <http://www.psc.state.fl.us/utilities/waterwastewater/>, click on “Price Index and Pass Through Application for Water and Wastewater Utilities”.

⁵⁶ United States Bureau of Labor Statistics CPI at: www.bls.gov/cpi/home.htm

- ✓ Emergency Purchases when it is determined that conditions exist which create a disruption of essential operations or conditions adversely affecting the safety, health or security of persons or property.

Purchasing Policies

No, *not* just the LOWEST Bid!

Consider this: once again, Tony's Terrific Tires has won your city council's bid for the water department. No matter that Tony apparently rebuilds old tires himself. Ignore that they last only a few months. Overlook the fact that Tony routinely submits pricey change orders for tires other than those originally specified.

You got what you deserved: the lowest bid. Now you're living with the results. Instead of fretting over lousy products and service, change your purchasing rules to include "*lowest responsible bid*." Some steps to take:

1. Start by writing very detailed bid specs, such as the percentage differential allowed for local companies. You'll need these specs if you select other than lowest bidder and end up with a lawsuit.
2. Get bids from at least three bidders, preferably five.
3. Evaluate those bids carefully, looking for hidden costs.
4. Consider service, location and return policies.
5. Above all, use common sense! Your fiduciary responsibility means you are the trustee of the public's ownership of your system. On their behalf, you must get best use of dollars ... from the lowest *responsible* bid.

FINAL THOUGHT.... TOOLS FOR ACCOUNTABILITY

Budgets and audits help boards and councils gain control over that for which they are accountable: the water and wastewater system. Since you must make budgets, leverage that time to get further returns. Use budgets to look at the big picture.

By comparing your budgets against your mission and considering whether to pay off or expand debt, your Board addresses the entire scope of its responsibilities. Financial, water loss and energy audits are three proven methods that help assure prudent management. In the next Chapter, we'll take a look at another important method: communications.

BUDGETING CASE STUDIES

How would you handle these problems on your Board? *(See Appendix A to see possible answers)*

1. Monthly budget reports show that water loss currently exceeds 25% of the amount produced. Most council members say this is normal, but Manager Bob wants to do a water audit.
2. The quarterly financial / status report does not include an estimate of inflow and infiltration into the wastewater treatment plant as a percentage of plant capacity. Staff indicates that it is difficult to quantify inflow and infiltration.
3. Your annual income and expenditure budgets are normally approved this month, but Manager Jane hasn't yet brought a draft to the board's attention. You are the only one who's worried.
4. Bill, a new board member, has told everyone he won't just rubber stamp the annual income and expenditure budgets. He wants a special meeting devoted to the draft budget.

CHAPTER 7

COMMUNICATIONS AND PUBLIC RELATIONS

"Sure, we communicate," report many board and council members, "Every meeting is posted ahead of time. It's up to the public to take the next step." Right? Wrong! Communications is intentionally at the heart of utility operations since it serves customers and is supported by customer rates and fees.

Chapter Overview: It's the historians who define reality. And it's up to you to provide factual, thorough information about how your system protects public health and promotes an improved quality of life. If you don't tell your story, the grapevine will. This Chapter discusses your constituents (they are not all equal) and five (5) steps to a positive image. Find out 18 inexpensive (if not downright cheap!) ways to spread your word. Then consider crisis communications and the special case of the media.

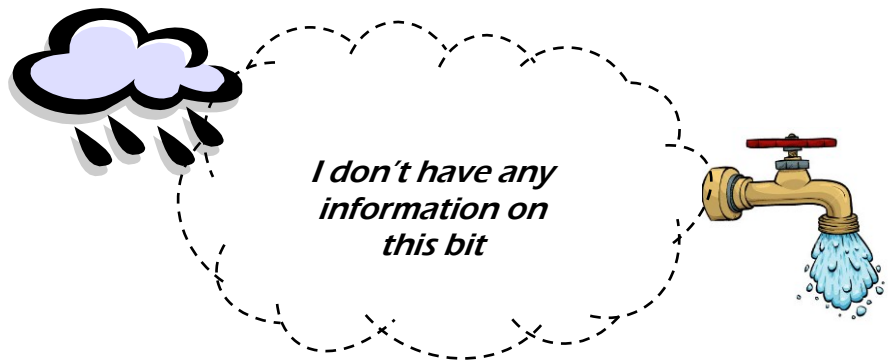
WHAT DO YOUR CUSTOMERS THINK ABOUT YOUR UTILITY?

You might be surprised to find out that customers don't think about your utility very often or don't know what you do. As long as water comes out of the tap and the toilet flushes you're out of sight and out of mind. They might only think about you when you've raised the rates or water quality drops (taste, odor and smell aesthetics). A great many of them might not even care how hard you're working to provide them great service.

Let's face it that to your customers you're invisible and meant to stay that way.

Good customer service is essential for any successful business, so why should water and wastewater Utilities be any different? You are in the public eye and your system provides a public service so you cannot duck public relations.

How we get water in our homes

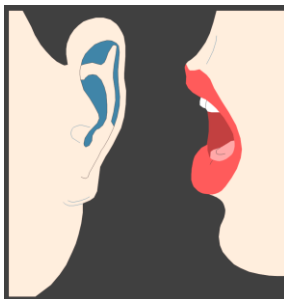


COMMUNICATION IS IMPORTANT

Why should you tell your story? It's simple. If you don't care enough to tell why your water or wastewater system is important, why should customers accept rate increases or vote for improvements?

With many water and sewer rates on the rise – not to mention crumbling infrastructure in need of continuous funding – consumer need to feel confident that water will continue to come out the tap and toilet will always flush. When consumers have concerns they want to know that they will be listened to, their questions answered, and that their problems will be properly addressed.

As a result a number of water and sewer systems are making an effort in this area and now offer various customer service options, including online bill payment, problem report portals and e-mail alerts. Additionally, some authorities' websites feature a quick list of frequently asked questions, important water-saving tips and notifications of water emergencies that may result in service disruptions.



Your board has a choice. It can be reactive, letting opinion form willy-nilly and then trying to put out fires. Or it can be proactive, providing facts for those inevitable opinions and comments.

Modern utility management involves more than providing a service or product -- it requires telling folks what you do. Why? Most systems today need more funding, whether to comply with the Safe Drinking Water Act (SDWA) regulations, to upgrade an aging system or keep up with growth. All financing comes down to votes -- on the City Council, by the Board of Board members or at the ballot box.

PUBLIC EXPECTATIONS FOR YOUR UTILITY

The public has extraordinary expectations of public entities. That includes institutions that normally don't think they have anything in common. What do library systems, school districts, and water and wastewater systems have in common? Each is a monopoly that serves the public.

John Doe and Jane Jones know that their money supports libraries, schools and water systems. Don't bother them with the differences among taxes, fees, bills, etc. They know one thing: that they pay good money for public services. As a result, they expect a lot.

Expectations of public entities typically fall in five areas:

- ✓ **Service.** You need to provide it better faster; longer and stronger
- ✓ **Problem solving.** Don't give excuses -- just solve the problem now!
- ✓ **Constituents.** You'd better remember Ann Average as well as the VIPs.
- ✓ **Stewards of the public dollar:** Your fiduciary responsibilities mean being a wise trustee.
- ✓ **Communications.** Just tell me what are you doing to me and why!

We all know that schools are a perennially hot topic with constituents. Increasingly water and wastewater systems are joining that "top of mind" position. Why? You stand at the intersection of three major public policy areas: public health, environmental protection and economic development.

The fact is, images and perceptions are part of your turf... just as much as daily operations and holding regularly scheduled meetings. A positive image doesn't "just happen." You have to take charge of your image, helping people understand what you do and how many times you go beyond the call of duty.

FIVE STEPS TO A POSITIVE IMAGE

Step 1. Legitimize Telling Your Story. This may be the hardest step. Why? Because many Board members think communications is a waste of time and money or that positive news never makes it into the local news sources – newspaper, television, and radio. Get your peers to agree that communications is so important that resources are allocated.

Don't assume that hard-pressed staff must do all the communicating. Of course, they know more about the details of the system -- but they shouldn't be your only players.

Mr. and Ms. Board Member, you are the natural ambassadors for your water or wastewater system. You were either elected or appointed to your governance position. Your acceptance signified your commitment as a public steward and your responsible leadership and support of this institution. If you don't care enough to host an open house, give a talk at Rotary or meet with the editor of your local newspaper, who should?

Step 2. Make your Game Plan. Get input and ideas from all the staff, not just the Manager. The fact is, all of the staff --especially the office staff-- have good ideas on telling your story. They are the folks in the trenches, taking irate phone calls and fielding tough questions. They know what customers understand... and what they don't!

- ➔ Consider starting a website to tell your story...

Consider starting a website to tell your story...

Step 3. Come up with Your Message; it says the same thing to everyone. Start by listing:

- The plusses about your system
- The minuses
- What the critics say

Keep your message short, preferably only four or five points. Use some aspect of the message in every communication so as to keep reinforcing your position.

Step 4. Pick your Audience. Who is it you're trying to communicate with? Your audience includes existing customers, potential customers, potential vendors, local leaders, and the media. Do not focus your message at critics – be defensive.

Instead take the positive position and talk about your water and wastewater system's mission, projects, facilities, service, and staff.

Step 5. Start by Starting. Whether you begin one communications item next quarter or six, just do it! No excuses, no backtracking. Don't try for a fancy newsletter; one side of your letterhead will do just fine.

A caution: communications is like parenthood. It goes on, and on, and on! Use stick-to-itiveness or risk the "busted promises" syndrome. That's when skeptics say "I told you so!" when the newsletter gets dropped or there is no more chairperson's letter. If you start it, you're in for the long haul.

Communications Checklist	
Communications is part of modern utility management. How are folks supposed to know what you do if you don't tell them? Set a goal of starting at least two new activities per year.	
Do Now ~ Next Year	1. Brief customer opinion survey
Do Now ~ Next Year	2. Semi-annual chairperson's letter
Do Now ~ Next Year	3. Customer newsletter at least twice a year
Do Now ~ Next Year	4. Start a website for notices, info, and Consumer Confidence Reports
Do Now ~ Next Year	5. Speaking: Rotary, PTA, churches, schools, high school science classes
Do Now ~ Next Year	6. Media: informal meetings, phone calls, occasional press releases, photos
Do Now ~ Next Year	7. Maps of your service area: people usually don't know boundaries
Do Now ~ Next Year	8. Water Week, held the first week in May annually: get posters, brochures, radio public service announcements from Florida Rural Water Association
Do Now ~ Next Year	9. Informational ad in local paper: present facts and events
Do Now ~ Next Year	10. Exhibit at local fairs, meetings and socials
Do Now ~ Next Year	11. Open house, tours for VIPs, high school chemistry class
Do Now ~ Next Year	12. Construction site progress signage and "thank you" signs
Do Now ~ Next Year	13. Donate excess or obsolete machinery to a school
Do Now ~ Next Year	14. Staff bulletin board (post on website)
Do Now ~ Next Year	15. Staff newsletter (post on website)
Do Now ~ Next Year	16. Monthly "what's going on and coming up" staff meeting
Do Now ~ Next Year	17. Adopt-a-road litter clean-up
Do Now ~ Next Year	18. Pairing with schools and libraries for exhibits, field trips
Do Now ~ Next Year	19. Guest column in the newspaper or Letter to the Editor
P.S. These are actual communications activities used by water and wastewater systems.	

MAKE THE MEDIA YOUR FRIEND

Love 'em or hate 'em, the media are a part of modern water and wastewater system management. Why? Because they are a conduit to many of your constituents. The media constitute the surest, quickest bridge to your targeted constituents. Instead of fighting the media, look at ways to set up a productive relationship. Make the media your friend.

The goal is balanced coverage. The media cover that which draws readers and viewers: bashes, crashes and fires. If you have an emergency indeed you'll get media attention. But the reverse can also be true if you make it happen: positive coverage about your achievements. For example, recently a system started informal meetings with a previously critical reporter. The latest article reported positively on the system's acquisition -- and use during the recent hurricanes -- of a back-up generator.

The 12 Rules to Remember for Dealing with the News Media⁵⁷

1. When dealing with the news media on a breaking story (or, for that matter, for any purpose,) please remember it's never "*off the record*" no matter what the reporter says or promises --- especially when TV cameras and radio recorders are involved --- so please be friendly and courteous but always be *on guard* when dealing with reporters/camera crews
2. Never volunteer any extra information and never estimate anything
3. Answer questions honestly (never lie)
4. If you don't know the answer to a question, be honest and admit it, then tell the reporter(s) you will find the answer and get back with them --- then do it!
5. If presented with a difficult question(s) and you need time to properly gather your thoughts, ask the reporter(s) to please repeat the question thus affording you a little extra time to formulate the proper response.
6. Develop an emergency situation news media plan --- just like preparing for a hurricane, have an media emergency media plan to deal with the news media in times of problems and/or emergencies including, service disruptions, breakdowns, shortages and, of course, in times of hurricanes and other natural disasters --- it always best to be on the offensive rather than the defensive with the news media.
7. If possible, develop contacts with the local news media people so that when and if you have a news release or an emergency you have a contact person inside the local newspaper(s), TV stations or news radio stations.
8. Designate a spokesperson(s) to deal with the media --- if it becomes necessary
9. Once positive relations are established with the local news media, provide timely news story leads or feature ideas to cultivate your sources with the news media
10. When dealing with television, please remember to call early in the day (the day before if possible) with a story lead or feature idea.
11. Daily newspaper deadlines are generally early in the afternoon, so it is best when possible, to contact the regional or local daily newspaper a day in advance. Weekly newspapers dated Thursday need story leads and feature ideas by 5 pm the Friday before publication date (no later than noon Monday)
12. Be nice!

CRISIS COMMUNICATIONS

It's tough enough to tell your story during normal times. But what if it's a crisis? Whether it's a failed water tank or bacteria outbreak, you must let the public know:

- What happened
- Why it happened
- What you're doing to combat it
- What they can do.

"Stop," you say. "If I tell them much, I'll have critics and Monday morning quarterbacks! Why do more than the minimum?"

Because in our culture, there is a huge price to be paid when your image and credibility are seriously damaged. Exxon's handling of the Valdez oil spill is one recent example. The fallout from such a crisis can range from large fines to increased industry regulations. If your system has its own emergency plan, make sure it includes the media. (Chapter Ten discusses emergency planning.)

⁵⁷ Lane, G. Jr. (2004) *The 12 Rules to Remember for Dealing with the News Media*.

What's your Media IQ?

Most Board members have had mixed experiences with time media. Use this list to check your personal attitudes, *see Appendix A for answers and scoring.*

Agree	Disagree	Not sure	1.	We leave the media alone and hope for the best.
Agree	Disagree	Not sure	2.	We have a website that tells our story to the press and public.
Agree	Disagree	Not sure	3.	The media cover us only when we're in trouble.
Agree	Disagree	Not sure	4.	We send out press releases occasionally
Agree	Disagree	Not sure	5.	The media never get the story right!
Agree	Disagree	Not sure	6.	It's a good idea to keep in touch with the publisher.
Agree	Disagree	Not sure	7.	Reporters try to put words in your mouth.
Agree	Disagree	Not sure	8.	It's possible to develop a positive relationship with the media.
Agree	Disagree	Not sure	9.	We can't get fair coverage from the media.
Agree	Disagree	Not sure	10.	It's possible to get balanced reporting from the media
			Total	
				Even numbered questions 3 pts for Agree, – 2 pts for Disagree, and 1 pt for Not sure
				Odd numbered questions – 2 pts for Agree, 3 pts for Disagree, and 1 pt for Not sure

NEWS RELEASES GUIDELINES:

News releases are double-spaced written in clear English. The minimum copy for a column is about 750 words or more, which is about four to five doubled-spaced typed pages. When composing the release spell everything out in plain English that all can understand. This means that you should limit your acronyms. Newspapers are not crazy about alphabetical soup – all acceptable acronyms are covered in the AP Style Book. The Associated Press Stylebook and Briefing on Media Law, usually called the AP Stylebook, is a style and usage guide used by newspapers and in the news industry in the United States, see www.apstylebook.com. You can pick one of these up for about \$15 used or \$45 new.

Use standard grammar and punctuation rules apply when not covered by the AP Style Book. All copy is to be written in "inverted pyramid" style. That means that the most important and pertinent information covered as early in the copy as possible. Editors cut copy from the bottom to fit space. Whenever possible, the lead paragraph should answer the following questions: who, what, when, why, where, how. The lead paragraph should summarize the story – this is not a mystery where the reader must wade through the explanations to find out the plot. Make it easy on them!

The two most important elements of a column or news release are the lead paragraph and the headline. Both are major bait to draw the reader into reading the column or copy. When possible, illustrations, photographs, graphs and charts are helpful to accompany columns and news releases. Factual, interesting statistics are always helpful to perk up copy but make sure that the statistics are accurate and sourced. Remember the old saying, "figures don't lie, but liars figure". Always source material when and where possible. Quotes are desirable, but they should be checked for accuracy.

Spell check every item, when in doubt of the spelling of a word, rely on spell check. Check spellings of all names and numbers at least twice. When in doubt check your facts, twice! Common sense, basic good grammar, a little humor, a lot of facts, and simple presentation are the key elements of readable copy (column or news release). Avoid expressing personal opinions and providing unsubstantiated information.

The figures 1-9 are written out; 10 and above are numerical. When using large numbers its best that they be rounded off and spelled out. Example: \$6 million). For accuracy, please check with the AP Style Book.

The old KISS rule is helpful to remember when writing columns and news releases – if we "keep it simple stupid", the reader will not only be informed but will understand the point you're trying to make. (The average readership level is grades eight-nine; that's why most newspaper copy is written at an eighth grade level.) Four of the best newspapers in the state to use as models are the "St. Petersburg Times", "Orlando Sentinel", "Tampa Tribune", and the "Miami Herald".

