Water, Sanitation, Hygiene (WASH) Improvements at the Mpapa Health Center, Tanzania

Progress of work performed May 2022 – August 2022



PHASE 1: Water source improvements, transmission line construction, and watershed protection.



In collaboration with Sanitation and Water Action (SAWA), a Tanzaniabased WASH NGO, and with generous support from our donors and partners, WEFTA is working to improve WASH resources for the Mpapa Health Center, a Catholic-run healthcare facility in the Mbinga Diocese of Tanzania.





Water Source Improvements

Paraphrased from SAWA Engineer: AUGUST FELIX MBUYA

Pictures show stages in construction of sedimentation chamber at the source, despite having challenge of presence of water we had success to build 3m3 sedimentation chamber with two partitions so it will be easy to filter the water with sand.

After introducing the filter chamber at the bedrock, we had success to capture more than 90% of the water at that source where we increased the potential source water quantity from 3500l/h to 4300l/h and we expect it will increase after source protection.

At sedimentation tank we provide a door, it will allow someone to enter and clean, also we provide washout and overflow.

Outlet of 3" GS pipe was also provided.

Construction of sedimentation chamber is at final stage of finishing, cheers to our technical team leading by Eng. August Mbuya despite of many challenges of water, rain and cold but we success to produce a quality sedimentation chamber as our primary and secondary treatment unit.









Excavation on the water source begins.











SAWA and community members move the materials to the work site.













Community work group.







3" piping used for the infiltration trench.

VERNAND

Measuring the pipe for infiltration perforations.













The perforated pipe is placed in the trench.







Smaller rock is placed on top of the larger rock to prevent dirt from clogging the trench.


The finished infiltration trench.

Water Source Improvements (continued)

Paraphrased from SAWA Engineer: AUGUST FELIX MBUYA

Due to presence of water which drain from different angles we decided to use innovative technique of infiltration galleries where excavated 6m away at depth of 6m whereby we succeed to collect all water which drain from different angle.

Now ongoing process is building of the sedimentation chamber at the source.

Excavation begins on the site of the sedimentation chamber.

Sedimentation chamber foundation excavation.

Sedimentation chamber foundation preparation.

Rock is gathered for the chamber foundation.

Chamber rock foundation is put in place.

Sand for concrete is hand-carried to the site.



















Steel reinforcement is placed for the wall structure.





The galvanized outlet pipe shows good water flow.



Chamber door is set and prepared for the next concrete pour.





Sedimentation chamber is coming along.

Chamber roof is prepared for the concrete pour.







Sister puts the final mortar on the chamber door.

Water Transmission Line Construction

Paraphrased from SAWA Engineer: AUGUST FELIX MBUYA

After meetings with community leaders and villagers to explain advantage of community engagement and mobilization in projects, we succeed to increase community participation in trench excavation whereby more than 80% of 6KM trench was excavated despite having rain and many community ceremonies.

Survey stakes are placed for the transmission line trench path.

Transmission line trenching begins.





Transmission line trenching through a wood lot is not always easy.




Checking trench depth.





Transmission line material arrives. HDPE Pipe is durable, flexible and cost effective.



Transmission line piping is not easy to transport.

Laying out the pipe for placement in the trench.



The sedimentation chamber shut-off valve is tested.



Connecting the transmission line to the sedimentation chamber shut-off valve.





Transmission line connection to the water source.

Transmission line connection to the sedimentation chamber with shut-off valve.



Water Transmission Line Construction (Continued)

Paraphrased from SAWA Engineer: AUGUST FELIX MBUYA

Just look at the photos everyone is happy either my team or villagers, we connect all pipes from intake to Mpapa parish more than 5km is connected despite challenges from topography and weather condition, but we succeed to reach our phase one project in time, we take only 30 days to ensure construction of innovated intake, trench excavation and pipe laying is done.

Waooo, this means more to me, my team and Mpapa Parish in general because the work was very huge and difficult, but we did it!

Next phase we are going to construct supply tanks, water points and so on...



The black 'poly' pipe is connected to the Galvanized pipe with mechanical joints.















The air release valve is in place. This is a one-way valve that only allows air to escape.





Almost to Mpapa. The church can be seen in the background.







Watershed Protection

Paraphrased from SAWA Engineer: AUGUST FELIX MBUYA

Water User Association of Northern Lumeme in collaboration with Mpapa Parish will plant more than 100 water friendly trees at the intake during rain season so this is just the beginning of natural source protection project.

SAWA and stakeholders with 'water friendly' saplings.





Planting saplings to help protect the water source.

Progress Report #2 – Coming soon!

We are grateful for our generous donors in supporting this project. Funding to complete the first phase (source capture, transmission line, and community tap stands) is in place.

We are seeking donors to fund the second phase of the water supply portion of this project and the third phase of wastewater system construction.

Please contact us at info@wefta.net if you would like to help!

