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भारत सरकार
GOVERNMENT OF INDIA

केन्द्रीय जल आयोग
CENTRAL WATER COMMISSION

जल-वर्ष पुस्तिका
WATER YEAR BOOK
(VOLUME - I)

(जुन - २०१५ - मई-२०१६)
(JUNE 2015 - MAY 2016)



महानदी कछार
MAHANADI BASIN

जल-विज्ञानीय प्रेक्षण परिमंडल
भुवनेश्वर

HYDROLOGICAL OBSERVATION CIRCLE
BHUBANESWAR



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FOREWORD

Proper assessment, analysis and compilation of hydro-meteorological data are essential for planning and management of precious water resources, which is vital not only for economic development but also for providing basic needs for such a large population of our country. Water reaches the land-mass through precipitation, a part of which evaporates, a portion of it percolates into ground as natural ground water and the excess runoff flows through **rivers and drain** into the sea. Central Water Commission (CWC), an apex technical Organisation of Government of India for surface water resources, carries out systematic collection of hydro-meteorological data, assessment of surface water is one of its prime functions.

Hydro-meteorological observation stations were established by CWC in almost all the river basins of India in a phased manner. These were further modernized and strengthened under various schemes. In the process, additional Divisions, Circles and Regional Offices were set up on a basin-wise concept.

The basin encompassing the east flowing rivers in-between the Ganga and Godavari basins viz. Mahanadi, Subarnarekha, Brahmani, Baitarani Vamsadhara, Rushikulya, Burhabalang, Nagavali and Sarada has been identified as Mahanadi and Eastern Rivers Basin which is dealt by Mahanadi and Eastern Rivers Organisation (M&ERO), CWC, Bhubaneswar. Hydrological Observation Circle (HOC), Bhubaneswar under M&ERO carries out hydrological observation and flood forecasting activities in these 9 river basins flowing mainly through Odisha alongwith its **neighboring states** of Jharkhand, Chhattisgarh, Andhra Pradesh and West Bengal through two Divisions under its jurisdiction viz. Mahanadi Division (MD), Burla and Eastern Rivers Division (ERD), Bhubaneswar.

There are a total of 103 observation stations under M&ERO. Systematic gauge and discharge observation are regularly conducted at 44 hydrological stations (out of the above 103) throughout the year. Sediment, Water Quality and Meteorological data are also observed at some of the stations. After scrutiny and checking, the collected and processed data are stored in a database through custom made software "Surface Water Data Entry System" (SWDES) and published in the form of Water Year Books. The present publication of Water Year Book contains Hydrological, Sediment and Water Quality data for the hydrological year 2015-16, i.e. from June-2015 to May-2016.

Water Year Book pertaining to the Hydrological Observation Circle, CWC, Bhubaneswar is published in four Volumes. While Volume-I incorporates data of Mahanadi Basin, Volume-II contains data of the Brahmani Basin, Volume-III of Subarnarekha, Burhabalang & Baitarani, basins, and Volume- IV of Vamsadhara, Nagavali, Rushikulya and Sarada basins. Each Volume contains Discharge data as Section-I, Sediment data as Section-II and Water Quality data as Section-III for respective river basins.

This volume I covers hydrological, sediment and water quality data for Water Year 2015-16 of Twenty one sites of Mahanadi river basin alongwith salient features and other important statistical information. **Sincere efforts** put in by the officers and staff of Mahanadi Division, CWC, Burla under the **able** leadership of Shri C. Mohanty, Executive Engineer, in collecting and processing the data and bringing out this publication is highly commendable. The guidance and encouragement of Chief Engineer, M&ERO, Bhubaneswar and co-operation of the official of H.O. Circle and Chief Engineer office are duly acknowledged.

Place: Bhubaneswar
Date: March - 2017

(D.K.JENA)
Superintending Engineer
HOC, CWC, Bhubaneswar

MAHANADI BASIN

1. BASIN DESCRIPTION

1.1 Introduction

River Mahanadi is one of the major inter-state east flowing rivers in the peninsular India. During the course of its traverse, it drains fairly large areas of Chattisgarh and Odisha and comparatively very small areas in the state of Jharkhand, Maharashtra and Madhya Pradesh. The basin encompasses the area within geographical co-ordinates of 80°30' to 86°50' East longitudes and 19°20' to 23°35' of North latitudes. The basin is physically bounded in the North by Central India hills, in the South and East by the Eastern Ghats, and in the West by Maikala hill range. The total catchment area of the basin is 1,41,600 sq. km.

Table below shows state wise break-up of the drainage area and the percentage with reference to total area of the basin.

Sl. No.	Name of the State	Drainage Area (km²)	% of Total Area
1	Chhattisgarh	74,970	52.9
2	Odisha	65,600	46.3
3	Jharkhand	650	0.5
4	Maharashtra	250	0.2
5	Madhya Pradesh	130	0.1
	TOTAL	1,41,600	100.0

Basin map of Mahanadi river system depicting various hydrological and hydro-meteorological observation stations maintained by CWC is enclosed herewith. CWC is maintaining 59 stations in Mahanadi Basin, out of which 18 are of type Gauge/ Discharge/ Sediment/ Water Quality (GDSQ), 1 is of type Gauge /Discharge/ Water Quality (GDQ), 2 are of type Gauge /Discharge (GD), 3 are of type Gauge/Seasonal Discharge (GD(S)), 17 are of type Gauge(G), 12 are of type Gauge (Seasonal). In addition, there are 6 stations of type Rainfall (RF) where only rainfall is observed. This report (Volume-I) contains data of 21 gauge and discharge sites which are being operated round the year.

1.2 River System

River Mahanadi originates at an elevation of about 442 meter above mean sea level near Pharsiya village near Nagri town in Raipur district of Chattisgarh. Total length of the river from its origin to outfall into the Bay of Bengal is about 851 km out of which 357 km is in Chhattisgarh and the balance 494 km in Odisha. During its traverse, a number of tributaries join the river on both the banks. Mahanadi has 8 major tributaries, out of which 6 join it upstream of Hirakud reservoir, while the balance 2 join it down stream of Hirakud.

The catchment upstream of Hirakud reservoir has an area of 83,400 km². The major tributaries in this reach are Seonath, Ib, Pairi, Jonk, Hasdeo and Mand. The catchment downstream of Hirakud reservoir has an area of 58,200 km². The major tributaries in this reach are Tel and Ong. Though, the catchment area of downstream portion is less than that of the

catchment upstream of Hirakud reservoir, it has been seen that the contribution of downstream area to the total flood in Mahanadi is equally significant.

The three major tributaries, namely Seonath and Ib on the Left Bank and Tel on the Right Bank, together constitute nearly 46.63 % of the total catchment area of the river Mahanadi.

Seonath, which is the largest tributary of Mahanadi, rises from an elevation of 533 meter in village Kotgai, District Durg (Chhattisgarh), and drains three districts of Chhattisgarh, namely, Durg, Rajnandgaon and Bilaspur.

Tel, which is the second largest tributary of Mahanadi, rises from an elevation of 700 m in village Jorigram of Nabarangpur district of Odisha and drains five districts of Odisha, namely Nabarangpur, Kalahandi, Bolangir, Boudh and Kandhamal.

Ib, which is the third largest tributary of Mahanadi, rises from an elevation of 762 m in village Pandrapat, District Raigarh (Chhattisgarh). It drains Raigarh and Jashpur districts of Chhattisgarh, along with three districts of Odisha, namely Sundargarh, Jharsuguda and Sambalpur.

The table below shows the details of the catchment area, length and elevation at source of the important tributaries.

Sl. No.	Name of the Tributary/ Sub-basin	Bank	Elevation at source above msl	Length (km)	Catchment Area (sq.km)	% of Total Area
1	Mahanadi		442	851	48,230	34.1
2	Pairi	Right	488	113	3,503	2.5
3	Seonath	Left	533	383	30,761	21.7
4	Jonk	Right	762	196	3,673	2.6
5	Hasdeo	Left	915	333	9,803	6.9
6	Mand	Left	686	242	5,237	3.7
7	Ib	Left	762	251	12,447	8.8
8	Ong	Right	457	204	5,128	3.6
9	Tel	Right	700	296	22,818	16.1
			Total		1,41,600	100.0

The delta region of river Mahanadi, comprising of the catchment below the Naraj barrage, is characterised by drainage congestion, tidal effect and extreme tendency for meandering and shifting of the course. The river branches repeatedly in this region. This area is also very fertile and supports very high population density. During periods of major floods, the delta area experiences significant economic and social problems.

Some of the major branches originating in the delta area of river Mahanadi include Kathjori, Birupa, Chitrotpala, Kuakhai, Daya, Kushabhadra, and Devi. In the recent years, all the major branches have been protected by construction of flood embankments. Some river reaches, especially near the outfall to the sea, are also experiencing the problem of siltation of the river bed, leading to increased flood problem.

1.3 Climatic Characteristics

The monsoon is the principal rainy season, when over 75 % of the annual rainfall is received over a major portion of the basin, with July/ August as the rainiest month. The average annual rainfall of the basin is of the order of 1400 mm.

Since the Mahanadi river basin covers a vast geographical area, there is wide spatial variation of hydro-meteorological characteristics. In winters, the mean daily temperature varies from 13°C to 20°C. In summers, the mean daily temperature varies from 30°C to 37°C. The month of May is generally the hottest month. During the year 1998, unusually high day temperatures of the order of 48.2 to 48.8°C were experienced in the basin.

1.4 Geology

The basin is physically bounded in the north by Central India hills, in the south and east by the Eastern Ghats, and in the west by Maikala hill range. The Chiroli Hills form the watershed dividing the Wainganga valley from the Mahanadi Basin, the upper portion of which is designated as the Chattisgarh Basin.

The floor of the basin is composed of horizontally bedded or very low dipping lime stones and shales of Cuddapah age, and is studded with shallow cup-like depressions. The ridges that form the southern rim of the basin comprise of sandstone and quartzite, dipping inward. Iron-ore ridges also occur here, which stand up very prominently because of resistance of iron ores to weathering agents. Rajhara Pahar is a typical example, which supplies iron ores to the Iron and Steel Plant at Bhilai.

On the north, the basin has a steep uneven edge, formed mainly of strong-bedded gneiss rocks with an east-west strike and high dip southwards.

Coal beds also occur in the basin near Korba. In the Bolangir region, khondalite or quartzite are seen. The Gandhamardan hill range is a good example of khondalite ridge. Sonabera Plateau appears to be a structural platform built of quartzite with an average elevation of 600 metre. It has a radial drainage, with all the streams descending the plateau scarp invariably formed waterfalls on leaving quartzite uplands, especially where they enter sandstone or limestone slopes.

In the upper Mahanadi region, the rocks generally found are belonging to Pleistocene to Archean age. Laterite, Basalt, Lime stone, Dolomite and Iron ore are abundantly found. The Seonath river basin belongs to Archean terrain, comprising of the Chhatisgarh and Eastern Ghats. The rocks are mostly Pleistocene, such as Lime stone Dolomite, Magnetite and Granite. The Hasdeo river basin contains Bauxite, Granite, Lime stone, Coal, Iron ore, Dolomite and Galena. The land of the Mand river basin comes under the Cuddapah series. It exhibits wide level plains of alluvial cover, deposited on the Cuddapah Lime stone and Shale stones. The Ib river basin belongs to the Archean Terrain of Chhotanagpur Plateau, and has been greatly influenced by the geomorphic features. The hilly regions have Igneous and Metamorphic rocks. The Tel river mainly comprises Sand stone, Silt stone and Shale rocks.

The Lower Mahanadi Basin comprises alluvial formation of recent origin, with varying thickness. In the North-Western region of delta, isolated out-crops of Archean sediment are seen. In the Western and South-Western region, Upper Gondwana rocks have been encountered.

1.5 Water storage / Diversion Structures

The water storage/ diversion structures constructed/ under construction in the basin have been detailed below:

Sl. No.	Name of the Project	River	Status	Original Capacity in Million Cubic Meter (MCM)	
				Gross	Live
1.	Hirakud Dam	Mahanadi	Existing	8141.0	5892.0
2.	Bango Dam	Hasdeo	Existing	3417.0	3046.0
3.	Ravishankar Sagar Dam	Mahanadi	Existing	909.0	768.0
4.	Murumsilli	Sillary	Existing	165.0	162.0
5.	Dudhawa Dam	Mahanadi	Existing	288.0	284.0
6.	Tandula	Tandula	Existing	322.0	312.0
7.	Kharang	Kharang	Existing	-	192.32
8.	Kodar Reservoir	Kodar Nala	Existing	160.23	148.91
9.	Mayana Tank	Naini Nala	Under const.	211.24	157.93
10.	Kelo Project	Kelo	Under const.	76.0	46.0
11.	Maniyari Project	Maniyari	Existing	151.0	148.0
12.	Kosarteda Project	Kosarteda	Existing	72.86	63.7
13.	Sikasar Dam	Pairi	Existing	217.0	199.0
14.	Sondur Dam	Sondur	Existing	198.0	179.0
15.	Lower Indra	Indra	Under const.	321.63	314.25
16.	Lower Suktel	Suktel	Under const.	320.28	263.43
17.	Paralkot Dam	Dewadha	Existing	66.3	63.6

2. STREAM FLOW DATA

2.1 Observation Methodology

Standard methods are adopted at all the discharge observation stations under Mahanadi Basin for collecting the data which are explained briefly as under:

Discharge observation Methods:- Area-velocity method is generally adopted for measuring discharge at sites. Velocities at the mid point of segments are observed using current meter suspended from an out-fit from Boat or Bridge, or by rigid rod in case of measurement by wading. Where none of the above methods is possible, velocity is observed by float method and the surface velocities are converted into mean velocities by applying suitable correction factor. The depth is measured by using sounding rod for depths up to 3 meter, and by log-line beyond 3 meter depth. Discharge by area velocity method is being observed once in a day except on Sundays and holidays, starting at 0800 Hrs. at all the sites. Besides, silt and water quality observation are also being made at GDSQ/GDQ sites.

Computation of Flow on Non-observed days:- The observed stage and discharge figures for each season (monsoon and non-monsoon) are plotted and a mean Stage v/s. Discharge curve is drawn, giving due attention to the scattered points with reference to area velocity etc.

The factors responsible for the shifting of the curves are also taken care of by studying the river cross section at regular intervals and with super imposition of previous year's Stage v/s. Discharge curves. Accordingly, the trend of the current curve is finalised. Finally, the discharges of the non observed days are computed from these Stage v/s. Discharge Curves.

2.2 Data Availability:

The data of following sites is presented in this volume:

Sl.No.	Name of Site	Tributary/ Sub-Tributary	Type	Data Available	
				From	To
1.	Rampur	Jonk	GDSQ		
			Gauge	29.01.1971	Continuing
			Discharge	20.02.1971	Continuing
			Sediment	05.07.1976	Continuing
			Water quality	15.09.1972	Continuing
2.	Rajim	-	GDSQ		
			Gauge	01.02.1971	Continuing
			Discharge	01.02.1971	Continuing
			Sediment	04.12.1972	Continuing
			Water quality	01.09.1972	Continuing
3.	Simga	Seonath	GDSQ		
			Gauge	29.09.1971	Continuing
			Discharge	09.09.1971	Continuing
			Sediment	30.12.1972	Continuing
			Water quality	01.09.1972	Continuing
4.	Kotni	Seonath	GDSQ		
			Gauge	22.09.1977	Continuing
			Discharge	30.09.1978	Continuing
			Sediment	25.07.2014	Continuing
			Water Quality	01.06.2015	Continuing

Sl. No.	Name of Site	Tributary/ Sub-tributary	Type	Data Available	
				From	To
5.	Andhiyarkore	Seonath/ Hamp	GDSQ		
			Gauge	27.09.1977	Continuing
			Discharge	29.11.1977	Continuing
			Sediment	12.07.1980	Continuing
			Water quality	01.06.1980	Continuing
6.	Baronda	Pairi	GDSQ		
			Gauge	12.07.1977	Continuing
			Discharge	06.12.1977	Continuing
			Sediment	29.06.1980	Continuing
			Water quality	02.06.1980	Continuing
7.	Pathardihi	Seonath/ Kharun	GDQ		
			Gauge	12.09.1987	Continuing
			Discharge	15.09.1989	Continuing
			Water quality	01.08.1992	Continuing
8.	Basantpur	-	GDSQ		
			Gauge	01.02.1971	Continuing
			Discharge	11.05.1971	Continuing
			Sediment	07.04.1973	Continuing
			Water quality	01.09.1972	Continuing
9.	Bamnidihi	Hasdeo	GDSQ		
			Gauge	29.01.1971	Continuing
			Discharge	18.02.1971	Continuing
			Sediment	01.05.1973	Continuing
			Water quality	01.09.1972	Continuing
10.	Jondhra	Seonath	GDSQ		
			Gauge	24.01.1979	Continuing
			Discharge	21.01.1979	Continuing
			Sediment	11.10.1980	Continuing
			Water quality	02.06.1980	Continuing
11.	Ghatora	Seonath/ Arpa	GDSQ		
			Gauge	15.10.1977	Continuing
			Discharge	17.09.1979	Continuing
			Sediment	01.11.2000	Continuing
			Water quality	01.11.1991	Continuing
12.	Seorinarayan	-	GDSQ		
			Gauge	01.06.1985	Continuing
			Discharge	09.12.1985	Continuing
			Sediment	11.02.2013	Continuing
			Water quality	01.06.2015	
13.	Manendragarh	Hasdeo	GDSQ		
			Gauge	21.06.1987	Continuing
			Discharge	21.06.1989	Continuing
			Sediment	09.07.1993	Continuing
			Water quality	01.10.1992	Continuing

Sl. No.	Name of Site	Tributary/ Sub-tributary	Type	Data Available	
				From	To
14.	Salebhata	Ong	GDSQ		
			Gauge	23.07.1971	Continuing
			Discharge	12.11.1971	Continuing
			Sediment	01.05.1973	Continuing
			Water quality	15.09.1972	Continuing
15.	Kantamal	Tel	GDSQ		
			Gauge	08.08.1971	Continuing
			Discharge	26.08.1971	Continuing
			Sediment	22.07.1976	Continuing
			Water quality	01.10.1972	Continuing
16	Sundargarh	IB	GDSQ		
			Gauge	07.08.1977	Continuing
			Discharge	30.12.1977	Continuing
			Sediment	21.07.1980	Continuing
			Water quality	02.06.1980	Continuing
17.	Kesinga	Tel	GDSQ		
			Gauge	10.11.1977	Continuing
			Discharge	07.11.1978	Continuing
			Sediment	22.09.2006	Continuing
			Water quality	01.06.2001	Continuing
18.	Kurubhata	Mand	GDSQ		
			Gauge	23.10.1977	Continuing
			Discharge	01.04.1978	Continuing
			Sediment	22.07.1980	Continuing
			Water quality	01.07.1980	Continuing
19.	Tikarpara	-	GDSQ		
			Gauge	19.02.1971	Continuing
			Discharge	28.05.1972	Continuing
			Sediment	01.06.1973	Continuing
			Water quality	01.12.1972	Continuing
20.	Gunderdehi	Tandula	GD		
			Gauge	01.07.2013	Continuing
			Discharge	15.07.2013	Continuing
21	Boudh	-	GD		
			Gauge	31.03.2015	Continuing
			Discharge	31.03.2015	Continuing

2.3 Surface Water Data Entry Software (SWDES):

Surface Water Data Entry Software (SWDES), a custom made software for processing hydrological data, has been used for this volume. The explanatory notes described below are designed to assist in the interpretation of data presented in the volume.

- i) Water Year ranges from June 1st of one calendar year to May 31st of the next calendar year, and covers one complete annual hydrological cycle.

- ii) Discharge is given in cubic meters per second.
- iii) Discharge is expressed as 0.000 when the river bed is dry and 0.000 N.F. when velocity is observed as 'NIL'.
- iv) The zero Reference Level (R.L.) of gauge is a datum level fixed for given the given site, which is kept 1 or 2 m lower than the lowest water level recorded in a perennial stream. In a non-perennial stream, it is kept 1 or 2 m lower than the lowest bed level of the stream.
- v) Discharges are rounded off as per standard practice.
- vi) Runoff in mm is the notional depth of water in mm over the catchments equivalent to annual runoff calculated at the discharge measurement station. It is computed using the relation.

$$\text{Runoff (mm)} = \frac{\text{Annual runoff (MCM)} \times 1000}{\text{Catchment area (km}^2\text{)}}$$
- vii) Peak and lowest flow correspond to the highest and lowest water levels recorded from 'SWDES' entered data.
- viii) Measuring authority refers to the field division of Central Water Commission (Mahanadi Division and Eastern Rivers Division) responsible for the operation of the gauging station.
- ix) The gauging station code number is a unique seven column alphanumeric reference number which facilitates storage and retrieval of flow data in data banks. The first column is identifier of either an integral river basin or, for convenience, a region when it has several contiguous river catchments. This is followed by a column which identifies an independent river system which either has one or more outlets to the sea or crosses international border to enter another country. The third, fourth and fifth column spaces denote first, second and third order tributaries respectively, from the mouth upstream. The sixth and seventh column spaces indicate the location of the gauging station in one of the 225 slots earmarked on the river. The blank column spaces are filled by zero.

3. **HYDROLOGICAL DATA**

This volume contains the following information for each of the above-stated site:

- i. History Sheet: Site Name, State, District, River Basin, Tributary, Sub-Tributary, Catchment Area, Latitude, Longitude, Date of Opening and Closing for various types of data.
- ii. Annual maximum/ minimum discharge since period of observation.
- iii. Daily Water level and observed/ computed discharge data including 10-daily, monthly and annual totals etc.
- iv. Histogram and hydrograph showing current year monthly mean discharges, historical monthly mean discharges, historical monthly minimum and monthly maximum discharge.
- v. Histogram showing annual run-off since beginning of observation.

- vi. Pie-Chart showing mean monthly run-off (as percentage of mean annual run-off) for the total years from inception.
- vii. Pie-Chart showing monthly run-off (as percentage of annual run-off) for the current year.
- viii. Plot of Pre-Monsoon and Post Monsoon Cross-section of the rivers for current year.
- ix. Water level hydrograph for 3 (three) major flood events of current year.

4. **SEDIMENT DATA (For Sediment Observation sites)**

Sediment observation is carried out daily during monsoon season and once in a week (on Monday) during the non-monsoon period. Data for non-observed days is estimated/ interpolated from the relationship of Discharge v/s. Sediment Load, prepared on the basis of observed sediment concentration and weighted mean discharge of the same year.

Sediment samples are collected from 0.6 x depth, from all the verticals along the hydrological observation sections where velocity is observed for computation of discharge, using Punjab type bottle sampler. The collected samples from all the segments are combined in 3 to 7 groups having compartments or groups of equal or nearly equal discharge, for analysis. Quantum of suspended sediment load is estimated in three grades, viz. Coarse, Medium and Fine. Coarse and medium grades are separated by sieving process and the fine grade by filtration of left over samples through filter paper. Grade wise concentration is derived gravimetrically as per standard procedure. The results so recorded, include:

- Daily observed suspended sediment (g/l).
- Corresponding discharge.
- Average sediment load in tonnes / day (10 daily & monthly basis).
- Annual sediment load for the current year.
- Annual sediment load and the corresponding volume of inflow for all the year since inception.
- Grain size distribution of bed load.

5. **WATER QUALITY DATA (For Water Quality Observation sites)**

The Water samples are collected at a regular interval of once in a month, on 1st working day of each month, from the main flowing segment of the stream, just below the water surface (20 to 30 cm) on the Station Gauge line where depth of flow and velocity are maximum, preferably in the mid stream. The water samples are collected in clean and pre-rinsed one-litre capacity plastic bottle having double stopper (inside and out side) system. Sampling bottle is filled to its full capacity without entrapping inside any air bubbles.

After sampling, the collected samples are sent to the Water Quality Laboratory (Level-II) based at Bhubaneswar (under the Eastern Rivers Division) and to Raipur (under Mahanadi Division, Burla), along with information on in-situ physical characteristics, for analysis. The samples received from the sites are preserved in a refrigerator in the Level-II laboratories, prior to analysis.

Analysis of parameters, namely pH, Electrical conductivity, Sodium, Potassium, Iron, Fluoride, Nitrate, Nitrite, Phosphate, Silicate, Boron, Sulphate, Calcium, Magnesium, Carbonate, Bi-carbonate, Chloride, Dissolved Oxygen, BOD and COD, are carried out in the laboratory by using standard methodologies. Micro-biological parameters like total coliform and faecal coliform are also being analyzed. For analysis of trace and toxic elements, samples are sent to Level-II + laboratory at Hyderabad once in a year, in the month of April and to Level – III + Laboratory at Kalindi Bhawan, New Delhi twice in year in the month of March and September. The results so recorded, include:

- River Water Analysis Monthly Physical, Chemical and Biological parameters.
- Annual Water Quality Summary Physical, Chemical and Biological parameters.
- Average Values over the Year season-wise averages:
 - Average for Summer (March to June)
 - Average for Floods (July to October).
 - Average for Winter (November to February)

Sampling Stations

In addition, Water Quality observation samples are also collected from the following locations which are not CWC Sites.

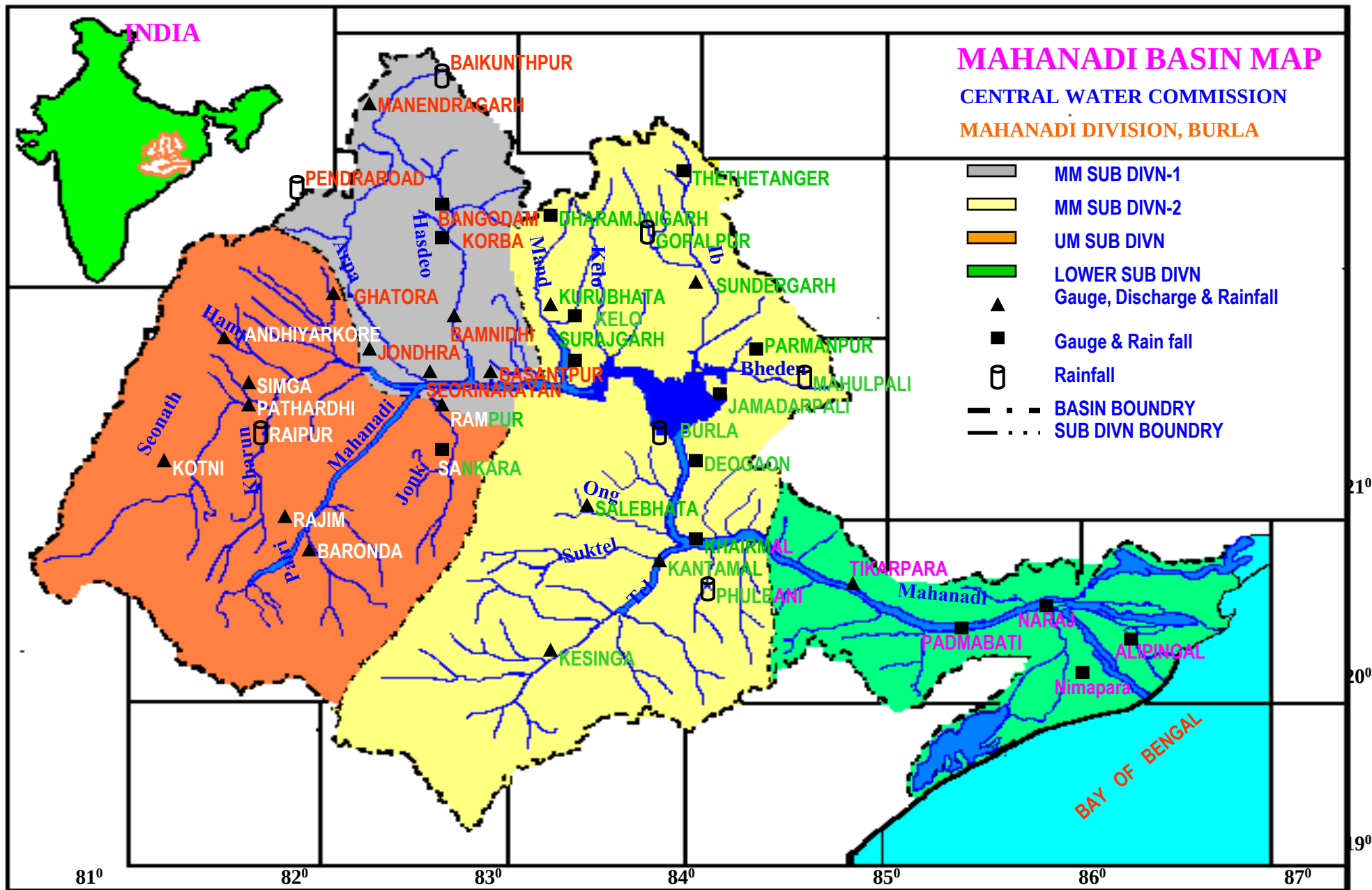
SI No.	Station Name	River/ Tributary	Type	Co-ordinates	
				Latitude	Longitude
1	Champa Road Bridge	Hasdeo	Q	21° 53' 55"	82° 42' 29"
2	Madhya Bharat Paper Mill (MBPL)	Hasdeo	Q	22° 02' 04"	82° 13' 34"

DETAILS OF CWC SITES IN MAHANADI BASIN

SINo.	Station Name	River/ Tributary	Code No	Type	Latitude	Longitude
1	Andhiyarkore	Hamp	EMP60E5	GDSQ	21° 50' 02"	81° 36' 21"
2	Bamnidihi	Hasdeo	EMM00B3	GDSQ	21° 53' 55"	82° 43' 02"
3	Bangodam	Hasdeo	001A	G	22° 35' 35"	82° 34' 31"
4	Baronda	Pairi	EMR00A4	GDSQ	20° 54' 45"	81° 53' 10"
5	Basantpur	Mahanadi	EM000R2	GDSQ	21° 43' 36"	82° 47' 17"
6	Baikunthpur	Hasdeo	004A	RF	23° 15' 02"	82° 35' 00"
7	Burla	-	001B	RF	21° 30' 30"	83° 53' 30"
8	Deogaon	Mahanadi	0012B	G	21° 18' 30"	83° 54' 00"
9	Dharamjaigarh	Mond	002B	G	22° 28' 20"	83° 12' 52"
10	Ghatora	Arpa	EMP40F2	GDSQ	22° 03' 24"	82° 13' 15"
11	Gopalpur	Basundhara	0011B	RF	22° 03' 40"	83° 43' 50"
12	Jamadaripali	Mahanadi	008B	G	21° 34' 14"	83° 59' 20"
13	Jondhra	Seonath	EMP00A4	GDSQ	21° 43' 30"	82° 20' 50"
14	Kantamal	Tel	EMF00C3	GDSQ	20° 39' 00"	83° 43' 55"
15	Kelo at Raigarh	Mahanadi	009B	GD(S)	21° 53' 19"	83° 24' 10"
16	Kesinga	Tel	EMF00K6	GDSQ	20° 11' 51"	83° 13' 30"
17	Khairmal	Mahanadi	007B	G	20° 49' 18"	84° 00' 00"
18	Korba	Hasdeo	002A	G	22° 21' 30"	82° 41' 30"
19	Kotni	Seonath	EMP00P8	GDSQ	21° 14' 10"	81° 14' 50"
20	Kurubhata	Mand	EMK00E2	GDSQ	21° 59' 15"	83° 12' 15"
21	Mahulpali	Bheden	0010B	G	22° 52' 30"	84° 25' 00"
22	Manendragarh	Hasdeo	EM00T7	GDSQ	23° 12' 10"	82° 13' 05"
23	Parmanpur	Bheden	004B	GD(S)	21° 46' 50"	84° 04' 54"
24	Patharidihi	Kharun	EMP70F3	GDQ	21° 20' 28"	81° 35' 38"
25	Pendra Road	Arpa	003A	RF	22° 45' 30"	81° 54' 30"
26	Phulbani	Mahanadi	006B	RF	20° 28' 00"	84° 15' 00"
27	Raipur	-	-	RF	21° 15' 36"	81° 36' 18"
28	Rajim	Mahanadi	EM000U7	GDSQ	20° 58' 25"	81° 52' 48"
29	Rampur	Jonk	EMN00B3	GDSQ	21° 39' 06"	82° 31' 10"
30	Salebhata	Ong	EMG00E5	GDSQ	20° 59' 00"	83° 32' 22"
31	Sankara	Jonk	163	G	21° 17' 19"	82° 31' 00"
32	Seorinarayan	Mahanadi	EM000R6	GDSQ	21° 43' 00"	82° 35' 48"
33	Simga	Seonath	EMP00J1	GDSQ	21° 37' 54"	81° 41' 16"
34	Sundargarh	Ib	EMI00H3	GDSQ	22° 06' 55"	84° 00' 40"
35	Surajgarh	Mahanadi	005B	G	21° 41' 35"	83° 22' 17"
36	Thethetanger	Ib	003B	G	22° 40' 05"	83° 54' 36"
37	Alipingal	Devi	-	G	20° 10' 00"	86° 10' 00"
38	Arapur	Sindolijore	-	G	20° 48' 06"	84° 36' 04"
39	Kanas	Daya	-	G(S)	20° 00' 08"	85° 38' 47"
40	Khandapara	Kusumi	-	G	20° 15' 22"	85° 11' 16"
41	Marshaghai	Luna	-	G	20° 20' 24"	86° 28' 51"
42	Naraj	Mahanadi	-	G	20° 28' 30"	85° 46' 30"
43	Nimapara	Kushabhadara	-	G	20° 04' 10"	86° 00' 00"
44	Padmavati	Mahanadi	-	G	20° 20' 36"	85° 17' 51"
45	Pubansa	Luna	-	G(S)	20° 26' 39"	86° 14' 51"
46	Tikarpara	Mahanadi	-	GDSQ	22° 38' 00"	84° 37' 08"

47.	Gunderdehi	Tandula	164	GD	20° 57' 11"	81° 16' 45"
48.	BalaKathi Rd. Bridge	Bhargavi	-	G(S)	20°12'09"	85°51'54"
49.	Balanga	Bhargavi	-	G(S)	20°02'20"	85°52'45"
50.	Bhingarpur	Kushbhadra	-	G(S)	20°15'48"	85°55'59"
51.	Daya Rd. Bridge	Daya	-	G(S)	20°12'36"	85°51'07"
52.	Kishan Nagar	Mahanadi	-	G(S)	20°25'34"	86°05'19"
53.	Tarpur	Mahanadi	-	G(S)	20°19'02"	86°22'31"
54.	Kathajodi . Bridge	Kathajodi (Devi)	-	G(S)	20°26'13"	85°53'17"
55.	Boudh	Mahanadi	-	GD	20°51'56"	84°18'48"
56.	Katghora	Ahira	-	G(S)		
57.	Padampur	Ong	-	GD(S)	21°00'57"	83°06'11"
58.	Maniyari	Maniyari	-	G(S)		
59.	Sarangpal	Mahanadi	-	G(S)	21°43'00"	82°20'34"

LIST OF ABBREVIATIONS USED		
CWC	:	Central Water Commission
HP	:	Hydrology Project
IMD	:	India Meteorological Department
msl	:	Mean sea level
Q	:	Discharge
WL	:	Water Level
Type of station		
G	:	Gauge (Water Level)
D	:	Discharge (Volume of water passing through a cross section of river per unit time)
S	:	Sediment (suspended sediment load)
Q	:	Water Quality
RF	:	Rainfall
(S)	:	Seasonal
UNITS		
m	:	Meter
mm	:	Milli meter
km	:	Kilometer
s	:	Second
MCM	:	Million cubic meters
MT	:	Metric ton
G	:	Gram



PAIRI SUB BASIN

SITE BARONDA

HISTORY SHEET

Water Year : 2015-2016

Site : Baronda

Code : EMR00A4

State : Chhattisgarh

District : Gariyaband

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Pairi

Sub Tributary :

Sub-Sub Tributary :

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Drainage Area : 3225 Sq. Km.

Bank : Right

Latitude : 20°54'45"

Longitude : 81°53'10"

Zero of Gauge (m) : 283 (m.s.l)

6/1/1978 - 6/1/2018

Opening Date

Closing Date

Gauge : 7/12/1977

Discharge : 12/6/1977

Sediment : 6/29/1980

Water Quality : 6/2/1980

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1978-1979	900.0	288.630	8/16/1978	0.049	284.070	5/5/1979
1979-1980	546.2	286.095	8/2/1979	0.015	284.040	5/6/1980
1980-1981	6250	289.330	9/18/1980	0.017	283.930	5/25/1981
1981-1982	1327	286.910	8/9/1981	0.100	284.050	4/3/1982
1982-1983	1069	286.430	8/13/1982	0.032	284.040	6/9/1982
1983-1984	1607	286.670	8/7/1983	0.044	284.165	4/9/1984
1984-1985	1709	286.430	8/9/1984	0.010	284.380	3/19/1985
1985-1986	1087	286.650	8/7/1985	0.007	284.260	4/21/1986
1986-1987	3968	287.500	8/14/1986	0.001	284.100	5/1/1987
1987-1988	267.1	285.450	9/4/1987	0.003	284.200	6/8/1987
1988-1989	205.5	285.400	7/2/1988	0.003	284.155	4/24/1989
1989-1990	219.4	285.370	8/26/1989	0.013	284.115	3/28/1990
1990-1991	3104	287.405	9/5/1990	0.051	284.140	4/20/1991
1991-1992	1806	287.190	7/30/1991	0.075	284.110	3/13/1992
1992-1993	5229	287.560	7/28/1992	0.042	284.115	3/22/1993
1993-1994	1154	286.210	8/20/1993	0.064	284.065	3/19/1994
1994-1995	3795	288.000	8/30/1994	0.140	283.960	3/30/1995
1995-1996	3650	288.620	9/3/1995	0.144	284.010	5/14/1996
1996-1997	784.0	286.190	8/2/1996	0.040	283.910	6/11/1996
1997-1998	4754	288.270	8/22/1997	0.249	284.000	3/17/1998
1998-1999	244.7	285.520	9/13/1998	0.139	284.060	2/28/1999
1999-2000	466.4	285.620	9/2/1999	0.235	283.980	1/24/2000

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2000-2001	452.4	285.750	7/19/2000	0.035	283.850	3/30/2001
2001-2002	6287	288.980	7/9/2001	0.301	284.000	4/19/2002
2002-2003	406.7	285.740	8/24/2002	0.080	283.950	6/6/2002
2003-2004	3923	288.700	8/29/2003	0.179	284.200	4/17/2004
2004-2005	900.0	286.325	8/22/2004	0.080	284.140	3/20/2005
2005-2006	934.8	286.720	9/14/2005	0.162	284.200	1/24/2006
2006-2007	1035	286.730	8/31/2006	0.157	284.240	6/21/2006
2007-2008	6594	288.582	8/7/2007	0.100	284.040	1/13/2008
2008-2009	4278	288.480	9/18/2008	0.142	283.950	1/1/2009
2009-2010	685.4	285.765	8/28/2009	0.130	284.020	12/31/2009
2010-2011	1812	286.255	8/6/2010	0.316	283.870	1/15/2011
2011-2012	1489	287.400	9/7/2011	0.458	283.980	12/10/2011
2012-2013	865.1	286.450	8/4/2012	0.172	283.980	12/15/2012
2013-2014	1881	287.410	7/31/2013	0.815	284.200	11/30/2013
2014-2015	1444	286.950	7/22/2014	0.000	284.980	7/16/2014

Stage-Discharge Data for the period 2015 - 2016

Station Name : Baronda (EMR00A4)

Division : MD,CWC,Burla

Local River : Pairi

Sub-Division : UMSD,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	283.000	0.000 *	284.320	4.622	284.230	3.035	284.520	21.22	284.265	5.877	284.060	2.090 *
2	283.000	0.000 *	284.420	13.87	284.215	3.030 *	284.405	8.640	284.240	5.700 *	284.060	2.093
3	283.000	0.000 *	284.400	9.950	284.195	2.871	284.195	2.778	284.288	5.575	284.050	1.724
4	283.000	0.000 *	284.370	8.539	284.270	6.977	284.120	2.239	284.260	5.900 *	284.050	1.724
5	283.000	0.000 *	284.340	8.125 *	284.260	6.990	284.115	1.766	284.268	5.747	284.040	1.213
6	283.000	0.000 *	284.290	4.348	284.235	3.540	284.110	1.700 *	284.250	5.634	284.035	0.714
7	283.000	0.000 *	284.185	2.780	284.200	2.846	284.105	1.562	284.280	5.881	283.850	0.554
8	283.000	0.000 *	284.145	2.395	284.175	1.924	284.100	1.500	284.230	4.907	283.500	0.320 *
9	283.000	0.000 *	284.190	2.530	284.170	1.900 *	284.370	14.75	284.250	5.900	283.000	0.000
10	283.000	0.000 *	284.288	6.932	284.150	1.840	284.155	3.289	284.135	4.113	283.000	0.000 *
11	283.000	0.000 *	284.365	15.53	284.215	4.249	284.135	2.195	284.125	4.100 *	283.000	0.000 *
12	283.000	0.000 *	284.680	90.00 *	284.250	7.052	284.125	1.705	284.140	4.894	283.000	0.000 *
13	283.000	0.000 *	284.450	25.56	284.250	7.113	284.195	2.770 *	284.125	3.962	283.000	0.000 *
14	283.000	0.000 *	284.370	19.30	284.645	84.97	284.110	1.365	284.120	3.673	283.000	0.000 *
15	283.000	0.000 *	284.300	14.56	284.480	40.00 *	284.180	6.153	284.110	3.614	283.000	0.000 *
16	283.000	0.000 *	284.365	19.59	284.380	20.00 *	284.785	175.5	284.105	3.356	283.000	0.000 *
17	283.000	0.000 *	284.550	32.52	284.285	7.711	286.470	700.0 *	284.100	3.324	283.000	0.000 *
18	283.000	0.000 *	284.500	29.54 *	284.303	10.79	285.930	535.7	284.100	3.300 *	283.000	0.000 *
19	283.000	0.000 *	284.450	24.35 *	284.295	7.806	284.748	145.4	284.095	3.184	283.000	0.000 *
20	283.000	0.000 *	284.400	16.55	284.250	4.185	285.240	300.0 *	284.085	2.180	283.000	0.000 *
21	283.000	0.000 *	284.370	13.23	284.275	6.560	286.140	609.1	284.080	2.108	283.000	0.000 *
22	283.000	0.000 *	284.350	11.61	284.205	3.437	284.935	227.3	284.075	2.100 *	283.000	0.000 *
23	283.000	0.000 *	284.425	17.22	284.180	2.050 *	284.950	233.9	284.070	1.993	283.000	0.000 *
24	283.000	0.000 *	284.645	82.63	284.160	1.903	284.720	129.0	284.065	1.950 *	283.000	0.000 *
25	284.380	10.82	284.603	54.44	284.140	1.860	284.670	121.5 *	284.090	2.200 *	283.000	0.000 *
26	284.355	7.530	284.515	30.02 *	284.183	3.053	284.588	80.31	284.080	2.112	283.000	0.000 *
27	284.310	4.930	284.450	22.49	284.570	63.65	284.410	25.00 *	284.070	2.435	283.000	0.000 *
28	284.280	3.840 *	284.410	17.53	284.585	67.73	284.355	18.08	284.065	2.408	283.000	0.000 *
29	284.250	3.321	284.370	11.50	284.400	19.54	284.320	13.65	284.120	3.363	283.000	0.000 *
30	284.293	4.685	284.300	8.406	284.555	55.00 *	284.300	6.370	284.105	3.170	283.000	0.000 *
31			284.235	4.008	284.385	17.05			284.090	3.027		
Ten-Daily Mean												
I Ten-Daily	283.000	0.000	284.295	6.410	284.210	3.495	284.220	5.945	284.247	5.523	283.764	1.043
II Ten-Daily	283.000	0.000	284.443	28.75	284.335	19.39	284.792	187.1	284.111	3.559	283.000	0.000
III Ten-Daily	283.787	3.512	284.425	24.83	284.331	21.98	284.739	146.4	284.083	2.442	283.000	0.000
Monthly												
Min.	283.000	0.000	284.145	2.395	284.140	1.840	284.100	1.365	284.065	1.950	283.000	0.000
Max.	284.380	10.82	284.680	90.00	284.645	84.97	286.470	700.0	284.288	5.900	284.060	2.093
Mean	283.262	1.171	284.389	20.15	284.293	15.18	284.583	113.1	284.145	3.796	283.255	0.348

Annual Runoff in MCM = 402 Annual Runoff in mm = 125

Peak Observed Discharge = 609.1 cumecs on 21/09/2015 Corres. Water Level :286.14 m

Lowest Observed Discharge = 0.000 cumecs on 09/11/2015 Corres. Water Level :283 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2015 - 2016

Station Name : Baronda (EMR00A4)

Division : MD,CWC,Burla

Local River : Pairi

Sub-Division : UMSD,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
2	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
3	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
4	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
5	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
6	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
7	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
8	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
9	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
10	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
11	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
12	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
13	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
14	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
15	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
16	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
17	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
18	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
19	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
20	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
21	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
22	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
23	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
24	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
25	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
26	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
27	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
28	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
29	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
30	283.000	0.000 *	283.000	0.000 *			283.000	0.000 *	283.000	0.000 *	283.000	0.000 *
31	283.000	0.000 *	283.000	0.000 *			283.000	0.000 *			283.000	0.000 *
Ten-Daily Mean												
I Ten-Daily	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000
II Ten-Daily	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000
III Ten-Daily	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000
Monthly												
Min.	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000
Max.	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000	283.000	0.000
Mean	283.000	0	283.000	0	283.000	0	283.000	0	283.000	0	283.000	0

Peak Computed Discharge = 700.0 cumecs on 17/09/2015

Corres. Water Level :286.47 m

Lowest Computed Discharge = 0.000 cumecs on 01/06/2015

Corres. Water Level :283 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

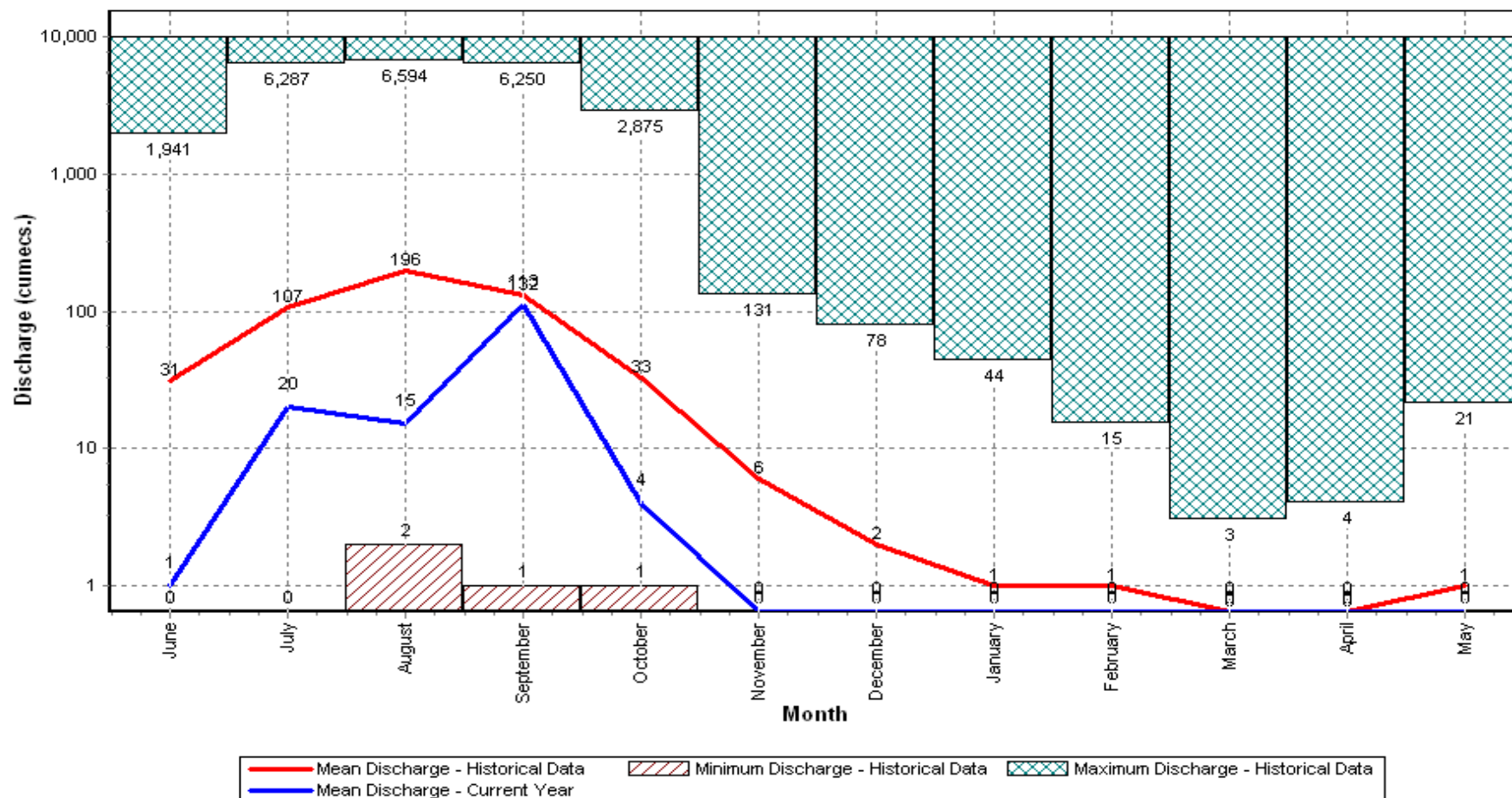
Station Name : Baronda (EMR00A4)

Data considered : 1978-2016

Division : MD,CWC,Burla

Local River : Pairi

Sub-Division : UMSD,CWC,Raipur



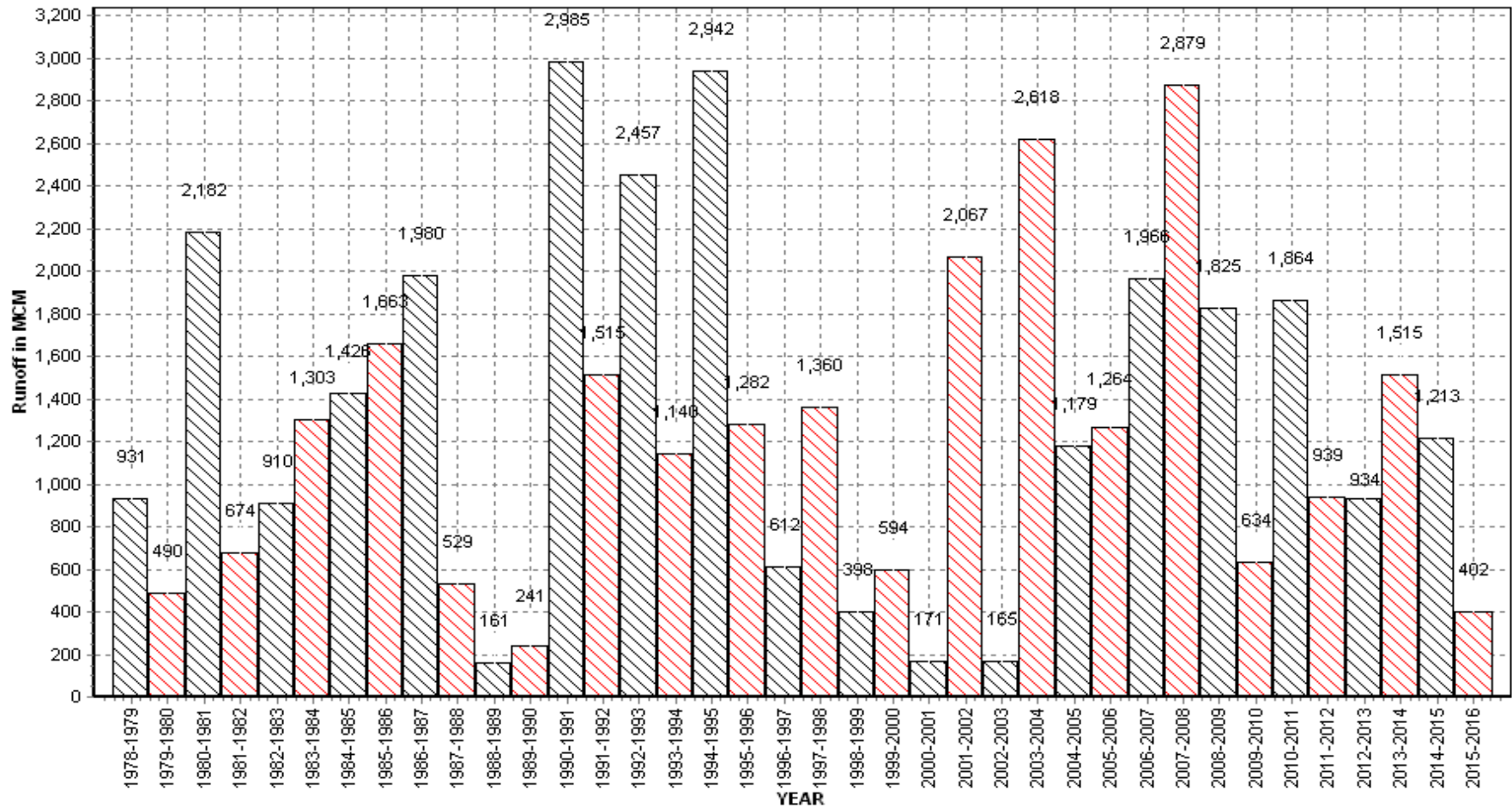
Annual Runoff Values for the period: 1978 - 2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



Note: Missing values have not been considered while arriving at Annual Runoff

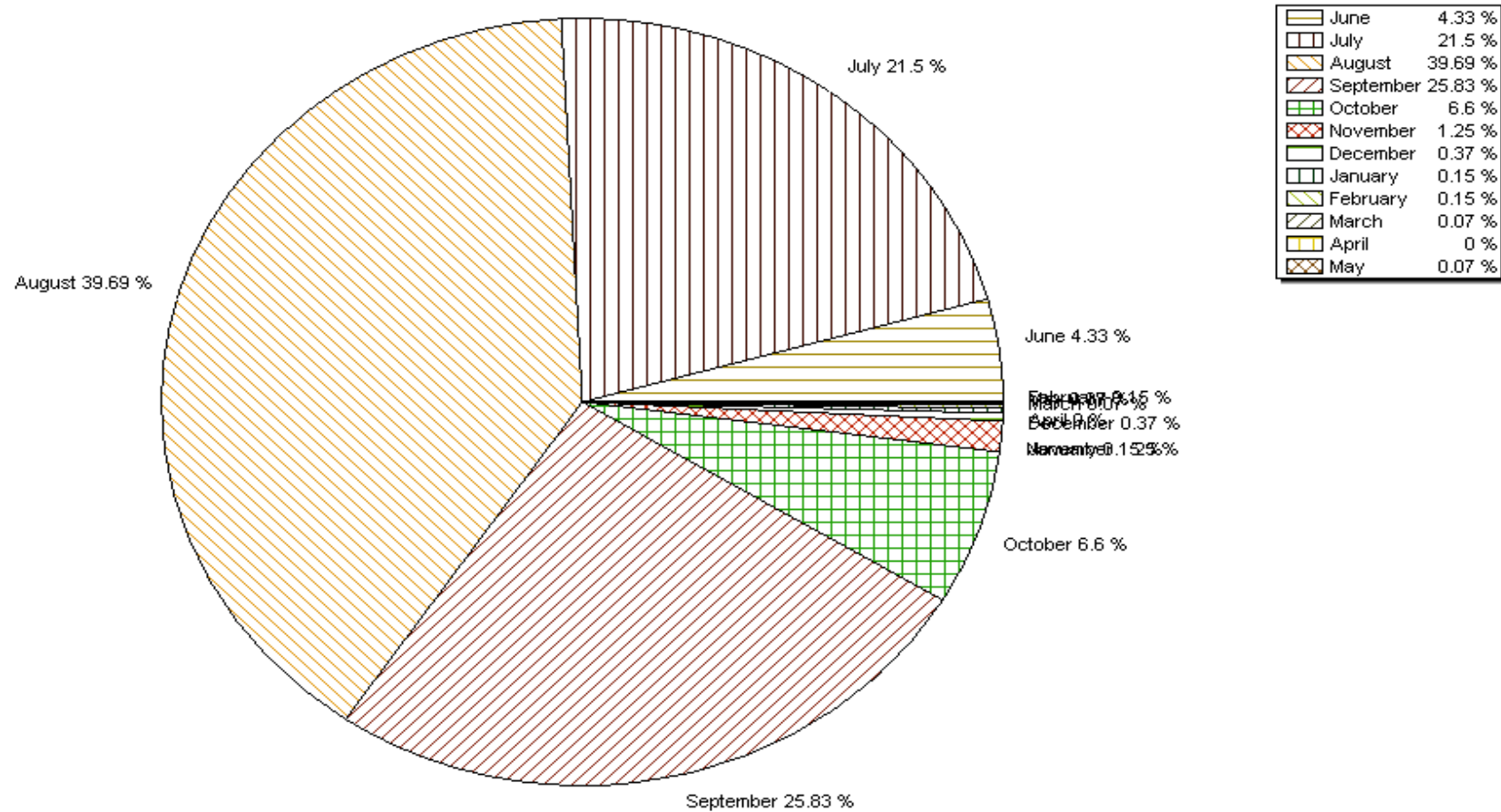
Monthly Average Runoff based on period : 1978-2015

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

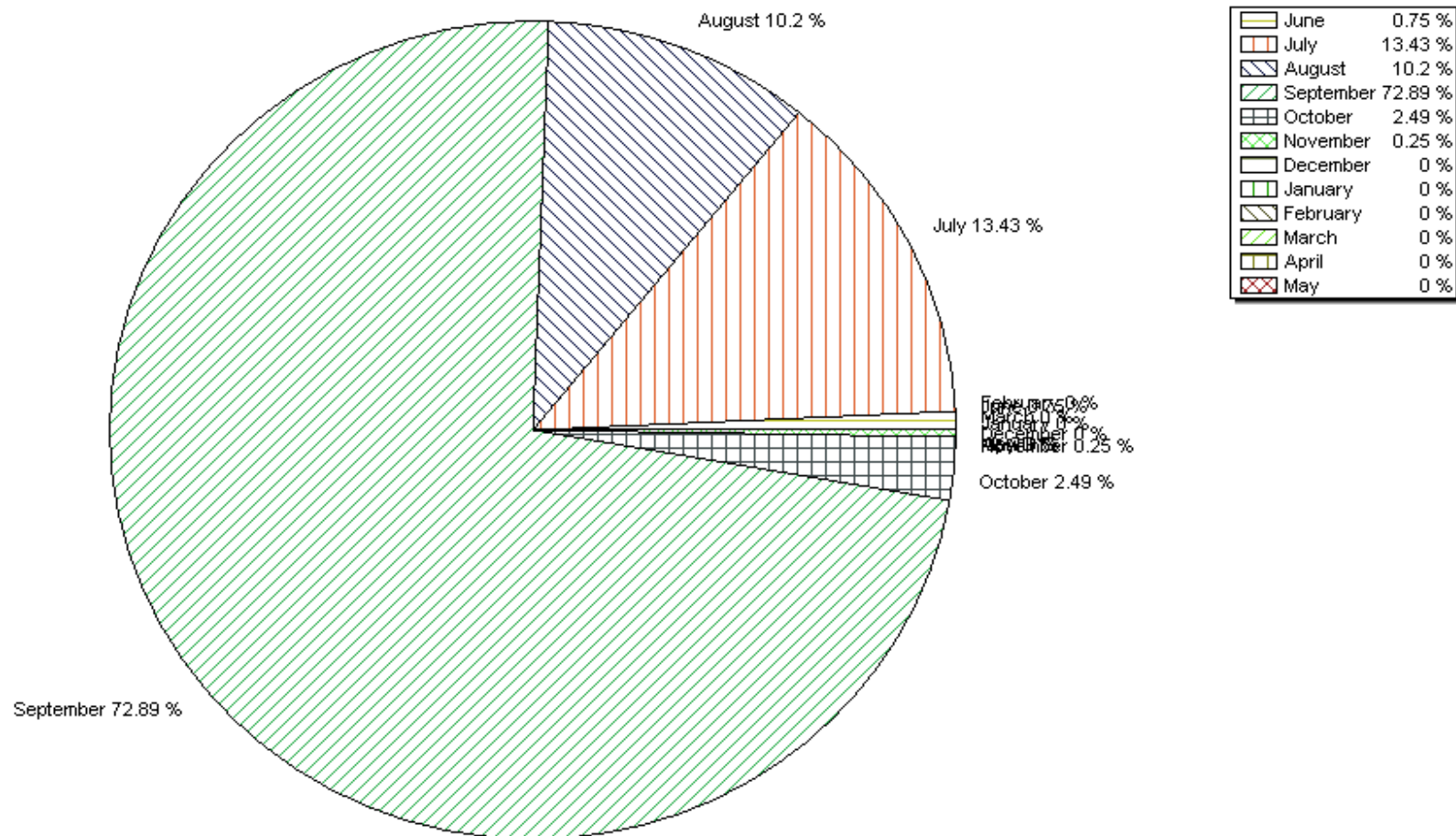
Sub-Division : UMSD,CWC,Raipur



Monthly Runoff for the Year : 2015-2016

Station Name : Baronda (EMR00A4)
Local River : Pairi

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



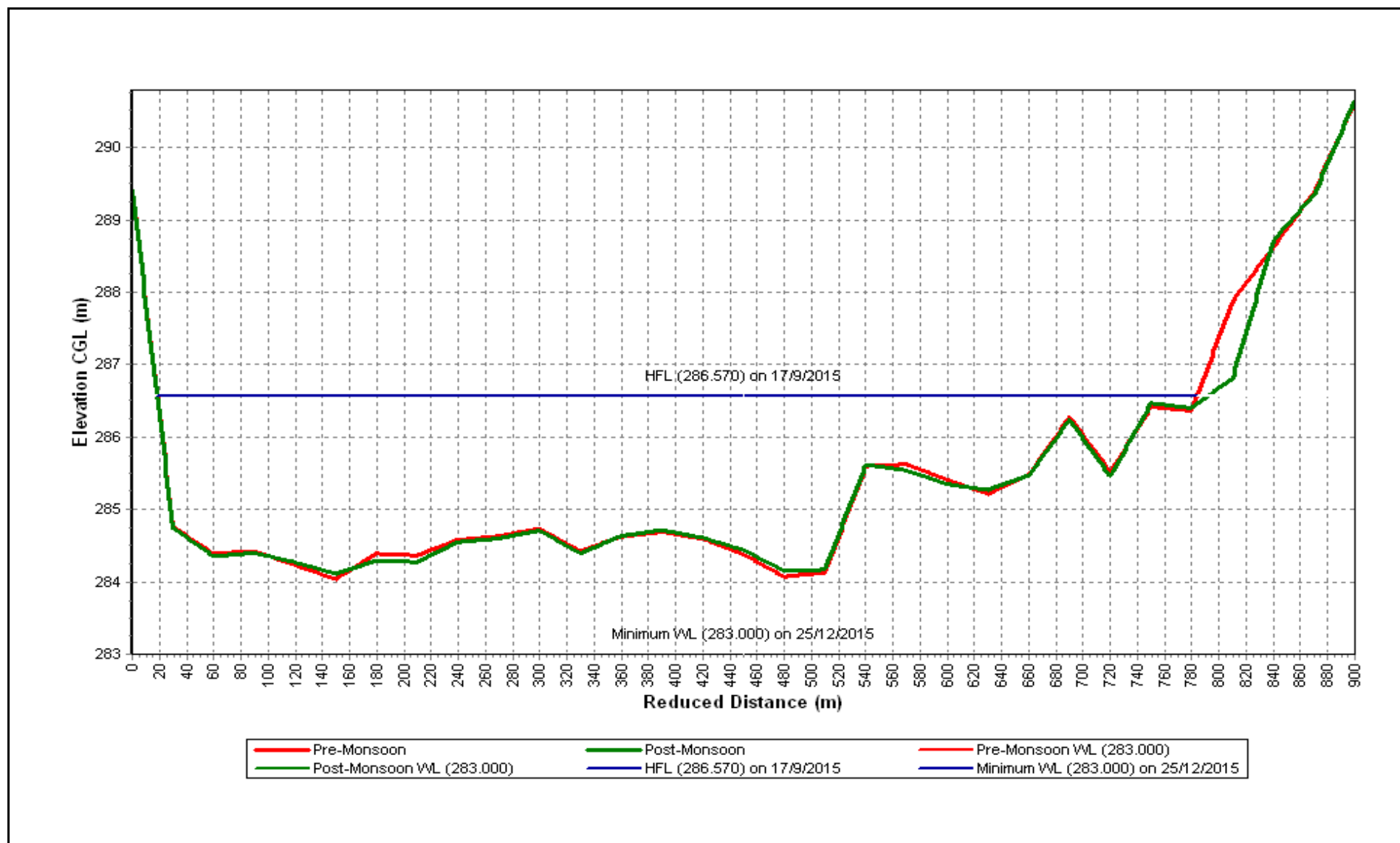
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



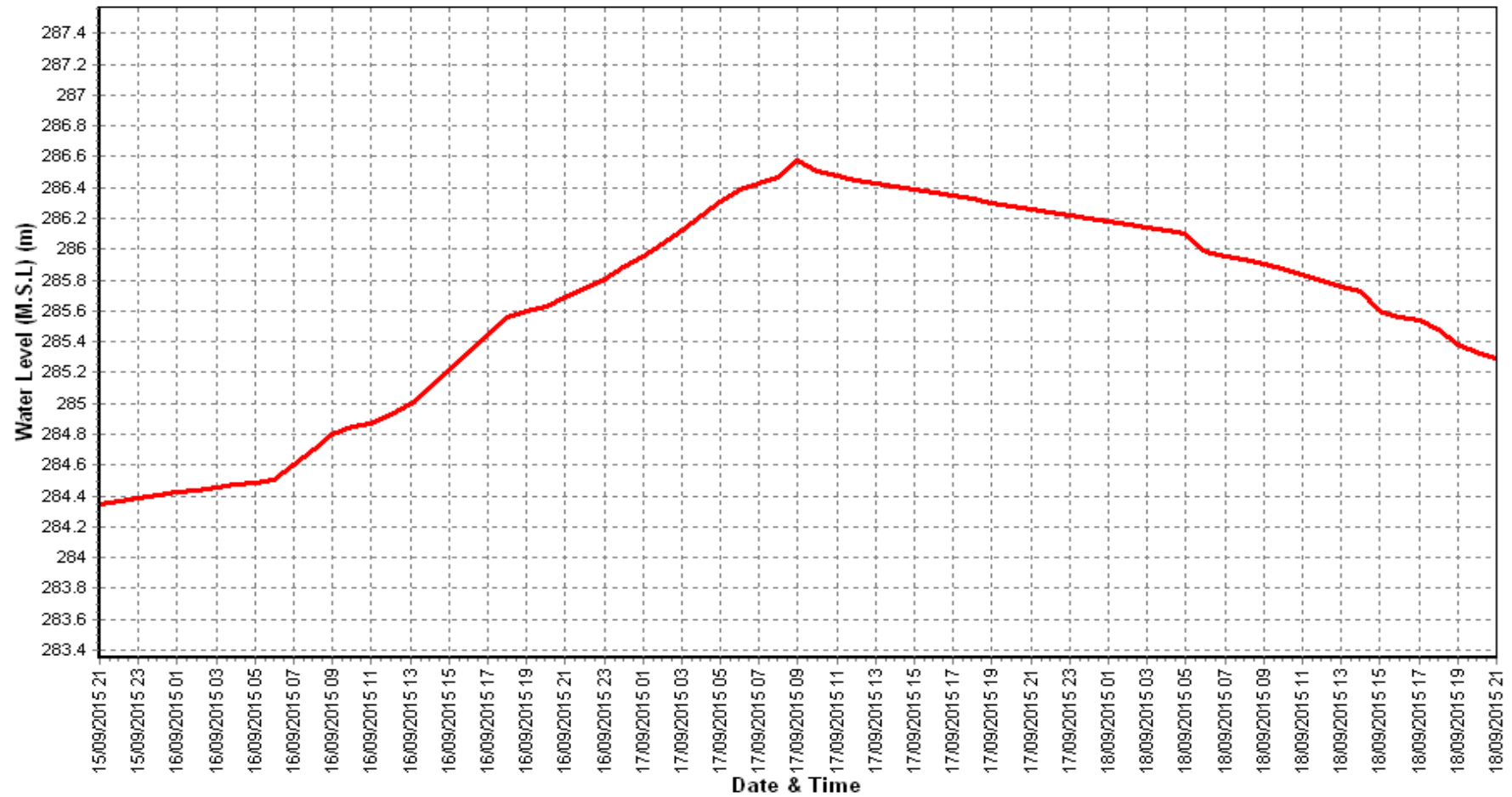
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

