

Operational Guideline
on
WATER LEVEL SOUNDERS/ INDICATORS
(for Ground water level measurement and Data Sharing)
under
Atal Bhujal Yojana

1. Water Level Sounders / Indicators:

The water level sounders/ indicators are simple handheld equipment's operated manually to measure the depth to water level from wells. The common type of indicator / equipment consists of a graduated plastic / Teflon tape with winch and a steel / metal rod / sonde as shown in Picture below. The metal rod help lowers the tape in the well. In the electric sounders the electric wire is molded inside the plastic tape. As soon as the metal rod touches the water surface, **a beep sound** is generated and the reading can be noted from the graduated tape.

Picture of a water level sounder/indicator



2. Ground water level monitoring:

Ground water monitoring is an organized activity to record changes in ground water level at regular intervals through a fixed network of observation wells / monitoring wells. Ground water level is measured from the open wells/ Dug wells/ Tube wells/ Bore wells / Piezometers at times from Hand Pumps using various types of measuring equipment's given as below:

- a. Common Plastic tapes.
- b. Graduated Steel tapes with winch
- c. Water Level Sounders / Indicators (Electric/Sonic)
- d. Automatic Water Level Recorders (AWLR) / Digital Water Level Recorders. (DWLR)

3. Purpose of water level monitoring at Gram Panchayat level:

Changes in ground water level with time and space is resultant of all the inputs and outputs to the ground water reservoir. It acts as thermometer to gauge the health of underlying aquifer. Water levels vary significantly even at short distances due to heterogeneities in the aquifers, geomorphological settings etc. Monitoring / measurement of seasonal changes in ground water level at close intervals in time and space at Gram Panchayat / local level is essential to control and regulate ground water withdrawal, which will eventually help in preparing realistic Water Budget and Water Security plan as well as updating the same on year on year basis. This necessitates acquisition of time series data at the level of Gram Panchayat for self-interpretation and decision making.

4. Parameter monitored:

Under Atal Bhujal Yojana, **Water level Sounders/ Indicators as well as Digital Water Level Recorders (DWLR)** have been procured to monitor the “**Depth to ground water level**” at frequent intervals. (*Ref: Guideline for Ground water monitoring*)

5. Data Collection:

The Water Level Sounder/Indicator is to be used by the District Implementation Partners (DIPs) / Gram Panchayat level functionaries/ Field Level Workers (FLWs), for measurement of ground water level from identified observations wells on monthly basis (1st - 5th of every month) or as and when required.

- The equipment can be used for regular monitoring of groundwater level on monthly basis (1st – 5th of every month) or as and when required from identified wells in the Gram Panchayat.
- Ideally, a local person in the village shall be identified for taking the measurements on a regular basis.
- A separate register is to be maintained by the person responsible, for recording the measurements as per the template attached. (*Annexure-I*)

6. Data sharing for public disclosure:

- The water level data in the prescribed format (*Annexure-I*) should be maintained by the DIPs/FLWs for all the observation wells being monitored in the Gram panchayat every month. The data shall be shared with DPMU on monthly basis by 5th of every month.
- The data shall be collated for all the Gram Panchayats in the district by DPMU. Any absurd values and anomalies shall be rectified/removed at the DPMU level. Thoroughly verified data must be shared with SPMU for further compilation and authentication
- SPMU shall share the data with NPMU by the 10th of every month, through email at ddir1-ataljal@gov.in with a copy to atal-jal@gov.in
- A facility to update the real time information has been created in Atal Jal mobile application, and is under finalization. A manual will be shared separately.

Dissemination of data at the level of Gram Panchayat, through notice boards/ social media/ pamphlets/ wall paintings/ etc., to be emphasized and ensured by DPMU & SPMU.

Annexure-I

Template for measurement & record keeping of Water Level Data collected (through Water Level Indicator/Sounder)

S. No	State	Dist	Block	GP	Vill.	Site Name	Location Detail	Lat	Long	Well ID	Type of Well (DW/TW/BW)	Aquifer type/formation	Well Depth (mbgl)	Well Diameter (m)	Measuring Point (magl)	Date of data collection	Water Level (mbgl)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

(Units: “m”- in meters; “mbgl”- meter below ground level; “magl”- meter above ground level)

(Latitude & Longitude to be mentioned in Degree Decimal)

(DW- Dug Well; TW-Tube Well; BW-Bore Well)

**Column no. 1 to 16 are static/one-time information. This shall be fixed for an observation well which has been selected for the purpose of regular monitoring.*

**Column No. 17 & 18 are dynamic information and must be updated every month.*

**The entire template can be copied and maintained in excel format for ease of compilation by DPMU/SPMU/NPMU.*