

Best Management Practice: BMP C: Create a Five-Year Operating Plan

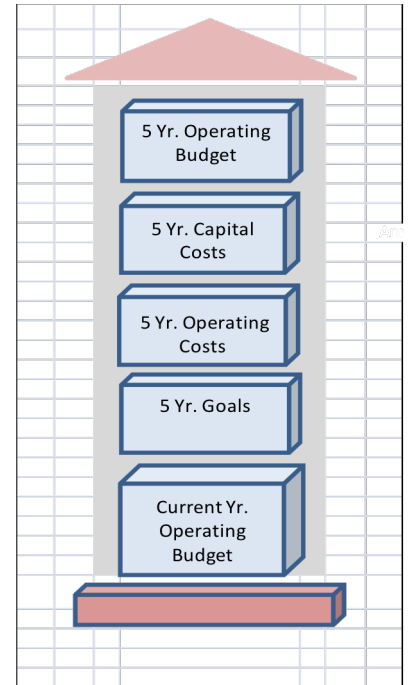
1 What, Why and How?

What is a Five-Year Operating Plan? A Five-Year Operating Plan shows what you want to do with your water system in the next five years, and how you expect to do it.

Why do we need a Five-Year Operating Plan? A five year plan provides context for preparing your annual budget and also enables greater focus on specific objectives than does your long-range plan.

How do we prepare a Five-Year Operating Plan? Here are the main steps in preparing five-year plan. These steps are explained further in following sections. For each step you create a building block.

- Step 1: Review the current year Operating Budget
- Step 2: Set goals and objectives for the next five years
- Step 3: For each “Operating” objective prepare a cost estimate
- Step 4: For each “Capital” objective prepare a cost estimate
- Step 5: Create five-year operating budget forecast
- Step 6: Ensure reserve accounts are in place.



2 Challenges and Benefits

A five-year plan will help overcome certain challenges and provide several benefits:

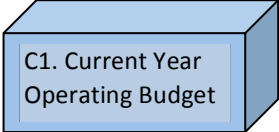
Challenges to Overcome	Benefits
<ul style="list-style-type: none"> • Many water system improvements and renewals require planning well in advance • Your annual budget only covers 12 months; some projects need longer to plan and implement • It is common for owners, operators, and trustees to think only of the short-term. • In short term planning, it is easy to overlook important but unseen components (“out of sight, out of mind”) 	<ul style="list-style-type: none"> • You can identify future expenditures that influence your operating budget, your asset renewal plans, and important system improvements. • Planning for five years encourages you to look well into the future. • Five year plans provide information for your long-term planning.

3 Steps to Follow

Follow the steps outlined below. Create building blocks using the worksheets and other tools provided.

Step 1: Review the Current Year Operating Budget

An annual budget is one of the most important tools you can have; one that every water system should complete with care. It provides a reference point for your activities over the year and can help you to get through challenging financial periods, for example, when you are faced with unexpected expenses. Your financial records showing past revenues and expenses will help you build a realistic budget for the current year. A spreadsheet program such as Microsoft Excel or similar software will be useful in preparing the budget, although you can create a budget “long-hand” on a paper-based worksheet. BMP D; *Establish a Long-Term Financial Plan* provides further guidance on creating operating forecasts.



C1. Current Year Operating Budget

You probably have an annual budget already in place. As you work through this BMP, you may see opportunities to change and improve your annual budget. For example, there may be expenses to operating your water system that you have not previously recognized and that should be included. As you budget for full cost recovery (See BMP E), it may become clear that you need to increase your water rates to cover new expenditures. BMP E: *Implementing Sustainable Rates & Charges* gives guidance in setting fair rates and charges.

Fire Protection

Some water suppliers need to recover the costs of items such as hydrants from fire protection authorities. See references for more information.

Tolls & Taxes

Some types of water suppliers charge both Tolls and Taxes. Tolls are charges made to cover the direct supply of water, and are part of operating revenues. Taxes may be in the form of a parcel tax, which is used for capital construction projects.

In budgeting, it may help to think of your expenses as including *fixed* costs and *variable* costs. Variable costs are those expenses in your water system that increase or decrease from month to month, for example, your cost for pumping water is determined by volume used. Fixed costs are those that are not generally dependent on the water volume you provide. These may include such items as rent, water testing, insurance, and so on. The worksheet *Current Year Operating Budget* helps you to summarize your revenues and expenses.

