**Best Management Practice:**

**BMP D: Create a Long-Term Financial Plan**



## 1 What, Why and How?

**What is a long-term financial plan?** A long-term financial plan estimates what your revenues and expenses will be over a period of at least ten years into the future. It includes planning for repair or replacement of equipment, for system improvement, for any proposed financing, and for building up reserve funds to pay for operations and projects.

**Why do we need a long-term financial plan?** Many parts of your system are expensive to repair or replace. You need lead-time to budget and save funds to be able to continue delivering safe water. A long-term plan is necessary to know how much to set aside each year and to set a realistic price for your water today and tomorrow.

**How do we prepare a long-term financial 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.

**Meaning of Terms**

***Forecast:*** to estimate or calculate in advance

***Reserves:*** cash set aside from regular operations; used “for rainy day” emergencies, and for long-term asset renewal, and large projects.

Step 1: Prepare a strategic plan

Step 2: Forecast operating expenses and operating reserve

Step 3: Forecast capital expenditures and capital reserve

Step 4: Forecast asset renewal reserves

Step 5: Forecast emergency reserve

Step 6: Forecast annual revenues

**Outline of Long-Term Financial Planning**

A long-term financial plan is based around estimates of the financial condition and needs of your water system over the long-term planning period. The planning period should be at least as long as the life of your asset with the greatest remaining useful life. The long-term plan should reference your strategic plan and documents used to prepare other BMPs. It should also include a clear statement of the assumptions on which the forecasts in the plan are based.

**Reserves Are Good**

Don’t get overwhelmed by the thought of figuring out “reserves.” Remember that it is easier to put aside $500 a year to replace a $10,000 item than to pay the whole amount in an emergency situation when it fails!

The long-term financial plan is a key document: it should answer the question: “Is our water system financially sustainable**?”** That is: Can you deliver safe and secure water in sufficient quantities to meet the needs of users for the foreseeable future. The plan will help you set realistic water rates and explain them to users. (See also the BMP: Sustainable Rates and Charges) A long-term financial plan is essential for all water systems, but some smaller systems may not need to include all the items outlined below. You are encouraged to modify the worksheets to suit your own situation.

This BMP discusses reserve accounts. Within each reserve, include for both interest and principal on any debts incurred in connection with the account. Reserve accounts are also mentioned in the BMP: *Prepare a Five-Year Plan*.

## 2 Challenges and Benefits

A long-term financial plan will help overcome certain challenges and provide several benefits:

|  |  |
| --- | --- |
| Challenges to Overcome | Benefits |
| * How do we predict the future? * How do we convince our customers that rate increases are required? * What are my minimum life cycle costs? * How do we manage increasing demands for service? * How do we plan to meet regulations? | * Provides lead-time to research cost-effective equipment choices * Establishes regular contributions to dedicated reserve funds * Helps explain water rate increases to customers * Gives greater access to financial assistance by demonstrating efficient planning |

## 3 Creating Building Blocks

Assemble the building blocks in the order shown in the following. Those shown in light blue may be created at a later date. Full instructions are given with each building block.

**STEP 1: Prepare a strategic plan**

Your strategic plan is a statement of how you want your water system to look in the future and how you intend to get there. It is difficult to create a good long-range financial plan if you do not have a strategic plan. Strategic planning typically:

Strategic Plan Worksheet

**Our Mission**

“We will deliver safe, affordable, and sustainable water supplies to our customers for the long-term future.”

* defines the purpose of your water system
* includes a vision and mission that reflects your values
* lists achievable goals and objectives.

Even if your water system has only a few connections, developing a common vision for the future of your water system makes sustainable operation easier. If you cannot agree on your vision and mission, you will have a hard time creating agreement around your long-term financial plan. To operate sustainably you must fully maintain your system, renew components in a timely manner, safeguard the quality and quantity of your water, and earn revenues that exceed expenses. Your strategic plan should outline how you will do these things; they all have important financial implications.

