

## **Tube well with hand pump**

### ***Virtual Sanitary Inspection***

WASH FIT Technical module on WATER  
Supplementary material  
**Time to complete: 30 minutes**

### **I. Background**

You are the local environmental health officer conducting surveillance and have been tasked with the very important job of conducting a Sanitary Inspection (SI) at the health facility in the village of Waterville.

Waterville village is served by a primary health care facility, Waterville PHC, which relies on a single tube well with hand pump (installed 5 years ago) for its water.

It is a lovely sunny day in Waterville on the day of your inspection (32° Celsius), which you are told is a pleasant change, as Ms. Grace Macauley (the water supply representative that is assisting the WASH FIT team to do the assessment) has complained that last week it was much cooler (22° Celsius) and raining heavily for the whole week.

The water quality is typically good at Waterville PHC, as your pre-Sanitary Inspection review of the historic water quality data for this water supply indicates that there were no faecal coliforms detected during last year's inspection (i.e. 0 CFU per 100 mL; sample taken on 21 February 2022), although the turbidity on this same date was high (10 NTU). There are no other water quality data available.

There is no continuous water treatment at this well prior to abstraction by the facility staff, although shock (batch) chlorination is practiced following flood events annually (typically a one-off dose of the well with chlorine, to a residual concentration of approx. 0.5 mg/L).

## II. Task

Using the above information, and Figures 1 and 2 below, complete the Sanitary Inspection forms for the tube well with a hand pump.

1. Answer all 10 questions
2. Answer the questions by ticking (✓) the appropriate box. For guidance, refer to the numbered risk factors linked to each question on the next page. Note that these are example risk factors only and should represent the starting point for a locally adapted SI package. Consider what additional risk factors may be relevant in your local context, and record these under “Additional details”.
3. If there is no risk present, tick the “No” box. If the question does not apply to the system being inspected, tick the “No” box, and add “NA” to the “If Yes, what action is needed?” column.
4. If a risk is present, tick the “Yes” box. For important situations that require attention, record the actions to be taken in the column provided. These notes can be used to develop a detailed improvement plan, outlining what will be done, by whom, by when and what resources are required. Where possible, corrective actions should focus on addressing the most serious risks first. Consider low-cost or no-cost improvements that can be made immediately. Some of this information may not be available if in a classroom setting – do the best you can!

## II. Supplemental information to help complete the task

- There is no inspection port (or corresponding cover) in this well type
- There are no sanitation facilities or sanitation infrastructure within 10 meters of the well, although there is a pit latrine 20 meters uphill of the well which serves the facility
- The local soil type is sandy, and is considered to be very permeable
- The well is located on the edge of the facility grounds, away from the facility building
- There is no fence or barrier around the well, although it is adjacent to a heavily vegetated area on the north side of the facility grounds
- This heavily vegetated area is sometimes used to dispose of rubbish from the health care facility, and there are some signs of open defecation by community members
- The perimeter of the facility is not well maintained and there is evidence of animal activity around the well facility (chickens roaming)
- There is an old open tube well located 40 meters uphill from the tube well with hand pump; however, thankfully the facility no longer uses this for, but it is still used by the local community for dumping household effluent (i.e. grey water from washing, bathing, laundry water etc.)



**Figure 1. Close-up of the tube well with a hand pump**

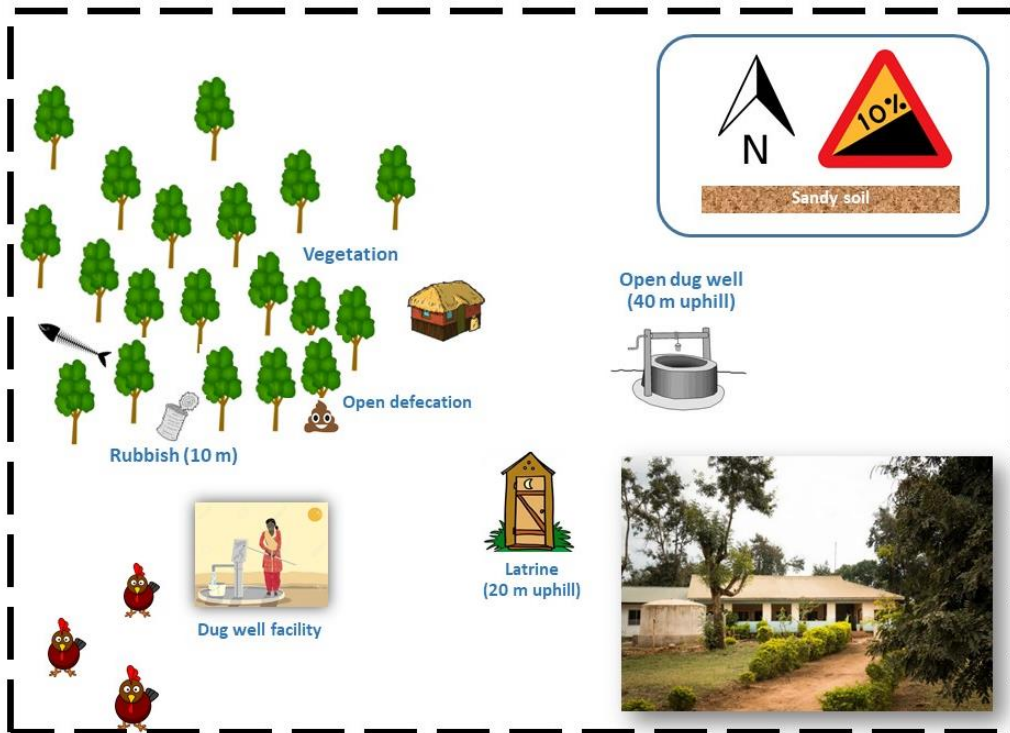


Figure 2. Overview of Waterville PHC (the dotted line is the perimeter of the health care facility)

### III. Guiding questions for group discussion

1. What was the overall risk score? Does the tube well meet the minimum standards as outlined in WASH FIT?
2. What are some corrective actions that should be taken?
3. Were any of the questions unclear or difficult to understand?
4. In what way would SI forms be useful in a health care facility?