All column copy and news releases should end with an “editor’s note” which carries your Mission Statement and states “for more information please contact -- provide the writer’s name, title, phone number and email address.”

WEBSITES FOR IMPROVED CUSTOMER SERVICE

Reasons to have a Website...

1. Establish A Presence so people can find you.

Water and wastewater systems are public entities and the public is looking to find you. Making it easy for them and establishing a professional looking presence gives them confidence in your organization and ability to serve them. This is where they expect to read more about the utility and the areas you serve.

- Telling your story...
- Mission statement
- To further inform the public about services, service area, and policies
- Obtain the interest of vendors to increase quality services and lower costs.

2. To Make Basic Utility Information Available

The website should publish office addresses, phone number, and key people.

3. To Provide Improved Customer Service

Your web site is a great place to publish your own list of "Frequently Asked Questions", or even the rarely asked ones. Well thought out questions and answers, in as much detail as you like, and exactly as you'd like it stated, can provide your customers with immediate help with their question, as well as provide customer service staff with a reference tool. The time of day is now irrelevant. With a web site your products, services and information become available to anyone with Internet access 24 hours a day, 7 days a week.



4. To Reduce Staff Time

Customers generally have the same questions. Instead of staff having to answer the same inquiries, over and over again, a FAQ (Frequently Asked Questions) page can save you and your staff a great deal of time. Post them on your website and provide a simple oversight for your customers. The more information they have about you, the more comfortable they are and trust you and your business.

It's not cheap to establish a website with this level of technology, particularly when tight security is required. However (and if this option is a possibility for your utility, you've probably thought of this already) there can be significant savings to operational costs by leveraging technology.

What information should water and wastewater systems disclose on their websites?

Above all the information and website design should be user-friendly. Utility ratepayers need to be able to adequately gauge whether it is: effective, competent, frugal with revenues, and in compliance with all expectations and relevant laws about public records and open meetings. In order for this to happen, residents and taxpayers should expect to find key information on any Utility's website.

1. Key Information.

- Utility address and phone numbers
- Emergency phone numbers

2. Board Meetings and Agendas. The website should disclose all Utility Board meetings and agendas.

- Time and pace of meetings.
- Agendas for all meetings that fall under rules about open meetings (about 99% of any Board meeting);

- Whether public input is allowed at the meeting and, if so, the rules that govern public input.
 - Minutes of meetings can be posted online.
3. **Elected Officials and Elections.** The website might disclose key information about the elected officials.
 - Their names, contact information, committee appointments, including phone numbers and e-mail addresses.
 - Terms of office and date of next election.
 4. **Administrative Officials.** The utility's website should disclose key information about the Utility's appointed administrators:
 - Their names, titles, and contact information, including phone numbers and e-mail addresses.
 5. **Customer Information.** Announcements, methods of payment, paying bills on-line, water / sewer rates and fees, connection / disconnection policies, non-payment penalties, consumer confidence reports, announcements about projects, requests for proposals, and precautionary boil water notices
 6. **Employment Opportunities.** Job openings and applications.
 7. **How to Conduct Business with your Utility.** The utility's website should provide comprehensive information about the contracts it enters into with vendors.
 - The rules the utility must abide by when it enters into contracts with outside vendors should be posted on the Utility's website.
 - When the utility enters into a bidding process for larger contracts, the request for bids should be posted on the utility's website.
 - Publicly available information about the bids the utility receives should be posted online, keyed to the request for bids the utility has previously published.
 - Specific contracts the utility enters into with outside vendors for any amount over \$10,000 (or your policy limit) might be posted online.

Practical Communications

A city of 3,000 population knows how to get the word out to its citizens, and uses many methods to keep folks informed. At the heart of its communications program is a long-term, positive relationship with the weekly Newspaper. The publisher regularly attends council and special meetings. City department heads write up special events. City Manager and the mayor regularly send in guest editorials and articles.

A long-range study about water sources has resulted in additional coverage. *"We are constantly writing articles to keep the population informed,"* City Manager said, *"so that when we go back to them for a vote, they'll have the background."* Other communications methods include:

Special Events. The City sponsored a one-day festival in conjunction with the 20th anniversary of a local rodeo. A mayor's proclamation kicked off the event; over 4,000 people attended. A major antiques' dealer convention is in the planning stages.

Speaking. The City Manager estimates that he speaks at least monthly to civic groups such as the Lions and church men's groups.

Local Radio. Monthly, the City Manager is interviewed on the local radio station about *"what's new at City Hall."*

In a nutshell the city keeps its public informed about what's going on.

FINAL THOUGHT... YOUR IMAGE IS YOUR REALITY

It's no use for Boards to moan and whine about being misunderstood by customers, the public or the media. You are in charge of your image. If you tell your story, you define reality. If you don't, the grapevine takes over.

Communications stands at the heart of utility mission since the utility serves the public and is supported by user fees and rates. In the next Chapter, find out how to deal with another important area: laws, statutes, rules and regulations.

Public Relations Case Studies

How would you handle these problems on your Board? *(see Appendix A for possible answers)*

1. Your board hired Fred, the new Manager, partly because he set up an aggressive communications program and website for his last employer. Now three board members are refusing to spend any money on communications or a website.
2. Tammy, the office manager, wants to write a new customer brochure. She got her Uncle Tim, a board member, to put the brochure on the upcoming agenda.

CHAPTER 8

LAWS, RULES & REGULATIONS

Each year there are more stringent laws, rules and regulations roll down from the state and federal government. These unfunded mandates impact how you conduct business (with employees, applicants and the public) and deliver water and wastewater services.

Chapter Overview: Chapter 8 reviews laws, rules and regulations that water and wastewater systems need to be vigilant about and understand according to the Drinking Water Act. Public drinking water must meet strict standards regarding the quality of water provided. Wastewater must be handled according to the Clean Water Act. Board members should also understand the myriad of laws that govern businesses, handling personnel, and so forth.

EXPECTING MORE OF PUBLIC ENTITIES

Both the reality and perception concerning business regulations affect your Water Utility. Whether your system is investor-owned, not-for-profit or a governmental jurisdiction, you're seen by the community as a public entity.

Why? Just like school and library districts, your system is a monopoly. As a public entity, it has unusual power over the daily lives of your customers --to say nothing of directly affecting their health and welfare. As a result of this responsibility public water and wastewater systems have created Policies and Procedures Manuals reflecting the three basic values:

1. Public business shall be conducted in public.
2. The public must be appropriately notified about a public entity's process and product.
3. No member of the public, potential employee or employee shall suffer from discrimination.

Protecting your utility board and yourself starts with knowing what's legal.

WATER / WASTEWATER RULES AND REGULATIONS

The water / wastewater industry can sound like one big bowl of alphabet soup. Wherever you look, there's another acronym.

- VOCs Volatile Organic Chemicals
- TCR Total Coliform Rule
- RTCR Revised Total Coliform Rule, just when you understood TCR
- D/DBPR Disinfectants / Disinfection By-Products Rule
- GWR Ground Water Rule
- TMDLs Total Maximum Daily Load calculation for wastewater disposal
- NNC Numeric Nutrient Criteria for wastewater disposal

What do any of these acronyms have in common, other than EPA created them? Each of these rules were promulgated with the goal of better protecting the public's health and the environment.

WATER UTILITY RESPONSIBILITIES

The responsibility of the water purveyor is to meet the primary standards set by EPA under the Safe Drinking Water Act (SDWA) of 1974, and the more stringent Florida standards. These responsibilities include the treatment and monitoring of bacteriological, chemical, and radiological contaminants; record keeping and reporting of results to the Florida Department of Environmental Protection (FDEP) and notification of any noncompliance to consumers and the public. The FDEP Rules encourage the avoidance of hazardous locations when constructing new or expanding public water systems; set Maximum Contaminant Levels (MCLs) for five properties of drinking water (inorganic chemicals, organic chemicals, turbidity, microbiological contaminants, radiological contaminants); require public water systems to monitor on a nine-year compliance cycle; and set reporting and report keeping requirements.

The National Secondary Drinking Water Regulations are designed to control contaminants that affect the aesthetic quality of drinking water. High concentrations of these contaminants may have health as well as aesthetic implications. The federally set contaminant levels were set as guidelines for Florida's rules.

To obtain a copy of the drinking water Rules and Regulations that affect your system go to the FDEP website at <http://www.dep.state.fl.us/>, under the PROGRAMS menu click on WATER, and then click on RULES. As mentioned before, the Focus-On-Change seminars held each year in February by FRWA in conjunction with FDEP are a great source to keep up to date on the ever-changing rules.

Among others, some important regulations found in the Safe Drinking Water Act include:

- **Consumer Confidence Reports** – all community water systems must prepare and distribute annual reports to the public about the water that they provide.
- **Drinking Water State Revolving Fund** – funding to help water systems make infrastructure or management improvements.
- **Microbial Contaminants and Disinfection Byproducts** – strengthens protection from microbial contaminants and has control over byproducts of chemical disinfection.
- **Operator Certification** – water operators must be certified and continue their education to ensure that systems are operated safely.
- **Public Information** – established a Safe Drinking Water Act hotline at 800-426-4791.
- **Source Water Assessment** – requires the development of source water assessments and wellhead protection plans.
- **Sampling and Reporting** - requires sampling and reporting from water suppliers. It also governs record keeping and public notification requirements for water suppliers.

Consumptive Use Permits and Water Management Districts. In Florida the ground and surface waters are deemed waters of the state and permission to use the water must be obtained from one of the five Water Management Districts. These districts were formed originally as flood protection agencies. Since the early 1960s, their responsibilities have grown to include managing the water supply, protecting water quality and preserving natural systems that serve important water-related functions. The water quality function to meant to ensure adequate water supplies for people, animals and the environment. Districts issue Water Universityse permits to ensure withdrawals from water bodies will not harm existing users, the water resources or the environment. The District also contributes funding and technical expertise to local governments for programs that conserve water and develop alternative water supplies.

- This means that water systems must first obtain the right to use the water from the state through your local Water Management District and then a permit for delivering it as drinking water to the public from the Florida Department of Environmental Protection.

WASTEWATER SYSTEM RESPONSIBILITIES

The responsibility of wastewater systems is to meet the requirements of the Federal Clean Water Act (CWA) An amendment in 1977 to the Federal Water Pollution Control Act became known as the Clean Water Act. The Act established the basic structure for regulating discharges of pollutants into waters and gives US EPA the authority to implement pollution control programs. The Act makes it unlawful for any person to discharge pollutants into navigable waters, unless a permit is obtained under its provisions.

Among others, some important regulations included in the Clean Water Act are:

- **Permits and Licenses** – established the National Pollutant Discharge Elimination System (NPDES) for obtaining permits when discharging pollutants into navigable waters. Less than a quarter of Florida's domestic wastewater facilities are authorized to discharge to surface water -- many of these facilities can also discharge to ground waters through land-application, beneficial reuse of reclaimed water or deep well injection.

- **Water Pollution Control Fund** – funding for construction of publicly-owned treatment works, implementing a management program, and developing and implementing a conservation and management plan.
- **State Disposal System (SDS) Permit** – regulating water discharges to the ground surface or subsurface -- through land-application, beneficial reuse of reclaimed water or deep well injection.

To obtain a copy of the clean water Rules and Regulations that affect your system go to the FDEP website at <http://www.dep.state.fl.us/>, under the PROGRAMS menu click on WASTEWATER, and then click on RULES. As mentioned before, the Focus-On-Change seminars held each year in February by FRWA in conjunction with FDEP are a great source to keep up to date on the ever-changing rules.

BUSINESS LAWS AND REGULATIONS

Business Regulatory Alphabet Soup

- ADA** Americans with Disabilities Act of 1990. Covers employers (Titles I and II) and public access (Title III). Businesses with fewer than 15 employees aren't covered, but local government jurisdictions of all sizes are. A 1994 Alabama court found a municipality with under 15 employees guilty of discrimination due to being a "public entity."
- EEO** Equal-employment opportunity (EEC) protection that started with the Civil Rights Act of 1964.
- FLSA** Fair Labor Standards Act of 1938. Protects employees by regulating minimum wage, maximum hour standards and overtime, permitting qualifying personnel to be exempt.
- FMLA** Family and Medical Leave Act of 1993. While it affects only entities with more than 50 employees, some states may be more stringent.
- HIPPA** Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy and Security Rules, which sets national standards for the security of electronic protected health information; and the confidentiality provisions of the Patient Safety Rule, which protect identifiable information being used to analyze patient safety events and improve patient safety.
- IRCA** Immigration Reform and Control Act of 1986. Requires employers to verify legal employability of new employees while avoiding discriminatory practices.
- OSHA** Occupational Safety and Health Act of 1970. Regulates workplace hazards that may affect employees.
- Other:** Sexual harassment protection stems from the Civil Rights Act of 1964 and its reauthorization of 1991, especially Title VII.

How to keep up on both water quality and "doing business" regulations? Subscribe to two free, quarterly publications. On Tap targets drinking water and is published by the National Drinking Water Clearinghouse. Its sister National Small Flows Clearinghouse publishes Small Flows serving the wastewater industry. Reach both at West Virginia University, P0 Box 6064, Morgantown, WV, 26506-6064 or phone 1-800-624-8301. If you have a modem, dial up the Drinking Water Information Exchange Bulletin Board at 800-932-7459.

A IS FOR ADA

Revolutionary and encompassing, the 1990 Americans with Disabilities Act (ADA) does for American employers what the SDWA did for the water industry: One standard that applies to the entire United



States.⁵⁸ It covers both employment and public access – it prohibits discrimination on the basis of a disability, see <http://www.eeoc.gov/facts/fs-ada.html>.

Does ADA affect the water and wastewater industry? Absolutely, if you have more than 15 employees. Probably, if you're a municipality; an early Department of Justice ruling exempting smaller communities has been reversed. Also, remember to check with your attorney or state association about your state's applicable laws; some are more stringent than ADA.

But whether your utility is covered or not, ADA has redefined the playing field for virtually all employers and those who deal with the public. How? By setting standards against which grievances and lawsuits will be measured.

Disabilities and the Job.

ADA forbids covered employers from a screening and/or hiring process that could have a discriminatory effect. You may discriminate against someone currently using unlawful drugs, but not against those who have been rehabilitated.

ADA requires employers to selecting individuals based on performing essential (not secondary) functions of the job and providing appropriate accommodations. It is important to make sure that your interviewing process, records, and job descriptions comply with the law. Check the National League of Cities' *Complying with the Americans with Disabilities Act of 1990 ~ local officials guide*.

Extending Benefits.

Health and insurance benefits must apply to all employees if any employees are covered and not exclude or discriminate against those with disabilities.

Protecting the Public.

Title III deals with public access by the disabled. Current legal thinking is that water and wastewater Utilities are probably covered under Category Six, service establishments, due to holding meetings where the public is invited to attend and having offices open to the public.

Many remedies are low budget. Consider installing ramps, ramping steps, widening doors, removing high/low density carpets, T-shaped doorknobs and faucets, and adding flashing lights to alarm systems. One suggestion: Once you've installed some improvements, contact the local newspaper for a tour and photo opportunity.

EQUAL-EMPLOYMENT OPPORTUNITY BASICS AND SEXUAL HARASSMENT

The Civil Rights Act of 1964 forbids workplace discrimination based on sex, race, national origin or religion. It puts the burden on employers to prevent what is usually an individual's action. Pursuant to the Act's Title VII, the Equal Employment Opportunity Commission (EEOC) has set forth guidelines on what constitutes illegal sexual harassment.⁵⁹

What comprises sexual harassment? The EEOC's guidelines define two types of behaviors: Hostile behavior and *quid pro quo*. "Hostile behavior" includes unreasonably interfering with work performance or creating an intimidating or offensive work environment. For more information see <http://www.eeoc.gov/>.

Quid pro quo, Latin for "this for that," refers to requiring (a) submission to unwelcome sexual advances, requests for sexual favors or other verbal or physical behavior in return for (b) better treatment in the workplace. "Better treatment can include promotion, salary/wage increase, larger office, trip, etc.

Some examples of sexual harassment:

- Verbal behavior such as jokes, stories, epithets, teasing
- Physical behavior such as touching, grabbing, stroking, kissing, barring exit or entrance from a room, graphic gestures
- Sexually explicit calendars, photos, pictures, signage, objects



⁵⁸ National League of Cities. (1991). *Complying with the Americans with Disabilities Act of 1990*:

⁵⁹ Miller, E., (1995). "Sound Off: What, Sexual Harassment in My Utility"

Of all the “ism’s,” sexism’s sexual harassment is arguably the most visible. Thanks to TV, few Americans have missed the sexting scandal by Anthony Weiner U.S. Congressman or former President Bill Clinton’s affairs with Monica Lewinsky and the Paula Jones harassment lawsuit.

One may think that these cases occur only in big cities, right? Wrong!

It is vital to have policies and procedures to handle complaints about a Hostile Work Environment. Where unwelcomed comments or conduct based on age, race, color, sex (whether or not of a sexual nature and including same-gender harassment and gender identity harassment), religion, national origin, disability (mental or physical), marital status or political affiliations. These unwelcomed comments or conduct become unlawful when the comments or conduct are severe or pervasive enough to create a work environment that a reasonable person would consider intimidating, hostile or abusive; or a supervisor’s harassing conduct results in a tangible change in an employee’s employment status or benefits (for example, demotion, termination, failure to promote, etc.). The victim can be anyone affected by the conduct, not just the individual at whom the offensive conduct is directed.

