Running Your System Like a Business

By **Mark Kemp-Rye** • *On Tap* Editor

"Planning: that is what small towns across the country do not do. They tend to live almost day-by-day and pray nothing bad happens to jeopardize their infrastructure or services they provide to their communities," says David Kindelspire, an environmental specialist with the Missouri Department of Natural Resources, in a Winter 2004 *On Tap* article.

Proper planning—coupled with its inseparable twin, budgeting—is, most experts maintain, the best habit a community can undertake to insure future success. In fact, they say, working without a plan is like heading out on a cross-country road trip without a map. "If you don't know where you're going, any road will take you there," says Jim Seroka, director of Auburn University's Center for Government Services and a trainer for the Alabama Rural Water Association.

If planning and budget preparation are so important, why don't more systems do them? Both Kindelspire and Seroka cite a number of reasons, including: lack of time, lack of training, a misplaced sense of preserving flexibility, and not wanting to uncover serious problems.

"I'm not faulting the local leaders for this failure to plan," Kindelspire adds. "Small communities just can't afford to buy the expertise needed to initiate an effective planning process. However, this skill can be easily learned with the help of almost all state and federal technical assistance agencies.

"That's why, speaking as one agency assistance provider, it is vital to spread the planning word as widely as we can, and help steer these communities on the road to success though planning," he says. "In the long run, in almost every case, a well-executed and thought-out plan will ultimately lead to community successes and quality of life improvements for its citizens."

Analyze Today, Prepare for Tomorrow

When a community undertakes a first plan, the terminology can be overwhelming. Typically, planning comes in three varieties: short-term (to address needs in the near future or for specific problems), long-term (two to five years), and strategic (five years and up). Planning is dynamic, though, and even long-term and strategic plans are revised on a regular (usually annual) basis. Capital planning refers to specific projects such as a line extension or treatment plant upgrade. (See sidebar at right for more about capital planning.) This article examines strategic planning and how it works with a system's annual budget.

According to Seroka, strategic planning will provide numerous benefits to the community. A good plan will:

- clarify future directions,
- establish priorities,
- develop effective strategies,
- consider the consequences of decisions,
- deal with changing circumstances,
- improve internal management,
- build internal teamwork and expertise,
- build external partnerships,
- strengthen customer relationships, and
- improve decision making processes, leading to better public policy choices.

Regardless of your plan's timeline or what you call it, four questions are common to all planning endeavors:

1. Where are we now?
2. Where do we want to be?
3. How do we get there?
4. How will we measure our progress?

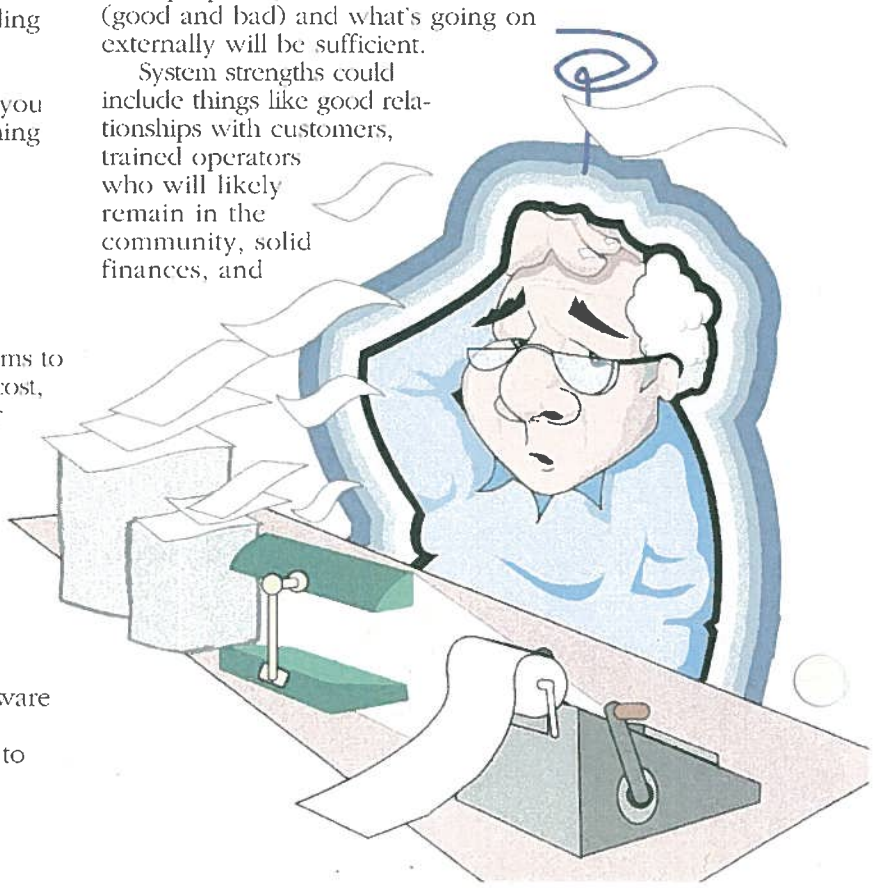
To answer these questions, the strategic plan should determine customer needs, create programs to fill those needs, determine what the needs will cost, and figure out a way to pay for the plans. Other questions to address may include: What are the current and future needs of the system? What parts of the system will need to be repaired or replaced in the next several years? Will we be adding customers? Do we have qualified personnel to operate the system now and down the road?

