

Hours of pumping from source, Tubewell 6.5 Hrs at Intermediate stage.
Ref: SWSM Guidelines vide letter number 1499/E-46/2021 dt 12-02-21

Rate of flow m^3/Hr at intermediate stage m^3/Hr LPM LPM
77.54 1293 Say 1300

Year/Stage	Demand (KLD)	Operating hours
Initial Stage Year 2022	383	4.94
Intermediate Stage Year 2037	504	6.50
Ultimate Stage Year 2052	649	8.37

1.6 SOURCE OF WATER SUPPLY

Water discharge of 1300 LPM is required as per base year demand considering 6.5 hrs of pumping. Considering design flow at intermediate stage as 60% of safe yield from tubewell, minimum tubewell yield required is 2170 LPM

Tube well yield required $1300/0.6 = 2167$ LPM

Tube well yield required, rounded up	2170 LPM
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Ref: DISTRICT GROUND WATER BROCHURE OF SANT RAVIDASNAGAR DISTRICT, UP, compiled by CGWB 2012-13. Exploratory tubewells drilled up to 30m to 752m have shown yields up to 2065 & 2876 LPM. Considering probable long term depletion of yield, the average 2876 LPM may be taken as characteristic yield potential of tube wells in Jaunpur district.

Hence we assume that required yield is available in this proposed area. Hence 1 tubewell with discharge rate of 2170 LPM has been considered for this project

1.7 REQUIREMENT OF TUBEWELLS & PUMPING HOURS

Table 17: Tubewell discharge calculation

Sn	Particulars	Stage / Year		
		2022	2037	2052
1	Population	5912	7792	10028
2	Rate of Water Supply LPCD	64.71	64.71	64.71
3	Daily Water Demand in KLD	383	504	649
4	Discharge of Tubewell Required in LPM	2170	2170	2170
5	No of Tubewell Required	1	1	1
6	Actual Pumping Hrs	4.94	6.5	8.37

Note: As per SWSM Guidelines vide letter number 1499/E-46/2021 dt 12-02-21, this project is proposed to be operated entirely on Solar power & panels shall be installed to meet power requirements for intermediate stage, subject to availability of the required land area. No state power utility connection is proposed in this project for pumps, actuators & control system.

For lighting loads in pump house & area lighting; the guidelines by CE E/M, vide MOM dt 10-07-21 - for lighting & fan load provision for 2kW load in solar plant, along with provision of inverter & battery.

Pipes - 2, Bhadoni

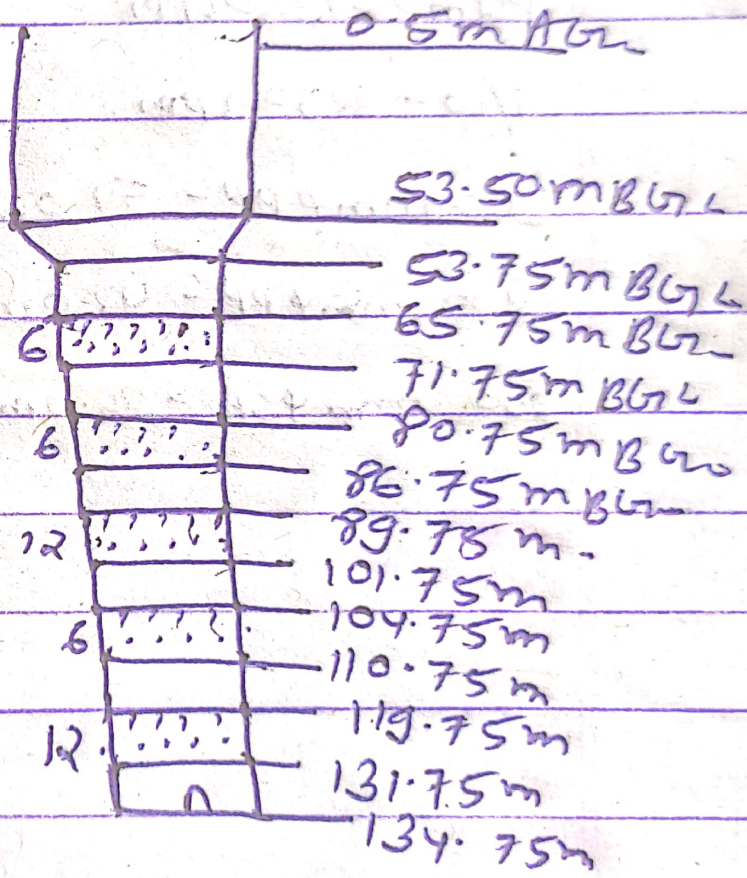
T/w - 2170 LPM.

Pump - 1300 LPM.

300 mm PP - 54.0m

200 mm PP - 39.0m

200 mm SD - 42.0m





Aqua Xplore

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Ref 1029 - P / AX - 2022

Date 29.10.2022

Geophysical Borehole Logging Report

Name of the site : Piparis T/W-2, Block-Bhadohi

District : Sant Ravidas Nagar

Date : 29.10.2022

Depth logged : 150.0 mbgl

Depth drilled : 165.0 mbgl – as reported

Logged by : Aqua Xplore

Presence : Rep. of M/S. Welspun Enterprises Limited , Sant Ravidas Nagar, U.P

Based on the interpretation of geophysical logs, following information may be deciphered, particularly with respect to salinity of the formation water;

Sl.No.	Depth range(mbgl)	Thickness(m)	Remarks
1	30.0---36.0	6.0	Good all
2	40.0---48.0	8.0	
3	56.0---60.0	4.0	
4	65.0---72.0	7.0	
5	80.0---87.0	7.0	
6	89.0---102.0	13.0	
7	104.0---113.0	9.0	
8	119.0---132.0	13.0	
9	134.0---142.0	8.0	

Note. All zones are intermixed with kankar. Sl.Nos.3 & 4 are fine sand.

for Aqua Xplore

CC;

M/S Welspun Enterprises Limited, Sant Ravidas Nagar, U.P.