

## **Hydro-meteorological observation activities of CWC**

Hydrological data observation is specialized work and Central Water Commission (CWC) has been mandated to carry the same on national basis. CWC has developed enough expertise through its network of hydrological observation stations and has got trained manpower. At present, Central Water Commission is having a network of 878 sites on major rivers and its tributaries of India. In addition to this, Central water Commission is also having a network of 76 exclusive meteorological stations. The details of sites are as under:

### **Existing Hydro-meteorological Network**

<b>SN</b>	<b>Type of Site</b>	<b>Existing Sites</b>
1	Gauge (G)	295
2.	Gauge and Discharge(GD)	154
3.	Gauge, Discharge and Water Quality (GDQ)	131
4.	Gauge, Discharge and Silt (GDS)	33
5.	Gauge, Discharge, Silt and Water Quality (GDSQ)	239
6.	Gauge and Water Quality (GQ)	26
7.	Exclusive Snow and Met Stations (ESM)	76
	<b>Total</b>	<b>954</b>

### **Objective of Hydro-meteorological Observation:**

- Assessment of Basin wise/sub-basin wise Water Resources
- International Issues arising out of trans boundary rivers
- Inter-State issues/ Conflict resolution
- Flood Forecasting, Inflow forecasting, reservoir regulation for Dam safety, flood inundation mapping and development of mathematical models
- Provide necessary water related data for better research, planning, development, management in the area of water resources
- Preparation of DPR
- Assessment of navigational potential for inland waterways
- To provide necessary water related data for better research, planning, development, management in the area of water resources

### **Frequency of Observation:**

**Gauge( Water Level):-** Gauges are being observed three times a day ( 8.00, 13.00, 18.00 hrs) during non-monsoon period and hourly during monsoon period.

**Discharge:** Discharge is being observed once a day at 8:00 AM except on holidays.

**Silt:** Silt samples are collected daily along with discharge observation. Thereafter, the samples are being analysed in the field laboratories (for coarse, medium and fine sediment).

**Bed Material:** Bed material analysis is being done at 14 sites. The frequency of observation is thrice a year.

**Water Quality:**

- **Base Station:** One sample is being collected every two months and total six samples in a year.
- **Trend Stations:** Sample is being collected once in every month.
- **Flux Stations:** Samples is being collected thrice in a month,
- **Trace and toxic metal** is being analysed twice in a year.

**Rainfall:** Rainfall are being observed twice daily (8:00 AM and 8:00 PM)

**Temperatures:** Daily maximum and minimum temperatures are recorded at each site. In addition river water and well water temperatures are also recorded at the time of observations.

**Data Transmission:** Data collected at sites are recorded in the corresponding standard forms and sent to sub-division office in physical format. After checking, it is entered in SWDES/eSWIS software developed under Hydrology Project. Thereafter, the validation of data is being carried out at Division level and compiled in the forms of books namely; Water Year Book, Sediment Year Book, Water Quality Year Book & Bed Material Year Book.

For more detail of Hydro-meteorological network click : [HO Network of CWC](#),  
[Meteorological network of CWC](#)