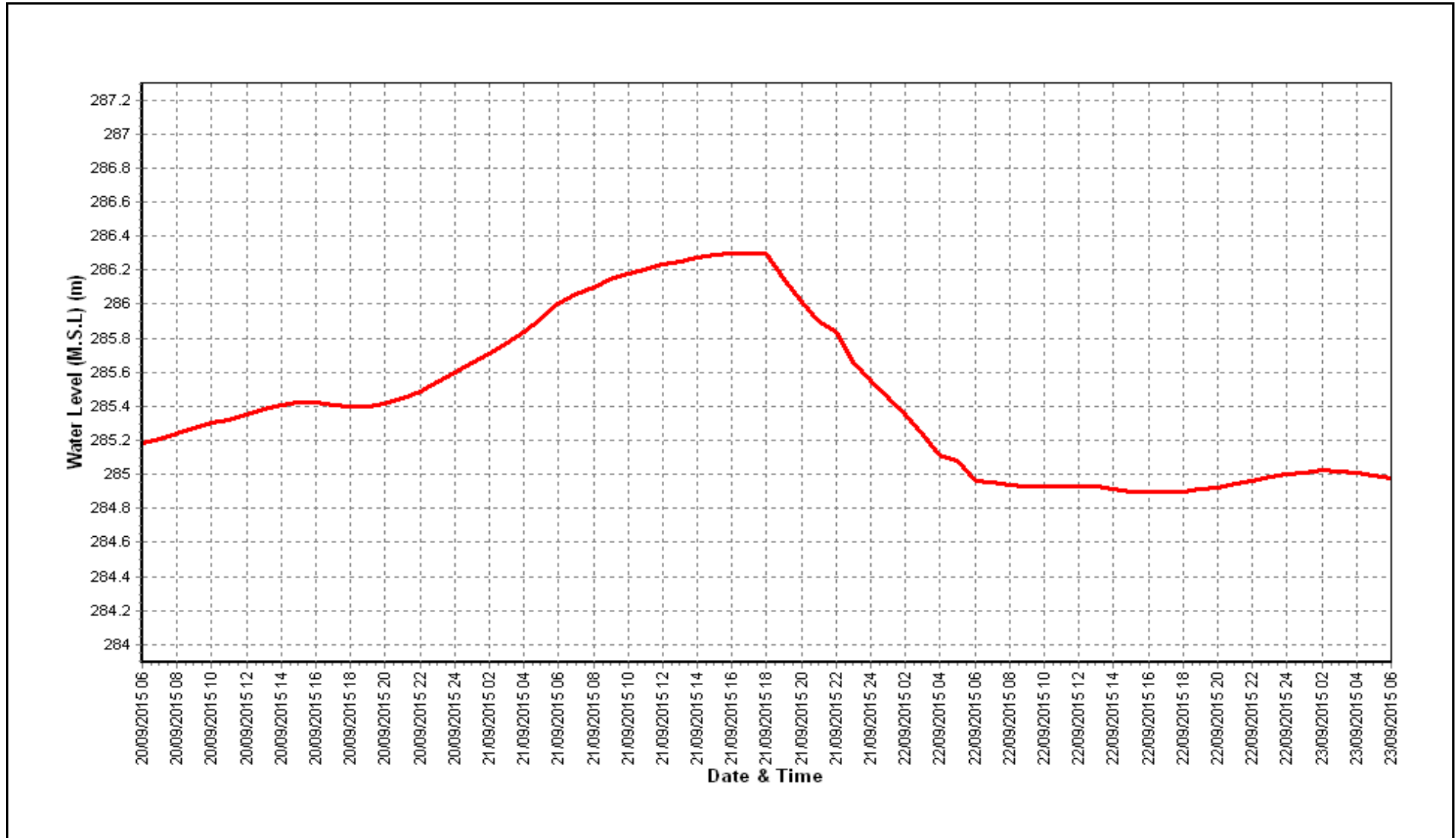
Sub-Division : UMSD,CWC,Raipur



Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Baronda (EMR00A4)
Local River : Pairi

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



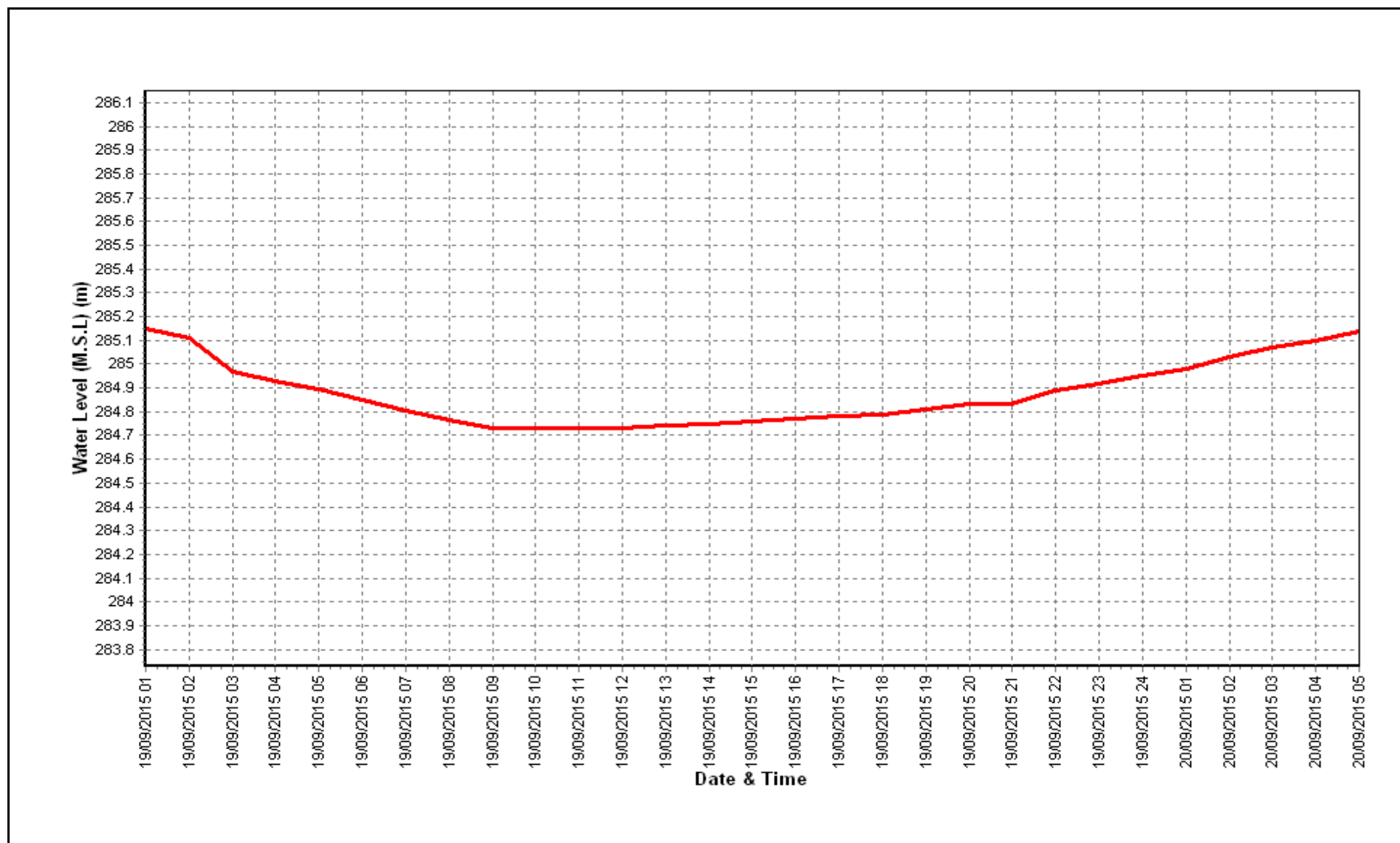
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

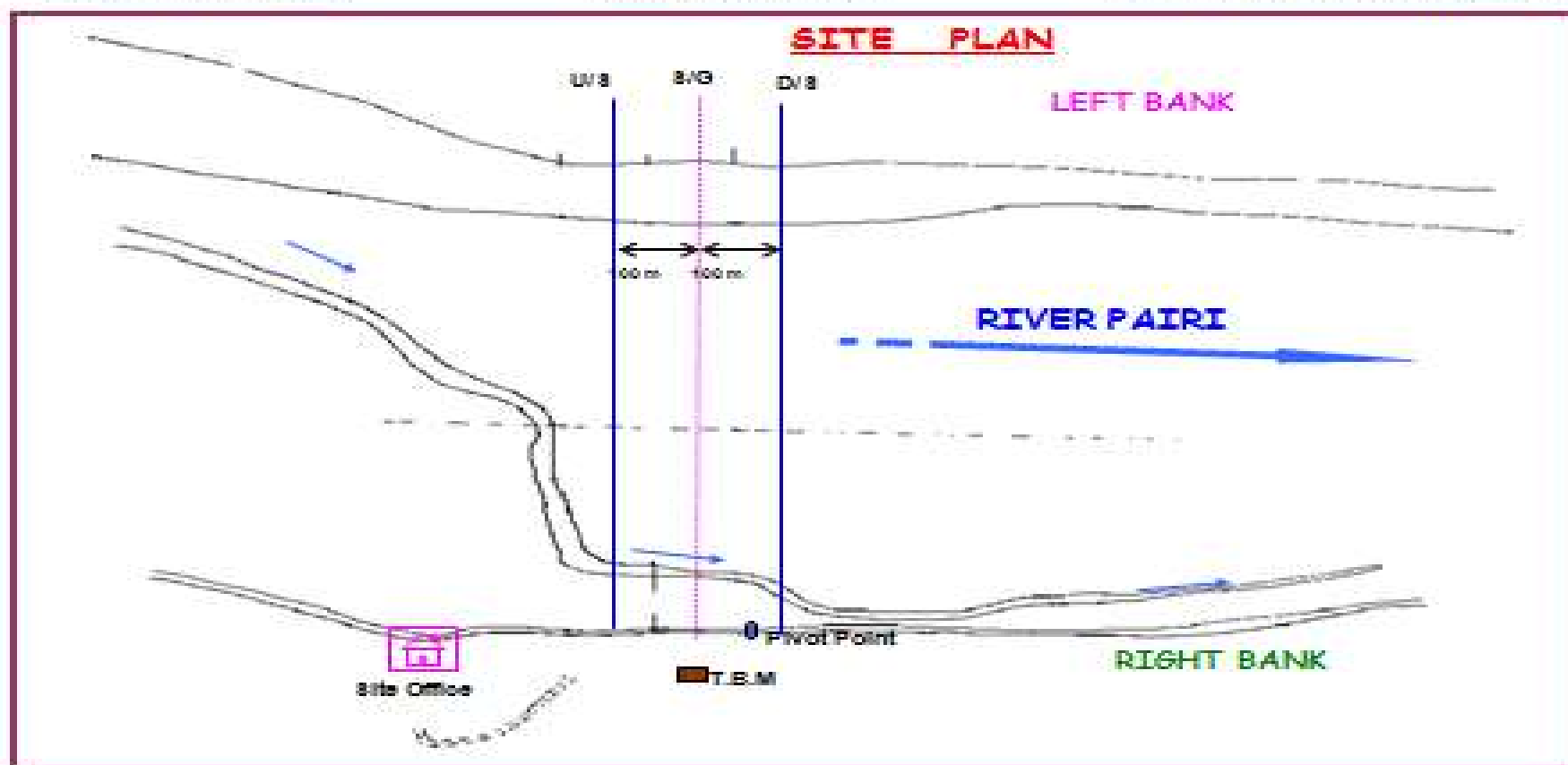


CENTRAL WATER COMMISSION, MAHANADI DIVISION, BURLA

Site : BARONDA

Code : EMR00A4

Sub-Division:UMSD CWC Raipur



SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	4.622	0.000	0.000	0.051	0.051	20	3.035	0.000	0.000	0.001	0.001	0
2	0.000	0.000	0.000	0.000	0.000	0	13.87	0.000	0.000	0.105	0.105	126	3.030	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	9.950	0.000	0.000	0.034	0.034	29	2.871	0.000	0.000	0.034	0.034	8
4	0.000	0.000	0.000	0.000	0.000	0	8.539	0.000	0.000	0.034	0.034	25	6.977	0.000	0.000	0.039	0.039	23
5	0.000	0.000	0.000	0.000	0.000	0	8.125	0.000	0.000	0.000	0.000	0	6.990	0.000	0.000	0.039	0.039	23
6	0.000	0.000	0.000	0.000	0.000	0	4.348	0.000	0.000	0.022	0.022	8	3.540	0.000	0.000	0.004	0.004	1
7	0.000	0.000	0.000	0.000	0.000	0	2.780	0.000	0.000	0.032	0.032	8	2.846	0.000	0.000	0.034	0.034	8
8	0.000	0.000	0.000	0.000	0.000	0	2.395	0.000	0.000	0.021	0.021	4	1.924	0.000	0.000	0.018	0.018	3
9	0.000	0.000	0.000	0.000	0.000	0	2.530	0.000	0.000	0.001	0.001	0	1.900	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	6.932	0.000	0.000	0.038	0.038	23	1.840	0.000	0.000	0.020	0.020	3
11	0.000	0.000	0.000	0.000	0.000	0	15.53	0.000	0.000	0.072	0.072	97	4.249	0.000	0.000	0.001	0.001	0
12	0.000	0.000	0.000	0.000	0.000	0	90.00	0.000	0.000	0.000	0.000	0	7.052	0.000	0.000	0.001	0.001	1
13	0.000	0.000	0.000	0.000	0.000	0	25.56	0.000	0.000	0.038	0.038	84	7.113	0.000	0.000	0.094	0.094	58
14	0.000	0.000	0.000	0.000	0.000	0	19.30	0.000	0.000	0.057	0.057	95	84.97	0.000	0.000	0.002	0.002	15
15	0.000	0.000	0.000	0.000	0.000	0	14.56	0.000	0.000	0.010	0.010	13	40.00	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	19.59	0.000	0.000	0.063	0.063	107	20.00	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	32.52	0.000	0.000	0.049	0.049	138	7.711	0.000	0.000	0.020	0.020	13
18	0.000	0.000	0.000	0.000	0.000	0	29.54	0.000	0.000	0.000	0.000	0	10.79	0.000	0.000	0.055	0.055	51
19	0.000	0.000	0.000	0.000	0.000	0	24.35	0.000	0.000	0.000	0.000	0	7.806	0.000	0.000	0.003	0.003	2
20	0.000	0.000	0.000	0.000	0.000	0	16.55	0.000	0.000	0.029	0.029	41	4.185	0.000	0.000	0.199	0.199	72
21	0.000	0.000	0.000	0.000	0.000	0	13.23	0.000	0.000	0.022	0.022	25	6.560	0.000	0.000	0.204	0.204	116
22	0.000	0.000	0.000	0.000	0.000	0	11.61	0.000	0.000	0.026	0.026	26	3.437	0.000	0.000	0.003	0.003	1
23	0.000	0.000	0.000	0.000	0.000	0	17.22	0.000	0.000	0.062	0.062	92	2.050	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	82.63	0.000	0.000	0.074	0.074	528	1.903	0.000	0.000	0.163	0.163	27
25	10.82	0.000	0.000	0.004	0.004	4	54.44	0.000	0.000	0.073	0.073	343	1.860	0.000	0.000	0.163	0.163	26
26	7.530	0.000	0.000	0.002	0.002	1	30.02	0.000	0.000	0.000	0.000	0	3.053	0.000	0.000	0.018	0.018	5
27	4.930	0.000	0.000	0.002	0.002	1	22.49	0.000	0.000	0.062	0.062	120	63.65	0.000	0.000	0.083	0.083	456
28	3.840	0.000	0.000	0.000	0.000	0	17.53	0.000	0.000	0.060	0.060	91	67.73	0.000	0.000	0.094	0.094	550
29	3.321	0.000	0.000	0.001	0.001	0	11.50	0.000	0.000	0.058	0.058	58	19.54	0.000	0.000	0.062	0.062	105
30	4.685	0.000	0.000	0.003	0.003	1	8.406	0.000	0.000	0.048	0.048	35	55.00	0.000	0.000	0.000	0.000	0
31							4.008	0.000	0.000	0.042	0.042	15	17.05	0.000	0.000	0.050	0.050	74
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	6.410	0.000	0.000	0.034	0.034	24	3.495	0.000	0.000	0.019	0.019	7
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	28.75	0.000	0.000	0.032	0.032	57	19.39	0.000	0.000	0.037	0.037	21
Ten Daily III	3.512	0.000	0.000	0.001	0.001	1	24.83	0.000	0.000	0.048	0.048	121	21.98	0.000	0.000	0.076	0.076	124
Monthly																		
Total						7						2151						1642

Annual Sediment Load (Metric Tonnes) : 28513

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	21.22	0.000	0.000	0.014	0.014	26	5.877	0.000	0.000	0.204	0.204	104	2.090	0.000	0.000	0.000	0.000	0
2	8.640	0.000	0.000	0.220	0.220	164	5.700	0.000	0.000	0.000	0.000	0	2.093	0.000	0.000	0.000	0.000	0
3	2.778	0.000	0.000	0.199	0.199	48	5.575	0.000	0.000	0.212	0.212	102	1.724	0.000	0.000	0.000	0.000	0
4	2.239	0.000	0.000	0.199	0.199	39	5.900	0.000	0.000	0.000	0.000	0	1.724	0.000	0.000	0.000	0.000	0
5	1.766	0.000	0.000	0.022	0.022	3	5.747	0.000	0.000	0.020	0.020	10	1.213	0.000	0.000	0.000	0.000	0
6	1.700	0.000	0.000	0.000	0.000	0	5.634	0.000	0.000	0.183	0.183	89	0.714	0.000	0.000	0.000	0.000	0
7	1.562	0.000	0.000	0.198	0.198	27	5.881	0.000	0.000	0.019	0.019	10	0.554	0.000	0.000	0.000	0.000	0
8	1.500	0.000	0.000	0.216	0.216	28	4.907	0.000	0.000	0.227	0.227	96	0.320	0.000	0.000	0.000	0.000	0
9	14.75	0.000	0.000	0.316	0.316	403	5.900	0.000	0.000	0.023	0.023	12	0.000	0.000	0.000	0.000	0.000	0
10	3.289	0.000	0.000	0.397	0.397	113	4.113	0.000	0.000	0.194	0.194	69	0.000	0.000	0.000	0.000	0.000	0
11	2.195	0.000	0.000	0.223	0.223	42	4.100	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	1.705	0.000	0.000	0.161	0.161	24	4.894	0.000	0.000	0.021	0.021	9	0.000	0.000	0.000	0.000	0.000	0
13	2.770	0.000	0.000	0.000	0.000	0	3.962	0.000	0.000	0.022	0.022	8	0.000	0.000	0.000	0.000	0.000	0
14	1.365	0.000	0.000	0.218	0.218	26	3.673	0.000	0.000	0.029	0.029	9	0.000	0.000	0.000	0.000	0.000	0
15	6.153	0.000	0.000	0.111	0.111	59	3.614	0.000	0.000	0.025	0.025	8	0.000	0.000	0.000	0.000	0.000	0
16	175.5	0.000	0.000	0.082	0.082	1243	3.356	0.000	0.000	0.014	0.014	4	0.000	0.000	0.000	0.000	0.000	0
17	700.0	0.000	0.000	0.000	0.000	0	3.324	0.000	0.000	0.027	0.027	8	0.000	0.000	0.000	0.000	0.000	0
18	535.7	0.000	0.000	0.029	0.029	1342	3.300	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	145.4	0.000	0.000	0.149	0.149	1872	3.184	0.000	0.000	0.018	0.018	5	0.000	0.000	0.000	0.000	0.000	0
20	300.0	0.000	0.000	0.000	0.000	0	2.180	0.000	0.000	0.023	0.023	4	0.000	0.000	0.000	0.000	0.000	0
21	609.1	0.000	0.000	0.161	0.161	8473	2.108	0.000	0.000	0.017	0.017	3	0.000	0.000	0.000	0.000	0.000	0
22	227.3	0.000	0.000	0.154	0.154	3025	2.100	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	233.9	0.000	0.000	0.151	0.151	3051	1.993	0.000	0.000	0.019	0.019	3	0.000	0.000	0.000	0.000	0.000	0
24	129.0	0.000	0.000	0.196	0.196	2184	1.950	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	121.5	0.000	0.000	0.000	0.000	0	2.200	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	80.31	0.000	0.000	0.206	0.206	1429	2.112	0.000	0.000	0.012	0.012	2	0.000	0.000	0.000	0.000	0.000	0
27	25.00	0.000	0.000	0.000	0.000	0	2.435	0.000	0.000	0.017	0.017	4	0.000	0.000	0.000	0.000	0.000	0
28	18.08	0.000	0.000	0.128	0.128	200	2.408	0.000	0.000	0.012	0.012	2	0.000	0.000	0.000	0.000	0.000	0
29	13.65	0.000	0.000	0.177	0.177	209	3.363	0.000	0.000	0.015	0.015	4	0.000	0.000	0.000	0.000	0.000	0
30	6.370	0.000	0.000	0.202	0.202	111	3.170	0.000	0.000	0.015	0.015	4	0.000	0.000	0.000	0.000	0.000	0
31							3.027	0.000	0.000	0.017	0.017	4						
Ten Daily Mean																		
Ten Daily I	5.945	0.000	0.000	0.178	0.178	85	5.523	0.000	0.000	0.108	0.108	49	1.043	0.000	0.000	0.000	0.000	0
Ten Daily II	187.1	0.000	0.000	0.097	0.097	461	3.559	0.000	0.000	0.018	0.018	5	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	146.4	0.000	0.000	0.138	0.138	1868	2.442	0.000	0.000	0.011	0.011	3	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						24140						573						0

Annual Sediment Load (Metric Tonnes) : 28513

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 28513

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 28513

Annual Sediment Load for period : 1980-2016

Station Name : Baronda (EMR00A4)

Division : MD,CWC,Burla

Local River : Pairi

Sub-Division : UMSD,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1980-1981	595793	0	595793	2182
1981-1982	204758	31	204790	674
1982-1983	805169	104	805272	910
1983-1984	836587	405	836992	1303
1984-1985	596408	0	596408	1426
1985-1986	549375	1	549377	1663
1986-1987	471867	20	471887	1980
1987-1988	317512	59	317570	529
1988-1989	86262	0	86262	161
1989-1990	68572	0	68572	241
1990-1991	1721091	12	1721104	2985
1991-1992	277934	2	277936	1515
1992-1993	1668281	2	1668283	2457
1993-1994	656171	2	656173	1140
1994-1995	925730	98	925828	2942
1995-1996	529944	3	529947	1282
1996-1997	394202	4	394207	612
1997-1998	678480	0	678480	1360
1998-1999	88505	8	88513	398
1999-2000	330747	0	330747	594
2000-2001	55332	0	55332	171
2001-2002	1041229	0	1041229	2067
2002-2003	57716	0	57716	165
2003-2004	687469	53	687522	2618
2004-2005	412797	18	412815	1179
2005-2006	332107	0	332107	1264
2006-2007	431082	0	431082	1966
2007-2008	1213921	0	1213921	2879
2008-2009	457255	0	457255	1825
2009-2010	130373	0	130373	634
2010-2011	665071	0	665071	1864
2011-2012	764	0	764	939
2012-2013	59965	0	59965	934
2013-2014	212204	0	212204	1515
2014-2015	88538	177	88715	1213
2015-2016	28513	0	28513	402

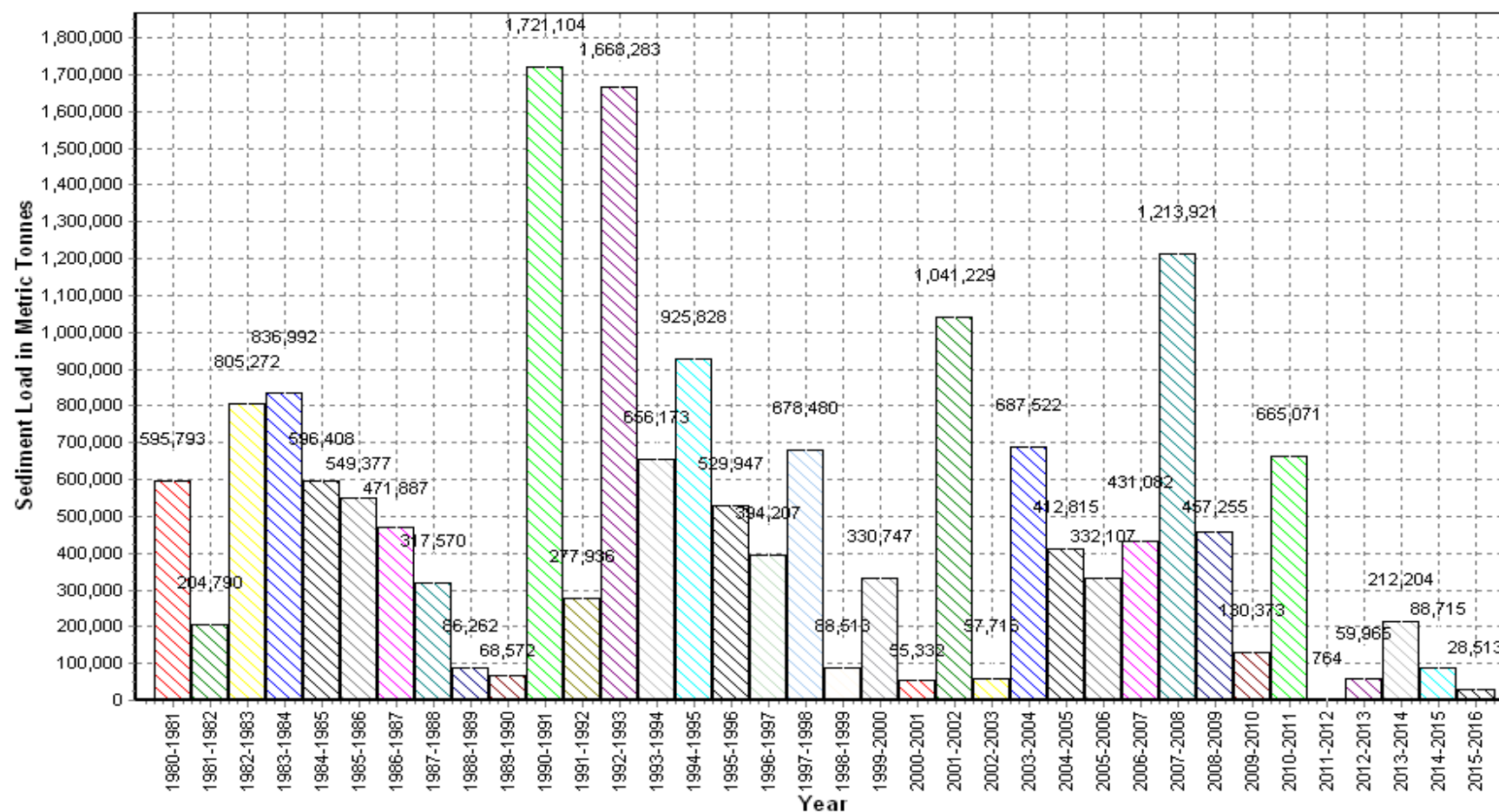
Annual Sediment Load for the period: 1980-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



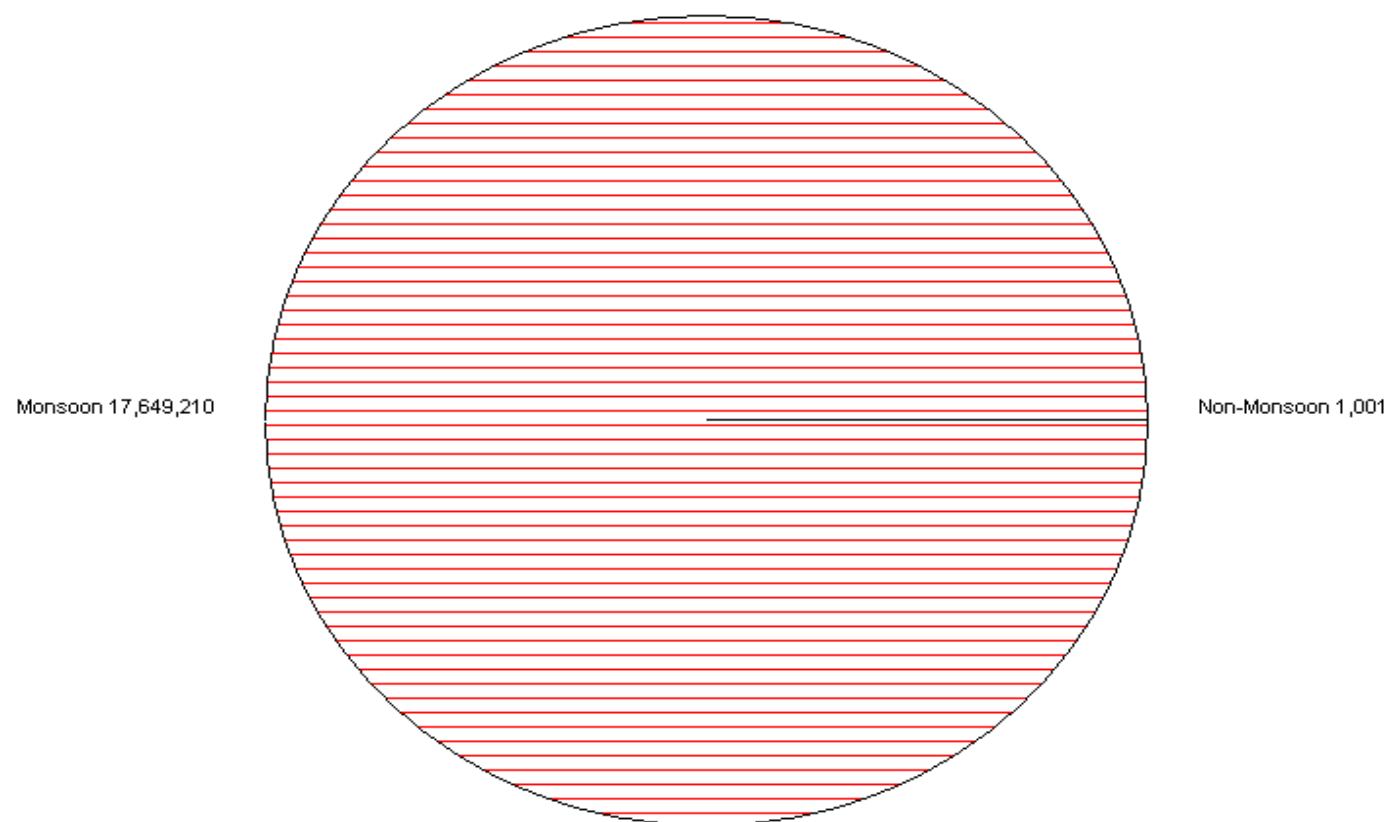
Seasonal Sediment Load for the period : 1980-2015

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



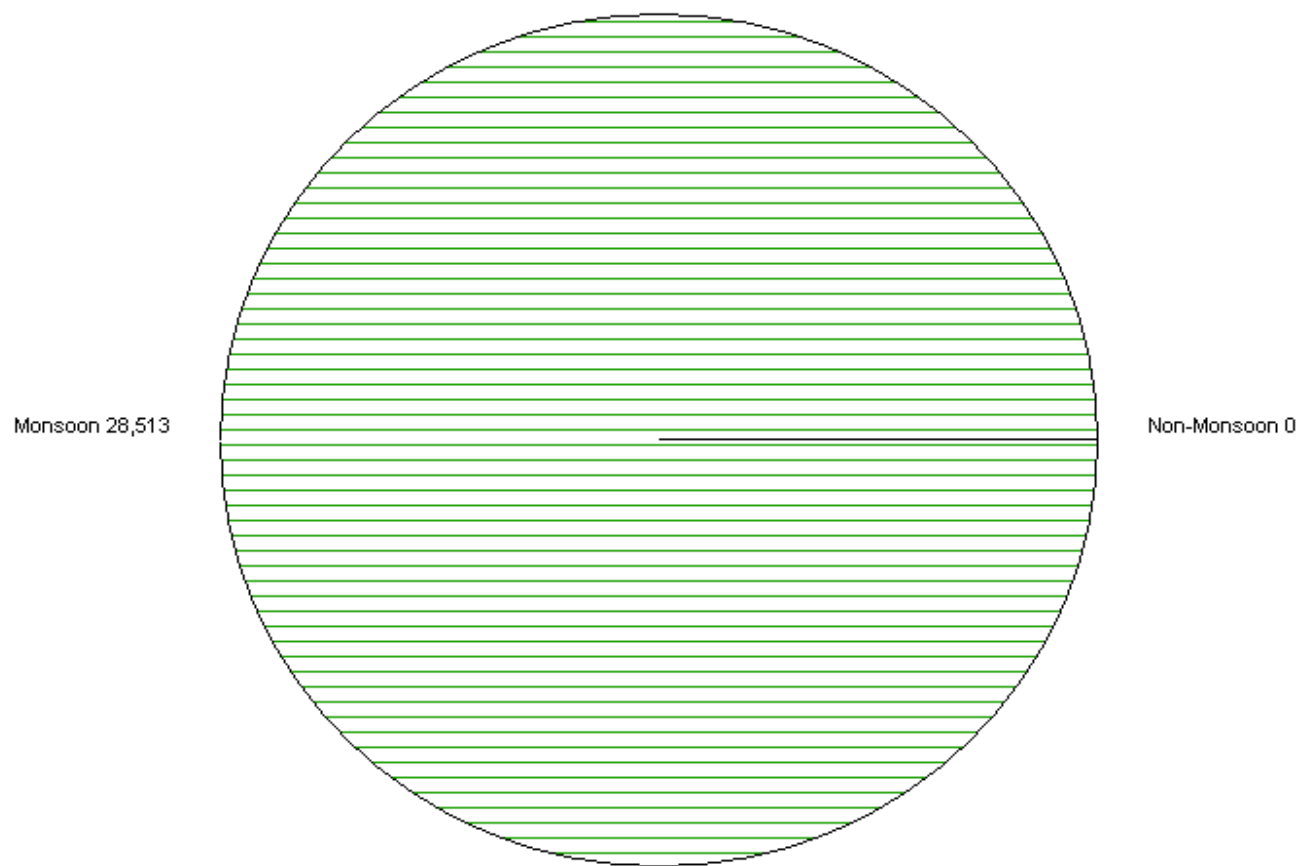
Seasonal Sediment Load for the Year: 2015-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	4.622	3.035	21.22	5.877	2.093	0.000	0.000	0.000	0.000	0.000	0.000
2	Colour_Cod (-)		Clear	Clear	Clear	Clear	Clear						
3	EC_GEN (µmho/cm)		86	109	91	87	91						
4	Odour_Code (-)		odour free	odour free	odour free	odour free	odour free						
5	pH_GEN (pH units)		8.4	7.9	7.9	8.4	7.7						
6	Temp (deg C)		29.0	26.0	25.0	27.0	22.0						
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	10.0	0.0						
2	ALK-TOT (mgCaCO3/L)		104	136	150	76	100						
3	Ca (mg/L)		11	16	16	14	18						
4	Cl (mg/L)		13.0	12.0	14.0	14.0	9.0						
5	CO3 (mg/L)		0.0	0.0	0.0	12.0	0.0						
6	HCO3 (mg/L)		63	83	91	34	61						
7	K (mg/L)		7.7	2.4	2.5	10.2	6.0						
8	Mg (mg/L)		11.7	8.7	7.8	9.7	5.8						
9	Na (mg/L)		14.9	6.4	8.1	16.5	21.2						
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)		1.0	0.1	1.1	0.1	1.1						
2	DO (mg/L)		7.8	6.3	7.1	6.7	7.0						
3	DO_SAT% (%)		101	78	86	84	80						
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)		28	40	40	36	44						
2	HAR_Total (mgCaCO3/L)		77	76	72	77	68						
3	Na% (%)		27	15	19	29	38						
4	RSC (-)		0.0	0.0	0.1	0.0	0.0						
5	SAR (-)		0.7	0.3	0.4	0.8	1.1						
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Baronda (EMR00A4)

Division : MD,CWC,Burla

Local River : Pairi

Sub-Division : UMSD,CWC,Raipur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	700.0	0.000	12.71
2	EC_GEN (µmho/cm)	5	109	86	93
3	pH_GEN (pH units)	5	8.4	7.7	8.1
4	Temp (deg C)	5	29.0	22.0	25.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	10.0	0.0	2
2	ALK-TOT (mgCaCO3/L)	5	150	76	113
3	Ca (mg/L)	5	18	11	15
4	Cl (mg/L)	5	14.0	9.0	12.4
5	CO3 (mg/L)	5	12.0	0.0	2.4
6	HCO3 (mg/L)	5	91	34	67
7	K (mg/L)	5	10.2	2.4	5.8
8	Mg (mg/L)	5	11.7	5.8	8.7
9	Na (mg/L)	5	21.2	6.4	13.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5	1.1	0.1	0.7
2	DO (mg/L)	5	7.8	6.3	7
3	DO_SAT% (%)	5	101	78	86
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	44	28	38
2	HAR_Total (mgCaCO3/L)	5	77	68	74
3	Na% (%)	5	38	15	26
4	RSC (-)	5	0.1	0.0	0
5	SAR (-)	5	1.1	0.3	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Flood																				
		Jun - Oct															2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015						
	PHYSICAL																					
1	Q (cumec)	50.61	20.88	98.15	39.86	106.3	191.9	152.1	205.7	93.12	37.07	48.66	56.06	288.2	66.08	6.951	1.484	1.044	20.47	6.591	2.675	2.879
2	EC_FLD (µmho/cm)	110	108	92	110	95	101	91	243	81	80	96	702	682			102	121	197	133	105	95
3	EC_GEN (µmho/cm)	110	108	92	110	97	101	96	206	80	135	111	115	107	79	93	102	121	197	133	105	95
4	pH_FLD (pH units)	7.5	7.5	7.8	7.9	7.7	7.4	7.6	7.7	7.9	7.5	7.8	8.3	8.7			7.9	7.8	7.8	7.8	7.6	8.0
5	pH_GEN (pH units)	7.5	7.5	7.8	7.9	7.7	7.4	7.6	7.6	7.8	7.6	7.6	7.9	8.2	7.7	8.2	7.9	7.8	7.8	7.8	7.6	8.0
6	Temp (deg C)	27.5	28.3	30.0	30.8	30.2	27.8	28.4	26.9	28.3	28.0	27.1	27.6	27.0	26.3	26.8	20.0	21.1	22.5	23.3	24.7	25.0
	CHEMICAL																					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.7	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	68	70	101	111	50		71	268	55	73	73	78	102	112	116	65	97	192	247	74	
3	B (mg/L)					0.06		0.01	0.00	0.00	0.00	0.00	0.00								0.04	
4	Ca (mg/L)	7	14	13	17	6		9	15	5	8	9	10	13	12	14	6	14	11	12	6	
5	Cl (mg/L)	4.6	5.4	18.3	11.0	10.1		5.3	5.1	3.8	2.8	3.8	6.1	13.3	10.3	13.3	4.3	5.0	12.3	7.3	11.1	
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.9	0.0	0.0	0.0	0.0	
7	F (mg/L)			1.04		0.17		0.07	0.12	0.06	0.33	0.17	0.14						0.93	0.41	0.05	
8	Fe (mg/L)					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.0	0.0
9	HCO3 (mg/L)	41	42	62	67	30		43	163	34	44	44	47	62	68	68	38	59	75	150	45	
10	K (mg/L)	2.4	4.0			2.1		1.3	0.8	1.0	1.6	1.8	1.1	4.0	2.6	5.7	1.1	3.1		3.9	1.4	
11	Mg (mg/L)	1.6	2.0	2.3	6.2	2.6		4.7	8.5	3.2	4.3	4.5	5.7	4.4	5.9	9.5	1.3	2.1	7.4	4.0	3.4	
12	Na (mg/L)	3.1	5.2			6.8		12.6	3.7	2.5	5.6	3.8	7.0	5.8	16.3	11.5	3.8	5.0		8.3	7.9	
13	NO2+NO3 (mg N/L)	0.91			0.11	0.03	0.08	0.15	0.71								0.12			0.15	0.06	0.03
14	NO2-N (mgN/L)					0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.03								0.00	0.01
15	NO3-N (mgN/L)					0.05	0.07	0.14	0.69												0.06	0.03
16	P-Tot (mgP/L)			0.020		0.033		0.010	0.030	0.023	0.012	0.015	0.045							0.480	0.011	
17	SiO2 (mg/L)					7.2		6.9	13.9	27.5	5.2	8.6	11.4								13.0	
18	SO4 (mg/L)	4.7	6.8	24.0	4.0	7.2		15.4	6.8	6.0	10.0	13.2	12.3				3.8	5.5	5.0	8.7	4.7	
	BIOLOGICAL/BACTERIOLOGICAL																					
1	BOD3-27 (mg/L)	1.1	0.4	1.7	0.9	0.7		1.4	0.9	1.5	0.6	0.9	1.3	0.7	0.9	0.6	1.3	1.3	0.9	0.9	1.1	
2	COD (mg/L)							12.0	14.0	16.0	13.0	15.0	16.0									
3	DO (mg/L)	8.2	8.1	7.0	7.7	6.3		7.7	6.3	6.5	6.5	6.4	7.3	7.0	7.3	7.0	11.1	8.2	6.9	7.7	8.0	
4	DO_SAT% (%)	104	104	95	104	83		99	78	83	82	80	93	88	91	87	117	89	82	90	96	
	TRACE & TOXIC																					
	CHEMICAL INDICES																					
1	HAR_Ca (mgCaCO3/L)	17	35	31	44	16		23	36	13	21	22	24	32	29	36	15	34	27	30	16	
2	HAR_Total (mgCaCO3/L)	23	43	41	69	27		43	72	27	38	41	48	50	54	76	21	43	57	47	30	
3	Na% (%)	25	19			33		39	13	16	24	16	23	17	39	23	26	12		25	35	
4	RSC (-)	0.2	0.1	0.2	0.0	0.1		0.0	1.3	0.0	0.0	0.0	0.0	0.1	0.2	0.0	0.3	0.2	0.0	1.6	0.2	
5	SAR (-)	0.3	0.3			0.6		0.8	0.2	0.2	0.4	0.3	0.4	0.3	1.0	0.6	0.4	0.2		0.5	0.6	
	PESTICIDES																					

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Baronda (EMR00A4)

Local River : Pairi

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Winter									Summer														
		Nov - Feb									Mar - May														
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL																								
1	Q (cumec)	1.222	2.546	1.279	10.45	1.535	3.090	5.514	2.858	0.523	1.472		2.141	1.730	1.688									0.000	0.000
2	EC_FLD (µmho/cm)	99	126	98	74	98	754				113		184	80	527		147								
3	EC_GEN (µmho/cm)	112	244	104	100	88	127	103	91	91	113		184	80	527		165								
4	pH_FLD (pH units)	7.9	7.9	8.1	7.9	8.1	8.5				7.3		7.9	8.1	7.7		8.2								
5	pH_GEN (pH units)	7.8	8.2	8.0	8.0	7.9	7.5	8.1	7.8	7.7	7.3		7.9	8.1	7.7		8.0								
6	Temp (deg C)	20.5	22.5	20.7	22.3	21.6	21.1	22.5	18.3	22.0	26.2			29.0	30.0		21.9								
	CHEMICAL																								
1	Alk-Phen (mgCaCO3/L)	0.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	4.6	0.0		0.0								
2	ALK-TOT (mgCaCO3/L)	79	164	71	73	68	74	116	116	100	54		179	81	353		127								
3	B (mg/L)	0.01	0.00	0.00	0.00	0.00	0.00								0.07		0.01								
4	Ca (mg/L)	7	16	7	7	7	9	16	18	18	5		15	8	38		10								
5	Cl (mg/L)	10.4	9.8	4.8	8.9	2.1	9.6	12.5	14.7	9.0	4.4		11.0	5.0	71.7		25.9								
6	CO3 (mg/L)	0.0	6.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	5.5	0.0		0.0								
7	F (mg/L)	0.06	0.09	0.09	0.07	0.14	0.17							0.11	0.12		0.18								
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0								0.2		0.0								
9	HCO3 (mg/L)	48	93	44	45	41	45	71	71	61	33		109	44	215		77								
10	K (mg/L)	1.5	2.2	1.8	1.8	1.6	1.0	11.6	2.2	6.0	1.2			3.3	4.5		2.2								
11	Mg (mg/L)	4.4	10.7	3.9	4.9	4.4	5.4	5.3	9.4	5.8	1.1		2.4	4.4	18.4		4.1								
12	Na (mg/L)	16.9	12.0	5.5	7.3	4.5	9.1	9.3	15.4	21.2	2.3			9.2	46.2		20.5								
13	NO2+NO3 (mg N/L)	0.10	0.53								2.77			0.10	0.14		0.19								
14	NO2-N (mgN/L)	0.01	0.04	0.01	0.01	0.01	0.01								0.00		0.01								
15	NO3-N (mgN/L)	0.09	0.49												0.14		0.18								
16	P-Tot (mgP/L)	0.017	0.050	0.013	0.033	0.015	0.025							0.020	0.027		0.025								
17	SiO2 (mg/L)	16.8	10.5	27.7	3.9	4.3	7.1								10.0		13.4								
18	SO4 (mg/L)	15.1	19.8	16.3	10.5	9.9	9.6				5.2		2.4	4.2	31.8		16.5								
	BIOLOGICAL/BACTERIOLOGICAL																								
1	BOD3-27 (mg/L)	0.9	0.8	0.8	0.8	1.1	0.6	0.3	0.8	1.1	1.3		0.7	2.2	2.2		1.4								
2	COD (mg/L)	21.0	22.7	13.3	16.0	14.0	20.0										16.0								
3	DO (mg/L)	8.1	8.2	7.7	7.8	7.3	7.7	8.4	8.5	7.0	8.7		7.4	7.4	8.2		6.1								
4	DO_SAT% (%)	89	94	85	90	83	86	98	91	80	103			95	108		68								
	TRACE & TOXIC																								
	CHEMICAL INDICES																								
1	HAR_Ca (mgCaCO3/L)	18	41	18	18	17	22	40	44	44	13		39	20	94		25								
2	HAR_Total (mgCaCO3/L)	37	85	34	38	35	44	62	83	68	18		49	38	171		42								
3	Na% (%)	50	30	25	26	21	30	20	28	38	15			42	36		52								
4	RSC (-)	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2		0.8	0.0	0.1		0.5								
5	SAR (-)	1.3	0.8	0.4	0.5	0.3	0.6	0.5	0.7	1.1	0.3			1.1	1.5		1.5								
	PESTICIDES																								

UPPER MAHANADI SUB-BASIN

SITE RAJIM

HISTORY SHEET

Water Year : 2015-2016

Site : Rajim

Code : EM000U7

State : Chhattisgarh

District : Gariyaband

Basin : Mahanadi

Independent River : Mahanadi

Tributary : -

Sub Tributary :

Sub-Sub Tributary :

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Drainage Area : 8760 Sq. Km.

Bank :

Latitude : 20°58'00"

Longitude : 81°52'30"

Zero of Gauge (m) : 275 (m.s.l)

2/1/1971 - 2/1/2021

Opening Date

Closing Date

Gauge : 2/1/1971

Discharge :

Sediment : 12/4/1972

Water Quality : 9/1/1972

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1971-1972	754.2	278.340	6/23/1971	0.100	275.995	3/29/1972
1972-1973	1334	278.840	7/8/1972	0.100	276.150	4/2/1973
1973-1974	7601	282.063	7/8/1973	0.070	276.240	4/30/1974
1974-1975	691.0	278.235	8/18/1974	0.001	276.190	4/29/1975
1975-1976	2765	279.760	9/9/1975	0.001	276.400	4/14/1976
1976-1977	9954	282.545	7/21/1976	0.004	276.315	4/6/1977
1977-1978	7100	281.905	9/13/1977	0.215	276.310	6/10/1977
1978-1979	7669	282.663	8/16/1978	0.387	276.450	6/5/1978
1979-1980	808.0	278.515	8/4/1979	0.003	276.320	5/6/1980
1980-1981	8457	281.700	9/19/1980	0.200	276.485	5/31/1981
1981-1982	3425	280.620	8/14/1981	0.080	276.475	6/4/1981
1982-1983	1210	278.920	8/14/1982	0.008	276.195	5/17/1983
1983-1984	1560	278.950	8/7/1983	0.080	276.205	5/26/1984
1984-1985	1679	279.200	8/9/1984	0.036	276.235	4/22/1985
1985-1986	1649	279.280	8/7/1985	0.058	276.225	6/1/1985
1986-1987	4498	280.500	6/24/1986	0.020	276.285	5/15/1987
1987-1988	486.4	278.110	7/23/1987	0.090	276.335	5/30/1988
1988-1989	280.2	277.600	8/1/1988	0.007	276.195	4/24/1989
1989-1990	255.6	277.830	8/26/1989	0.016	276.120	4/16/1990
1990-1991	7449	281.230	8/23/1990	0.052	276.640	5/14/1991
1991-1992	6923	282.570	7/30/1991	0.006	276.595	5/22/1992
1992-1993	6000	281.300	8/21/1992	0.300	276.425	3/28/1993

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1993-1994	1631	279.500	8/20/1993	0.074	276.335	3/18/1994
1994-1995	8017	282.680	8/30/1994	0.534	276.425	3/8/1995
1995-1996	3340	280.400	7/24/1995	0.157	276.260	5/25/1996
1996-1997	3823	279.450	8/2/1996	0.155	276.160	5/20/1997
1997-1998	6094	281.145	8/22/1997	0.500	276.210	6/15/1997
1998-1999	400.0	277.900	9/13/1998	0.239	276.205	4/8/1999
1999-2000	933.9	278.500	8/31/1999	0.587	276.315	4/19/2000
2000-2001	1152	278.760	7/19/2000	0.073	276.200	2/10/2001
2001-2002	7133	282.350	7/9/2001	2.477	276.540	5/1/2002
2002-2003	838.0	278.530	8/24/2002	1.001	276.530	1/22/2003
2003-2004	8449	282.625	8/29/2003	0.264	276.340	5/30/2004
2004-2005	3003	280.400	8/23/2004	0.040	276.140	5/21/2005
2005-2006	2907	280.180	9/14/2005	0.227	276.300	4/3/2006
2006-2007	6790	281.665	8/31/2006	0.275	276.360	3/8/2007
2007-2008	4132	280.530	6/30/2007	0.140	276.500	5/23/2008
2008-2009	4771	280.965	9/18/2008	0.116	276.380	2/7/2009
2009-2010	2257	278.925	8/27/2009	0.645	276.390	1/2/2010
2010-2011	3193	279.350	9/7/2010	0.638	276.300	2/3/2011
2011-2012	3679	279.840	9/7/2011	1.880	276.430	12/5/2011
2012-2013	2405	279.275	8/4/2012	6.486	276.620	7/4/2012
2013-2014	2572	279.775	7/31/2013	8.800	276.390	12/8/2013
2014-2015	4058	280.610	8/5/2014	0.000	275.000	4/14/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	275.000	0.000 *	275.000	0.000 *	276.520	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
2	275.000	0.000 *	275.000	0.000 *	276.510	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
3	275.000	0.000 *	275.000	0.000 *	276.500	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
4	275.000	0.000 *	275.000	0.000 *	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
5	275.000	0.000 *	275.000	0.000 *	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
6	275.000	0.000 *	275.000	0.000 *	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
7	275.000	0.000 *	275.000	0.000 *	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
8	275.000	0.000 *	275.000	0.000 *	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
9	275.000	0.000 *	275.000	0.000 *	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
10	275.000	0.000 *	275.000	0.000 *	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
11	275.000	0.000 *	277.080	188.8	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
12	275.000	0.000 *	277.160	200.0 *	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
13	275.000	0.000 *	277.030	174.6	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
14	275.000	0.000 *	276.788	72.56	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
15	275.000	0.000 *	276.700	67.13	276.980	148.0 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
16	275.000	0.000 *	276.785	72.88	276.520	17.00 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
17	275.000	0.000 *	277.050	147.1	275.000	0.000	278.730	0.000 *	275.000	0.000 *	275.000	0.000 *
18	275.000	0.000 *	276.940	84.00 *	275.000	0.000	278.020	727.0	275.000	0.000 *	275.000	0.000 *
19	275.000	0.000 *	276.830	77.00 *	275.000	0.000	277.460	351.9	275.000	0.000 *	275.000	0.000 *
20	275.000	0.000 *	276.755	68.53	275.000	0.000	277.540	366.0 *	275.000	0.000 *	275.000	0.000 *
21	275.000	0.000 *	276.720	67.89	275.000	0.000	278.615	1161	275.000	0.000 *	275.000	0.000 *
22	275.000	0.000 *	276.690	64.65	275.000	0.000	277.960	681.4	275.000	0.000 *	275.000	0.000 *
23	276.885	82.21	276.740	65.20	275.000	0.000	277.530	380.5	275.000	0.000 *	275.000	0.000 *
24	276.900	87.41	277.345	317.8	275.000	0.000	277.320	183.2	275.000	0.000 *	275.000	0.000 *
25	276.815	74.20	277.270	283.6	275.000	0.000	277.200	227.0	275.000	0.000 *	275.000	0.000 *
26	276.668	33.59	277.000	70.00 *	275.000	0.000	277.105	153.0	275.000	0.000 *	275.000	0.000 *
27	276.580	20.20	276.850	71.52	275.000	0.000	277.010	0.000 *	275.000	0.000 *	275.000	0.000 *
28	276.570	20.01 *	276.735	76.48	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
29	275.000	0.000 *	276.660	59.86	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
30	275.000	0.000 *	276.560	18.86	275.000	0.000	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
31			276.520	17.64	275.000	0.000			275.000	0.000 *		
Ten-Daily Mean												
I Ten-Daily	275.000	0.000	275.000	0.000	275.453	0.000	275.000	0.000	275.000	0.000	275.000	0.000
II Ten-Daily	275.000	0.000	276.912	115.3	275.350	16.50	276.175	144.5	275.000	0.000	275.000	0.000
III Ten-Daily	276.042	31.76	276.826	101.2	275.000	0.000	276.774	278.7	275.000	0.000	275.000	0.000
Monthly												
Min.	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000
Max.	276.900	87.41	277.345	317.8	276.980	148.0	278.730	1161	275.000	0.000	275.000	0.000
Mean	275.347	10.59	276.265	73.1	275.259	5.323	275.983	141.1	275.000	0	275.000	0

Annual Runoff in MCM = 603 Annual Runoff in mm = 69

Peak Observed Discharge = 1161 cumecs on 21/09/2015 Corres. Water Level :278.615 m

Lowest Observed Discharge = 0.000 cumecs on 01/08/2015 Corres. Water Level :276.52 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2015 - 2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
2	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
3	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
4	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
5	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
6	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
7	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
8	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
9	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
10	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
11	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
12	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
13	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
14	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
15	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
16	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
17	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
18	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
19	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
20	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
21	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
22	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
23	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
24	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
25	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
26	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
27	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
28	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
29	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
30	275.000	0.000 *	275.000	0.000 *			275.000	0.000 *	275.000	0.000 *	275.000	0.000 *
31	275.000	0.000 *	275.000	0.000 *			275.000	0.000 *			275.000	0.000 *
Ten-Daily Mean												
I Ten-Daily	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000
II Ten-Daily	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000
III Ten-Daily	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000
Monthly												
Min.	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000
Max.	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000	275.000	0.000
Mean	275.000	0	275.000	0	275.000	0	275.000	0	275.000	0	275.000	0

Peak Computed Discharge = 366.0 cumecs on 20/09/2015

Corres. Water Level :277.54 m

Lowest Computed Discharge = 0.000 cumecs on 01/06/2015

Corres. Water Level :275 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

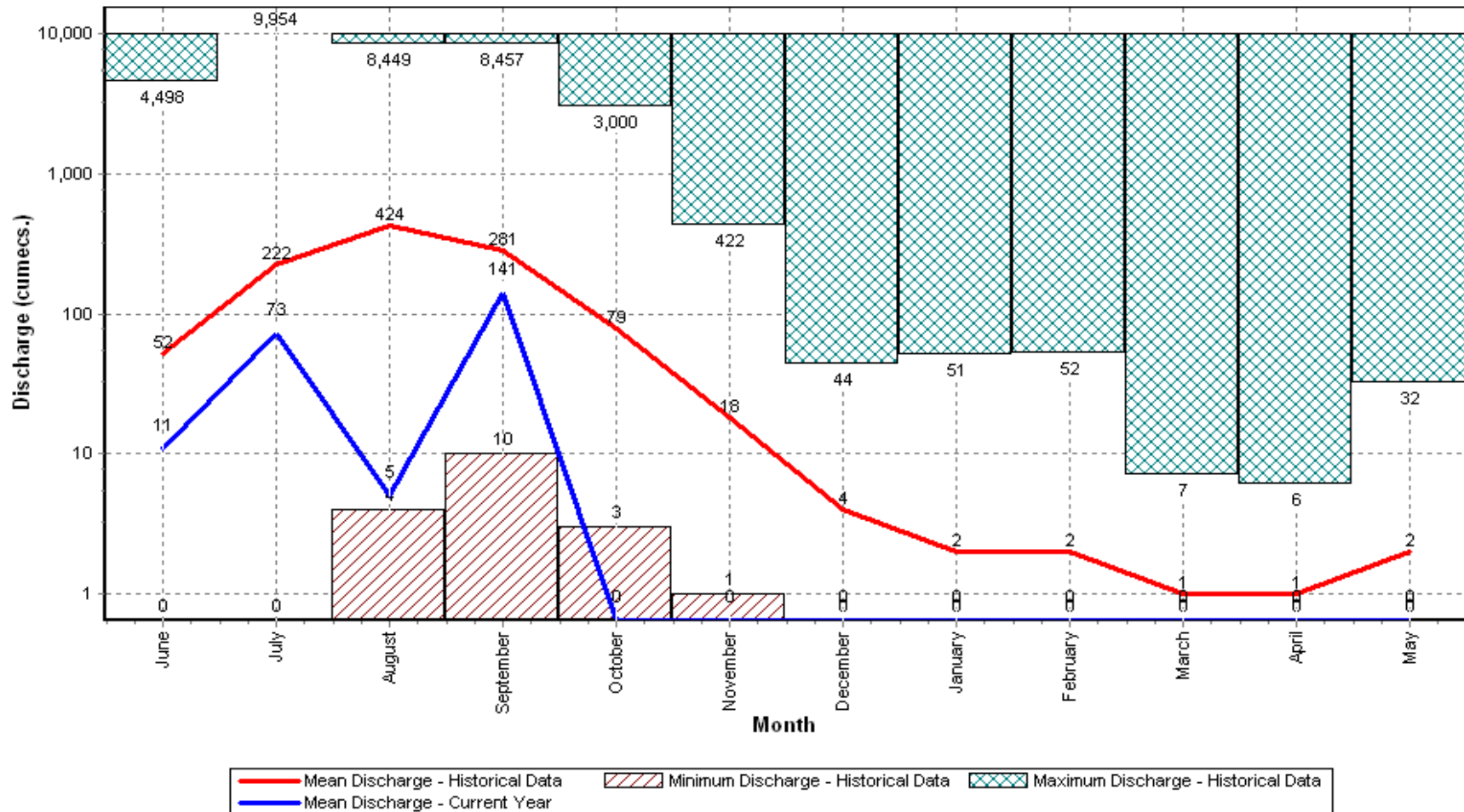
Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

Station Name : Rajim (EM000U7)
Local River : Mahanadi

Data considered : 1971-2016

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



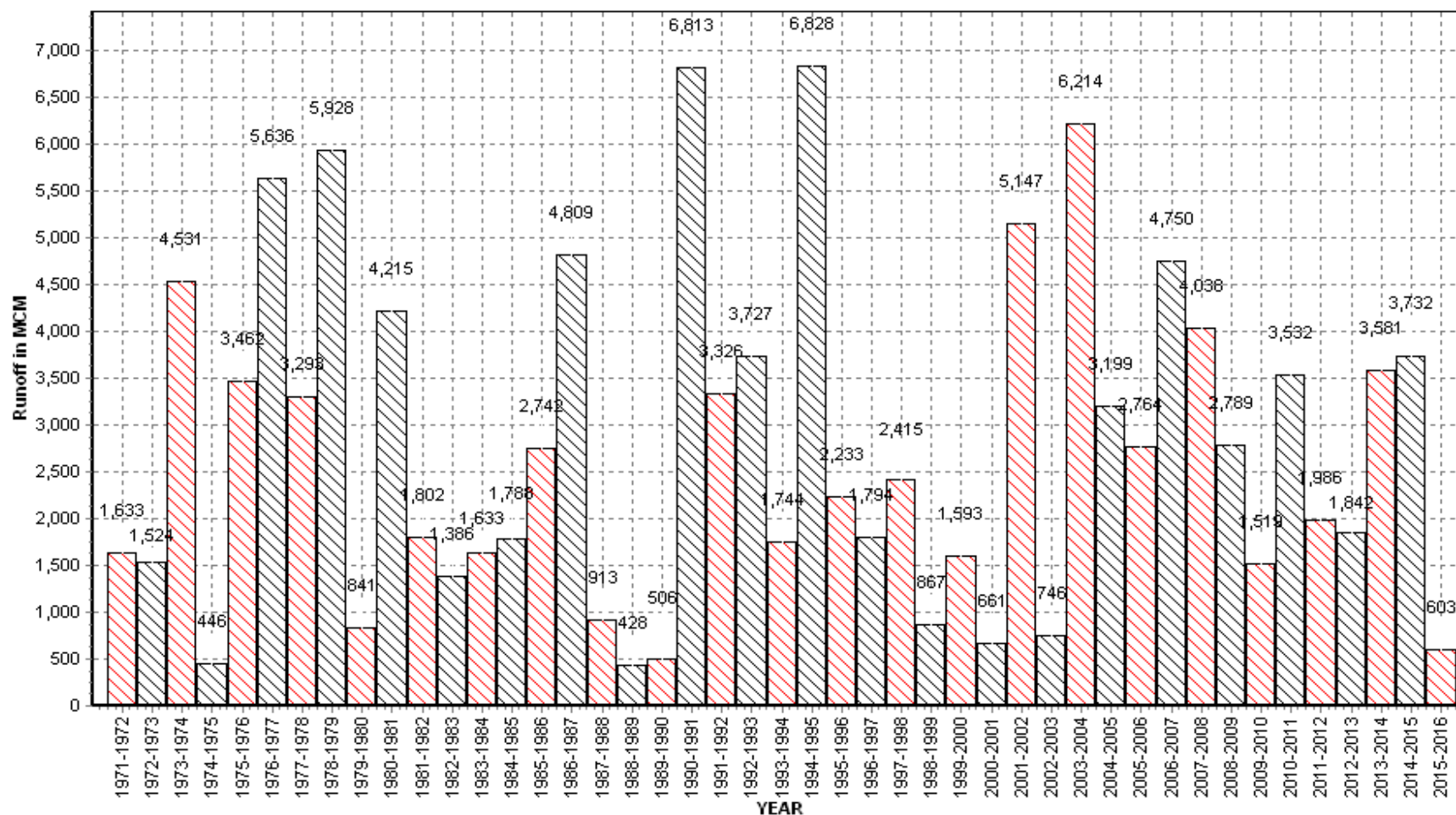
Annual Runoff Values for the period: 1971 - 2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



Note: Missing values have not been considered while arriving at Annual Runoff

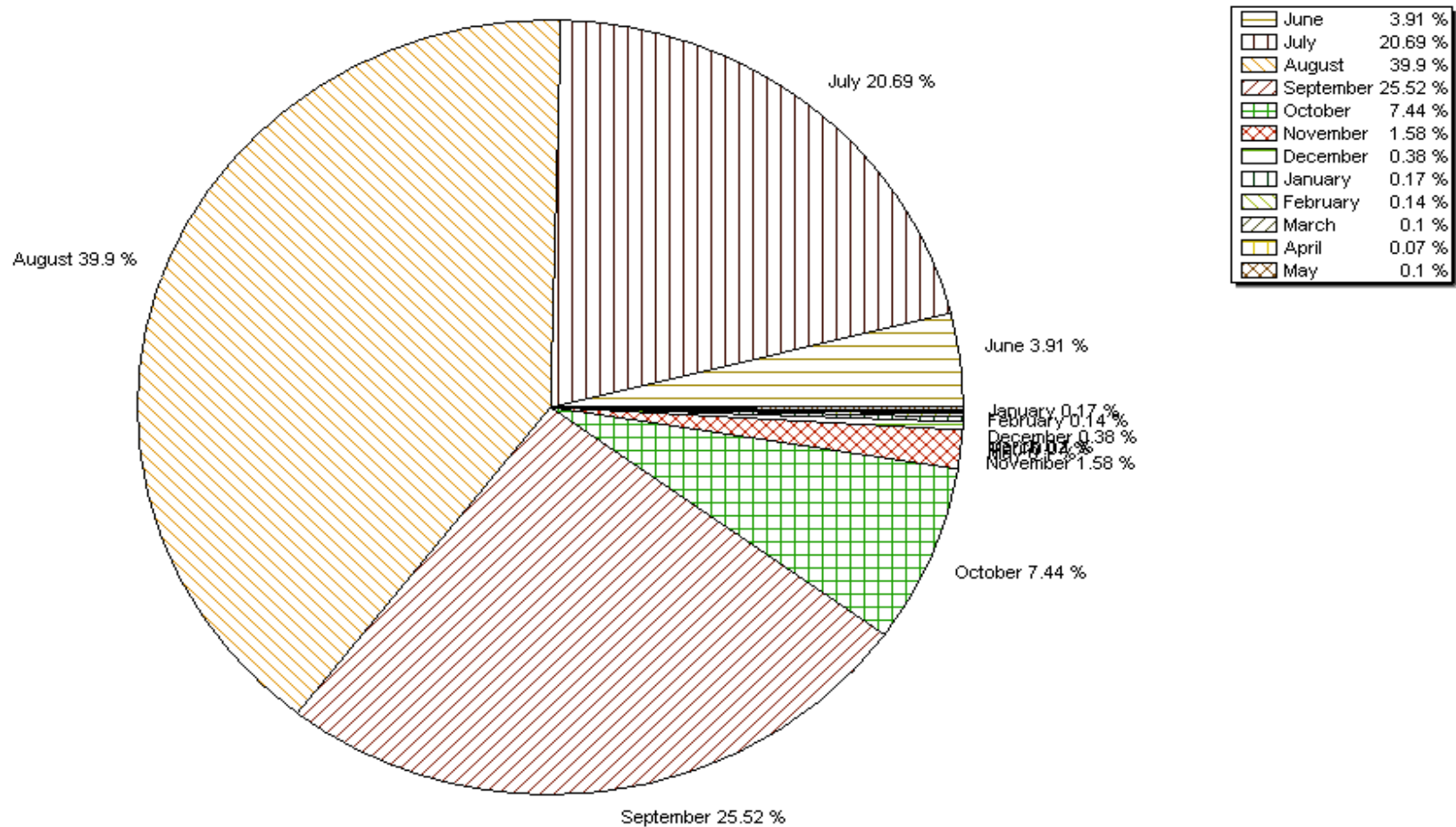
Monthly Average Runoff based on period : 1971-2015

