



HOPE International Development Agency

Water Supply in Ethiopia

Necessity of Safe Access to Clean Water

Water is indispensable to our lives in many ways; to drink, to cook, to wash clothes, to clean our homes, just to name a few. We use water more than we actually realize, and its safety is of paramount importance as water-borne diseases can be very dangerous to children especially in the rural communities. Although many of us take our easy access to water for granted, many women and children in rural Ethiopia walk hours to fetch water from ponds or springs that might be contaminated.



HOPE's Approach to Clean Water Supply



On-site study and analysis in designing water supply systems specific to each site



Transportation of construction and water system materials to the villages



Construction of Water Supply Systems in the villages through local subcontractors



Assist the community in **setting up a local committee** to manage and maintain the water supply system





On-Site Study and System Design

HOPE builds gravity-fed water supply systems that relies on the force of gravity alone to distribute water. Therefore, identifying potential water springs that can feed a sizable water supply system is critical. At the very beginning of the project, a HOPE water engineer visits the project area to gather information on each spring such as its flow rate, altitude, distance from the populated areas, and so on. This data is then used to determine the shape, size and scale of the water supply system.

Material Transportation

Construction materials and the components of the water system, such as pipes, cement, sand and gravel are delivered by trucks. However trucks cannot directly access most project sites due to the lack of traversable roads. Therefore HOPE's 4WD vehicles are used to transport these materials further from the points where the larger trucks unload the materials. However there are still many roads that even the 4WD vehicles cannot access. The members of the local communities then step in and carry the materials on foot for the final stretch.





Construction of the Water Supply System

Construction of the water supply system is carried out by sub-contractors from nearby towns.

A water supply system consists of four main parts:

- Spring Cap
- Water Reservoir
- Water Points (Faucet)
- Wash Basins (for Laundry)

Construction of the water supply system starts in the dry season and is typically completed within 6 months before the rainy season sets in.

HOPE encourages local communities to participate and contribute to this construction process as well.



Digging ditches for the pipe installation



Carrying pipes to a water point construction site

Participation of Local Communities

Participation in the construction of the water system helps build a sense of ownership among the local members of the community, which is important for the sustainability of the water system. The involvement of the community and their contribution to the project encourages them to take up responsibility to maintain and sustain the water system.

Examples of community contribution are;

- Carrying of materials on foot (pipe, cement etc)
- Digging ditches to lay pipes
- Building roads and bridges for vehicles to pass



Preparing roads for vehicles



Building a new bridge

Sustainable Management System

The most important part of the project is to ensure the life of the water supply system over many years.

Simple Structure

In order to make for sustainable water supply systems, HOPE designs them as simple as possible. Most project sites are remote and often lack electric supply and access to technical services such as plumbers and mechanics. Therefore, all the water supply systems HOPE designs rely solely on the force of gravity alone.

Local Maintenance Team

The local community elects 10 people to form a maintenance team who are then provided with on-the-job training from professionals during the construction of the water supply system. This helps them obtain



The maintenance team and the committee members training on water reservoir maintenance

important, practical skills and knowledge to handle regular repair and maintenance of the system.

Management Body

HOPE provides assistance to the local communities in forming a WaSA (Water and Sanitation Association) committee that can administer the whole water supply system. This local committee will

represent the community and enforce water usage by-laws that are created and agreed upon by the community members themselves. The committee will also mediate cases of conflict and damages to the system. The committee will also collect water usage fees from families, which will be used to fund the maintenance of the water system.



Changes in the Locals' Lives

Water points are designed so that families can collect a minimum of 25 liters of clean water within a 15-minute walk from their homes. This not only helps protect people from water-borne diseases such as diarrhea, but also reduces the time used to fetch water, which frees children from this daily chore thus allowing them to get to school on time. The women also benefit from the time saved which they can use for their families and for themselves.





HOPE was first founded in 1975 in Canada, and HOPE UK was founded in 2002. www.hope-international.org.uk