Take a Good, Hard Look

"A successful manager has to always be aware of changes taking place in the environment in which the business operates and be prepared to make necessary changes," says Carryn Lee, financial analyst with the Kentucky Rural Water Association, in a Fall 2003 *WaterProof* article. "Owners, managers, and customers of utilities may be required to make substantial investments in the foreseeable future and should seek to assure themselves that the plan for operating the utility is the best that it can be."

A common technique for understanding various changing conditions is known as a SWOT [Strengths, Weaknesses, Opportunities, Threats] Analysis. For most purposes, a review of internal conditions (good and bad) and what's going on externally will be sufficient.

System strengths could include things like good relationships with customers, trained operators who will likely remain in the community, solid finances, and



Capital Planning

According to Mike Hattery of Cornell University's Local Government Program, a capital plan is "a multi-year financial plan that:

- lists and describes capital projects a local government plans to undertake (e.g., line extension or plant upgrade);
- indicates how projects will be funded; and
- projects the effects of the plan on key financial variables, such as the real property tax rate.

Assessing the effects of a group of capital projects on the general financial picture is sometimes referred to as fiscal capacity analysis," Hattery notes. "The length of the capital plan period is a local decision, but five or six years are often recommended."

An article titled "How to Develop a Multi-Year Capital Plan" has more information about capital planning and is available on the National Environmental Services Center Web site at *www.nesc.wvu.edu.*

up-to-date infrastructure, including the treatment plant and distribution network. Conversely, if there's a lot of turnover with employees or money troubles or aging facilities, these weaknesses must be listed.

External conditions—be they threats or opportunities—must also be discussed. These issues include whether or not your area is growing or losing population, if new regulations are in the offing, if private companies are buying systems in the area, and if there are any larger plans for consolidating or regionalizing systems. Of course no one can see into the future, but a SWOT analysis will be invaluable when typical problems arise.

Once these internal and external conditions have been examined, planners will be able to formulate good answers to the four central questions cited above.

Where are we now?

The SWOT analysis, if done honestly, provides an accurate picture of the way things are right now. To supplement this analysis, it's also useful to collect data about current customers, current water consumption patterns, and current system capacity.

Where do we want to be?

What will the system be like in five, 10, 20 years? When will we need to make major upgrades or replacements? Will we add new customers? These questions allow you to state, in concrete terms, where your system will be by the end of the plan's timeline. Many systems find it useful to craft a mission statement and a vision statement to capture who they are, what they do, and what they seek to achieve.

How do we get there?