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



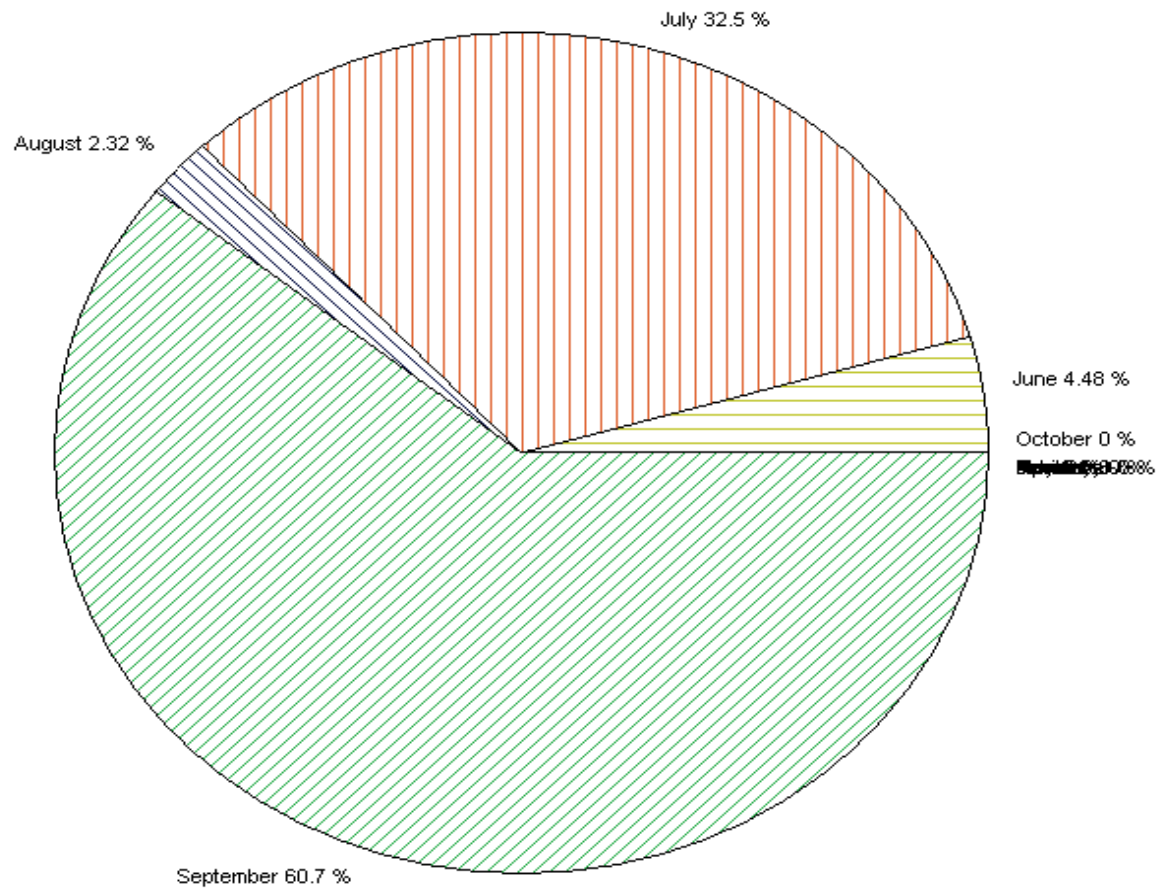
Monthly Runoff for the Year : 2015-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



June	4.48 %
July	32.5 %
August	2.32 %
September	60.7 %
October	0 %
November	0 %
December	0 %
January	0 %
February	0 %
March	0 %
April	0 %
May	0 %

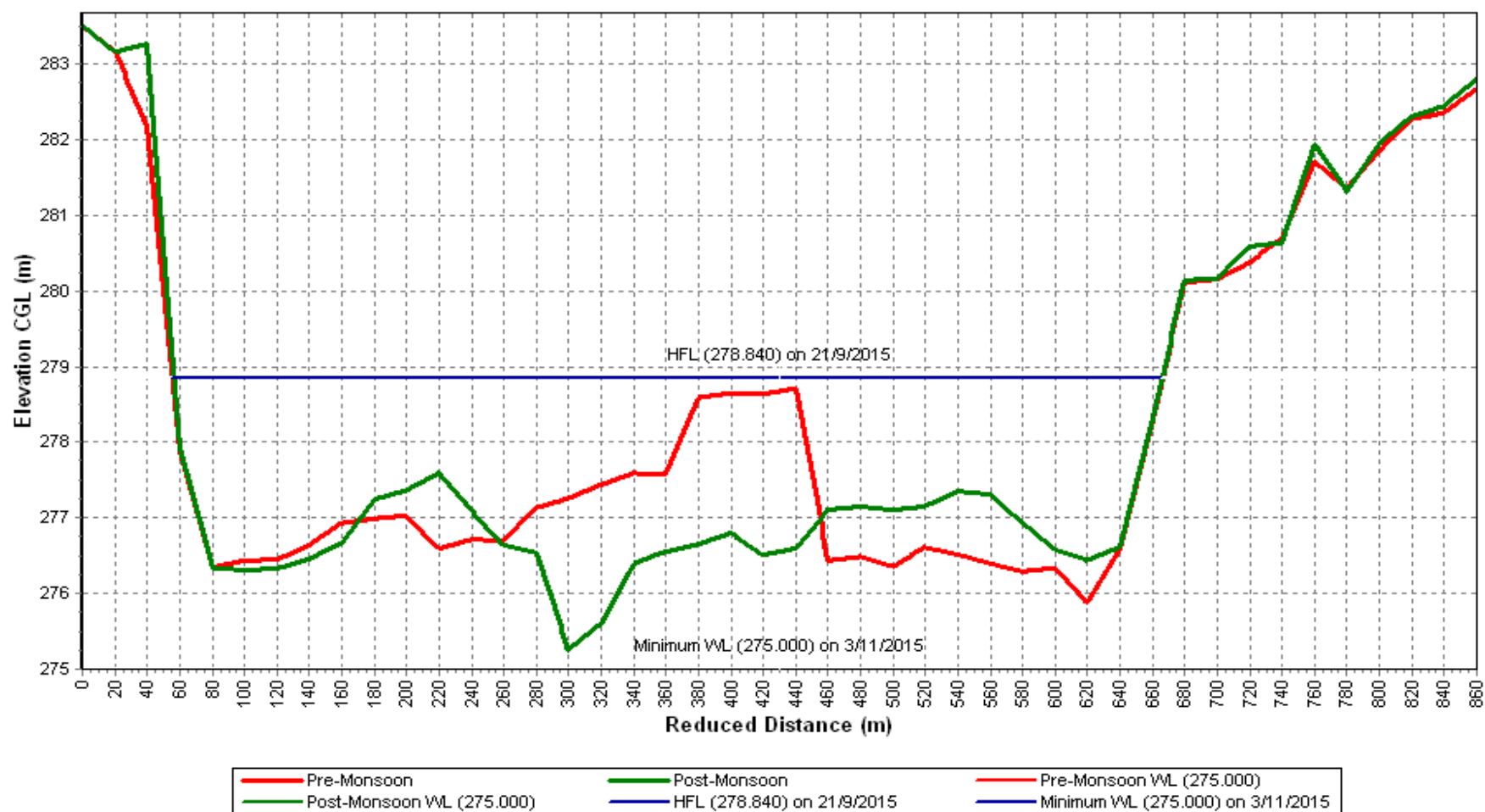
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



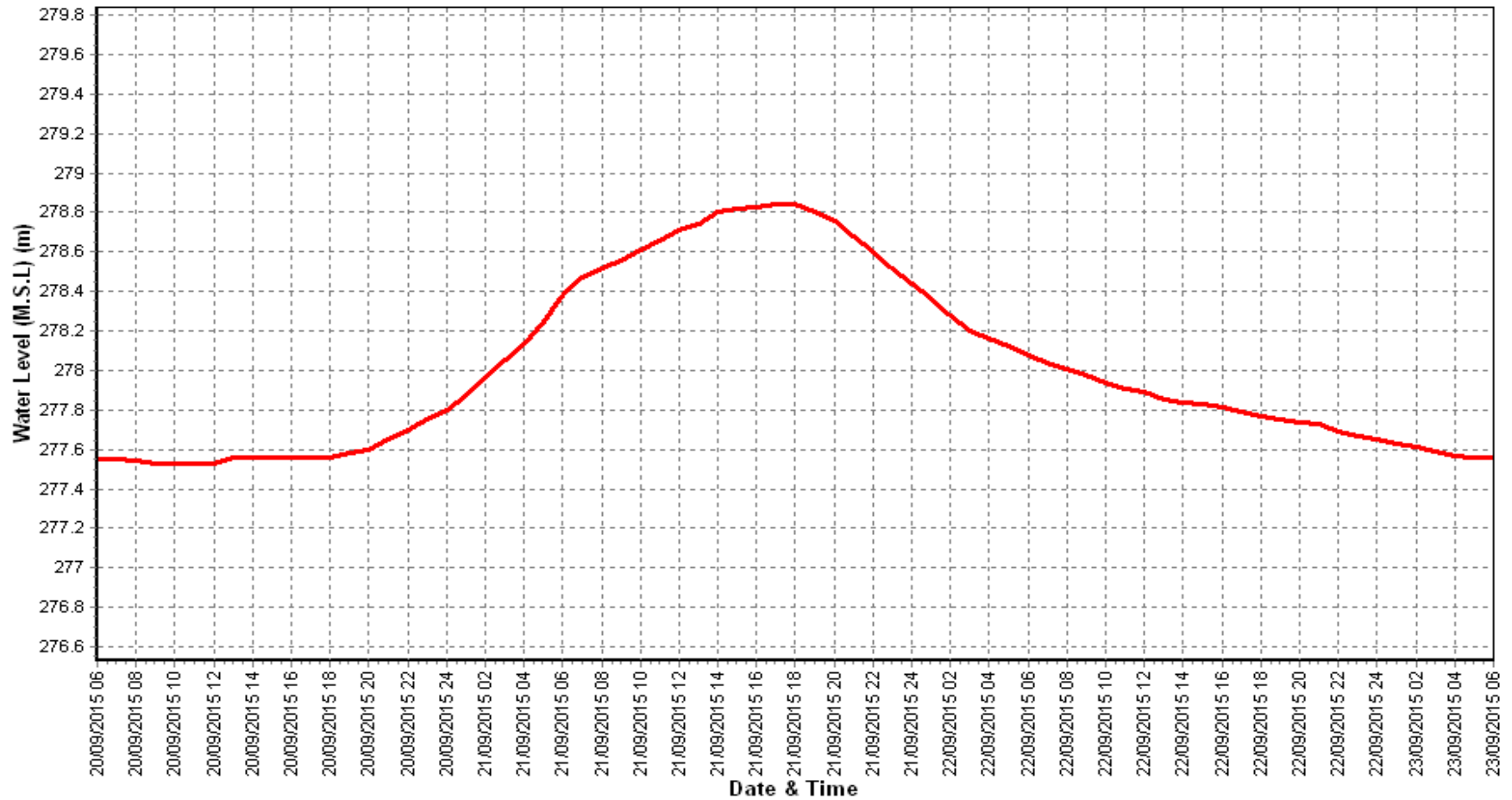
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

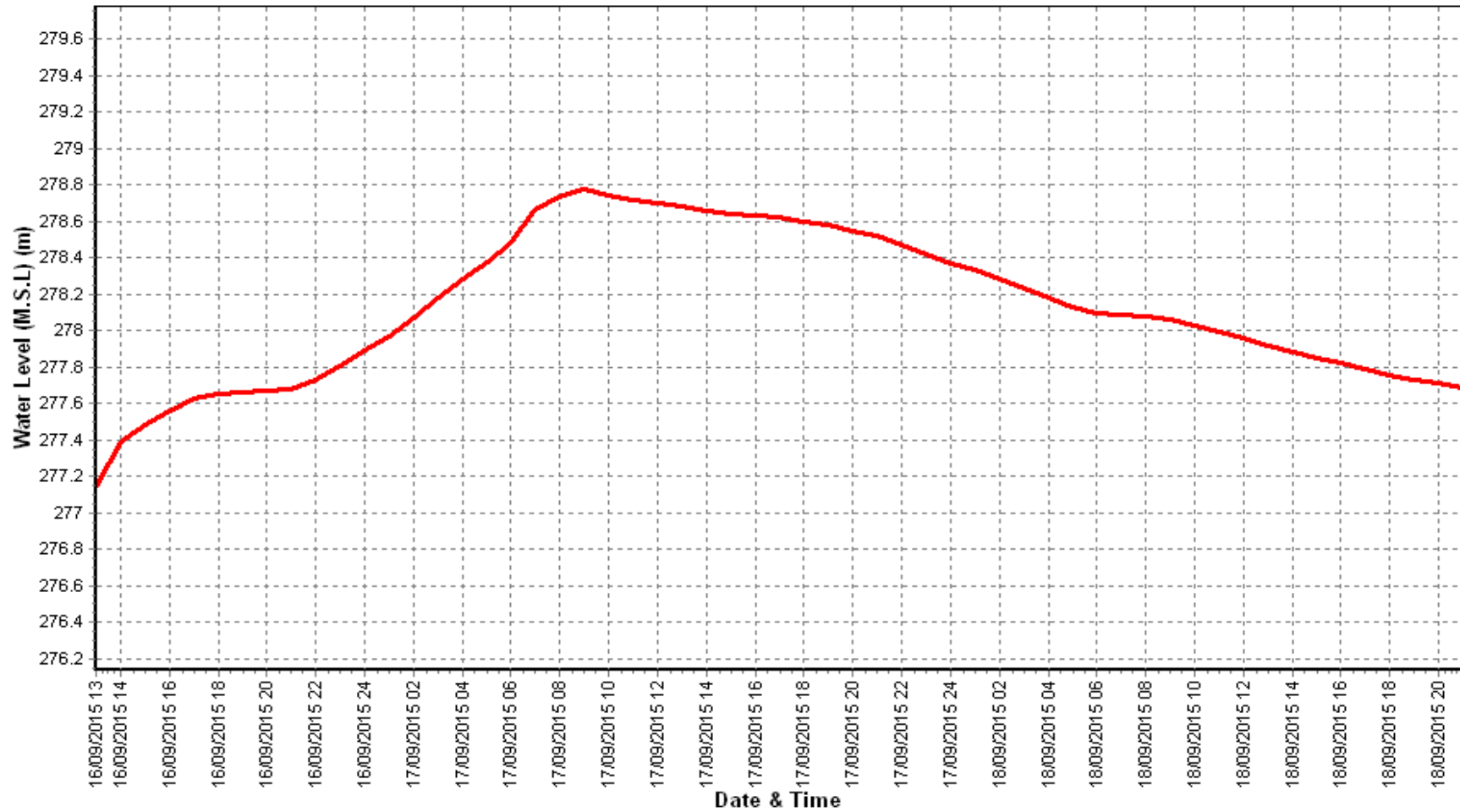
Sub-Division : UMSD,CWC,Raipur



Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Rajim (EM000U7)
Local River : Mahanadi

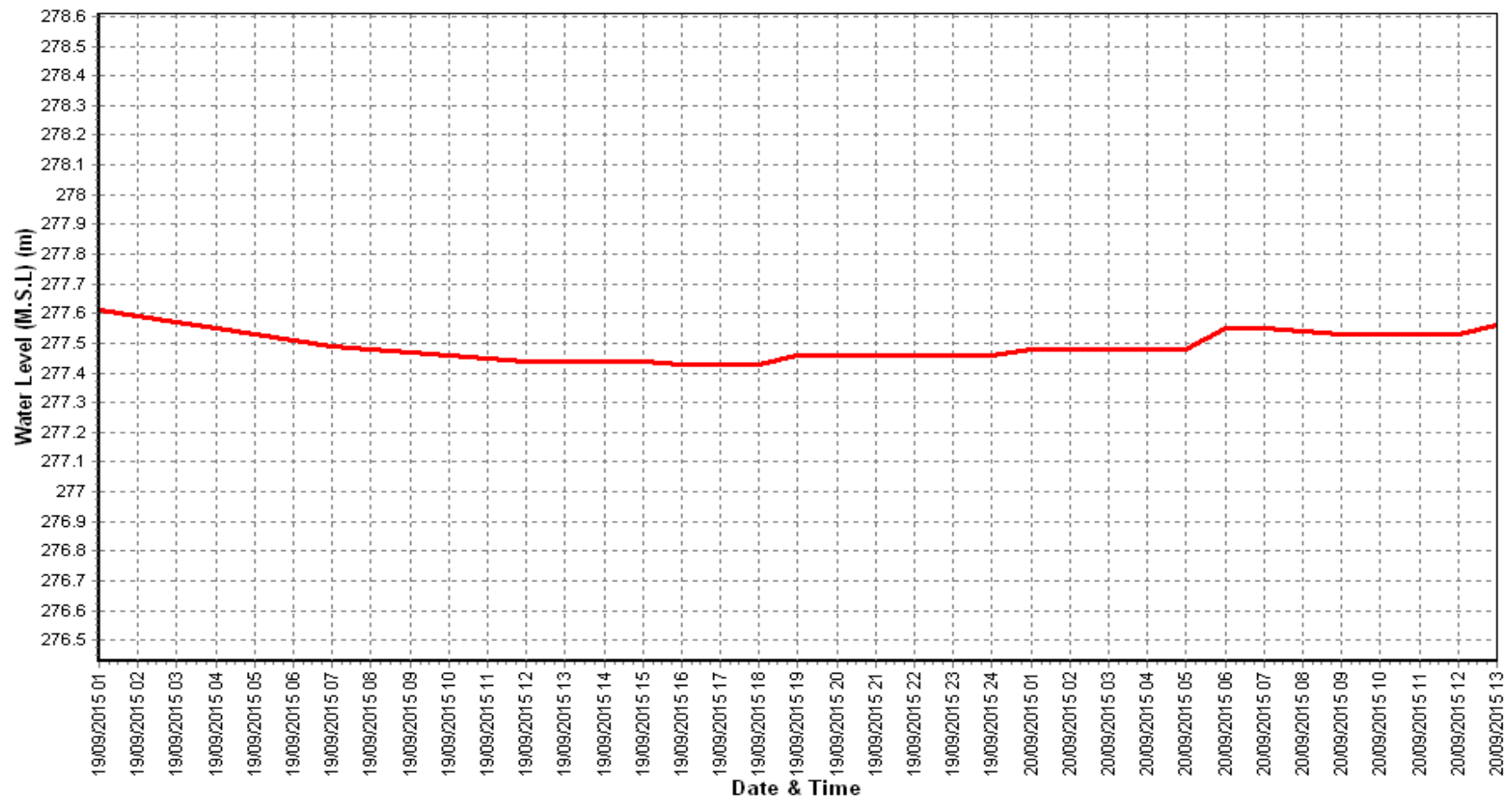
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur

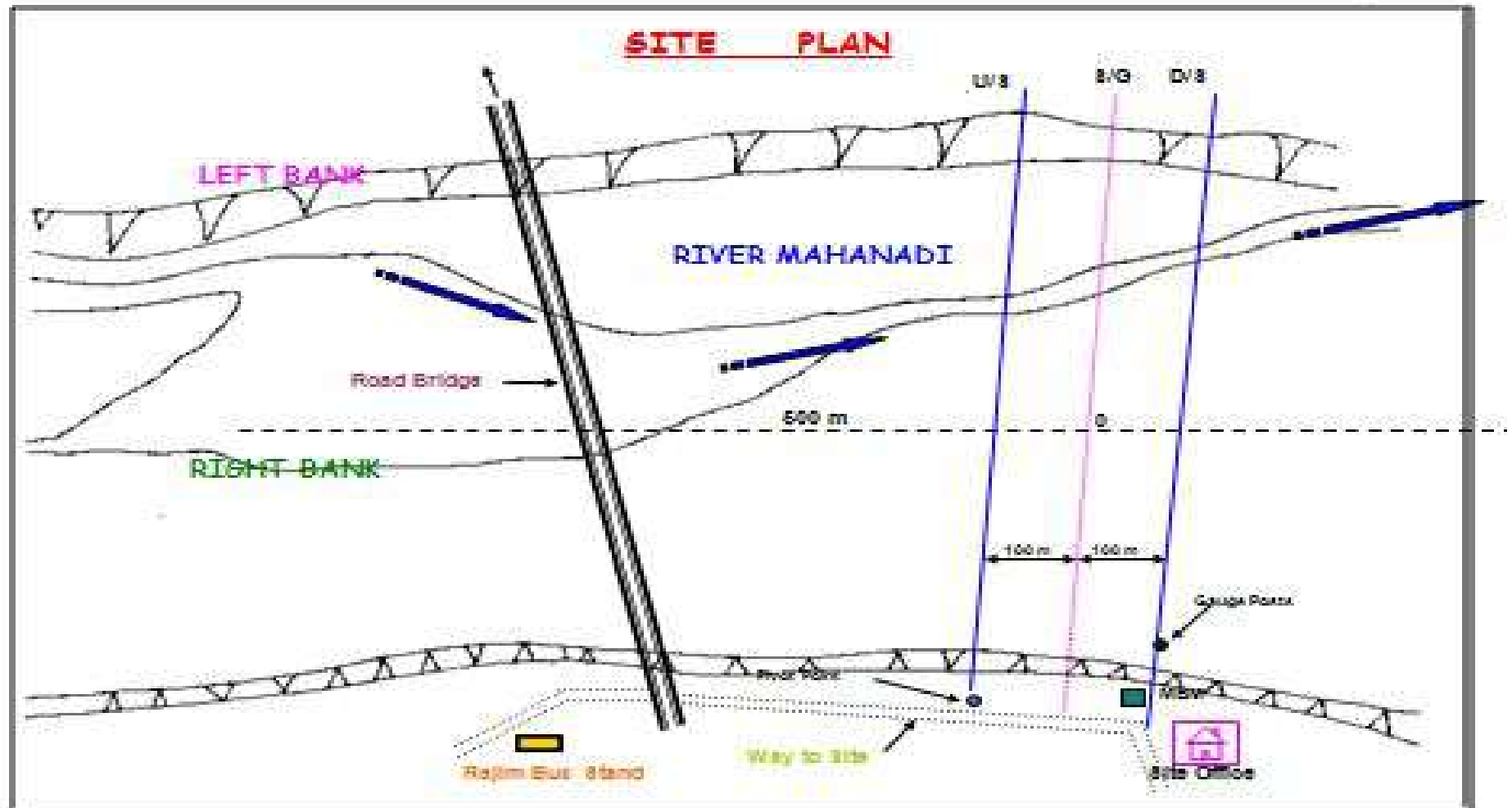


Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Rajim (EM000U7)
Local River : Mahanadi

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	188.8	0.000	0.000	0.040	0.040	659	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	200.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	174.6	0.000	0.000	0.042	0.042	640	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	72.56	0.000	0.000	0.048	0.048	303	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	67.13	0.000	0.000	0.046	0.046	267	148.0	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	72.88	0.000	0.000	0.046	0.046	288	17.00	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	147.1	0.000	0.000	0.052	0.052	657	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	84.00	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	77.00	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	68.53	0.000	0.000	0.037	0.037	221	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	67.89	0.000	0.000	0.033	0.033	196	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	64.65	0.000	0.000	0.038	0.038	211	0.000	0.000	0.000	0.000	0.000	0
23	82.21	0.000	0.000	0.012	0.012	85	65.20	0.000	0.000	0.037	0.037	210	0.000	0.000	0.000	0.000	0.000	0
24	87.41	0.000	0.000	0.021	0.021	159	317.8	0.000	0.000	0.045	0.045	1227	0.000	0.000	0.000	0.000	0.000	0
25	74.20	0.000	0.000	0.013	0.013	80	283.6	0.000	0.000	0.047	0.047	1142	0.000	0.000	0.000	0.000	0.000	0
26	33.59	0.000	0.000	0.021	0.021	61	70.00	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	20.20	0.000	0.000	0.002	0.002	3	71.52	0.000	0.000	0.035	0.035	218	0.000	0.000	0.000	0.000	0.000	0
28	20.01	0.000	0.000	0.002	0.002	3	76.48	0.000	0.000	0.037	0.037	246	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	59.86	0.000	0.000	0.035	0.035	180	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	18.86	0.000	0.000	0.031	0.031	51	0.000	0.000	0.000	0.000	0.000	0
31							17.64	0.000	0.000	0.030	0.030	46	0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	115.3	0.000	0.000	0.031	0.031	304	16.50	0.000	0.000	0.000	0.000	0
Ten Daily III	31.76	0.000	0.000	0.007	0.007	39	101.2	0.000	0.000	0.033	0.033	339	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						391						6762						0

Annual Sediment Load (Metric Tonnes) : 39588

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	727.0	0.000	0.000	0.095	0.095	5967	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	351.9	0.000	0.000	0.079	0.079	2411	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	366.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	1161	0.000	0.000	0.124	0.124	12393	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	681.4	0.000	0.000	0.120	0.120	7053	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	380.5	0.000	0.000	0.083	0.083	2739	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	183.2	0.000	0.000	0.065	0.065	1026	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	227.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	153.0	0.000	0.000	0.064	0.064	846	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	144.5	0.000	0.000	0.017	0.017	838	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	278.7	0.000	0.000	0.046	0.046	2406	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						32435						0						0

Annual Sediment Load (Metric Tonnes) : 39588

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 39588

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 39588

Annual Sediment Load for period : 1973-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1973-1974	1978702	72	1978774	4531
1974-1975	75961	0	75961	446
1975-1976	2677864	131	2677995	3462
1976-1977	2327108	0	2327108	5636
1977-1978	1605507	59	1605566	3293
1978-1979	3672054	90	3672144	5928
1979-1980	619677	0	619677	841
1980-1981	1469016	37	1469053	4215
1981-1982	224369	251	224620	1802
1982-1983	464795	0	464795	1386
1983-1984	525325	42	525367	1633
1984-1985	461471	0	461471	1788
1985-1986	571298	122	571420	2742
1986-1987	2403869	29	2403898	4809
1987-1988	317775	291	318066	913
1988-1989	127748	0	127748	428
1989-1990	84728	31	84759	506
1990-1991	1437770	327	1438097	6813
1991-1992	701842	2	701844	3326
1992-1993	902131	26	902157	3727
1993-1994	586991	16	587008	1744
1994-1995	1747511	394	1747905	6828
1995-1996	666934	57	666991	2233
1996-1997	567450	1	567452	1794
1997-1998	866508	61	866569	2415
1998-1999	98720	61	98781	867
1999-2000	258778	201	258979	1593
2000-2001	144560	0	144560	661
2001-2002	2395681	170	2395851	5147
2002-2003	86580	12	86592	746
2003-2004	2997447	121	2997569	6214
2004-2005	530911	25	530936	3199
2005-2006	569412	0	569412	2764
2006-2007	1568793	14	1568807	4750
2007-2008	1316593	93	1316686	4038
2008-2009	656713	0	656713	2789
2009-2010	270421	14	270435	1519
2010-2011	857183	128	857311	3532
2011-2012	1844	9	1852	1986
2012-2013	120215	0	120215	1842
2013-2014	306684	17	306702	3581
2014-2015	306802	149	306951	3732
2015-2016	39588	0	39588	603

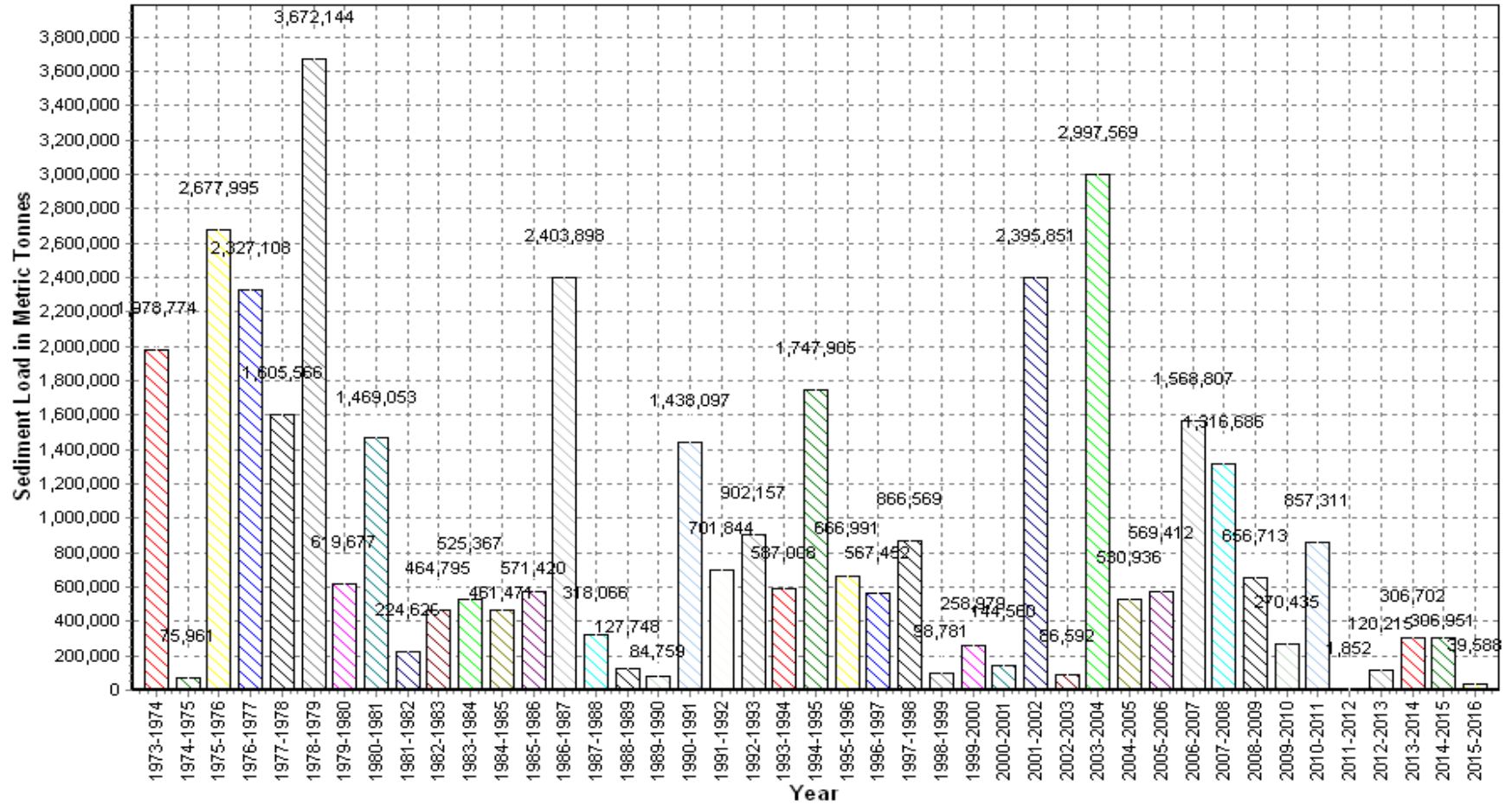
Annual Sediment Load for the period: 1973-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

Division : MD,CWC,Burla

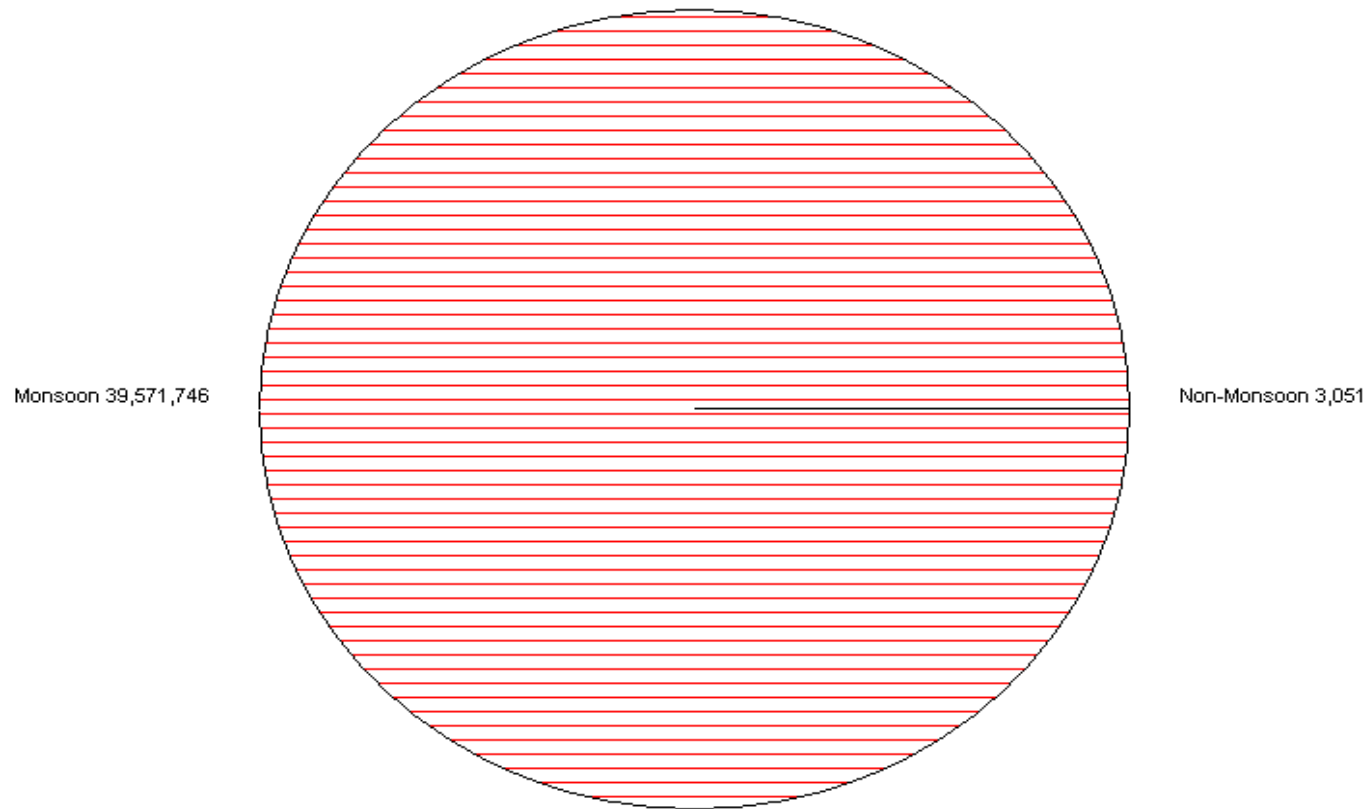
Sub-Division : UMSD,CWC,Raipur



Seasonal Sediment Load for the period : 1973-2015

Station Name : Rajim (EM000U7)
Local River : Mahanadi

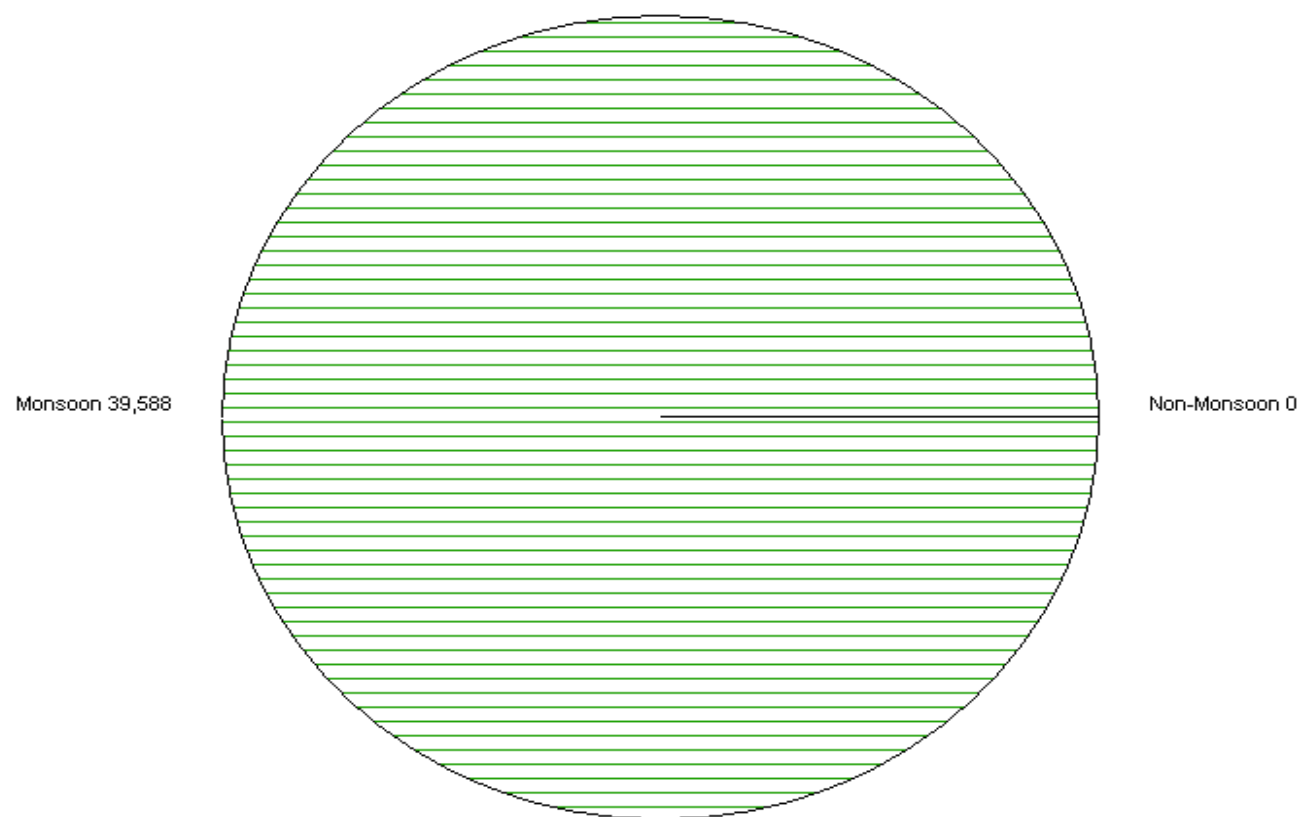
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Seasonal Sediment Load for the Year: 2015-2016

Station Name : Rajim (EM000U7)
Local River : Mahanadi

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/1/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
2	Colour_Cod (-)			Clear									
3	EC_GEN (µmho/cm)			158									
4	Odour_Code (-)			odour free									
5	pH_GEN (pH units)			8.0									
6	Temp (deg C)			28.0									
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)			0.0									
2	ALK-TOT (mgCaCO3/L)			148									
3	Ca (mg/L)			24									
4	Cl (mg/L)			12.0									
5	CO3 (mg/L)			0.0									
6	HCO3 (mg/L)			90									
7	K (mg/L)			3.2									
8	Mg (mg/L)			5.8									
9	Na (mg/L)			8.4									
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)			0.1									
2	DO (mg/L)			5.4									
3	DO_SAT% (%)			69									
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)			60									
2	HAR_Total (mgCaCO3/L)			84									
3	Na% (%)			17									
4	RSC (-)			0.0									
5	SAR (-)			0.4									
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Rajim (EM000U7)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : UMSD,CWC,Raipur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	1161	0.000	19.07
2	EC_GEN (µmho/cm)	1	158	158	158
3	pH_GEN (pH units)	1	8.0	8.0	7.9
4	Temp (deg C)	1	28.0	28.0	28
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	1	148	148	148
3	Ca (mg/L)	1	24	24	24
4	Cl (mg/L)	1	12.0	12.0	12
5	CO3 (mg/L)	1	0.0	0.0	0
6	HCO3 (mg/L)	1	90	90	90
7	K (mg/L)	1	3.2	3.2	3.2
8	Mg (mg/L)	1	5.8	5.8	5.8
9	Na (mg/L)	1	8.4	8.4	8.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1	0.1	0.1	0.1
2	DO (mg/L)	1	5.4	5.4	5.4
3	DO_SAT% (%)	1	69	69	69
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	1	60	60	60
2	HAR_Total (mgCaCO3/L)	1	84	84	84
3	Na% (%)	1	17	17	17
4	RSC (-)	1	0.0	0.0	0
5	SAR (-)	1	0.4	0.4	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Flood																					
		Jun - Oct																					
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008
	PHYSICAL																						
1	Q (cumec)	95.94	74.15	264.9	144.5	265.6	525.2	261.6	347.1	195.7	62.72	183.6	135.6	749.5	120.1	0.000	6.951	8.743	70.16	22.24	4.598	7.283	6.198
2	EC_FLD (µmho/cm)	114	116	98	142	113	135	90	222								138	199	114	115	174	129	210
3	EC_GEN (µmho/cm)	114	116	98	142	113	135	92	215	111	130	116	119	91	104	158	138	199	114	115	174	129	180
4	pH_FLD (pH units)	7.4	7.9	8.0	7.7	7.6	7.5	7.3	7.2	7.3	6.7	7.3			6.2		7.4	7.8	7.9	7.5	7.0	7.6	7.2
5	pH_GEN (pH units)	7.4	7.9	8.0	7.7	7.6	7.5	7.5	7.5	7.9	7.5	7.3	7.6	8.1	7.7	7.9	7.4	7.8	7.9	7.5	7.0	7.6	7.6
6	Temp (deg C)	27.0	27.1	31.3	30.8	30.2	26.8	26.9	25.6	28.0	26.8	26.8	25.6	26.4	27.7	28.0	20.1	20.8	22.5	23.3	24.8	20.9	18.8
	CHEMICAL																						
1	Alk-Phen (mgCaCO3/L)	0.0	1.2	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	78	84	267	137	73		55	156	76	94	80	85	83	131	148	106	154	108	101	121		141
3	B (mg/L)					0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.00								0.06	0.01	0.01
4	Ca (mg/L)	8	17	15	26	11		6	18	7	11	9	10	12	12	24	12	23	14	9	12		15
5	Cl (mg/L)	3.8	7.2	22.0	15.8	10.3		1.4	5.6	4.1	4.5	5.4	10.5	12.8	10.0	12.0	3.9	6.0	11.0	5.0	24.4		8.4
6	CO3 (mg/L)	0.0	1.4	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0		0.0
7	F (mg/L)			1.18		0.18		0.09	0.35	0.13	0.43	0.17	0.17						0.69	0.30	0.09	0.09	0.25
8	Fe (mg/L)					0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.0	0.0	0.0
9	HCO3 (mg/L)	48	50	163	103	44		34	95	47	57	49	52	51	80	90	64	92	63	62	74		86
10	K (mg/L)	2.7	3.6			1.8	0.1	1.4	1.4	1.9	1.8	1.9	1.1	3.3	2.8	3.2	1.9	4.7		2.2	4.8		2.1
11	Mg (mg/L)	1.6	2.3	3.4	7.5	14.4		1.9	8.9	4.5	5.8	4.9	5.8	2.7	7.5	5.8	2.6	4.7	5.0	5.3	5.2		10.7
12	Na (mg/L)	3.5	3.4			6.1		2.5	5.8	3.8	7.2	4.0	3.7	3.9	16.8	8.4	2.7	5.1		7.2	11.4		9.0
13	NO2+NO3 (mg N/L)	0.60			0.05	0.07	0.06	0.07	0.23								0.11			0.58	0.06	0.06	0.11
14	NO2-N (mgN/L)					0.00	0.00	0.04	0.05	0.01	0.01	0.02	0.03								0.00	0.00	0.01
15	NO3-N (mgN/L)					0.07	0.06	0.03	0.18												0.05	0.05	0.10
16	P-Tot (mgP/L)					0.003	0.044	0.010	0.017	0.010	0.015	0.012	0.045						0.030	0.010	0.037	0.015	
17	SiO2 (mg/L)					8.0	15.5	5.6	11.2	11.5	6.9	12.5	11.8								19.3	12.8	18.8
18	SO4 (mg/L)	3.9	6.8	20.7	3.2	6.8		5.7	9.0	8.5	11.8	14.0	15.2				3.8	2.7	6.9	12.7	6.8		11.2
	BIOLOGICAL/BACTERIOLOGICAL																						
1	BOD3-27 (mg/L)	1.2	0.9	0.8	1.3	0.7	0.5	1.6	0.5	1.2	0.8	0.8	1.9	0.5	1.3	0.1	1.9	0.4	0.7	1.6	2.8	0.6	1.3
2	COD (mg/L)						20.5	11.2	14.0	16.0	18.0	18.3	18.0									23.5	23.0
3	DO (mg/L)	7.7	7.9	5.4	6.2	6.5	6.1	8.3	6.4	6.4	5.9	6.3	6.6	6.8	6.9	5.4	9.5	7.4	6.5	8.2	8.7	7.0	6.8
4	DO_SAT% (%)	96	98	76	84	87	76	104	78	81	74	79	81	84	88	69	101	82	86	97	104	79	73
	TRACE & TOXIC																						
	CHEMICAL INDICES																						
1	HAR_Ca (mgCaCO3/L)	19	42	36	66	27		16	44	18	27	23	26	29	31	60	31	58	36	24	30		37
2	HAR_Total (mgCaCO3/L)	25	42	50	97	87		24	81	37	51	43	50	40	62	84	41	77	57	45	51		82
3	Na% (%)	22	15			18		18	16	18	22	16	13	16	36	17	11	11		32	29		20
4	RSC (-)	0.3	0.0	2.1	0.0	0.0		0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.2	0.1		0.2	0.2		0.1
5	SAR (-)	0.3	0.3			0.3		0.2	0.3	0.3	0.4	0.3	0.2	0.3	0.9	0.4	0.2	0.2		0.6	0.7		0.5
	PESTICIDES																						

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Rajim (EM000U7)

Local River : Mahanadi

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Winter								Summer														
		Nov - Feb								Mar - May														
		2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL																							
1	Q (cumec)	4.084	2.851	9.084	11.71	35.80	48.21	11.09	0.000	4.874	2.273	4.093	1.831	0.950	0.693	2.644							0.000	0.000
2	EC_FLD (µmho/cm)		171							136	340	219	161	160	284	214								
3	EC_GEN (µmho/cm)	203	199	178	134	160	122	133		136	340	219	161	160	284	256			260					
4	pH_FLD (pH units)		7.4	6.5	7.1			6.3		7.5	7.7	8.0	7.6	7.2	7.7	7.0								
5	pH_GEN (pH units)	8.0	7.6	7.5	7.5	7.7	8.0	8.0		7.5	7.7	8.0	7.6	7.2	7.7	7.5			7.8					
6	Temp (deg C)	19.3	19.3	20.8	22.8	22.5	21.3	22.5		24.7	22.0	29.0	30.3	30.5	24.3	24.2			22.0					
	CHEMICAL																							
1	Alk-Phen (mgCaCO3/L)	5.1	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0			0.0					
2	ALK-TOT (mgCaCO3/L)	138	146	92	98	102	108	139		98	177	207	93	117		135			325					
3	B (mg/L)	0.01	0.00	0.00	0.00	0.00								0.08		0.01			0.00					
4	Ca (mg/L)	13	20	15	10	15	17	21		10	30	30	19	14		18			20					
5	Cl (mg/L)	18.2	9.7	11.0	6.2	10.8	12.5	13.7		3.2		21.5	12.0	18.7		28.5			24.6					
6	CO3 (mg/L)	6.1	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0			0.0					
7	F (mg/L)	0.32	0.07	0.26	0.17	0.28							0.38	0.05	0.14	0.15			0.11					
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0								0.0	0.0	0.1			0.1					
9	HCO3 (mg/L)	78	89	56	60	62	66	85		60	108	126	57	72		82			198					
10	K (mg/L)	4.6	3.6	2.9	1.4	1.1	12.3	2.9		1.3			2.8	3.5		2.1			3.8					
11	Mg (mg/L)	6.7	11.3	8.0	5.6	6.8	1.5	12.3		2.7	2.9	9.4	7.4	5.0		9.2			11.2					
12	Na (mg/L)	15.1	5.7	8.5	5.4	5.4	9.9	14.2		1.7			8.3	11.2		18.7			20.3					
13	NO2+NO3 (mg N/L)	0.55								2.61			0.13	0.09	0.06	0.32								
14	NO2-N (mgN/L)	0.01	0.01	0.11	0.01	0.01								0.00	0.00	0.01			0.04					
15	NO3-N (mgN/L)	0.54												0.08	0.06	0.31								
16	P-Tot (mgP/L)	0.020	0.017	0.045	0.030	0.030							0.013	0.033	1.200	0.030			0.050					
17	SiO2 (mg/L)	13.9	15.9	9.0	5.9	8.4								14.3	20.1	16.4			11.2					
18	SO4 (mg/L)	15.6	17.3	16.2	12.9	10.4				6.0		2.6	8.9	3.4		6.8			22.4					
	BIOLOGICAL/BACTERIOLOGICAL																							
1	BOD3-27 (mg/L)	1.8	2.6	0.8	0.9	1.2	0.4	1.7		2.8	0.5	0.7	0.8	1.4	0.6	2.7			1.0					
2	COD (mg/L)	19.0	28.0	19.0	20.0	16.0									29.7	25.3			20.0					
3	DO (mg/L)	5.4	5.2	6.5	7.9	8.0	8.5	8.7		7.4	8.1	7.1	6.2	4.5	5.3	5.6			4.8					
4	DO_SAT% (%)	59	56	73	91	92	96	101		88	92	93	79	60	63	67			55					
	TRACE & TOXIC																							
	CHEMICAL INDICES																							
1	HAR_Ca (mgCaCO3/L)	33	50	37	26	38	42	53		26	75	76	47	36		45			50					
2	HAR_Total (mgCaCO3/L)	60	97	71	49	66	48	105		37	87	114	77	57		83			97					
3	Na% (%)	35	11	18	19	15	24	22		11			19	32		32			30					
4	RSC (-)	0.3	0.0	0.0	0.0	0.0	0.2	0.0		0.2	0.0	0.2	0.0	0.1		0.0			1.3					
5	SAR (-)	0.9	0.2	0.4	0.3	0.3	0.6	0.6		0.1			0.4	0.7		0.9			0.9					
	PESTICIDES																							

SITE SEORINARAYAN

HISTORY SHEET

Water Year : 2015-2016

Site : Seorinarayan

Code : EM000R6

State : Chhattisgarh

District : Janjgir-champa

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Mahanadi

Sub Tributary :

Sub-Sub Tributary :

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Drainage Area : 48050 Sq. Km.

Bank :

Latitude : 21°43'00"

Longitude : 82°35'30"

Zero of Gauge (m) : 209.5 (m.s.l)

01.06.1985 - 31.05.2015

Opening Date

Closing Date

Gauge : 01.06.1985

Discharge : 09.12.1985

Sediment : 11.02.2013

Water Quality : 01.06.2015

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1986-1987	10705	220.985	28.06.1986	5.000	212.090	01.06.1986
1987-1988	3813	216.730	23.07.1987	5.380	212.075	17.05.1988
1988-1989	3927	217.070	05.08.1988	0.190	211.925	26.05.1989
1989-1990	1584	215.840	02.09.1989	1.688	212.045	14.06.1989
1990-1991	13400	221.170	15.09.1990	5.178	212.215	31.05.1991
1991-1992	11206	220.360	31.07.1991	1.187	211.945	29.05.1992
1992-1993	16203	221.775	21.08.1992	0.733	211.970	25.05.1993
1993-1994	10354	219.500	20.08.1993	0.750	211.870	30.05.1994
1994-1995	18960	222.740	11.07.1994	1.290	211.900	01.06.1994
1995-1996	17967	221.780	25.07.1995	3.337	211.740	19.06.1995
1996-1997	7504	218.200	03.08.1996	0.791	211.730	29.05.1997
1997-1998	13470	220.990	23.08.1997	0.407	211.675	10.06.1997
1998-1999	9356	219.020	14.09.1998	3.600	211.910	13.06.1998
1999-2000	5188	217.930	01.09.1999	5.045	211.900	11.06.1999
2000-2001	4156	217.130	20.07.2000	0.124	211.865	03.05.2001
2001-2002	15166	221.470	10.07.2001	0.086	211.885	21.05.2002
2002-2003	3061	216.405	12.09.2002	0.081	211.930	10.06.2002
2003-2004	22800	224.310	30.08.2003	2.963	212.105	31.05.2004
2004-2005	6536	218.400	24.08.2004	1.248	212.125	29.05.2005
2005-2006	12831	220.650	15.09.2005	1.199	212.230	19.05.2006
2006-2007	13796	220.955	14.08.2006	0.961	212.445	31.05.2007
2007-2008	13869	221.390	01.07.2007	0.835	212.425	05.06.2007
2008-2009	13646	221.385	20.09.2008	0.390	212.060	31.05.2009
2009-2010	12907	221.530	22.07.2009	0.075	211.960	22.05.2010
2010-2011	8740	219.205	26.07.2010	0.059	211.955	14.06.2010
2011-2012	17799	223.115	08.09.2011	0.281	211.790	30.05.2012
2012-2013	11282	220.120	05.08.2012	0.142	211.745	14.06.2012
2013-2014	12474	220.800	01.08.2013	0.850	212.050	04.06.2013
2014-2015	17490	221.820	06.08.2014	3.100	213.710	05.04.2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	213.750	7.811	214.195	201.7	214.105	259.0	214.550	639.2	214.160	226.6	214.015	140.0 *
2	213.750	6.779	214.205	212.3	214.060	258.0 *	214.550	645.0	214.140	200.0 *	213.960	105.4
3	213.740	5.945	214.210	211.7	214.325	435.9	214.648	618.4	214.188	252.4	213.950	104.3
4	213.740	5.661	214.255	208.3	215.000	1230	214.660	631.0	214.000	120.0 *	213.950	98.62
5	213.730	5.254	214.345	300.0 *	214.840	972.1	214.490	577.4	214.180	208.6	213.958	99.89
6	213.720	5.181	214.370	270.9	214.715	948.8	214.380	600.0 *	214.160	214.3	213.960	99.96
7	213.710	5.000 *	214.300	254.1	214.505	821.7	214.300	504.7	214.150	215.0	213.965	110.4
8	213.730	8.860	214.190	243.5	214.390	710.8	214.233	451.8	214.150	213.8	213.975	116.0 *
9	213.750	9.011	214.173	226.4	214.290	440.4 *	214.160	223.9	214.180	216.6	213.980	103.3
10	213.760	9.116	214.168	225.7	214.205	460.5	214.117	218.6	214.130	154.7	213.975	116.1
11	213.790	10.34	214.300	294.9	214.240	502.1	214.100	211.3	214.105	180.0 *	213.970	110.2 *
12	213.800	10.93	214.640	915.0 *	214.230	515.4	214.085	208.0	214.080	150.8	213.970	110.2
13	213.820	12.40	214.700	935.5	214.290	440.4	214.080	207.0 *	214.120	165.1	213.965	104.9
14	213.850	16.00 *	214.595	912.7	214.390	434.5	214.043	127.1	214.057	144.4	213.963	105.1
15	213.940	23.08	214.510	428.7	214.550	782.0 *	214.020	121.5	214.070	141.5	213.940	100.0 *
16	213.930	18.12	214.445	401.0	214.550	782.0 *	214.010	121.5	214.070	157.1	213.933	109.5
17	213.900	16.88	214.338	365.3	214.700	1030	213.970	121.0	214.080	160.0	213.935	105.4
18	213.930	18.10 *	214.370	342.0 *	215.400	1865	214.660	973.2	214.085	160.0 *	213.935	104.0
19	214.020	57.68	214.370	342.0 *	214.970	1248	216.280	2692	214.090	161.7	213.930	103.3
20	213.990	53.77	214.435	361.2	214.730	804.9	216.120	2250 *	214.090	163.2	213.925	98.55
21	213.975	53.00 *	214.385	345.7	214.543	781.9	215.865	1868	214.090	164.1	213.925	98.35
22	213.980	62.54	214.338	318.9	214.435	695.8	217.000	3343	214.085	160.0 *	213.925	98.00 *
23	214.040	69.07	214.390	345.0	214.315	545.0 *	216.500	3096	214.030	164.2	213.925	97.33
24	214.570	408.0	214.640	629.2	214.235	283.6	215.350	1484	214.060	145.0 *	213.905	84.67
25	214.820	720.1	215.075	1379	214.155	262.7	215.230	1200 *	214.055	140.0 *	213.900	66.20 *
26	214.615	602.3	214.715	900.0 *	214.130	252.1	214.830	997.9	214.045	129.1	213.900	66.21
27	214.440	402.4	214.725	943.6	214.133	254.0	214.622	800.0 *	214.040	129.5	213.900	46.22
28	214.290	211.0 *	214.560	728.5	214.200	340.8	214.472	662.8	214.040	124.6	213.900	47.66
29	214.250	210.6	214.390	453.1	214.415	548.5	214.325	662.0	214.035	124.8	213.900	47.00 *
30	214.190	196.5	214.293	427.6	214.560	783.0 *	214.230	433.8	214.030	122.4	213.890	45.97
31			214.414	268.6	214.600	684.8			214.025	120.7		
Ten-Daily Mean												
I Ten-Daily	213.738	6.862	214.241	235.4	214.444	653.8	214.409	511.0	214.144	202.2	213.969	109.4
II Ten-Daily	213.897	23.73	214.470	529.8	214.605	840.4	214.537	703.2	214.085	158.4	213.947	105.1
III Ten-Daily	214.317	293.6	214.539	612.7	214.338	493.8	215.242	1455	214.049	138.6	213.907	69.76
Monthly												
Min.	213.710	5.000	214.167	201.7	214.060	252.1	213.970	121.0	214.000	120.0	213.890	45.97
Max.	214.820	720.1	215.075	1379	215.400	1865	217.000	3343	214.188	252.4	214.015	140.0
Mean	213.984	108	214.421	464.3	214.458	657.2	214.729	889.7	214.091	165.5	213.941	94.76

Annual Runoff in MCM = 6395 Annual Runoff in mm = 133

Peak Observed Discharge = 3343 cumecs on 22/09/2015 Corres. Water Level :217 m

Lowest Observed Discharge = 0.020 cumecs on 25/04/2016 Corres. Water Level :213.765 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2015 - 2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	213.890	46.23	213.850	19.15	213.800	7.010	213.770	2.066	213.770	0.510	213.760	0.000 *
2	213.890	46.04	213.850	19.35	213.795	6.827	213.770	1.983	213.770	0.477	213.765	0.000 *
3	213.885	46.39	213.840	16.00 *	213.795	6.912	213.800	3.923	213.770	0.475 *	213.765	0.000 *
4	213.880	44.74	213.820	13.96	213.795	5.881	213.800	3.706	213.765	0.459	213.760	0.000 *
5	213.870	45.02	213.810	13.84	213.790	5.891	213.805	3.954	213.765	0.456	213.760	0.000 *
6	213.800	36.10 *	213.810	12.87	213.790	5.869	213.805	3.500 *	213.765	0.493	213.760	0.000 *
7	213.860	41.85	213.800	10.84	213.790	5.860 *	213.805	3.600 *	213.765	0.475	213.760	0.000 *
8	213.860	41.43	213.800	10.06	213.790	6.099	213.805	3.733	213.765	0.471	213.770	0.000 *
9	213.840	37.54	213.805	10.71	213.790	6.009	213.800	3.877	213.770	0.493	213.775	0.000 *
10	213.820	37.24	213.810	13.83 *	213.795	6.419	213.800	3.902	213.775	0.450 *	213.775	0.000 *
11	213.800	36.18	213.820	10.97	213.795	6.362	213.795	3.640	213.775	0.457	213.780	0.000 *
12	213.800	36.10	213.830	11.72	213.795	6.291	213.795	2.331	213.775	0.239	213.780	1.695
13	213.800	36.10 *	213.830	12.10	213.795	6.240	213.800	2.310 *	213.775	0.242	213.780	1.694
14	213.800	34.09	213.825	11.34	213.790	4.510 *	213.800	2.314	213.775	0.240 *	213.790	1.732
15	213.800	33.34	213.825	11.66	213.780	4.887	213.800	2.315	213.770	0.047	213.780	1.000 *
16	213.800	37.39	213.820	11.85	213.780	4.844	213.795	2.324	213.780	0.041	213.800	1.708
17	213.790	4.893	213.820	11.85 *	213.780	4.586	213.795	2.263	213.780	0.040 *	213.800	1.685
18	213.790	4.967	213.820	10.85	213.780	2.297	213.795	2.280	213.780	0.039	213.790	1.176
19	213.790	4.920	213.820	10.70	213.780	2.309	213.795	2.247	213.775	0.080	213.790	1.293
20	213.790	4.900 *	213.825	11.34	213.780	2.310	213.790	2.200 *	213.775	0.078 *	213.785	1.197
21	213.785	4.311	213.825	9.907	213.780	2.305 *	213.780	0.437	213.775	0.028	213.785	1.190 *
22	213.785	4.269	213.815	10.09	213.775	2.355	213.780	0.443	213.770	0.039	213.785	1.185 *
23	213.780	4.050	213.815	9.891	213.775	2.360	213.780	0.432	213.770	0.030	213.780	1.237
24	213.880	22.00 *	213.815	9.855 *	213.775	2.234	213.775	0.390 *	213.770	0.030 *	213.780	0.912
25	213.775	4.000 *	213.815	9.989	213.775	2.237	213.775	0.385 *	213.765	0.020	213.780	0.865
26	213.770	3.928	213.810	8.900 *	213.770	2.138	213.770	0.442	213.765	0.022	213.775	0.819
27	213.800	10.00 *	213.810	8.901	213.770	2.170	213.770	0.435 *	213.765	0.000 *	213.775	0.850
28	213.830	11.50	213.810	8.347	213.770	2.165 *	213.770	0.627	213.765	0.000 *	213.760	0.798
29	213.850	18.60	213.810	8.347	213.770	2.065	213.770	0.608	213.765	0.000 *	213.760	0.790 *
30	213.850	19.78	213.800	7.069			213.770	0.501	213.760	0.000 *	213.760	0.691
31	213.850	20.13	213.800	7.000 *			213.770	0.529			213.760	0.686
Ten-Daily Mean												
I Ten-Daily	213.859	42.26	213.820	14.06	213.793	6.278	213.796	3.424	213.768	0.476	213.765	0.000
II Ten-Daily	213.796	23.29	213.824	11.44	213.785	4.464	213.796	2.422	213.776	0.150	213.788	1.318
III Ten-Daily	213.814	11.14	213.811	8.936	213.773	2.226	213.774	0.475	213.767	0.017	213.773	0.911
Monthly												
Min.	213.770	3.928	213.800	7.000	213.770	2.065	213.770	0.385	213.760	0.000	213.760	0.000
Max.	213.890	46.39	213.850	19.35	213.800	7.010	213.805	3.954	213.780	0.510	213.800	1.732
Mean	213.823	25.1	213.818	11.4	213.784	4.395	213.788	2.055	213.770	0.214	213.775	0.748

Peak Computed Discharge = 2250 cumecs on 20/09/2015

Corres. Water Level :216.12 m

Lowest Computed Discharge = 0.000 cumecs on 27/04/2016

Corres. Water Level :213.765 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

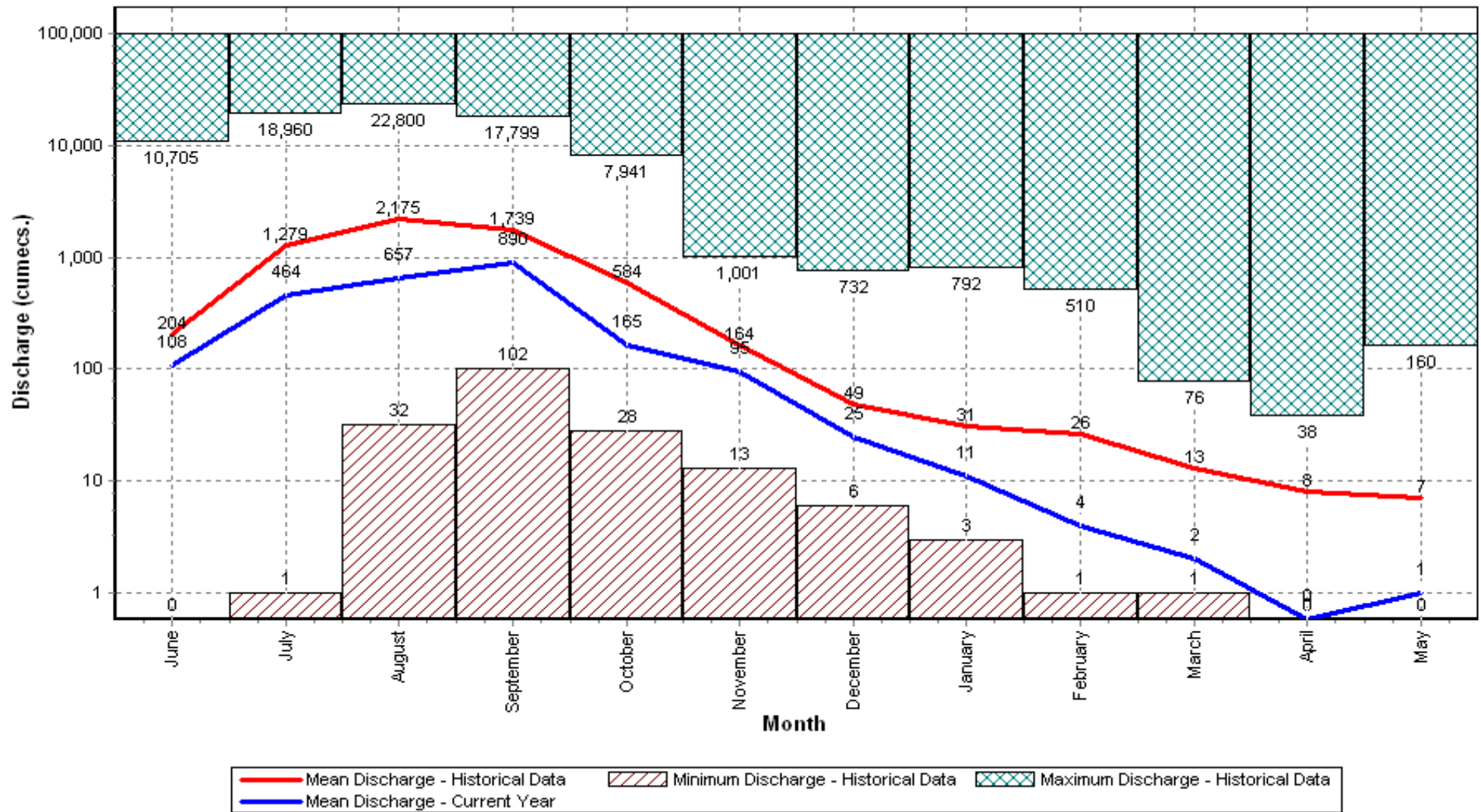
Station Name : Seorinarayan (EM000R6)

