

I train young men and women to drill water wells in Tanzania. We have built 7 well drilling rigs and have completed 75 wells. I have worked with a water engineer with the Tanzania government to develop well drilling standards for use in training and practice. I would like for the members of NGWA to examine the standards and give me any criticism or suggestions. Please email me your comments. Thanks. Ron Reed 530, 342 9321 mrron@sbcglobal.net

KILOLO STAR WELL DRILLERS WATER SUPPLY WELL STANDARDS

These guidelines and standards are minimum requirements for basic protection of the groundwater resource and for the health and safety of communities using wells. The Kilolo Star Well Drillers are committed to following these standards and are dedicated to protecting the ground water resources of Tanzania.

1. Every well shall be located at a site free from sources of contamination.

The well should be a minimum 30 meters from any part of human waste disposal area (septic drainfield, latrine).

At least 15 meters from any food or related wastewater disposal area (e.g. kitchen and or laundry waste water disposal areas.

At least 30 meters from a confined animal feeding areas, animal housing or manure storage.

At least 150 meters from a solid waste landfill (dump) or chemical or industrial waste disposal area.

Away from surface drainage of rainwater that might flood the well.

2. The well drilling process must not contaminate the ground water.

No organic materials should be used such as an animal waste, soil containing roots or other vegetation, nor any petroleum based products.

3. Every well must have an annular surface seal surrounding the casing to at least 5 meters below ground surface or to the top of the target aquifer if it is less than 5 meters. The seal should be cement grout, bentonite or concrete with small rocks (less than 2.5 cm)

3. Gravel pack, filter pack, annular backfill material shall be clean and free of organic material prior to placement in the well.

4. The area immediately surrounding a well shall be sloped away from the well to drain water away from the well.

5. The well shall be cleaned and tested to assure safe, potable water prior to use. A 50 ppm concentration of chlorine is recommended.
6. Water from each well should be tested for basic portability. Adequate testing is required to assure no Escheichia coli (Ee-coli) beyond the minimum pathological dose is present. Other tests should be considered depending on the area and known or suspected contamination of nitrates, arsenic, fluoride, salinity, or radionuclide.
7. Any well or borehole that is abandoned shall to the extent possible restore the boundaries between aquifers and from ground surface to the first aquifer. Steps shall be taken to prevent any hazard to children and others from the abandon well.
8. All wells shall be documented as to location, well depth drilled and depth of completed well. Location by GPS for each well is required. Formation description by depth, including, predominant materials, color, size and hardness or texture. To the extent possible well documentation shall be filed with the appropriate government agencies.
9. All required license and government registration shall be complied with.
10. Kilolo Star Well drillers shall always work in a safe manner. Care should be taken to prevent children and others from being on the drill site and exposed to possible injury. Well drillers should wear hard hats and work shoes. Safety rules should be established and followed.
11. Kilolo Star Well Drillers shall respect the people of village where they are drilling a well. The drill site should be cleaned and the ground restored when the well is completed. All trash shall be picked up on disposed of.

**KILOLO STAR WELL DRILLERS ARE COMMITTED TO
WORKING AS PROFESSIONAL WELL DRILLERS AND TO
FOLLOWING THE PRINCIPLES OF PROPER WELL DRILLING.
WE RESPECT THE GROUND WATER AS A HUMAN TREASURE
TO BE PROTECTED AND VALUED.**

KILOLO STAR WELL DRILLERS

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