Why should your system worry about sexual harassment? Because:

1. It’s the law... and some water and wastewater Utilities are already in court.
2. It covers every size employer, public and private.
3. It affects employees, applicants, customers and the public.
4. It takes money and time to defend yourself, to say nothing of penalties if found guilty

“Wait a minute,” you say “Don’t I have a right to tell my joke or story?” Yes, there has been litigation defending alleged sexually harassing behaviors as free speech under the First Amendment. Despite the American Civil Liberties Union winning an injunction in district court against the Los Angeles Fire Department’s ban of Playboy-type magazines, sexual harassment cases will continue.

Proving it. In Harris vs. Forklift Systems, the Supreme Court ruled that victims need only show that the offensive behavior created an environment that “a reasonable person would find hostile or abusive.” Previously it had been necessary to show psychological impairment.

Paying for it. Don’t count on your insurance to pay for this one! In a Kansas case, the Directors and Officers Liability Insurance (often called D&O) insurer refused to pay a settlement with a former employee. Why? Despite confronting her manager and his promising to cease, harassment continued.

The employee then went to the board, which agreed to protect her in the future. The board talked to the manager, who agreed to do as directed -- but offensive behavior continued. Eventually the employee quit and asked for payment.

Four major blunders occurred:

1. The board didn’t immediately start an investigation. Instead, they talked to the manager.
2. Only the employee kept written records. The board and manager did everything verbally
3. The system’s attorney was alerted only when the employee quit.
4. The board forgot that their Directors and Officers Liability Insurance (often called D&O) insurance didn’t cover intentional acts of discrimination.

In the end, the tab included the \$40,000 settlement with the employee plus hefty legal fees for the specialized law firm that conducted the investigation, held several board/staff training sessions and prepared a report. Since the case never got to court, there were no legal fees paid to the employee, however.

Costs assessed by a court can include:

- Legal fees for defense
- Lost employee and Board time
- Punitive and compensatory damages awarded the victim

Other costs include:

- Indirect costs

- Lowered employee morale
- Impaired image and stature in the community

Preventing Illegal Sexual Harassment. The best defense is a good offense. Start with a Board briefing by your attorney on sexual harassment laws -- and remember that some states have even stiffer provisions. Next, develop a program that includes:

- Policy manual review. If your policies don't cover sexual harassment, get professional help from personnel specialists to establish policies and procedures, including punishment. Should you end up in court, they will be a key exhibit.
- Training all employees. Everyone, not just supervisors, must learn about your policies and procedures; give each employee a copy. Emphasize that management will not tolerate such illegal actions.
- Train managers. The burden is on them to watch for, handle and investigate allegations.
- Take complaints seriously. When a complaint is made, quickly begin an investigation of the allegations while protecting both the victim and accused.
- Take action per your policies. Depending on the investigation's outcome, apply the appropriate punishment and/or other steps.
- Records. Throughout the process, document all complaints and subsequent steps you and the employee take.

In summary, sexual harassment legislation affects virtually all U.S. employers, including water and wastewater Utilities regardless of size. Lawsuits against small systems have already started; there are sure to be more.

Equal Opportunity. Equal-employment opportunity laws have been around since the 1960s. They cover much more than sexism: Discrimination due to age, race, national origin, religion or disability. Upon getting a complaint, the regional EEO Commission (EEOC) will study pertinent data.

For example, an age discrimination complaint will spur investigation of other employees' ages, pay practices, stereotyping in job assignments, and verbal or physical actions. If it is a gender complaint, the investigation might cover hiring, promotion and firing patterns by sex; percentage of men/women in management; and pay practices.

Interviews. "No problem," you say. "We just wing it depending on the job. Interviews are no big deal." Wrong! If your system doesn't understand the criticality of interviews, chances are high you're making mistakes. Take these steps:

Have a professional personnel expert review your interview form and records. (And while you're at it, have them take a look at your Employee Handbook. In some lawsuits, they've been found to be an implied, enforceable contract.)

Ask only legal questions. Typically, they are open ended, such as inquiry about ability to perform the essential functions of the job with or without accommodation.

Document what was said and/or done.

The keys to success? First, using a consistent interview methodology or format. Second, having a legitimate need to know. Generally, it's not allowed to ask about age, race, sex, religion, marital status, pregnancy, child care or sexual preference.



FAIR LABOR STANDARDS ACT OF 1938 (FLSA)

The Fair Labor Standards Act protects employees by regulating minimum wage, maximum hour standards and overtime, permitting qualifying personnel to be exempt. Watch for up-to-dates on minimum wage, maximum hour standards, and legitimate overtime charges. Recent court cases about retroactive loss of exempt status centered on two practices. One is giving those employees additional compensation based on hours worked. The other is deducting salary or accrued vacation, sick leave or comp time for partial-day absences.

For example, the County of Kern, California had a policy of deducting salary for part-day absences when an employee has no accrued leave. The court found this policy violated FLSA and the entity might be subject to criminal penalties including fines and imprisonment.

Courts are increasingly punishing employers with improper payroll practices for exempt employees. Start first by having up-to-date job descriptions that specifically state if the position is exempt or non-exempt. Then check your payroll policies and practices with a professional. For more information see <http://www.dol.gov/whd/flsa/faq.htm>.

FAMILY AND MEDICAL LEAVE ACT

Like employers throughout the country, Florida employers must comply with the federal Family and Medical Leave Act (FMLA), which allows eligible employees to take unpaid leave, with the right to reinstatement, for certain reasons. Employers in Florida must follow the FMLA if they have at least 50 employees for at least 20 weeks in the current or previous year. In addition, Florida law gives employees the right to take domestic violence leave, as explained below.

Eligible Florida employees may take up to 12 weeks of leave for serious health conditions, bonding with a new child, or preparation for a family member's military service; more leave is available for employees who need to care for a family member who was seriously injured on active military duty. For more information see <http://www.dol.gov/whd/>.

Employees are eligible for FMLA leave if:

- They have worked for the company for at least a year
- They worked at least 1,250 hours during the previous year, and
- They work at a location with at least 50 employees within a 75-mile radius.

FMLA leave is available if an employee needs time off to:

- Recuperate from a serious health condition
- Care for a family member with a serious health condition
- Bond with a new child
- Handle qualifying exigencies arising out of a family member's military service, or
- Care for a family member who suffered a serious injury during active duty in the military.

HIPAA

Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy and Security Rules, which sets national standards for the security of electronic protected health information; and the confidentiality provisions of the Patient Safety Rule, which protect identifiable information being used to analyze patient safety events and improve patient safety.

Individual and group plans that provide or pay the cost of medical care are covered entities.⁶⁰ Health plans include health, dental, vision, and prescription drug insurers, health maintenance organizations ("HMOs"), Medicare, Medicaid, Medicare+Choice and Medicare supplement insurers, and long-term care insurers (excluding nursing home fixed-indemnity policies). Health plans also include employer-sponsored group health plans, government and church-sponsored health plans, and multi-employer health plans. There are exceptions -- a group health plan with less than 50 participants that is administered solely by the employer that established and maintains the plan is not a covered entity. Two types of government-funded programs are not health plans: (1) those whose principal purpose is not providing or paying the cost of health care, such as the food stamps program; and (2) those programs whose principal activity is directly providing health care, such as a community health center, or the making of grants to fund the direct provision of health care. Certain types of insurance entities are also not health plans, including entities providing only workers' compensation, automobile insurance, and property and casualty insurance. If an insurance entity has separable lines of business, one of which is a health plan, the HIPAA regulations apply to the entity with respect to the health plan line of business. For more information see <http://www.hhs.gov/ocr/privacy/>.

IMMIGRATION

⁶⁰ Retrieved from <http://www.hhs.gov/ocr/privacy/hipaa/understanding/summary/index.html>

In 1986 employers became responsible for enforcing federal immigration policy -- the Immigration Reform and Control Act requires filing a Form 1-9 Employment Eligibility Verification within three days of hiring a new employee. The 1-9 Form shows which documents the employer examined to establish identity and employability status. Not surprisingly counterfeiting the 24+ possible documents has turned out to be a problem. While coping with the 1-9 falls heaviest on states with the largest immigration -- such as California, Florida, Texas and New York -- the entire U.S. is covered.

While the Act's main requirements deal with ascertaining the employee's legal status, there is also a provision prohibiting discrimination in hiring practices. Between 1986 and 1992, the Department of Justice's Office of Special Council reported about 3,000 discrimination charges filed under IRCA. Penalties can range from \$100 to \$10,000 plus back pay reinstatement and paying an employee's legal fees.

What should water and wastewater systems do? First, get up-to-date information about IRCA from your attorney. Second, have a personnel professional review your hiring practices and interview questions so as to comply with the protections offered by ADA and sexual harassment legislation, while still fulfilling IRCA requirements. Finally, treat all employees and applicants the same according to your revised hiring practices. For more information see http://www.dol.gov/ofccp/regs/compliance/ca_irca.htm.

OSHA - OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970.

OSHA regulates workplace hazards that may affect employees. Congress passed the Occupational and Safety Health Act to ensure worker and workplace safety. Their goal was to make sure employers provide their workers a place of employment free from recognized hazards to safety and health, such as exposure to toxic chemicals, excessive noise levels, mechanical dangers, heat or cold stress, or unsanitary conditions.⁶¹ For more information see www.osha.gov/.

Checklist for Issues that can cause Lawsuits

The best guard against lawsuits on racism, sexism and disabilities is knowing the law. Take a few minutes to check what your system is doing to day. (*see Appendix A to see how you did*)

- | | | | |
|------|-------|-----|--|
| True | False | 1. | During applicant interviews, we ask about marital status, age and race. |
| True | False | 2. | We always have candidates take a pre-employment medical test. |
| True | False | 3. | We routinely do drug testing of all applicants. |
| True | False | 4. | We "wing it" in interviews, asking what seems to apply to the job. |
| True | False | 5. | We pay male employees more because the work is harder. |
| True | False | 6. | Employees shouldn't be penalized due to telling jokes or stories. |
| True | False | 7. | Directors and Officers Liability Insurance protects our Board from lawsuits. |
| True | False | 8. | Training employees about sexism and racism is a waste of time and money. |
| True | False | 9. | We don't expect older employees to do as much as younger ones. |
| True | False | 10. | Having minority employees is a frill to impress regulatory agencies. |

BUT WE'RE TOO SMALL!

"Stop!" you say, "We have only one full-time person and two part-timers. Surely we're exempt!" Sorry, but even very small systems need to know the business regulations. Why?

1. **Penalties.** If you're covered by the business regulations, you risk fines, penalties and even jail for non-compliance... to say nothing of a black eye to your image.

⁶¹ National Rural Water Association. (1994). *Risk Reduction in Personnel Management*.

2. **Misunderstandings.** Even if these regulations don't apply to you, your employees or consumers may think you're covered. That could lead to grievances, misunderstandings, and/or lawsuits, which will take precious money and time to handle.
3. **Improvements.** The public expects more from public entities such as water and wastewater systems. Demonstrate your concern with the law's intended protection. For example, if you're remodeling the area where Board meetings are held, consult the Americans with Disabilities Act of 1990 (ADA) standards and put in wheelchair ramps and T-shaped doorknobs to aid public access.
4. **Inclusion.** Some key acts, such as ADA, cover current and prospective employees and the public. Others, such as sexual harassment, include third parties such as customers and vendors.
5. **The State vs. the Feds.** Sometimes the states have tougher regulations than does the federal legislation. Check with your attorney and/or FRWA.

FINAL THOUGHT... KNOWLEDGE IS YOUR FRIEND, IGNORANCE IS NO EXCUSE

Modern water and wastewater Utilities fall under both water quality and "doing business" laws and regulations. If you don't like those regulations, start today by contacting your state association and representatives. Tell them your problems. Tell them the costs. Be sure to tell them your recommended solutions. And keep it up.

In the meantime, check which business regulations affect your system; a good place to start is with your attorney and/or state association. Next, review your policies and practices... and revise as needed. Train your Board and all staff. Finally document everything; it's your best protection if you find yourself a defendant.

Laws, Rules & Regulations Case Studies

How would you handle these problems on your board (*see Appendix A for possible answers*)

1. Sarah, the office manager, wants to get certified as an operator. The board is split over whether to give her time off and to pay for the class.
2. Mayor Ron has talked several times with Jake, a minority Manager, at state conferences. Now that Supt. Sam is retiring, the mayor wants to recruit Jake for that position. The city has never recruited a person for any city job, relying instead on newspaper ads and postings.

CHAPTER 9

EXPERTS, CONSULTANTS & VENDORS

"If I have seen further [than certain other men] it is by standing upon the shoulders of giants" Isaac Newton.⁶²

Engineers, auditors, attorneys, contractors, and other experts bring high powered (and often high priced) assistance to your board or council. You need to make sure you're getting your money's worth.

Chapter Overview: Very few city councils or boards can afford full-time special expertise on staff. That is why you hire experts for short specific jobs. They are professionally trained and can enrich you with the experience of other systems and help to solve problems. However it's important to avoid rubberstamping their recommendations. This Chapter discusses their role, getting second opinions and the five rules of using experts wisely.

THE ROLE OF EXPERTS, CONSULTANTS & VENDORS

Outsourcing experts, consultants and vendors for business is both commonplace and smart. Outsourcing has been shown to be effective and efficient in many situations. If management is said to be the art of getting things done through people then great management would include using the expertise of consultants and vendors to get things done right.



Experts, consultants and vendors represent a public-private partnership with your utility in delivering good water and wastewater services. More and more systems use outside resources to help them deliver service, these might include:

- Janitorial Services
- Equipment and Parts,
- Chemicals,
- Power,
- Landscaping,
- Laundry,
- Payroll,
- Engineering Firms,
- Auditors,
- Attorneys,
- Contractors,
- Contract Operations⁶³

As we discuss the various issues, it is important to keep in mind the broad spectrum of public-private sector arrangements for water and sewer utilities. These partners bring specialized training and experience to your board. Having worked with many clients, they know solutions that have worked for other water or wastewater systems.

They Must be Good Partners. No matter how urgently you need their specialized knowledge, experts must be able to work harmoniously with your Manager and employees. They must be a good fit for your system. The last thing you need is a high priced engineer or attorney who tries to give you a solution better suited for a larger utility or that looks down on your team.

Playing the right role requires the right expectations. Try these steps for interviewing and selecting your expert – an auditor, attorney or other consultant. Engineers must be hired under the Consultants Competitive Negotiation Act, see discussion on the next page.

1. Scope of Work. Get Board agreement on the scope of the project you need before contacting the expert.
2. Discuss. Invite her or him in for an informal discussion (at no charge) of the problem or project.
3. Track record. Use that informal discussion to find out about jobs done for other clients, preparing specifications, how and when change orders are issued, payment schedules, etc.
4. Dates. Set dates for receiving a bid / proposal and for your Board decision.
5. Winning bid. Negotiate as necessary for the lowest, responsible price (see Chapter Six).
6. Notification. Win or lose, notify all bidders. They deserve the courtesy!

⁶² Quote from *The Columbia World of Quotations*. (1996) Columbia University Press. Letter to Robert Hooke, February 5, 1675, with reference to his dependency on Galileo's and Kepler's work in physics and astronomy.

⁶³ Secoy, W. (2012).

CHOOSING THE RIGHT ENGINEERING FIRM FOR YOUR SYSTEM

The Consultants Competitive Negotiation Act (CCNA - Title 19, Section 287.055, Florida Statutes) controls how utilities must select and retain professional services and applies to municipalities, cities, counties, and special districts. Utilities regulated by the Public Service Commission also must follow set procedures. While these statutes do not apply to private interests or to many other public agencies, they do offer a systematic process.

Engineering Firms are not all alike. When it comes to engineering consultants they come in every conceivable shape, size, and specialty. Sizes range from the mega international to the one-man operation. Consulting firms specialize in subdivision development, structural; electrical, communications, mechanical, hydrogeologists, geotechnical; transportation, wastewater/water treatment or general civil. Some firms are able to provide a wide range of services at high quality and some focus on specialties.

Large Firms versus Small Firms. Large firms mean more depth, staff, experience, quality assurance, and project management. Large firms bring with them higher cost, overhead and fees. Larger firms are better for larger complex projects and have high consistency between projects. Small firms are best for smaller, less complex projects and you are more likely to have the same project manager throughout the project. Unless your project is very large, complex and requires many engineering disciplines, i.e., structural, electrical, mechanical, environmental, civil, instrumentation and controls, etc., you are typically better served by choosing a small firm. Contracts and clients are more important to smaller firms. You get more personal attention and are more sensitive to community issues.



What to Watch Out For! Most engineers are conscientious professionals that provide sincere advice and excellent designs. A few bad apples can spoil it for the rest. The advice below should help you avoid those few and pick the best consultant for the job; otherwise you could end up with an ill-fitting plant that is hard to operate costing you time, headaches and money in the future.

FRWA assistance is available in helping you Choose an Engineering Firm. Florida Rural Water Association is available to provide templates for requesting proposals, review engineering proposals and sit in on interviews as an objective third party opinion as you select the best firm for your water / wastewater system. The objective of this evaluation is to identify the best, most reasonable, and reliable engineering firm that would also benefit your community and ratepayers without regard to politics and parochial interest. We see the results of engineering design all around Florida and intend to provide an unbiased opinion for your system.

Nine-Point Checklist for Picking The Right Consultant for the Right Job. Be careful when choosing a firm. Be certain that the engineer you have is the best for your needs. Using a consistent process produces consistent results; the following nine-point checklist will help picking the right consultant your system.