Data considered : 1986-2016

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur



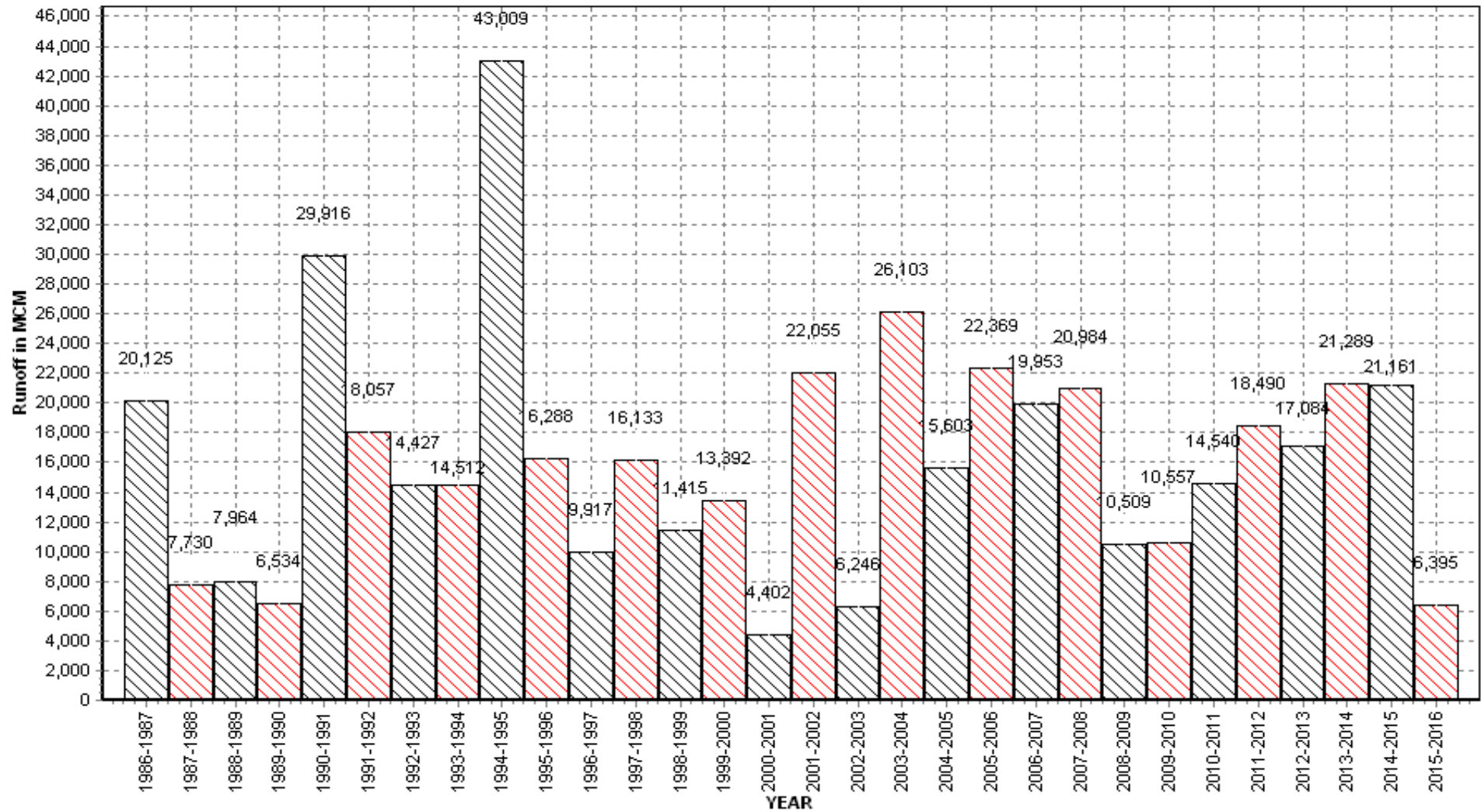
Annual Runoff Values for the period: 1986 - 2016

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



Note: Missing values have not been considered while arriving at Annual Runoff

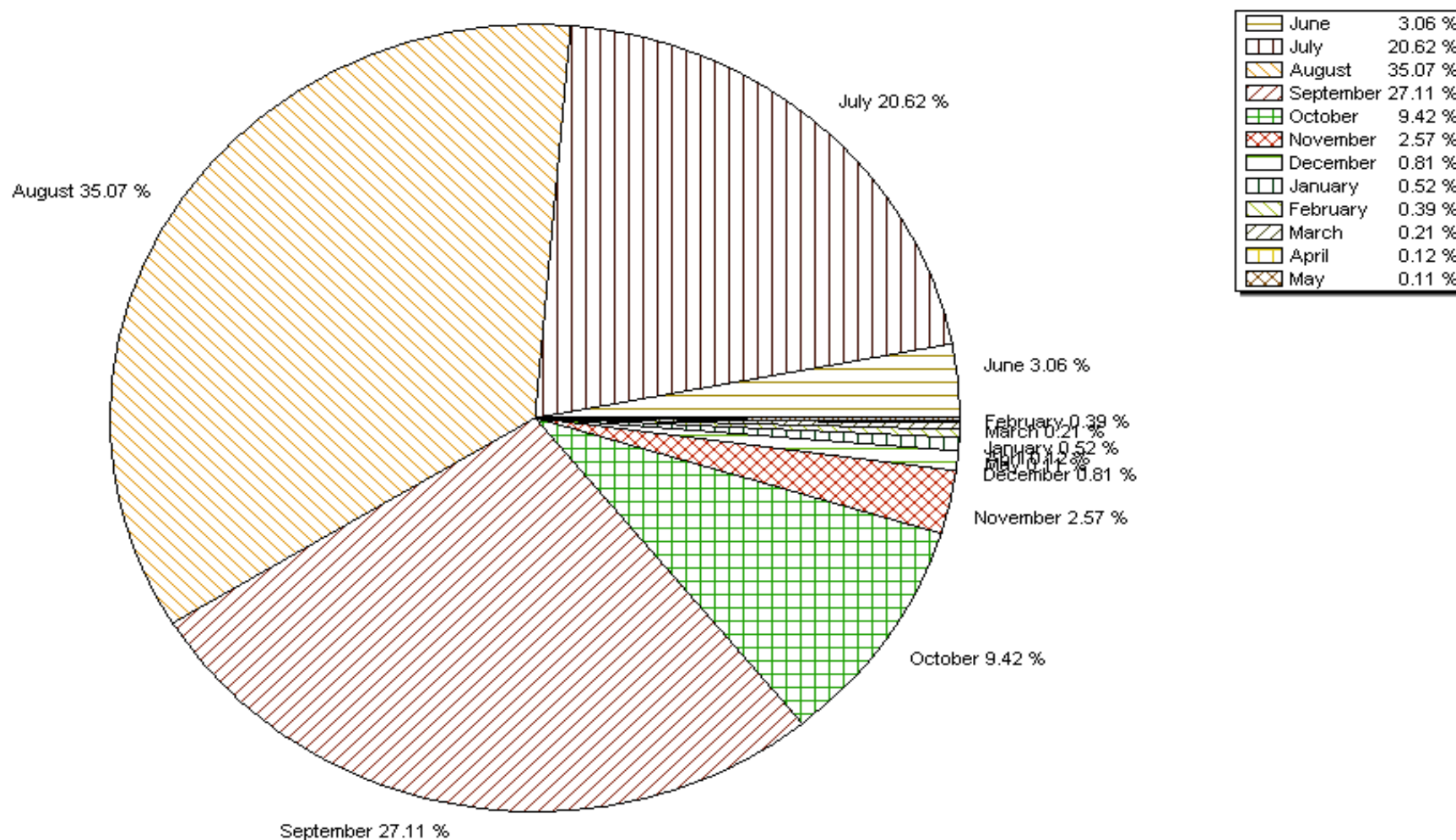
Monthly Average Runoff based on period : 1986-2015

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



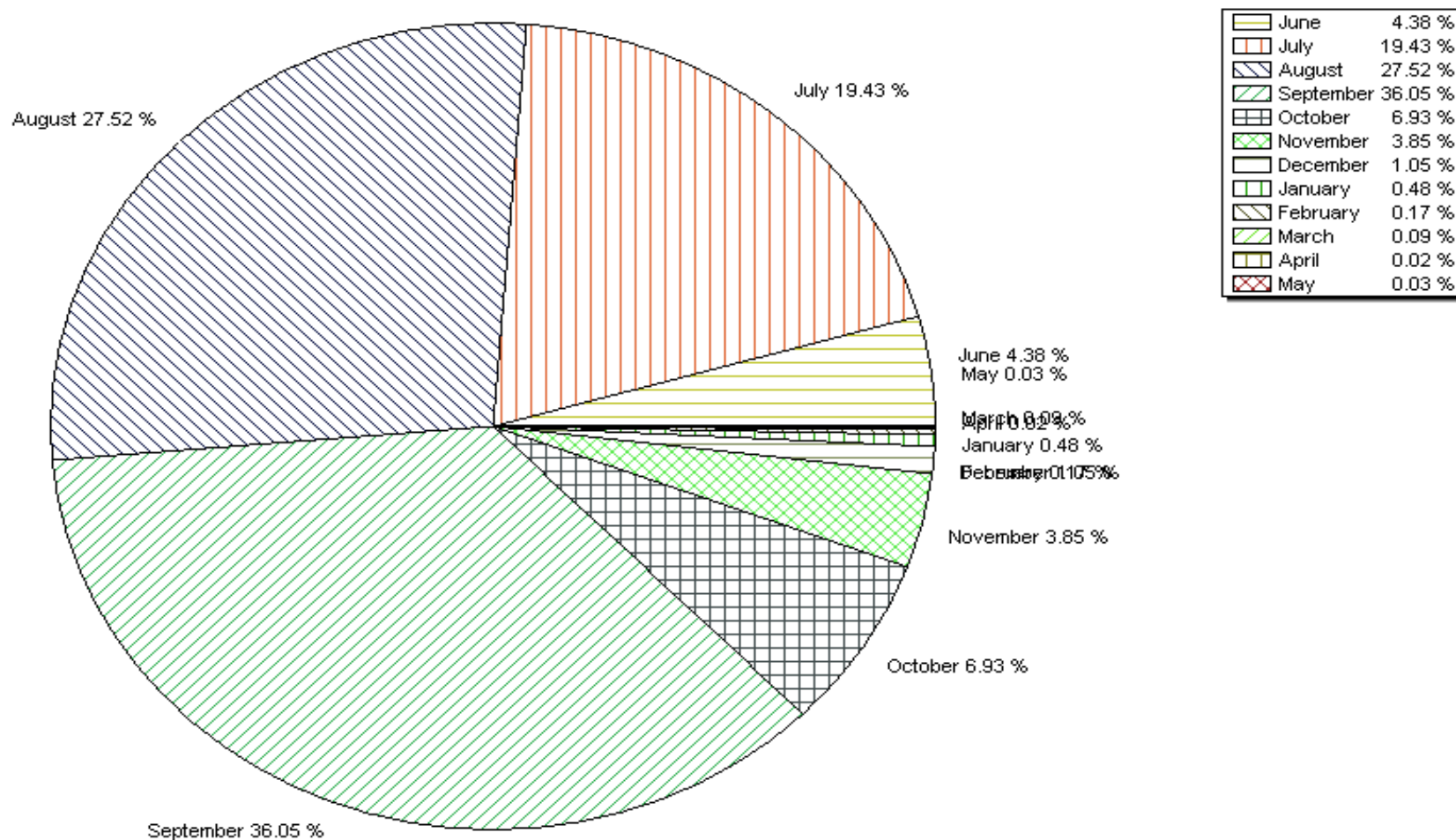
Monthly Runoff for the Year : 2015-2016

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



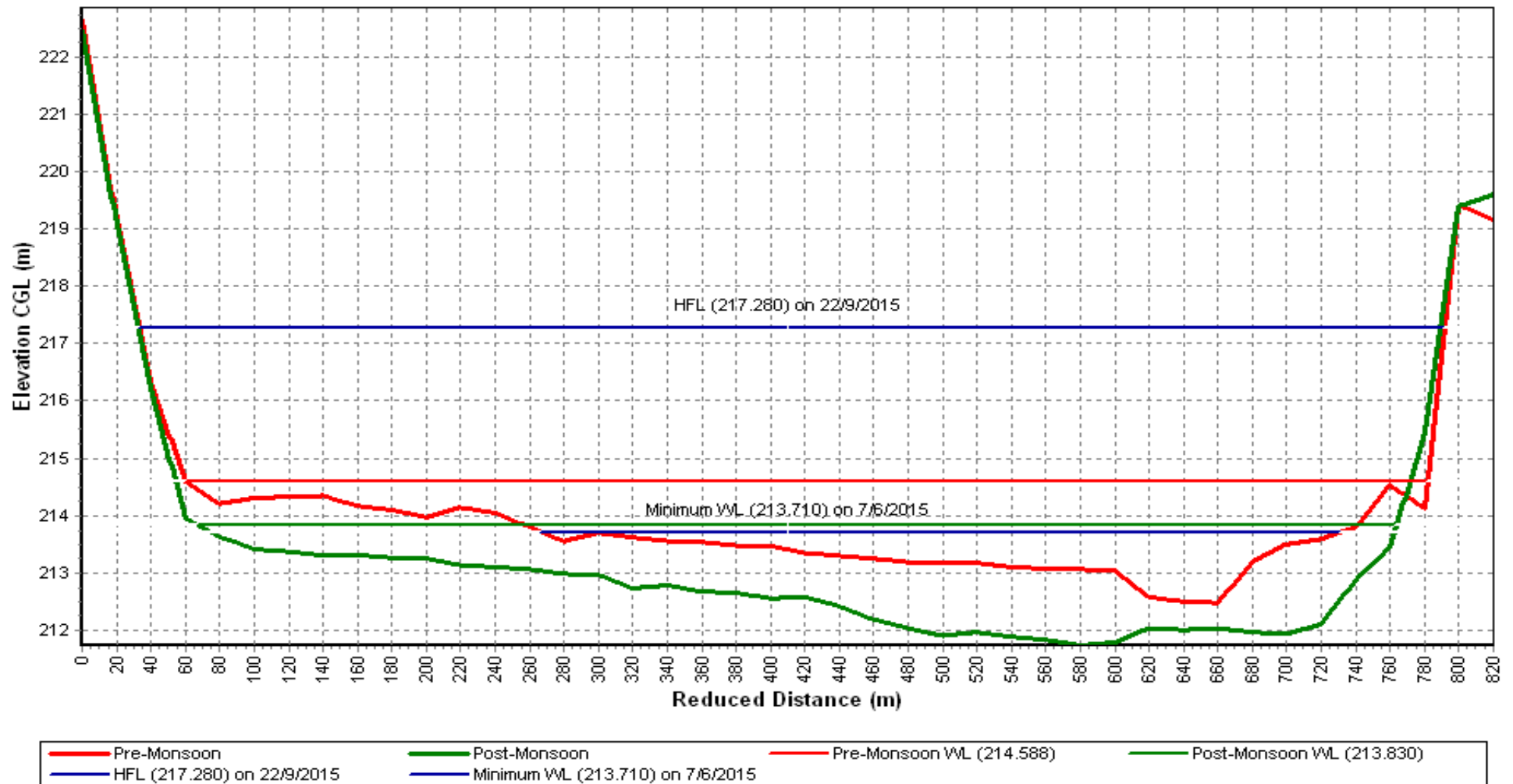
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur



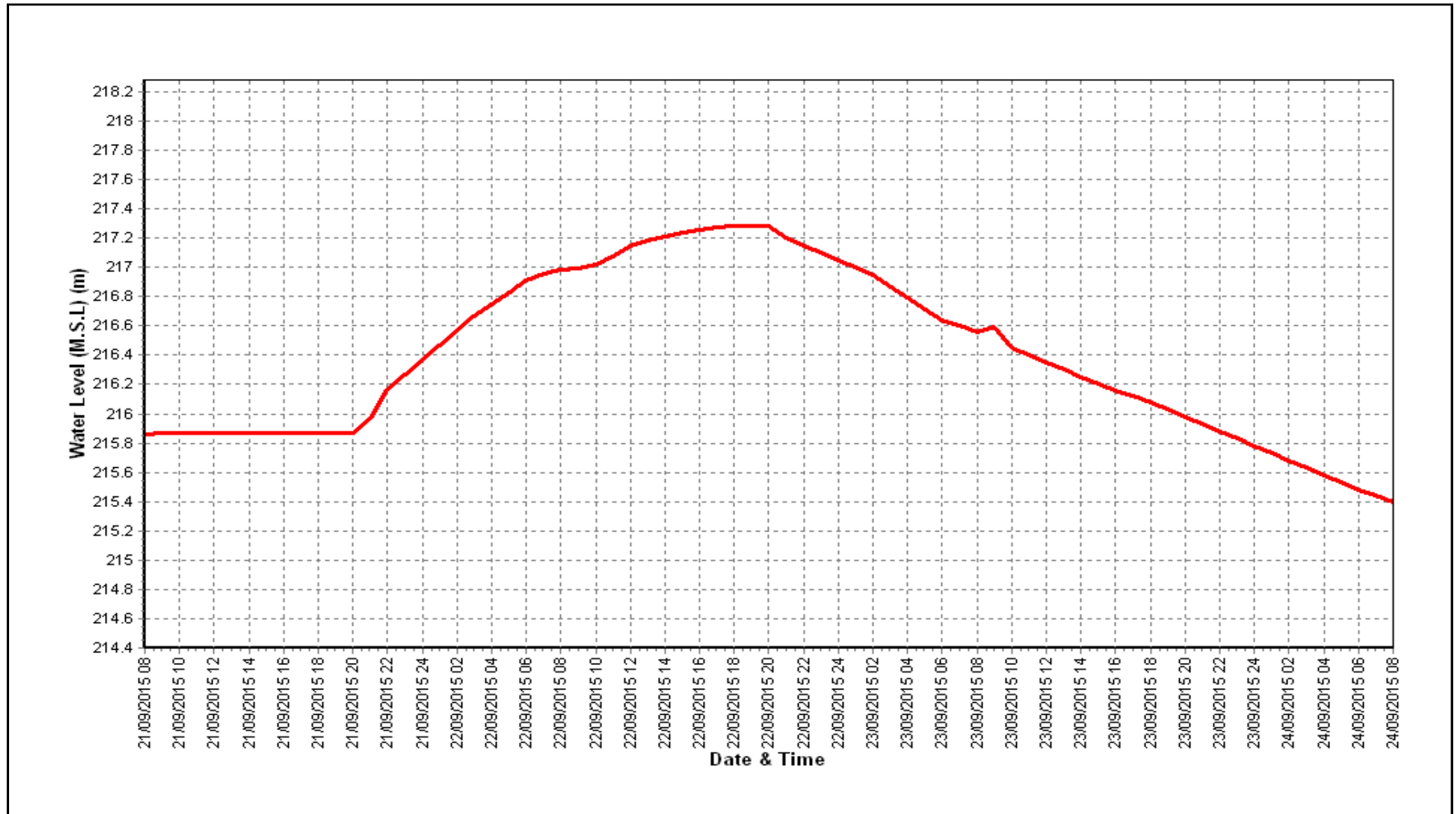
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



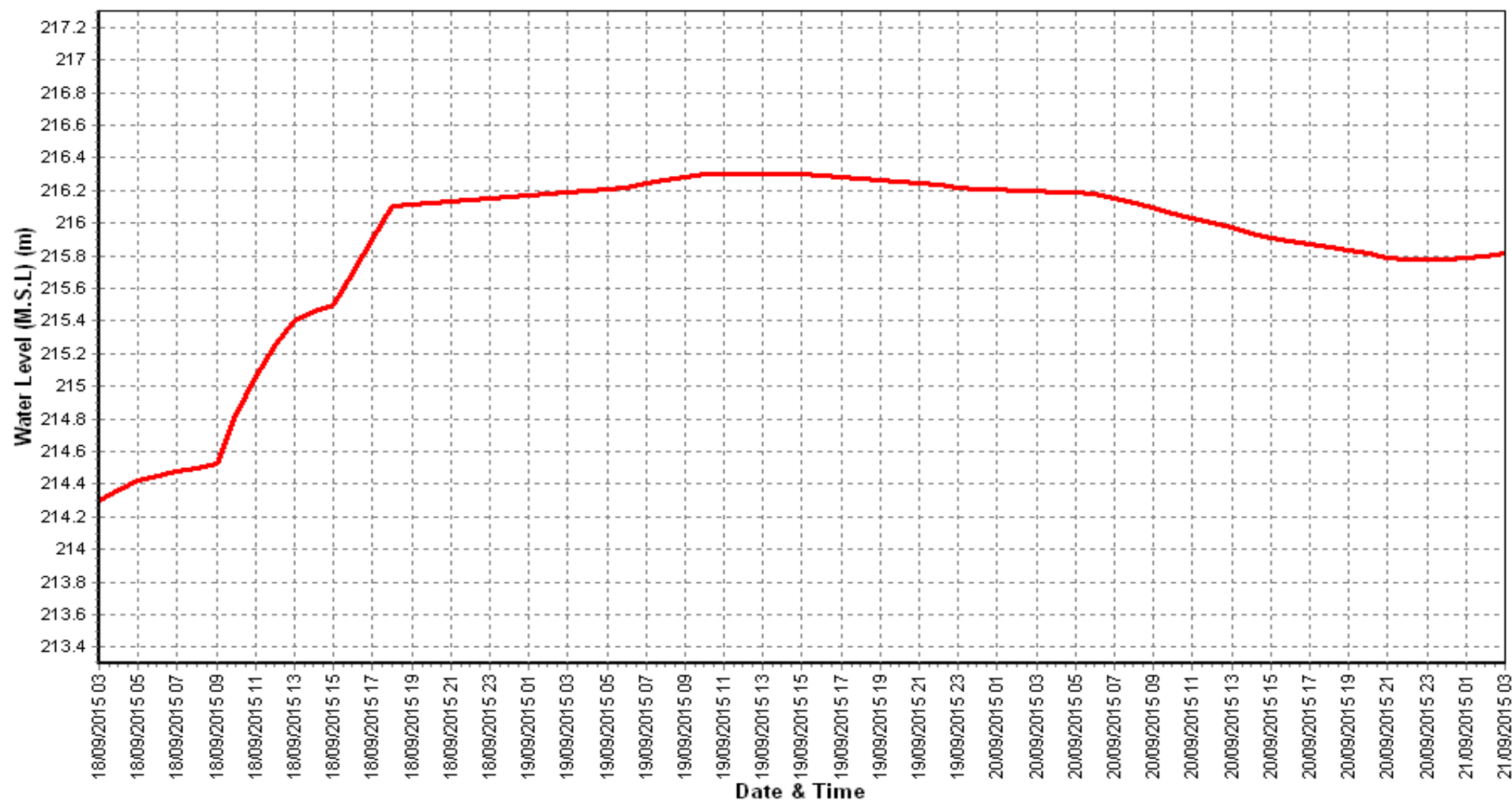
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



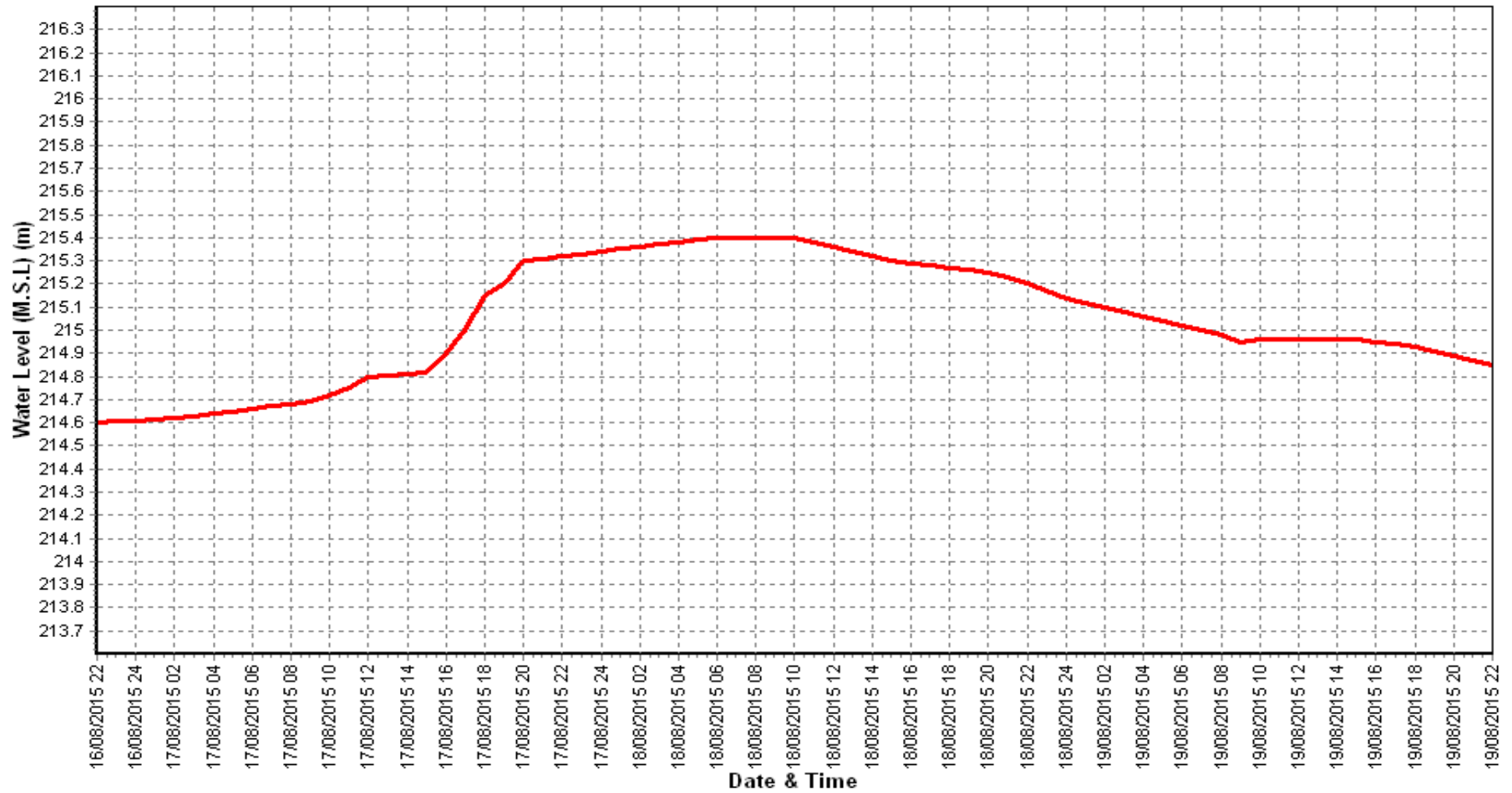
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

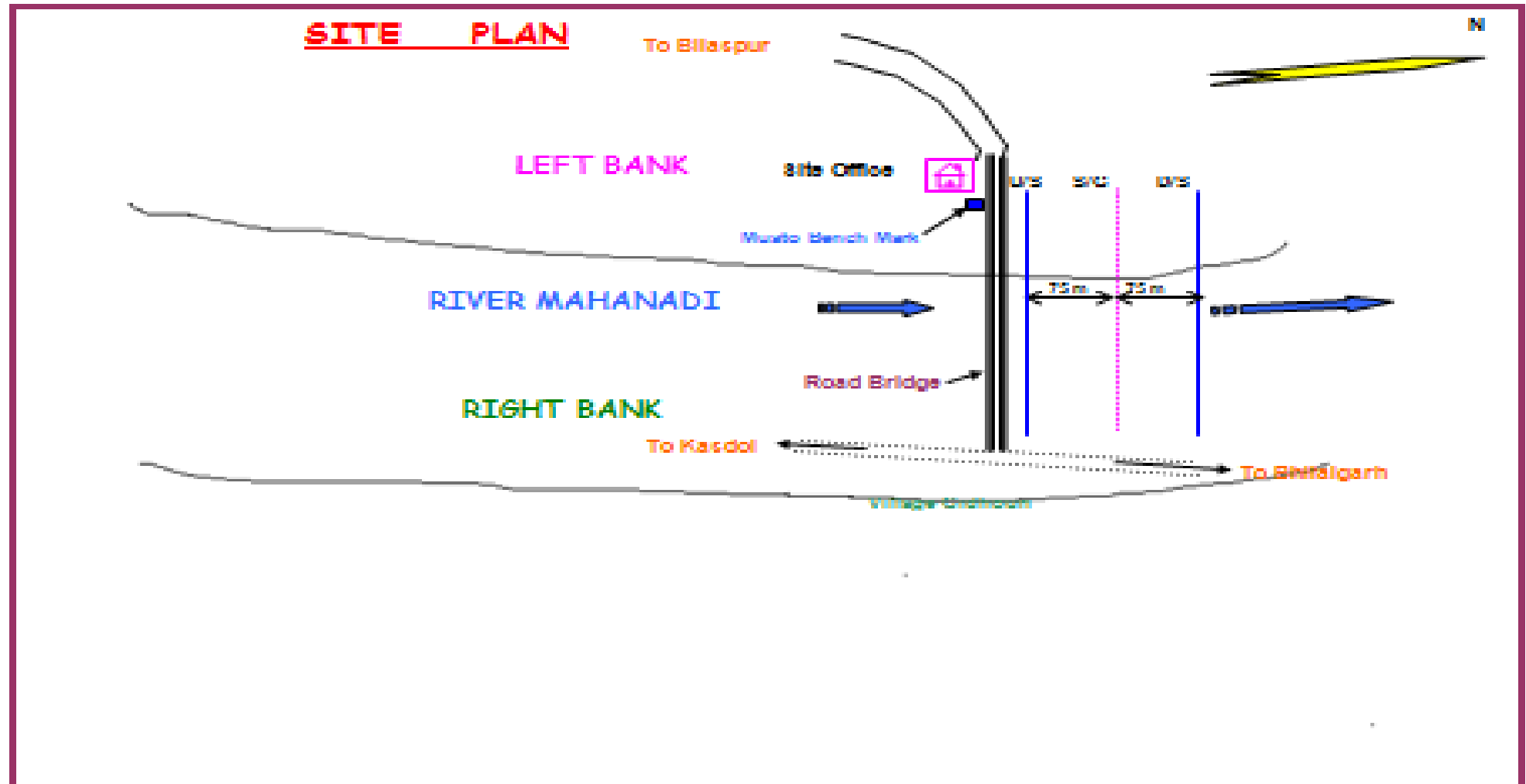


CENTRAL WATER COMMISSION, MAHANADI DIVISION, BURLA

SITE- Seorinayan.

Code_ EM000RE

Sub-Division :MMBCH Raipur.



SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	7.811	0.000	0.000	0.000	0.000	0	201.7	0.000	0.000	0.014	0.014	246	259.0	0.000	0.000	0.081	0.081	1808
2	6.779	0.000	0.000	0.000	0.000	0	212.3	0.000	0.000	0.012	0.012	213	258.0	0.000	0.000	0.000	0.000	0
3	5.945	0.000	0.000	0.000	0.000	0	211.7	0.000	0.000	0.000	0.000	0	435.9	0.000	0.000	0.158	0.158	5951
4	5.661	0.000	0.000	0.000	0.000	0	208.3	0.000	0.000	0.015	0.015	261	1230	0.000	0.000	0.401	0.401	42603
5	5.254	0.000	0.000	0.000	0.000	0	300.0	0.000	0.000	0.000	0.000	0	972.1	0.000	0.000	0.124	0.124	10432
6	5.181	0.000	0.000	0.000	0.000	0	270.9	0.000	0.000	0.018	0.018	428	948.8	0.000	0.000	0.101	0.101	8271
7	5.000	0.000	0.000	0.000	0.000	0	254.1	0.000	0.000	0.000	0.000	0	821.7	0.000	0.000	0.115	0.115	8178
8	8.860	0.000	0.000	0.000	0.000	0	243.5	0.000	0.000	0.010	0.010	210	710.8	0.000	0.000	0.097	0.097	5976
9	9.011	0.000	0.000	0.000	0.000	0	226.4	0.000	0.000	0.016	0.016	307	440.4	0.000	0.000	0.000	0.000	0
10	9.116	0.000	0.000	0.000	0.000	0	225.7	0.000	0.000	0.016	0.016	306	460.5	0.000	0.000	0.043	0.043	1691
11	10.34	0.000	0.000	0.000	0.000	0	294.9	0.000	0.000	0.078	0.078	1977	502.1	0.000	0.000	0.044	0.044	1926
12	10.93	0.000	0.000	0.000	0.000	0	915.0	0.000	0.000	0.000	0.000	0	515.4	0.000	0.000	0.045	0.045	1991
13	12.40	0.000	0.000	0.000	0.000	0	935.5	0.000	0.000	0.030	0.030	2425	440.4	0.000	0.000	0.032	0.032	1221
14	16.00	0.000	0.000	0.000	0.000	0	912.7	0.000	0.000	0.049	0.049	3856	434.5	0.000	0.000	0.064	0.064	2414
15	23.08	0.000	0.000	0.000	0.000	0	428.7	0.000	0.000	0.048	0.048	1763	782.0	0.000	0.000	0.000	0.000	0
16	18.12	0.000	0.000	0.000	0.000	0	401.0	0.000	0.000	0.093	0.093	3215	782.0	0.000	0.000	0.000	0.000	0
17	16.88	0.000	0.000	0.000	0.000	0	365.3	0.000	0.000	0.085	0.085	2692	1030	0.000	0.000	0.085	0.085	7582
18	18.10	0.000	0.000	0.000	0.000	0	342.0	0.000	0.000	0.000	0.000	0	1865	0.000	0.000	0.201	0.201	32351
19	57.68	0.000	0.000	0.000	0.000	0	342.0	0.000	0.000	0.000	0.000	0	1248	0.000	0.000	0.140	0.140	15102
20	53.77	0.000	0.000	0.000	0.000	0	361.2	0.000	0.000	0.075	0.075	2328	804.9	0.000	0.000	0.101	0.101	7017
21	53.00	0.000	0.000	0.000	0.000	0	345.7	0.000	0.000	0.048	0.048	1422	781.9	0.000	0.000	0.096	0.096	6505
22	62.54	0.000	0.000	0.018	0.018	95	318.9	0.000	0.000	0.026	0.026	716	695.8	0.000	0.000	0.083	0.083	4990
23	69.07	0.000	0.000	0.032	0.032	193	345.0	0.000	0.000	0.033	0.033	987	545.0	0.000	0.000	0.000	0.000	0
24	408.0	0.000	0.000	0.056	0.056	1964	629.2	0.000	0.000	0.045	0.045	2419	283.6	0.000	0.000	0.053	0.053	1291
25	720.1	0.000	0.000	0.057	0.057	3546	1379	0.000	0.000	0.106	0.106	12571	262.7	0.000	0.000	0.026	0.026	579
26	602.3	0.000	0.000	0.036	0.036	1873	900.0	0.000	0.000	0.000	0.000	0	252.1	0.000	0.000	0.025	0.025	545
27	402.4	0.000	0.000	0.027	0.027	939	943.6	0.000	0.000	0.100	0.100	8153	254.0	0.000	0.000	0.028	0.028	610
28	211.0	0.000	0.000	0.000	0.000	0	728.5	0.000	0.000	0.084	0.084	5287	340.8	0.000	0.000	0.033	0.033	981
29	210.6	0.000	0.000	0.024	0.024	428	453.1	0.000	0.000	0.082	0.082	3202	548.5	0.000	0.000	0.040	0.040	1891
30	196.5	0.000	0.000	0.027	0.027	450	427.6	0.000	0.000	0.085	0.085	3148	783.0	0.000	0.000	0.000	0.000	0
31							268.6	0.000	0.000	0.069	0.069	1592	684.8	0.000	0.000	0.085	0.085	5041
Ten Daily Mean																		
Ten Daily I	6.862	0.000	0.000	0.000	0.000	0	235.4	0.000	0.000	0.010	0.010	197	653.8	0.000	0.000	0.112	0.112	8491
Ten Daily II	23.73	0.000	0.000	0.000	0.000	0	529.8	0.000	0.000	0.046	0.046	1826	840.4	0.000	0.000	0.071	0.071	6960
Ten Daily III	293.6	0.000	0.000	0.028	0.028	949	612.7	0.000	0.000	0.061	0.061	3591	493.8	0.000	0.000	0.043	0.043	2039
Monthly																		

Total

9488

59724

176946

Annual Sediment Load (Metric Tonnes) : 531280

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	639.2	0.000	0.000	0.046	0.046	2513	226.6	0.000	0.000	0.031	0.031	611	140.0	0.000	0.000	0.000	0.000	0
2	645.0	0.000	0.000	0.035	0.035	1973	200.0	0.000	0.000	0.000	0.000	0	105.4	0.000	0.000	0.027	0.027	250
3	618.4	0.000	0.000	0.028	0.028	1501	252.4	0.000	0.000	0.092	0.092	2004	104.3	0.000	0.000	0.000	0.000	0
4	631.0	0.000	0.000	0.063	0.063	3440	120.0	0.000	0.000	0.000	0.000	0	98.62	0.000	0.000	0.000	0.000	0
5	577.4	0.000	0.000	0.069	0.069	3457	208.6	0.000	0.000	0.026	0.026	470	99.89	0.000	0.000	0.000	0.000	0
6	600.0	0.000	0.000	0.000	0.000	0	214.3	0.000	0.000	0.022	0.022	411	99.96	0.000	0.000	0.000	0.000	0
7	504.7	0.000	0.000	0.083	0.083	3606	215.0	0.000	0.000	0.022	0.022	405	110.4	0.000	0.000	0.000	0.000	0
8	451.8	0.000	0.000	0.062	0.062	2401	213.8	0.000	0.000	0.019	0.019	346	116.0	0.000	0.000	0.000	0.000	0
9	223.9	0.000	0.000	0.065	0.065	1248	216.6	0.000	0.000	0.024	0.024	447	103.3	0.000	0.000	0.028	0.028	253
10	218.6	0.000	0.000	0.064	0.064	1211	154.7	0.000	0.000	0.018	0.018	239	116.1	0.000	0.000	0.000	0.000	0
11	211.3	0.000	0.000	0.071	0.071	1302	180.0	0.000	0.000	0.000	0.000	0	110.2	0.000	0.000	0.000	0.000	0
12	208.0	0.000	0.000	0.099	0.099	1770	150.8	0.000	0.000	0.014	0.014	185	110.2	0.000	0.000	0.000	0.000	0
13	207.0	0.000	0.000	0.000	0.000	0	165.1	0.000	0.000	0.014	0.014	203	104.9	0.000	0.000	0.000	0.000	0
14	127.1	0.000	0.000	0.026	0.026	281	144.4	0.000	0.000	0.010	0.010	126	105.1	0.000	0.000	0.000	0.000	0
15	121.5	0.000	0.000	0.017	0.017	177	141.5	0.000	0.000	0.008	0.008	98	100.0	0.000	0.000	0.000	0.000	0
16	121.5	0.000	0.000	0.073	0.073	762	157.1	0.000	0.000	0.005	0.005	65	109.5	0.000	0.000	0.026	0.026	241
17	121.0	0.000	0.000	0.000	0.000	0	160.0	0.000	0.000	0.004	0.004	51	105.4	0.000	0.000	0.000	0.000	0
18	973.2	0.000	0.000	0.055	0.055	4583	160.0	0.000	0.000	0.000	0.000	0	104.0	0.000	0.000	0.000	0.000	0
19	2692	0.000	0.000	0.222	0.222	51722	161.7	0.000	0.000	0.004	0.004	50	103.3	0.000	0.000	0.000	0.000	0
20	2250	0.000	0.000	0.000	0.000	0	163.2	0.000	0.000	0.004	0.004	51	98.55	0.000	0.000	0.000	0.000	0
21	1868	0.000	0.000	0.184	0.184	29644	164.1	0.000	0.000	0.000	0.000	0	98.35	0.000	0.000	0.000	0.000	0
22	3343	0.000	0.000	0.263	0.263	75881	160.0	0.000	0.000	0.000	0.000	0	98.00	0.000	0.000	0.000	0.000	0
23	3096	0.000	0.000	0.199	0.199	53263	164.2	0.000	0.000	0.000	0.000	0	97.33	0.000	0.000	0.020	0.020	167
24	1484	0.000	0.000	0.175	0.175	22487	145.0	0.000	0.000	0.000	0.000	0	84.67	0.000	0.000	0.000	0.000	0
25	1200	0.000	0.000	0.000	0.000	0	140.0	0.000	0.000	0.000	0.000	0	66.20	0.000	0.000	0.000	0.000	0
26	997.9	0.000	0.000	0.115	0.115	9889	129.1	0.000	0.000	0.000	0.000	0	66.21	0.000	0.000	0.000	0.000	0
27	800.0	0.000	0.000	0.000	0.000	0	129.5	0.000	0.000	0.000	0.000	0	46.22	0.000	0.000	0.000	0.000	0
28	662.8	0.000	0.000	0.056	0.056	3201	124.6	0.000	0.000	0.000	0.000	0	47.66	0.000	0.000	0.000	0.000	0
29	662.0	0.000	0.000	0.021	0.021	1184	124.8	0.000	0.000	0.000	0.000	0	47.00	0.000	0.000	0.000	0.000	0
30	433.8	0.000	0.000	0.020	0.020	738	122.4	0.000	0.000	0.000	0.000	0	45.97	0.000	0.000	0.025	0.025	97
31							120.7	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	511.0	0.000	0.000	0.051	0.051	2135	202.2	0.000	0.000	0.025	0.025	493	109.4	0.000	0.000	0.006	0.006	50
Ten Daily II	703.2	0.000	0.000	0.056	0.056	6060	158.4	0.000	0.000	0.006	0.006	83	105.1	0.000	0.000	0.003	0.003	24
Ten Daily III	1455	0.000	0.000	0.103	0.103	19629	138.6	0.000	0.000	0.000	0.000	0	69.76	0.000	0.000	0.004	0.004	26
Monthly																		

Total

278233

5762

1009

Annual Sediment Load (Metric Tonnes) : 531280

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	46.23	0.000	0.000	0.000	0.000	0	19.15	0.000	0.000	0.000	0.000	0	7.010	0.000	0.000	0.000	0.000	0
2	46.04	0.000	0.000	0.000	0.000	0	19.35	0.000	0.000	0.000	0.000	0	6.827	0.000	0.000	0.000	0.000	0
3	46.39	0.000	0.000	0.000	0.000	0	16.00	0.000	0.000	0.000	0.000	0	6.912	0.000	0.000	0.000	0.000	0
4	44.74	0.000	0.000	0.000	0.000	0	13.96	0.000	0.000	0.000	0.000	0	5.881	0.000	0.000	0.000	0.000	0
5	45.02	0.000	0.000	0.000	0.000	0	13.84	0.000	0.000	0.000	0.000	0	5.891	0.000	0.000	0.000	0.000	0
6	36.10	0.000	0.000	0.000	0.000	0	12.87	0.000	0.000	0.000	0.000	0	5.869	0.000	0.000	0.000	0.000	0
7	41.85	0.000	0.000	0.019	0.019	68	10.84	0.000	0.000	0.000	0.000	0	5.860	0.000	0.000	0.000	0.000	0
8	41.43	0.000	0.000	0.000	0.000	0	10.06	0.000	0.000	0.000	0.000	0	6.099	0.000	0.000	0.000	0.000	0
9	37.54	0.000	0.000	0.000	0.000	0	10.71	0.000	0.000	0.000	0.000	0	6.009	0.000	0.000	0.000	0.000	0
10	37.24	0.000	0.000	0.000	0.000	0	13.83	0.000	0.000	0.000	0.000	0	6.419	0.000	0.000	0.000	0.000	0
11	36.18	0.000	0.000	0.000	0.000	0	10.97	0.000	0.000	0.000	0.000	0	6.362	0.000	0.000	0.000	0.000	0
12	36.10	0.000	0.000	0.000	0.000	0	11.72	0.000	0.000	0.000	0.000	0	6.291	0.000	0.000	0.000	0.000	0
13	36.10	0.000	0.000	0.000	0.000	0	12.10	0.000	0.000	0.000	0.000	0	6.240	0.000	0.000	0.000	0.000	0
14	34.09	0.000	0.000	0.017	0.017	50	11.34	0.000	0.000	0.000	0.000	0	4.510	0.000	0.000	0.000	0.000	0
15	33.34	0.000	0.000	0.000	0.000	0	11.66	0.000	0.000	0.000	0.000	0	4.887	0.000	0.000	0.000	0.000	0
16	37.39	0.000	0.000	0.000	0.000	0	11.85	0.000	0.000	0.000	0.000	0	4.844	0.000	0.000	0.000	0.000	0
17	4.893	0.000	0.000	0.000	0.000	0	11.85	0.000	0.000	0.000	0.000	0	4.586	0.000	0.000	0.000	0.000	0
18	4.967	0.000	0.000	0.000	0.000	0	10.85	0.000	0.000	0.000	0.000	0	2.297	0.000	0.000	0.000	0.000	0
19	4.920	0.000	0.000	0.000	0.000	0	10.70	0.000	0.000	0.000	0.000	0	2.309	0.000	0.000	0.000	0.000	0
20	4.900	0.000	0.000	0.000	0.000	0	11.34	0.000	0.000	0.000	0.000	0	2.310	0.000	0.000	0.000	0.000	0
21	4.311	0.000	0.000	0.000	0.000	0	9.907	0.000	0.000	0.000	0.000	0	2.305	0.000	0.000	0.000	0.000	0
22	4.269	0.000	0.000	0.000	0.000	0	10.09	0.000	0.000	0.000	0.000	0	2.355	0.000	0.000	0.000	0.000	0
23	4.050	0.000	0.000	0.000	0.000	0	9.891	0.000	0.000	0.000	0.000	0	2.360	0.000	0.000	0.000	0.000	0
24	22.00	0.000	0.000	0.000	0.000	0	9.855	0.000	0.000	0.000	0.000	0	2.234	0.000	0.000	0.000	0.000	0
25	4.000	0.000	0.000	0.000	0.000	0	9.989	0.000	0.000	0.000	0.000	0	2.237	0.000	0.000	0.000	0.000	0
26	3.928	0.000	0.000	0.000	0.000	0	8.900	0.000	0.000	0.000	0.000	0	2.138	0.000	0.000	0.000	0.000	0
27	10.00	0.000	0.000	0.000	0.000	0	8.901	0.000	0.000	0.000	0.000	0	2.170	0.000	0.000	0.000	0.000	0
28	11.50	0.000	0.000	0.000	0.000	0	8.347	0.000	0.000	0.000	0.000	0	2.165	0.000	0.000	0.000	0.000	0
29	18.60	0.000	0.000	0.000	0.000	0	8.347	0.000	0.000	0.000	0.000	0	2.065	0.000	0.000	0.000	0.000	0
30	19.78	0.000	0.000	0.000	0.000	0	7.069	0.000	0.000	0.000	0.000	0						
31	20.13	0.000	0.000	0.000	0.000	0	7.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	42.26	0.000	0.000	0.002	0.002	7	14.06	0.000	0.000	0.000	0.000	0	6.278	0.000	0.000	0.000	0.000	0
Ten Daily II	23.29	0.000	0.000	0.002	0.002	5	11.44	0.000	0.000	0.000	0.000	0	4.464	0.000	0.000	0.000	0.000	0
Ten Daily III	11.14	0.000	0.000	0.000	0.000	0	8.936	0.000	0.000	0.000	0.000	0	2.226	0.000	0.000	0.000	0.000	0
Monthly																		
Total						118						0						0

Annual Sediment Load (Metric Tonnes) : 531280

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	2.066	0.000	0.000	0.000	0.000	0	0.510	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	1.983	0.000	0.000	0.000	0.000	0	0.477	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	3.923	0.000	0.000	0.000	0.000	0	0.475	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	3.706	0.000	0.000	0.000	0.000	0	0.459	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	3.954	0.000	0.000	0.000	0.000	0	0.456	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	3.500	0.000	0.000	0.000	0.000	0	0.493	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	3.600	0.000	0.000	0.000	0.000	0	0.475	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	3.733	0.000	0.000	0.000	0.000	0	0.471	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	3.877	0.000	0.000	0.000	0.000	0	0.493	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	3.902	0.000	0.000	0.000	0.000	0	0.450	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	3.640	0.000	0.000	0.000	0.000	0	0.457	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	2.331	0.000	0.000	0.000	0.000	0	0.239	0.000	0.000	0.000	0.000	0	1.695	0.000	0.000	0.000	0.000	0
13	2.310	0.000	0.000	0.000	0.000	0	0.242	0.000	0.000	0.000	0.000	0	1.694	0.000	0.000	0.000	0.000	0
14	2.314	0.000	0.000	0.000	0.000	0	0.240	0.000	0.000	0.000	0.000	0	1.732	0.000	0.000	0.000	0.000	0
15	2.315	0.000	0.000	0.000	0.000	0	0.047	0.000	0.000	0.000	0.000	0	1.000	0.000	0.000	0.000	0.000	0
16	2.324	0.000	0.000	0.000	0.000	0	0.041	0.000	0.000	0.000	0.000	0	1.708	0.000	0.000	0.000	0.000	0
17	2.263	0.000	0.000	0.000	0.000	0	0.040	0.000	0.000	0.000	0.000	0	1.685	0.000	0.000	0.000	0.000	0
18	2.280	0.000	0.000	0.000	0.000	0	0.039	0.000	0.000	0.000	0.000	0	1.176	0.000	0.000	0.000	0.000	0
19	2.247	0.000	0.000	0.000	0.000	0	0.080	0.000	0.000	0.000	0.000	0	1.293	0.000	0.000	0.000	0.000	0
20	2.200	0.000	0.000	0.000	0.000	0	0.078	0.000	0.000	0.000	0.000	0	1.197	0.000	0.000	0.000	0.000	0
21	0.437	0.000	0.000	0.000	0.000	0	0.028	0.000	0.000	0.000	0.000	0	1.190	0.000	0.000	0.000	0.000	0
22	0.443	0.000	0.000	0.000	0.000	0	0.039	0.000	0.000	0.000	0.000	0	1.185	0.000	0.000	0.000	0.000	0
23	0.432	0.000	0.000	0.000	0.000	0	0.030	0.000	0.000	0.000	0.000	0	1.237	0.000	0.000	0.000	0.000	0
24	0.390	0.000	0.000	0.000	0.000	0	0.030	0.000	0.000	0.000	0.000	0	0.912	0.000	0.000	0.000	0.000	0
25	0.385	0.000	0.000	0.000	0.000	0	0.020	0.000	0.000	0.000	0.000	0	0.865	0.000	0.000	0.000	0.000	0
26	0.442	0.000	0.000	0.000	0.000	0	0.022	0.000	0.000	0.000	0.000	0	0.819	0.000	0.000	0.000	0.000	0
27	0.435	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.850	0.000	0.000	0.000	0.000	0
28	0.627	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.798	0.000	0.000	0.000	0.000	0
29	0.608	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.790	0.000	0.000	0.000	0.000	0
30	0.501	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.691	0.000	0.000	0.000	0.000	0
31	0.529	0.000	0.000	0.000	0.000	0							0.686	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	3.424	0.000	0.000	0.000	0.000	0	0.476	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	2.422	0.000	0.000	0.000	0.000	0	0.150	0.000	0.000	0.000	0.000	0	1.318	0.000	0.000	0.000	0.000	0
Ten Daily III	0.475	0.000	0.000	0.000	0.000	0	0.017	0.000	0.000	0.000	0.000	0	0.911	0.000	0.000	0.000	0.000	0
Monthly																		

Total

0

0

0

Annual Sediment Load (Metric Tonnes) : 531280

Annual Sediment Load for period : 2013-2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2013-2014	6165457	0	6165457	21289
2014-2015	15490976	226	15491202	21161
2015-2016	531162	118	531280	6395

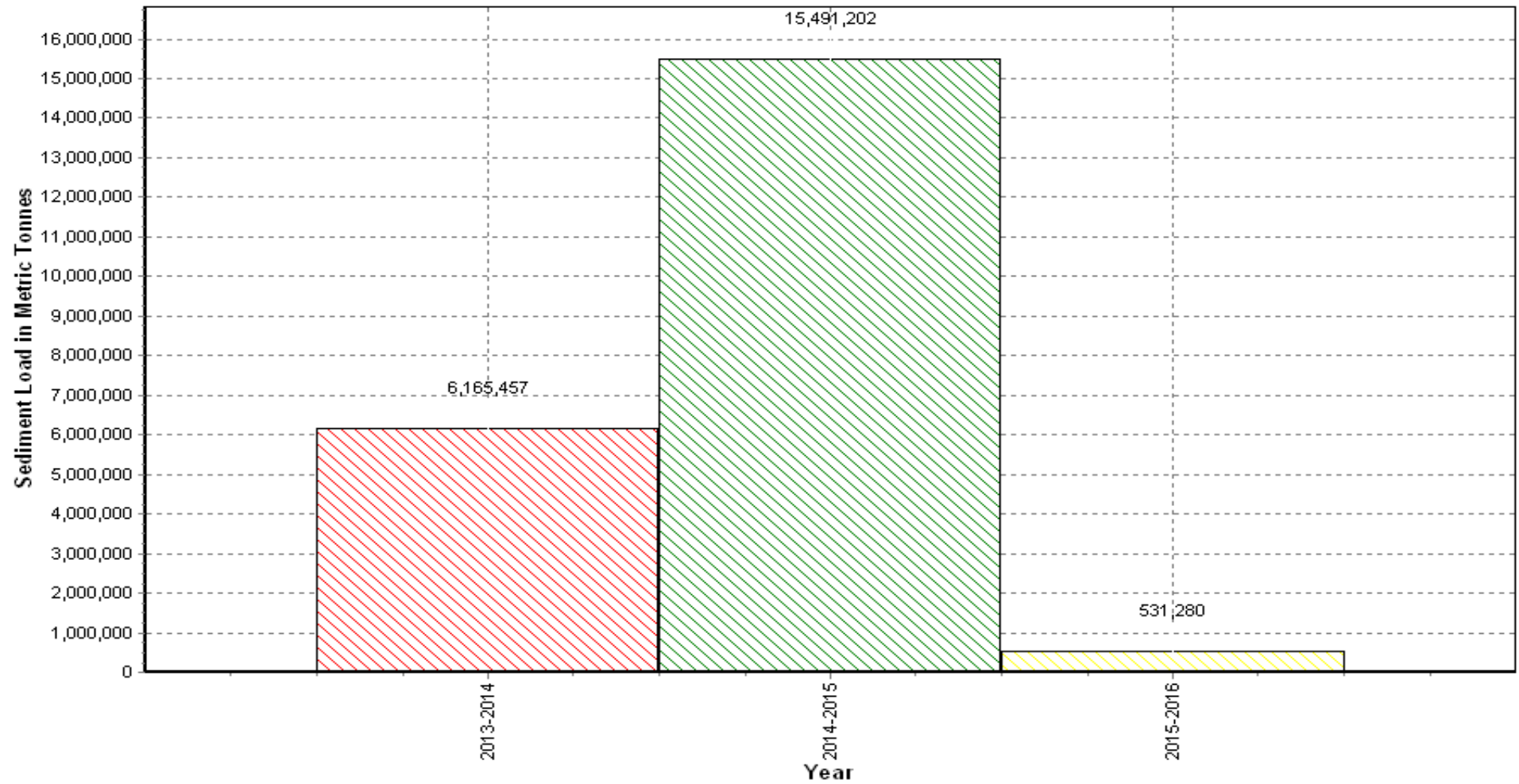
Annual Sediment Load for the period: 2013-2016

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



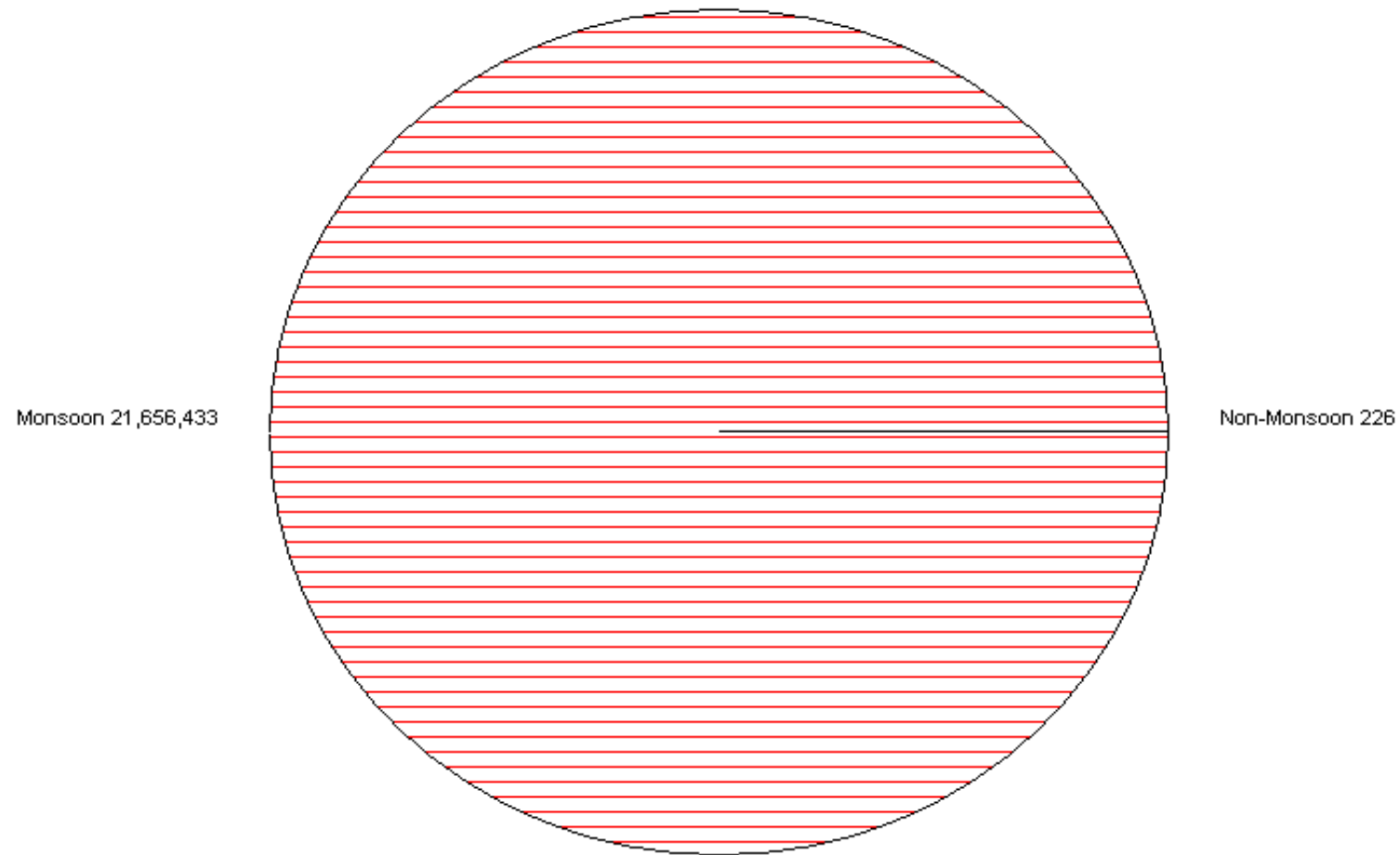
Seasonal Sediment Load for the period : 2013-2015

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



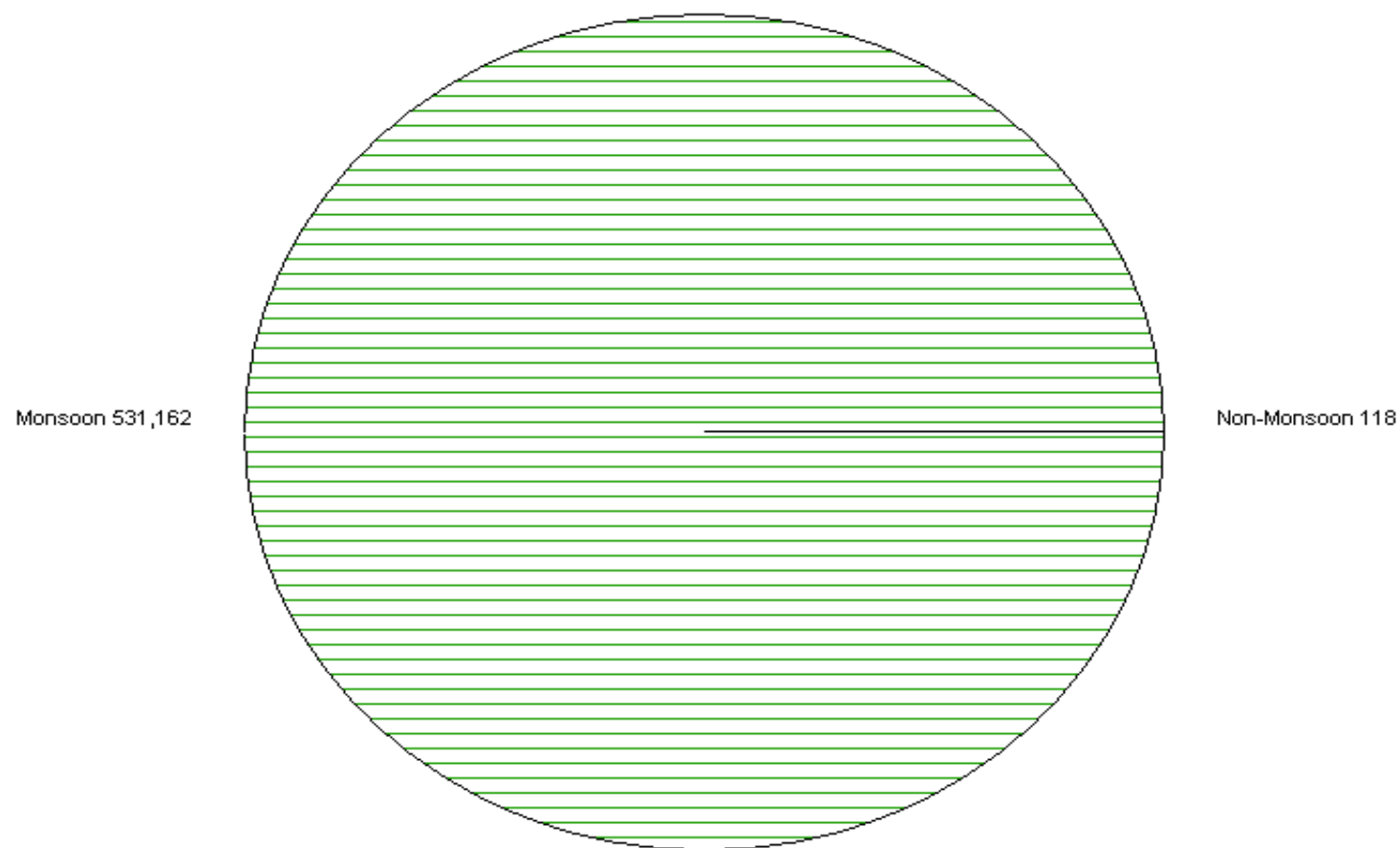
Seasonal Sediment Load for the Year: 2015-2016

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	01.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	01.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	7.811	201.7	259.0	639.2	226.6	140.0	46.23	19.15	7.010	2.066	0.510	0.000
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)			148	157	176	163	183	152	161	183	208	238
4	EC_GEN (μmho/cm)	296	295	276	270	267	302	405	332	315	353	457	397
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)		8.2	8.3	7.9	8.1	8.3	8.3	8.6	9.1	9.0	9.0	9.4
7	pH_GEN (pH units)	8.9	7.7	7.8	7.6	8.2	8.3	8.0	8.3	8.7	8.7	8.6	8.3
8	Temp (deg C)		28.6	29.5	30.4	31.6	25.7	24.8	19.4	22.7	26.0	28.9	31.2
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	15.9	12.0	6.0	0.0	0.0	0.0	0.0	6.0	0.0	12.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	180	188	220	240	196	120	296	276	252	263	184	152
3	Ca (mg/L)	19	32	35	45	27	26	50	29	24	32	21	42
4	Cl (mg/L)	34.0	34.0	19.0	17.0	16.0	13.0	37.0	33.0	30.0	32.0	28.0	60.0
5	CO3 (mg/L)	19.2	14.4	7.2	0.0	0.0	0.0	0.0	7.2	0.0	14.4	0.0	0.0
6	HCO3 (mg/L)	90	100	127	146	120	73	181	161	154	146	112	93
7	K (mg/L)	10.4	8.9	5.8	4.0	11.9	9.3	6.1	9.5	7.5	10.1	6.1	35.0
8	Mg (mg/L)	8.8	15.6	17.5	5.8	5.8	15.6	21.4	17.5	16.5	17.5	22.4	14.6
9	Na (mg/L)	48.3	23.4	14.5	15.4	40.5	34.7	27.1	42.3	33.6	45.2	18.9	100.6
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.6	0.7	0.1	1.0	0.9	2.0	1.0	1.2	1.4	0.9	0.8	1.2
2	DO (mg/L)	7.2	4.7	5.5	7.0	5.9	9.1	8.3	7.8	7.6	6.8	5.6	5.4
3	DO_SAT% (%)		60	72	93	79	110	99	84	87	84	72	73
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	48	80	88	112	68	64	124	72	60	80	52	104
2	HAR_Total (mgCaCO3/L)	85	145	161	136	92	129	213	145	129	153	145	165
3	Na% (%)	52	25	16	19	45	35	21	37	35	37	21	51
4	RSC (-)	0.4	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	2.3	0.8	0.5	0.6	1.8	1.3	0.8	1.5	1.3	1.6	0.7	3.4
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Seorinarayan (EM000R6)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	3343	0.000	202.2
2	EC_FLD (μmho/cm)	10	238	148	177
3	EC_GEN (μmho/cm)	12	457	267	330
4	pH_FLD (pH units)	11	9.4	7.9	8.6
5	pH_GEN (pH units)	12	8.9	7.6	8.2
6	Temp (deg C)	11	31.6	19.4	27.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	15.9	0.0	4.3
2	ALK-TOT (mgCaCO3/L)	12	296	120	214
3	Ca (mg/L)	12	50	19	32
4	Cl (mg/L)	12	60.0	13.0	29.4
5	CO3 (mg/L)	12	19.2	0.0	5.2
6	HCO3 (mg/L)	12	181	73	125
7	K (mg/L)	12	35.0	4.0	10.4
8	Mg (mg/L)	12	22.4	5.8	14.9
9	Na (mg/L)	12	100.6	14.5	37.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	2.0	0.1	1.1
2	DO (mg/L)	12	9.1	4.7	6.7
3	DO_SAT% (%)	11	110	60	83
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	124	48	79
2	HAR_Total (mgCaCO3/L)	12	213	85	142
3	Na% (%)	12	52	16	33
4	RSC (-)	12	0.4	0.0	0
5	SAR (-)	12	3.4	0.5	1.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2015-2016

Station Name : Seorinarayan (EM000R6)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

River Water

S.No	Parameters	Flood Jun - Oct 2015	Winter Nov - Feb 2015-2016	Summer Mar - May 2016
	PHYSICAL			
1	Q (cumec)	266.9	53.10	0.859
2	EC_FLD (µmho/cm)	160	165	210
3	EC_GEN (µmho/cm)	281	339	402
4	pH_FLD (pH units)	8.1	8.6	9.2
5	pH_GEN (pH units)	8.0	8.3	8.5
6	Temp (deg C)	30.0	23.2	28.7
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	6.8	1.5	4.0
2	ALK-TOT (mgCaCO3/L)	205	236	200
3	Ca (mg/L)	32	32	32
4	Cl (mg/L)	24.0	28.3	40.0
5	CO3 (mg/L)	8.2	1.8	4.8
6	HCO3 (mg/L)	117	142	117
7	K (mg/L)	8.2	8.1	17.0
8	Mg (mg/L)	10.7	17.7	18.1
9	Na (mg/L)	28.4	34.5	54.9
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.9	1.4	1.0
2	DO (mg/L)	6.1	8.2	5.9
3	DO_SAT% (%)	76	95	76
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	79	80	79
2	HAR_Total (mgCaCO3/L)	124	154	154
3	Na% (%)	31	32	37
4	RSC (-)	0.1	0.0	0.0
5	SAR (-)	1.2	1.2	1.9
	PESTICIDES			

SITE BASANTPUR

HISTORY SHEET

Water Year : 2015-2016

Site : Basantpur

Code : EM000R2

State : Chhattisgarh

District : Janjgir-champa

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Mahanadi

Sub Tributary :

Sub-Sub Tributary :

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Drainage Area : 57780 Sq. Km.