To achieve the goals you've set, describe how to make them happen. Each goal should have a specific plan of attack and the list should be prioritized. Document who will be responsible for leading each project, when it will be done, and how much it will cost. Take advantage of strengths and opportunities, minimize weaknesses and threats to the system. Remember to be realistic. Setting too many goals often means that none are done very well.

How will we measure our progress?

It's easy to say "we will add new customers" but hard to quantify and, therefore, hard to document progress. A better method is to say, "we'll add 50 new customers in each of the next five years." Decide what the milestones are for the various goals and set stages for achieving them. Goals should be measurable, and progress (or lack thereof) should be reported to the board and other stakeholders on a regular basis.

After the first strategic plan is in place and stakeholders agree that it provides a good roadmap to the future, it's time to match funding to goals. This is where plans and budgets are married.

Ten Ways to Save Money

When expenses are outpacing revenue, it's easy to say "we'll just raise rates." There are other ways to make ends meet, and your customers will appreciate it if you can balance the books without increasing their bill.

1. Collect overdue accounts—Collection and shutoff policies must be enforced or you're losing money.
2. Reduce system leaks—Water loss should be no more than 15 percent of the treated water you produce.
3. Make sure meters are working—Meters are to a water system what fare counters are to cab drivers. If they aren't working, people are riding for free.
4. Update fees, deposits, charges—Check these items. Some may date back many years and be ready for a more realistic update.
5. Get bills out on time—Everyone who uses water should get a bill on a regular basis.
6. Find thieves—Water theft is a serious issue in some communities.
7. Buy in bulk—Purchasing supplies, such as chlorine, are usually cheaper in mass quantities. Consider working with neighboring systems to buy supplies and share equipment.
8. Add new customers—It may be cost effective to add nearby homes and businesses not currently in the distribution network.
9. Invest money—Find a bank that offers interest on your bank account. Put reserves in CDs or money market accounts.
10. Run the pumps at night—In some places, the electric utility offers significantly lower rates during off-peak hours.

The Annual Expense Budget

The word "budget" comes from the French *bougette*, meaning "little bag." This term was adopted by the British when the chancellor of the exchequer presented his annual report to Parliament. The chancellor was said to open his 'budget' or bag containing financial documents. Today, the "bag" notion is, obviously, more figurative than literal. Nevertheless, the basic concepts of an allotment of funds, keeping track of the money, and planning for the future is still relevant.

"Incorporating long-term planning into the annual budget is the first component of effective budgeting," says Stacy Anderson, manager with the accounting firm Virchow Krause and Company. "The budget is the primary tool local governments use to make decisions about service priorities and fiscal policies. The quality of the decisions for allocating scarce resources depends on the quality of the process employed. By adopting best practices in budgeting, an organization can improve decision making and operations while enhancing public accountability."

According to the manual *Managing a Small Drinking Water System* developed by training specialists at the National Environmental Services Center (NESC), the annual expense budget is "a major tool for tracking all necessary and authorized expenditures. By having a budget, you can: help reduce unnecessary costs, determine if actual costs are being incurred as projected, control spending, ensure accountability, and improve the ability to anticipate costs."

Most expense budgets have five items:

1. operating expenses
2. emergency operating reserves
3. debt service payments
4. debt service reserves
5. reserves for asset replacement

The Community Resource Group/Southern Rural Community Assistance Program (RCAP), in their *Small System Guide to Financial Management*, encourages systems to check the budget to see that it includes expenses for utility bills, chemicals, insurance premiums, debt, emergencies, and repairs or replacements. Before beginning a new budget, have the previous year's budget on hand. It's also a good idea to have several years' worth of budgets for reference and to calculate averages.

Operating Expenses

Review the previous year or two's expenses. Then, list the various activities the water system performs and estimate whether these activities will cost more in the year ahead or less. Here are some questions:

- Will you do more or less sampling?
- Will your operators require training or upgraded certification?
- Will you need different supplies?
- Will customers increase or decrease?
- Will a drought add expenses?
- Will office costs, including postage, increase?
- Will the system need significant repairs?
- Will the current inventory be sufficient?