- 1. Advertise for Engineering Proposals / Statements of Qualifications.** Publish a formal request for proposals (RFP) notice in your local paper and statements of qualification. Send a copy of your Request for Proposal to engineers you want to consider hiring. The notice should describe the project or problem and list the things you need to evaluate good candidates, such as:
 - Request for proposal instructions.
 - Project description, scope and approach.
 - List prime engineering firm & sub-consultants.
 - Ability of project manager & project engineer.
 - Engineering team composition.
 - Experience of design office and location of work to be performed.
 - Ability to furnish the required services in a timely manner & team member workload.
 - Current schedule of hourly billing rates.
 - List available resources, materials, equipment, and facilities necessary to meet all contractual requirements.
 - Consultant insurance requirements statement.

- Potential conflicts statement.
- List of clients / utility systems within 50 miles

2. **Review Firm Qualifications.** When you receive the Request for Proposals, review the statements of qualifications, and consider the firms that appear to be capable of meeting the requirements of your project. The primary factor in choosing a firm is their qualifications to solve your particular problem. Qualifications include the firm's experience, staff, workload, and equipment. Qualifications are also an indicator of the firm's integrity and reputation. Beware of slick glossy proposals and flashy brochures -- don't confuse glitz with performance.

Request for Proposal Template (free)

Florida Rural Water Association has a Request for Proposal package template available for water / wastewater system use – you can request your free copy by e-mailing: FRWA@frwa.net and put "RFP Package Template" in the subject line. The simplified format includes a sample advertisement, instructions to proposers and proposal form are simple to use -and- complies with CCNA! Firms just type in their data/responses in the forms and submit it back to the community. It uses a uniform Request for Proposal format to standardize proposals for a better side-by-side comparison; reduce staff review time; and discourage the inches thick glossy binders that engineering consultants typically submit for RFPs. It really works and it cuts through the "hire me, I'm better" pandemonium to really evaluate how firms have performed in the past and if the project engineers that they're getting are seasoned professionals or just neophytes.

3. **Shortlist the Three Best Firms.** Select the three (3) firms that are most qualified to complete your project and have the best understanding of your needs. Invite them to take part in an informal interview or telephone conference call. Some utilities shortlist 5 firms, infrequently choosing the fourth or fifth ranked teams -- this is inefficient and not respectful of your time and energy firms put into the proposal process. Further it wastes staff time to sit through five interviews, often taking a full day instead of half a day for 3 firms.
4. **Conduct Telephone Interviews.** FRWA recommends the interviews be conducted over the telephone with the proposed project manager and engineer and thus avoid flashy presentations, which take time and money. During the interview, discuss with each firm its qualifications, staff availability, present workload, and key personnel that would be assigned to your project. Telephone interviews are allowed under Florida Law (CCNA - Consultants Competitive Negotiation Act, Title 19, Section 287.055, Florida Statutes). CCNA requires you to conduct discussions, *"with, and may require public presentations by, no fewer than three firms regarding their qualifications, approach to the project, and ability to furnish the required services."* This does NOT have to be face-to-face interviews but can be over telephone (saving time and money for your staff and the firms).
5. **Interview Questions and Evaluation Forms.** Florida Rural Water Association has a list of engineering interview questions and evaluation forms available for water / wastewater system use – you can request your free copy by e-mailing: FRWA@frwa.net and put "Engineering Interview Questions and Evaluation Forms" in the subject line.
6. **CALL References to Determine the Quality of Past Performance.** Checking references may be the most important step of the process. Talk to at least three (3) references for each firm shortlisted – don't skip this step. Ask probing questions about the firm, project manager and engineer.
7. **Rank the Firms.** Rank the firms in order of their suitability for your project based on reputation, location, experience, availability of qualified staff, ability to meet your schedule, and any other factors pertinent to your specific project.
8. **Select the Best Firm.** Select the firm considered to be most qualified to complete your project. Send a written notice to the firm of award of the project. Invite that firm to a meeting to develop a mutual understanding of the scope of the services required for your project and determine the equitable compensation for the required engineering or surveying services.



9. **Negotiate the Scope of Work and Compensation.** Carefully draft the scope of work and the engineering fee. Spell everything out. Details are important. Fees are based on the amount and type of services required for the project. Unnecessary services are wasteful. Insufficient services can cause problems. Most engineering and surveying firms will charge for services based on the actual amount of time spent by personnel and category. Fees are typically higher for the more experienced personnel and more specialized expertise. The contract fees are based on the anticipated hours to be spent on the project, hourly rates, and anticipated expenses. These parameters establish a contract amount that cannot be exceeded without prior approval of the client. Many firms will use an “overhead multiplier” that is multiplied by the engineer’s hourly rate who charges hours when working on your project. Make sure your contract is not overloaded with “administrative costs.” Want you want is more indians and less chiefs working on your projects.

CAVEAT EMPTOR

Caveat emptor is Latin for "let the buyer beware." You would be surprised if you travel the state with us to see the types of firms and their variability in design. We see many honest professionals providing the best solutions that match the community’s size, demographics, personality and ability to pay. We also see things that would make any rational person think there is a conspiracy to overbuild and install the most elaborate treatment available to mankind. We have seen oversized water and wastewater plants at only 25% capacity with operators struggling to keep the plant functioning because they were so over-designed. We have found complex water plants at small remote communities being visited a few times a week that really should require full time operation and tweaking. These train wrecks (metaphorically referred to) are disasters for the community that we see coming but cannot stop or change.



1. **Beware of “Full” Service.** Beware of general civil firms that have a small water and wastewater group yet promise “full service”. Many general civil firms claim that they offer “full service”, but use this definition loosely. Typically, general civil firms like this will do subdivision development, stormwater, pipelines, roads and streets really well; but wastewater/water treatment will be a sideline. Treatment and utility engineering is very different and uses a different thought process. Likewise engineers specializing in wastewater are not the best engineers for transportation projects.
2. **Beware of Endless Studies and Reports.** Studies and reports have never actually built a water plant. Endless needs analysis, feasibility studies, and reports are signs that the engineer misses college and may not have designed a lot of plants. The experienced design engineer wants to roll-up his sleeves after minimal necessary study and get right into design. We know of utilities that have spent hundreds of thousands of dollars for studies and reports with no wastewater plant to show for it.
3. **Beware of using the same Consultant over and over.** Just using the same consultant or firm over and over for every project can be risky and unwise. Change is good -- a little competition is healthy; switching engineers keeps them on their toes; fresh ideas are introduced; and performance is increased. Changing project teams breaks up poor service, weak project management, bad planning, communication shortfalls, excessive focus on higher fees at the expense of projects, and attitude problems. Change reminds the firms that you are the client and paying attention to your needs are paramount.
4. **Beware of Ready Answers and Big Fees.** It is a very common strategy used by engineers to suggest the most expensive answer for your problem. It’s easy. They don’t have to think very long or hard about the answer. In the water industry the ready answer for Disinfection By-Product concerns is to simply throw reverse osmosis or nanofiltration at the problem. Some in the industry have excused this strategy and rejoined that the money comes from grants anyway and the project brings big fees – so why should anyone care? Remember, engineering firms are typically paid as a percentage of construction cost. The more the project costs you, the more you pay them.
5. **Beware of the Scare Tactic.** Be careful when you start hearing the following statements from engineering firms:
 - “We know your system better than anyone else.” This is often used to keep you from hiring a different firm. If you think a little healthy competition would help lower fees and better service then it’s probably time to hire another firm.
 - “We can get you more grant money than any other firm.” See empty promises for full grant funding below.

- *"We have a close working relationship..."* Don't let your relationship color your choice of the best team for this project. If they have a close relationship with you, they will understand you are acting in the best interests of the wastewater system.
 - *"Long history together, previous contracts or firm retention."* Beware of using the same Consultant over and over, see above.
 - *"We are the Engineer-of-Record for this water plant."* The question to ask – what things do they know about the plant that they're afraid of telling me?
 - *"We have all the drawings of your system already loaded on our computers."* Your system maps are not a state-secret. Sharing this information with other professional engineering and survey firms is good and highlights needed system improvements.
 - *"We are the only / best team that can get your permit."* Be careful of firms that promise they can get you the permit in record time or are the only ones to get you out of trouble with the regulatory agency.
6. **Beware of the "Newest Technology."** New technologies often promise dramatic savings in capital and operating costs. They may sound thrilling, sexy and cutting edge but can be risky particularly if the firm has never completed this type of project before. Don't let them experiment on you! Instead pick a team of experienced professionals. Technologies with little operating history often experience unanticipated problems and can cost several times more in the long-term than proven technologies. If you consider a new technology, insist that a contact list of similar operating facilities be provided. Do not listen to the vendor promoting a product, contact those that are actually operating the technology and ask relevant questions about the treatment efficiencies experienced and problems that have occurred.
 7. **Beware of Empty Promises for Full Grant Funding.** Be careful of firms that promise 100% grants. *"The time of 75% grants is over"*, says Michael A. Langston, USDA Rural Development Florida Community Programs Director, *"those days are past, except for a small group of disadvantaged systems."* Beware of firms that say they can get you MORE grants than other groups or that they have an "Inside Track". Rural Development and the State Revolving Fund do NOT provide preferential treatment; in fact it's against the law for the agency to give preferential treatment. Don't believe the promises.
 8. **Beware of Change Orders.** Some firms provide reasonable fees up front but can beat you to death with constant and continual change orders. This is called scope creep and it's sure death to any budget. Unfortunately, scope creep does occur and is often legitimate. But a cunning consultant can manage to get a lot more fees than you would ever expect. Beware of consultants that have a history of change ordering their projects or cannot manage projects well.
 9. **Beware of Potential Conflicts.** Beware of consultants that provide engineering services to every community in your area. This might be good since they're convenient and aware of local issues, but this can be bad since another client can put them into a position where they might not give you the best advice for your system. Your interests may not always be parallel with your neighbor's interests. Can you be certain that your engineer will remain unbiased; give you the best advice; and focus only on your needs? It's the law in Florida that they notify you in writing if they MIGHT have a potential conflict *per 61G15-19.001(6) Florida Administrative Code!*
 10. **Beware of Slick Proposals and Flashy Brochures.** Engineers are technical folks, geeky and sometimes a little nerdy. They are really good, high caliber people that can solve your problems well. The people that produce slick glossy proposals and flashy brochures are not the same ones working your project -- don't confuse glitz with performance. Don't believe everything you read. Make sure that the experienced professionals that are highlighted in the glossy brochures will be the same people working on your project.
 11. **Beware of Engineering Interviews.** As described in Checklist item #4 above, the best engineers may not be excellent public speakers; so you should not rely on face-to-face interviews alone to select your engineer. In fact you may wish to skip them entirely in favor of a telephone discussion; it's allowed under Florida Law, saves time for your staff, and money for the firms.

FRWA assistance available
 -- call on us to review engineering proposals and sit in on interviews as an objective third party opinion to help you select the best firm for your water / wastewater system.

More than once we have seen firms bring in flashy presentations and handsome “faces” to get the job – when the engineers stuck in the corner are the ones you’re going to be working with but not allowed to speak for fear they’ll lose the job. Long after the “faces” are gone you’re working with the real hands-on engineers – let’s only hope you made a good choice. Look past the hype; look at performance.

Surprisingly the most important choice you will make is not the firm but the firm’s project manager that you will be working with. You want someone you can trust and someone who is listening to your concerns. Remember that the engineer that can make the most profit for the firm may not be the same engineer that will give you the most cost effective project. Insist on someone that you can work with to manage your project.

12. **Beware of Overloaded Staff.** Beware that your engineer may have more to do than time available. There are some great engineers out there that have a great number of projects. Signs of staff overloading includes unreturned phone calls, missed deadlines, missed appointments, or having three or four people rotate on and off your project.
13. **Beware of Chameleons.** Beware of consultants that are camouflaging themselves with name changes, constantly reinventing themselves, and have frequent employee turnover. "Chameleon" firms like this are usually unstable; constantly chasing the latest trends, and are usually very distracted and unable to provide consistent service.
14. **Beware of Delegating Control of Projects to the Engineer!** Sounds odd, but often utility managers are very busy, too busy to keep track of what’s going on with the consultant. They feel that they can relinquish complete responsibility to the consulting firm. You are no longer the project manager and it’s not good in the long run. Over time you may find that you have become so dependent on the consultant that you are out of touch and the firm begins to take over control. Soon your project grows in scope and the cost rises significantly. This typically happens gradually over time and is a result of the business relationship becoming more personal. It is good to have a well-balanced relationship with your consultant, but do not get too cozy. If the relationship becomes too personal, it will be hard for you to stay objective and make sound decisions.

City of Good Enough, USA

Here’s a true story; only the names have been changed. Consider The City of Good Enough, USA, population 661. Initially everybody was happy. The council got a state-of-the-art wastewater treatment plant; the engineers and construction contractors got hefty fees. There was even some media coverage at groundbreaking including TV and radio time.

Two years later, you could smell the wastewater plant a half-mile away. Trees and weeds grew around the settling ponds; algae had taken over. The two aerators didn’t operate.

The council had just been turned down for a loan to build a senior citizen center due to insufficient (and out of compliance) wastewater handling capability. The Florida Department of Environmental Protection was sending out notification of non-compliance and assessing penalties. Engineers said the only solution was a new \$1.6 million wastewater treatment plant.

Good Enough could barely afford its current system. A new plant was out of the question.

This story ended happily. Outside experts and FRWA WW Circuit Riders helped. The new part-time superintendent learned how to perform his job more effectively, including keeping and submitting records to state agencies.

Within several months, the wastewater treatment plant was in compliance and the 12-unit senior citizen housing underway. Instead of incurring \$1.6 million new debt, Good Enough spent under \$5,000 getting back in compliance. Most important, its superintendent knows how to operate the system and where to go for help.

FRWA ENGINEERING ASSISTANCE IS AVAILABLE

Free Engineering Advice is just a Phone Call / Email Away. If you have a question about water issues FRWA Engineers are always happy to answer your questions or assist in any way. Most of what they do is to provide compliance, operation, maintenance, management, potential compliance, health, and environmental issues – including permitting and design – all of this is a free phone call / email away. Please use them; they're here to help. Because of heavy workload they assist with minor permitting and design and recommend engineering consultants handle those larger projects.

FRWA Advice is Free -- the reason why FRWA's advice is helpful is because we care. FRWA has your system's best interest at heart, have seen what works, and understands FDEP rules.

FRWA Engineers assist hundreds of FRWA Active Members with water system engineering issues each year, including:

- Water treatment technical advice
- FDEP permitting & consent orders
- Regulatory updates & assistance
- System troubleshooting
- Water quality issues
- Disinfection by-product compliance
- Water pressure, flow & storage
- Flushing / unidirectional flushing
- Water corrosion / sequestering
- Capacity analysis reports
- Capital improvement planning
- Feasibilities / cost estimates
- Bid Evaluation & value engineering
- and so much more...

If it's a regulatory compliance / permitting / design issue, sometimes they can get some breathing space from FDEP until starting on your project. This also gives FDEP assurance that FRWA Engineers are on your team -- *but you have to call them first and they must have a chance to respond with an offer of engineering services!*

Contributions to FRWA in Aid of Engineering Assistance. For projects that include permitting, engineering design, or reports you will be requested to provide a contribution – usually on the range of \$2,000 and depending on project complexity and if you've been a long term FRWA member system.⁶⁴ This will much less than if you have hired a consultant.



The objective of requesting contributions to FRWA in Aid of Engineering Assistance is to maintain the high quality of engineering services provided to member systems; recoup lost EPA grant funding; request those receiving benefits assist in financially supporting the engineering program; and promote and encourage FRWA membership. Engineering Assistance can be divided into several categories – basic engineering / permitting projects, more complex engineering / permitting projects and feasibility reports, and predevelopment planning grant / loan assistance.

Category of Engineering Projects	Examples of Engineering Assistance
Basic Engineering / Permitting Projects	Simple projects e.g., permitting assistance for chlorine conversions to sodium hypochlorite, hydropneumatic tank replacements, lead & copper corrosion control (poly/orthophosphate blend), iron & manganese sequestering, WTP rerating applications, WTP capacity analyses or calculations, etc.
More Complex Engineering / Permitting Projects & Reports	More involved projects e.g., feasibility studies; permitting assistance for health-based compliance issues, consent orders, variance requests, emergency well replacement, unidirectional flushing programs, WWTP capacity reports, etc.
USDA RD Predevelopment Planning Grants or SRF Pre-Construction Grants	Assistance with Predevelopment Planning / Pre-Construction Grants, engineering estimates, preliminary engineering reports, and environmental reports needed to start projects for economically disadvantaged communities.

⁶⁴ This is in compliance with the Consultants Competitive Negotiation Act (CCNA) Section 287.055(3), Florida Statutes, and is below the threshold for requiring the request for proposal process -- estimated construction costs for individual projects must be less than \$250,000, or engineering studies fees must be less than \$25,000.

RIGHT-SIZING YOUR PROJECT.

Here are a few questions that you should ask before allowing your project to go to design, permitting, and construction.

1. Start with looking at least one similar project proposed by your engineering firm at a neighboring system – call them, ask questions, and make an on-site visit. Some of the questions to ask might include:
 - Does this facility meet your needs?
 - What was your experience in working with your project engineer?
 - Are the operations and maintenance costs affordable?
 - If you had it to do over would you make the same decisions?
2. Contact one of the Florida Rural Water Association engineers and ask for a SECOND OPINION. FRWA is committed to helping your Board find the most cost-effective solution... We will help you answer several important questions:
 - Does the concept our engineer proposes meet FDEP rules and standards?
 - Is the concept our engineer is proposing fit your system, its needs, demographics, and economics?
 - Is there a way of accomplishing project objectives more efficiently and effectively?
 - How expensive will the facility be to operate and maintain? Is there a more efficiently system?
 - What have other systems done successfully?

Mr. and Ms. Board Member, you are a very busy person. But it's vital to take time and review the original and second opinions carefully. As trustee for the public, it's part of your stewardship.

