

**Operational Guideline**  
on  
**WATER FLOW METER**  
*(for Volumetric Measurement of Ground water withdrawal from Wells*  
*and Data Sharing)*  
under  
**Atal Bhujal Yojana**

**1. Water Flow Meter:**

A water flow meter is a device that measures the amount / rate of water flowing through a pipe which can be converted in to volume of water. It can be fitted to delivery pipe in the water well to measure the volume of water withdrawn. There are several types of water flow meter technologies to choose from depending on the water measurement application, maintenance requirements, and budgetary terms. The mechanical type water flow meters are common equipment's to measure the volume of ground water coming out from the water wells. Advanced type of flow meter includes Ultrasonic type.

*Picture of a common water flow meter*



**2. Ground Water Flow Monitoring:**

Ground water withdrawals are often estimated by indirect methods in absence of direct metering of water wells. It is essential to measure the volume of ground water on daily/ yearly basis for water budgeting as well as for control and regulatory purpose. This also helps in planning the irrigation as per the crop water requirements.

**3. Purpose of Ground Water Flow monitoring at Gram Panchayat level**

To understand the ground water dynamics especially in terms of discharge, volume of groundwater withdrawn should be precisely recorded at Gram Panchayat level which can also be used to work out the water budget and decide the management interventions.

Taking regular, reliable and accurate measurements of flow / volume of ground water taken out is one of the best ways to plan the irrigation and ensure food security. Therefore, a water flow/Energy meter is an essential equipment which measures the amount of ground water withdrawal from the

groundwater reservoirs. This equipment's are to be fitted to individual farmer's tube well, used for irrigation, after obtaining their consent.

#### **4. Parameters monitored:**

Under Atal Bhujal Yojana **Mechanical Type Water Flow Meters** are being procured to measure the “**Volume of ground water being pumped (usually in cubic meter)**” by farmers from their tube wells. Water flow meters can be used to measure the ground water volume taken out from the open wells/ Dug wells/ Tube wells/ Bore wells, during the running pump.

#### **5. Data Collection:**

**The Manual water flow meter procured under Atal Bhujal Yojana is to be used by the District Implementation Partners (DIPs) / GP level functionaries/Field Level Worker/Farmer himself, for measurement of volume of water extracted on a daily basis, after pump has been operated by the farmer.**

The methodology for measurement from Water flow meter and record keeping is given as below:

- The equipment can be used for taking readings on a daily basis, whenever pump is operated in the wells by the farmer / individual owning the well.
- Ideally, the farmer himself or a local person in the village can be identified for collecting the readings on regular basis.
- A separate register is to be maintained by the identified person, for recording the readings as per the template attached. (*Annexure-I*)

#### **6. Data Sharing with NPMU**

- The Volume of ground water flow withdrawal measured through the equipment in the prescribed format (*Annexure-I*) should be maintained by the DIPs/FLWs on a daily basis and to be shared with DPMU on monthly basis by 1st 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 5<sup>th</sup> of every month, through email at [ddir1-ataljal@gov.in](mailto:ddir1-ataljal@gov.in) with a copy to [atal-jal@gov.in](mailto: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.**

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## Annexure-I

### Template for measurement & record keeping data collected through Water Flow Meters

S. No	State	Dist	Block	GP	Vill.	Site Name	Location Detail	Lat	Long	Name of the Owner	Type of Well (DW/TW/BW)	Pump type	Date of installation of WFM	Area irrigated	Crop irrigated	Date of data collection	Meter reading (unit as per WFM- <i>to be specified</i> )
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

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

(Latitude & Longitude to be mentioned in Degree Decimal)

*\*Column no. 1 to 14 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. 15 & 16 are dynamic information and must be updated as and when irrigated area/crop is modified.*

*\*Column No. 17 & 18 are dynamic information and must be updated daily (after pump has been operated by the farmer).*

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