The answers to these questions will help you craft an accurate estimate for the new budget. (The sidebar on page 22 provides a simple ratio that shows if operating expenses are sufficient.)

Emergency Operating Reserves

At a minimum, you should reserve 10 percent of the operating budget for emergencies. However, if your system is an old one or if you have extenuating circumstances, such as drought, you will probably need to increase this amount. Additionally, if you've been averaging, say, 15 percent for emergencies over the last several years, budget for at least 15 percent.

Debt Service

The budget must reflect how much you owe and what the payments on this debt are.

Remember to include both principle and interest payments in the budget, and don't forget any new loans you'll incur during the budget period.

Debt Service Reserves

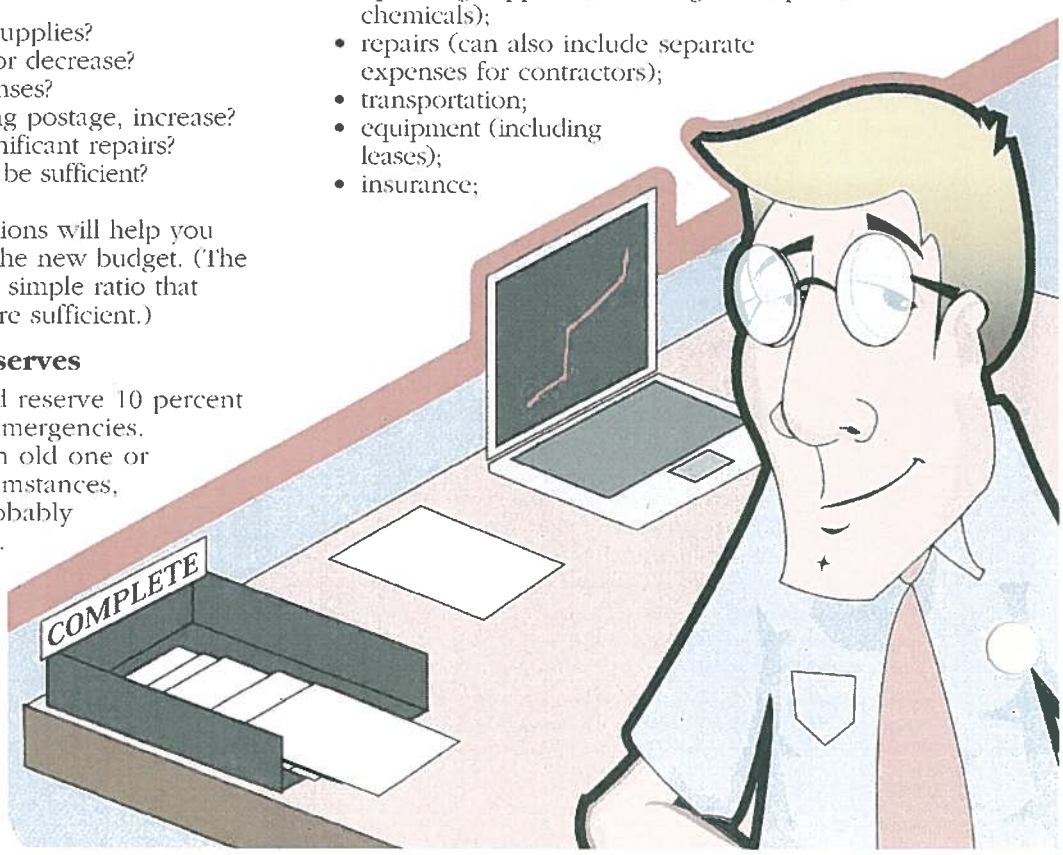
Most, if not all, loans or bonds require you to maintain a certain level of reserve. Review all loan agreements and bond covenants to see what your requirements are. (The sidebar on page 22 provides a ratio that helps determine if debt service reserves are sufficient.) By paying loans on time and maintaining adequate reserves, you ensure that your system remains eligible for these funds in the future.