Bank :

Latitude : 21°43'18"

Longitude : 82°47'27"

Zero of Gauge (m) : 206 (m.s.l)

1/1/1971 - 12/31/2025

Opening Date

Closing Date

Gauge : 2/1/1971

Discharge : 5/11/1971

Sediment : 9/1/1972

Water Quality : 9/1/1972

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1971-1972	17875	202.630	7/29/1971	3.500	208.205	5/21/1972
1972-1973	9552	215.292	9/13/1972	1.900	208.270	5/29/1973
1973-1974	15431	216.380	7/15/1973	1.900	208.265	6/1/1973
1974-1975	15388	216.400	8/18/1974	0.965	207.850	5/22/1975
1975-1976	21162	216.870	8/21/1975	1.227	207.875	6/17/1975
1976-1977	26191	218.020	8/15/1976	2.000	208.110	6/23/1976
1977-1978	14631	216.500	8/8/1977	4.326	208.460	6/10/1977
1978-1979	17665	217.190	8/29/1978	4.308	208.480	6/7/1978
1979-1980	12516	216.250	8/10/1979	1.428	208.375	5/30/1980
1980-1981	26874	219.320	9/20/1980	1.430	208.360	6/3/1980
1981-1982	12309	215.580	8/23/1981	6.860	208.145	6/1/1981
1982-1983	9624	215.450	8/31/1982	6.500	208.265	5/8/1983
1983-1984	8366	214.670	9/9/1983	5.000	208.405	6/12/1983
1984-1985	10075	215.575	8/10/1984	5.800	208.460	5/31/1985
1985-1986	11094	215.680	9/13/1985	5.200	208.440	6/1/1985
1986-1987	18512	217.670	6/28/1986	6.500	208.760	6/9/1986
1987-1988	8568	213.900	9/15/1987	7.000	208.455	6/7/1987
1988-1989	6001	213.785	8/5/1988	2.920	208.470	5/31/1989
1989-1990	2441	212.150	7/4/1989	2.800	208.475	6/5/1989
1990-1991	14915	216.970	9/15/1990	39.76	208.760	5/25/1991
1991-1992	14236	216.420	8/24/1991	4.000	208.605	5/31/1992
1992-1993	17201	217.190	8/22/1992	3.810	208.595	6/1/1992

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1993-1994	11006	215.400	8/21/1993	9.444	208.530	6/4/1993
1994-1995	17661	218.230	7/11/1994	31.40	208.760	4/14/1995
1995-1996	15619	217.040	7/25/1995	23.50	208.655	5/22/1996
1996-1997	6300	214.080	8/3/1996	14.61	208.570	5/18/1997
1997-1998	12324	216.540	8/23/1997	17.55	208.630	6/10/1997
1998-1999	8789	215.200	9/15/1998	29.09	208.540	5/10/1999
1999-2000	7234	214.200	8/10/1999	28.19	208.740	5/13/2000
2000-2001	5134	213.170	7/21/2000	26.02	208.765	3/7/2001
2001-2002	15685	216.890	7/10/2001	25.52	208.740	6/11/2001
2002-2003	3402	212.690	9/12/2002	15.00	208.700	5/4/2003
2003-2004	33088	219.310	8/30/2003	9.000	208.600	6/15/2003
2004-2005	7891	214.780	8/24/2004	23.69	208.590	5/6/2005
2005-2006	11521	216.300	9/15/2005	23.83	208.415	5/10/2006
2006-2007	14920	217.015	8/14/2006	28.00	208.560	6/4/2006
2007-2008	12200	216.450	7/1/2007	7.760	208.600	5/19/2008
2008-2009	16827	217.540	9/20/2008	7.657	208.445	6/4/2008
2009-2010	16117	216.985	7/22/2009	2.630	208.610	4/26/2010
2010-2011	9138	214.580	9/9/2010	3.450	208.580	6/1/2010
2011-2012	23366	219.050	9/9/2011	2.267	208.070	5/29/2012
2012-2013	8825	215.920	8/5/2012	2.285	208.050	6/13/2012
2013-2014	12021	216.050	8/1/2013	3.837	207.930	6/4/2013
2014-2015	19935	218.150	8/6/2014	9.127	207.970	6/6/2014

Stage-Discharge Data for the period 2015 - 2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	208.370	49.24	208.945	428.1	208.945	434.9	209.820	1168	209.040	539.2	208.610	190.0 *
2	208.370	51.72	208.980	445.4	208.835	381.6 *	209.950	1214	209.000	500.0 *	208.600	177.8
3	208.380	51.25	208.940	420.2	208.800	364.6	209.950	1221	208.965	446.7	208.540	100.9
4	208.420	58.71	208.920	400.7	210.500	1899	209.970	1181	208.910	314.0 *	208.530	100.4
5	208.320	38.12	209.030	480.0	210.570	1972	209.620	954.2	208.910	314.6	208.500	93.54
6	208.310	35.58	209.110	507.8	210.065	1284	209.360	707.8 *	208.880	316.0	208.480	88.76
7	208.350	41.76 *	209.110	489.9	209.670	1005	209.170	529.7	208.880	317.3	208.500	94.72
8	208.350	41.76	208.900	389.7	209.370	796.8	209.030	501.3	208.840	300.0	208.500	94.70 *
9	208.310	35.92	208.905	393.6	209.225	757.6 *	208.930	437.7	208.875	315.0	208.490	91.01
10	208.320	37.72	209.010	453.0	209.030	503.4	208.850	390.4	208.840	273.7	208.500	96.42
11	208.320	37.57	209.250	710.7	209.030	500.8	208.810	365.5	208.810	272.0 *	208.480	88.75 *
12	208.360	44.11	209.800	1100	209.080	526.8	208.780	307.2	208.790	257.9	208.460	83.44
13	208.370	44.18	209.860	1144	209.120	539.4	208.760	305.3 *	208.840	261.8	208.440	78.94
14	208.470	80.19 *	209.580	927.8	209.350	775.5	208.710	298.9	208.770	243.4	208.480	84.89
15	208.530	100.7	209.390	800.3	209.570	925.9 *	208.700	296.7	208.750	234.5	208.450	83.00 *
16	208.520	96.03	209.470	844.3	209.710	1022 *	208.705	297.7	208.775	244.1	208.390	54.75
17	208.520	98.24	209.380	793.3	209.750	1049	208.750	335.4 *	208.780	246.7	208.380	53.66
18	208.540	102.5	209.250	630.0 *	211.680	3399	210.400	1707	208.770	241.4 *	208.390	54.44
20	208.545	105.0	209.260	634.9	210.045	1275	211.170	2698 *	208.780	246.8	208.370	50.33
21	208.520	95.82 *	209.235	618.4	209.670	1004	210.850	2026	208.790	248.9	208.370	50.16
22	208.570	107.9	209.100	494.3	209.445	801.6	212.800	4282	208.775	245.0 *	208.410	56.10 *
23	208.730	321.5	209.145	515.8	209.260	780.0 *	212.420	3738	208.770	250.3	208.360	50.11
24	209.400	771.6	209.655	987.8	209.110	537.7	211.380	2579 *	208.750	234.5 *	208.350	48.17
25	209.890	1197	210.540	1940	208.970	445.5	210.620	1923 *	208.730	233.0 *	208.380	52.65 *
26	209.570	897.4	210.410	1800 *	208.890	414.0	210.070	1379	208.705	205.0	208.380	52.66
27	209.240	703.9	209.950	1222	208.850	330.8	209.660	1026 *	208.660	196.4	208.365	49.42
28	209.080	500.0 *	209.585	932.2	209.015	451.3	209.410	726.0	208.660	191.8	208.370	51.66
29	208.970	444.5	209.270	642.3	209.410	786.7	209.273	649.8	208.620	184.3	208.440	70.00 *
30	208.950	457.4	209.080	485.2	209.770	1060 *	209.130	603.6	208.610	180.8	208.370	51.86
31			208.975	444.9	209.810	1153			208.610	180.8		
Ten-Daily Mean												
I Ten-Daily	208.350	44.18	208.985	440.8	209.501	939.8	209.465	830.5	208.914	363.6	208.525	112.8
II Ten-Daily	208.471	80.76	209.457	837.8	209.818	1204	209.473	994.3	208.783	249.0	208.424	68.83
III Ten-Daily	209.092	549.8	209.540	916.6	209.291	705.9	210.561	1893	208.698	213.7	208.379	53.28
Monthly												
Min.	208.310	35.58	208.900	389.7	208.800	330.8	208.700	296.7	208.610	180.8	208.350	48.17
Max.	209.890	1197	210.540	1940	211.680	3399	212.800	4282	209.040	539.2	208.610	190.0
Mean	208.637	224.9	209.334	737.7	209.529	942	209.833	1239	208.795	273.5	208.443	78.31

Annual Runoff in MCM = 9452 Annual Runoff in mm = 164

Peak Observed Discharge = 4282 cumecs on 22/09/2015 Corres. Water Level :212.8 m

Lowest Observed Discharge = 1.267 cumecs on 05/05/2016 Corres. Water Level :207.5 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	208.350	48.26	208.180	28.39	207.950	19.70	207.880	14.34	207.680	5.300	207.570	3.000 *
2	208.310	42.90	208.150	22.96	207.930	18.36	207.830	13.56	207.680	5.054	207.540	1.872
3	208.295	39.02	208.160	23.50 *	207.900	16.66	207.875	14.20	207.740	7.200 *	207.545	1.872
4	208.305	40.07	208.170	26.69	207.895	16.44	207.890	14.70	207.750	7.286	207.520	1.668
5	208.310	42.87	208.125	18.31	207.890	15.84	207.825	12.50	207.780	9.950	207.500	1.267
6	208.300	39.00 *	208.165	25.19	207.905	17.17	207.820	12.30 *	207.775	9.613	207.515	1.554
7	208.330	42.40	208.120	18.07	207.900	17.17 *	207.810	12.20 *	207.770	9.325	207.510	1.440
8	208.300	39.55	208.130	18.85	207.895	16.06	207.700	5.025	207.750	7.548	207.530	2.100 *
9	208.285	35.80	208.125	18.72	207.870	12.12	207.690	4.821	207.750	7.421	207.530	2.010
10	208.310	40.34	208.180	28.39	207.870	12.02	207.840	11.76	207.740	7.200 *	207.535	2.168
11	208.290	37.40	208.090	16.88	207.875	12.47	207.700	5.177	207.730	6.606	207.530	2.091
12	208.240	33.56	208.130	18.13	207.865	12.13	207.680	4.663	207.800	10.24	207.525	1.945
13	208.190	27.00 *	208.140	19.36	207.855	11.41	207.810	12.20 *	207.660	4.706	207.550	2.408
14	208.170	24.81	208.150	20.01	207.860	12.00 *	207.830	13.11	207.810	10.30 *	207.560	2.579
15	208.165	24.00	208.140	19.08	207.785	8.439	207.900	16.56	207.800	10.27	207.580	3.200 *
16	208.160	23.53	208.130	18.88	207.810	9.098	207.920	17.63	207.760	9.226	207.690	7.368
17	208.160	23.63	208.110	17.18	207.790	8.474	207.825	12.81	207.700	6.200 *	207.700	7.278
18	208.155	23.39	208.135	19.87	207.860	11.65	207.735	6.447	207.550	1.985	207.710	7.806
20	208.130	19.00 *	208.110	17.18	207.865	11.73	207.690	4.700 *	207.540	1.903 *	207.760	11.45
21	208.140	18.94	208.060	31.44	207.820	9.300 *	207.780	9.222	207.550	2.061	207.730	8.500 *
22	208.130	18.67	208.020	25.44	207.860	13.73	207.775	9.046	207.545	2.006	207.710	7.900 *
23	208.140	19.06	208.000	22.49	207.840	12.58	207.770	9.034	207.530	1.834	207.650	6.435
24	208.220	30.34	208.010	22.70 *	207.730	6.251	207.760	8.400 *	207.540	1.927 *	207.610	4.400
25	208.210	28.50 *	208.020	23.95	207.850	13.03	207.750	8.200 *	207.540	1.927	207.600	4.219
26	208.150	21.89	207.990	22.05 *	207.820	11.96	207.765	8.467	207.510	1.561	207.610	4.657
27	208.190	27.25 *	207.990	22.05	207.830	12.08	207.760	8.400 *	207.575	1.641	207.620	4.785
28	208.180	26.02	207.980	21.49	207.810	11.90 *	207.750	7.627	207.560	2.214	207.630	4.969
29	208.170	24.69	208.000	22.52	207.860	13.23	207.715	5.552	207.560	2.104	207.590	3.800 *
30	208.190	27.03	207.985	21.71			207.680	5.268	207.540	1.924	207.610	4.455
31	208.210	27.72	207.960	21.50 *			207.660	4.723			207.625	4.857
Ten-Daily Mean												
I Ten-Daily	208.310	41.02	208.150	22.91	207.901	16.16	207.816	11.54	207.742	7.590	207.530	1.895
II Ten-Daily	208.182	26.03	208.126	18.54	207.837	10.67	207.780	9.924	207.689	6.334	207.637	5.835
III Ten-Daily	208.175	24.56	208.001	23.39	207.824	11.56	207.742	7.631	207.545	1.920	207.635	5.362
Monthly												
Min.	208.130	18.67	207.960	16.88	207.730	6.251	207.660	4.663	207.510	1.561	207.500	1.267
Max.	208.350	48.26	208.180	31.44	207.950	19.70	207.920	17.63	207.810	10.30	207.770	12.22
Mean	208.221	30.34	208.090	21.67	207.855	12.84	207.778	9.632	207.659	5.281	207.602	4.396

Peak Computed Discharge = 2698 cumecs on 20/09/2015

Corres. Water Level :211.17 m

Lowest Computed Discharge = 1.903 cumecs on 20/04/2016

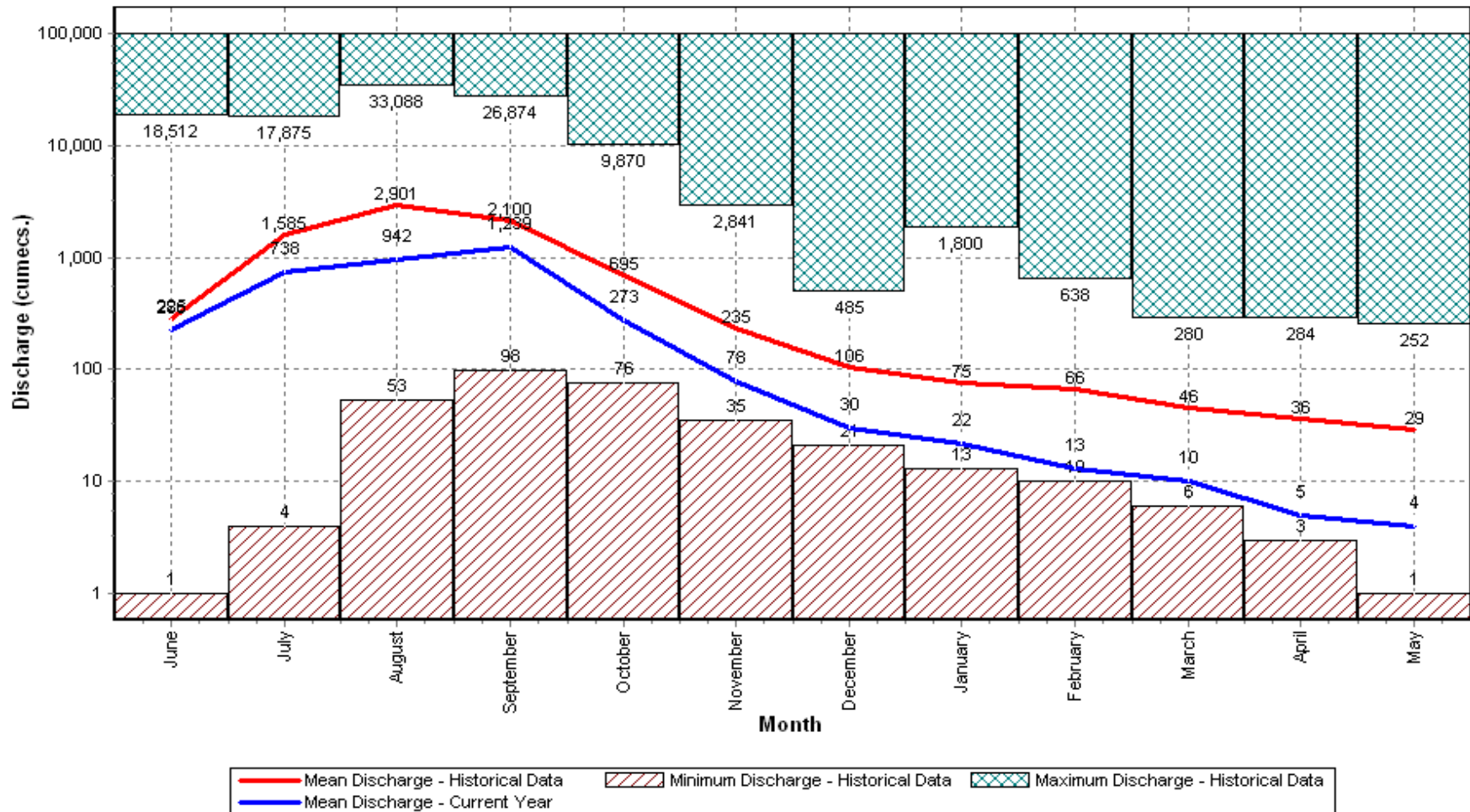
Corres. Water Level :207.54 m

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

Station Name : Basantpur (EM000R2)
Local River : Mahanadi

Data considered : 1971-2016

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



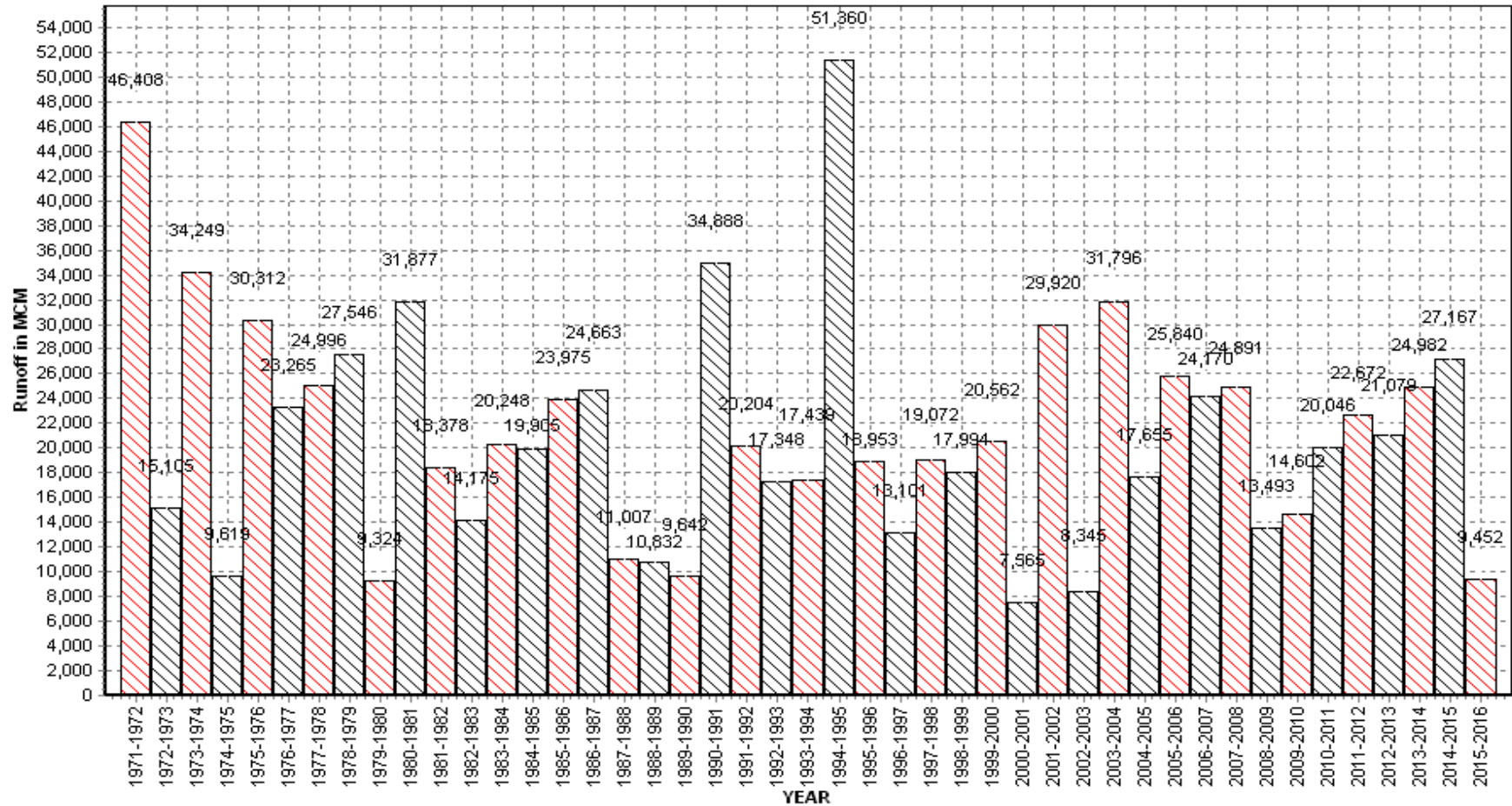
Annual Runoff Values for the period: 1971 - 2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

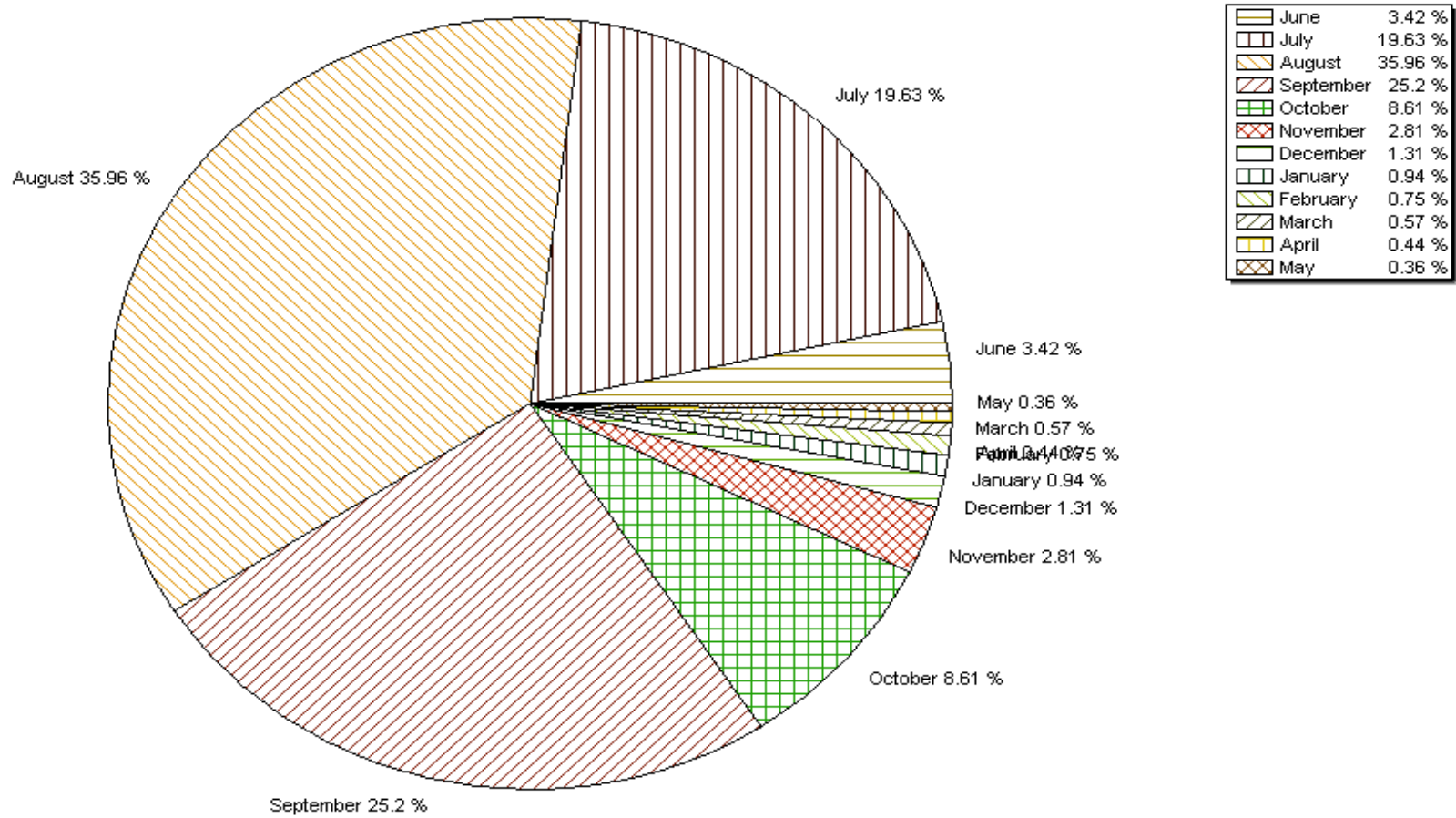


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1971-2015

Station Name : Basantpur (EM000R2)
Local River : Mahanadi

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



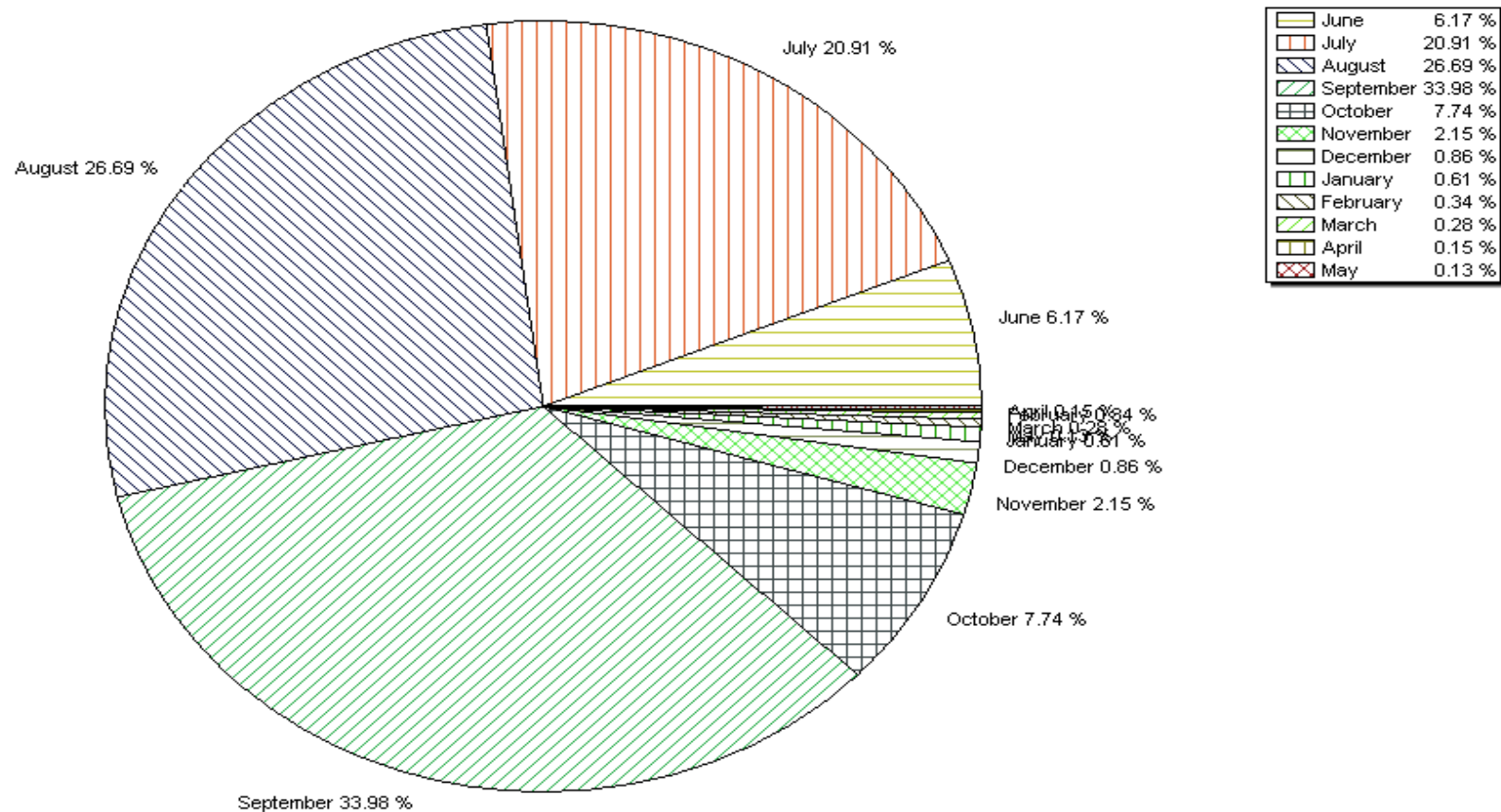
Monthly Runoff for the Year : 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

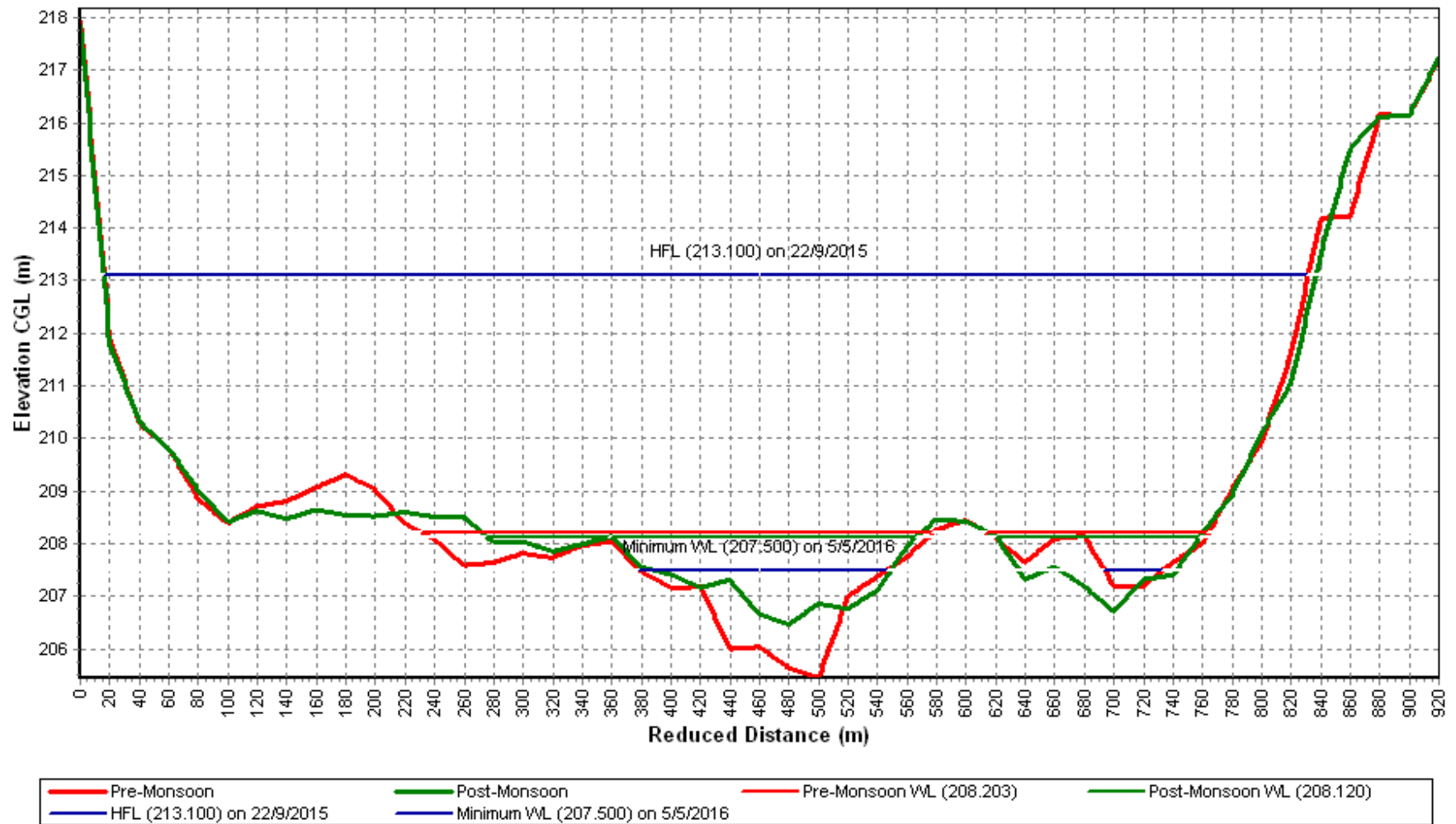
Sub-Division : MMSD I,CWC,Raipur



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Basantpur (EM000R2)
Local River : Mahanadi

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



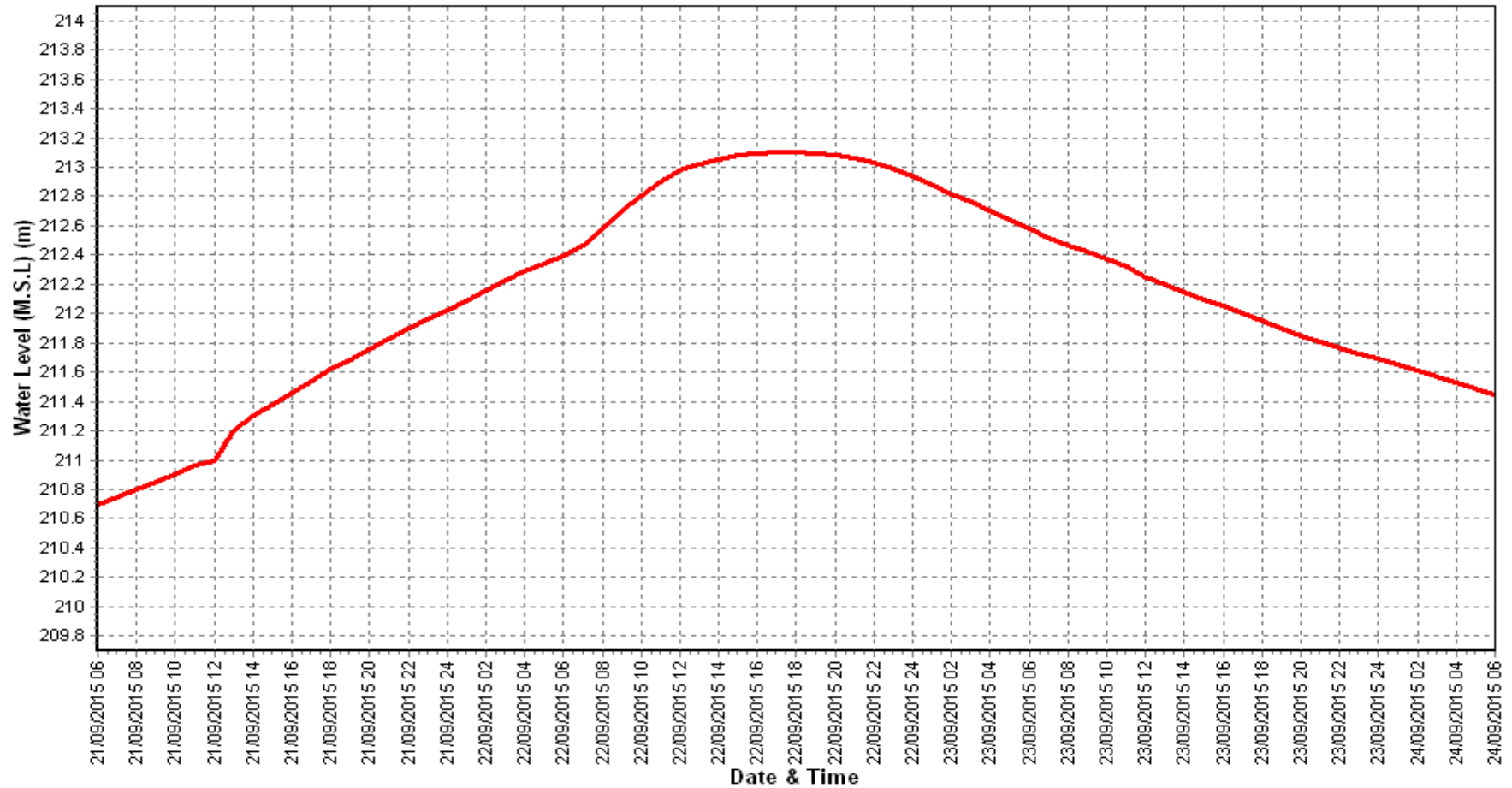
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



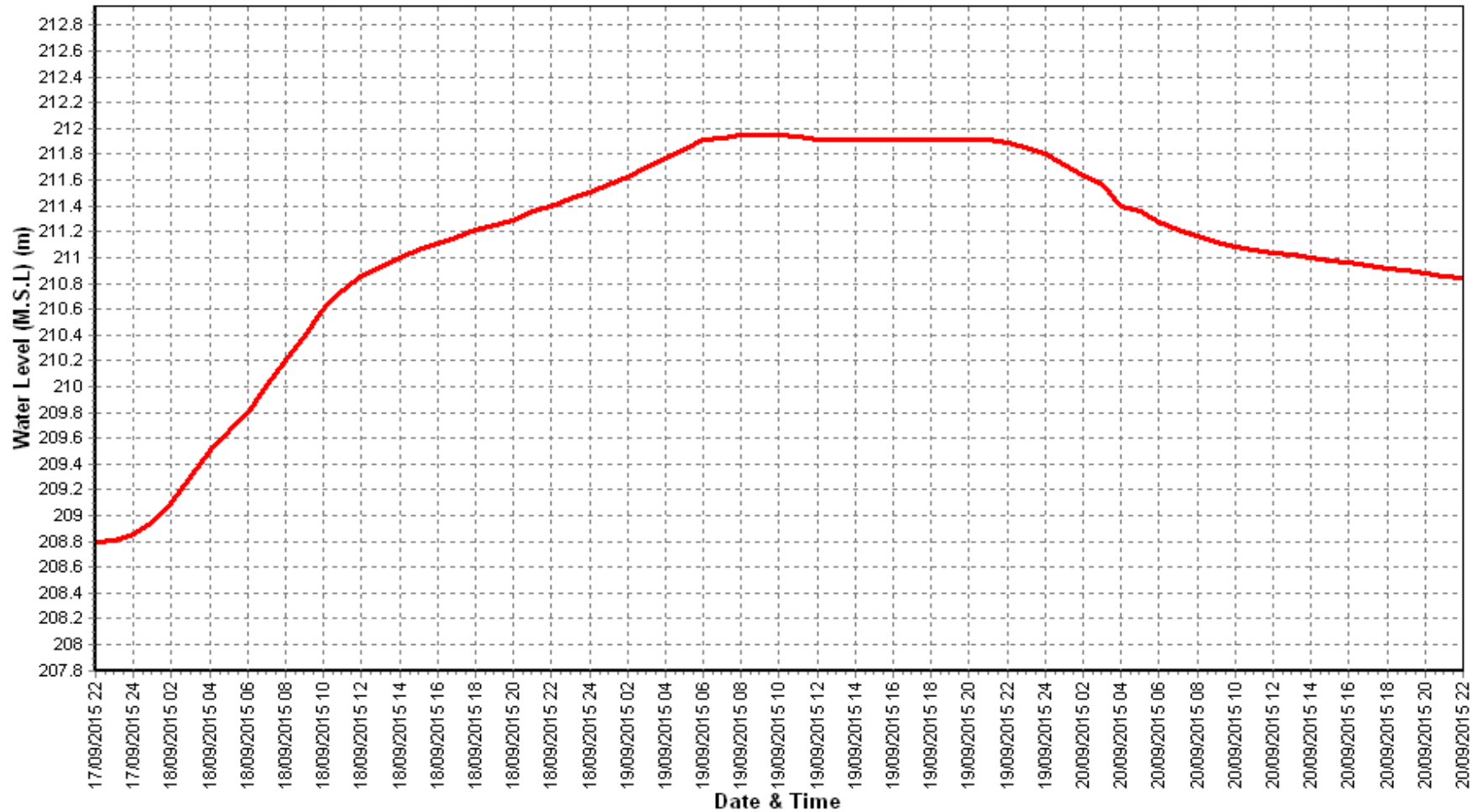
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



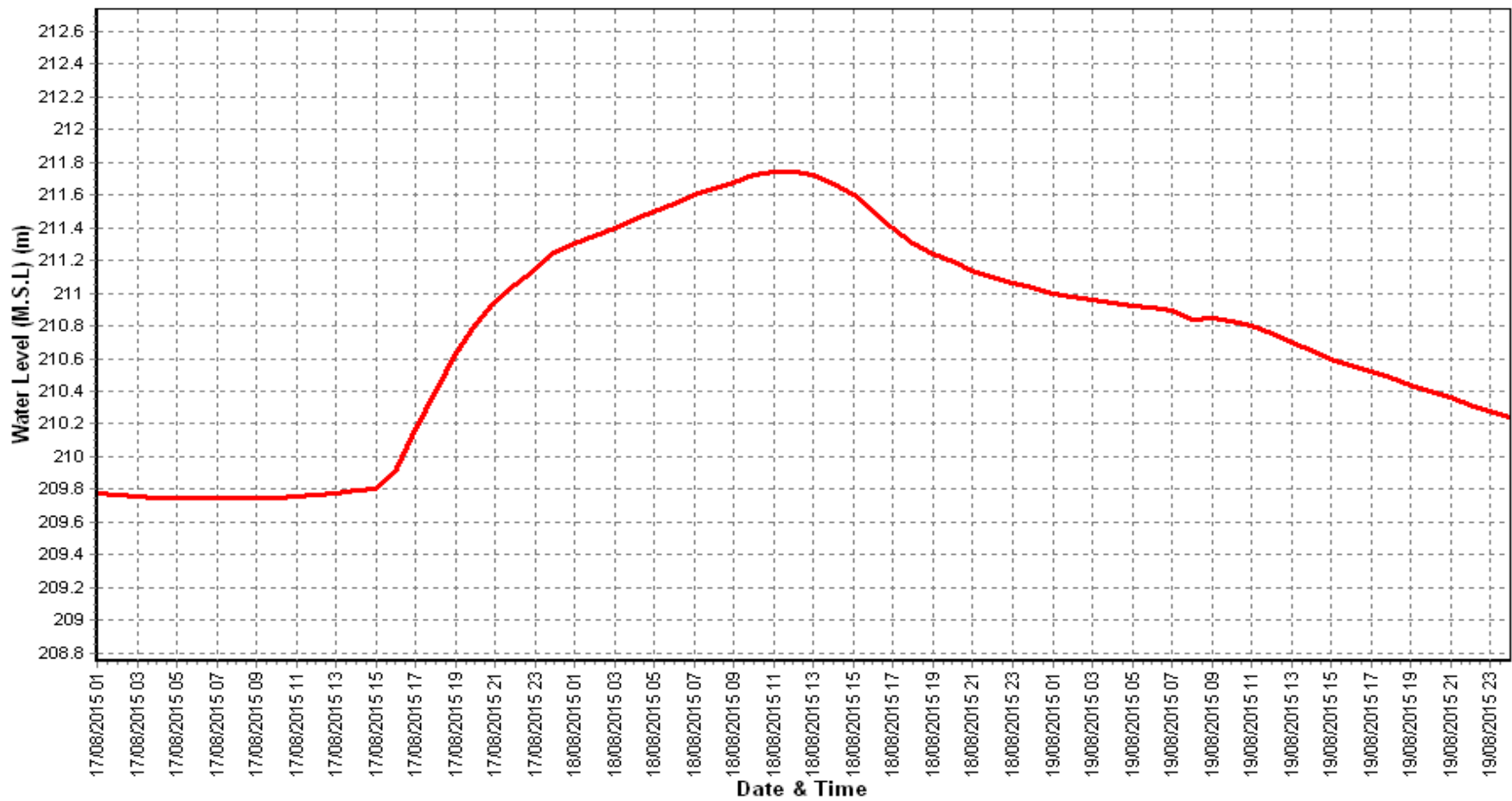
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

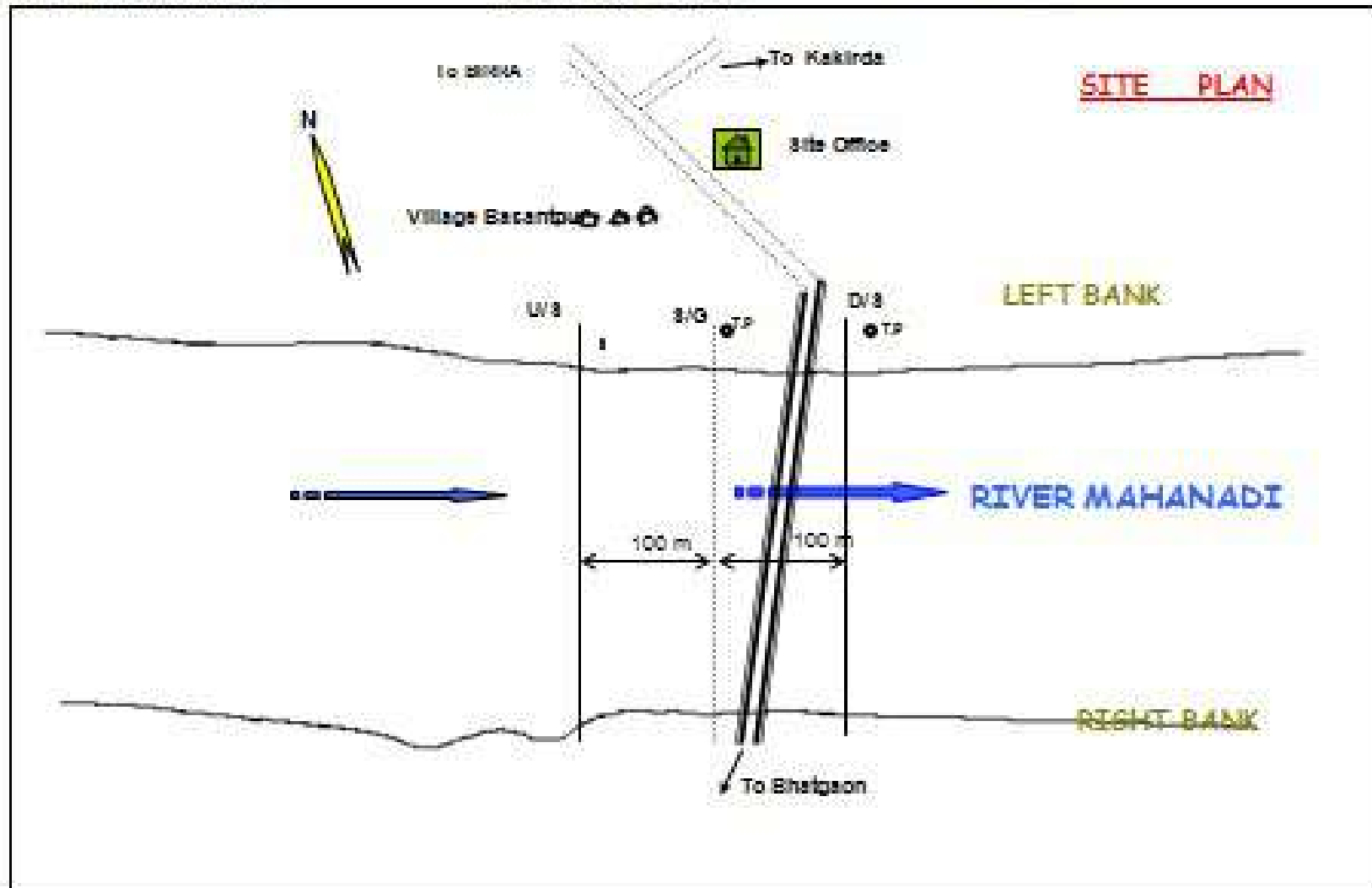


CENTRAL WATER COMMISSION, MAHANADI DIVISION, CWC BURLA

Site : BASANTPUR

Code : EM000R2

Sub-Division: MMSD-I CWC Raipur



SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	49.24	0.000	0.000	0.024	0.024	102	428.1	0.000	0.000	0.140	0.140	5179	434.9	0.000	0.000	0.105	0.105	3945
2	51.72	0.000	0.000	0.008	0.008	36	445.4	0.000	0.000	0.088	0.088	3386	381.6	0.000	0.000	0.000	0.000	0
3	51.25	0.000	0.000	0.011	0.011	49	420.2	0.000	0.000	0.040	0.040	1452	364.6	0.000	0.000	0.265	0.265	8348
4	58.71	0.000	0.000	0.023	0.023	117	400.7	0.000	0.000	0.098	0.098	3376	1899	0.000	0.000	0.188	0.188	30758
5	38.12	0.000	0.000	0.010	0.010	33	480.0	0.000	0.000	0.000	0.000	0	1972	0.000	0.000	0.290	0.290	49405
6	35.58	0.000	0.000	0.016	0.016	49	507.8	0.000	0.000	0.143	0.143	6252	1284	0.000	0.000	0.180	0.180	19963
7	41.76	0.000	0.000	0.000	0.000	0	489.9	0.000	0.000	0.178	0.178	7513	1005	0.000	0.000	0.178	0.178	15408
8	41.76	0.000	0.000	0.031	0.031	112	389.7	0.000	0.000	0.280	0.280	9428	796.8	0.000	0.000	0.135	0.135	9294
9	35.92	0.000	0.000	0.029	0.029	90	393.6	0.000	0.000	0.268	0.268	9097	757.6	0.000	0.000	0.000	0.000	0
10	37.72	0.000	0.000	0.024	0.024	78	453.0	0.000	0.000	0.128	0.128	4990	503.4	0.000	0.000	0.085	0.085	3697
11	37.57	0.000	0.000	0.033	0.033	107	710.7	0.000	0.000	0.240	0.240	14737	500.8	0.000	0.000	0.155	0.155	6706
12	44.11	0.000	0.000	0.051	0.051	194	1100	0.000	0.000	0.000	0.000	0	526.8	0.000	0.000	0.123	0.123	5575
13	44.18	0.000	0.000	0.029	0.029	111	1144	0.000	0.000	0.285	0.285	28180	539.4	0.000	0.000	0.128	0.128	5942
14	80.19	0.000	0.000	0.000	0.000	0	927.8	0.000	0.000	0.165	0.165	13227	775.5	0.000	0.000	0.145	0.145	9716
15	100.7	0.000	0.000	0.064	0.064	557	800.3	0.000	0.000	0.158	0.158	10890	925.9	0.000	0.000	0.000	0.000	0
16	96.03	0.000	0.000	0.086	0.086	714	844.3	0.000	0.000	0.265	0.265	19332	1022	0.000	0.000	0.000	0.000	0
17	98.24	0.000	0.000	0.051	0.051	433	793.3	0.000	0.000	0.158	0.158	10795	1049	0.000	0.000	0.158	0.158	14272
18	102.5	0.000	0.000	0.090	0.090	797	630.0	0.000	0.000	0.000	0.000	0	3399	0.000	0.000	0.885	0.885	259898
20	105.0	0.000	0.000	0.066	0.066	599	634.9	0.000	0.000	0.160	0.160	8777	1275	0.000	0.000	0.190	0.190	20936
21	95.82	0.000	0.000	0.000	0.000	0	618.4	0.000	0.000	0.140	0.140	7480	1004	0.000	0.000	0.160	0.160	13881
22	107.9	0.000	0.000	0.053	0.053	494	494.3	0.000	0.000	0.193	0.193	8222	801.6	0.000	0.000	0.103	0.103	7099
23	321.5	0.000	0.000	0.128	0.128	3556	515.8	0.000	0.000	0.215	0.215	9581	780.0	0.000	0.000	0.000	0.000	0
24	771.6	0.000	0.000	0.150	0.150	10000	987.8	0.000	0.000	0.253	0.253	21551	537.7	0.000	0.000	0.103	0.103	4762
25	1197	0.000	0.000	0.108	0.108	11174	1940	0.000	0.000	0.333	0.333	55720	445.5	0.000	0.000	0.125	0.125	4812
26	897.4	0.000	0.000	0.078	0.078	6048	1800	0.000	0.000	0.000	0.000	0	414.0	0.000	0.000	0.088	0.088	3130
27	703.9	0.000	0.000	0.055	0.055	3345	1222	0.000	0.000	0.213	0.213	22444	330.8	0.000	0.000	0.113	0.113	3216
28	500.0	0.000	0.000	0.000	0.000	0	932.2	0.000	0.000	0.125	0.125	10068	451.3	0.000	0.000	0.090	0.090	3509
29	444.5	0.000	0.000	0.058	0.058	2228	642.3	0.000	0.000	0.128	0.128	7075	786.7	0.000	0.000	0.095	0.095	6457
30	457.4	0.000	0.000	0.060	0.060	2371	485.2	0.000	0.000	0.125	0.125	5240	1060	0.000	0.000	0.000	0.000	0
31							444.9	0.000	0.000	0.123	0.123	4709	1153	0.000	0.000	0.085	0.085	8467
Ten Daily Mean																		
Ten Daily I	44.18	0.000	0.000	0.018	0.018	67	440.8	0.000	0.000	0.136	0.136	5067	939.8	0.000	0.000	0.143	0.143	14082
Ten Daily II	80.76	0.000	0.000	0.055	0.055	417	837.8	0.000	0.000	0.143	0.143	10594	1204	0.000	0.000	0.201	0.201	36331
Ten Daily III	549.8	0.000	0.000	0.069	0.069	3922	916.6	0.000	0.000	0.168	0.168	13826	705.9	0.000	0.000	0.087	0.087	5030
Monthly																		
Total						44052						308700						559461

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	1168	0.000	0.000	0.138	0.138	13872	539.2	0.000	0.000	0.085	0.085	3960	190.0	0.000	0.000	0.000	0.000	0
2	1214	0.000	0.000	0.130	0.130	13638	500.0	0.000	0.000	0.000	0.000	0	177.8	0.000	0.000	0.014	0.014	215
3	1221	0.000	0.000	0.115	0.115	12134	446.7	0.000	0.000	0.060	0.060	2316	100.9	0.000	0.000	0.000	0.000	0
4	1181	0.000	0.000	0.133	0.133	13523	314.0	0.000	0.000	0.000	0.000	0	100.4	0.000	0.000	0.000	0.000	0
5	954.2	0.000	0.000	0.133	0.133	10924	314.6	0.000	0.000	0.085	0.085	2311	93.54	0.000	0.000	0.000	0.000	0
6	707.8	0.000	0.000	0.000	0.000	0	316.0	0.000	0.000	0.075	0.075	2048	88.76	0.000	0.000	0.000	0.000	0
7	529.7	0.000	0.000	0.110	0.110	5034	317.3	0.000	0.000	0.040	0.040	1096	94.72	0.000	0.000	0.000	0.000	0
8	501.3	0.000	0.000	0.123	0.123	5306	300.0	0.000	0.000	0.063	0.063	1620	94.70	0.000	0.000	0.000	0.000	0
9	437.7	0.000	0.000	0.095	0.095	3593	315.0	0.000	0.000	0.058	0.058	1565	91.01	0.000	0.000	0.022	0.022	171
10	390.4	0.000	0.000	0.073	0.073	2446	273.7	0.000	0.000	0.030	0.030	709	96.42	0.000	0.000	0.000	0.000	0
11	365.5	0.000	0.000	0.098	0.098	3079	272.0	0.000	0.000	0.000	0.000	0	88.75	0.000	0.000	0.000	0.000	0
12	307.2	0.000	0.000	0.125	0.125	3317	257.9	0.000	0.000	0.060	0.060	1337	83.44	0.000	0.000	0.000	0.000	0
13	305.3	0.000	0.000	0.000	0.000	0	261.8	0.000	0.000	0.068	0.068	1527	78.94	0.000	0.000	0.000	0.000	0
14	298.9	0.000	0.000	0.083	0.083	2131	243.4	0.000	0.000	0.058	0.058	1209	84.89	0.000	0.000	0.000	0.000	0
15	296.7	0.000	0.000	0.115	0.115	2948	234.5	0.000	0.000	0.065	0.065	1317	83.00	0.000	0.000	0.000	0.000	0
16	297.7	0.000	0.000	0.095	0.095	2443	244.1	0.000	0.000	0.083	0.083	1740	54.75	0.000	0.000	0.020	0.020	94
17	335.4	0.000	0.000	0.000	0.000	0	246.7	0.000	0.000	0.045	0.045	959	53.66	0.000	0.000	0.000	0.000	0
18	1707	0.000	0.000	0.195	0.195	28764	241.4	0.000	0.000	0.000	0.000	0	54.44	0.000	0.000	0.000	0.000	0
20	2698	0.000	0.000	0.000	0.000	0	246.8	0.000	0.000	0.058	0.058	1226	50.33	0.000	0.000	0.000	0.000	0
21	2026	0.000	0.000	0.035	0.035	6127	248.9	0.000	0.000	0.040	0.040	860	50.16	0.000	0.000	0.000	0.000	0
22	4282	0.000	0.000	0.090	0.090	33293	245.0	0.000	0.000	0.000	0.000	0	56.10	0.000	0.000	0.000	0.000	0
23	3738	0.000	0.000	0.095	0.095	30680	250.3	0.000	0.000	0.055	0.055	1189	50.11	0.000	0.000	0.022	0.022	97
24	2579	0.000	0.000	0.268	0.268	59611	234.5	0.000	0.000	0.000	0.000	0	48.17	0.000	0.000	0.000	0.000	0
25	1923	0.000	0.000	0.000	0.000	0	233.0	0.000	0.000	0.000	0.000	0	52.65	0.000	0.000	0.000	0.000	0
26	1379	0.000	0.000	0.120	0.120	14301	205.0	0.000	0.000	0.058	0.058	1019	52.66	0.000	0.000	0.000	0.000	0
27	1026	0.000	0.000	0.000	0.000	0	196.4	0.000	0.000	0.140	0.140	2376	49.42	0.000	0.000	0.000	0.000	0
28	726.0	0.000	0.000	0.115	0.115	7213	191.8	0.000	0.000	0.110	0.110	1823	51.66	0.000	0.000	0.000	0.000	0
29	649.8	0.000	0.000	0.775	0.775	43514	184.3	0.000	0.000	0.030	0.030	478	70.00	0.000	0.000	0.000	0.000	0
30	603.6	0.000	0.000	0.975	0.975	50845	180.8	0.000	0.000	0.058	0.058	898	51.86	0.000	0.000	0.010	0.010	46
31							180.8	0.000	0.000	0.028	0.028	430						
Ten Daily Mean																		
Ten Daily I	830.5	0.000	0.000	0.105	0.105	8047	363.6	0.000	0.000	0.050	0.050	1562	112.8	0.000	0.000	0.004	0.004	39
Ten Daily II	994.3	0.000	0.000	0.079	0.079	6657	249.0	0.000	0.000	0.055	0.055	1171	68.83	0.000	0.000	0.002	0.002	9
Ten Daily III	1893	0.000	0.000	0.247	0.247	24558	213.7	0.000	0.000	0.047	0.047	825	53.28	0.000	0.000	0.003	0.003	14
Monthly																		
Total						392622						36410						622

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	48.26	0.000	0.000	0.000	0.000	0	28.39	0.000	0.000	0.000	0.000	0	19.70	0.000	0.000	0.025	0.025	42
2	42.90	0.000	0.000	0.000	0.000	0	22.96	0.000	0.000	0.000	0.000	0	18.36	0.000	0.000	0.000	0.000	0
3	39.02	0.000	0.000	0.000	0.000	0	23.50	0.000	0.000	0.000	0.000	0	16.66	0.000	0.000	0.000	0.000	0
4	40.07	0.000	0.000	0.000	0.000	0	26.69	0.000	0.000	0.028	0.028	65	16.44	0.000	0.000	0.000	0.000	0
5	42.87	0.000	0.000	0.000	0.000	0	18.31	0.000	0.000	0.000	0.000	0	15.84	0.000	0.000	0.000	0.000	0
6	39.00	0.000	0.000	0.000	0.000	0	25.19	0.000	0.000	0.000	0.000	0	17.17	0.000	0.000	0.000	0.000	0
7	42.40	0.000	0.000	0.018	0.018	64	18.07	0.000	0.000	0.000	0.000	0	17.17	0.000	0.000	0.000	0.000	0
8	39.55	0.000	0.000	0.000	0.000	0	18.85	0.000	0.000	0.000	0.000	0	16.06	0.000	0.000	0.032	0.032	44
9	35.80	0.000	0.000	0.000	0.000	0	18.72	0.000	0.000	0.000	0.000	0	12.12	0.000	0.000	0.000	0.000	0
10	40.34	0.000	0.000	0.000	0.000	0	28.39	0.000	0.000	0.000	0.000	0	12.02	0.000	0.000	0.000	0.000	0
11	37.40	0.000	0.000	0.000	0.000	0	16.88	0.000	0.000	0.020	0.020	29	12.47	0.000	0.000	0.000	0.000	0
12	33.56	0.000	0.000	0.000	0.000	0	18.13	0.000	0.000	0.000	0.000	0	12.13	0.000	0.000	0.000	0.000	0
13	27.00	0.000	0.000	0.000	0.000	0	19.36	0.000	0.000	0.000	0.000	0	11.41	0.000	0.000	0.000	0.000	0
14	24.81	0.000	0.000	0.029	0.029	63	20.01	0.000	0.000	0.000	0.000	0	12.00	0.000	0.000	0.000	0.000	0
15	24.00	0.000	0.000	0.000	0.000	0	19.08	0.000	0.000	0.000	0.000	0	8.439	0.000	0.000	0.029	0.029	21
16	23.53	0.000	0.000	0.000	0.000	0	18.88	0.000	0.000	0.000	0.000	0	9.098	0.000	0.000	0.000	0.000	0
17	23.63	0.000	0.000	0.000	0.000	0	17.18	0.000	0.000	0.000	0.000	0	8.474	0.000	0.000	0.000	0.000	0
18	23.39	0.000	0.000	0.000	0.000	0	19.87	0.000	0.000	0.015	0.015	26	11.65	0.000	0.000	0.000	0.000	0
20	19.00	0.000	0.000	0.000	0.000	0	17.18	0.000	0.000	0.000	0.000	0	11.73	0.000	0.000	0.000	0.000	0
21	18.94	0.000	0.000	0.032	0.032	52	31.44	0.000	0.000	0.000	0.000	0	9.300	0.000	0.000	0.000	0.000	0
22	18.67	0.000	0.000	0.000	0.000	0	25.44	0.000	0.000	0.000	0.000	0	13.73	0.000	0.000	0.024	0.024	28
23	19.06	0.000	0.000	0.000	0.000	0	22.49	0.000	0.000	0.000	0.000	0	12.58	0.000	0.000	0.000	0.000	0
24	30.34	0.000	0.000	0.000	0.000	0	22.70	0.000	0.000	0.000	0.000	0	6.251	0.000	0.000	0.000	0.000	0
25	28.50	0.000	0.000	0.000	0.000	0	23.95	0.000	0.000	0.000	0.000	0	13.03	0.000	0.000	0.000	0.000	0
26	21.89	0.000	0.000	0.000	0.000	0	22.05	0.000	0.000	0.000	0.000	0	11.96	0.000	0.000	0.000	0.000	0
27	27.25	0.000	0.000	0.000	0.000	0	22.05	0.000	0.000	0.017	0.017	32	12.08	0.000	0.000	0.000	0.000	0
28	26.02	0.000	0.000	0.034	0.034	77	21.49	0.000	0.000	0.000	0.000	0	11.90	0.000	0.000	0.000	0.000	0
29	24.69	0.000	0.000	0.000	0.000	0	22.52	0.000	0.000	0.000	0.000	0	13.23	0.000	0.000	0.021	0.021	24
30	27.03	0.000	0.000	0.000	0.000	0	21.71	0.000	0.000	0.000	0.000	0						
31	27.72	0.000	0.000	0.000	0.000	0	21.50	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	41.02	0.000	0.000	0.002	0.002	6	22.91	0.000	0.000	0.003	0.003	6	16.16	0.000	0.000	0.006	0.006	9
Ten Daily II	26.03	0.000	0.000	0.003	0.003	6	18.54	0.000	0.000	0.004	0.004	5	10.67	0.000	0.000	0.003	0.003	2
Ten Daily III	24.56	0.000	0.000	0.006	0.006	12	23.39	0.000	0.000	0.002	0.002	3	11.56	0.000	0.000	0.005	0.005	6
Monthly																		
Total						256						152						159

Annual Sediment Load (Metric Tonnes) : 1342526

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	14.34	0.000	0.000	0.000	0.000	0	5.300	0.000	0.000	0.000	0.000	0	3.000	0.000	0.000	0.000	0.000	0
2	13.56	0.000	0.000	0.000	0.000	0	5.054	0.000	0.000	0.000	0.000	0	1.872	0.000	0.000	0.000	0.000	0
3	14.20	0.000	0.000	0.000	0.000	0	7.200	0.000	0.000	0.000	0.000	0	1.872	0.000	0.000	0.000	0.000	0
4	14.70	0.000	0.000	0.000	0.000	0	7.286	0.000	0.000	0.018	0.018	11	1.668	0.000	0.000	0.000	0.000	0
5	12.50	0.000	0.000	0.000	0.000	0	9.950	0.000	0.000	0.000	0.000	0	1.267	0.000	0.000	0.000	0.000	0
6	12.30	0.000	0.000	0.000	0.000	0	9.613	0.000	0.000	0.000	0.000	0	1.554	0.000	0.000	0.000	0.000	0
7	12.20	0.000	0.000	0.000	0.000	0	9.325	0.000	0.000	0.000	0.000	0	1.440	0.000	0.000	0.000	0.000	0
8	5.025	0.000	0.000	0.000	0.000	0	7.548	0.000	0.000	0.000	0.000	0	2.100	0.000	0.000	0.000	0.000	0
9	4.821	0.000	0.000	0.000	0.000	0	7.421	0.000	0.000	0.000	0.000	0	2.010	0.000	0.000	0.000	0.000	0
10	11.76	0.000	0.000	0.000	0.000	0	7.200	0.000	0.000	0.000	0.000	0	2.168	0.000	0.000	0.000	0.000	0
11	5.177	0.000	0.000	0.000	0.000	0	6.606	0.000	0.000	0.018	0.018	10	2.091	0.000	0.000	0.000	0.000	0
12	4.663	0.000	0.000	0.000	0.000	0	10.24	0.000	0.000	0.000	0.000	0	1.945	0.000	0.000	0.000	0.000	0
13	12.20	0.000	0.000	0.000	0.000	0	4.706	0.000	0.000	0.000	0.000	0	2.408	0.000	0.000	0.000	0.000	0
14	13.11	0.000	0.000	0.020	0.020	22	10.30	0.000	0.000	0.000	0.000	0	2.579	0.000	0.000	0.000	0.000	0
15	16.56	0.000	0.000	0.000	0.000	0	10.27	0.000	0.000	0.000	0.000	0	3.200	0.000	0.000	0.000	0.000	0
16	17.63	0.000	0.000	0.000	0.000	0	9.226	0.000	0.000	0.000	0.000	0	7.368	0.000	0.000	0.018	0.018	11
17	12.81	0.000	0.000	0.000	0.000	0	6.200	0.000	0.000	0.000	0.000	0	7.278	0.000	0.000	0.000	0.000	0
18	6.447	0.000	0.000	0.000	0.000	0	1.985	0.000	0.000	0.000	0.000	0	7.806	0.000	0.000	0.000	0.000	0
20	4.700	0.000	0.000	0.000	0.000	0	1.903	0.000	0.000	0.000	0.000	0	11.45	0.000	0.000	0.000	0.000	0
21	9.222	0.000	0.000	0.019	0.019	15	2.061	0.000	0.000	0.000	0.000	0	8.500	0.000	0.000	0.000	0.000	0
22	9.046	0.000	0.000	0.000	0.000	0	2.006	0.000	0.000	0.000	0.000	0	7.900	0.000	0.000	0.000	0.000	0
23	9.034	0.000	0.000	0.000	0.000	0	1.834	0.000	0.000	0.000	0.000	0	6.435	0.000	0.000	0.016	0.016	9
24	8.400	0.000	0.000	0.000	0.000	0	1.927	0.000	0.000	0.000	0.000	0	4.400	0.000	0.000	0.000	0.000	0
25	8.200	0.000	0.000	0.000	0.000	0	1.927	0.000	0.000	0.000	0.000	0	4.219	0.000	0.000	0.000	0.000	0
26	8.467	0.000	0.000	0.000	0.000	0	1.561	0.000	0.000	0.000	0.000	0	4.657	0.000	0.000	0.000	0.000	0
27	8.400	0.000	0.000	0.000	0.000	0	1.641	0.000	0.000	0.000	0.000	0	4.785	0.000	0.000	0.000	0.000	0
28	7.627	0.000	0.000	0.019	0.019	12	2.214	0.000	0.000	0.000	0.000	0	4.969	0.000	0.000	0.000	0.000	0
29	5.552	0.000	0.000	0.000	0.000	0	2.104	0.000	0.000	0.000	0.000	0	3.800	0.000	0.000	0.000	0.000	0
30	5.268	0.000	0.000	0.000	0.000	0	1.924	0.000	0.000	0.000	0.000	0	4.455	0.000	0.000	0.000	0.000	0
31	4.723	0.000	0.000	0.000	0.000	0							4.857	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	11.54	0.000	0.000	0.000	0.000	0	7.590	0.000	0.000	0.002	0.002	1	1.895	0.000	0.000	0.000	0.000	0
Ten Daily II	9.924	0.000	0.000	0.002	0.002	2	6.334	0.000	0.000	0.002	0.002	1	5.835	0.000	0.000	0.002	0.002	1
Ten Daily III	7.631	0.000	0.000	0.003	0.003	2	1.920	0.000	0.000	0.000	0.000	0	5.362	0.000	0.000	0.001	0.001	1
Monthly																		
Total						50						22						20