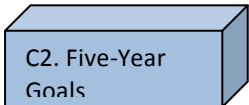
Step 2: Set goals and objectives for the next five-years

Ten Parts of Your Water System

1. Water Source Reliability
2. Water Quality
3. Customer Satisfaction
4. People Development
5. Operational Effectiveness
6. Financial Viability
7. Infrastructure Condition
8. Operational Resiliency
9. Stakeholder Support
10. Community Sustainability

Consider all aspects of your water system when preparing a five-year plan. You can divide the system into the ten parts shown.

For each of these parts, set goals that outline what you want to achieve in the next five years. It's a good idea to involve others in your goal setting process; these may include customers, health officials, consultants and financial advisors. Your preliminary long-range plan, if you have one already, will also help you identify five-year goals. Complicated goals can be broken down into steps with milestones and indicators to keep you on track. Use the *Five-Year Goals* worksheet.



C2. Five-Year Goals

Once you have a list of goals, you can identify specific objectives to help you reach those goals. Objectives should be “SMART” that is:

specific, measurable, achievable, reasonable, and timely (come with timelines). What is the difference between goals and objectives? Think of goals as the things that might result from a meeting of all your

customers in which desired results are identified in broad terms, such as “provide safe and reliable drinking water”. Objectives are generally more specific, or quantifiable (for example, “We will install filtration to reduce the turbidity below 1 NTU”), or come with a date by which they should be achieved. An estimate of the costs of achieving the objective is always useful.

For example, a goal might be to remove a Boil Water Notice and provide a safe water supply to your customers. This goal may need more than one year to reach. The objective in Year 1 may be to revise your water rates so that you can begin to pay for treatment. The objective for Year 2 might be to send your operator, volunteer or otherwise, for training about water treatment technology; and the objective for Year 3 would be to install upgraded water treatment equipment.

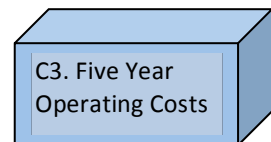
The answers to the following questions will help you establish specific objectives, a timetable for achieving the objectives and a cost estimate.

- Where are we now?
- Where do we want to be?
- How do we get there?
- How do we measure our progress?

Note that some of the objectives you identify may be fulfilled if you continue to operate in the way you are currently operating, and therefore will not involve your spending any more money than you are spending now. Where that is the case you do not need to include these objectives in the following steps, which are intended to help you budget for new expenditures only.

Step 3: For each “Operating” objective prepare a cost estimate

Now that you have your list of new five-year goals and specific objectives, you’ll need to attach cost estimates to achieve them. You will need to decide if the costs should be paid from your operating budget or your capital budget. If the objective will lead to creation of a physical asset, such as a reservoir, with a value exceeding \$2,000 say, then regard it as a capital item.



An “Iterative” Process

Using some of the worksheets for financial planning is an iterative process. That is, you make an initial forecast of a certain value, see what the effect of that forecast value is on other items, and go back and change the forecast value if it does not have the desired effect.

If the objective leads to a smaller expenditure, then it can be part of the operating budget. Some new objectives, such as providing operator training, will obviously be part of the operating budget.

Enter specific operating objectives onto the *Five-Year Operating Costs* worksheet, together with your estimate of total cost over the five years. Show the estimated percentage of the work you plan to do each year towards the objective, and the annual cost for that work. Complete the worksheet and add up all the new costs for each of the five years. This completed worksheet can be referenced in preparing your annual budgets and the long-range financial plan.

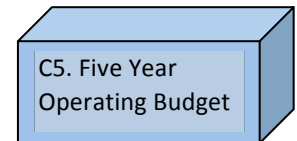
Step 4: For each “Capital” objective prepare a cost estimate

In the previous step you identified certain objectives as part of your five year operating costs. The costs for achieving the remaining objectives, those associated with capital projects, belong in the worksheet: *Five-Year Capital Costs*. As is the case with the operating objectives, you can sum the total of your estimated capital costs over the next five years and use this information in other worksheets. In particular, you should carry forward your forecasted capital expenditures over the next five years to the worksheet: *D1. Long-Term Capital Plan* in BMP D: Long-Term Plan



Step 5: Create five-year operating budget forecast

In Step 1, you assembled information about your current year budget and your revenues and expenditures for past years. Now use this information to make an initial forecast of the revenues and operating expenses for existing administration and operating expense items that you will incur over the next five years; allow for inflation where appropriate. Enter information in the worksheet *Five Year Operating Budget Forecast*. Note that you should exclude the new operating expenses you identified in Step 3.



Enter the forecast expenditures over the next five years that you identified in Step 3 on the line “New Operating Expenditures”. The worksheet will add up all the operating expenses to give you the “Total Operating Expenses” for the next five years.