Asset Replacement

If you will need to replace significant portions of your system, you must budget for it. According to NESC's *Managing a Small Drinking Water System*, "the amount of the reserve could be based on a portion of the replacement cost of the system or on the cost of the most expensive scenario of a system breakdown."

Running a water system involves many different tasks. From office management to water treatment, there are probably dozens of different activities. To keep track of expenses across these various functions, CRG suggests the following budget categories:

- annual debt service;
- purchased water;
- salaries and other personnel costs;
- office supplies and expenses;
- utility costs;
- operating supplies (including tools, parts, chemicals);
- repairs (can also include separate expenses for contractors);
- transportation;
- equipment (including leases);
- insurance;



Use Simple Ratios to Assess Financial Health

The U.S. Environmental Protection Agency (EPA) has come up with two simple ratios that a water system can use to determine its financial health: an operating ratio (OR) and a debt service coverage ratio (DSCR). Both are easily constructed using readily available data.

Operating Ratio Measures Overall Health

A water system can have the cleanest, safest drinking water around, but if it isn't covering its expenses, it can't keep it up forever. The OR shows whether or not a system has enough revenues to cover its expenses. An operating ratio of 1.2 or greater indicates that a system is in good financial health. A ratio of less than 1.0 means that expenses are more than revenues.

Operating Ratio (OR)

$$OR = \frac{TOR}{O\&M}$$

TOR = Total Operating Revenues
O&M = Operating and Maintenance Expenses (excluding depreciation, interest, or other department expenses)

Debt Service Coverage Ratio Measures Ability to Pay

As with the operating ratio, a system must have adequate revenue to cover its debt service. The DSCR measures a system's ability to cover its debt, over and above its operating expenses. A debt service ratio of 1.5 or greater is considered very good; a ratio of between 1.0 and 1.5 is considered acceptable; and a ratio of less than 1.0 means that there is inadequate revenue to cover the system's debt service.

Debt Service Coverage Ratio (DSCR)

$$DSCR = \frac{AGR - O\&M}{OAP \& IC}$$

AGR = Annual Gross Revenues
O&M = Operating and Maintenance Expenses
AP & IC = Annual Principal and Interest Charges

Why are these two ratios significant?

According to EPA's *National Characteristics of Drinking Water Systems Serving Populations Under 10,000*, as the size of a drinking water system increases, these ratios improve. Conversely, small systems are most often the ones in financial peril. For example, 61 percent of systems serving fewer than 101 customers and 43 percent of systems serving between 101 and 500 customers have an operating ratio of less than one.

The same study found that the "vast majority of small systems have no debt. Of those systems serving fewer than 100 people that do have debt, however, most have debt service ratios below one." Achieving financial health is an important component of the1996 Safe Drinking Water Act (SDWA) amendments and of particular concern for those responsible for small systems.

Experts point out that these ratios do not represent a complete financial assessment. Rather, they should be viewed as a general way for a small system to judge whether or not they are on the right track. "Achieving the public health protection objectives of the SDWA requires systems with strong technical, financial, and managerial capacity," says Peter Shanaghan, former small systems coordinator for EPA. "Financial ratios are an exceptionally important indicator of a system's financial capacity."

- building expenses (including mortage or rent);
- professional expenses (accounting, auditing, legal, engineering);
- postage;
- telephone (and Internet access, if you have it);
- licenses, professional dues, subscriptions, etc.;
- training and out-of-town travel; and
- taxes.

Who should be involved in creating a system budget? The governing board or water system owners are ultimately responsible for the budget and are, therefore, instrumental for its planning and implementation. System managers will, of course, need to be involved in this process. Don't forget that other employees, particularly operators and office staff, will have valuable insights on how to budget more effectively.

The Revenue Budget

After completing the annual expense budget—all the money you'll be spending for the year—it's time to construct the revenue budget—or, all the money you'll bring in over the coming year. In an ideal world, the revenue budget will be equal to (or exceed) the annual budget right off the bat. In reality, revenue usually falls somewhat short of expenses, forcing the tough decision of whether to increase revenues (most often through a rate hike) or decrease expenses or both.