Annual Sediment Load for period : 1973-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

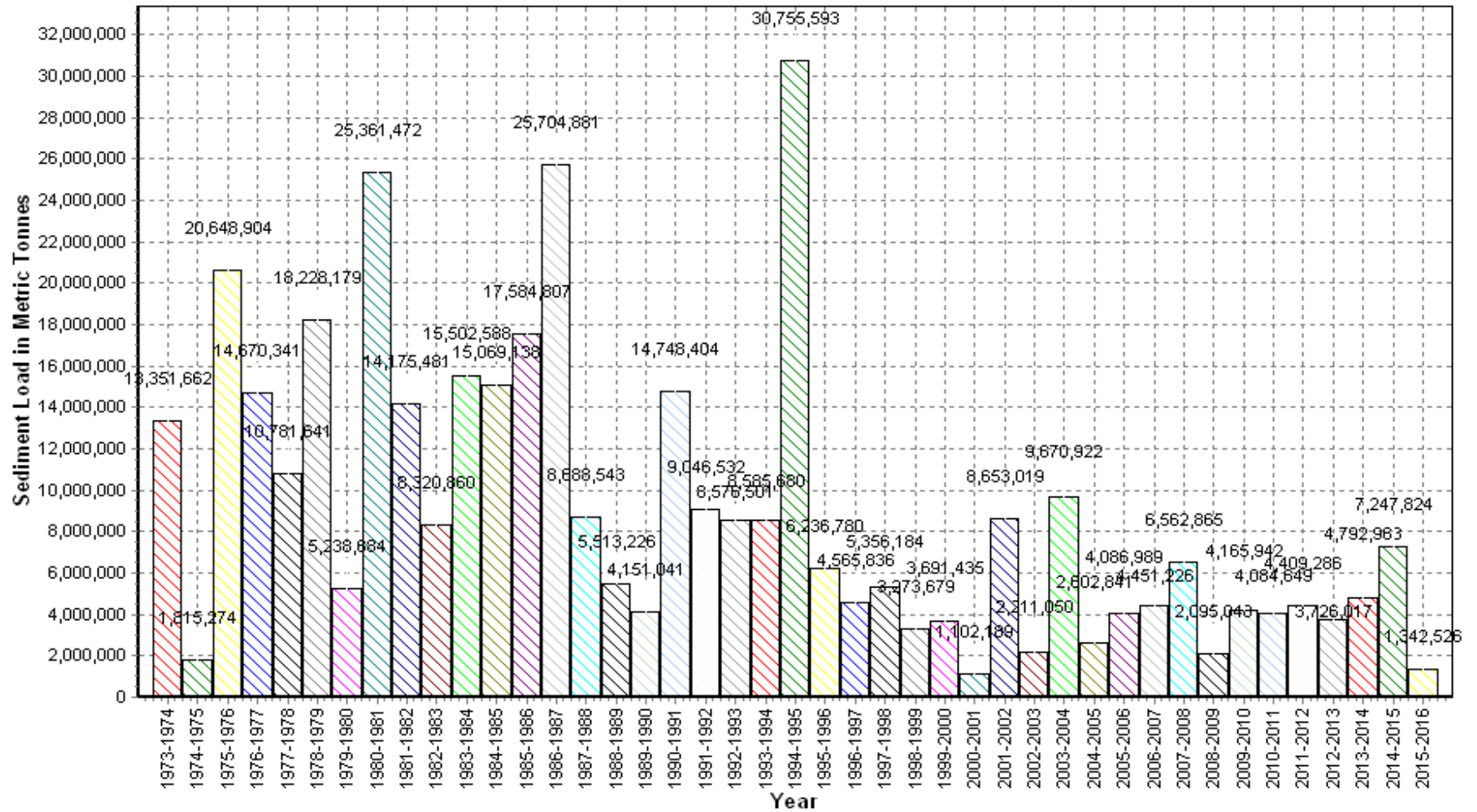
Sub-Division : MMSD I,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1973-1974	13346414	5248	13351662	34249
1974-1975	1815054	220	1815274	9619
1975-1976	20626347	22557	20648904	30312
1976-1977	14668919	1422	14670341	23265
1977-1978	10758712	22928	10781641	24996
1978-1979	18203926	24253	18228179	27546
1979-1980	5235829	2855	5238684	9324
1980-1981	25344116	17356	25361472	31877
1981-1982	14166825	8656	14175481	18378
1982-1983	8317774	3086	8320860	14175
1983-1984	15499685	2903	15502588	20248
1984-1985	15047638	21500	15069138	19905
1985-1986	17583023	1784	17584807	23975
1986-1987	25702082	2799	25704881	24663
1987-1988	8686840	1703	8688543	11007
1988-1989	5511599	1627	5513226	10832
1989-1990	4150721	320	4151041	9642
1990-1991	14745477	2927	14748404	34888
1991-1992	9045509	1023	9046532	20204
1993-1994	8583379	2301	8585680	17439
1994-1995	30691520	64073	30755593	51360
1995-1996	6223214	13565	6236780	18953
1996-1997	4562979	2856	4565836	13101
1997-1998	5348879	7305	5356184	19072
1998-1999	3271130	2549	3273679	17994
1999-2000	3685291	6144	3691435	20562
2000-2001	1100237	1951	1102189	7565
2001-2002	8644276	8743	8653019	29920
2002-2003	2203590	7460	2211050	8345
2003-2004	9661577	9345	9670922	31796
2004-2005	2597039	5801	2602841	17655
2005-2006	4084463	2526	4086989	25840
2006-2007	4446277	4949	4451226	24170
2007-2008	6560638	2227	6562865	24891
2008-2009	2093227	1813	2095040	13493
2009-2010	4165017	925	4165942	14602
2010-2011	4084649	0	4084649	20046
2011-2012	4394240	15047	4409286	22672
2012-2013	3718823	7194	3726017	21079
2013-2014	4784581	8381	4792963	24982
2014-2015	7245833	1991	7247824	27167
2015-2016	1341867	659	1342526	9452

Annual Sediment Load for the period: 1973-2016

Station Name : Basantpur (EM000R2)
Local River : Mahanadi

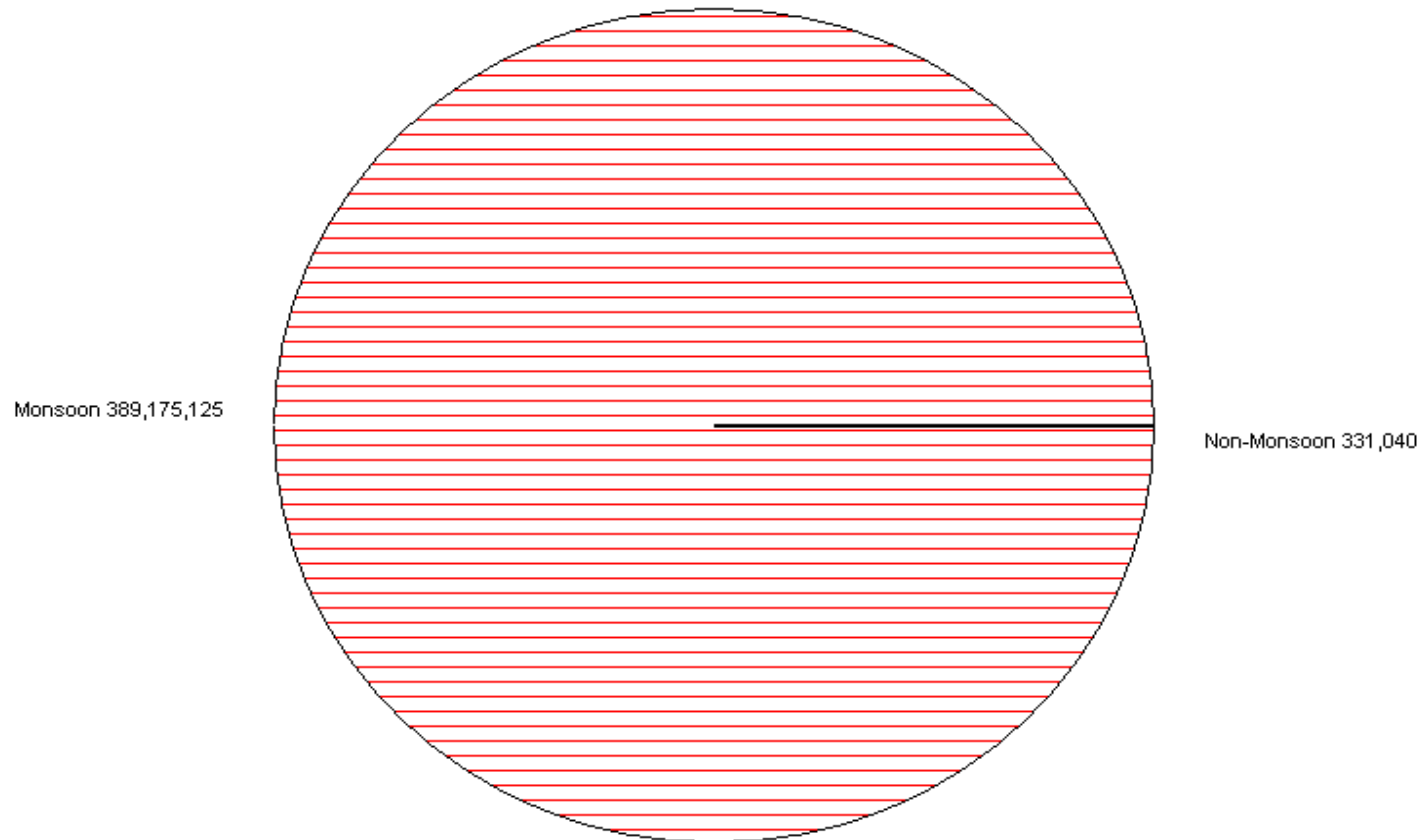
Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



Seasonal Sediment Load for the period : 1973-2015

Station Name : Basantpur (EM000R2)
Local River : Mahanadi

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



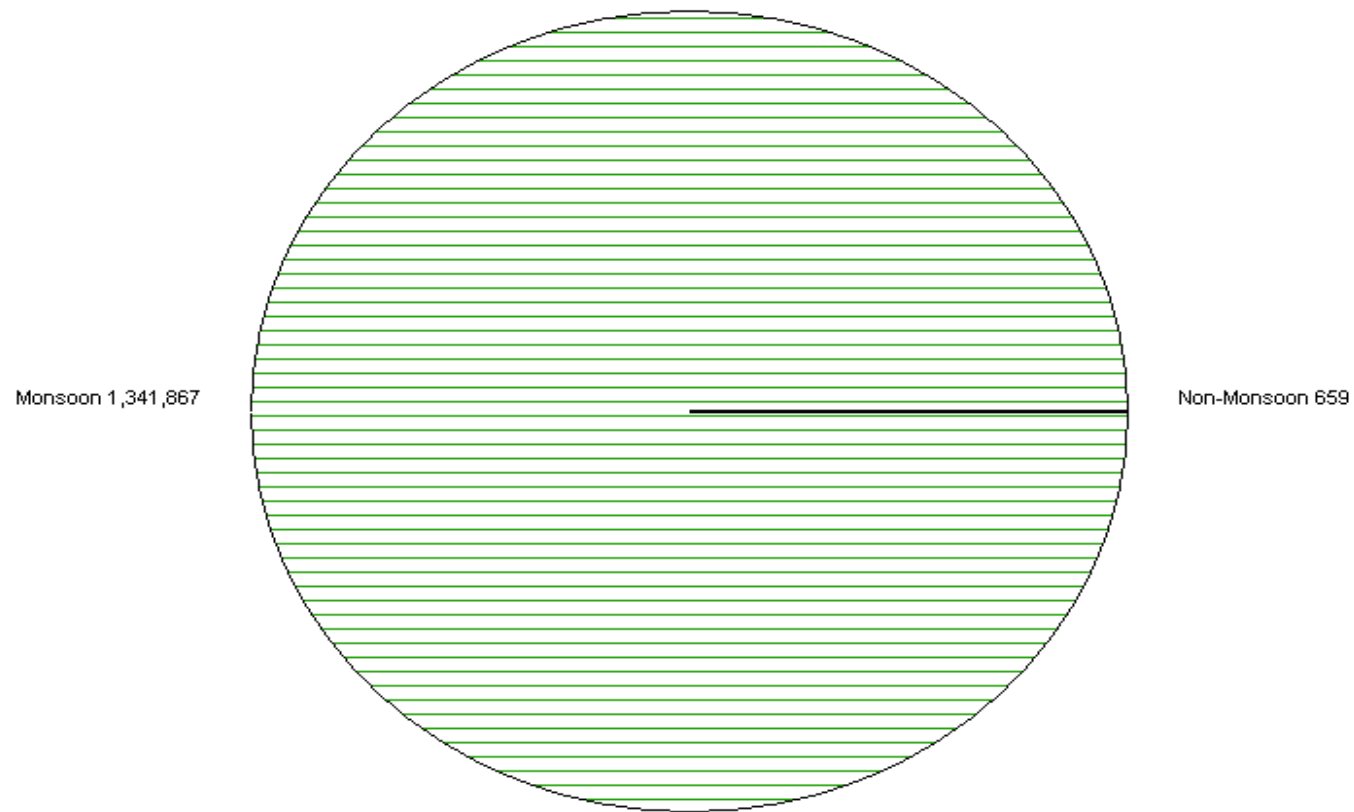
Seasonal Sediment Load for the Year: 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	49.24	428.1	434.9	1168	539.2	177.8	48.26	28.39	19.70	14.34	5.300	1.872
2	Colour_Cod (-)	Clear	Clear	Brown	Light Brown	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	640	188	384	175	187		189	183	191		277	
4	EC_GEN (μmho/cm)	161	168	207	138	193	223	229	230	225	240	314	251
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.4	7.8	8.2	7.9	8.0	8.1	7.9					
7	pH_GEN (pH units)	8.4	7.8	7.8	7.6	8.1	8.3	8.2	8.2	8.4	8.5	8.6	8.7
8	Temp (deg C)	30.1	26.6	28.1	28.2	29.8	25.8	22.8	20.0	23.5	24.2	30.6	36.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	152	144	160	157	200	120	216	188	208	188	248	236
3	Ca (mg/L)	22	19	24	14	30	37	30	24	22	29	23	35
4	Cl (mg/L)	18.0	14.0	18.0	11.0	16.0	11.0	16.0	16.0	18.0	25.0	24.0	18.0
5	CO3 (mg/L)	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	HCO3 (mg/L)	88	88	98	96	122	73	132	115	127	115	151	144
7	K (mg/L)	5.5	9.4	4.1	3.6	5.0	3.3	6.1	5.6	3.3	8.2	8.3	17.4
8	Mg (mg/L)	4.9	7.8	6.8	11.7	6.8	8.8	15.6	9.7	8.8	5.8	5.8	3.9
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.2	1.1	0.4	0.1	0.7	0.6	0.6	0.6	1.0	0.2	1.9	1.4
2	DO (mg/L)	5.5	4.6	3.5	5.7	5.6	6.4	6.6	8.1	8.2	6.7	6.5	8.1
3	DO_SAT% (%)	73	57	45	73	73	78	76	89	96	80	86	118
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	56	48	60	36	76	92	76	60	56	72	58	88
2	HAR_Total (mgCaCO3/L)	76	81	88	85	104	129	141	101	93	96	82	104
3	Na% (%)	24	22	20	19	24	14	20	28	20	33	33	40
4	RSC (-)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.8	0.3
5	SAR (-)	0.6	0.6	0.5	0.5	0.7	0.4	0.6	0.8	0.5	1.1	1.0	1.6
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Basantpur (EM000R2)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : MMSD I,CWC,Raipur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	4282	1.267	298.9
2	EC_FLD (µmho/cm)	9	640	175	268
3	EC_GEN (µmho/cm)	12	314	138	215
4	pH_FLD (pH units)	7	8.2	7.4	7.9
5	pH_GEN (pH units)	12	8.7	7.6	8.2
6	Temp (deg C)	12	36.0	20.0	27.1
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	4.0	0.0	0.3
2	ALK-TOT (mgCaCO3/L)	12	248	120	185
3	Ca (mg/L)	12	37	14	26
4	Cl (mg/L)	12	25.0	11.0	17.1
5	CO3 (mg/L)	12	4.8	0.0	0.4
6	HCO3 (mg/L)	12	151	73	112
7	K (mg/L)	12	17.4	3.3	6.7
8	Mg (mg/L)	12	15.6	3.9	8
9	Na (mg/L)	12	38.5	9.8	16.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.9	0.1	0.7
3	DO_SAT% (%)	12	118	45	79
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	92	36	65
2	HAR_Total (mgCaCO3/L)	12	141	76	98
3	Na% (%)	12	40	14	25
4	RSC (-)	12	0.8	0.0	0.1
5	SAR (-)	12	1.6	0.4	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Basantpur (EM000R2)
Local River : Mahanadi

River Water

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Flood Jun - Oct																				
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL																					
1	Q (cumec)	1412	684.1	1862	1004	2903	3379	2552	582.3	514.9	674.3	1399	1067	3170	2035	523.8	197.8	104.1	415.8	164.0	204.3	154.4
2	EC_FLD (µmho/cm)	179	170	157	168	226	159	188	172	190						315	133	170	157	300	162	167
3	EC_GEN (µmho/cm)	179	170	157	168	226	159	146	168	221	268	260	312	214	247	173	133	170	157	300	162	167
4	pH_FLD (pH units)	7.8	8.0	7.6	7.8	7.8	7.6	8.4	7.6	7.2	6.9	7.0	6.4	6.7	6.4	7.9	8.1	7.7	7.9	8.0	6.9	8.0
5	pH_GEN (pH units)	7.8	8.0	7.6	7.8	7.8	7.6	7.6	7.7	7.5	7.4	7.3	7.3	8.0	8.3	7.9	8.1	7.7	7.9	8.0	6.9	8.0
6	Temp (deg C)	27.3	28.5	28.3	32.0	30.2	28.7	28.4	28.3	27.8	27.1	29.6	28.7	27.0	29.5	28.6	18.9	19.1	22.5	23.3	24.8	20.0
	CHEMICAL																					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	2.6	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	2.8	0.8	0.6	0.0	0.0	0.6	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	127	96	152	93	127	107	115	127	156	174	181	223	186	203	163	102	97	151	190	107	117
3	B (mg/L)					0.05	0.01	0.01	0.01	0.00	0.00	0.00	0.00								0.01	0.00
4	Ca (mg/L)	17	17	18	38	16	10	13	11	15	20	20	28	23	22	22	16	17	15	18	12	13
5	Cl (mg/L)	11.2	13.4	19.2	13.3	18.2	8.6	10.5	13.1	10.7	11.8	12.8	15.9	22.8	13.8	15.4	11.6	14.3	13.7	8.0	14.1	13.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	3.2	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	3.4	1.0	0.8	0.0	0.0	0.7	0.0	0.0
7	F (mg/L)			1.43		0.30	0.05	0.09	0.10	0.14	0.16	0.19	0.23				0.30		0.98		0.08	0.08
8	Fe (mg/L)	0.2	0.2			0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1				0.3	0.2			0.1	0.0
10	K (mg/L)	2.6	2.4	1.8		3.0	1.7	2.0	2.0	3.1	3.9	4.2	2.9	7.4	14.0	5.5	2.4	2.8		1.3	2.2	1.7
11	Mg (mg/L)	5.6	4.5	5.6	5.0	5.1	5.1	5.5	7.2	9.6	10.2	10.4	16.1	6.8	10.3	7.6	1.9	4.9	4.4	11.4	5.7	7.2
12	Na (mg/L)	9.7	9.2	6.1		9.9	4.6	5.4	8.1	9.6	15.7	18.2	16.4	15.3	21.6	12.3	7.9	9.0		25.4	8.3	7.0
13	NH3-N (mg N/L)	0.14	0.07															0.09				
14	NO2+NO3 (mg N/L)	0.85	0.79		0.10	0.06	0.06	0.07	0.32								0.44	0.62		0.25	0.07	0.04
15	NO2-N (mgN/L)					0.00	0.01	0.01	0.03	0.01	0.02	0.02	0.05								0.00	0.00
16	NO3-N (mgN/L)					0.06	0.05	0.06	0.29												0.06	0.03
17	o-PO4-P (mg P/L)								0.080													
18	P-Tot (mgP/L)			0.020		0.013	0.009	0.010	0.034	0.036	0.026	0.054	0.118						0.010	0.020	0.010	0.006
19	SiO2 (mg/L)	8.4	11.3			12.2	15.7	19.4	23.4	22.1	19.6	22.6	27.4				9.4	14.0			15.9	14.1
20	SO4 (mg/L)	10.1	9.4	18.0	9.8	10.3	11.0	11.0	13.6	16.8	21.4	24.6	28.3				6.2	7.6	13.2	14.3	14.8	12.2
	BIOLOGICAL/BACTERIOLOGICAL																					
1	BOD3-27 (mg/L)	1.0	1.4	1.0	0.8	1.0	0.4	1.2	0.8	0.9	0.8	1.0	1.0	0.7	0.6	0.5	1.2	0.7	0.2	0.9	0.6	1.0
2	COD (mg/L)						21.1	18.0	16.8	24.0	24.8	24.8	30.4									23.4
3	DO (mg/L)	6.2	6.5	5.1	6.4	5.8	6.1	7.2	6.9	5.8	5.1	5.8	5.8	5.6	6.5	5.0	7.7	7.7	6.1	8.7	7.5	7.9
4	DO_SAT% (%)	77	83	67	89	77	79	92	88	73	64	76	74	70	85	64	82	82	82	102	90	86
	TRACE & TOXIC																					
1	Al (mg/L)	0.22	0.18														0.20	0.16				
	CHEMICAL INDICES																					
1	HAR_Ca (mgCaCO3/L)	42	42	46	96	39	26	33	27	38	49	50	70	58	54	55	39	42	37	44	30	33
2	HAR_Total (mgCaCO3/L)	65	61	69	117	61	47	56	57	78	91	93	137	87	97	87	47	62	55	91	54	63
3	Na% (%)	24	26	14		25	18	17	22	21	22	27	20	22	28	22	26	23		36	24	19
4	RSC (-)	0.1	0.1	0.3	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.0	0.2	0.2	0.0	0.1	0.0	0.6	0.3	0.0	0.0
5	SAR (-)	0.5	0.5	0.3		0.6	0.3	0.3	0.5	0.5	0.7	0.8	0.6	0.7	1.0	0.6	0.5	0.5		1.0	0.5	0.4
	PESTICIDES																					

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Basantpur (EM000R2)

Local River : Mahanadi

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Winter										Summer													
		Nov - Feb										Mar - May													
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL																								
1	Q (cumec)	131.6	107.6	70.29	149.4	146.5	126.2	209.9	165.9	68.54	135.9	31.06	94.63	63.28	68.56	97.53	32.94	44.15	7.787	21.04	29.06	29.00	32.59	34.76	7.171
2	EC_FLD (µmho/cm)	195	235							187	128	215	218	139	134	137	150								277
3	EC_GEN (µmho/cm)	201	243	313	358	299	354	434	288	227	128	215	218	139	134	137	158	276	281	389	347	320	342	232	268
4	pH_FLD (pH units)	8.2	7.2	7.3	8.0	7.8	6.6		6.4	8.0	8.1	8.0	8.0	8.3	7.5	7.6	7.4	7.0	6.9		7.2	6.5			
5	pH_GEN (pH units)	7.8	7.5	7.6	7.4	7.8	7.8	8.1	8.3	8.3	8.1	8.0	8.0	8.3	7.5	7.6	8.1	7.6	7.6	7.3	7.6	8.1	8.0	8.3	8.6
6	Temp (deg C)	20.3	18.5	16.8	22.3	20.5	20.6	21.8	21.4	23.0	23.8	24.3	28.0	29.0	32.0	27.7	26.2	23.7	23.8	25.2	25.7	27.3	26.0	25.8	30.3
	CHEMICAL																								
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.1	9.3	0.0
2	ALK-TOT (mgCaCO3/L)	150	92	197	261	215	259	255	234	183	103	116	205	65	95	93	107	169	202	197	226	265	258	189	224
3	B (mg/L)	0.01	0.01	0.00	0.00	0.01	0.00							0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00				
4	Ca (mg/L)	13	18	21	27	23	35	37	35	28	14	20	20	48	12	12	11	20	19	25	28	34	36	26	29
5	Cl (mg/L)	17.8	19.5	11.5	22.0	17.0	15.4	22.8	20.3	15.3	10.4	18.7	14.0	7.5	10.5	17.4	14.6	13.0	14.6	24.9	22.7	20.7	21.3	22.3	22.3
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	0.1	11.2	0.0
7	F (mg/L)	0.12	0.11	0.16	0.10	0.14	0.24							0.15	0.05	0.16	0.15	0.19	0.14	0.09	0.23	0.21			
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1	0.1		0.1		0.2	0.2			0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.1		0.1	
10	K (mg/L)	2.1	2.5	3.6	4.8	4.2	1.7	10.1	14.6	4.6	2.7	3.6		1.9	1.7	1.8	2.3	2.9	5.7	6.0	2.7	8.6	4.5	6.3	11.3
11	Mg (mg/L)	8.8	10.2	10.1	15.7	13.5	16.0	14.1	15.6	10.7	2.3	6.2	8.0	-16.3	4.2	5.1	6.5	10.8	13.0	14.1	15.4	7.2	18.8	14.9	5.2
12	Na (mg/L)	10.4	12.8	10.2	19.8	17.6	22.4	24.1	21.3	14.4	7.7	12.2		7.2	8.2	6.9	10.5	10.8	23.5	19.3	18.7	44.9	24.7	18.1	27.8
13	NH3-N (mg N/L)																								
14	NO2+NO3 (mg N/L)	0.12	0.59						0.20		0.57	0.77		0.08	0.06	0.08	0.47	0.30						0.21	
15	NO2-N (mgN/L)	0.01	0.01	0.02	0.04	0.04	0.04		0.02					0.00	0.00	0.02	0.02	0.02	0.02	0.05	0.10	0.07		0.05	
16	NO3-N (mgN/L)	0.11	0.57						0.18					0.05	0.08	0.45	0.28							0.16	
17	o-PO4-P (mg P/L)																								
18	P-Tot (mgP/L)	0.020	0.017	0.042	0.062	0.062	0.072		0.060					0.020	0.018	0.007	0.020	0.013	0.033	0.103	0.107	0.073		0.063	
19	SiO2 (mg/L)	25.5	20.3	23.8	18.3	14.0	16.2		9.4		8.8	8.3		18.5	15.3	17.2	23.8	15.5	20.4	20.7	19.3			20.7	
20	SO4 (mg/L)	20.3	15.7	21.3	32.4	25.5	25.8		26.4		4.0	12.1	5.1	8.7	9.6	8.6	12.3	22.7	20.3	38.5	36.1	32.7			29.9
	BIOLOGICAL/BACTERIOLOGICAL																								
1	BOD3-27 (mg/L)	0.7	1.0	0.7	0.9	0.6	0.9	0.7	1.2	0.7	0.9	0.9	0.4	0.4	0.2	1.0	0.7	0.9	1.1	1.1	1.4	0.7	1.1	0.7	1.2
2	COD (mg/L)	23.0	25.0	29.0	30.0	22.0	30.0									24.7	23.7	28.0	24.0	24.0	21.3	25.3			
3	DO (mg/L)	9.0	6.8	7.5	7.3	7.4	7.2	7.9	8.2	7.3	7.5	6.6	7.4	7.0	6.0	6.2	7.3	5.1	5.7	5.9	5.5	5.7	6.2	6.4	7.1
4	DO_SAT% (%)	98	72	77	83	82	80	89	92	84	89	79	93	89	81	79	90	60	67	70	67	71	76	78	95
	TRACE & TOXIC																								
1	Al (mg/L)										0.25	0.15													
	CHEMICAL INDICES																								
1	HAR_Ca (mgCaCO3/L)	32	44	54	67	58	87	92	87	71	36	49	50	120	31	31	28	49	48	62	69	86	91	64	73
2	HAR_Total (mgCaCO3/L)	69	87	96	133	114	154	151	152	116	45	75	83	53	48	52	55	94	102	121	133	115	169	126	94
3	Na% (%)	24	24	18	23	24	20	24	21	21	25	26		22	26	23	28	19	32	25	22	44	24	23	35
4	RSC (-)	0.2	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.4	0.0	0.0	0.4
5	SAR (-)	0.6	0.6	0.5	0.7	0.7	0.8	0.9	0.8	0.6	0.5	0.6		0.4	0.5	0.5	0.6	0.5	1.0	0.8	0.7	1.8	0.8	0.7	1.2
	PESTICIDES																								

SEONATH SUB-BASIN

SITE GUNDERDEHI

HISTORY SHEET

Water Year : 2015-2016

Site : GUNDERDEHI

Code : 164

State : Chhattisgarh

District : Durg

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Seonath

Sub Tributary : Tandula

Sub-Sub Tributary :

Local River : Tandula

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Burla

Drainage Area : Sq. Km.

Bank :

Latitude : 20°57'11"

Longitude : 81°16'45"

Zero of Gauge (m) : 292 (m.s.l)

01.07.2013

Opening Date

Closing Date

Gauge : 01.07.2013

Discharge : 15.07.2013

Sediment :

Water Quality :

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2014-2015	570.3	296.630	08.09.2014	0.000	292.000	11.05.2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : GUNDERDEHI (164)

Division : MD,CWC,Burla

Local River : Tandula

Sub-Division : UMSD,CWC,Burla

Day	Jun			Jul			Aug			Sep			Oct			Nov		
	W.L	Q		W.L	Q		W.L	Q		W.L	Q		W.L	Q		W.L	Q	
1	292.000	0.000 *		292.510	0.000 *		292.510	0.000 *		293.630	0.000 *		293.045	0.000 *		293.690	0.000 *	
2	292.000	0.000 *		292.535	0.000 *		292.505	0.000 *		293.630	0.000 *		293.050	0.000 *		293.685	0.000 *	
3	292.000	0.000 *		292.715	0.000 *		292.505	0.000 *		293.630	0.000 *		293.040	0.000 *		293.680	0.000 *	
4	292.000	0.000 *		292.830	0.000 *		292.510	0.000 *		293.630	0.000 *		293.060	0.000 *		293.680	0.000 *	
5	292.000	0.000 *		292.720	0.000 *		292.510	0.000 *		293.615	0.000 *		293.160	0.000 *		293.670	0.000 *	
6	292.000	0.000 *		292.625	0.000 *		292.505	0.000 *		293.600	0.000 *		293.280	0.000 *		293.655	0.000 *	
7	292.000	0.000 *		292.520	0.000 *		292.505	0.000 *		293.540	0.000 *		293.310	0.000 *		293.650	0.000 *	
8	292.000	0.000 *		292.530	0.000 *		292.500	0.000 *		293.530	0.000 *		293.310	0.000 *		293.580	0.000 *	
9	292.000	0.000 *		292.530	0.000 *		292.500	0.000 *		293.515	0.000 *		293.540	0.000 *		293.530	0.000 *	
10	292.000	0.000 *		292.550	0.000 *		292.500	0.000 *		293.510	0.000 *		293.580	0.000 *		293.450	0.000 *	
11	292.000	0.000 *		292.710	0.000 *		292.610	0.000 *		293.480	0.000 *		293.580	0.000 *		293.450	0.000 *	
12	292.000	0.000 *		292.980	0.000 *		292.550	0.000 *		293.480	0.000 *		293.590	0.000 *		293.440	0.000 *	
13	292.000	0.000 *		292.840	0.000 *		292.560	0.000 *		293.445	0.000 *		293.590	0.000 *		293.440	0.000 *	
14	292.000	0.000 *		292.730	0.000 *		292.790	0.000 *		293.420	0.000 *		293.585	0.000 *		293.440	0.000 *	
15	292.000	0.000 *		292.705	0.000 *		293.330	0.000 *		293.390	0.000 *		293.390	0.000 *		293.470	0.000 *	
16	292.000	0.000 *		292.690	0.000 *		293.290	0.000 *		293.475	0.000 *		293.400	0.000 *		293.480	0.000 *	
17	292.000	0.000 *		292.740	0.000 *		292.800	0.000 *		294.500	0.000 *		293.660	0.000 *		293.480	0.000 *	
18	292.000	0.000 *		292.710	0.000 *		292.860	0.000 *		294.475	161.6		293.580	0.000 *		293.490	0.000 *	
19	292.000	0.000 *		292.680	0.000 *		292.885	0.000 *		294.060	55.94		293.470	0.000 *		293.520	0.000 *	
20	292.000	0.000 *		292.680	0.000 *		292.935	0.000 *		293.850	45.00 *		293.560	0.000 *		293.550	0.000 *	
21	292.000	0.000 *		292.730	0.000 *		292.930	0.000 *		293.650	0.000		293.550	0.000 *		293.550	0.000 *	
22	292.000	0.000 *		292.690	0.000 *		292.885	0.000 *		293.885	58.02		293.580	0.000 *		293.550	0.000 *	
23	292.000	0.000 *		292.630	0.000 *		292.845	0.000 *		293.650	0.000		293.600	0.000 *		293.550	0.000 *	
24	292.810	0.000 *		292.740	0.000 *		292.790	0.000 *		293.480	0.000		293.600	0.000 *		293.550	0.000 *	
25	292.710	0.000 *		292.810	0.000 *		292.730	0.000 *		293.790	0.000		293.500	0.000 *		293.550	0.000 *	
26	292.600	0.000 *		292.750	0.000 *		292.710	0.000 *		293.680	0.000 *		293.390	0.000 *		293.550	0.000 *	
27	292.560	0.000 *		292.660	0.000 *		292.705	0.000 *		293.670	0.000 *		293.440	0.000 *		293.550	0.000 *	
28	292.500	0.000 *		292.605	0.000 *		292.710	0.000 *		293.670	0.000 *		293.560	0.000 *		293.550	0.000 *	
29	292.500	0.000 *		292.570	0.000 *		292.950	0.000 *		293.310	0.000 *		293.680	0.000 *		293.550	0.000 *	
30	292.500	0.000 *		292.550	0.000 *		293.440	0.000 *		293.125	0.000 *		293.660	0.000 *		293.550	0.000 *	
31				292.515	0.000 *		293.650	0.000 *					293.690	0.000 *				
Ten-Daily Mean																		
I Ten-Daily	292.000	0.000		292.607	0.000		292.505	0.000		293.583	0.000		293.238	0.000		293.627	0.000	
II Ten-Daily	292.000	0.000		292.746	0.000		292.861	0.000		293.758	26.25		293.540	0.000		293.476	0.000	
III Ten-Daily	292.418	0.000		292.659	0.000		292.940	0.000		293.591	5.802		293.568	0.000		293.550	0.000	
Monthly																		
Min.	292.000	0.000		292.510	0.000		292.500	0.000		293.125	0.000		293.040	0.000		293.440	0.000	
Max.	292.810	0.000		292.980	0.000		293.650	0.000		294.500	161.6		293.690	0.000		293.690	0.000	
Mean	292.139	0		292.670	0		292.774	0		293.644	10.68		293.453	0		293.551	0	

Annual Runoff in MCM = 28 Annual Runoff in mm =

Peak Observed Discharge = 161.6 cumecs on 18/09/2015 Corres. Water Level :294.475 m

Lowest Observed Discharge = 0.000 cumecs on 21/09/2015 Corres. Water Level :293.65 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : GUNDERDEHI (164)

Division : MD,CWC,Burla

Local River : Tandula

Sub-Division : UMSD,CWC,Burla

Day	Dec			Jan		Feb		Mar		Apr		May	
	W.L	Q		WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	293.550	0.000 *		293.500	0.000 *	293.400	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
2	293.550	0.000 *		293.500	0.000 *	293.390	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
3	293.550	0.000 *		293.500	0.000 *	293.380	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
4	293.550	0.000 *		293.500	0.000 *	293.370	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
5	293.550	0.000 *		293.500	0.000 *	293.370	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
6	293.550	0.000 *		293.500	0.000 *	293.370	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
7	293.550	0.000 *		293.500	0.000 *	293.350	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
8	293.550	0.000 *		293.500	0.000 *	293.350	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
9	293.550	0.000 *		293.490	0.000 *	293.350	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
10	293.540	0.000 *		293.480	0.000 *	293.340	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
11	293.540	0.000 *		293.480	0.000 *	293.340	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
12	293.540	0.000 *		293.470	0.000 *	293.330	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
13	293.530	0.000 *		293.470	0.000 *	293.300	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
14	293.530	0.000 *		293.470	0.000 *	293.270	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
15	293.530	0.000 *		293.470	0.000 *	293.240	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
16	293.530	0.000 *		293.470	0.000 *	293.230	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
17	293.530	0.000 *		293.470	0.000 *	293.220	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
18	293.530	0.000 *		293.460	0.000 *	293.210	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
19	293.530	0.000 *		293.460	0.000 *	293.180	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
20	293.530	0.000 *		293.460	0.000 *	293.140	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
21	293.530	0.000 *		293.460	0.000 *	293.100	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
22	293.530	0.000 *		293.460	0.000 *	293.070	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
23	293.520	0.000 *		293.450	0.000 *	293.040	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
24	293.520	0.000 *		293.450	0.000 *	293.010	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
25	293.520	0.000 *		293.450	0.000 *	292.980	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
26	293.520	0.000 *		293.440	0.000 *	292.950	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
27	293.520	0.000 *		293.440	0.000 *	292.920	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
28	293.520	0.000 *		293.440	0.000 *	292.850	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
29	293.500	0.000 *		293.430	0.000 *	292.790	0.000 *	292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
30	293.500	0.000 *		293.420	0.000 *			292.000	0.000 *	292.000	0.000 *	292.000	0.000 *
31	293.500	0.000 *		293.410	0.000 *			292.000	0.000 *			292.000	0.000 *
Ten-Daily Mean													
I Ten-Daily	293.549	0.000		293.497	0.000	293.367	0.000	292.000	0.000	292.000	0.000	292.000	0.000
II Ten-Daily	293.532	0.000		293.468	0.000	293.246	0.000	292.000	0.000	292.000	0.000	292.000	0.000
III Ten-Daily	293.516	0.000		293.441	0.000	292.968	0.000	292.000	0.000	292.000	0.000	292.000	0.000
Monthly													
Min.	293.500	0.000		293.410	0.000	292.790	0.000	292.000	0.000	292.000	0.000	292.000	0.000
Max.	293.550	0.000		293.500	0.000	293.400	0.000	292.000	0.000	292.000	0.000	292.000	0.000
Mean	293.532	0		293.468	0	293.201	0	292.000	0	292.000	0	292.000	0

Peak Computed Discharge = 45.00 cumecs on 20/09/2015

Corres. Water Level :293.85 m

Lowest Computed Discharge = 0.000 cumecs on 01/06/2015

Corres. Water Level :292 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

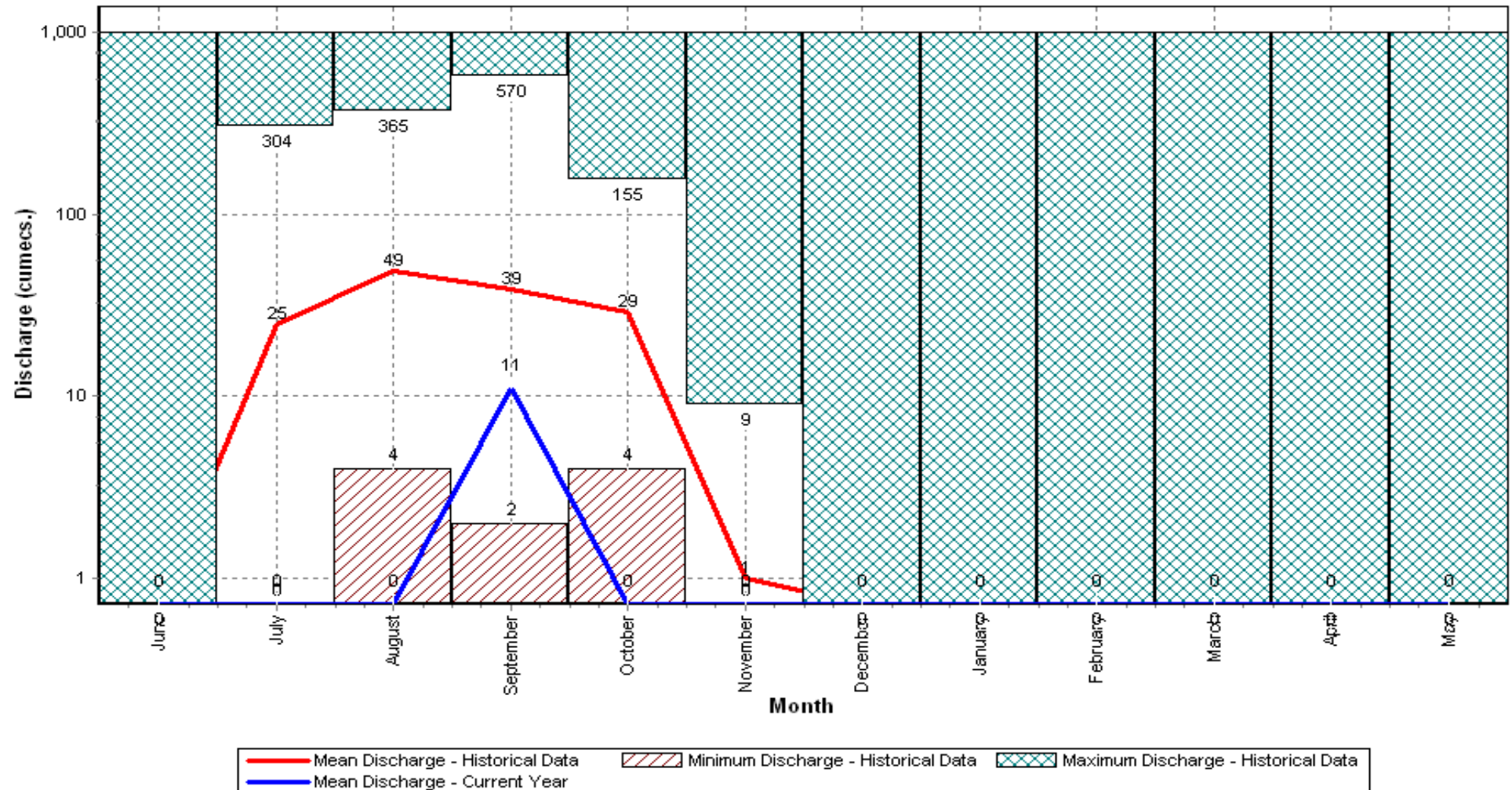
Station Name : GUNDERDEHI (164)

Data considered : 2014-2016

Division : MD,CWC,Burla

Local River : Tandula

Sub-Division : UMSD,CWC,Burla



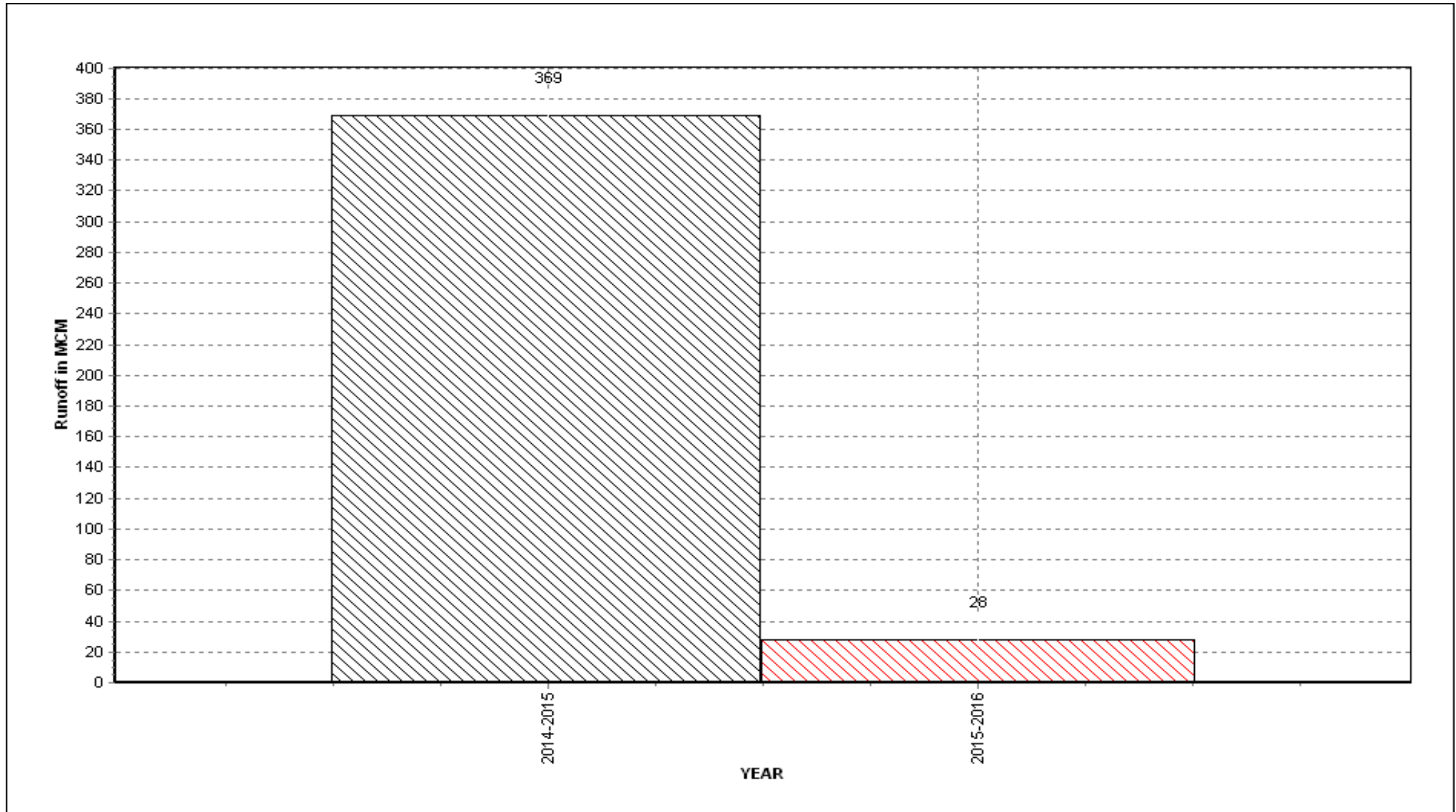
Annual Runoff Values for the period: 2014 - 2016

Station Name : GUNDERDEHI (164)

Local River : Tandula

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Burla



Note: Missing values have not been considered while arriving at Annual Runoff

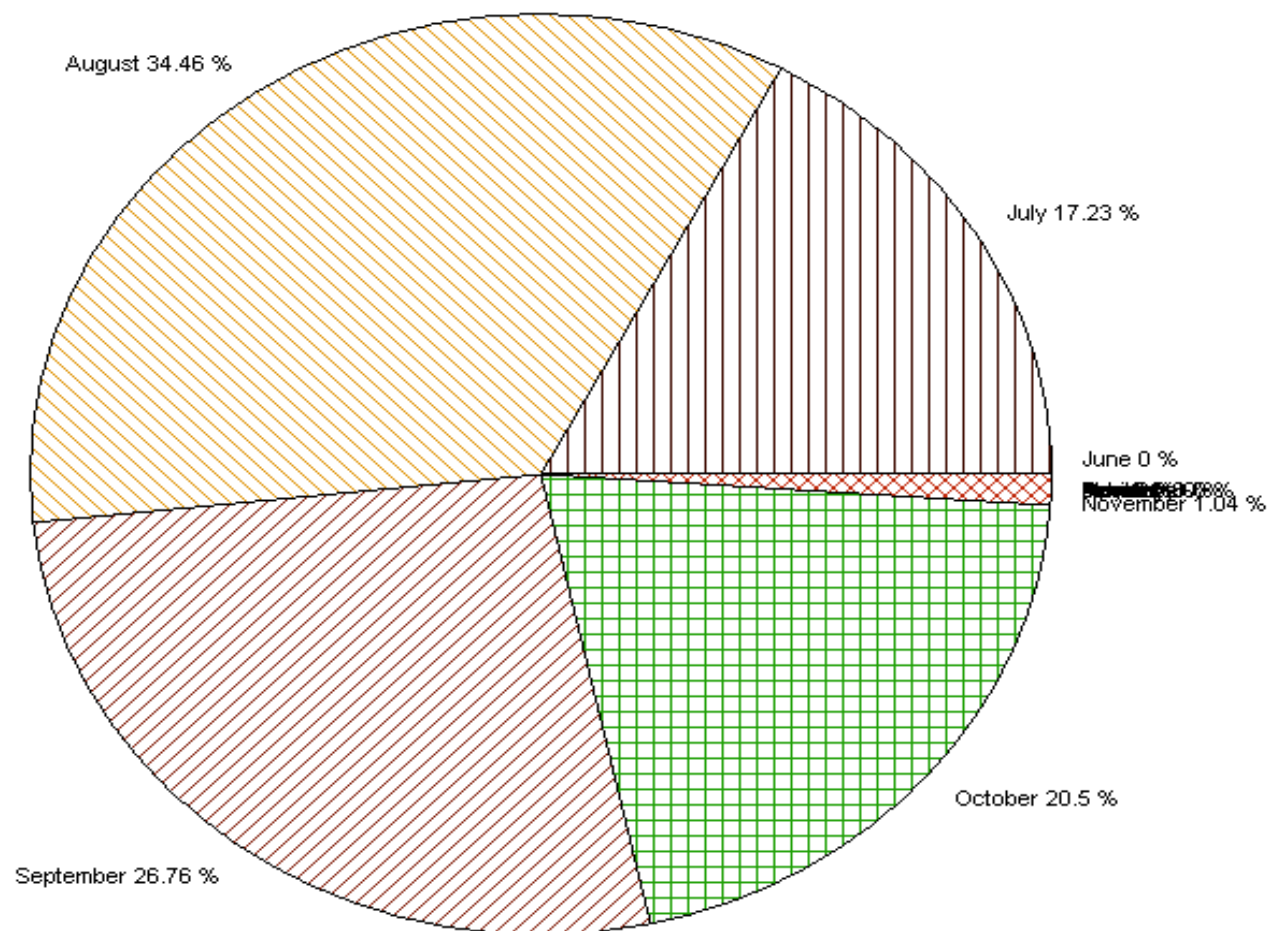
Monthly Average Runoff based on period : 2014-2015

Station Name : GUNDERDEHI (164)

Local River : Tandula

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Burla

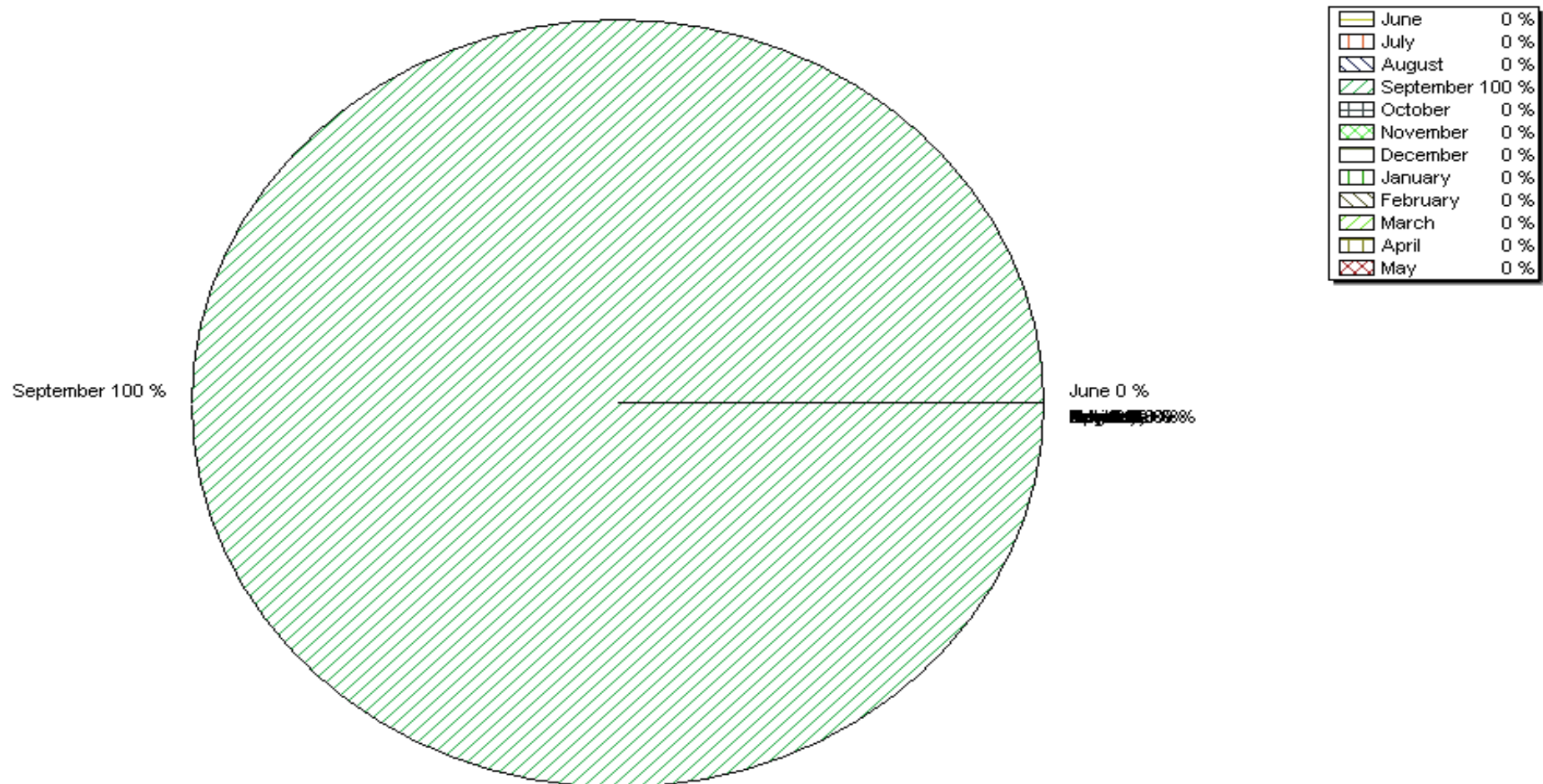


June	0 %
July	17.23 %
August	34.46 %
September	26.76 %
October	20.5 %
November	1.04 %
December	0 %
January	0 %
February	0 %
March	0 %
April	0 %
May	0 %

Monthly Runoff for the Year : 2015-2016

Station Name : GUNDERDEHI (164)
Local River : Tandula

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Burla



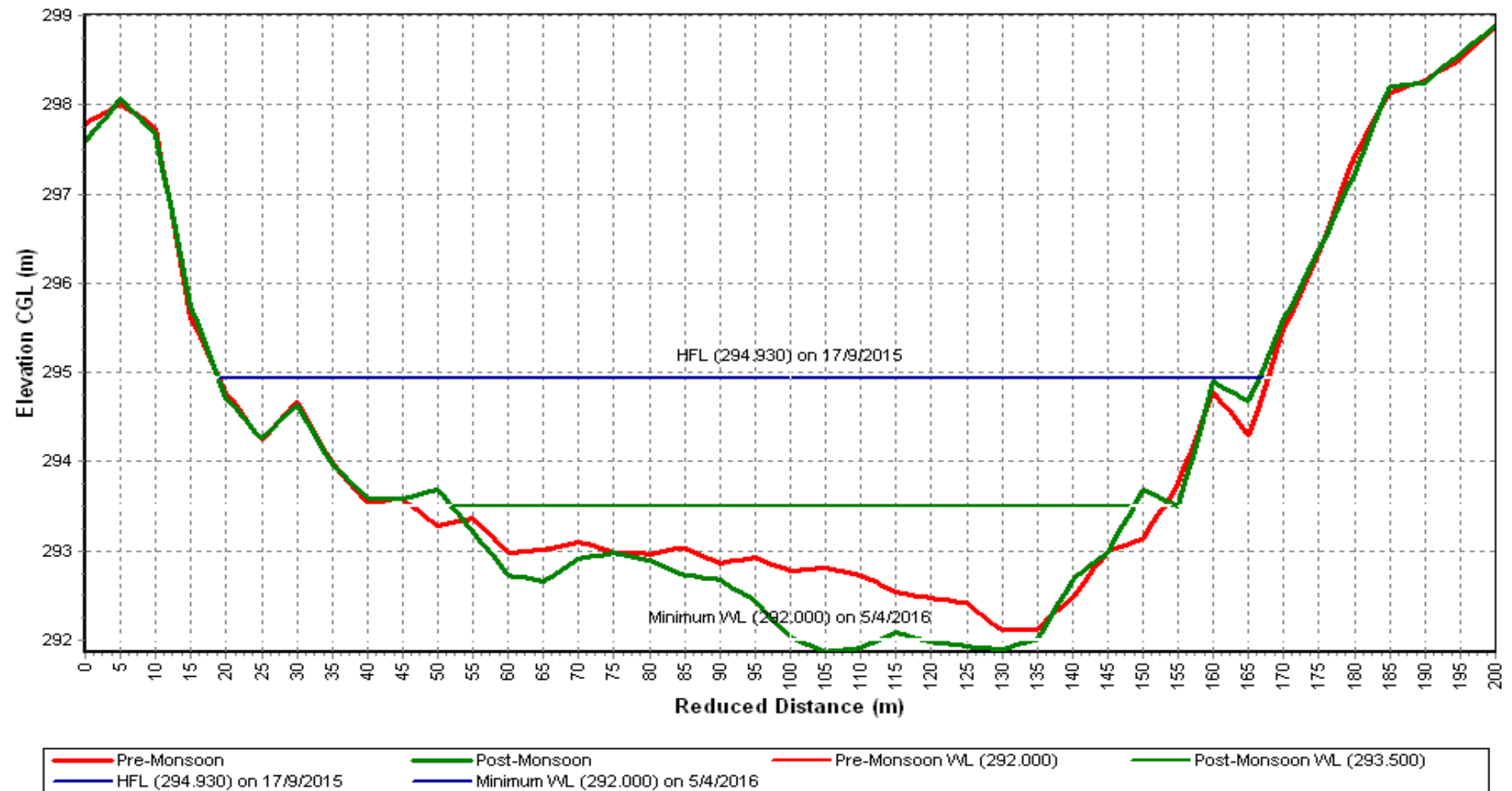
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : GUNDERDEHI (164)

Local River : Tandula

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Burla



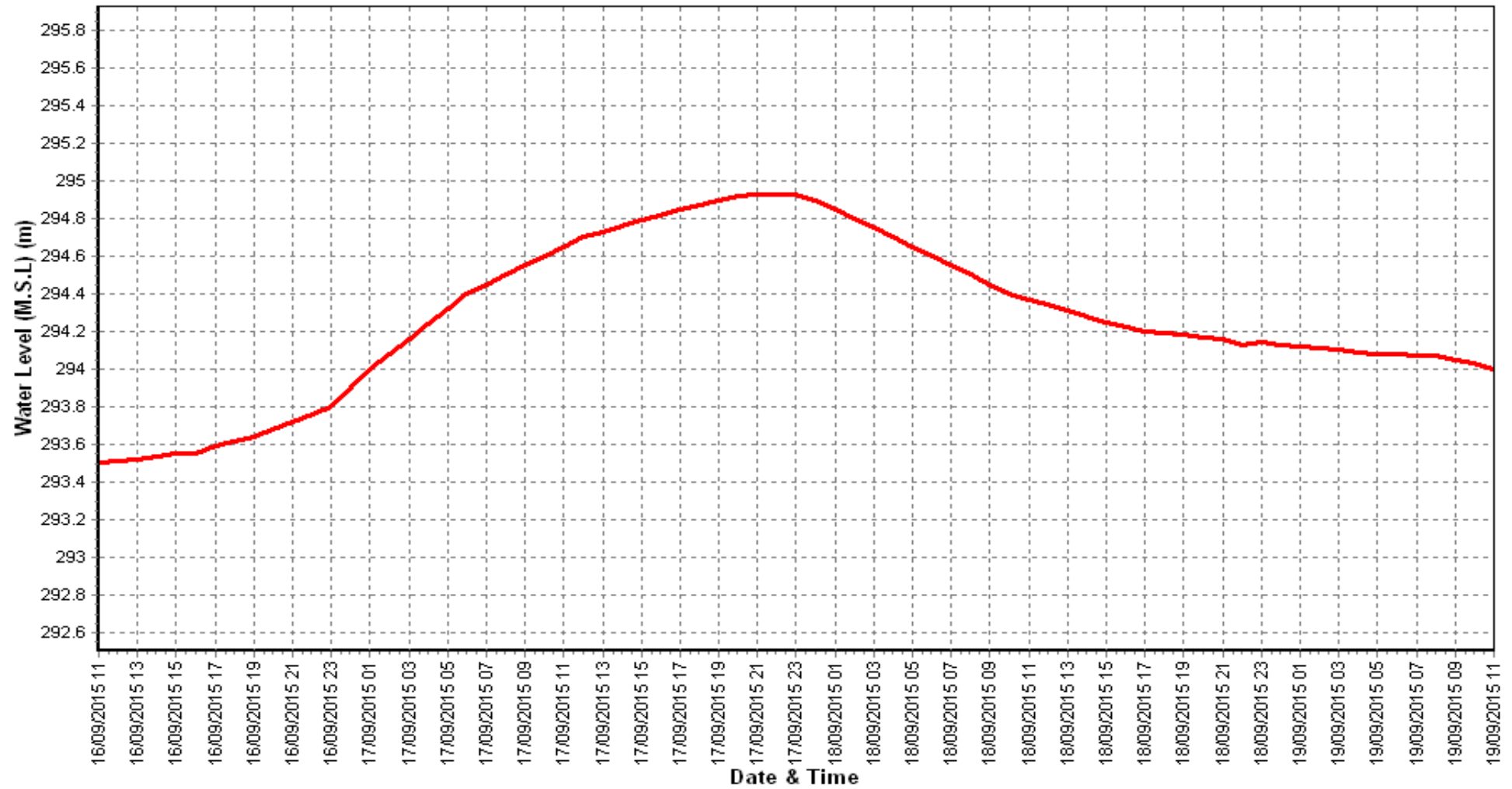
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : GUNDERDEHI (164)

Local River : Tandula

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Burla



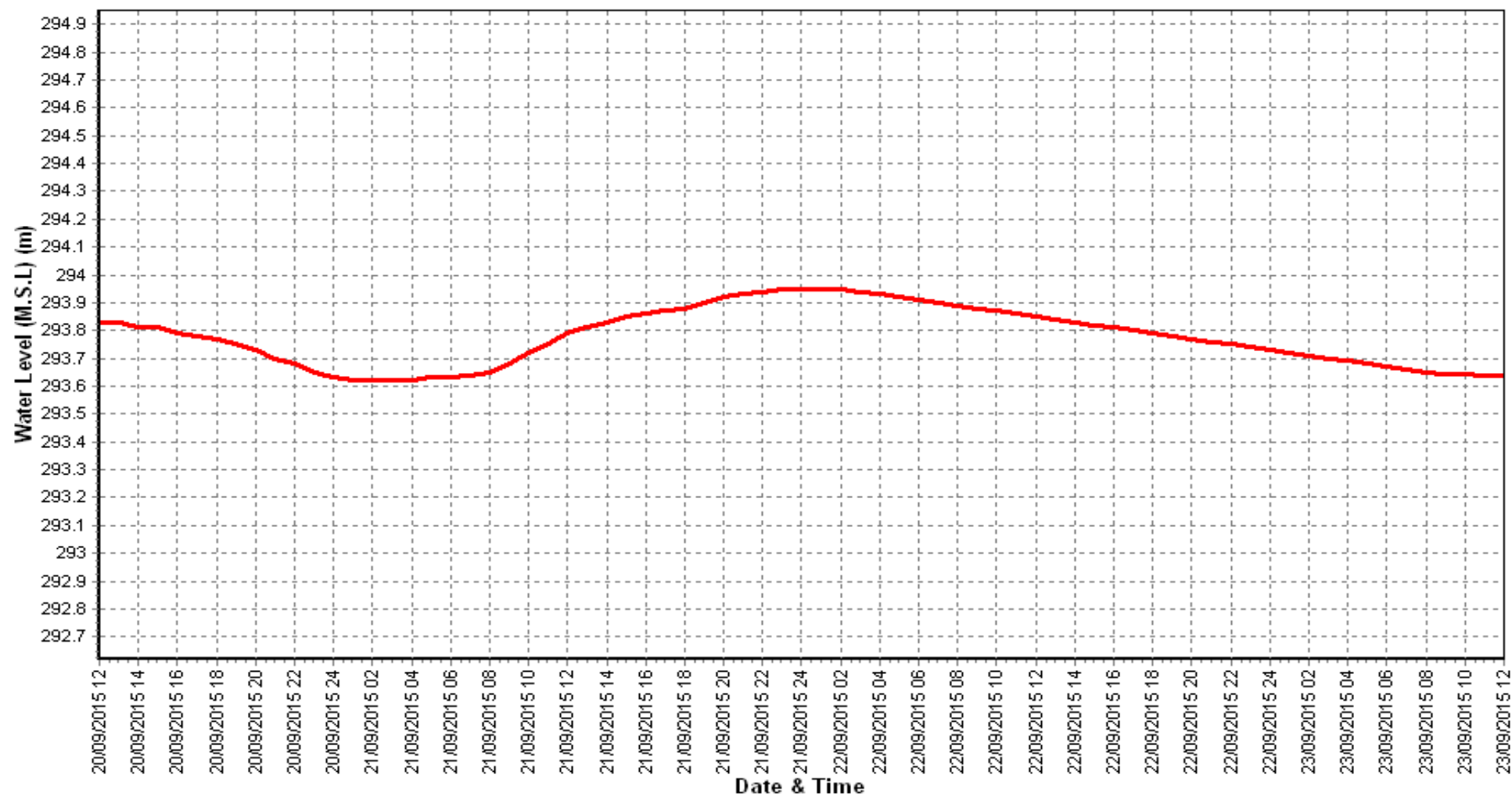
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : GUNDERDEHI (164)

Local River : Tandula

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Burla



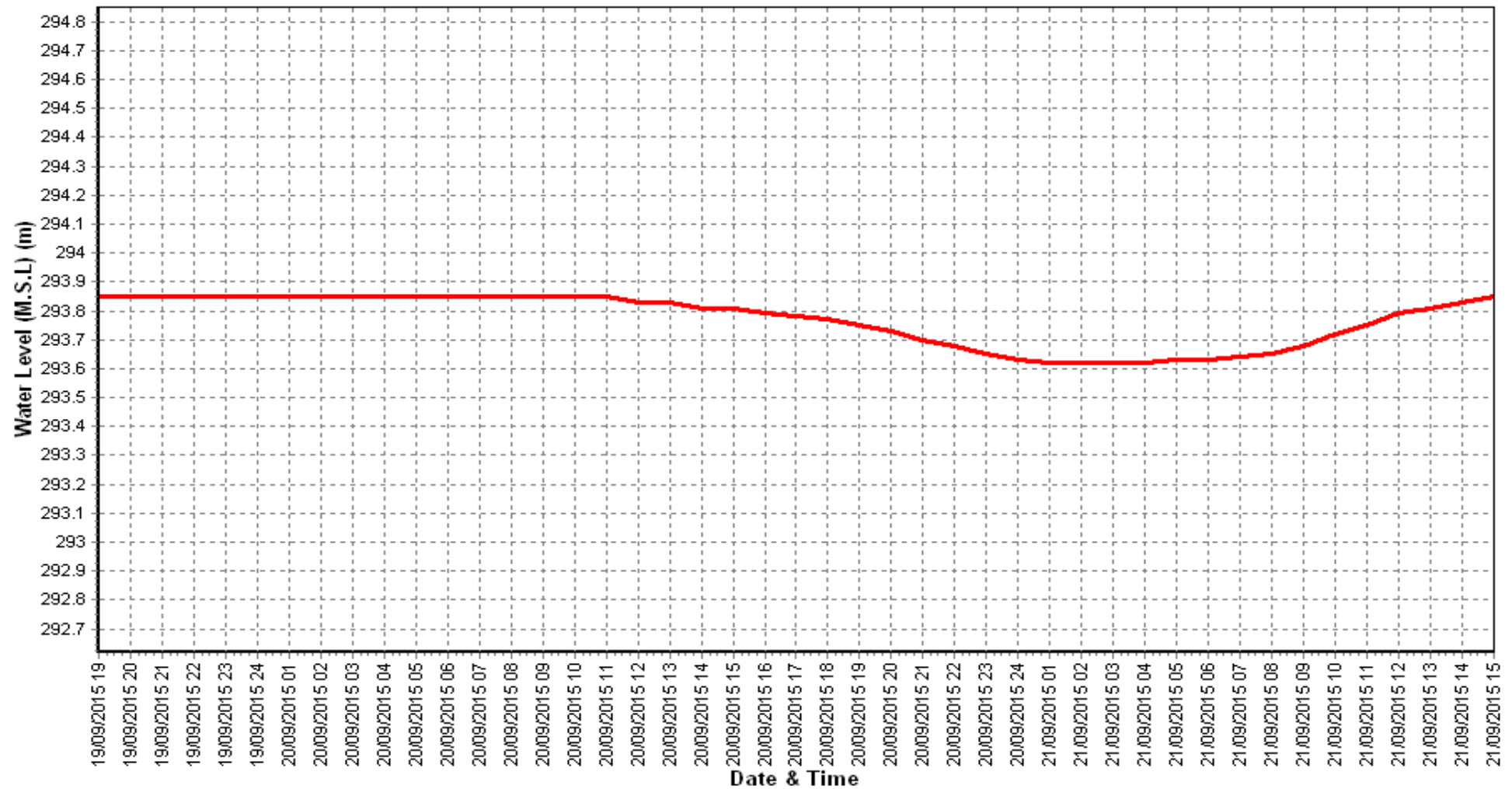
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : GUNDERDEHI (164)

Local River : Tandula

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Burla



SITE KOTNI

HISTORY SHEET

Water Year : 2015-2016

Site : Kotni

Code : EMP00P8

State : Chhattisgarh

District : Durg

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Seonath

Sub Tributary :

Sub-Sub Tributary :

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Drainage Area : 6990 Sq. Km.