**STEP 2: Forecast Operating Expenses**

**Forecast of Expenses**

Operating expenses are those everyday costs to your system to produce and deliver water. These costs can include such things as chemicals, maintenance, fuel, utilities, [payroll](http://www.businessdictionary.com/definition/payroll.html), [depreciation](http://www.businessdictionary.com/definition/depreciation.html), [rent](http://www.businessdictionary.com/definition/rent.html), [repairs](http://www.businessdictionary.com/definition/repair.html), and taxes.

You will already have an Operating Account at a financial institution such as bank or credit union for your water system. If you are a smaller system this may be the only account you have; all revenues and expenses appear in this account. A larger system may maintain other bank accounts such as a separate account for reserves.

To manage your Operating Account, no matter what size of system, consider grouping operating expenses into “Administration and Operations” and “Contributions to Reserve Accounts.” This will help you to you build the reserve needed for future expenditures such as improving your water treatment.

Inflation Assumptions

General 2%

Materials & Supplies 3%

Fuel 4%

An on-line inflation calculator is available at: [http://www.bankofcanada.ca/rates/related/inflation-calculator/#](http://www.bankofcanada.ca/rates/related/inflation-calculator/)

To forecast your annual operating expenses look at past financial records. Once you know your current operating expenses, you can forecast by including adjustments for future inflation. Remember that you will want to re-visit inflation assumptions occasionally. Also add new operating expenses that may be identified in your five-year plan.

Your forecast of operating expenses is a key component of the long-range financial plan. It includes not only a forecast of Administration and Operations expenses, but also the contributions you will make to the various reserve accounts, each of which is outlined in following sections.

**STEP 3: Forecast Operating Reserve**

**Reserve Accounts**

* Operating Reserves
* Asset Renewal Reserve
* Emergency Reserve
* Capital Reserve

These reserves may each be in separate bank accounts. Smaller water systems however are unlikely to open four different bank accounts. They can however maintain these accounts in “virtual” form by tracking them for internal use with worksheets.

Your forecast of operating expenses is a key component of the long-range financial plan. It includes not only an estimate of future Administration and Operations expenses, but also the contributions you will make to the various reserve accounts.

All water systems are encouraged to track an **Operating Reserve** account. This is where you set money aside to deal with operational expenses that are not emergencies but which are important but not funded from your regular operating budget. For example, an unexpected operator training opportunity or a new monitoring service might appear. You can build the balance of an Operating Reserve account by making planned annual contributions from your operating budget, until you reach an appropriate account for your system.

This account should always be “positive;” that is there are always some dollars available. You may need to occasionally increase the contribution going into this account by transfer from your operating account.

**STEP 4: Forecast capital expenditures**

Your strategic plan from Step 1 will give you a good idea of the capital projects you will need to undertake. Examples might include installation of water filtration equipment or construction of a new reservoir. The information needed to create a capital expenditure forecast is partly available from your asset management, five-year, and strategic plans. The asset management plan identifies major items needing replacement or renewal. The strategic and five-year plans will include reference to system upgrading and expansion. These plans will reflect any required actions to meet conditions of Operating Permits or Construction Permits, such as to install disinfection within the next two years.

**Depreciation**

Your Statement of Income and Expenditures may list “depreciation: expenses. *Depreciation* is the decrease in value of assets as a result of wear and tear. Some types of water systems, such as improvement districts, are now required to calculate the amount of annual depreciation.

Capital Expenditure Forecast

To prepare the capital expenditure forecast, gather information on the cost of each item and the year it is expected to be installed. You can ask manufacturers or installers for quotes, other local water systems for information on their experiences, or contact your local drinking water officer or public health engineer for guidance. Then complete the forecast worksheet appropriate for your system. Also note that there is no hard and fast rule that separates capital expenditures from expenditures from the operating budget. A practical guideline for small water systems is that any item exceeding $2,000 is a capital expenditure.

**STEP 5: Forecast Capital Reserves**

Consider setting up a separate Capital Reserve bank account. Otherwise, do track Capital Reserve funds within your regular account and make sure this money is dedicated to capital purchases. Within this account show the sources of money that you use to pay for capital projects, and show the various expenditures you make in connection with capital projects. This account may include proceeds from loans, and the payments of principal and interest on long-term debt. Your long-range financial plan should include a forecast of this account over the longest term practical.