If you suspect that the engineering design doesn't work for your utility the best time to change things is before construction begins. Do you think it's over-designed? Do you think it's not what you really need? But how do you know? -- call your FRWA Circuit Rider. We can review the design to determine if the project is over-designed, assure that the design is appropriate for your community, minimize total ownership costs, improve quality, reduce construction time, make the project easier to construct, insure safe operations, and assure environmental and regulatory goals will be met.

Remember that "bigger is not better." If you are sold on a project larger than necessary it will cost you more to operate and maintain unneeded equipment over the long-term. The best projects are built in phases and the most cost effective projects are constructed using "just in time" principles. Phasing a project also allows you to optimize the treatment capacities and making sure you actually need the additional treatment processes before they are installed.

FRWA engineers can look at plans, specs and contract documents for the optimum blend of scheduling, performance, constructability, maintainability, environmental awareness, safety, and cost consciousness. This Value Engineering (VE) process is not meant to criticize today's designs or insinuate that any engineering firm is not providing acceptable designs. The designs being prepared today are mostly responsible designs, they can be built, and they will likely function as intended. The goal of a Value Engineering study is provide water / wastewater systems a free second opinion about what you're getting.

Managing Engineers, Auditors, Attorneys, Contractors, and other experts

Getting the most out of your experts takes thought and practice. What's your Board's score?

- | | |
|-----------|---|
| A B C D F | 1. Our attorney's recommendations are easy to understand. |
| A B C D F | 2. We regularly question concepts proposed by our engineer. |
| A B C D F | 3. We understand what our audit says. |
| A B C D F | 4. We make sure that our contractors build according to design specs. |
| A B C D F | 5. Our contracts withhold some payments until final acceptance. |
| A B C D F | 6. We use public relations experts when we have an image problem. |
| A B C D F | 7. We're concerned about track record, not who knows whom. |
| A B C D F | 8. Our Manager gets a second opinion on some expert recommendations. |
| _____ | TOTALS - A=4 points; B=3 points; C=2 points and 0=1 point. Subtract a point for each F. |

FIVE RULES FOR UTILIZING EXPERTS WISELY

Once you've decided on your expert for this project, it's tempting to just *turn* it all over to the Manager. Don't do it. Remember, you use experts only for special or big-ticket projects. It's important that your Board has a level of understanding that permits giving prompt, accurate answers to questions from customers and the public. Use these rules to assure Board control of this important project.

1. **Set up your contract so that payments are made upon Successful Completion of Phases.** That way you assure that specifications turn into reality. Don't approve invoices until you have the deliverables in hand and you're happy with the progress. No one needs problems such as maps that don't show where pipes were actually buried or load-bearing walls that don't do the job.
2. **At major milestones, have your expert come in for a status briefing.** Be sure that supporting documents go out ahead of time with your board agenda. List your questions and make sure you get answers, not vague comments.
3. **Don't micro-manage the project.** Leave supervision of your expert up to your Manager but *do* get regular progress reports.
4. **Do show interest.** For example, ask questions about project status at your monthly Board meeting. Or schedule a visit to the construction site. One tip: don't just drop in. That could undercut the Managers authority
5. **Don't contact the expert directly.** This decreases the Manager's authority and ability to supervise the project effectively. It also avoids the risk of using your apparent authority as an individual board member to authorize contracts or change orders, which is illegal.

Need to change your engineer? Don't delay

The Town of XYZ is a vacation paradise but for local municipalities, providing water and wastewater for residents and visitors is a challenge.

The Town serves 800 residents and another 800 people in the surrounding areas. Some time ago, the Town had to fire the engineer who had designed the new wastewater plant.

"We dismissed our engineer after getting a letter from the FDEP threatening fines", reported the Mayor. Three years of erroneous data had gone to the FDEP because the engineer specified and approved an incorrect flow meter being installed in the plant. Small flows weren't being measured correctly.

Today, the Town of XYZ has a new engineer; last fall she supervised the first-ever grit and sludge removal from the surge tank. How does City Council prevent new problems? *"We have two or three people in Public Works who have gone to FRWA training, and they know the basic principles. A couple of times we've overridden the engineer and said it wouldn't work."*

WHEN THE BOARD DOES IT ALL...

These five rules work whether or not you have a full-time Manager. If you don't, decide which Board member will play the role of the Manager -- and stick with it. That's the way to avoid too many people contacting the expert.

When several Board members contact experts, confusion, contradictory directions and change orders are the likely results. In that case, it's common for a promising project to degenerate into a mess.

Symptoms of too many people contacting the expert include:

- Extra meetings to clarify specifications
- Many change orders
- Cost over-runs
- Delays
- Finger-pointing among board members
- Giving the expert inappropriate authority and/or responsibility

Whether your Board has several employees or none, it's your job to use experts wisely

FINAL THOUGHT... EXPERTS TAKE SPECIAL HANDLING

From time to time, your Board will utilize experts. Whether it's an attorney, engineer, auditor, public relations firm or construction company you need, these folks provide knowledge and experience. They can be an effective part of your team provided you understand their role and business orientation. The effort spent managing experts wisely pays off. In the next Chapter, find out why emergency plans are also an effort that pays off.

Outsourcing Case Studies

How would you handle these problems on your board? *(see Appendix A for possible answers)*

1. Smith Engineering has been your city council's consultant for a dozen years. Last month, you got a proposal for a new water storage tank. New councilperson Laurie wants to get a second opinion, Mayor Fran sees that as a waste of time, and the rest of the council is unsure what to do.
2. Your board has a part-time operator/manager, Chuck. Due to his lack of time, he has recommended that two board members supervise the construction company that will lay two miles of new pipe.

CHAPTER 10

EMERGENCY RESPONSE PLANS

The terrorist attacks of 9/11 and recent hurricanes have snapped emergency plans into sharp focus. There are also the normal emergencies such as broken lines, non-functional controls and inoperative pumps. Systems are realizing that they don't have enough standby generators for well, plants, and lift stations. Equipment-intensive industries such as water and wastewater can expect breakdowns from time to time. How should your Board prepare? By preparing emergency plans.

Chapter Overview: Man-made and natural disasters, along with everyday breakdowns of facilities and equipment, can drastically affect your system or ability to meet customer needs. This Chapter discusses the pros and cons of emergency plans and four steps to preparing one. Use the planning checklist to find out your Board score. Be sure to compare the sample table of contents with your own document.

EMERGENCY, DEFINITION

“Emergencies” cover a lot of territory, from everyday occurrences such as water leaks and valve malfunctions to much more devastating events. Large-scale emergencies are often called disasters; they may be man-made or natural. Examples of man-made disasters include sabotage, arson, oil or toxic spills and epidemics. Examples of natural disasters include tornados, hurricanes, earthquakes, floods, fires, blizzards, ice storms, extreme cold wave and volcanic dust.⁶⁵

PLANS SAVE PRECIOUS TIME

It's a fact that boards are overworked. Almost always, there's more paper, meetings and demands than you can handle. Your key to success is keeping things as simple as possible and saving time. Planning ahead, especially for emergencies, saves time. Why? Because there is a previously-agreed-upon blueprint that the Board and employees follow.

For example don't wait until you are forced to announce conservation restrictions. Instead, set up a detailed plan ahead of time. One tip: be sure to include criteria for invoking the plan. In any emergency communications and access often are impaired. It may not be possible to phone one another or get to the office. By turning to their emergency plan, all players know their assignments and can get started. Hint: keep a copy at home as well as in the office.

Governing body and employee preparedness is more than sound management. It may literally save lives and protect the community from further damage.

EMERGENCY RESPONSE PLANS ARE REQUIRED BY FDEP

All Community Water Systems serving, or designed to serve, 350 or more persons or 150 or more service connections are required to complete and implemented an Emergency Response Plan per FDEP Rule 62-555.350(15), FAC. The Emergency Response Plan must include:

- ✓ Communication Charts;
- ✓ Copies of Interlocal or Mutual Aid Agreements;
- ✓ Disaster-Specific Preparedness Response Plan for: Vandalism or Sabotage; Drought; Hurricane; Structure Fire; and if applicable -- Flood, Forest or Brush Fire, Hazardous Material Release.
- ✓ Results of a Vulnerability Assessment
- ✓ Standby Power Requirement Compliance Details (amount of fuel)
- ✓ Drinking Water Chemicals Storage



⁶⁵ AWWA. (1984). *Emergency Planning For Water Utility Management*.

START YOUR ERP WITH THE FRWA TEMPLATE

The Florida Rural Water Association has prepared Emergency Response Plan templates for water / wastewater Utility planning. Download the free template at www.frwa.net, click on Emergency Prep and choose one of the guides and templates for your system. The word versions are easy to modify for your system.

1. **Assess your system's vulnerability.** Start by identifying your system's components, from sources and transmission system to communications. Then estimate the effects of a specific disaster on each component. Consider water demand before, after and during the disaster --and system requirements to meet it.
2. **Take protective measures.** It's likely that a disaster would result in contaminated water, power outages, communications disruption, transportation problems and plant damage. Protective measures could include limited access to watersheds, adequate structural design of physical plant, automatic valves and development of multiple water sources.
3. **Prepare the plan.** The emergency plan contains "what, why who, how, when, and where" information. It includes damage assessment, protecting personnel and making inventories.
4. **Train staff.** Once the plan has been approved, start staff training. Occasionally participate in simulated disasters with other local personnel.

It may take your system several months to complete its emergency planning. That's OK so long as you keep working and don't quit.

Emergency Response Plan

For Public Drinking Water Systems
Per Chapter 62-555.350 (15) F.A.C.
Disaster Specific Preparedness / Response Plan

Water System: _____

Street Address: _____

City, State, Zip: _____

Phone: _____

Fax: _____

Contact: _____

E-mail: _____

Number Connections: _____


PWS: _____

County: _____

Date: _____

Department of Environmental Protection
Ken C. Carter, P.E.
John R. Sowerby, P.E.

FRWA Security Staff
Sterling L. Carroll, P.E.
Tom Gustafson
Bill Secoy



For more information or additional copies of this document contact:
FLORIDA RURAL WATER ASSOCIATION
2970 Wellington Circle - Tallahassee FL 32309
Telephone: 850-668-2746 ~ Fax: 850-493-4581
e-mail: FRWA@frwa.net

Why do Emergency Response Planning?

The Pros:

- Everyone knows his or her assignment
- One spokesperson deals with the media and public, avoiding mixed messages
- Damage is assessed more quickly
- Repairs and other steps start more quickly
- Service starts up more quickly
- Plans avoid false steps and confusion
- The county emergency operations center has a copy of your Emergency Response Plan

The Cons:

- Board meetings are already full
- Staff are too busy to develop and write a plan
- The plan may never be needed
- Planning is hard to do
- We prefer to stay in control, not work with other entities

FLAWARN

Florida's Water / Wastewater Agency Response Network (FlaWARN) is a voluntary network of "UTILITIES HELPING UTILITIES" willing to provide mutual aid during emergency situations or following hurricanes. FlaWARN is a formal organization free to all water and wastewater Utilities with:

- 300 Utility Members
- 8 Association Partners – FDEP, FSAWWA, FDEM-SERT, FWPCOA, FWEA, SEDA, TREEO & FRWA
- Secure Web-Based Data Bank of Members
- Mutual Aid Agreements
- Technical Resources like Best Management Practices
- Coordination with FDEP, SERT, Law Enforcement & Emergency Agencies
- Pre-Emergency Preparedness Planning

The project's infrastructure consists of a secure web-based data bank of available resources and a practical mutual aid agreement designed to reduce bureaucratic red tape in times of emergency. The goal of FlaWARN is to provide immediate assistance, as quickly as possible, to impacted utilities by whatever means necessary until such time that a permanent solution to the disruption may be implemented.

Water Utilities, along with the rest of the nation, face unprecedented challenges. At a time to innovate, as well as improve existing security and preparedness efforts. Public infrastructure is at the heart of this process and FlaWARN is leading the way. There is no charge for joining FlaWARN and joining offers the opportunity to increase your facility's response and recovery capability.

To join FlaWARN, go to <http://www.flawarn.org/> and click on the Membership Application.

BEST MANAGEMENT PRACTICES FOR EMERGENCY RESPONSE & PREPAREDNESS

FRWA has prepared Emergency Response & Preparedness Best Management Practices (BMPs) for Florida's Water & Wastewater Systems to download the free BMPs at www.frwa.net, click on Emergency Prep and click on FRWA Best Management Practices. You can download the whole document or individual chapters.

- Membership in the FlaWARN Disaster Recovery Organization
- Emergency Preparedness Planning Overview
- Detailed Emergency Hurricane Procedures for Water and Wastewater Facilities
- Preparing Lift Stations for Hurricanes
- Guidelines for Response and Restoration for Water and Wastewater Facilities
- Procedures for Conducting Post Hurricane Assessments
- Considerations for Contamination in Restoration of Utility Services
- Procedures for Response and Receiving Agencies for Restoration Activities
- Considerations for Organizing Work for First Responders
- Loaning and Receiving Equipment in Responder Operations
- Operating Agreement for Loaning and Receiving Equipment
- Transport of Equipment, Materials and Personnel to Staging Areas
- Considerations for Effective Staging Area Set Up
- Considerations for Dealing with Post-Hurricane Shock, Stress, and Trauma
- Power Outages and Procedures for Emergency Generator Installations
- Guidelines for Effective Rotation of Pumps, Generators, and Tankers

- Development of Exit Strategies for Responders
- Weather/Hurricane Terms and Acronyms
- Glossary and Related Links

MUTUAL AID AGREEMENTS

The Mutual Aid Agreement between FlaWARN member utilities is prepared to facilitating rapid emergency response amongst responding utilities. Signing the Mutual Aid Agreement is NOT mandatory for basic FlaWARN registration. However members are encouraged to sign and submit the agreement as soon as possible.

FRWA strongly recommends you sign the Mutual Aid Agreement, go to <http://www.flawarn.org/>.

The Mutual Aid Agreement has been carefully crafted to promote "utilities helping utilities" in time of emergency. It is not designed to address or settle any and all situations and legalities that may arise. The Mutual Aid Agreement provides other members with a quick, advance good-faith indication from a responsible party that the utility understands and agrees to the underlying concepts and provisions (including reimbursement) for mutual aid.

Having a signed Mutual Aid Agreement already on file prior to an emergency can greatly facilitate planning and prioritizing by agencies responding to your requests for help in time of need. This was clearly demonstrated during the recent hurricanes.

FDEP'S STORMTRACKER

The QUICKEST way for you to get a response after a hurricane is to report your system status on FDEP's StormTracker at: <http://stormtracker.dep.state.fl.us/login.asp>. USERNAME: florida , PASSWORD: storm

StormTracker is the way to report your status after an emergency. When utilities post the need assistance this information is automatically transmitted to FlaWARN, FRWA, and FDEP. We can monitor the status of your water and wastewater facilities after an emergency event.

Follow the online instructions for updating your "Post Hurricane" facility status. You will need your seven digit PWS or Wastewater ID number in order to update your status. In the event you are unable to access this site, you may contact your local Drinking Water regulatory agency (FDEP or DOH) or your Florida Rural Water Association representative for assistance.

If you cannot update via the internet or cannot contact your local regulatory agency or the FRWA, then call the Storm Tracker Contact Center toll free number 866-742-0481

Emergency Response Plan (ERP) Checklist

Planning helps your Board respond more quickly to an emergency. How ready are you?

- | | | | | |
|------|-------|----------|----|---|
| True | False | Not sure | 1. | We update our Emergency Response Plan (ERP) annually |
| True | False | Not sure | 2. | Our ERP has a comprehensive day and night telephone list. |
| True | False | Not sure | 3. | We've designated one individual to be a utility spokesperson. |
| True | False | Not sure | 4. | We know who's assigned to assess damage and report to StormTracker. |
| True | False | Not sure | 5. | Our Emergency Response Plan has an events and action log. |
| True | False | Not sure | 6. | We print emergency contact numbers on bills, brochures, etc. |
| True | False | Not sure | 7. | At least every five years, we perform a disaster exercise using our plan. |
| True | False | Not sure | 8. | Our Emergency Response Plan includes a vulnerability assessment. |
| True | False | Not sure | 9. | We have joined FlaWARN (a voluntary network of "Utilities Helping Utilities") |

True False Not sure

10. We have signed the FlaWARN Mutual Aid Agreement.

TOTALS ~ True = 4 pts; Not Sure = 0 pts; False = -1, (*see Appendix A for scoring*)

WORK WITH YOUR COUNTY EMERGENCY OPERATIONS CENTER

When the plan is adopted, meet with your County Emergency Operations Center and provide them a copy of your Emergency Response Plan. Also contact local law enforcement, City Police or County Sheriff's Office, and coordinate with them – it is likely that you'll have to have credentials to pass through check points after a major event. So that you get to know all the players now is important to avoid misunderstandings or miscommunications later.

This is also a good opportunity to provide a press release to the media, customers, and the website. That's not being boastful. Rather, it shows that your Board uses prudent management and is ready for any contingency. Your customers and the public look to you for stewardship, not just for the present but also for the future. Telling your story reassures them that indeed the Board is governing on their behalf. What's the bottom line? No surprises for the Board, public or employees when restriction notices, etc., go out.

FINAL THOUGHT...EMERGENCY PLANNING DOESN'T COST, IT SAVES

Emergency planning symbolizes the best of a Board's stewardship. It helps protect customers and the public from a disaster and minimizes response time. No matter how badly crippled your water or wastewater system might be, your emergency plan helps you get back in service sooner. That means you do a better job protecting the public's health and safety. In the next Chapter, we examine another kind of planning... for the next generation.