Bank :

Latitude : 21°13'02"

Longitude : 81°14'19"

Zero of Gauge (m) : 268 (m.s.l)

9/20/1977 - 9/20/2017

Opening Date

Closing Date

Gauge : 9/20/1977

Discharge : 9/30/1978

Sediment : 7/25/2014

Water Quality : 6/1/2015

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1982-1983	1917	275.835	8/14/1982	0.030	270.115	3/15/1983
1983-1984	1518	275.020	8/20/1983	0.020	269.985	3/14/1984
1984-1985	2934	277.155	8/3/1984	0.020	270.185	2/25/1985
1985-1986	1536	275.295	9/12/1985	0.030	270.510	3/29/1986
1986-1987	5098	278.400	8/15/1986	0.050	270.445	3/5/1987
1987-1988	1204	274.150	8/28/1987	0.010	270.270	2/12/1988
1988-1989	503.0	273.155	7/31/1988	0.050	270.285	12/31/1988
1989-1990	300.0	272.295	9/15/1989	0.010	270.245	12/11/1989
1990-1991	3305	278.090	8/23/1990	0.013	270.380	3/25/1991
1991-1992	2399	277.480	8/24/1991	0.032	270.270	1/18/1992
1992-1993	2524	277.380	8/22/1992	0.094	270.240	1/4/1993
1993-1994	1040	273.635	8/17/1993	0.056	270.150	3/17/1994
1994-1995	5269	279.610	7/12/1994	0.290	270.300	4/30/1995
1995-1996	2409	277.260	7/25/1995	0.010	270.360	3/5/1996
1996-1997	950.0	274.540	8/2/1996	0.043	270.355	1/13/1997
1997-1998	2094	276.070	8/23/1997	0.610	270.375	7/20/1997
1998-1999	938.9	273.620	9/9/1998	0.385	270.510	12/28/1998
1999-2000	754.4	273.435	9/1/1999	0.115	270.430	2/1/2000
2000-2001	1513	275.180	7/19/2000	0.040	270.300	11/20/2000
2001-2002	1800	275.970	8/20/2001	0.011	270.410	12/20/2001
2002-2003	613.3	273.460	6/25/2002	0.020	270.360	7/30/2002
2003-2004	2269	276.790	8/24/2003	0.057	270.470	12/28/2003

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2004-2005	721.7	273.260	7/17/2004	0.000	268.000	4/5/2005
2005-2006	2472	279.360	9/15/2005	0.000	268.000	4/15/2006
2006-2007	2393	277.960	8/14/2006	0.000	270.075	2/24/2007
2007-2008	3950	278.030	7/1/2007	0.000	269.950	4/5/2008
2008-2009	803.4	274.467	9/19/2008	0.000	272.300	12/4/2008
2009-2010	2210	276.075	7/16/2009	0.000	272.160	1/25/2010
2010-2011	2838	276.735	8/7/2010	0.000	272.630	1/25/2011
2011-2012	2048	278.390	9/8/2011	0.000	272.785	1/26/2012
2012-2013	1886	275.925	9/6/2012	0.000	270.700	3/26/2013
2013-2014	3000	278.700	8/1/2013	0.000	270.910	2/28/2014
2014-2015	2205	277.780	8/6/2014	0.000	272.630	10/20/2014

Stage-Discharge Data for the period 2015 - 2016

Station Name : Kotni (EMP00P8)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : UMSD,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	270.280	0.000 *	271.410	0.000 *	270.450	0.000 *	272.130	0.000 *	273.170	130.5	272.540	0.000 *
2	270.270	0.000 *	271.280	0.000 *	270.410	0.000 *	272.400	0.000 *	273.140	126.5	272.540	0.000 *
3	270.270	0.000 *	271.070	0.000 *	270.360	0.000 *	272.410	0.000 *	273.100	103.9	272.530	0.000 *
4	270.270	0.000 *	270.800	0.000 *	270.390	0.000 *	272.620	0.000 *	272.760	0.000 *	272.530	0.000 *
5	270.265	0.000 *	270.650	0.000 *	270.410	0.000 *	272.590	0.000 *	272.280	0.000 *	272.520	0.000 *
6	270.265	0.000 *	270.530	0.000 *	270.400	0.000 *	272.450	0.000 *	272.260	0.000 *	272.520	0.000 *
7	270.260	0.000 *	270.510	0.000 *	270.380	0.000 *	272.630	0.000 *	272.530	0.000 *	272.520	0.000 *
8	270.260	0.000 *	270.500	0.000 *	270.370	0.000 *	272.800	0.000 *	272.580	0.000 *	272.520	0.000 *
9	270.260	0.000 *	270.490	0.000 *	270.360	0.000 *	272.670	0.000 *	272.610	0.000 *	272.520	0.000 *
10	270.260	0.000 *	270.510	0.000 *	270.350	0.000 *	272.560	0.000 *	272.600	0.000 *	272.520	0.000 *
11	270.255	0.000 *	270.710	0.000 *	270.350	0.000 *	272.330	0.000 *	272.590	0.000 *	272.510	0.000 *
12	270.255	0.000 *	271.120	0.000 *	270.360	0.000 *	271.920	0.000 *	272.610	0.000 *	272.510	0.000 *
13	270.255	0.000 *	271.160	0.000 *	270.350	0.000 *	271.530	0.000 *	272.650	0.000 *	272.510	0.000 *
14	270.255	0.000 *	270.680	0.000 *	270.410	0.000 *	271.330	0.000 *	272.670	0.000 *	272.500	0.000 *
15	270.255	0.000 *	270.690	0.000 *	270.420	0.000 *	271.290	0.000 *	272.700	0.000 *	272.500	0.000 *
16	270.250	0.000 *	271.130	0.000 *	270.410	0.000 *	271.270	0.000 *	272.700	0.000 *	272.490	0.000 *
17	270.250	0.000 *	271.170	0.000 *	270.520	0.000 *	271.260	0.000 *	272.730	0.000 *	272.480	0.000 *
18	270.250	0.000 *	271.180	0.000 *	270.600	0.000 *	271.580	0.000 *	272.750	0.000 *	272.470	0.000 *
19	270.250	0.000 *	271.160	0.000 *	270.650	0.000 *	271.990	0.000 *	272.770	0.000 *	272.460	0.000 *
20	270.245	0.000 *	271.140	0.000 *	270.660	0.000 *	272.640	0.000 *	272.790	0.000 *	272.450	0.000 *
21	270.245	0.000 *	271.200	0.000 *	270.670	0.000 *	273.610	375.4	272.800	0.000 *	272.440	0.000 *
22	270.250	0.000 *	271.080	0.000 *	270.670	0.000 *	274.080	656.8	272.800	0.000 *	272.420	0.000 *
23	270.910	0.000 *	270.840	0.000 *	270.680	0.000 *	273.880	494.9	272.810	0.000 *	272.400	0.000 *
24	271.530	0.000 *	271.300	0.000 *	270.670	0.000 *	273.680	479.1	272.810	0.000 *	272.380	0.000 *
25	272.290	0.000 *	271.920	0.000 *	270.670	0.000 *	273.520	455.0	272.820	0.000 *	272.370	0.000 *
26	272.860	0.000 *	272.630	0.000 *	270.670	0.000 *	273.370	270.0	272.820	0.000 *	272.360	0.000 *
27	272.370	0.000 *	272.560	0.000 *	270.680	0.000 *	273.310	249.0	272.800	0.000 *	272.340	0.000 *
28	271.860	0.000 *	272.080	0.000 *	270.690	0.000 *	273.140	117.9	272.790	0.000 *	272.320	0.000 *
29	271.560	0.000 *	271.600	0.000 *	270.690	0.000 *	273.120	110.4	272.780	0.000 *	272.300	0.000 *
30	271.470	0.000 *	271.140	0.000 *	270.740	0.000 *	273.190	136.1	272.730	0.000 *	272.280	0.000 *
31			270.660	0.000 *	271.540	0.000 *			272.670	0.000 *		
Ten-Daily Mean												
I Ten-Daily	270.266	0.000	270.775	0.000	270.388	0.000	272.526	0.000	272.703	36.10	272.526	0.000
II Ten-Daily	270.252	0.000	271.014	0.000	270.473	0.000	271.714	0.000	272.696	0.000	272.488	0.000
III Ten-Daily	271.534	0.000	271.546	0.000	270.761	0.000	273.490	334.5	272.785	0.000	272.361	0.000
Monthly												
Min.	270.245	0.000	270.490	0.000	270.350	0.000	271.260	0.000	272.260	0.000	272.280	0.000
Max.	272.860	0.000	272.630	0.000	271.540	0.000	274.080	656.8	273.170	130.5	272.540	0.000
Mean	270.684	0	271.126	0	270.548	0	272.577	111.5	272.730	11.64	272.458	0

Annual Runoff in MCM = 320 Annual Runoff in mm = 46

Peak Observed Discharge = 656.8 cumecs on 22/09/2015 Corres. Water Level :274.08 m

Lowest Observed Discharge = 103.9 cumecs on 03/10/2015 Corres. Water Level :273.1 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : Kotni (EMP00P8)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : UMSD,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	272.260	0.000 *	270.680	0.000 *	270.320	0.000 *	270.090	0.000 *	269.850	0.000 *	269.560	0.000 *
2	272.250	0.000 *	270.680	0.000 *	270.300	0.000 *	270.090	0.000 *	269.840	0.000 *	269.550	0.000 *
3	272.200	0.000 *	270.680	0.000 *	270.280	0.000 *	270.090	0.000 *	269.830	0.000 *	269.540	0.000 *
4	272.140	0.000 *	270.670	0.000 *	270.270	0.000 *	270.080	0.000 *	269.820	0.000 *	269.530	0.000 *
5	272.080	0.000 *	270.670	0.000 *	270.260	0.000 *	270.080	0.000 *	269.810	0.000 *	269.520	0.000 *
6	272.010	0.000 *	270.670	0.000 *	270.250	0.000 *	270.070	0.000 *	269.800	0.000 *	269.510	0.000 *
7	271.930	0.000 *	270.670	0.000 *	270.240	0.000 *	270.070	0.000 *	269.790	0.000 *	269.500	0.000 *
8	271.840	0.000 *	270.650	0.000 *	270.230	0.000 *	270.070	0.000 *	269.780	0.000 *	269.490	0.000 *
9	271.750	0.000 *	270.600	0.000 *	270.220	0.000 *	270.060	0.000 *	269.770	0.000 *	269.480	0.000 *
10	271.660	0.000 *	270.590	0.000 *	270.210	0.000 *	270.060	0.000 *	269.760	0.000 *	269.470	0.000 *
11	271.570	0.000 *	270.580	0.000 *	270.200	0.000 *	270.050	0.000 *	269.750	0.000 *	269.460	0.000 *
12	271.480	0.000 *	270.570	0.000 *	270.190	0.000 *	270.040	0.000 *	269.740	0.000 *	269.450	0.000 *
13	271.390	0.000 *	270.560	0.000 *	270.180	0.000 *	270.030	0.000 *	269.730	0.000 *	269.440	0.000 *
14	271.300	0.000 *	270.560	0.000 *	270.170	0.000 *	270.020	0.000 *	269.720	0.000 *	269.430	0.000 *
15	271.210	0.000 *	270.540	0.000 *	270.160	0.000 *	270.010	0.000 *	269.710	0.000 *	269.420	0.000 *
16	271.120	0.000 *	270.530	0.000 *	270.150	0.000 *	270.000	0.000 *	269.700	0.000 *	269.410	0.000 *
17	271.030	0.000 *	270.520	0.000 *	270.140	0.000 *	269.900	0.000 *	269.690	0.000 *	269.400	0.000 *
18	270.940	0.000 *	270.510	0.000 *	270.130	0.000 *	269.900	0.000 *	269.680	0.000 *	269.390	0.000 *
19	270.840	0.000 *	270.500	0.000 *	270.120	0.000 *	269.890	0.000 *	269.670	0.000 *	269.380	0.000 *
20	270.740	0.000 *	270.490	0.000 *	270.110	0.000 *	269.890	0.000 *	269.660	0.000 *	269.370	0.000 *
21	270.710	0.000 *	270.480	0.000 *	270.110	0.000 *	269.880	0.000 *	269.660	0.000 *	269.360	0.000 *
22	270.700	0.000 *	270.470	0.000 *	270.110	0.000 *	269.880	0.000 *	269.650	0.000 *	269.350	0.000 *
23	270.700	0.000 *	270.460	0.000 *	270.110	0.000 *	269.870	0.000 *	269.640	0.000 *	269.340	0.000 *
24	270.700	0.000 *	270.450	0.000 *	270.110	0.000 *	269.870	0.000 *	269.630	0.000 *	269.330	0.000 *
25	270.700	0.000 *	270.440	0.000 *	270.110	0.000 *	269.870	0.000 *	269.620	0.000 *	269.320	0.000 *
26	270.700	0.000 *	270.430	0.000 *	270.110	0.000 *	269.860	0.000 *	269.610	0.000 *	269.310	0.000 *
27	270.700	0.000 *	270.420	0.000 *	270.100	0.000 *	269.860	0.000 *	269.600	0.000 *	269.300	0.000 *
28	270.700	0.000 *	270.400	0.000 *	270.100	0.000 *	269.860	0.000 *	269.590	0.000 *	269.290	0.000 *
29	270.690	0.000 *	270.390	0.000 *	270.090	0.000 *	269.860	0.000 *	269.580	0.000 *	269.280	0.000 *
30	270.690	0.000 *	270.370	0.000 *			269.860	0.000 *	269.570	0.000 *	269.270	0.000 *
31	270.690	0.000 *	270.350	0.000 *			269.860	0.000 *			269.260	0.000 *
Ten-Daily Mean												
I Ten-Daily	272.012	0.000	270.656	0.000	270.258	0.000	270.076	0.000	269.805	0.000	269.515	0.000
II Ten-Daily	271.162	0.000	270.536	0.000	270.155	0.000	269.973	0.000	269.705	0.000	269.415	0.000
III Ten-Daily	270.698	0.000	270.424	0.000	270.106	0.000	269.866	0.000	269.615	0.000	269.310	0.000
Monthly												
Min.	270.690	0.000	270.350	0.000	270.090	0.000	269.860	0.000	269.570	0.000	269.260	0.000
Max.	272.260	0.000	270.680	0.000	270.320	0.000	270.090	0.000	269.850	0.000	269.560	0.000
Mean	271.272	0	270.535	0	270.175	0	269.968	0	269.708	0	269.410	0

Peak Computed Discharge = 455.0 cumecs on 25/09/2015

Corres. Water Level :273.52 m

Lowest Computed Discharge = 0.000 cumecs on 01/06/2015

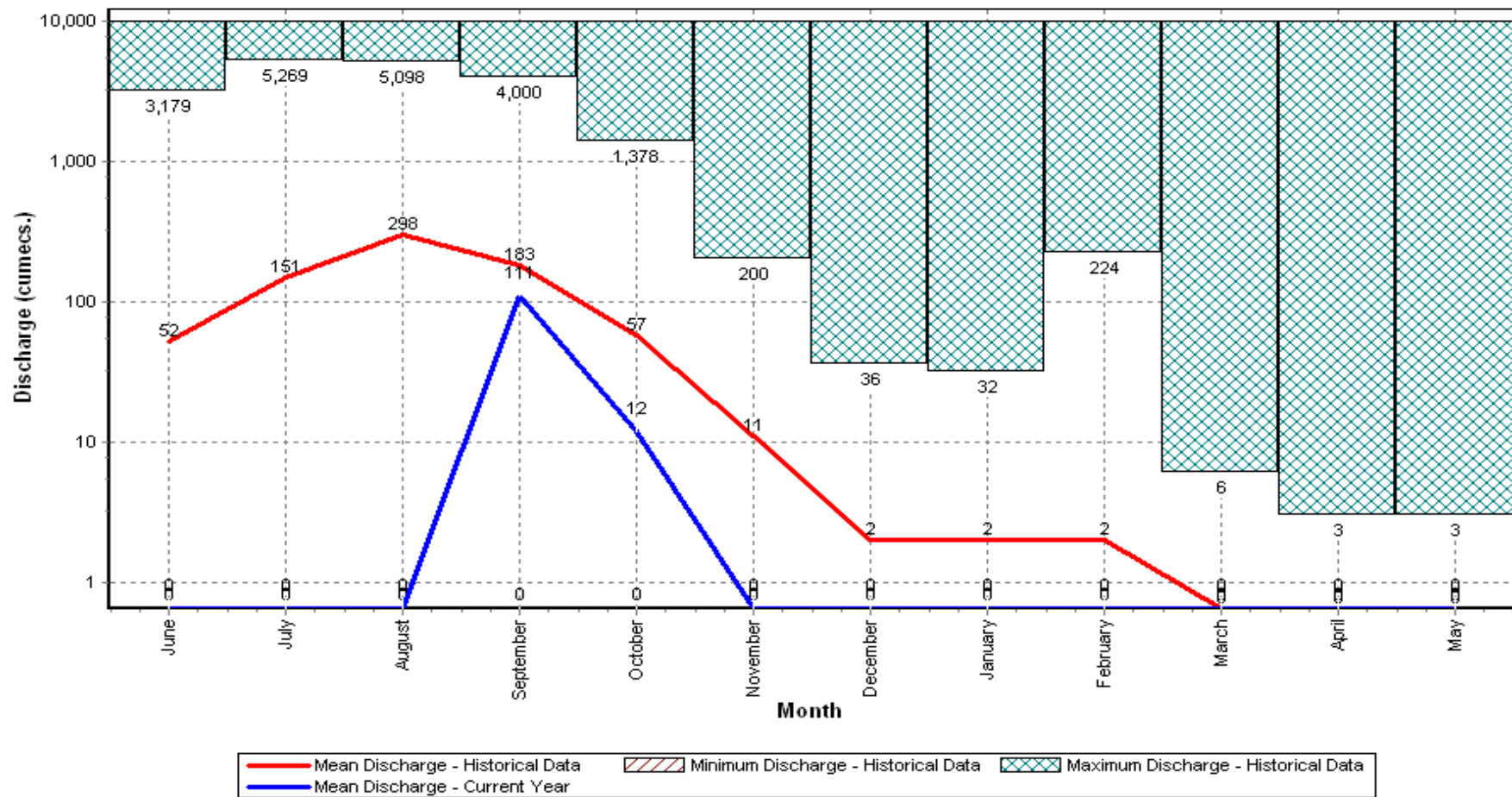
Corres. Water Level :270.28 m

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

Station Name : Kotni (EMP00P8)
Local River : Seonath

Data considered : 1982-2016

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



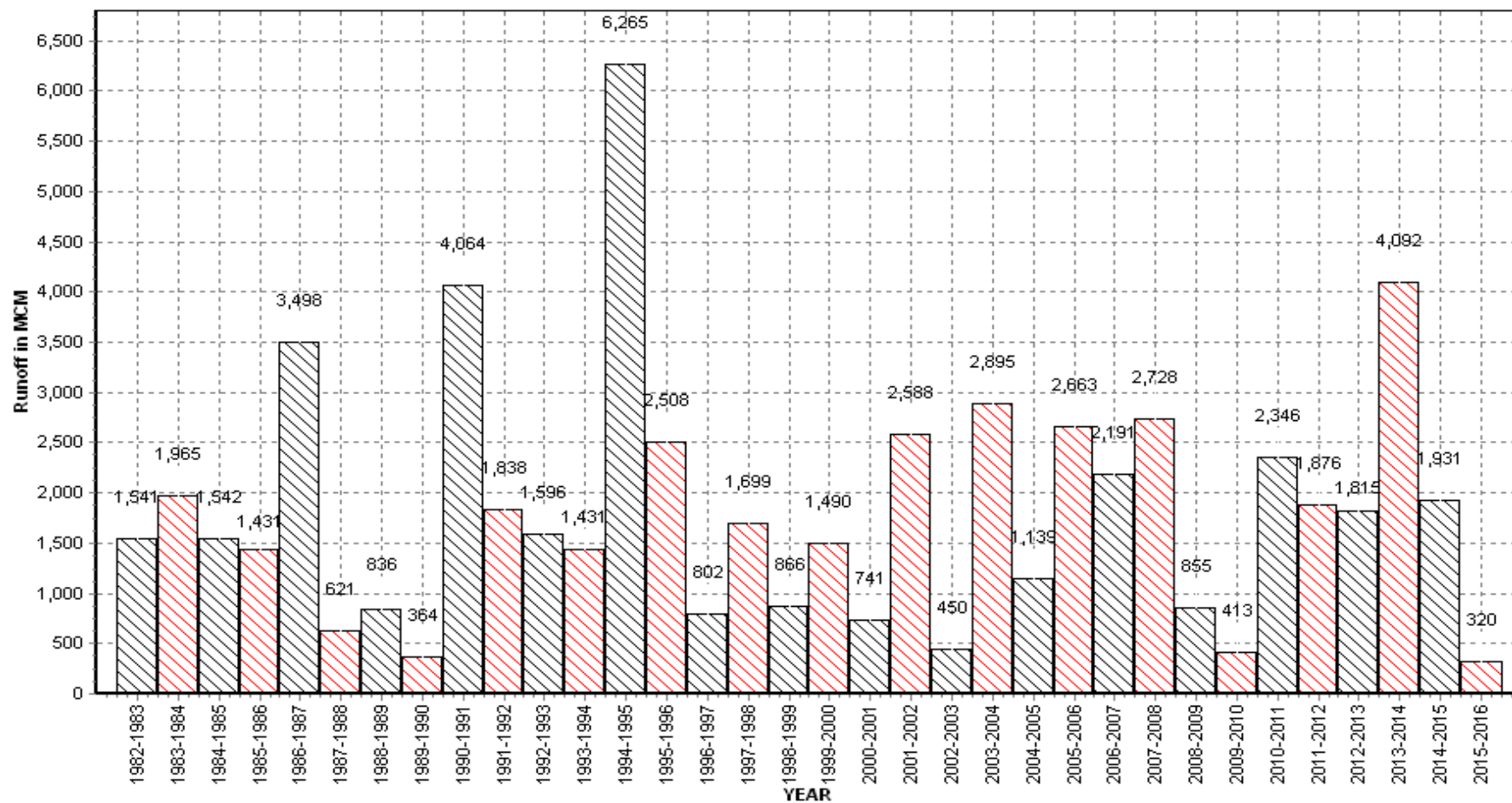
Annual Runoff Values for the period: 1982 - 2016

Station Name : Kotni (EMP00P8)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



Note: Missing values have not been considered while arriving at Annual Runoff

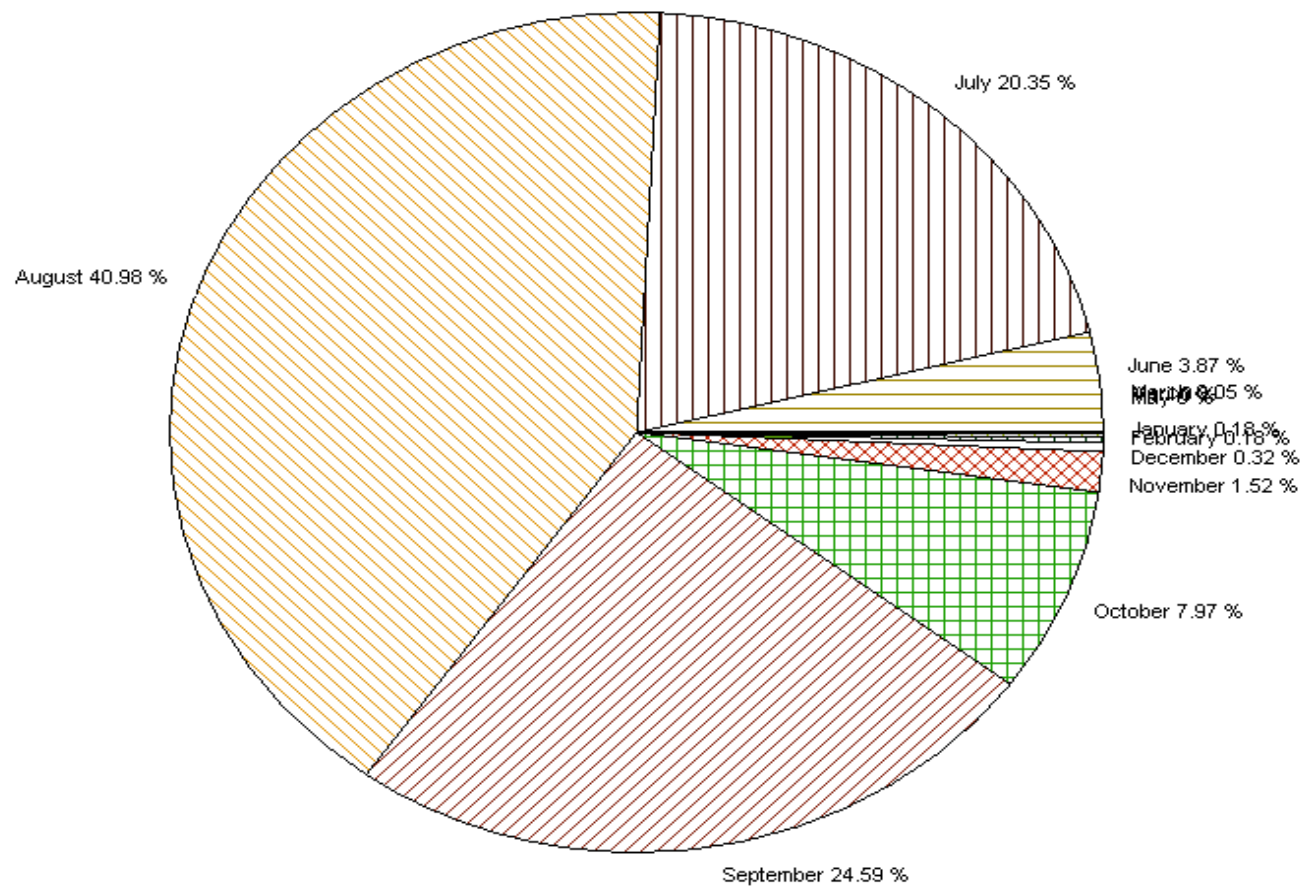
Monthly Average Runoff based on period : 1982-2015

Station Name : Kotni (EMP00P8)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

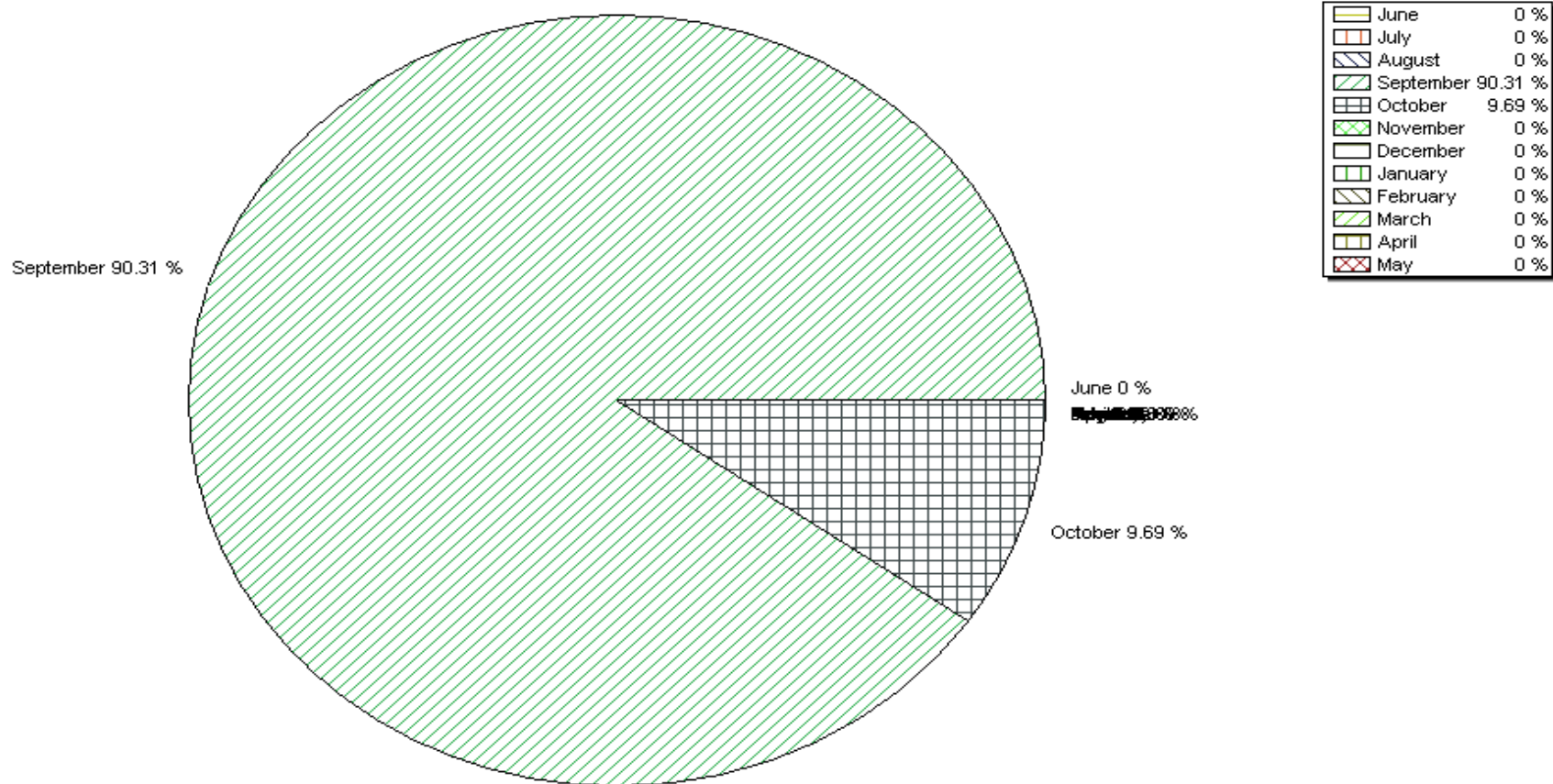


June	3.87 %
July	20.35 %
August	40.98 %
September	24.59 %
October	7.97 %
November	1.52 %
December	0.32 %
January	0.18 %
February	0.18 %
March	0.05 %
April	0 %
May	0 %

Monthly Runoff for the Year : 2015-2016

Station Name : Kotni (EMP00P8)
Local River : Seonath

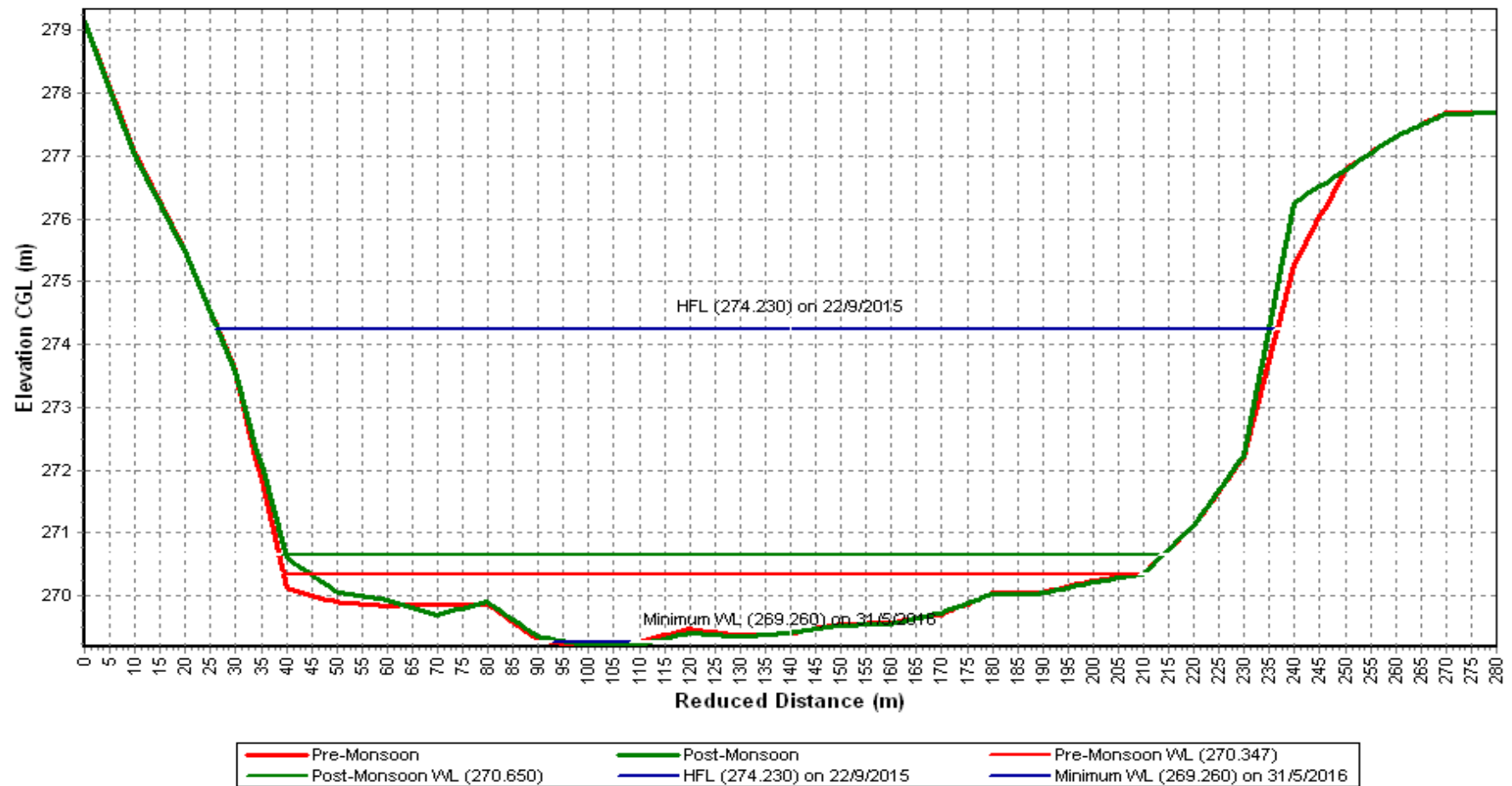
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Kotni (EMP00P8)
Local River : Seonath

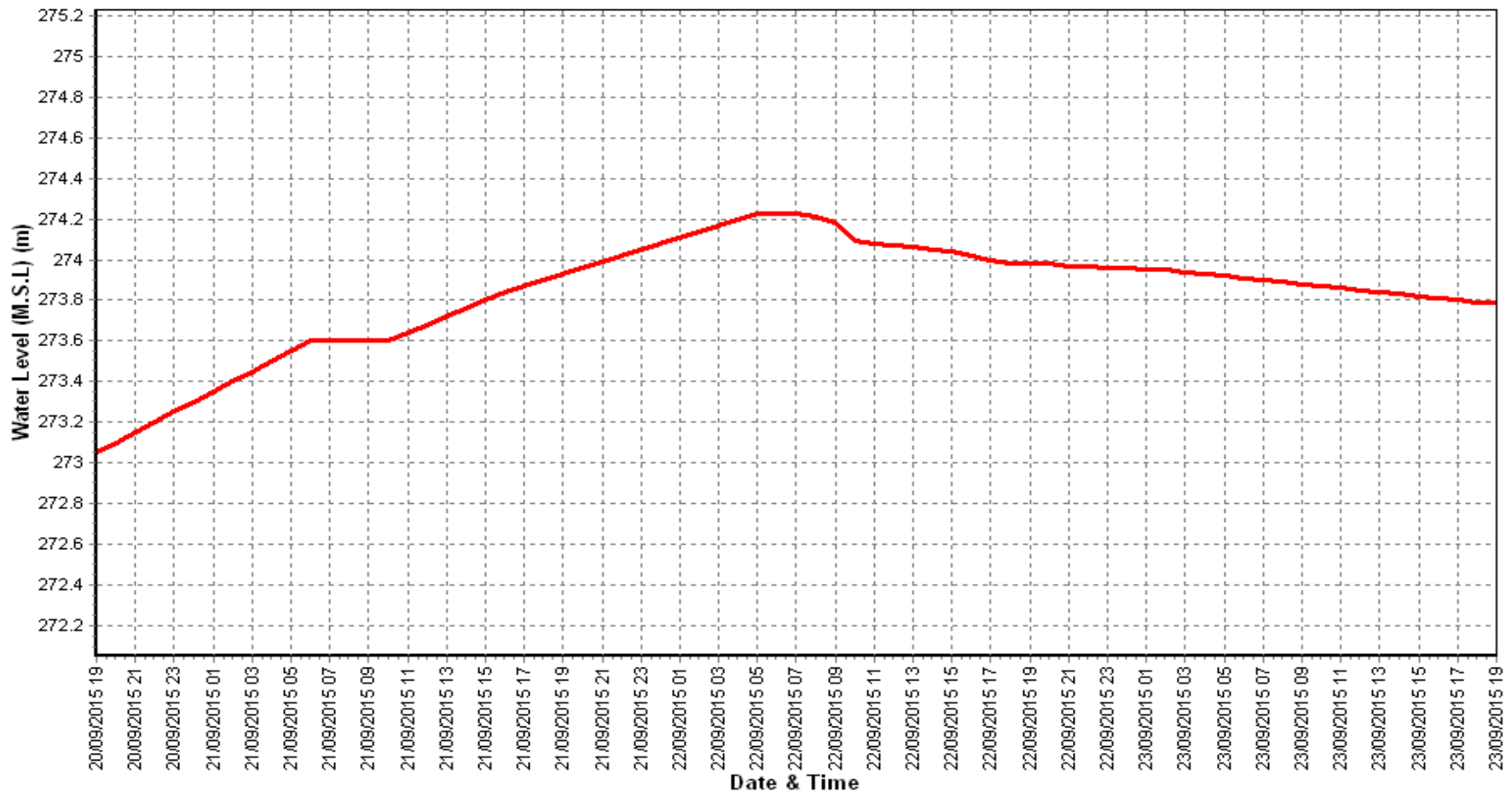
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Kotni (EMP00P8)
Local River : Seonath

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



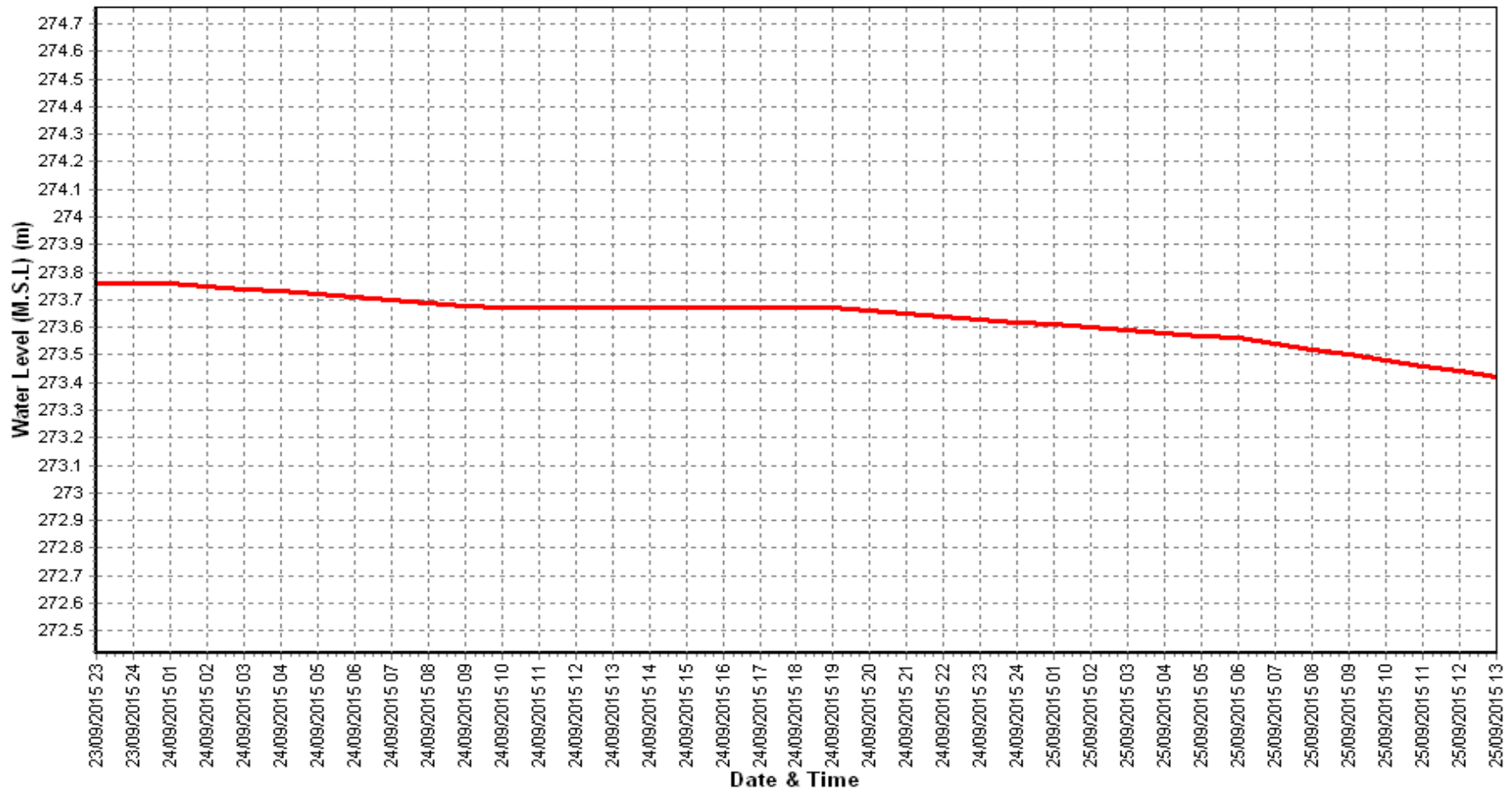
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Kotni (EMP00P8)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



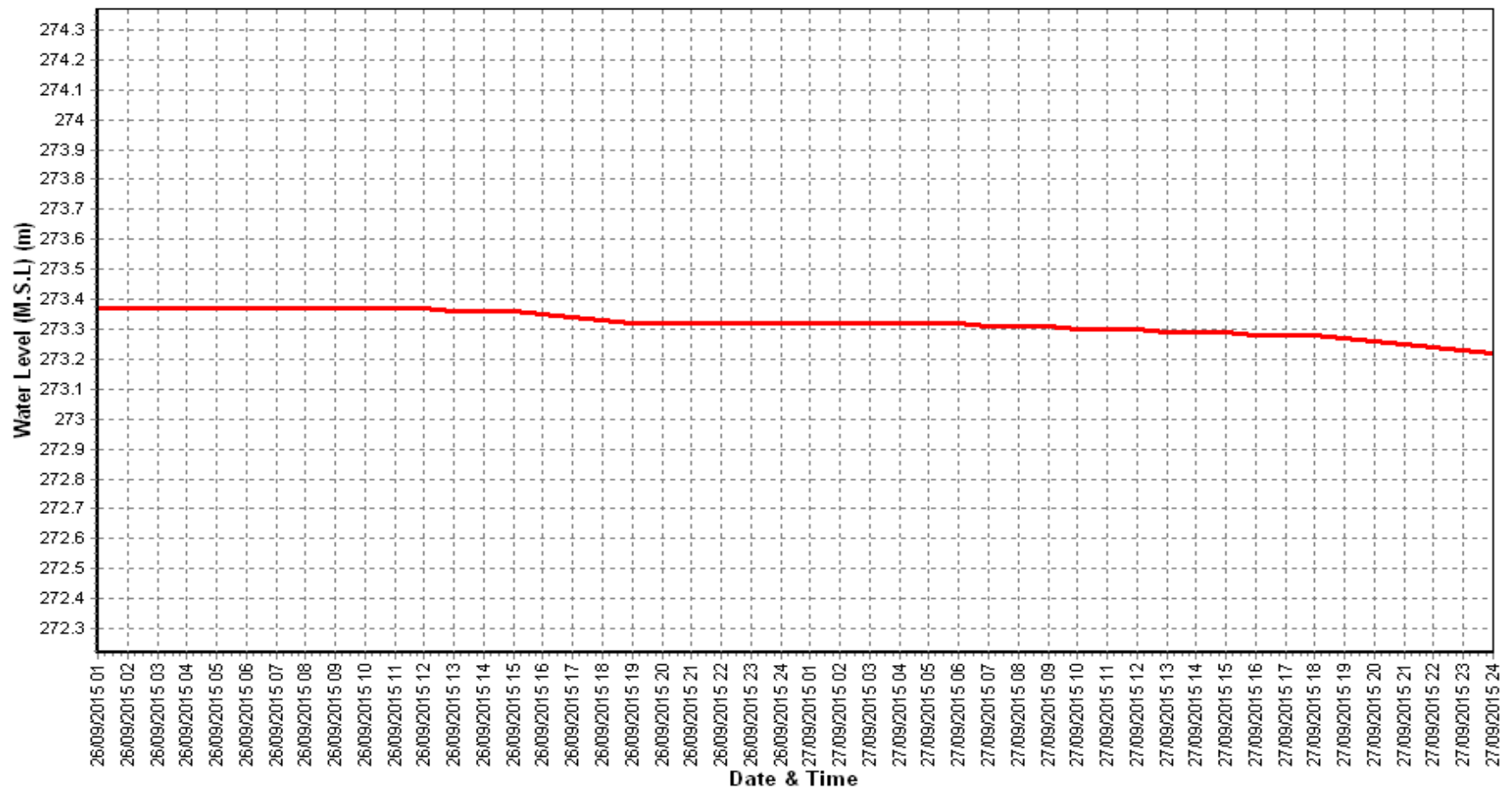
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

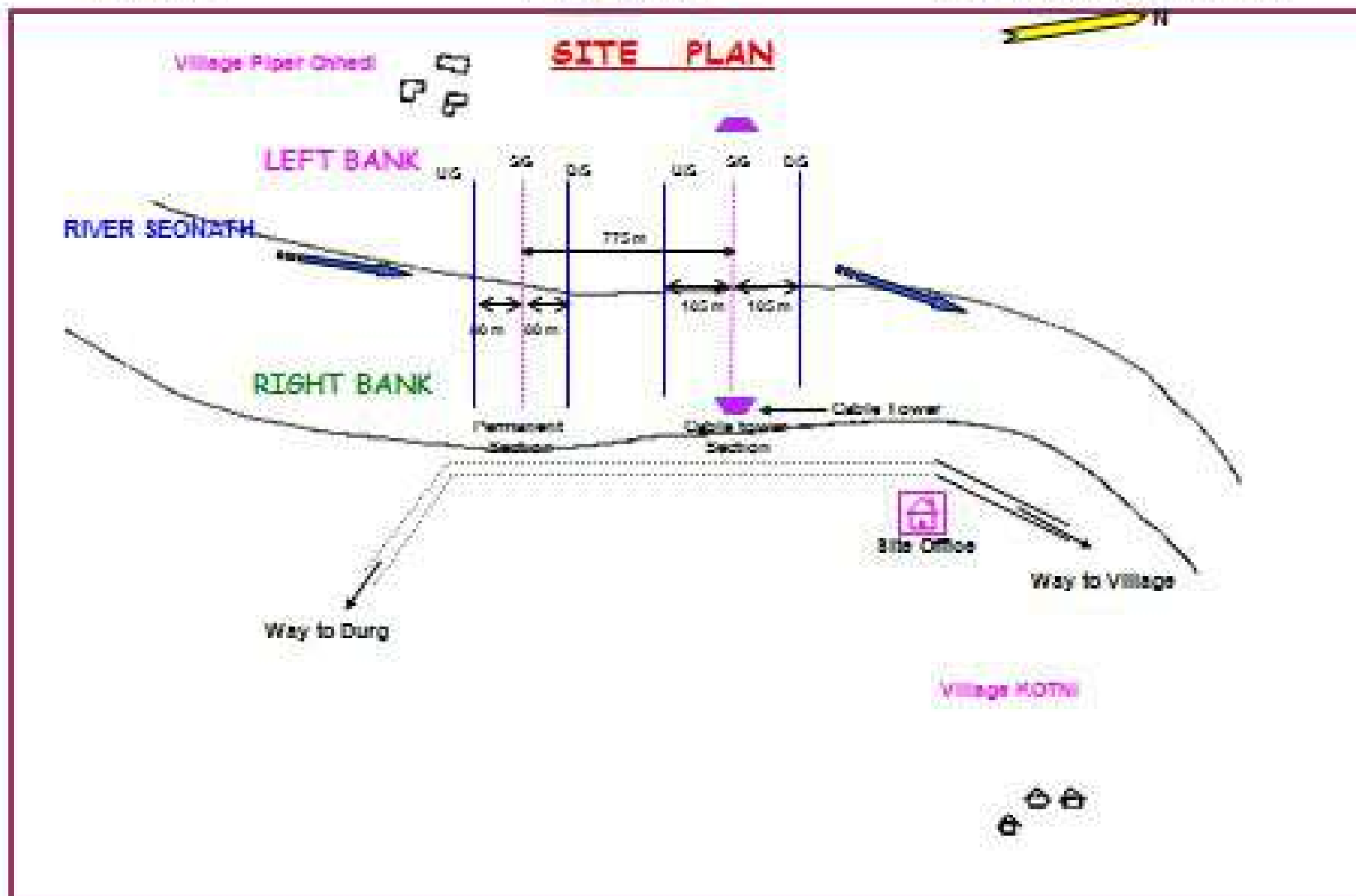
Station Name : Kotni (EMP00P8)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Kotni (EMP00P8)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
<u>Ten Daily Mean</u>																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 313282

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Kotni (EMP00P8)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	130.5	0.000	0.000	0.350	0.350	3947	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	126.5	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	103.9	0.000	0.000	0.470	0.470	4221	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	375.4	0.000	0.000	1.250	1.250	40545	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	656.8	0.000	0.000	1.430	1.430	81146	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	494.9	0.000	0.000	2.120	2.120	90642	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	479.1	0.000	0.000	1.320	1.320	54638	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	455.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	270.0	0.000	0.000	0.850	0.850	19827	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	249.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	117.9	0.000	0.000	0.490	0.490	4993	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	110.4	0.000	0.000	0.620	0.620	5916	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	136.1	0.000	0.000	0.630	0.630	7408	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							0.000	0.000	0.000	0.000	0.000	0						
<u>Ten Daily Mean</u>																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	36.10	0.000	0.000	0.082	0.082	817	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	334.5	0.000	0.000	0.871	0.871	30511	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						305114						8168						0

Annual Sediment Load (Metric Tonnes) : 313282

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Kotni (EMP00P8)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 313282

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Kotni (EMP00P8)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
<u>Ten Daily Mean</u>																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 313282

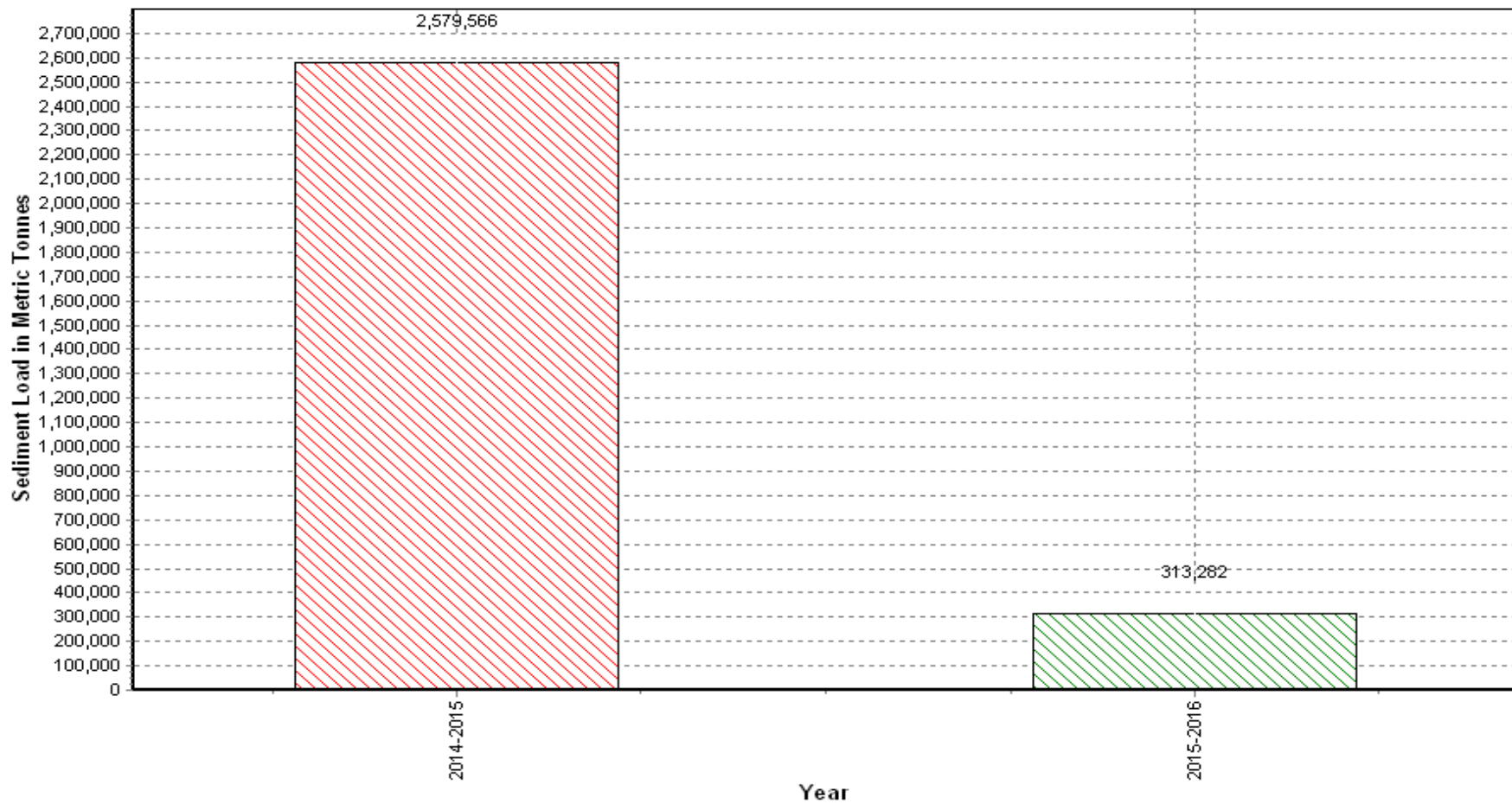
Annual Sediment Load for period : 2014-2016**Station Name : Kotni (EMP00P8)****Local River : Seonath****Division : MD,CWC,Burla****Sub-Division : UMSD,CWC,Raipur**

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2014-2015	2579566	0	2579566	1931
2015-2016	313282	0	313282	320

Annual Sediment Load for the period: 2014-2016

Station Name : Kotni (EMP00P8)
Local River : Seonath

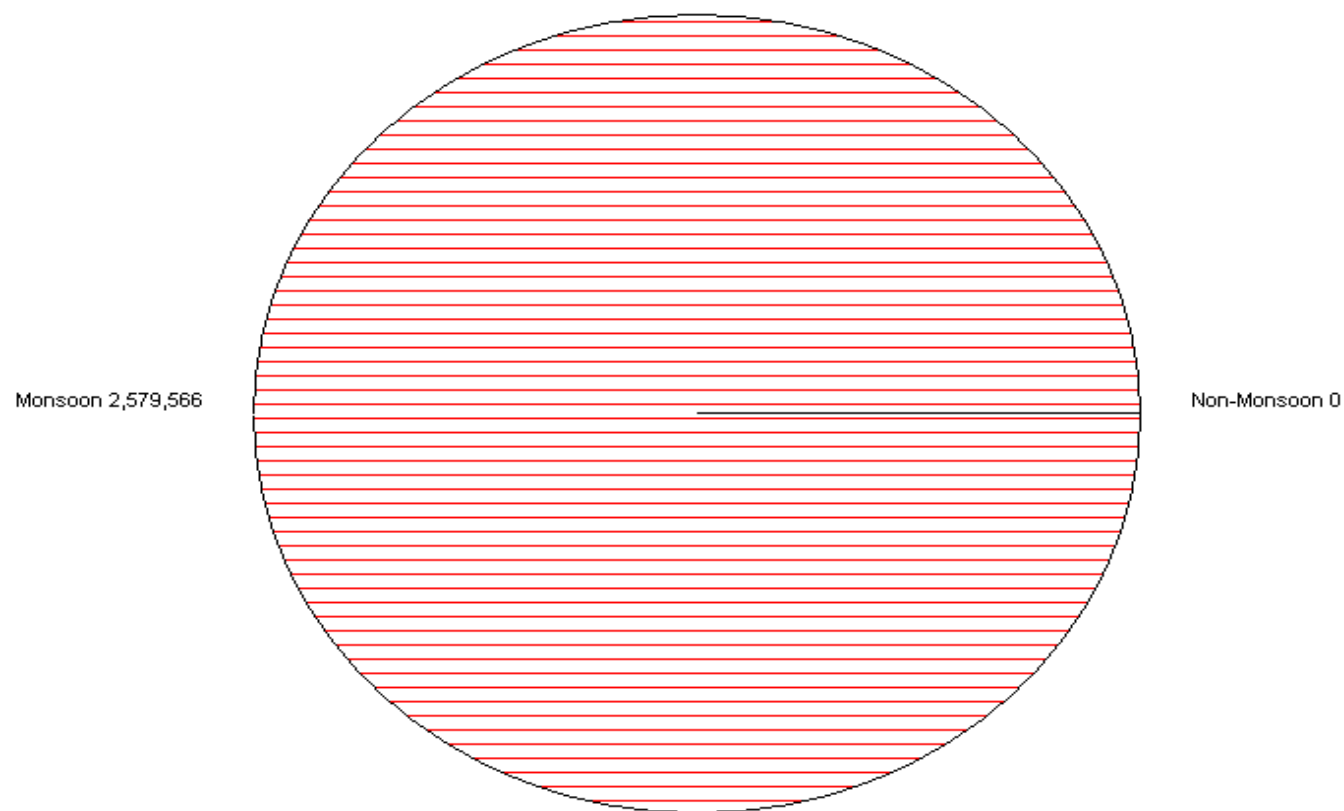
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Seasonal Sediment Load for the period : 2014-2015

Station Name : Kotni (EMP00P8)
Local River : Seonath

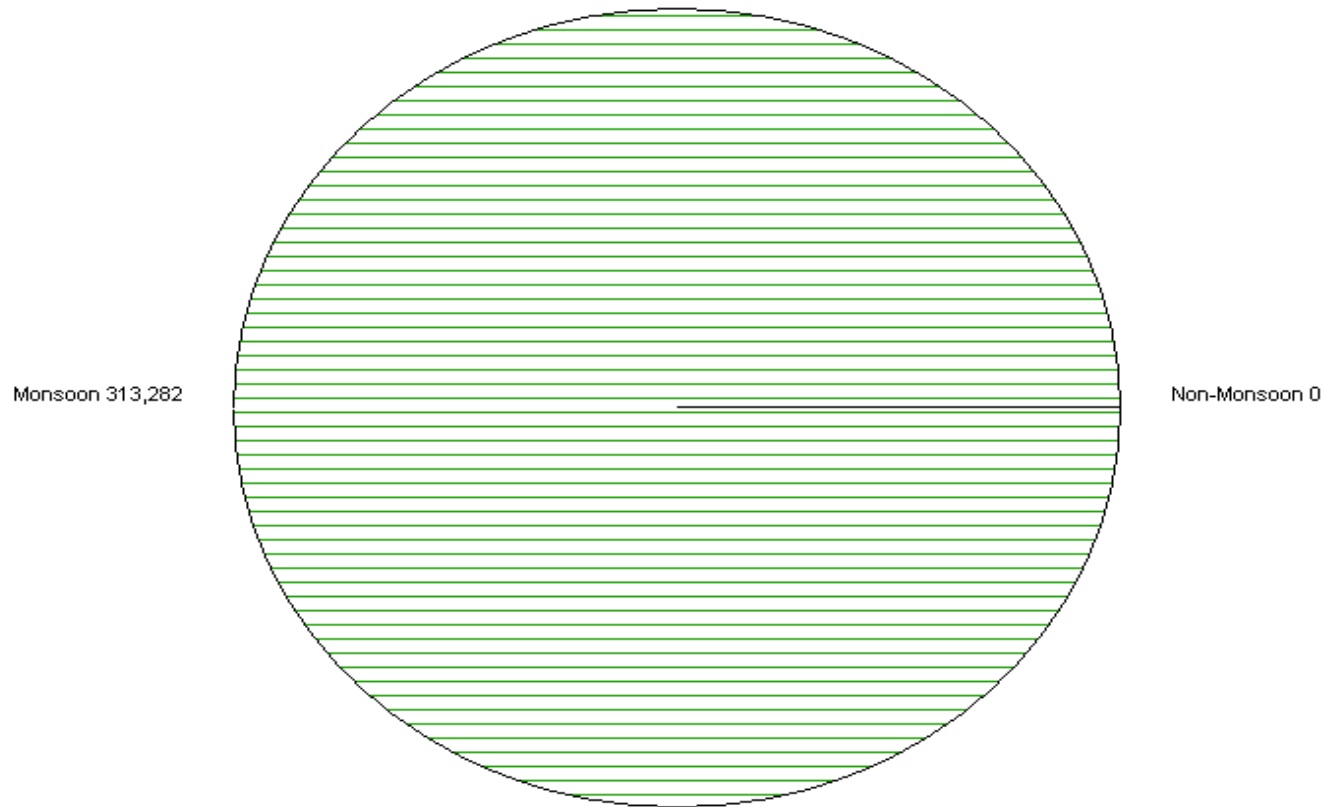
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Seasonal Sediment Load for the Year: 2015-2016

Station Name : Kotni (EMP00P8)
Local River : Seonath

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



SITE PATHARDIH

HISTORY SHEET

Water Year : 2015-2016

Site : Pathardih

Code : EMP70F3

State : Chhattisgarh

District Raipur

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Seonath

Sub Tributary :

Sub-Sub Tributary :

Local River : Kharun

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Drainage Area : 2511 Sq. Km.