CRG's *Small System Guide to Financial Management* identifies two types of income common to most systems. Operating revenue is money coming from water sales, connection fees, forfeited meter deposits, late payments, penalties, and reconnection fees. Non-operating revenue is income from interest on checking and reserve accounts and meter deposits. "We recommend you ignore non-operating revenues and only count on operating revenues to cover the expense of operating your system next year," the guide notes.

When estimating revenue for the coming year, determine if you'll be losing or gaining customers, how much rates will go up, and the amount of unpaid bills owed you. Except for debt service requirements, budget items have varying degrees of flexibility. As you evaluate revenue and expenses, you'll be able to make adjustments.

Some items, such as office rental, are less controllable. Other expenses may be reduced. (The sidebar on page 20 provides ten ways to cut costs.) The process of planning the expense budget, estimating revenues, and setting rates is interactive. More often than not, systems will come to the realization that they must raise rates.

Ongoing Evaluation

Once the expense and revenue budgets are finished they shouldn't sit on a shelf collecting dust. To get the best use out of these documents, the board should receive monthly financial reports. "Now it's time to make the budget work for you," the CRG training booklet states. "No matter how good your budget is, it won't stop financial crises, and it won't help you achieve financial stability for your system unless you use it every month."

Monthly financial reports should show revenues from various sources and the costs of various purchases. Each of these revenues and expenses should be expressed in terms of how much was projected for the item and what percentage of the total they are. (Worksheets for this and other topics related to budgets are available free on the NESC Web site at *www.nesc.wvu.edu*.)

In many states, public organizations such as a water system are required to have an audit every year. Even if you aren't specifically required to do so, an audit will let you know if finances are in order and provide suggestions for ways to improve budgets and management. An audit will:

- provide independent verification of your system's financial condition,
- review internal controls and identify weaknesses,
- report financial information in a format understood by lenders, and
- show any items that are not in compliance with federal regulations.

An audit will not determine if someone is stealing from you. If you suspect fraud, you can hire an auditor to do a special audit to uncover theft. The NESC training manual recommends that you rotate auditors at least every three years and that you not rely on your own bookkeepers to perform audits.

When you receive a satisfactory audit report from the auditor, by all means let your customers know. Showing that you are spending money wisely is good public relations.

Plenty of Work (But Worth It)

Strategic planning and solid budgeting practices are a lot of work—there's no two ways about it. But the effort will be worth it. And, you don't have to do it alone.

"If I could offer one piece of advice on planning," Kindelspire says, "it would be to start now. Don't try to invent or re-invent the wheel by yourself. If you look up and find that you are alone in your office wondering how to start the planning process, you got off on the wrong foot. Seek out and find your network of assistance sources, whether they are federal or state agencies, the municipality just down the road, or the retired community development director living next door."

Not only will good planning help your system run more smoothly, but, as a local official, you are responsible for the financial health of your system. Good planning and budgeting mean that your system is meeting its needs now and into the future, that your community can borrow money when necessary, and the funds are secure and expended for the right purposes.

"As a local official," the NESC manual states, "You should continue to learn about your system's financial operations and conditions. Assure yourself that the water system has the financial capability to stay in business for the long-term."

"And don't ever forget," Seroka admonishes, "If you're failing to plan, you're planning to fail."

More Information Available

Contact information for a number of organizations that help small communities with planning and budgeting may be found on pages 55 and 56.

NESC offers the Community Resource Group/RCAP publication *Small System Guide to Financial Management* as a free product. Call us toll free at (800) 624-8301 or e-mail *info@mail.nesc. wvu.edu* and request product number DWBLFN10.

NESC also has the training manual *Managing a Small Drinking Water System*. The entire manual is available as are individual modules that address specific topics. Call (800) 624-8301 for more information and pricing. The manual is available on CD.

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