Emergency Response Planning Cases Studies

How would you handle these problems on your board? (*see Appendix A for possible answers.*)

1. Manager Laura Mae has just come back from a Florida Rural Water Association meeting. She wants to prepare the first-ever emergency plan, but Chairperson Wendell says it's a waste of time.
2. The county's emergency preparedness officer has asked Mayor Paul if the city would like to participate in a simulated disaster exercise. Manager Robert is worried that the city will lose control if they join in.
3. Your emergency plan has designated Tad, the Manager, as official spokesperson. The plan is undergoing its annual review Mayor Lucinda, who is up for re-election, wants to be named spokesperson.

CHAPTER 11

ASSET MANAGEMENT

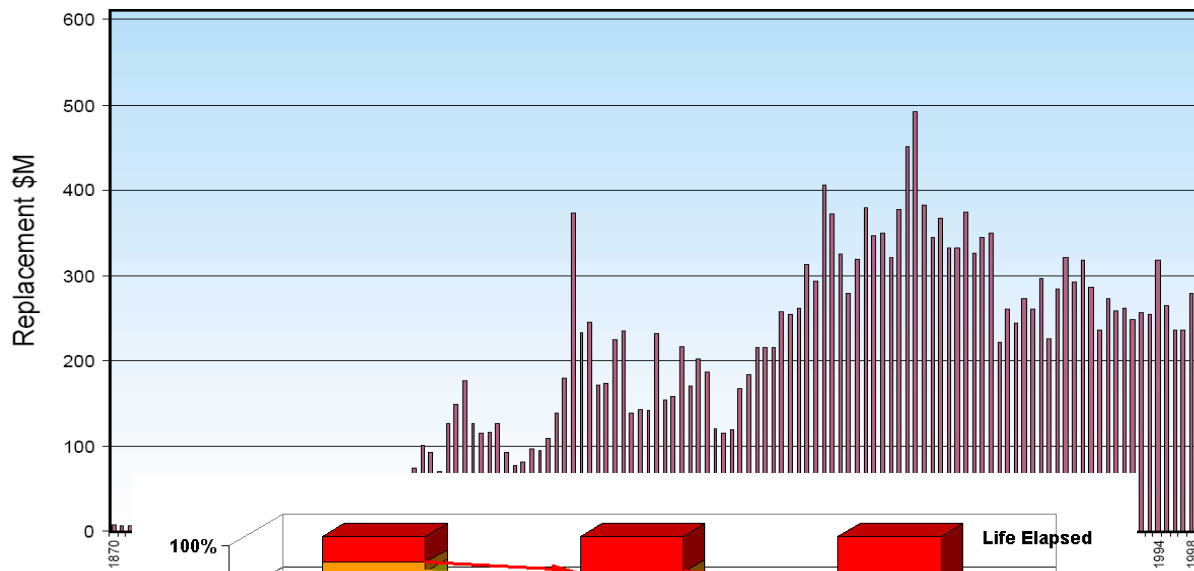
Asset management is maintaining a desired level of service for what you want your assets to provide at the lowest life cycle cost. Lowest life cycle cost refers to the best appropriate cost for rehabilitating, repairing, or replacing an asset. Asset management is implemented through an asset management program and typically includes a written asset management plan.

Chapter Overview: A good starting point for any size water / wastewater system is the five core questions framework for asset management. This framework walks you through all of the major activities associated with asset management and can be implemented at the level of sophistication reasonable for any given system. These five core framework questions provide the foundation for many asset management best practices. Several asset management best practices are listed for each core question on the following pages. Keep in mind that these best practices are constantly being improved upon.⁶⁶

AGING INFRASTRUCTURE.

Florida's water and wastewater infrastructure represents more than a century of investment, substantially funded by local ratepayers. A significant portion of Florida's infrastructure dates from the period just following World War II. Florida's population boom followed the advances in affordable air conditioning and improved mosquito control making Florida a desired location.⁶⁷ All of this means the newest of Florida's systems are now over 50 years old and a considerable number of city systems have pipes approaching 100 years old – nearing the end of their useful life. These systems were built and expanded to accommodate the baby boom generation – and now aging with them into retirement.

AWWA Infrastructure Replacement Study. AWWA's study, "Reinvesting in Drinking Water Infrastructure, Dawn of the Replacement Era" focused on twenty medium to large utilities scattered throughout the United States projecting infrastructure needs. The historic pattern of water main installation reflects the total cost in current dollars of replacing the pipes laid down between 1870 and 1998 from the AWWA study.⁶⁸ Graphically represented in Figure 11-1 is a reflection of the development of the overall pattern of population growth in large cities across the country. Note there are periods of boom and slower growth -- a 1890s boom, a World War I boom, a roaring '20s boom, and the massive post-World War II baby boom.



⁶⁶ USEPA. (2008b). *Asset Management: A Best Practices Guide*.
⁶⁷ Walker, R. & Soledad, W. (2004) pp. 311–328
⁶⁸ AWWA. (2001). *Reinvesting in Drinking Water Infrastructure, Dawn of the Replacement Era, Analysis of Twenty Utilities Needs for Repair and Replacement of Drinking Water Infrastructure*, p.10, Figure 2

Predictions of Aging Pipelines. EPA predicts the shift in the likely condition associated with the aging pipe networks (see Figure 11-2)⁶⁹. As systems age and deteriorate the need to replace pipe will generally echo the original installation wave as shown in Figure 1. Although there will be differences based on pipe material and condition, systems are going to be faced with replacement and renewal projects.

Based on the deterioration projections, the amount of pipe classified as either "poor," "very poor," or "life elapsed" will increase from 10 percent of the total network to 44 percent of the total network.

AWWA has forecasted needed infrastructure replacement over the next 30 years, see the Nessie curve Figure 11-3, Asset Replacement Projections for Combined Water & Wastewater Utility.⁷⁰ The report takes 20 utilities spread over the continental United States and presents demographic trends.

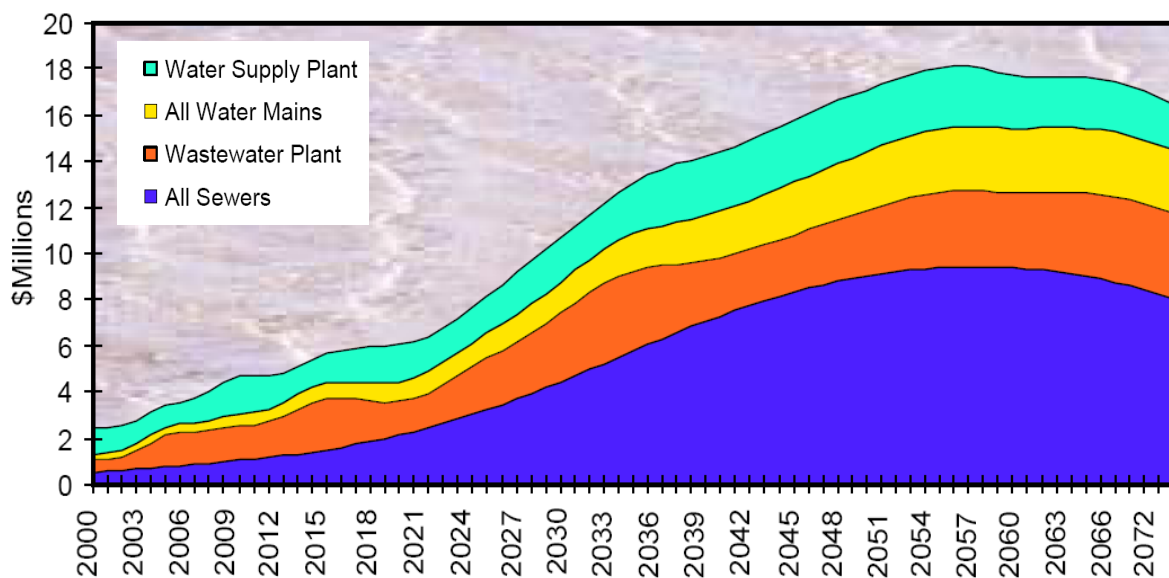


Figure 11-3 - Asset Replacement Projections for Combined Water & Wastewater Utility ⁷

69 The Clean Water and Drinking Water Infrastructure Gap Analysis, Office of Water (4606M), EPA-816-R-02-020, September 2002, p. 14-15, www.epa.gov/safewater

70 Reinvesting in Drinking Water Infrastructure, p. 20

ASSET MANAGEMENT

Asset management is maintaining a desired level of service for what you want your assets to provide at the lowest life cycle cost. Lowest life cycle cost refers to the best appropriate cost for rehabilitating, repairing or replacing an asset. Asset management is implemented through an asset management program and typically includes a written asset management plan.

Challenges faced by Water / Wastewater Systems	Benefits of Asset Management
<ul style="list-style-type: none"> ▪ Determining the best (or optimal) time to rehabilitate / repair / replace aging assets. ▪ Increasing demand for services. ▪ Overcoming resistance to rate increases. ▪ Diminishing resources. ▪ Rising service expectations of customers. ▪ Increasingly stringent regulatory requirements. ▪ Responding to emergencies as a result of asset failures. ▪ Protecting assets. 	<ul style="list-style-type: none"> ▪ Prolonging asset life and aiding in rehabilitate / repair / replacement decisions through efficient and focused operations and maintenance. ▪ Meeting consumer demands with a focus on system sustainability. ▪ Setting rates based on sound operational and financial planning. ▪ Budgeting focused on activities critical to sustained performance. ▪ Meeting service expectations and regulatory requirements. ▪ Improving response to emergencies. ▪ Improving security and safety of assets.

Asset management consists of the following five steps:

1. **Taking an inventory.** Before you can manage your assets, you need to know what assets you have and what condition they are in. This information will help you schedule rehabilitations and replacements of your assets.
2. **Prioritizing your assets.** Your water system probably has a limited budget. Prioritizing your assets will ensure that you allocate funds to the rehabilitation or replacement of your most important assets.
3. **Developing an asset management plan.** Planning for the rehabilitation and replacement of your assets includes estimating how much money you will need each year to maintain the operation of your system each year. This includes developing a budget and calculating your required reserves.
4. **Implementing your asset management plan.** Once you have determined how much money you will have to set aside each year and how much additional funding (if any) you will need to match that amount, you need to work with your management and customers and with regulators to carry out your plan and ensure that you have the technical and financial means to deliver safe water to your customers.
5. **Reviewing and revising your asset management plan.** Once you have developed an asset management plan, do not stick it in a drawer and forget about it! Your asset management plan should be used to help you shape your operations. It is a flexible document that should evolve as you gain more information and as priorities shift.

This chapter provides information and worksheets that will help you complete all five steps. As you work your way through this chapter, you should remember that the suggestions provided and the results you develop based on the worksheets are not set in stone. You should adjust your plan based on your own experience and the particular characteristics of your system. In addition, you should reevaluate your plan every year, updating each of the worksheets.

STEP 1 – INVENTORY SYSTEM ASSETS

Before you can manage your assets, you need to know what you have, what condition it is in, and how much longer you expect it to last. To complete an inventory, list all your assets and collect the following information for each:

1. Condition
2. Age
3. Service history
4. Useful life

The worksheets on the following pages and Appendix K will help you develop an asset inventory and keep track of important information. Detailed instructions are provided. You may want to keep track of your assets on a computer spreadsheet such as MS Excel or use custom software. If you would like a formatted MS Excel spreadsheet template from FRWA just email FRWA@frwa.net and put “Asset Management Spreadsheet Template” in the subject line.

Inventorying your assets can be an intensive job. Get the best information that you can, but don't get bogged down in this step and use estimates where needed. If you keep up with an asset management program, new information will become available as assets get replaced or rehabilitated, and your inventory of assets will improve.

The System Inventory Worksheet. The following System Inventory Worksheet will help you:

- Identify all of your system's assets;
- Record the condition of your assets;
- Record the service history of your assets;
- Determine your assets' adjusted useful lives;
- Record your assets' ages; and,
- Estimate the remaining useful life of each of your assets. Usually, there are two steps to estimating useful life:
 1. Determine the expected useful life by using the manufacturer's recommendations or the estimates provided in the box to the right.⁷¹ Adjust these numbers based on the specific conditions and experiences of your system.
 2. Calculate an adjusted useful life by taking into account the service history and current condition of your asset.

An example is provided below that will help you understand how to complete your own worksheet and a blank version with instructions in Appendix K that you can photocopy and use.

Expected Useful Life	
Water Intake Structures	35 – 45 yrs
Wells, Screens & Casings	25 – 35 yrs
Chlorination Equipment	10 – 15 yrs
Chemical Feed Equipment	5 – 10 yrs
Other Treatment Equipment	10 – 15 yrs
Ground Storage Tanks, Concrete	50 – 60 yrs
Ground Storage Tanks, Steel	30 – 40 yrs
Elevated Storage Tanks, Steel	35 – 45 yrs
Hydropneumatic Tanks	20 – 25 yrs
Pumps, Well & High Service	10 – 15 yrs
Buildings, Concrete	40 – 50 yrs
Buildings, Frame	30 – 40 yrs
Electrical Systems	7 – 10 yrs
SCADA, Telemetry Systems	5 – 7 yrs
Transmission Mains	35 – 50 yrs
Distribution Pipes	35 – 50 yrs
Valves	35 – 40 yrs
Blow-Off valves	35 – 40 yrs
Master Meters	10 – 15 yrs
Residential Water Meters	7 – 12 yrs
Fire Hydrants	40 – 60 yrs
Monitoring / Lab Equipment	5 – 7 yrs
Tools / Shop Equipment	10 – 15 yrs
Office Furniture / Equipment	7 – 10 yrs
Computers & Equipment	4 – 8 yrs
Transportation Equipment	5 – 10 yrs

⁷¹ The Expected Useful Life values are estimated ranges based on experience and drawn from a variety of sources. The life ranges assume that the assets have been PROPERLY MAINTAINED.

Water / Wastewater System Inventory Worksheet *(example)*

Get the best information you can, don't get bogged down in this step, use estimates where needed -- need to know what you have, what condition it's in, and how much longer it's expected to last.

Date Completed / Updated: February 19, 2013

Completed by: John Doe, Operator & Jane Smith, Manager

ID	Asset	Expected Useful Life	Condition (new, good, poor, unknown, etc.)	Service History (date & type of service performed)	Year Rehab / Installed	Adjusted Useful Life (years)	Age (years)	Remaining Useful Life (years)
W001	Well No. 1 (1951 @ 336-ft deep)	35-yrs	Good, still okay for at least 10+ yrs	Casing televised 1995	1951	72-yrs	62-yrs	10-yrs
W002	Well No. 1 Pump, 440 gpm Turbine	20-yrs	Good, needs repainting, still okay for at least 10+ yrs	Rehab 2003	2003	25-yrs	10-yrs	15-yrs
W003	Well No. 1 Pump Motor 40 HP	15-yrs	Unknown, still okay for at least 5+ yrs	- - -	1997	20-yrs	16-yrs	4-yrs
W004	Well No. 1 Pump Controls	20-yrs	Good, still okay for at least 5+ yrs		1993	25-yrs	20-yrs	5-yrs
W005	Well No. 1 Sodium Hypochlorate Feed System	15-yrs	Good	Replaced 2004	2004	15-yrs	9-yrs	6-yrs
W006	Well No. 1 Phosphate Feed System	15-yrs	Good	Replaced parts	2001	15-yrs	12-yrs	3-yrs
W100	Tank No. 1, Hydropneumatic	30-yrs	Fair, needs repainting	Inspected 2012	1989	30-yrs	24-yrs	6-yrs
W101	Tank No. 2, Elevated, steel	40-yrs	Good, needs repainting	Inspected 2012	1989	40-yrs	24-yrs	16-yrs
W200	Fire Hydrants (45)	45-yrs	Fair, 5 out-of-service	Repaired 4 in 2012	1951 thru 2004	45-yrs	62 to 9-yrs	(17-yrs) to 36-yrs
W201	Valves (68)	40-yrs	Good, 12 out-of-service	Repaired 2 in 2012	1951 thru 2004	40-yrs	62 to 9-yrs	(22-yrs) to 31-yrs
W204	4-inch, DIP	50-yrs	Poor, significant tuberculation	Reduced capacity	1951	50-yrs	62 yrs	(12-yrs) needs replacement
W212	12-inch, DIP	50-yrs	Good, minor tuberculation	No breaks in last 15-yrs	1951	50-yrs	62 yrs	(12-yrs) still okay 10+ yrs

STEP 2 – PRIORITIZE ASSETS

Once you have inventoried your assets, your next step will be to prioritize your assets based on their importance to your system. Prioritization means ranking your system's assets to help you decide how to allocate resources. Factors involved in prioritization include:

- How soon will you have to replace an asset (its remaining useful life).
- How important the asset is to the provision of safe drinking water (its impact on public health).
- How important the asset is to the operation of the system (can other assets do the same job?).

A water / wastewater system is often one of many responsibilities of a community or municipality. Other factors can influence which water system projects are funded and when they are completed. For example, in many communities, distribution system rehabilitation and replacement is tied to the road repair schedule and budgeting. Developing an asset management plan and prioritizing your assets will help you determine when you should replace your assets so as to not jeopardize water delivery, but you may have to work with your community or municipality to develop a replacement schedule that works for all parties.

Ideally, an asset management plan will help you forecast your financial needs well into the future and develop a rehabilitation and replacement schedule appropriate for your system's priorities.

An Example Prioritization Scheme

There is no one correct way to prioritize your assets. Most often, assets are prioritized based on their remaining useful life. However, this is not the only way to prioritize your assets and may not be the best way for your system.

One possible prioritization scheme, in order from most critical assets to the least critical:

1. Existing threat to public health, safety, or environment;

2. Potential public health, safety, or environmental concern;
3. Internal safety concern or public nuisance;
4. Improved system operations & maintenance (O&M) efficiency; and
5. It would be nice to have...

