

## 1. INTRODUCTION:

### 1.1 Water an Overview:

Water is a prime natural resource, a basic human need and a precious national asset. The extent, to which water is abundant or scarce, clear or polluted, beneficial or destructive, has a major influence on the quality of human life. The ever-increasing demand for water on one hand and the deteriorating quality of water by pollution on the other have already created serious problems. Available water must, therefore, be optimally harnessed and used most beneficially under appropriate priorities. Wisely used water means harvest, health, prosperity and ecological abundance for the people and the nations on the Earth. Badly managed water contributes to economic under development, poverty, disease, flooding, drought, erosion, Stalinations, water logging, silting, environmental degradation and human conflict.

## 2. STUDENTS PARTICIPATION

Students of 5<sup>th</sup> semester, Civil are participates the technical visit to enhance a technical knowledge under the subject Hydrology & Water Resources Engineering.

**Table.1 following schedule is followed during technical Visit.**

Date	Class	Time	Place	Purpose	Speaker
15/10/2014	5 <sup>th</sup> seme. FOE	10:30 to 11:30	Aaji-1 Weather Station- Rajkot	Analysis of Instrument and Parameter	Assi. Er. A. G. Shah, SWDC- Gandhinagar
		11:30 to 12:00	River Gauging	Analysis of Instrument and Parameter	Tech. Assi. Nimavat ,River gauging Centre, Rajkot

		12:30 to 14:00	Seminar Wall Regional Training Centre , WALMI - Rajkot	Important of Hydrological data	Assi. Er. A. G. Shah, SWDC - Gandhinag ar
		14:00 to 14:30	RTC- WALMI- Rajkot	Lunch	
17/10/2014	5 <sup>th</sup> seme. FOT	10:30 to 11:30	Aaji-1 Weather Station- Rajkot	Analysis of Instrument and Parameter	Assi. Er. A. G. Shah , SWDC- Gandhinagar
		11:30 to 12:00	River Gauging	Analysis of Instrument and Parameter	Tech. Assi. Nimavat, River Gauging Sub Division – Rajkot.
		12:30 to 14:00	Seminar Wall Regional Training Centre , WALMI - Rajkot	Important of Hydrological data	Assi. Er. A. G. Shah, SWDC- Gandhinagar
		14:00 to 14:30	RTC- WALMI - RAJKOT	Lunch	

### 2.1 Students Participation at Aaji-1 Weather Station

Following instrument's working procedure is discussed by Assi. Er. A.G. Shah to measure the various meteorological parameter i.e. evaporation rate, wind direction, wind pressure, Daily Rainfall, Humidity and River flow velocity.



Fig:1 Sunshine Recorder



Fig: 2 Wind vane



Fig:3 Pan Evaporimeter



Fig:4 Steven screen





Fig:5 Wind Velocity Recorder



Fig:6 Automatic rainfall Recorder



Fig:7 Ordinary Rain gauge Recorder



Fig:8 Student interaction View

### 3. Presentation On Student's Awareness for Hydrology Project.

The hydrology project aims at assisting the Government of India and the nine participating States in developing comprehensive, easily accessed and user-friendly databases

covering all aspects of the hydrological cycles including surface water and ground water in terms of quality and quantity and climatic measurements. This should contribute to improve planning and management of water resources in India.

### **3.1 Objectives and Scope:**

The main objective of the HP is to improve the institutional and organizational arrangements, technical capabilities and physical facilities available for measurement, validation, collection, analysis, transfer and dissemination of hydrological, hydro-meteorological and water quality data for basic water resource evaluation within the concerned agencies at Central Government level and in the participating states. The project would upgrade and expand the physical infrastructure thorough construction of observation site works and buildings, and provisions of measuring instrumentation and equipment, and laboratory facilities.

The Project would help in the development of interactive computerized data banks within CWC's and CGWB's regional offices and the state agencies responsible for surface water and ground water hydrological data collection. These data storage centres will be linked through state of the art communication system. The above arrangement would help to develop comprehensive, easily accessed and user friendly data bases covering all aspects of the hydrological cycle including surface water and ground water in terms of quality and climatic measurements. The state of the art computer hardware and software and communication systems would be provided on the project for the purpose.

The project would introduce standard procedures for data collection, processing, validation and management including the use of software of routine quality control and general water resources analysis.

### **3.2 Project Benefits:**

The Project on completion is envisaged to generate substantial benefits by improving the water resources and climate data base of the participating agencies, and making data easily available to legitimate users from computerized data banks. The reliable water data, with adequate coverage in content, time and space is the foundation on which all

water resources planning, development and management exercises are based. The improved hydrological and hydro-meteorological information would help in making reliable and economic – a) investment decisions in which water resources availability is a dominant determinate (i.e. irrigated agriculture, water supply and sanitation, industrial water use, etc): and b) operational decisions in existing enterprises in which water is an essential input to achieve predicted impact.

**3.3 Data Availability at State Water Data Centre:**

Sr. No.	Surface Water Observations Stations in the State	Nos.	Data Availability
1	Rainfall Stations(Daily)	373	1961-2013
2	Weather Stations	179	1999-2013
3	River Gauging Stations	107	1983-2013
4	Water Quality Stations	178	1998-2013

**3.4 Data Dissemination Policy**

Zero price policy is the most appropriate policy. Moreover, as experiences have shown such a policy will encourage the complete use of all available hydro-met data in design, planning, and overall management in Water sector, Agricultural sector, Transport sector etc.

At present surface water data are disseminated free of cost to Government organizations, Assignment / Studies to the consultants who are carrying out work for Government organizations on recommendation of concerned authority of Government and to students for academic purpose with recommendation of academic institution. It may happen that those body which are getting data free of cost for some Government work, but then those data might be given to some other agencies with minimum economic rate. To curb such practices, zero pricing policy is the best tool.

**3.5 Data Dissemination Summary:**

Year	Total request disseminated	Amount received as revenue in Rs.
2000	08	Nil
2001	09	Nil
2002	24	Nil
2003	33	20,000.00

2004	25	14,000.00
2005	52	2,61,000.00
2006	37	36,800.00
2007	49	32,000.00
2008	92	4,48,800.00
2009	78	92,000.00
2010	99	16,800.00
2011	94	42,800.00
2012	82	1,49,920.00

### 3.6 STUDENTS FEEDBACK

At last but not least, students are participating actively while demonstrating the instruments as well as presentation on awareness programme on hydrological project. They feel excellent experience of hydrological data recording while technical visit.