

Bringing Water to a Village in Lesotho

Water Supply Provision Process

Pre-Construction

1. Village submits application for water supply system to **Lesotho Department of Rural Water Supply (DRWS)**.
2. A **Village Liaison Officer (VLO)** from DRWS visits the village. The VLO carries out the following activities with the village:
 - a. S/he documents the village's existing water supply situation and the village's level of desire to work to build and maintain a water supply system.
 - b. S/he talks with the village about what DRWS can do to help them improve their water supply situation.
 - c. S/he helps them to organize a **Village Water Committee (VWC)** that will oversee the construction and post-construction maintenance of the water supply system.
 - d. S/he begins taking flow measurements from all water sources around the village (usually springs).
3. DRWS makes a priority list for villages to work with and when a village is chosen, a **Senior Technical Officer (STO)** from DRWS visits the village. The STO carries out the following activities with the village:
 - a. S/he explains which water sources can be used in a new water supply system based on the flow measurements taken by the VLO and the general guidelines for how water supply systems can be constructed according to DRWS standards.
 - b. S/he performs a survey with the VWC. They start at the spring and decide where the pipeline will run and where the various structures (sedimentation tank, storage tank, tap stands (spigots), etc.) will be located.
 - c. S/he takes the survey information back to the DRWS office and draws a design of the water supply system using DRWS's format. The design is reviewed by DRWS engineers and if it is acceptable, construction of the system can commence.

Construction

1. DRWS delivers materials that cannot be found naturally around the village (i.e. pipes, cement, etc.) to a point as close to the village as they can get with their delivery trucks. The villagers then collect the materials from that point and set up a storage site in the village.
2. When the village has collected the majority of their materials, a skilled builder from DRWS moves into the village to begin construction of the water system.
3. The builder teaches the villagers how to perform several tasks that will complete the preparation for construction. These tasks are:
 - a. To excavate the spring back to a point where the water is coming out of the ground at a single distinct point (called the eye of the spring).
 - b. To shape stones found near the village so that they can be used to construct stone masonry water tanks.
 - c. To collect sand that can be used in the concrete/mortar mixes.
 - d. To dig trenches so that the pipeline can be buried.

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4. The builder splits his time between supervising the villagers' unskilled labor operations and actually constructing the water system. The steps in actually building the water system are:
 - a. First, the builder places a pipe right at the eye of the spring to catch the water coming from the spring and then makes a concrete protection around the pipe and the spring so that all of the water is channeled into the pipe.
 - b. Then the builder constructs a small sedimentation tank in close proximity to the spring. All structures are constructed from stone masonry.
 - c. Next the builder constructs a storage tank somewhere near the village that will collect water during periods of low demand each day.
 - d. The builder then constructs tap stands at different locations throughout the village.
 - e. Finally, the builder connects the pipe coming from the spring to the sedimentation tank; pipe is laid in the trench between the sedimentation tank and the storage tank; and pipe is laid in trenches between the storage tank and each of the tap stands in the village.
 - f. After all pipes are connected and construction is finished, an engineer from DRWS inspects the system. If s/he approves of the construction, the villagers cover the protected spring with soil and backfill all of the pipeline trenches.

Post-Construction

1. During construction of the water system, one of the members of the VWC that was chosen to be the "Water Minder" works with the builder. The builder teaches him or her the function of each of the components of the water system and how to perform routine maintenance tasks. From the point when the DRWS engineer approves of the construction of the system and the builder moves out of the village, the Water Minder is responsible for all such routine maintenance of the water system.
2. If any maintenance problems arise that the Water Minder cannot handle, an application for maintenance of the system is submitted to DRWS. DRWS prioritizes its maintenance requests and the village must pay for any work that DRWS does.

Adapted and used with Permission from Eric Giddens, PCV Lesotho 1997-1999