Prioritization Worksheet <i>(example)</i>					
<i>Please note, first three columns carry over from the Asset Inventory Worksheet.</i>					
Date Completed / Updated: February 19, 2013			Completed by: John Doe, Operator & Jane Smith, Manager		
ID	Asset	Remaining Useful Life (years)	Importance	Redundancy	Priority (1 is high, 10 low)
W001	Well No. 1 (1951 @ 336-ft deep)	10-yrs	Necessary for service	Two wells are required by FDEP rule	6
W002	Well No. 1 Pump, 440 gpm Turbine	15-yrs	Necessary for service	Two wells are required by FDEP rule	3
W003	Well No. 1 Pump Motor 40 HP	4-yrs	Necessary for service	Two wells are required by FDEP rule	3
W004	Well No. 1 Pump Controls	5-yrs	Necessary for service	Two wells are required by FDEP rule	3
W005	Well No. 1 Sodium Hypochlorate Feed System	6-yrs	Necessary for service	Other feed system, required by FDEP rule	2
W006	Well No. 1 Phosphate Feed System	3-yrs	For iron & manganese control	Other feed system, secondary standard	7
W100	Tank No. 1, Hydropneumatic	6-yrs	Needed for water surge / hammer	No redundancy	7
W101	Tank No. 2, Elevated, steel	16-yrs	Needed for fire protection and demand storage	No redundancy	2
W200	Fire Hydrants (45)	(17-yrs) to 36-yrs	Needed for fire protection and flushing	Other hydrants	5
W201	Valves (68)	(22-yrs) to 31-yrs	Needed for isolation	Other valves, but some are out-of-service	4
W204	4-inch, DIP	(12-yrs) needs replacement	Needed for delivery	No redundancy	6
W212	12-inch, DIP	(12-yrs) still okay 10+ yrs	Needed for delivery	No redundancy	6

STEP 3 – PLAN FOR THE FUTURE

Now that you have prioritized your assets, you will have to determine how much it will cost to rehabilitate and replace them as they deteriorate. To properly protect public health and deliver safe water, you need to rehabilitate and replace your assets in addition to operating your water system. Many systems will need considerable lead-time to budget and gather the necessary funds. By developing an asset management plan, you will be able to allocate your resources in the most efficient way.

The Required Reserve Worksheet will lead you through the steps necessary to determine how much money you need to put in reserve each year (for the next five years) to fund your highest priority activities. This reserve should be protected from other use.

The worksheet will give you an idea of how much money you should set aside to fund your reserve account this year. Changes in your system's finances and costs of new assets can change from year to year. It is important that you update this worksheet every year. This will ensure that you have enough reserves to cover necessary rehabilitations and improvements. This worksheet only helps account for additional funds you will need to rehabilitate or replace your assets. Standard O&M costs (e.g., chemicals for disinfection) are not included in the calculations on this worksheet.

Remember!

A preventive maintenance program will allow you to maximize the useful lives of your assets and can help you avoid problems and cut down or delay replacement costs.

Remember that while the total reserves needed each year may at first seem overwhelming, it is easier to put aside \$500 a year to replace a storage tank than to pay \$20,000 to replace it when it fails. Step #4 will discuss some of your system's options for raising revenues to carry out your asset management plan. Contact FRWA for additional ideas on funding options available to your system.

Required Reserve Worksheet (example).				
Date Completed / Updated: February 19, 2013		Completed by: John Doe, Operator & Jane Smith, Manager		
Prioritized Asset List (highest first to lowest priority)	Action / Activity	Years until action needed	Estimated Total Cost	Reserve Required for Current Year
Chlorination Systems	Replace sodium hypochlorate feed system pumps & tubing, Wells 1 & 2	6-yrs	\$750	\$125
Wells	Replace Well No. 1 casing	10-yrs	\$10,000	\$1,000
	Televising Well No. 2 casing	10-yrs	\$2,000	\$200
	Replace Well No. 1 pump, 440 gpm	15-yrs	\$5,000	\$335
	Replace Well No. 1 motor & controls	5-yrs	\$7,500	\$1,500
	Replace Well No. 2 pump, 600 gpm	25-yrs	\$7,500	\$300
	Replace Well No. 2 motor & controls	15-yrs	\$8,500	\$565
Finished Water Storage Tanks	Rehab Ground Storage Tank No. 3, steel	5-yrs	\$25,000	\$5,000
	Repaint & rehab Elevated Tank No. 2, steel	16-yrs	\$32,000	\$2,000
	Repaint & rehab Hydropneumatic Tank No. 1	6-yrs	\$5,000	\$1,200
Distribution System	Replace 6 Buried Valves per year, continuing	Annually	6 x \$3,500	\$21,000
	Repair 5 Fire Hydrants per year, continuing	Annually	5 x \$1,500	\$7,500
	Install 12 Automatic Flushing Valves	2013	12 x \$1,500	\$18,000
	Replace 2,500-ft of 4-inch, DIP every odd year	Every Odd Year	\$30,000	\$15,000
	Replace 3,000-ft of 6-inch, DIP every even year	Every Even Year	\$54,000	\$27,000
	Replace 5,200-ft of 12-inch, DIP	5-yrs	\$187,000	\$37,440
Secondary Treatment for iron & manganese	Replace chemical feed pumps & tubing, Wells 1 & 2	3-yrs	\$750	\$250
Total Reserve Needed For Current Year				\$138,415

STEP 4 – HOW TO CARRY OUT THIS PLAN

In the previous section, you may have discovered that you should be reserving additional money every year to cover the cost of rehabilitating and replacing your assets. Preparing a financial forecast (by estimating how much revenue you expect for the next five years) will help you determine if you will need to supplement your revenues to carry out your asset management plan. If you don't already have a five-year forecast, the Budgeting Worksheet on the next page will help you complete this task. In addition, to increase or more efficiently use your revenues to operate and maintain your system and carry out your asset management plan you can:

- Create Additional Reserve Accounts. Reserve all or some of the money you will need in a protected capital improvement reserve account and create an emergency account to fund unexpected repairs and replacements. You may be restricted in how much money can be placed in reserve accounts.
- Form Partnerships or Outsourcing. Working with other water systems or using contractors may allow you to lower costs, simplify management, and continue to provide your customers with safe drinking water.
- Consider Increasing Rates. Alternatively, consider assessing a one time fee for infrastructure improvements or funding of a reserve account.
- Apply for Financial Assistance. Banks and government agencies can provide funds for infrastructure projects such as treatment facilities, distribution lines, and water source development. If you do not have enough funds to pay for needed capital improvements, you can apply for loans and grants. Although you will pay interest on loans which

will, over the long term, increase your costs, loans will allow you to address needed system improvements without dramatically increasing rates or assessing fees to cover the costs.

Budgeting Worksheet			
Date Completed / Updated: February 19, 2013		Completed by: John Doe, Operator & Jane Smith, Manager	
Projected Revenues		Projected Expenses	
Water Sales:	\$379,971	Salaries and Benefits	\$213,650
Late Fees:	\$15,227	Professional Services (audit, attorney & engineer, etc.)	\$46,000
New Meter Installations:	\$12,450	Plant Chemicals	\$15,000
Reconnect Fees:	\$1,900	Water Testing	\$16,000
Secured Funding:		Contract Labor	\$12,000
Interest:	\$1,000	Utilities (power & phone)	\$35,000
Miscellaneous:		Travel	\$1,600
		Postage	\$1,220
		Insurance	\$4,500
		Maintenance & Repair	\$18,000
		Office Costs (supplies, postage, computer, etc.)	\$20,000
		Auto	\$4,000
Total Revenues:	\$410,548	Total Expenses:	\$386,970

Net Income		Additional Reverses Needed	
Total Revenues:	\$410,548	Total Reserve Needed For Current Year	\$138,415
Total Expenses:	\$386,970	Net Income:	\$23,578
Net Income:	\$23,578	Total Reserve Needed For Current Year	(\$114,837)
Operating Ratio (Rev / Exp):	1.06		

In order to better understand your financial position, your manager must complete the budgeting worksheet. Note that almost all revenues come from service fees (\$379,971 of \$410,548 in total revenues or 93%). Most of expenditures go to pay for maintenance, salaries and benefits, and chemicals.

On the surface, it would seem that the system is in a fairly good financial situation. After expenses, it has a net income of \$23,578 a year. However the Operating Ratio is only 1.06 - compares revenue versus expenses for a utility. In Chapter Six the recommended operating ratio for a financially healthy utility system is greater than 1.10.

However, the system cannot afford the annual \$138,415 contribution to its reserve account with its current income. If the system does not raise revenues or secure outside funding, it will not have the income necessary to pay for rehabilitation and replacement of its assets in the future. The water system board and manager will have to start thinking about how to raise the additional revenue necessary to make up for the shortfall.

STEP 5 – REVIEWING AND REVISING YOUR ASSET MANAGEMENT PLAN

Once you have inventoried and prioritized your assets, determined how much money you will need to set aside each year to fund the rehabilitation and replacement of your assets, and explored funding options for your water system, you can use your asset management plan to help plan your water system's future. You will have a good picture of when you will need to replace your assets and how much money you will need to fund those replacements and continue to deliver safe and secure drinking water to your customers.

Remember that the worksheets should be reviewed, revised, and updated on an annual basis. Your asset management plan should help you shape your system's operations and should change as your priorities change. Current information in the worksheets provides a better picture of your system's position, and better prepares you to meet your water system's future needs.

CHAPTER 12

STRATEGIC PLANNING ⁷²

In the midst of everyday tasks and emergencies, it's hard to think about the future. But that's part of your Board job. It takes true statesmanship to look past today to future needs and alternative ways of fulfilling them. From Board recruitment to customer relations and financial security, preparing for the future goes with your territory.

Chapter Overview: This Chapter discusses the Seven (7) Steps of Strategic Planning assuring that your water / wastewater system meets future needs -- 1) Identifying the current state of system assets; 2) Establishing the required "sustainable" level of service; 3) Identifying which assets are critical to sustained performance; 4) Determining the life-cycle costs; and 5) Starting a Operating Budget and Capital Improvements Program as a long-term financing strategy. Also discussed is Board recruitment.

STRATEGIC PLANNING FOR TOMORROW

The drinking water and wastewater industry are facing many key challenges in the 21st century. These include replacing aging infrastructure, meeting extensive regulatory requirements, operating in an environment with increased competition and public expectations, and ensuring system security and safety.

To meet these challenges and continue to provide a safe and reliable water supply and wastewater treatment, systems will need to be prepared and ensure that technical, managerial, and financial structures can respond to changing circumstances. Strategic planning can help prepare your water system to meet challenges and maintain organizational and financial stability in an uncertain future.



Sometimes it seems that just coping with today's realities takes all your board or council's energy. Customers, regulations, employees, daily operations, politics, problems, media attention -- that's enough to exhaust the most gung-ho governing body member.

You think today is tough? Just wait for tomorrow. Mr. and Ms. Board Member, part of your job is making sure steps are taken today that will help carry out your mission in the future.

Sometimes it seems that just coping with today's realities takes all your board or council's energy. Customers, regulations, employees, daily operations, politics, problems, media attention -- that's enough to exhaust the most gung-ho governing body member.

THE CONCEPT OF STRATEGIC PLANNING

The idea of strategic planning is to 'plan today for an uncertain tomorrow.' It can help you address both problems that you know will arise in the future, and problems that you can't predict. It can help your system succeed in a changing environment. The seven steps of strategic planning are:

- Step 1. Developing a Strategic Roadmap
- Step 2. Defining Your Area of Service
- Step 3. Assessing Your System's Technical, Managerial, and Financial Capacity
- Step 4. Identifying Your Options
- Step 5. Analyzing and Assessing Your Options
- Step 6. Implementing Your Options
- Step 7. Assess and Evaluate

The 7 Steps of Strategic Planning



⁷² USEPA. (2003). *Strategic Planning: A Handbook for Small Water Systems*

A written strategic plan can be the end result of the planning process. It is typically a short document that summarizes what your water and wastewater system does, why it does it, what it is trying to accomplish, and how it will meet its goals and values. Systems that do not develop a written plan should still engage in the strategic planning process.

The following concepts on strategic planning 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 steps from which you can begin to develop a written strategic plan.

To plan strategically or to draw up a written strategic plan, you will need to look at all aspects of your system and develop values and goals. While this could lead to organizational, financial, or technical changes in the way your system operates, the benefits of strategic planning will make your efforts worthwhile.

HOW STRATEGIC PLANNING BENEFITS MY WATER / WASTEWATER SYSTEM

In general, water / wastewater systems draw up formal plans for important capital improvements projects and when such plans are required (e.g., for permits, licenses, rate review processes, etc.). This kind of long-range planning typically involves developing a goal and a series of milestones that will be met over a certain period of time. However, it typically does not prepare systems to successfully respond to unknown or changing conditions, nor does it involve improving operations and management. Strategic planning on the other hand, will not only guide these infrastructure improvements, but will also focus the use of limited resources on previously defined priorities, improve decision making, and enhance responsiveness and performance of a system.

For example, system security has recently become a top priority for systems. Traditional long-range planning can provide a time frame and plan of action for systems to make needed security-related improvements or otherwise upgrade security measures. Strategic planning will not only provide a road map for accomplishing these tasks, but will also prepare your system to effectively respond to unexpected events, while accomplishing the overall goals and objectives of your system.

Strategic planning can:

- Help you understand what services your system currently provides and what services you would like to provide in the future to best serve your customers.
- Allow you to concentrate on making good decisions now so that your system will be successful in the future.
- Focus your energy and resources.
- Ensure that system employees, owners, and managers are all working toward the same goals.

“If it ain’t broke, don’t fix it” is not a sensible approach to planning. It does not allow your water system to prepare for and adapt to changing circumstances. Strategic planning will.

STEP 1: DEVELOPING A STRATEGIC ROADMAP

The first step in learning how to plan strategically and create an effective strategic plan, is developing a strategic roadmap and defining your ideals, goals, and values. A strategic roadmap will help you determine the purpose of strategic planning for your system, and what you intend to gain from the process. Ultimately, your answers will provide a guide, or roadmap, by helping you shape your actions to meet your ideals, goals, and values.

Consider the following questions:

1. What is your system trying to accomplish, and why?

Answering this question will help you understand what the day-to-day purpose of your system is, and the fundamental reasons for its existence.

2. How can this be accomplished?

Answering this question will help you understand how to achieve your purpose (defined by question 1).



Your answers to these questions should address both the practical operation of your system (e.g., achieving delivery of clean water to customers through proper treatment and storage methods), and the broader goals of which system personnel should be aware (e.g., public health protection). Your answers to these questions would also serve as a basis for vision and mission statements in a written strategic plan should your water system decide to do one.

Once you have considered your answers to the above questions, the following example will help you develop your own strategic roadmap by asking you to address your system's:

- Ideals** An image of what your system should become.
- Goals** The day-to-day and overall operation and management objectives or aspirations for your system.
- Values** The beliefs you would like to guide your system's employees; explain what is most important to your system and your system's employees.

The example strategic roadmap is provided for your consideration. Once you have defined your goals and values, you will need to assess whether the way in which your system is currently being maintained, managed, and operated is helping to accomplish these goals or promote these values.

Strategic Roadmap (example worksheet)	
Ideals	<i>The XYZ Water and Wastewater will provide safe, high-quality, and dependable-quantity water and wastewater services to customers by ensuring the safety and security of supply and the system, meeting and exceeding existing and new EPA and FDEP regulations, and consistently evaluating and improving management and operations.</i>
Goals	<i>To meet or exceed all water quality standards and customer expectation, have an adequate and safe supply of water and wastewater services at reasonable rates.</i>
Values	<i>To conduct business in a way that builds consumer confidence, promotes a supportive work environment, protects public health and the environment, and minimizes cost while still providing superior service and product.</i>

STEP 2: DEFINING YOUR AREA OF SERVICE

Defining your area of service involves deciding which functions or roles your system will or will not be responsible for. It is important to note that not every system is suited to provide every service. Defining your area of service will focus the strategic planning process and allow you to more effectively meet your goals and fulfill your values.

Water systems can provide a number of services in the areas of source water development and protection; drinking water treatment; treated water storage, transmission, and distribution; and retail customer services. Nowadays, security issues are also a major concern, see Chapter Ten for Emergency Response Planning. The following example worksheet will allow you to define your area of service including your current roles and functions and provides space for you to list the services, roles, and functions you would like to provide in the future.