Capital Reserve Forecast

You should manage this account so that the bottom line is always positive. To do this you may need on occasions to increase the money going into this account, for example by increasing the contribution from your operating account. Or you may need to limit your expenditures from this account, for example by deferring a capital project.

**STEP 6: Forecast Asset Renewal Reserve**

The Asset Renewal Reserve should list the sources of money and the expenditures related to asset renewal. Your long-range financial plan should include a forecast of this account over the longest term practical. You should manage this account so that the bottom line is always positive. To do this you may need on occasions to increase the money going into this account, for example by increasing the contribution from your operating account. Further information about managing asset renewal is found in Best Management Practice: *Create an Asset Management Plan*.

Asset Renewal Reserve Forecast

**STEP 7: Forecast Emergency Reserve**

This account is where you set money aside for emergencies: unexpected events that can happen to even the best-managed water systems. You can build the Emergency Reserves account balance by making annual contributions from your operating budget until you reach a balance that is appropriate for your system. You should manage this account so that the bottom line is always positive. To do this you may need on occasions to increase the money going into this account, for example by increasing the contribution from your operating account.

A future Best Management Practice: *Create an Emergency Response Plan*, will give guidance on setting an appropriate emergency reserve target balance and on other aspects of emergency planning.

**STEP 8: Forecast annual revenues**

Water system revenues may come from one or more of these charges:

Forecast of Revenue

1. the basic water service charge (fixed charge per billing period)
2. the consumption charge (rate per cubic metre)
3. service fees (connection/disconnection charge, line extensions).

There may be earned revenues from other sources, such as charges to developers for extending the water system. Smaller water systems may simply take their total annual expenditures and divide this by the number of connections to come up with the annual charge per household.

Do base your projected revenues on clear assumptions about changes in the water supplied to customers, such as stating the estimated increase in additional customers over the period covered by your plan. You may make projections of your customer base by looking at past growth trends and taking into account what you know about the future of your community. In larger systems which have water meters are installed, the revenues are influenced by the amount of water the average customer will use. In recent years some systems have experienced a modest fall in consumption per person, due to the success of water conservation initiatives. Small changes to the assumptions you make about these factors can cause large changes in projected revenue. These factors should be reviewed annually to see if they are still valid.

To start this part of the planning process, make some realistic assumptions about annual changes. For example, assume that the basic water service charge will increase by 2% per year and the consumption charge will increase by 3% per year.

The underlying purpose of forecasting future revenues is to be able to set future rates and charges to recover enough money to be financially viable for the long-term. This topic is covered in more detail in the Best Management Practice: *Setting Sustainable Rates and Charges*.

**How do we know if our system is financially viable?**

Once you have completed the forecasts and estimates outlined above, the next step is to find out if your planned rates and charges will be enough to pay for the estimated operating expenses and capital expenditures. For this purpose, a calculation of Annual Net Surplus (or Deficit) will indicate if your system is financially sustainable. The Annual Net Surplus/Deficit measures the difference between revenue and expenses: a positive difference is a surplus and a negative difference is a deficit. This in turn lets you know whether your financial assets can be maintained or if they will be depleted. Annual Net Surplus/Deficit can be displayed on a simple spreadsheet.

Forecast of Annual Net Surplus

## 3. How long will this take?

The table below shows a typical timeframe to prepare the Best Management Practice Long-term Financial Plan 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 long-term financial 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.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Building Block | Weeks > | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  |  |  |  |  |  |  |  |  |  |  |
| 1 | Create strategic plan |  |  |  |  |  |  |  |  |  |
| 2 | Create long-term financial plan |  |  |  |  |  |  |  |  |  |
| 3 | Forecast of revenue |  |  |  |  |  |  |  |  |  |
| 4 | Forecast of expenses |  |  |  |  |  |  |  |  |  |
| 5 | Forecast of capital expenditures |  |  |  |  |  |  |  |  |  |
| 6 | Forecast annual net surplus |  |  |  |  |  |  |  |  |  |

## 4. More Information

More information on long-term financial planning 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>