

Comment on: Dry condition of dug wells in the dry summer season

The following features need to be considered for shallow dug wells:

1. The diameter and depth of the well;
2. The design of the well including the composition of the rings and its porosity;
3. Distance of the recharging water bodies for instance any tributaries or channels of rivers, jheel/beel or large open ponds;
4. Suitable geomorphological landforms with host shallow unconfined aquifer.

Generally water from the surrounding water bodies filled with the monsoon rainwater recharges the shallow dug wells. In other words it can be expressed, as tapping of water from the top aquifer that is believed to contain arsenic safe water.

The design used by Project Well is a modified version of the conventional wells developed by Dr. Timir Hore. The depth of such wells, in the Project Well study area, (location maps are available on the web site <projectwellusa.org>) range between 14 to 22 feet. The vital feature of such well is the pack of sand around each well, from bottom to top, that helps in recharge of water and also acts as a filter to a certain extent. The porosity of the concrete rings needs to be considered depending on the geological nature of the sediments underlying the area and which would be almost the same in Bengal and Bangladesh with some localized variation.

The wells that are constructed in 2001 (one), 2002 (five) and in 2003 (twenty) have been observed to have water of the following depths in the driest month of May 2003.

DW#	No. of Consumers (March 03)	Total Rings	Depth (ft)	Height of water level in May 2003 in feet
<b>2002</b>				
PW2	30	20	18.33	0.92
PW3	**1	21	19.25	3.67
PW4	**13	23	21.08	4.58
PW6	50	20	18.33	7.33
PW7	126	16	14.67	3.67
<b>2001</b>				
PW9	**4	22	20.17	NA
<b>2003</b>	<b>Constructed</b>	<b>in May 2003</b>		
PW1	New	22	20.16	1.38
PW5	Scheduled			

DW#	No. of Consumers (March 03)	Total Rings	Depth (ft)	Height of water level in May 2003 in feet
PW10	Scheduled			
PW11	New	22	20.17	NA (water appeared at 8.6 feet)
PW12	New	20	18.33	5.0 (as of 10th June 03)
PW13	New	21	19.25	4.58
PW14	New	23	21.08	4.13
PW15	New	23	19.36	4.58
PW16	New	25	22.92	3.21
PW17	New	20	18.33	3.21
PW18	New	*19	14.25	3.21
Pw19	New	23	21.08	0.11
PW20	New	24	22.00	8.25
PW21	New	21	19.25	3.7
PW22	New	22	20.17	5.04
PW23	Scheduled			
PW24	New	24	22.00	NA (water appeared at 13 feet bgl)
PW25	New	24	22.00	1.83
PW26	Scheduled			
PW27	New	24	22.00	NA (water appeared at 13 feet bgl)
PW28	New	23	21.08	NA (water appeared at 9 feet bgl)
PW29	New	23	21.08	5.2
PW30	New	23	21.08	NA (water appeared at 14.5 feet bgl)

*Note:*

*\*Due to the difference in the height of a few rings there is a difference in the total depth of some wells.*

*\*\*The reasons for the small number of users in some of the existing wells can be discussed later.*