Current and Future Areas of Service (example worksheet)		
Area of Service	Current Role	Future Role
Source water development & protection	<i>Conduct routine wellhead O&M, compliance monitoring, and implement wellhead protection program prepared by FRWA.</i>	<i>Continue current efforts, address & finance security-related measures, and consider the development of a new wellfield to meet future demands.</i>
Water Treatment	<i>Conduct routine O&M, compliance, monitoring, lab analysis, asset maintenance, and operator training – continue to attend FRWA training & request FRWA technical assistance as needed.</i>	<i>Continue current efforts but consider improving treatment process to remove hardness, color, odor & taste as requested by customers. Prepare for additional treatment in the face of ever tightening EPA regulations.</i>
Storage & Distribution	<i>Conduct routine O&M, compliance, monitoring, lab analysis, leak detection & repair, system flushing, tank cleaning, tank inspections & repair, rehabilitation, corrosion control.</i>	<i>Continue current efforts but consider installing automatic flushing valves, performing unidirectional flushing, and start a water main replacement program with financing.</i>

Current and Future Areas of Service <i>(example worksheet)</i>		
Area of Service	Current Role	Future Role
Wastewater Collection	<i>Conduct routine O&M, infiltration & inflow analysis, lift station, manhole & sewer line repair, odor & corrosion control, and monitor oil & grease.</i>	<i>Continue current efforts but consider a routine infiltration & inflow reduction program, and start a sewer main replacement program with financing.</i>
Wastewater Treatment	<i>Conduct routine O&M, compliance, monitoring, lab analysis, asset maintenance, and operator training – continue to attend FRWA training & request FRWA technical assistance as needed.</i>	<i>Continue current efforts but consider improving treatment process to increase removal of nutrients. Prepare for additional treatment in the face of ever tightening EPA regulations.</i>
Wastewater Disposal	<i>Conduct routine O&M, compliance, monitoring, and lab analysis of effluent residuals and disposal.</i>	<i>Prepare for more stringent nutrient criteria standards by eliminating all surface water discharges.</i>
Customer Service	<i>Continue to conduct routine new connections installations, meter reading, billing, and collections.</i>	<i>Consider upgrading billing system. Improve customer service through additional training and emphasis. Adjust rates and fees annually via price indices to avoid large rate increases.</i>
Emergency Preparedness & Security	<i>Continue to maintain emergency preparedness plans and security of water and wastewater facilities. Participate in County Emergency Operations exercises and activities.</i>	<i>In addition to having standby generators at the wells, water & wastewater plants - consider installing standby generators on all major lift stations, purchasing several mobile diesel tanks and potable generators.</i>

When filling in your worksheet, consider whether you have been successful in performing all of your roles or if there are services that you have had trouble providing effectively. Ultimately, you may decide to expand or limit your system's functions. For example, a system may choose to purchase treated water from a wholesale provider and concentrate its efforts on distribution and retail customer services. The example is not exhaustive, but gives an indication of the things you might want to consider regarding expanding, reducing, or altering your system's roles.

STEP 3: ASSESSING YOUR SYSTEM'S CAPACITY

An important part of strategic planning involves assessing your system's capabilities. You may already have some of this information in the form of self-assessments, sanitary surveys, and loan and permit application data. Assessing your capabilities includes an assessment of your:

- Physical infrastructure and operational abilities (technical capacity) see Chapter Two. This includes deciding whether processes need to be changed or improved upon, and assessing the technical knowledge and qualifications of your system's operators. For example, consider the number of Continuing Education credits earned by operators, their understanding of new and upcoming regulations, and their level of certification.
- Institutional and administrative abilities (managerial capacity) and deciding whether your system's affairs are conducted in a manner that enables you to maintain "compliance, operate efficiently, and meet customer expectations.
- Ability to acquire and manage financial resources (financial capacity) and deciding whether you will be able to continue current operations, make necessary repairs and replacements, and afford upgrades.

Knowing your strengths and weaknesses in these three areas will help you refine your goals to focus on areas that need improvement, and capitalize on your strengths. The following table provides an example of how to note your strengths and weaknesses in the three components of capacity.

Assessing Your System's Capacity <i>(example worksheet)</i>		
Capacity	Strengths	Weaknesses
Technical	<i>Reliable source of drinking water, little trouble meeting SDWA standards, more than adequate W/WW treatment capacity, and system operators are certified.</i>	<i>Asset inventory needs to be completed, limited asset management plan, capital improvements program hasn't been updated in 5-years, need more standby power generators, need to anticipate future regulations.</i>
Managerial	<i>Good relationship with customers and FDEP, operator properly trained, manager has University Management Certification.</i>	<i>Part-time contract operator, new board members need orientation.</i>
Financial	<i>Books and records are maintained according to generally accepted accounting principles, financials are audited annually.</i>	<i>Assets need to be valued, not all reserve accounts are fully funded, rates need to be adjusted annually by price indices.</i>

Remember to consider:

- For technical capacity - the adequacy of your source water, physical infrastructure, operator expertise and knowledge, and overall operations and maintenance.
- For managerial capacity - your system's ownership structure; staffing and organization; and relationships with customers, regulators, and technical assistance providers.
- For financial capacity - your system's revenues, credit worthiness, and fiscal management and controls.

STEP 4: IDENTIFYING YOUR OPTIONS

At this point in the strategic planning process, you have defined your current services and roles and decided what services you would like to provide in the future. You should also have a good understanding of the strengths and weaknesses in your technical, managerial, and financial capabilities. This information will allow you to identify a range of options to best fulfill your goals and values.

One goal of strategic planning is to fully consider the widest possible range of alternatives over a long-term time frame and not just choose the "quick fix". This involves thinking about options that can be implemented within your system's current structures, and options that may require reorganizing or fundamentally changing your system's ownership, managerial, operational, and physical structures.

Some examples of strategic options appear in the box to the right.

The worksheet below provides space for you to list options for your system. List as many options as you can think of even if they do not seem feasible. An option that does not seem feasible in the near term may be more feasible in the longer term and other options may be more feasible when implemented in combination. You will assess each option in Step 5.

Strategic Options Examples

- *Build stakeholder involvement and community interest in our wellhead protection plan.*
- *In case of emergencies install an interconnect with an adjacent system.*
- *Develop an asset management plan and capital improvement plan, and research potential funding sources for infrastructure improvements*
- *Contact FRWA to hold a board orientation workshop, update rates, and help with asset management.*

Identifying Options <i>(worksheet)</i>	
Area of Service	Options
Source water development & protection	
Water Treatment	
Storage & Distribution	
Wastewater Collection	
Wastewater Treatment	
Wastewater Disposal	
Customer Service	
Emergency Preparedness & Security	

STEP 5: ANALYZING AND ASSESSING YOUR OPTIONS

In order to thoroughly assess your options and determine their feasibility, you must consider the long-term economic, regulatory, and implementation impacts the options will have on your system. Options can impact a technological aspect of your system (source water development and protection, treatment, storage and distribution) or an organizational aspect (retail customer services, operation and management, ownership).

Pursuing an option, or combination of options, could result in reorganization or a change to your ownership or management. Other options may be easily worked into the current structure and operating environment. The optimal choice is one that will achieve your goals at the lowest possible cost and allow you to succeed in a dynamic environment.

To fully assess each option, consider the following questions:

- How will this option affect the technical, managerial, and financial capacity of the system?
- Is the option consistent with your system's goals and values?
- Will implementing the option ensure continued compliance with current and future regulatory standards?
- Is the total cost of choosing and implementing this option within your system's current or potential financial means?
- Will the option be accepted by the governing board, town managers, the community, and regulators?
- Will the option increase the quality or reliability of service and be accepted by customers?

- Will the option positively or negatively impact system security?
- Can this option be practically implemented by water system managers and operators?

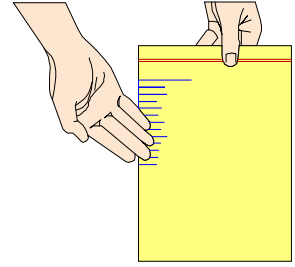
The following worksheet provides an example for you to consider the pros and cons for each option you identified in the previous step. Remember to consider future challenges that your system may encounter such as increasing regulatory requirements and customer expectations, replacement and major rehabilitation of physical assets, and maintaining and upgrading security measures. A blank table is provided in Appendix L

Once you have made your choices, you may wish to go a step further and write up a formal strategic plan. Businesses typically develop formal strategic plans as a management tool to: develop goals towards which all employees can work; ensure that the company is achieving the highest performance standards possible; and guarantee success and adaptability in a changing business environment.

Analyzing and Assessing Options <i>(example worksheet)</i>				
Area of Service	Options	Pros	Cons	Optimum Solution
Source water development & protection	<i>Implement wellhead protection plans</i>	<i>Will lead to a better understanding of quality or safety concerns, ensures safe supply</i>	<i>Gathering community / system support could be difficult, costly and time consuming, unknown contamination sources</i>	<i>Develop inventory of known and potential sources for contamination, build shareholder involvement and community interest in source water protection program</i>
	<i>Develop an alternative wellfield supply</i>	<i>Will lead to a better understanding of quality or safety concerns, ensures safe supply, FRWA can provide a free well siting plan</i>	<i>System has had no significant water quality issues to date, up front capital expenditures</i>	
Water Treatment	<i>Continue with disinfection only for time being</i>	<i>Least expensive option, effective to date</i>	<i>May not be sufficient for compliance with new regulations and customer requests</i>	<i>Continue to use disinfection for now</i>
	<i>Consider aeration for DBP precursors, color, odor, taste removal</i>	<i>Option for complying with DBPR, improved water quality for customers</i>	<i>Requires engineering design, permitting, and construction costs</i>	<i>Put in 5-year Capital Improvements Program, find loan / grant source</i>
Storage & Distribution	<i>Increase storage capacity</i>	<i>Continued delivery to customers, meet daily demands, fire protection</i>	<i>Need updated asset management plan to assess need, would require engineering design, permitting, and construction costs</i>	<i>Put in 5-year Capital Improvements Program, find loan / grant source</i>
Wastewater Collection	<i>Consider a routine infiltration & inflow reduction program</i>	<i>Reduces flows and grit into the wastewater treatment plant</i>	<i>Requires televising mains and smoke testing, staff time and maintenance costs</i>	<i>Put in 5-year Capital Improvements Program, find loan / grant source</i>
	<i>Start a sewer main replacement program with financing</i>	<i>Upgrades sewer mains and reduces flows and grit into the wastewater treatment plant</i>	<i>Requires televising mains and smoke testing, staff time and construction costs</i>	<i>Put in 5-year Capital Improvements Program, find loan / grant source</i>
Wastewater Treatment	<i>Consider improving treatment process to increase removal of nutrients.</i>	<i>Prepare for future regulations, produce a higher quality effluent</i>	<i>Requires engineering design, permitting, and construction costs</i>	<i>Put in 5-year Capital Improvements Program, find loan / grant source</i>
Wastewater Disposal	<i>Prepare for more stringent nutrient criteria standards by eliminating all surface water discharges.</i>	<i>Prepare for future regulations, eliminates NPDES monitoring requirements</i>	<i>Requires engineering design, permitting, and construction costs</i>	<i>Put in 5-year Capital Improvements Program, find loan / grant source</i>
Customer Service	<i>Start website for posting CCR and paying bills</i>	<i>Potential cost savings for CCR mailings, reduced staff time handling customer bills</i>	<i>Setup and monthly costs for website.</i>	<i>Start website within 6 months.</i>
Emergency Preparedness & Security	<i>Conduct vulnerability assessment and prepare ERP</i>	<i>Prepared for immediate responses in emergency situations</i>	<i>Takes staff time</i>	<i>Complete vulnerability assessment and prepare ERP in next 3 months</i>

STEP 6: IMPLEMENTING YOUR OPTIONS

Strategic planning takes time and effort. It is important to realize however, that implementing the options you have selected will involve additional on- going commitments. You may need to gather additional technical, managerial, and financial resources, which may require additional planning. You need to make sure that everyone involved in implementing the options (managers, operators, governing board, etc.), and everyone who will be affected by it (your customers, regulators, etc.), is committed to its success.



Implementing your options involves identifying challenges that could arise during and after implementation, and developing an action plan to address these challenges. This can include developing a time line of upcoming regulations; a schedule for monitoring and evaluating your system's technical, managerial, and financial progress; and plans for continuous improvement.

To implement your chosen options, you need to develop an action plan. YOU MAY NEED TO:

- Provide special training for technical staff or management
- Make personnel changes.
- Obtain approvals, permits, and certifications from relevant authorities
- Address new regulatory and legal
- Re-examine your system's revenue-raising requirements.
- Inform relevant parties of changes and garner support from regulators, system staff, managers, consumers, and the community.
- Find outside public or private sources to fund changes

The following worksheet is designed to help identify potential challenges and develop an action plan to address obstacles to successful implementation. It provides space for describing your challenges and your plans for overcoming them. This worksheet will also help you set out a schedule for implementing your options. A blank table is provided in Appendix L.

Implementation Action Plan and Challenges *(example worksheet)*

Chosen Options	Required Action ¹	Proposed Start & End Dates ²	Related Challenges ³	Plans to Address Challenges ⁴
Source water development & protection	<i>Request a wellhead protection plan from FRWA (free) and implement recommendations</i>	<i>Start within 3 months (date) Complete in 6 months (date)</i>	<i>Implement recommendations by gathering community / system support</i>	<i>Contact adjacent landowners about protecting wellhead from contamination and post signs around wellhead.</i>
	<i>Consider an alternative wellfield supply for higher quality water</i>	<i>Start within 6 months (date) Complete in 2-years (date)</i>	<i>May requires engineering, feasibility study by FRWA, engineering design, permitting, and construction costs</i>	<i>Request an alternative wellfield-siting plan from FRWA (free). Put into 5-year Capital Improvements Program, find loan / grant sources.</i>
Water Treatment	<i>Continue with disinfection only for time being</i>	<i>N/A</i>	<i>May not be sufficient for compliance with new regulations and customer requests</i>	<i>Continue to use disinfection for now</i>
	<i>Consider aeration for DBP precursors, color, odor, taste removal</i>	<i>Start within 12 months (date) Complete in 2-years (date)</i>	<i>May requires engineering, feasibility study by FRWA, engineering design, permitting, and construction costs</i>	<i>Request an engineering feasibility report from FRWA (donation). Put into 5-year Capital Improvements Program, find loan / grant sources.</i>
Storage & Distribution	<i>Increase storage capacity</i>	<i>Start within 6 months (date) Complete in 3-years (date)</i>	<i>May requires engineering, feasibility study by FRWA, engineering design, permitting, and construction costs</i>	<i>Request an engineering feasibility report from FRWA (donation). Put into 5-year Capital Improvements Program, find loan / grant sources.</i>
Wastewater Collection	<i>Estimate infiltration & inflow into the WWTP</i>	<i>Start now (date) Complete in 6 months (date)</i>	<i>Requires televising mains and smoke testing, staff time and maintenance costs</i>	<i>Request FRWA WW Circuit Rider assistance with televising mains and smoke testing.</i>
	<i>Start a routine infiltration & inflow reduction program</i>	<i>Start in 6 months (date) Complete within 12 months (date)</i>	<i>Requires staff time and maintenance costs</i>	<i>Schedule staff to focus on infiltration & inflow reduction at least 2-days per week</i>
	<i>Start a sewer main replacement program with financing</i>	<i>Start in 12 months (date) Complete within 3-years (date)</i>	<i>Requires engineering design, permitting, and construction costs</i>	<i>Put into 5-year Capital Improvements Program, find loan / grant sources.</i>
Wastewater Treatment	<i>Improve treatment process to increase removal of nutrients.</i>	<i>Start in 12 months (date) Complete within 3-years (date)</i>	<i>Requires engineering design, permitting, and construction costs</i>	<i>Put into 5-year Capital Improvements Program, find loan / grant sources.</i>
Wastewater Disposal	<i>Eliminate surface water discharge to prepare for more stringent nutrient criteria standards.</i>	<i>Start in 2-years (date) Complete within 5-years (date)</i>	<i>Requires engineering design, permitting, and construction costs</i>	<i>Put into 5-year Capital Improvements Program, find loan / grant sources.</i>
Customer Service	<i>Start website for posting CCR and paying bills</i>	<i>Start now (date) Complete in 6 months (date)</i>	<i>Requires funds and staff time to website setup and monthly maintenance.</i>	<i>Put into next Fiscal Year budget and assign staff member to monitor / update website.</i>
Emergency Preparedness & Security	<i>Conduct vulnerability assessment and prepare Emergency Response Plan (ERP)</i>	<i>Start now (date) Complete in 3 months (date)</i>	<i>Takes staff time.</i>	<i>Complete Emergency Response Plan. Meet with County EOC and share copies with them and local law enforcement.</i>
Notes: 1. Describe the steps that are required to implement each option – be specific! These might include key meetings, financing approvals, or any construction projects, for example. If there are multiple stages for completing your chosen option, you may want to group these accordingly. 2. Enter the date on which you hope to start and complete each required action. If there is no specific date, enter the month of day, which you would like the have this plan set in motion and completion. 3. Summarize any potential problem or obstacle related to each required action. Think about these before the project begins, and make any changes or updates as the project progresses. 4. Enter any ideas or action you can take to overcoming potential problems or obstacles already encountered. As your options are implemented and new or different challenges arise, edit you plans accordingly.				

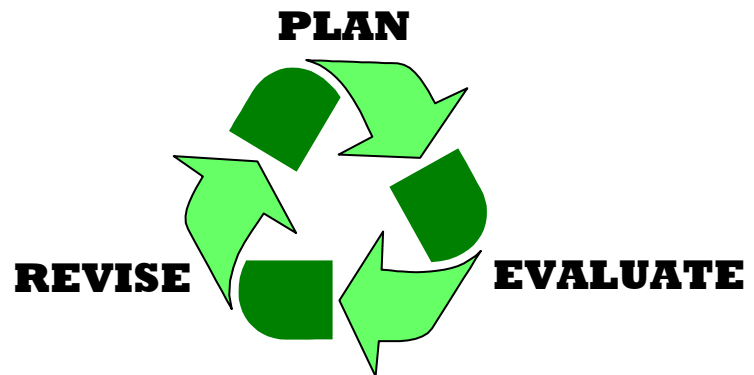
STEP 7: ASSESS AND EVALUATE

Strategic planning helps you face an unpredictable future successfully. This does not mean that your current plan will address every circumstance or provide a solution for every challenge. There may be elements that don't work, or problems that arise that need additional analysis and action. Or, you may want to make changes if the results are not serving your system's or your customers' best interests.

On-going monitoring and evaluation will help you assess whether your system is operating the way you want it to. The worksheets in this chapter and Appendix L should be reviewed, revised, and updated on no less than an annual basis to reflect any financial, managerial, technical, or strategic changes affecting your system.

Remember, strategic planning is a continuous process that can result in continuous improvements. The planning process and the values and goals that define your system should allow you to respond more effectively, quickly, and creatively in the future.

There are numerous tools and resources that can make strategic planning easier. FRWA is available to help you through this process.



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