# Best Management Practice

# BMP A: Create a Basic Asset Inventory

## 1 What, Why and How?



**What is an asset inventory?** An asset inventory is a list of items of value owned by the water system, with information about each item. Detailed information may include the manufacturer name and model number, installation date, and original cost. More detailed versions may include the condition of the asset and remaining useful life.

**Why do we need an asset inventory?** The asset inventory increases your knowledge of the system, and gives you specific information to make better financial decisions. The inventory will help you schedule repairs and replacements and ensure that you are getting the greatest value possible from your assets. If you don’t know what you have you can’t manage it effectively.

**How do we prepare an asset inventory?** Here are the main steps in preparing an asset inventory. These steps are explained further in following sections. For each step you create a building block.

Step 1: Create a plan of your system

Step 2: Identify and list of your system’s assets

Step 3: Research the life expectancy of components

Step 4: Work out the expected service life of each asset

Step 5: Create a list of service providers

## 2 Challenges and Benefits

|  |  |
| --- | --- |
| Challenges to Overcome | Benefits of an Asset Inventory |
| * You don’t know what you have, what condition it’s in, or when it needs to be renewed.
* You have unexpected failures because you don’t know the condition of components.
* You do not know how much money to set aside to renew your assets.
* You cannot explain properly to customers why you need money to renew assets.
 | * Shows the strengths and weaknesses of your physical assets, which helps to avoid unexpected problems with operation and water quality.
* Enables you to plan for replacement and renewal and to know when money must be spent.
* Provides overall picture of your system, and helps you share this with customers and regulators.
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## 3 Creating Building Blocks

Assemble the building blocks in the order shown in the following. Notes are included with each building block (In the Excel files).

You may find that information on your system is already on file, or spread out in various locations. Now is a good time to pull together information from all sources available and keep it in one place. This will save time when you need to refer to this data again in later steps in asset management, or in communicating with stakeholders such as issuing your annual report. Information on your system can come from:

*Where are our assets?*

|  |  |
| --- | --- |
| * As-built plans

Create Plan of System | * manuals and purchase receipts
 |
| * well logs
 | * Construction Permits
 |
| * maintenance logs
 | * water system risk assessment reports
 |
| * land surveys
 | * past annual reports
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If you have original as-built plans, you will need to check them carefully, from source to tap, and update them with any recent additions or replacements. A scale plan will help you identify not only components, but lengths and sizes. Be sure to keep your updated files in a secure location for future reference. If you do not have a scale plan, do check with outside agencies such as regional public health engineering, drinking water officer, or engineering consultants, who may have worked on your system, and ask for copies of their documents.

*What are our assets?*

The figure below is an example of a schematic for a small water system. Your water system may have more or less components. You should create a schematic of your system, which consists at a minimum of the water source, treatment, and distribution system. The schematic you create will help you in listing all your assets (see worksheet in the appendix for additional information).

In listing the assets also collect and record the following information for each:

* Condition
* Age
* Service History
* Useful life.

List of Assets

You can keep an ongoing record of your assets by completing the asset inventory form by hand. Or you can use an Excel computer spreadsheet. Get the best information that you can, but don’t get bogged down. It is okay to use estimates where you don’t have complete information. New information will become available as assets get replaced or rehabilitated, and your inventory of assets will improve.



*What is the useful life?*

Use the Reference sheet (REF) in the Excel file “Typical Life Expectancies” to find information about the typical life expectancies of water system components. You may be able to customize this schedule to reflect the characteristics of your water system. Information about the typical life expectancy of assets is also available from a number of sources. These include the following web sites:

Determine Useful Life of Assets

(*web site references to follow*)

One of the most important aspects of managing your assets is working out how much longer you think they will last. A number of factors can affect the remaining life of your assets, including the quality of routine servicing and maintenance, excessive use, and environmental conditions such as poor source water quality, soil quality, and climate. Use your local knowledge plus manufacturers’ recommendations in determining the estimated service life. Assets that are in poor condition, not regularly maintained, or subject to excessive use or soil quality issues will be at the lower end of the expected useful service life range.

*What is the remaining useful life?*

Estimated Useful Life

Knowing when to repair, rehabilitate, or replace an asset will help you get the most value from your assets. At some point, continuing to repair the asset will no longer be cost-effective and you will need to rehabilitate or replace it.

Once you have an up-to-date inventory of assets, it is a good idea to record details of the people who service the assets and suppliers who can provide replacements. Storing this information together with your inventory records will save time in the future when you have questions or concerns about individual assets. This information can also be used to help explain repair and replacement costs to users when developing a budget or requesting a rate increase.

List of Service Providers

*Who services our assets?*

There is a blank schedule provided with this BMP to record details (*to follow later*) . This may also help in the implementation of other BMPs in this series.

## 3. How long will this process take?

The table below shows a typical timeframe to prepare this BMP 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 asset management 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.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Building Block | Weeks > | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  |  |  |  |  |  |  |  |  |  |  |
| 1 | Plan of System |  |  |  |  |  |  |  |  |  |
| 2 | Asset Inventory |  |  |  |  |  |  |  |  |  |
| 3 | Typical Life Expectancies |  |  |  |  |  |  |  |  |  |
| 4 | Remaining Useful Life |  |  |  |  |  |  |  |  |  |
| 5 | List of Service Providers |  |  |  |  |  |  |  |  |  |

## 4. More Information

More information on the topic of this BMP 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>