Under the heading “Contributions to Reserves” on the worksheet, enter the amounts you have worked out as a result of following other BMPs. Now the worksheet will give you the “Total Annual Costs” over the next five years. The line below shows the “Total Revenues less Total Costs”. You may have to adjust your forecast of the revenues or the expenditures to make sure this amount is always positive.

Last Three Years & Making Forecasts

If you have figures for last 3 years, create additional columns in the worksheet for Year -2 and Year -3. You can then work out averages for the last 3 years. Identify any non-recurring or extraordinary expenses and take account of these in working out averages and creating forecasts of future costs and revenues. Make sure you keep an explanation of your forecast expenses together with your worksheets.

For example, if your initial forecast of revenues over the next five years results in Total Costs exceeding Total Revenues, you may have to increase water rates in the future. The BMP: Sustainable Rates & Charges will help with this. Whatever the effect on water rates, it is important to continue communications with your customers so that they are aware of the benefits of your activities, including the 5-year plan.

Step 6: Ensure reserve accounts are in place

Create Reserve Accounts

- Replacement Reserve Fund
- Operating Reserve Fund
- Emergency Reserve Fund
- Construction Reserve Fund

Creation of a five-year plan requires you to think beyond your current annual budget and the events of the coming year. As you think about the longer term, the value of creating reserve accounts will become clear. The reserve accounts that are useful for water systems are shown in the box.

Replacement Reserve: You operate a water system which includes expensive assets, some of which may last a long time, and which have to be maintained and eventually replaced. So you should set aside money each year in your *Replacement Reserve* fund to provide for eventual renewal or replacement of equipment. Systematic renewal will reduce downtime and avoid extra costs due to breakdowns. Your asset management plan¹ will help with this.

Operating Reserve: During your annual budget process, you may consider preparing projections for three scenarios – best case, worst case, and middle of the road. The difference between the annual expenditures for the worst case and the middle-of-the-road case may give an indication of the money you should set aside in an *Operating Reserve* fund. This approach encourages you to anticipate potential problems, and to plan for them. And this gives you additional confidence when responding to the unexpected.

Emergency Reserve: You should operate your water system like a business, and all businesses face unexpected events which affect their finances. An established *Emergency Reserve* fund with budgeted annual contributions made until you achieve a target balance in the fund, will provide money “for a rainy day,” give you peace of mind, and increase confidence of users in your ability to manage a sustainable water system.

Construction Reserve: Your construction reserve is the fund from which you pay for capital construction projects. Capital projects are those which improve your system (as opposed to renewing existing parts and equipment, which are covered in the Replacement Reserve). Examples of capital projects might be installing filtration for the first time, or extending your distribution network to serve new customers. Income to the construction reserve fund might include the annual contributions you make from your operating budget, and any proceeds of loans you receive for capital expenditures. Expenditures from the reserve will include direct payments for capital projects, and the principal and interest charges in repayment of loans.

Maintain Flexibility

Sometimes the dividing line between expenditures from the Replacement Reserve and the Construction Reserve may not be clear. For example, if you are replacing an aging asbestos cement pipe with a pvc pipe, this could be considered an improvement, payable from the Construction Reserve. Obtain specialist advice in setting up reserves if necessary, and maintain flexibility.

3 How long will this take?

The table below shows a typical timeframe to prepare this Best Management Practice for implementation. This includes communication time to discuss details with key people, bring together individuals who can contribute to the process, and administrative time to assemble the information needed for the individual building blocks. Preparation of each building block, perhaps in the form of a worksheet or checklist, may only require one or two hours, once you are familiar with the process.

Expect to revisit your five-year plan at least annually to update information. This review and update will take less time than the initial planning process, and is important for good financial decision-making.

¹ See BMP B

	Building Block	Weeks >	1	2	3	4	5	6	7	8
1	Five-Year Goals									
2	Objectives & Budgets									
3	Annual Budgeting Worksheet									
4	About Reserve Funds Info Sheet									

4 More Information

More information on the topic of this Best Management Practice is available from the following:

Drinking Water Health Authority Contacts:

http://www.health.gov.bc.ca/protect/dw_ha_contacts.html

Drinking Water Resources and Associations:

<http://www.health.gov.bc.ca/protect/dwresources.html>

Design Guidelines for Rural Residential Community Water Systems:

http://www.env.gov.bc.ca/wsd/water_rights/water_utilities/cabinet/design_guidelines_final_mar2012.pdf

WaterBC:

<http://www.waterbc.ca/resources/best-management-practices/>