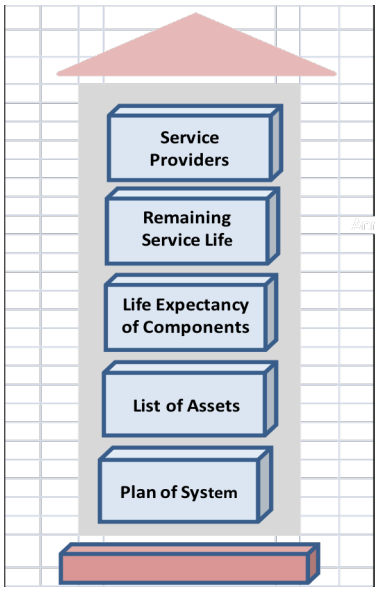
Best Management Practice

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 your system's assets
Step 3: Find out the life expectancy of components
Step 4: Work out the remaining service life of each asset
Step 5: Create a list of service providers

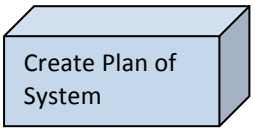
2 Challenges and Benefits

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. • Enables more efficient emergency response • Enables operator succession planning • Enables inventory for emergency repairs

3 Steps to Follow

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

Step 1: Create a Plan of System

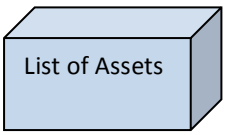


Create a clear and current plan of your water system. You may find that information on your system is already on file, or spread out in various locations. Now is a good time to pull together information from all available sources and keep it in one place. This will save time when you need to refer to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

- As-built plans
- well logs
- maintenance logs
- land surveys
- manuals and purchase receipts
- Construction Permits
- water system risk assessment reports
- past annual reports

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 may 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 the regional health authority or engineering consultants who may know about your system, and ask for copies of their documents.

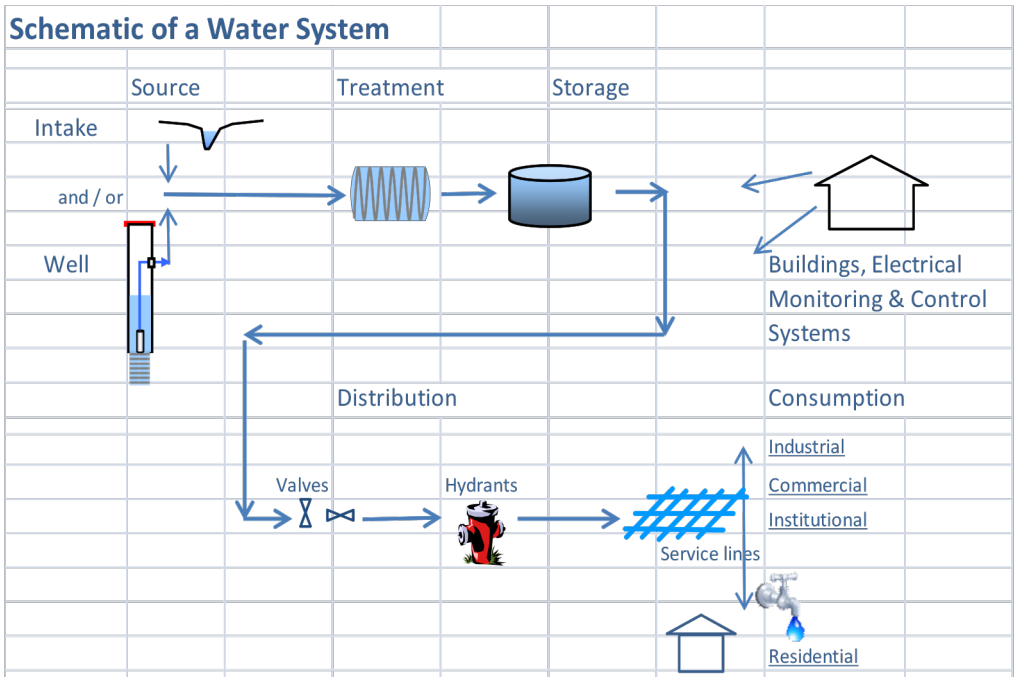
Step 2: Identify and list your system's assets



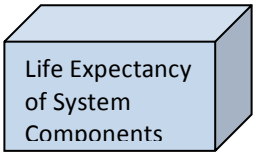
The figure below is an example of a schematic for a small water system. Your water system may have more or less components. You should create a schematic of your system, which consists at a minimum of the water source, treatment, and distribution components. The schematic may help you in listing your 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
- History of breaks and malfunctions
- Useful life.

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. Creating the inventory is your best opportunity to assess the information you have about your assets and to identify gaps in knowledge.



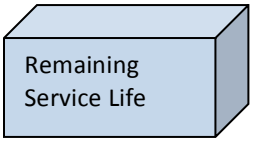
Step 3: Find out the life expectancy of components



Using the Reference Sheet "*Typical Life Expectancies,*" find information about your water system components. Information about the typical life expectancy of components is also available from a number of other sources. There is some flexibility in the way you define an "asset". Some of your water system "assets" may consist of a single component such as a pump. Other "assets" may result from the combination of several components which together make an "asset" such as a pumping station, which includes pumps, pipework valves and other components. You might consider grouping components of similar life expectancy as one "asset"; for example group curb stop and corporation stop valves together.

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

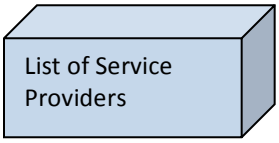
Knowing when to repair, rehabilitate, or replace an asset will help you get the most value from your assets. At some point, continuing to repair the asset will no longer be cost-effective and you will need to rehabilitate or replace it.



A number of factors can affect remaining service life, including 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 working out remaining 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.

Step 5: Create a list of service providers

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 of 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.



4 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. The time required to gather information about assets will depend on the size and complexity of the system involved.

Expect to revisit your asset inventory 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 Service Life									
5	List of Service Providers									

5 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

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

For information to help with an asset inventory:

- Records of your water system held by your Health Authority.
- Possibly well logs prepared when your well was drilled.