

STEP 3 Manage assets

Assets are the physical components of an infrastructure system, such as pipes, pumps and taps. An asset can be any piece of equipment, tool or machinery used in the operation of the system.

Asset management is the maintenance, repair and replacement of all the components of the water supply. Planning and managing the assets helps maintain multiple barriers to contamination. When the water supply system is well maintained it runs better and is less likely to fail. Asset management can also reduce the cost of operating the water supply.

When a water supply fails, it is often due to the failure of an electrical or mechanical part. Electrical and mechanical parts need regular maintenance. Long-term asset management includes understanding how long the parts are expected to last and planning for replacement or upgrades.

Some asset maintenance tasks can be dangerous. For example, to service a submersible pump you need to have received special training. These tasks should only be done by someone who is highly experienced or qualified.

The aims of this step

- Identify water system assets and their maintenance requirements.
- Plan long-term management and replacement cycles of assets.

At the end of this step, you should have

- organised maintenance activities for electrical and mechanical assets
- a completed asset management replacement timeline.

Preparation

Package materials	Additional materials	Estimated time
Maintenance posters • 'Chlorination' • 'Diesel Motor and Pump' • 'Electric Pumps' • 'UV Disinfection' • 'Diesel Generators' • 'Solar Powered Pump'	Textas, pencils Community Map from Step 1 List of step-wise system improvements As-built map of the water supply	Half a day
'Asset Management Table' activity sheet		

“ I want to put all those posters together and laminate them as a book. ”

Read the section on water treatment in Appendix 5 'Water quality' and Appendix 8 'Asset Maintenance'.

What to do

The asset management step is in two stages. In the first stage you identify each mechanical or electrical component to understand its maintenance needs. In the second stage you plan for its long-term replacement.

Identify the electrical and mechanical components

The maintenance posters cover the main electrical and mechanical items found on most small communities. These items need to be inspected and serviced regularly. Each poster outlines the day-to-day maintenance requirements.

Select the posters that relate to the community's supply. Point out to the community participants each of the maintenance requirements and tasks described in the posters. Talk about the similarities and differences between what is on the posters and what is done for this community's water supply. If there are differences, are they significant and is there a good reason for them? For example, in a very dusty area solar panels might need to be washed more often.

Check each asset and demonstrate the maintenance task to the community participants.

When the maintenance tasks are complete:

- Write any extra requirements and tasks on the posters.
- Add any extra items to the list of step-wise water supply improvements.
- Make sure the posters are displayed where they can be used. You could either display each poster near the relevant asset or bind all the posters together to create a booklet. Do whatever best suits the community.



TIPS

- › *During or after the meeting, carry out some of the weekly and monthly activities as a practical training session.*
- › *As-built maps can provide extra information about the water supply infrastructure, such as location and specifications of components and when they were installed.*
- › *After the meeting, carry out on-site inspections and check that supplies (of oil, for example) are adequate.*

Plan to replace components

List every component on the 'Asset Management Table' activity sheet. Describe each component in the left-hand column, including the following details, if possible:

- description (make, model, size, design capacity)
- condition
- age / year constructed.

In each corresponding column, write:

- quantity
- date fitted
- working life, in years (use the table at the top of the activity sheet to work this out)
- expected replacement date (add the expected working life to the date fitted)
- approximate replacement cost
- other information that may help with re-ordering parts, such as the distributor's contact details.

At the bottom of the activity sheet is an asset management timeline. Using the stickers provided with the package (see Appendix 3 for sticker descriptions), mark on the timeline the expected replacement date of each component. Depending on your experience and local conditions, you may choose to change the actual working life. This process, however, will help you to plan repair and replacement cycles.

Discuss the expected replacement costs and strategies to meet the costs.