Bank :

Latitude : 21°20'28"

Longitude : 81°35'48"

Zero of Gauge (m) : 271 (m.s.l)

6/12/1987 - 6/12/2017

Opening Date

Closing Date

Gauge : 6/12/1987

Discharge : 6/5/1989

Sediment :

Water Quality : 6/1/1995

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1990-1991	1115	277.140	8/23/1990	0.080	272.110	4/17/1991
1991-1992	1170	277.190	8/24/1991	0.146	272.045	5/18/1992
1992-1993	1618	278.220	7/29/1992	0.050	272.085	4/30/1993
1993-1994	595.2	275.670	8/20/1993	0.125	272.200	5/12/1994
1994-1995	1695	279.210	7/12/1994	1.009	272.290	6/6/1994
1995-1996	1554	278.115	7/25/1995	0.113	272.165	6/12/1995
1996-1997	1163	279.145	8/2/1996	0.099	272.120	7/11/1996
1997-1998	1092	277.860	8/23/1997	0.215	272.170	5/29/1998
1998-1999	235.1	274.570	7/11/1998	0.028	272.200	2/22/1999
1999-2000	1255	277.485	8/31/1999	0.094	272.155	4/14/2000
2000-2001	875.4	276.830	7/20/2000	0.100	272.215	10/16/2000
2001-2002	968.3	276.475	7/10/2001	0.375	272.180	2/28/2002
2002-2003	350.0	274.830	8/18/2002	0.170	272.115	7/12/2002
2003-2004	1243	277.450	8/29/2003	0.139	272.180	2/17/2004
2004-2005	706.3	276.233	7/30/2004	0.060	272.360	2/28/2005
2005-2006	2000	278.600	9/14/2005	0.156	272.155	4/5/2006
2006-2007	1500	278.920	8/14/2006	0.130	272.160	2/28/2007
2007-2008	909.0	279.630	7/1/2007	0.451	272.085	12/18/2007
2008-2009	878.7	276.915	9/20/2008	0.594	272.490	11/25/2008
2009-2010	646.2	276.085	7/22/2009	1.090	272.235	11/9/2009
2010-2011	753.5	276.565	8/7/2010	0.430	272.140	12/3/2010
2011-2012	1441	277.865	9/8/2011	0.302	272.160	12/6/2011
2012-2013	1103	277.505	8/4/2012	0.338	272.065	11/12/2012
2013-2014	1300	278.270	8/1/2013	0.806	272.110	11/15/2013
2014-2015	1284	278.705	7/23/2014	0.000	272.035	2/8/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : Pathardih (EMP70F3)

Division : MD,CWC,Burla

Local River : Kharun

Sub-Division : UMSD,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	272.700	0.000 *	272.390	11.77	272.190	9.093	272.880	21.20	272.388	10.13	272.240	3.300 *
2	272.650	0.000 *	272.850	29.58	272.120	8.221 *	272.880	21.29	272.340	9.500 *	272.230	3.211
3	272.630	0.000 *	273.150	87.02	272.110	7.609	272.670	15.14	272.315	8.417	272.220	2.704
4	272.620	0.000 *	273.143	74.79	272.145	8.773	272.498	17.68	272.300	8.100 *	272.230	2.847
5	272.675	0.000 *	273.020	62.50 *	272.330	10.04	272.373	11.15	272.560	18.65	272.210	2.531
6	272.690	0.000 *	272.710	37.62	272.180	8.666	272.255	4.950 *	272.450	15.34	272.190	1.114
7	272.715	0.000 *	272.550	18.25	272.165	7.125 *	272.260	9.596	272.460	15.93	272.170	0.787
8	272.660	0.000 *	272.430	16.85	272.135	7.402	272.280	9.851	272.430	14.16	272.160	0.850 *
9	272.610	0.000 *	272.190	8.782	272.125	7.215 *	272.240	6.570	272.395	12.19	272.150	0.000
10	272.530	0.000 *	272.585	18.69	272.115	6.305	272.160	5.001	272.375	11.48	272.140	0.000 *
11	272.470	0.000 *	273.255	80.57	272.110	6.225	272.408	4.947	272.430	14.10 *	272.160	0.000 *
12	272.460	0.000 *	273.620	110.0 *	272.100	6.016	272.155	4.862	272.430	12.90	272.150	0.000 *
13	272.465	0.000 *	273.330	84.93	272.740	17.14	272.165	4.950 *	272.440	13.06	272.145	0.000 *
14	272.490	0.000 *	273.180	78.47	272.970	23.99	272.185	5.211	272.475	16.44	272.165	0.000 *
15	272.440	0.000 *	272.910	42.74	272.455	12.00 *	272.185	5.102	272.510	17.52	272.150	0.000 *
16	272.515	0.000 *	272.648	26.71	272.280	9.500 *	272.360	7.775	272.530	18.68	272.170	0.000 *
17	272.585	0.000 *	272.760	49.07	272.688	15.32	274.640	305.3 *	272.535	19.02	272.190	0.000 *
18	272.650	0.000 *	273.385	87.63 *	272.488	13.00	274.810	321.9	272.540	19.10 *	272.180	0.000 *
19	272.630	0.000 *	273.170	70.00 *	272.298	9.824	274.260	221.5	272.540	18.75	272.175	0.000 *
20	272.570	0.000 *	272.938	56.22	272.210	7.402	273.890	160.0 *	272.560	19.45	272.160	0.000 *
21	272.540	0.000 *	272.728	40.57	272.905	21.94	274.070	185.2	272.610	21.53	272.150	0.000 *
22	272.805	43.74	272.905	49.79	272.185	7.642	274.230	214.7	272.610	21.50 *	272.150	0.000 *
23	273.140	71.42	273.355	85.48	272.180	7.500 *	273.970	171.1	272.480	16.84	272.175	0.000 *
24	273.820	165.8	274.460	250.5	272.175	6.690	273.525	113.9	272.405	10.05 *	272.170	0.000 *
25	273.370	104.6	274.125	194.6	272.165	6.584	273.210	75.00 *	272.375	6.500 *	272.180	0.000 *
26	272.970	43.50	273.470	100.0 *	272.155	6.203	272.990	25.59	272.420	11.47	272.190	0.000 *
27	272.680	26.83	273.050	61.12	272.350	10.96	272.760	17.05 *	272.350	6.266	272.170	0.000 *
28	272.515	24.15 *	272.730	42.23	272.443	12.01	272.728	16.45	272.280	4.973	272.160	0.000 *
29	272.500	23.87	272.465	17.66	272.348	10.77	272.550	27.97	272.390	10.55	272.150	0.000 *
30	272.420	12.65	272.310	9.000	272.900	22.20 *	272.243	16.51	272.320	5.145	272.140	0.000 *
31			272.228	10.14	272.940	24.49			272.280	4.518		
Ten-Daily Mean												
I Ten-Daily	272.648	0.000	272.702	36.58	272.161	8.045	272.449	12.24	272.401	12.39	272.194	1.734
II Ten-Daily	272.528	0.000	273.119	68.63	272.434	12.04	273.106	104.2	272.499	16.90	272.164	0.000
III Ten-Daily	272.876	51.66	273.075	78.28	272.431	12.45	273.227	86.34	272.411	10.85	272.163	0.000
Monthly												
Min.	272.420	0.000	272.190	8.782	272.100	6.016	272.155	4.862	272.280	4.518	272.140	0.000
Max.	273.820	165.8	274.460	250.5	272.970	24.49	274.810	321.9	272.610	21.53	272.240	3.300
Mean	272.684	17.22	272.969	61.72	272.345	10.9	272.928	67.58	272.436	13.3	272.174	0.578

Annual Runoff in MCM = 451 Annual Runoff in mm = 180

Peak Observed Discharge = 321.9 cumecs on 18/09/2015 Corres. Water Level :274.81 m

Lowest Observed Discharge = 0.000 cumecs on 09/11/2015 Corres. Water Level :272.15 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : Pathardih (EMP70F3)

Division : MD,CWC,Burla

Local River : Kharun

Sub-Division : UMSD,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	272.100	0.000 *	272.140	0.000 *	272.130	0.000 *	272.145	0.000 *	272.150	0.000 *	272.125	0.000 *
2	272.080	0.000 *	272.145	0.000 *	272.135	0.000 *	272.140	0.000 *	272.155	0.000 *	272.115	0.000 *
3	272.070	0.000 *	272.150	0.000 *	272.140	0.000 *	272.130	0.000 *	272.150	0.000 *	272.115	0.000 *
4	272.110	0.000 *	272.140	0.000 *	272.140	0.000 *	272.120	0.000 *	272.145	0.000 *	272.110	0.000 *
5	272.140	0.000 *	272.135	0.000 *	272.145	0.000 *	272.125	0.000 *	272.135	0.000 *	272.105	0.000 *
6	272.160	0.000 *	272.130	0.000 *	272.140	0.000 *	272.125	0.000 *	272.155	0.000 *	272.100	0.000 *
7	272.155	0.000 *	272.120	0.000 *	272.135	0.000 *	272.130	0.000 *	272.150	0.000 *	272.105	0.000 *
8	272.150	0.000 *	272.140	0.000 *	272.120	0.000 *	272.135	0.000 *	272.145	0.000 *	272.110	0.000 *
9	272.170	0.000 *	272.140	0.000 *	272.125	0.000 *	272.140	0.000 *	272.140	0.000 *	272.105	0.000 *
10	272.150	0.000 *	272.145	0.000 *	272.130	0.000 *	272.145	0.000 *	272.145	0.000 *	272.090	0.000 *
11	272.160	0.000 *	272.130	0.000 *	272.135	0.000 *	272.150	0.000 *	272.155	0.000 *	272.080	0.000 *
12	272.145	0.000 *	272.130	0.000 *	272.140	0.000 *	272.150	0.000 *	272.150	0.000 *	272.075	0.000 *
13	272.140	0.000 *	272.125	0.000 *	272.145	0.000 *	272.140	0.000 *	272.145	0.000 *	272.070	0.000 *
14	272.140	0.000 *	272.135	0.000 *	272.155	0.000 *	272.135	0.000 *	272.140	0.000 *	272.065	0.000 *
15	272.130	0.000 *	272.130	0.000 *	272.150	0.000 *	272.130	0.000 *	272.135	0.000 *	272.060	0.000 *
16	272.150	0.000 *	272.140	0.000 *	272.145	0.000 *	272.140	0.000 *	272.130	0.000 *	272.065	0.000 *
17	272.155	0.000 *	272.140	0.000 *	272.140	0.000 *	272.150	0.000 *	272.125	0.000 *	272.070	0.000 *
18	272.160	0.000 *	272.145	0.000 *	272.135	0.000 *	272.145	0.000 *	272.125	0.000 *	272.075	0.000 *
19	272.150	0.000 *	272.135	0.000 *	272.130	0.000 *	272.140	0.000 *	272.120	0.000 *	272.080	0.000 *
20	272.140	0.000 *	272.140	0.000 *	272.120	0.000 *	272.150	0.000 *	272.125	0.000 *	272.085	0.000 *
21	272.160	0.000 *	272.150	0.000 *	272.120	0.000 *	272.145	0.000 *	272.130	0.000 *	272.080	0.000 *
22	272.170	0.000 *	272.150	0.000 *	272.125	0.000 *	272.140	0.000 *	272.135	0.000 *	272.085	0.000 *
23	272.180	0.000 *	272.145	0.000 *	272.135	0.000 *	272.135	0.000 *	272.130	0.000 *	272.090	0.000 *
24	272.170	0.000 *	272.140	0.000 *	272.135	0.000 *	272.130	0.000 *	272.125	0.000 *	272.095	0.000 *
25	272.160	0.000 *	272.140	0.000 *	272.140	0.000 *	272.125	0.000 *	272.120	0.000 *	272.100	0.000 *
26	272.150	0.000 *	272.150	0.000 *	272.145	0.000 *	272.120	0.000 *	272.110	0.000 *	272.090	0.000 *
27	272.155	0.000 *	272.160	0.000 *	272.150	0.000 *	272.115	0.000 *	272.110	0.000 *	272.090	0.000 *
28	272.160	0.000 *	272.150	0.000 *	272.155	0.000 *	272.120	0.000 *	272.115	0.000 *	272.090	0.000 *
29	272.135	0.000 *	272.145	0.000 *	272.150	0.000 *	272.130	0.000 *	272.120	0.000 *	272.095	0.000 *
30	272.130	0.000 *	272.140	0.000 *			272.140	0.000 *	272.125	0.000 *	272.100	0.000 *
31	272.120	0.000 *	272.130	0.000 *			272.145	0.000 *			272.110	0.000 *
<u>Ten-Daily Mean</u>												
I Ten-Daily	272.128	0.000	272.139	0.000	272.134	0.000	272.133	0.000	272.147	0.000	272.108	0.000
II Ten-Daily	272.147	0.000	272.135	0.000	272.139	0.000	272.143	0.000	272.135	0.000	272.073	0.000
III Ten-Daily	272.154	0.000	272.145	0.000	272.139	0.000	272.131	0.000	272.122	0.000	272.093	0.000
<u>Monthly</u>												
Min.	272.070	0.000	272.120	0.000	272.120	0.000	272.115	0.000	272.110	0.000	272.060	0.000
Max.	272.180	0.000	272.160	0.000	272.155	0.000	272.150	0.000	272.155	0.000	272.125	0.000
Mean	272.143	0	272.140	0	272.138	0	272.136	0	272.135	0	272.091	0

Peak Computed Discharge = 305.3 cumecs on 17/09/2015

Corres. Water Level :274.64 m

Lowest Computed Discharge = 0.000 cumecs on 01/06/2015

Corres. Water Level :272.7 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

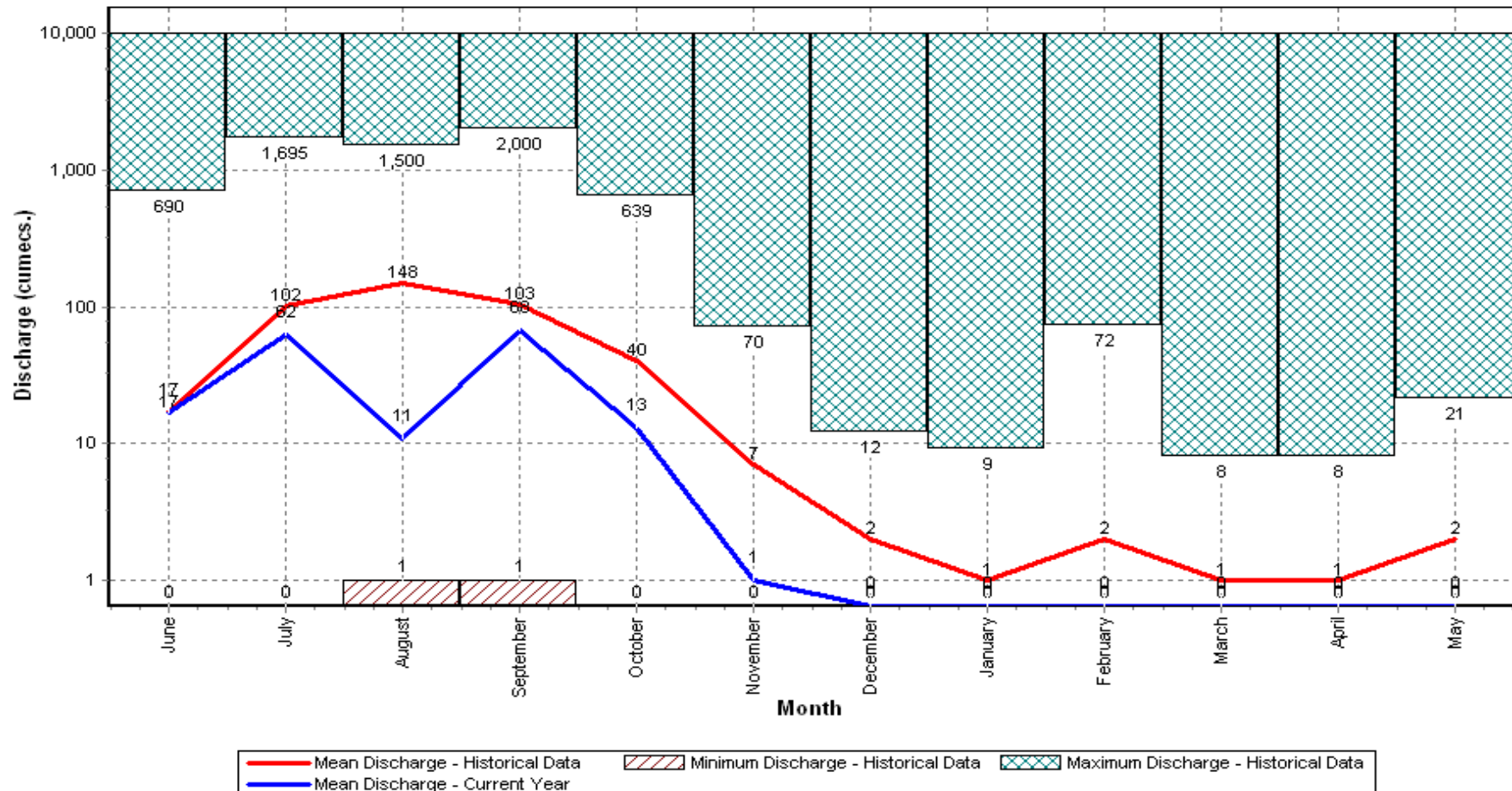
Station Name : Pathardih (EMP70F3)

Local River : Kharun

Data considered : 1990-2016

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



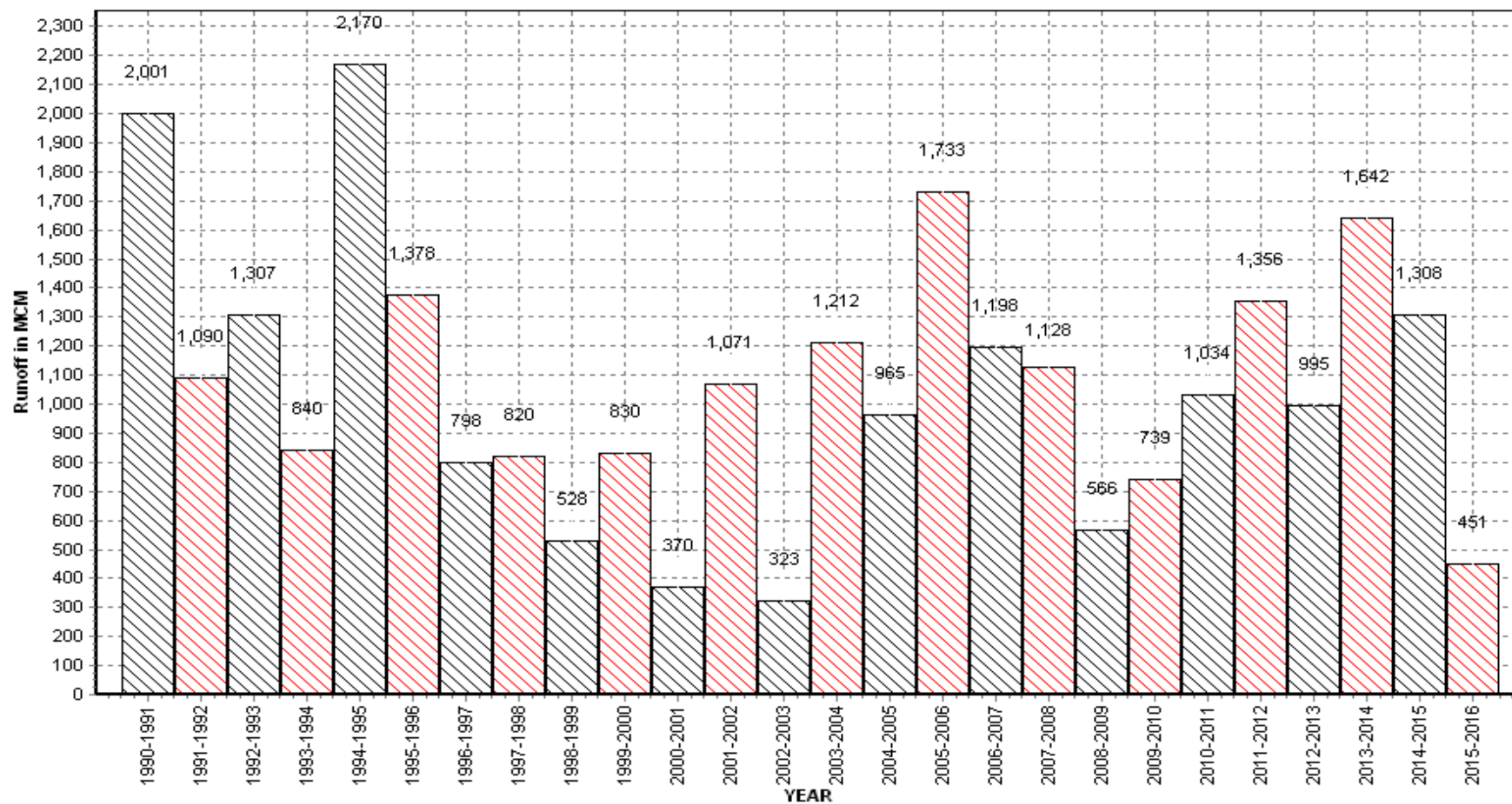
Annual Runoff Values for the period: 1990 - 2016

Station Name : Pathardih (EMP70F3)

Local River : Kharun

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



Note: Missing values have not been considered while arriving at Annual Runoff

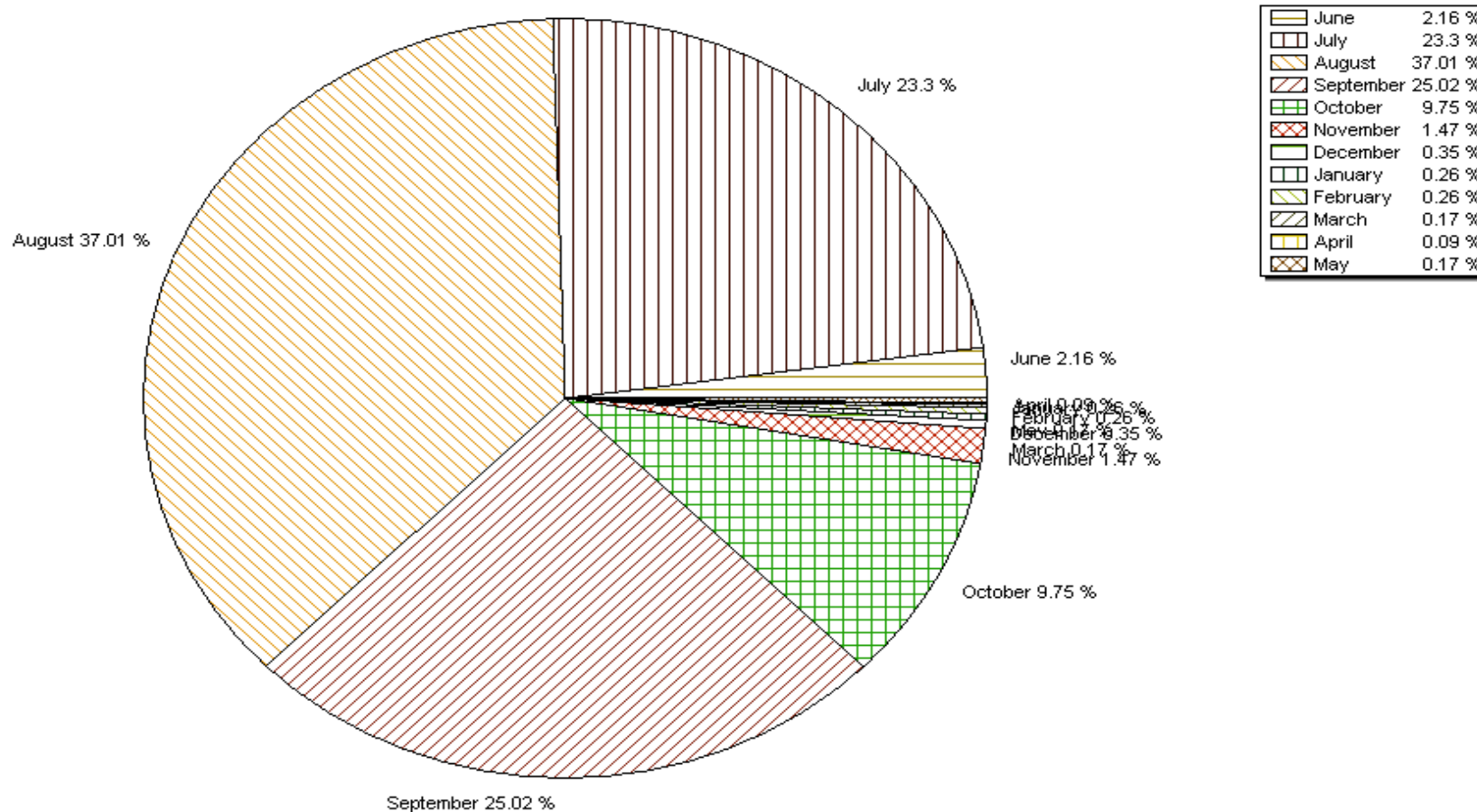
Monthly Average Runoff based on period : 1990-2015

Station Name : Pathardih (EMP70F3)

Local River : Kharun

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



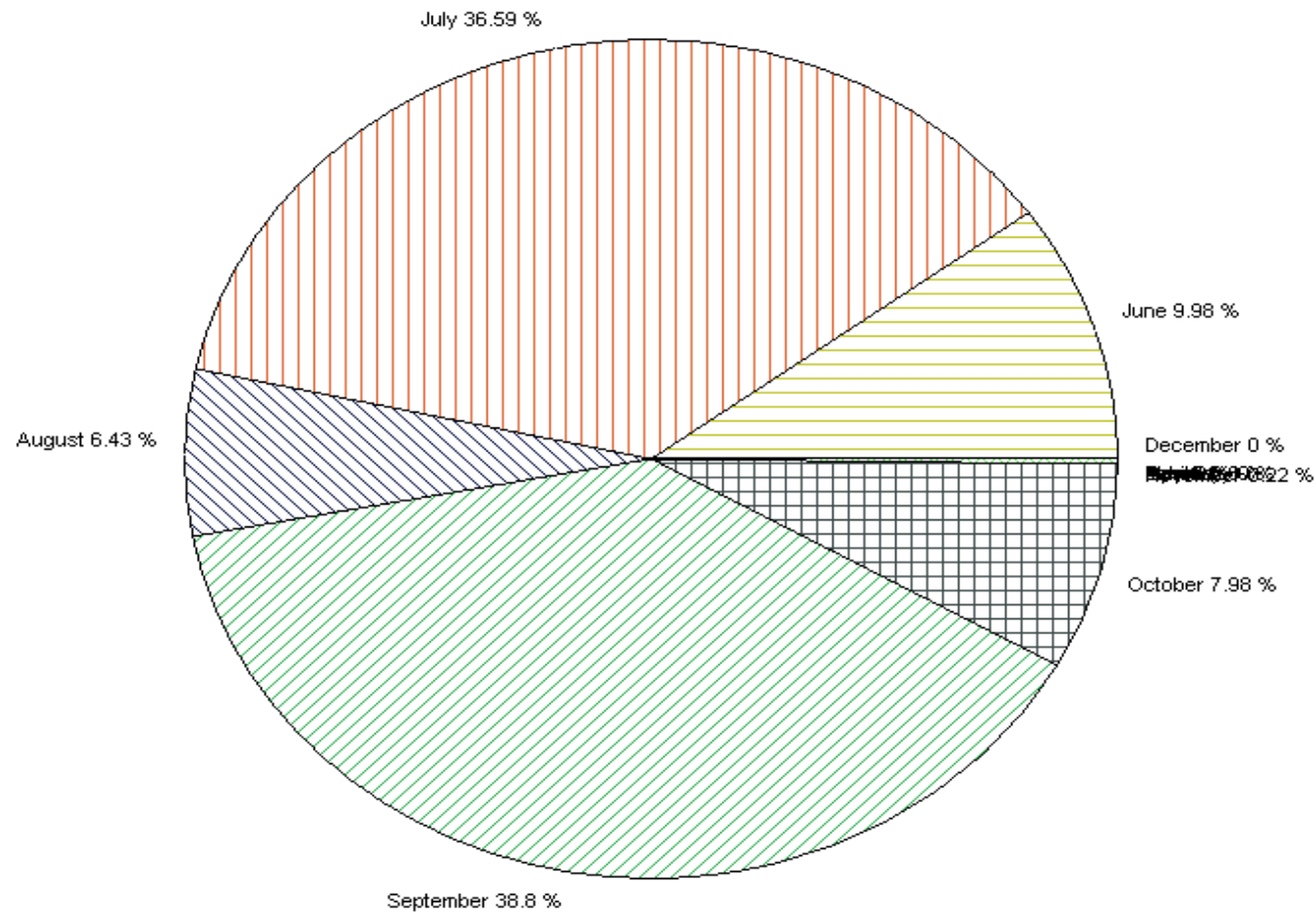
Monthly Runoff for the Year : 2015-2016

Station Name : Pathardih (EMP70F3)

Local River : Kharun

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



June	9.98 %
July	36.59 %
August	6.43 %
September	38.8 %
October	7.98 %
November	0.22 %
December	0 %
January	0 %
February	0 %
March	0 %
April	0 %
May	0 %

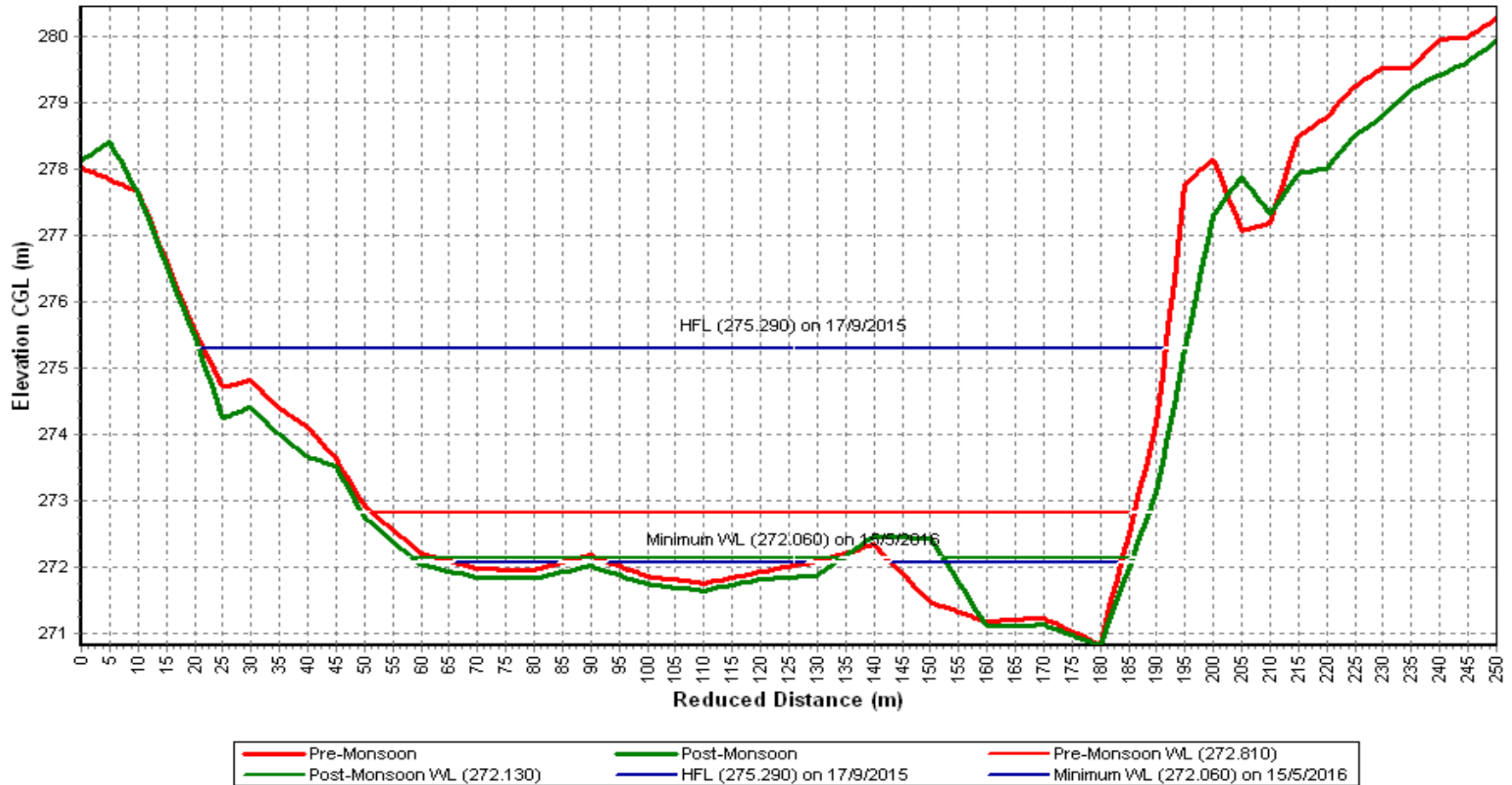
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Pathardih (EMP70F3)

Local River : Kharun

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



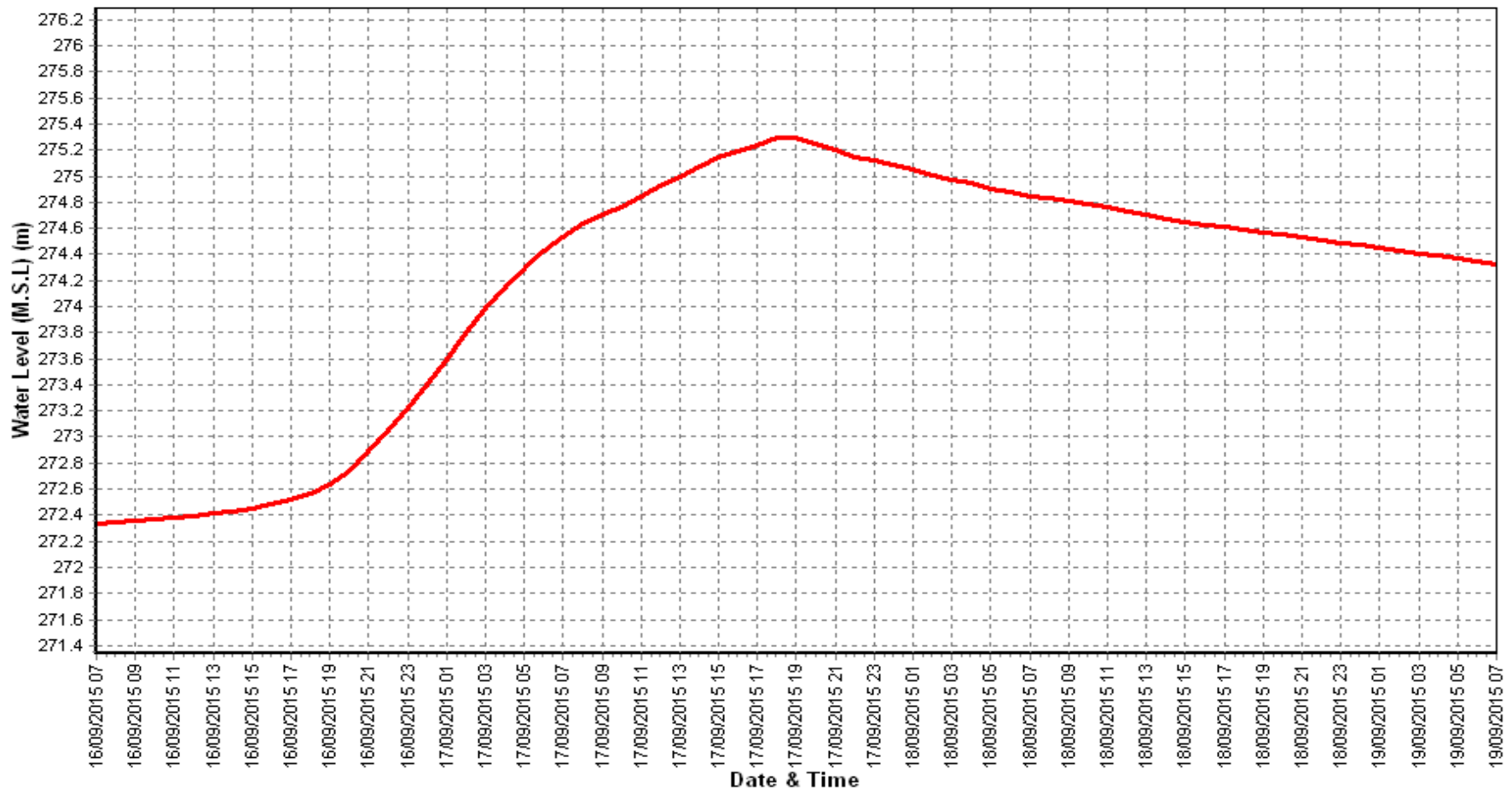
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Pathardih (EMP70F3)

Local River : Kharun

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



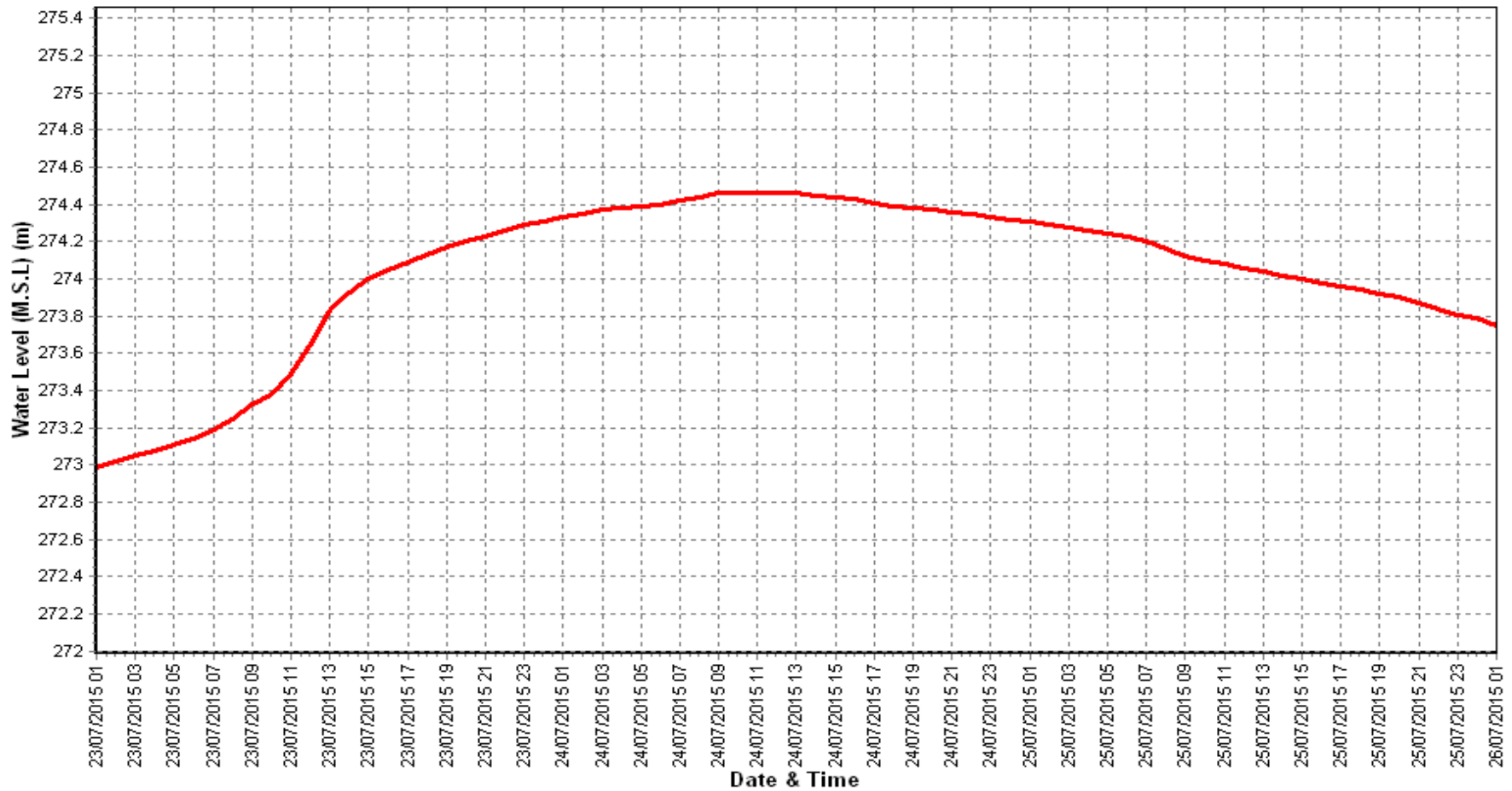
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Pathardih (EMP70F3)

Local River : Kharun

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



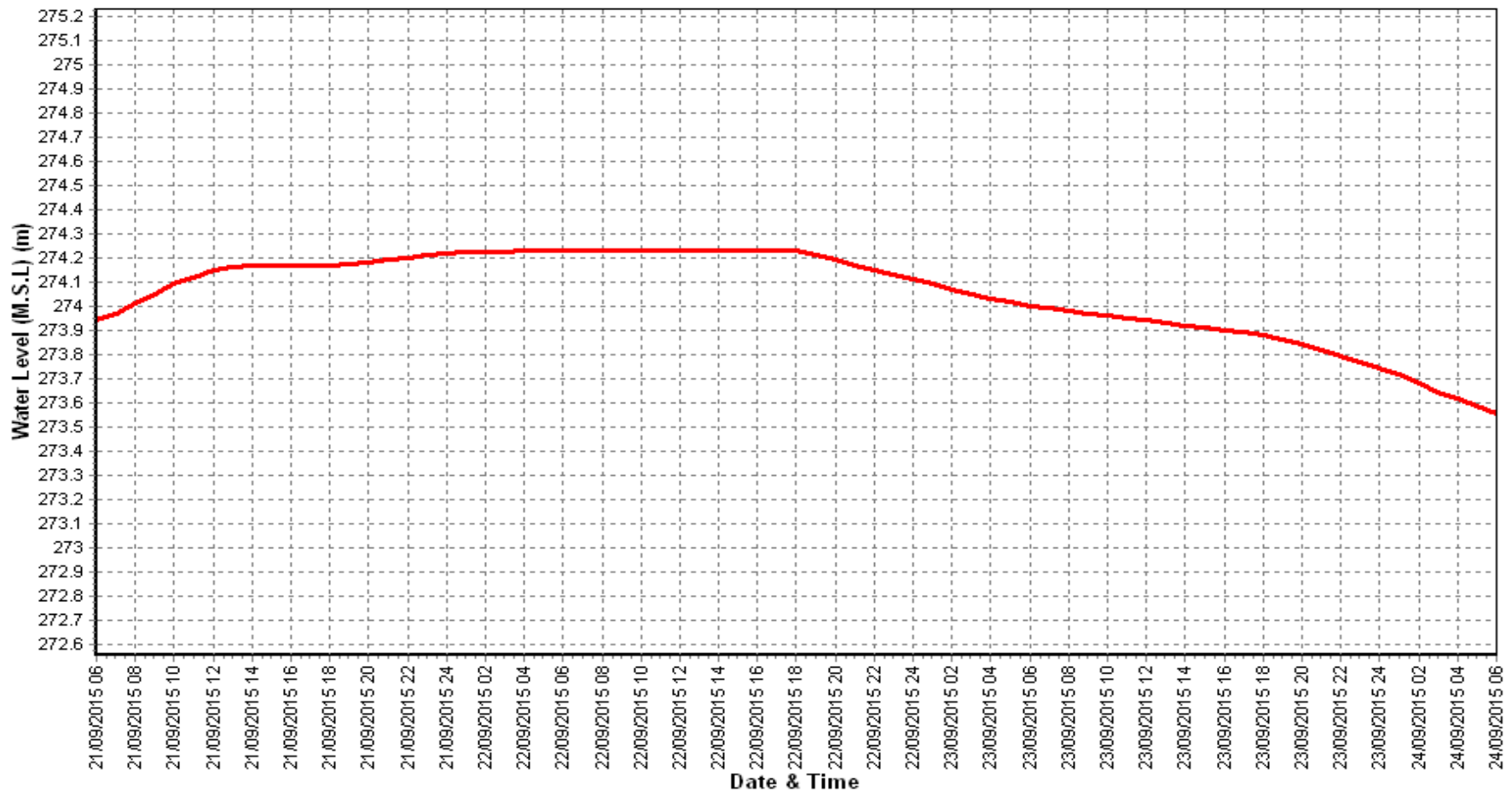
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

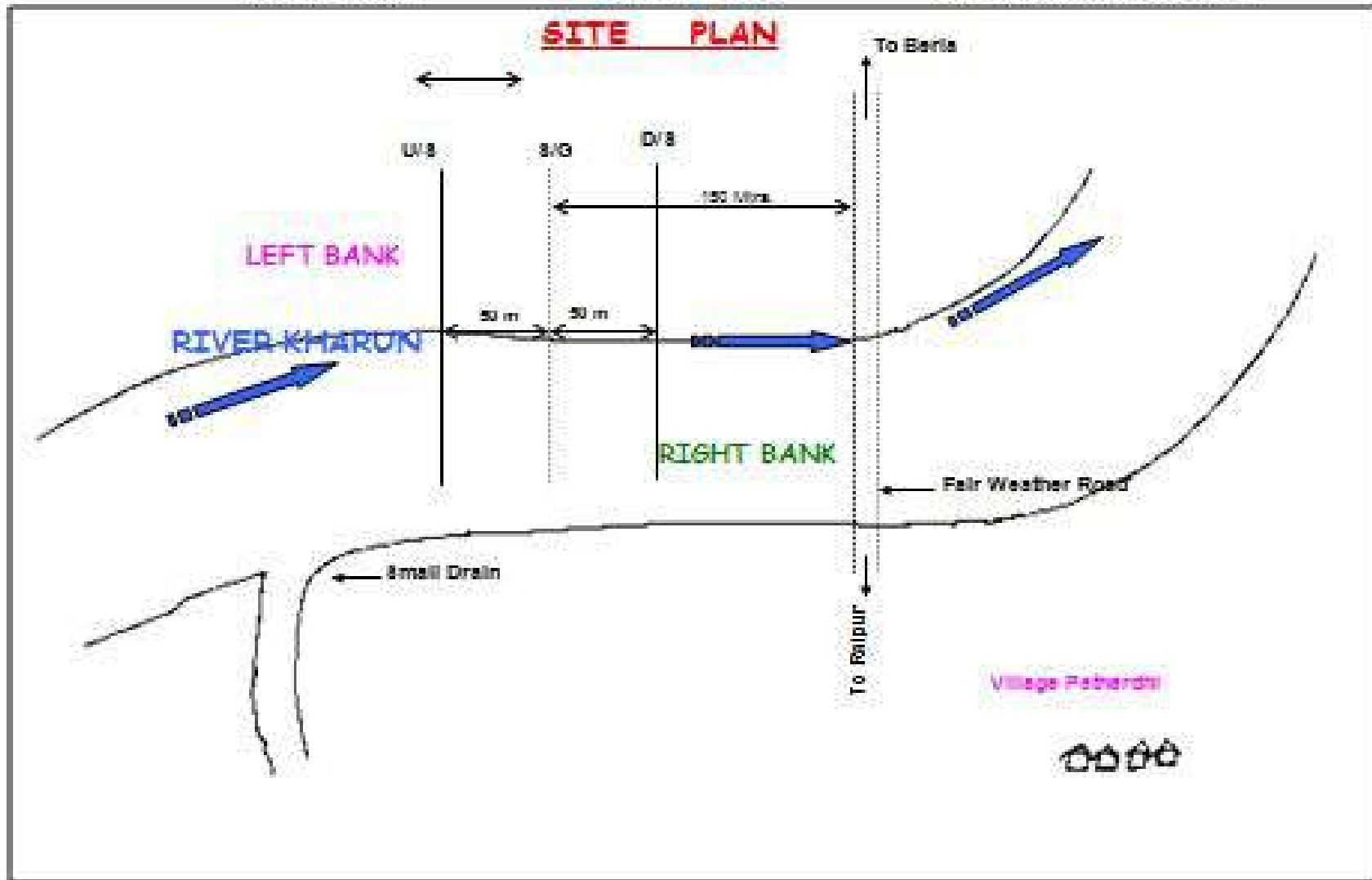
Station Name : Pathardih (EMP70F3)

Local River : Kharun

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur





SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Pathardih (EMP70F3)

Local River : Kharun

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	11.77	9.093	21.20	10.13	3.211	0.000	0.000	0.000	0.000	0.000	0.000
2	Colour_Cod (-)		Light Brown	Light Brown	Light Brown	Clear	Clear	Clear					
3	EC_FLD (μmho/cm)				130	133	153	188					
4	EC_GEN (μmho/cm)		387	95	332	323	401	508					
5	Odour_Code (-)		odour free	odour free	odour free	odour free	odour free	odour free					
6	pH_FLD (pH units)		7.8	7.6	8.1	8.3	8.0	8.0					
7	pH_GEN (pH units)		7.5	7.7	7.4	7.9	7.7	7.6					
8	Temp (deg C)		32.2	28.6	29.8	30.7	27.2	24.9					
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)		0.0	13.9	0.0	0.0	0.0	0.0					
2	ALK-TOT (mgCaCO3/L)		248	224	272	260	176	328					
3	Ca (mg/L)		45	42	37	42	55	55					
4	Cl (mg/L)		56.0	32.0	35.0	32.0	22.0	64.0					
5	CO3 (mg/L)		0.0	16.8	0.0	0.0	0.0	0.0					
6	HCO3 (mg/L)		151	120	166	159	107	200					
7	K (mg/L)		6.7	8.3	8.4	10.5	6.2	5.8					
8	Mg (mg/L)		9.7	14.6	16.5	13.6	6.8	23.3					
9	Na (mg/L)		27.6	20.0	24.9	26.9	25.4	21.9					
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)		1.3	0.6	0.6	0.9	0.9	0.8					
2	DO (mg/L)		2.5	5.4	3.9	5.3	3.6	2.5					
3	DO_SAT% (%)		34	69	51	70	45	30					
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)		112	104	92	104	136	136					
2	HAR_Total (mgCaCO3/L)		153	165	161	161	165	233					
3	Na% (%)		27	20	24	25	24	17					
4	RSC (-)		0.0	0.0	0.0	0.0	0.0	0.0					
5	SAR (-)		1.0	0.7	0.9	0.9	0.9	0.6					
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Pathardih (EMP70F3)

Division : MD,CWC,Burla

Local River : Kharun

Sub-Division : UMSD,CWC,Raipur

River Water Summary					
S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
PHYSICAL					
1	Q (cumec)	366	321.9	0.000	14.28
2	EC_FLD (µmho/cm)	4	188	130	151
3	EC_GEN (µmho/cm)	6	508	95	341
4	pH_FLD (pH units)	6	8.3	7.6	8
5	pH_GEN (pH units)	6	7.9	7.4	7.6
6	Temp (deg C)	6	32.2	24.9	28.9
CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	6	13.9	0.0	2.3
2	ALK-TOT (mgCaCO3/L)	6	328	176	251
3	Ca (mg/L)	6	55	37	46
4	Cl (mg/L)	6	64.0	22.0	40.2
5	CO3 (mg/L)	6	16.8	0.0	2.8
6	HCO3 (mg/L)	6	200	107	150
7	K (mg/L)	6	10.5	5.8	7.6
8	Mg (mg/L)	6	23.3	6.8	14.1
9	Na (mg/L)	6	27.6	20.0	24.4
BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	6	1.3	0.6	0.8
2	DO (mg/L)	6	5.4	2.5	3.9
3	DO_SAT% (%)	6	70	30	50
TRACE & TOXIC					
CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	6	136	92	114
2	HAR_Total (mgCaCO3/L)	6	233	153	173
3	Na% (%)	6	27	17	23
4	RSC (-)	6	0.0	0.0	0
5	SAR (-)	6	1.0	0.6	0.8
PESTICIDES					

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Pathardih (EMP70F3)

Local River : Kharun

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	21.65	32.30	113.5	62.85	392.7	299.8	222.4	43.70	83.23	91.14	190.6	158.5	378.6	40.48	10.44	1.531	4.861	6.353	9.876	5.384
2	EC_FLD (µmho/cm)	406	263	203	555	308	224	241								131	415	290	430	629	510
3	EC_GEN (µmho/cm)	406	263	203	555	308	224	216	341	285	268	313	313	276	393	284	415	290	430	629	510
4	pH_FLD (pH units)	7.6	8.1	7.7	7.7	7.4	7.6	7.6				7.3	6.0	7.0	7.5	7.9	7.6	8.3	8.0	7.7	7.4
5	pH_GEN (pH units)	7.6	8.1	7.7	7.7	7.4	7.6	7.6	7.6	7.9	7.4	7.6	7.5	8.2	7.7	7.6	7.6	8.3	8.0	7.7	7.3
6	Temp (deg C)	29.2	28.8	29.5	30.0	29.4	26.1	29.0	25.5	27.0	29.2	27.5	28.8	30.8	32.4	30.3	20.6	27.0	22.5	23.3	24.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	2.2	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0	9.7	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	294	153	199	222	171		162	255	191	187	219	222	208	235	251	307	207	425	341	334
3	B (mg/L)					0.05		0.01	0.01	0.00	0.00	0.00	0.00								0.05
4	Ca (mg/L)	33	21	22	30	22		18	25	20	20	24	28	29	35	41	36	29	41	42	28
5	Cl (mg/L)	11.4	7.9	34.0	14.7	35.2		13.7	20.8	13.3	8.7	11.6	12.6	33.0	28.3	38.8	9.2	7.0	29.6	28.2	61.9
6	CO3 (mg/L)	0.0	2.7	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	0.0	11.6	0.0	0.0	0.0
7	F (mg/L)			1.62		0.30		0.13	0.15	0.21	0.18	0.22	0.26						1.36	1.33	0.14
8	Fe (mg/L)					0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1								0.1
9	HCO3 (mg/L)	179	90	121	166	104		99	155	117	114	134	136	127	143	149	187	114	256	208	204
10	K (mg/L)	4.6	5.7			5.1		2.4	4.1	3.6	4.9	4.9	3.4	6.8	10.8	8.5	4.6			8.9	7.3
11	Mg (mg/L)	8.9	5.7	4.0	24.3	7.5		6.8	15.2	13.3	12.6	14.6	15.6	10.0	11.4	13.6	11.3	6.0	16.5	19.4	20.8
12	Na (mg/L)	7.6	9.6			19.5		15.4	12.9	14.6	17.5	13.5	9.9	13.3	17.1	24.8	9.9			43.0	35.1
13	NO2+NO3 (mg N/L)	0.73	0.64			0.13	0.13	0.10	0.80								0.66			0.79	0.39
14	NO2-N (mgN/L)					0.00	0.01	0.01	0.01	0.02	0.03	0.04	0.05								0.00
15	NO3-N (mgN/L)					0.12	0.09	0.09	0.79												0.39
16	P-Tot (mgP/L)			0.020		0.023		0.017	0.053	0.047	0.070	0.053	0.103						0.080	0.020	0.018
17	SiO2 (mg/L)					8.5		14.8	18.3	21.9	15.3	17.3	20.5								12.1
18	SO4 (mg/L)	4.3	12.0	16.1	8.0	23.0		14.3	17.3	16.7	15.9	23.5	24.2				6.5		49.8	58.2	44.9
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.9	0.7	1.5	1.0	1.1		1.4	0.9	1.7	0.7	1.1	2.0	1.1	1.2	0.8	1.5	1.7	1.1	2.0	1.1
2	COD (mg/L)							17.6	19.0	25.3	38.7	29.3	26.7								
3	DO (mg/L)	7.7	7.8	5.9	5.2	4.5		7.1	6.1	6.7	5.6	4.8	6.9	5.5	1.2	4.3	11.6	8.1	5.1	7.2	6.1
4	DO_SAT% (%)	100	101	71	69	60		92	75	84	73	61	89	74	16	56	123	102	62	84	74
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	82	54	56	74	55		44	62	51	50	61	69	73	87	103	91	72	102	106	71
2	HAR_Total (mgCaCO3/L)	119	77	72	174	86		72	126	106	103	122	134	115	135	160	138	97	170	186	158
3	Na% (%)	8	18			31		33	18	23	25	18	14	18	20	24	12			33	32
4	RSC (-)	0.3	0.2	0.6	0.0	0.0		0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.4	0.5	0.3
5	SAR (-)	0.2	0.5			0.9		0.8	0.5	0.6	0.7	0.5	0.4	0.5	0.6	0.9	0.4			1.4	1.3
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Pathardih (EMP70F3)

Local River : Kharun

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Winter Nov - Feb										Summer Mar - May													
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL																								
1	Q (cumec)	3.179	7.031	5.472	1.344	7.186	5.622	4.050	26.06	4.017	0.803					0.565									0.000
2	EC_FLD (µmho/cm)	337	428								170	497				581									
3	EC_GEN (µmho/cm)	337	445	489	490	407	396	451	286	362	455	497				581		426							
4	pH_FLD (pH units)	8.1	7.7			7.3	7.6		7.7	7.9	8.0	7.6				6.9		7.9							
5	pH_GEN (pH units)	8.1	7.7	8.0	7.9	7.5	7.8	8.2	7.7	8.1	7.6	7.6				6.9		8.1							
6	Temp (deg C)	24.0	24.8	17.7	25.0	24.6	25.8	24.0	28.9	27.0	26.1	24.3				30.5		23.5							
	CHEMICAL																								
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0		2.7							
2	ALK-TOT (mgCaCO3/L)		323	316	325	281	274	335	248	280	252	343				398		256							
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00	0.00								0.08		0.01							
4	Ca (mg/L)		27	35	34	30	30	14	35	45	55	40				56		28							
5	Cl (mg/L)		43.2	61.3	27.8	38.9	36.7	19.2	25.0	39.0	43.0	11.2				61.5		79.8							
6	CO3 (mg/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				0.0		3.3							
7	F (mg/L)		0.33	0.13	0.14	0.21	0.25	0.32								0.12		0.16							
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1	0.1	0.0								0.5		0.1							
9	HCO3 (mg/L)		197	192	198	171	167	204	151	171	154	209				243		153							
10	K (mg/L)		7.7	7.9	5.4	6.6	6.2	4.8	27.1	6.2	6.0	7.1				8.5		9.0							
11	Mg (mg/L)		18.2	18.3	19.4	17.5	16.6	9.2	10.7	15.6	15.1	14.3				17.7		9.2							
12	Na (mg/L)		23.4	42.9	27.6	17.0	24.1	59.4	19.6	15.3	23.7	12.5				36.5		34.9							
13	NO2+NO3 (mg N/L)	0.20	0.32	1.56								1.31				0.19		0.22							
14	NO2-N (mgN/L)	0.01	0.01	0.03	0.05	0.06	0.03	0.04								0.01		0.01							
15	NO3-N (mgN/L)	0.20	0.31	1.53												0.18		0.21							
16	P-Tot (mgP/L)		0.025	0.163	0.011	0.070	0.200	0.060								0.015		0.025							
17	SiO2 (mg/L)		21.4	19.5	21.0	16.1	15.0	18.4								16.5		20.0							
18	SO4 (mg/L)		32.5	33.5	12.0	29.6	28.9	19.8				6.0				29.3		25.5							
	BIOLOGICAL/BACTERIOLOGICAL																								
1	BOD3-27 (mg/L)		0.8	0.7	1.1	0.8	1.4	1.8	1.3	4.1	0.8	1.7				0.8		2.0							
2	COD (mg/L)		34.0	32.0	48.0	130.0	20.0	24.0										26.0							
3	DO (mg/L)		7.3	6.9	9.6	6.3	7.6	7.5	7.3	4.1	3.0	10.8				7.2		6.9							
4	DO_SAT% (%)		87	73	116	75	92	89	93	51	37	126				95		81							
	TRACE & TOXIC																								
	CHEMICAL INDICES																								
1	HAR_Ca (mgCaCO3/L)		68	87	84	75	74	36	88	112	136	99				139		71							
2	HAR_Total (mgCaCO3/L)		144	163	165	148	143	74	133	177	199	158				213		109							
3	Na% (%)		25	35	26	19	26	62	20	15	20	15				27		37							
4	RSC (-)		0.4	0.1	0.0	0.0	0.1	1.9	0.0	0.0	0.0	0.3				0.0		0.4							
5	SAR (-)		0.8	1.5	0.9	0.6	0.9	3.0	0.7	0.5	0.7	0.5				1.1		1.5							
	PESTICIDES																								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Pathardih (EMP70F3)
Local River : Kharun

River Water

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	
		2016
	PHYSICAL	
1	Q (cumec)	0.000
2	EC_FLD (µmho/cm)	
3	EC_GEN (µmho/cm)	
4	pH_FLD (pH units)	
5	pH_GEN (pH units)	
6	Temp (deg C)	
	CHEMICAL	
1	Alk-Phen (mgCaCO3/L)	
2	ALK-TOT (mgCaCO3/L)	
3	B (mg/L)	
4	Ca (mg/L)	
5	Cl (mg/L)	
6	CO3 (mg/L)	
7	F (mg/L)	
8	Fe (mg/L)	
9	HCO3 (mg/L)	
10	K (mg/L)	
11	Mg (mg/L)	
12	Na (mg/L)	
13	NO2+NO3 (mg N/L)	
14	NO2-N (mgN/L)	
15	NO3-N (mgN/L)	
16	P-Tot (mgP/L)	
17	SiO2 (mg/L)	
18	SO4 (mg/L)	
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	
2	COD (mg/L)	
3	DO (mg/L)	
4	DO_SAT% (%)	
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	
2	HAR_Total (mgCaCO3/L)	
3	Na% (%)	
4	RSC (-)	
5	SAR (-)	
	PESTICIDES	

SITE SIMGA

HISTORY SHEET

Water Year : 2015-2016

Site : Simga

Code : EMP00J1

State : Chhattisgarh

District : Baloda Bazar

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Seonath

Sub Tributary :

Sub-Sub Tributary :

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Drainage Area : 30761 Sq. Km.

Bank :

Latitude : 21°37'33"

Longitude : 81°41'36"

Zero of Gauge (m) : 244 (m.s.l)

9/29/1971 - 9/29/2071

Opening Date

Closing Date

Gauge : 7/29/1971

Discharge :

Sediment : 12/30/1972

Water Quality : 9/1/1972

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1972-1973	1703	250.860	8/24/1972	0.800	245.895	6/14/1972
1973-1974	6320	256.305	7/10/1973	1.000	245.935	5/19/1974
1974-1975	3484	252.675	8/18/1974	0.217	246.375	5/26/1975
1975-1976	5761	254.045	8/16/1975	0.780	246.385	5/9/1976
1976-1977	3423	253.140	8/15/1976	1.142	245.905	5/26/1977
1977-1978	6253	255.065	8/8/1977	0.902	245.880	6/6/1977
1978-1979	6965	256.730	8/31/1978	1.650	245.957	6/9/1978
1979-1980	4392	255.150	8/10/1979	1.160	245.945	4/28/1980
1980-1981	6626	255.600	9/15/1980	1.998	245.975	6/3/1980
1981-1982	4210	254.030	8/11/1981	3.047	246.005	5/11/1982
1982-1983	2876	253.490	8/9/1982	3.006	245.945	5/3/1983
1983-1984	3200	251.415	8/9/1983	2.937	245.955	6/9/1983
1984-1985	5339	254.465	8/4/1984	4.600	245.945	5/31/1985
1985-1986	6150	254.660	9/13/1985	5.300	245.945	6/2/1985
1986-1987	5615	254.780	6/26/1986	4.345	245.970	5/1/1987
1987-1988	1208	249.600	8/30/1987	4.500	245.980	5/12/1988
1988-1989	858.3	248.860	8/2/1988	0.330	245.850	5/18/1989
1989-1990	1157	249.700	7/3/1989	0.230	245.830	6/7/1989
1990-1991	5909	254.480	9/15/1990	1.925	245.940	5/14/1991
1991-1992	5447	254.320	8/25/1991	1.236	245.855	5/13/1992
1992-1993	5799	254.600	8/22/1992	0.083	245.695	5/12/1993
1993-1994	2353	251.450	8/18/1993	0.387	245.865	5/23/1994

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1994-1995	10821	257.590	7/13/1994	2.264	245.910	6/8/1994
1995-1996	5024	254.780	7/26/1995	1.190	245.940	6/16/1995
1996-1997	3564	253.120	8/2/1996	0.392	245.800	5/26/1997
1997-1998	4917	253.960	8/23/1997	0.306	245.820	6/5/1997
1998-1999	2189	251.540	9/14/1998	0.036	245.790	5/13/1999
1999-2000	2216	251.600	8/31/1999	0.186	245.780	5/12/2000
2000-2001	2824	251.910	7/20/2000	0.016	245.785	4/17/2001
2001-2002	3513	252.220	8/22/2001	0.014	245.680	5/14/2002
2002-2003	1950	250.750	8/18/2002	0.057	245.730	5/7/2003
2003-2004	4865	253.810	8/30/2003	0.092	245.820	5/5/2004
2004-2005	1697	250.650	7/30/2004	0.197	245.830	4/16/2005
2005-2006	11000	256.950	9/16/2005	0.517	245.790	3/6/2006
2006-2007	7200	255.890	8/15/2006	0.260	245.785	4/16/2007
2007-2008	11332	256.790	7/2/2007	0.109	245.765	6/5/2007
2008-2009	2977	252.035	9/20/2008	0.080	245.910	2/5/2009
2009-2010	3039	251.960	7/17/2009	0.000	245.610	5/4/2010
2010-2011	3349	252.120	9/9/2010	0.000	244.000	6/15/2010
2011-2012	7359	255.610	9/9/2011	0.000	245.750	5/9/2012
2012-2013	2995	252.390	9/6/2012	0.000	245.800	6/7/2012
2013-2014	6844	255.750	8/2/2013	0.000	245.720	6/6/2013
2014-2015	9572	256.640	7/24/2014	0.000	489.830	4/13/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : Simga (EMP00J1)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : UMSD,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	246.245	0.000	246.760	199.4	246.430	48.81	247.455	385.4	246.605	72.82	246.225	28.50 *
2	245.830	0.000 *	246.910	240.4	246.360	42.36 *	247.485	386.8	246.630	75.50 *	246.170	24.84
3	245.830	0.000 *	247.300	331.6	246.350	41.82	247.585	424.3	246.575	63.34	246.220	28.79
4	245.830	0.000 *	247.230	301.2	246.810	211.4	247.260	289.1	246.520	59.60 *	246.230	29.20
5	245.830	0.000 *	247.070	248.4 *	247.075	256.1	246.965	243.9	246.440	50.91	246.210	28.45
6	245.830	0.000 *	246.770	191.4	246.790	212.8	246.760	76.50 *	246.610	66.93	246.190	27.37
7	245.840	0.000 *	246.600	84.43	246.620	162.8	246.630	74.14	246.470	49.87	246.240	29.52
8	245.840	0.000 *	246.390	39.70	246.460	54.44	246.650	74.73	246.405	45.37	246.230	29.10 *
9	245.840	0.000 *	246.395	40.51	246.415	46.52 *	246.515	59.78	246.390	45.11	246.180	21.81
10	245.840	0.000 *	246.885	215.8	246.355	35.17	246.445	55.48	246.420	51.75	246.110	16.35
11	245.840	0.000 *	247.325	303.2	246.460	47.46	246.338	43.40	246.425	52.30 *	246.100	16.20 *
12	245.840	0.000 *	247.130	284.4 *	246.430	46.73	246.305	41.47	246.375	36.60	246.090	15.64
13	245.840	0.000 *	247.055	255.3	246.710	175.1	246.290	40.20 *	246.340	38.18	246.070	15.38
14	245.850	0.000 *	246.940	233.2	247.105	268.9	246.270	25.24	246.340	37.30	246.150	19.92
15	246.245	25.93	246.950	243.9	247.230	278.5 *	246.240	24.09	246.300	30.14	246.140	19.50 *
16	246.330	28.45	246.780	208.0	246.890	187.4 *	246.210	23.28	246.310	30.36	246.130	18.68
17	246.443	36.49	246.640	157.6	246.930	230.9	247.370	300.0 *	246.300	33.69	246.110	16.19
18	246.298	27.17	246.810	216.3 *	247.270	309.1	250.150	1066	246.440	38.50 *	246.130	18.70
19	246.570	33.66	246.975	227.9 *	246.940	235.3	249.680	1177	246.460	39.49	246.110	15.35
20	246.400	20.58	246.830	219.9	246.700	175.6	248.300	630.0 *	246.430	47.68	246.100	15.11
21	246.420	21.54 *	246.730	179.6	246.560	62.10	248.400	654.6	246.420	38.56	246.090	14.68
22	246.765	142.2	246.660	164.9	246.455	49.04	249.130	1100	246.380	34.80 *	246.120	16.05 *
23	247.340	391.9	246.950	220.5	246.435	47.30 *	248.660	758.5	246.360	35.38	246.140	19.89
24	247.620	499.8	247.840	540.3	246.430	38.70	247.925	516.7	246.310	30.20 *	246.130	17.17
25	247.325	336.1	247.830	503.4	246.290	28.74	247.580	485.0 *	246.270	29.40 *	246.120	16.98 *
26	247.030	246.8	247.470	432.5 *	246.318	33.40	247.190	300.6	246.250	22.51	246.040	10.90
27	246.975	254.2	247.190	298.1	246.300	37.18	246.920	231.5 *	246.220	23.19	246.020	10.01
28	246.880	245.6 *	246.950	254.0	246.350	53.27	246.910	228.8	246.120	11.35	246.000	9.575
29	246.765	212.6	246.795	206.0	246.535	64.82	246.843	224.6	246.050	8.625	246.000	9.500 *
30	246.740	191.3	246.655	164.2	246.830	223.8 *	246.785	211.9	246.120	16.79	246.050	10.94
31			246.533	65.19	247.120	278.4			246.235	26.25		
Ten-Daily Mean												
I Ten-Daily	245.876	0.000	246.831	189.3	246.566	111.2	246.975	207.0	246.507	58.12	246.200	26.39
II Ten-Daily	246.165	17.23	246.944	235.0	246.867	195.5	247.315	337.0	246.372	38.42	246.113	17.07
III Ten-Daily	246.986	254.2	247.055	275.3	246.511	83.34	247.634	471.2	246.249	25.19	246.071	13.57
Monthly												
Min.	245.830	0.000	246.390	39.70	246.290	28.74	246.210	23.28	246.050	8.625	246.000	9.500
Max.	247.620	499.8	247.840	540.3	247.270	309.1	250.150	1177	246.630	75.50	246.240	29.52
Mean	246.342	90.48	246.947	234.6	246.644	128.5	247.308	338.4	246.372	40.08	246.128	19.01

Annual Runoff in MCM = 2264 Annual Runoff in mm = 74

Peak Observed Discharge = 1177 cumecs on 19/09/2015 Corres. Water Level :249.68 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2015 Corres. Water Level :246.245 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : Simga (EMP00J1)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : UMSD,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	246.060	8.881	245.940	3.018	245.820	0.789	245.830	1.256	245.710	0.076	245.540	0.000 *
2	246.080	12.17	245.930	2.913	245.810	0.776	245.820	1.234	245.710	0.078	245.540	0.000 *
3	246.160	20.37	245.930	2.900 *	245.800	0.849	245.840	1.270	245.710	0.058 *	245.520	0.000 *
4	245.980	5.952	245.940	3.069	245.795	0.588	245.830	1.103	245.670	0.013	245.515	0.000 *
5	245.930	2.506	245.940	3.340	245.795	0.667	245.830	1.066	245.650	0.000	245.510	0.000 *
6	245.920	2.200 *	245.950	3.679	245.780	0.443	245.820	1.060 *	245.640	0.000 *	245.500	0.000 *
7	245.940	2.900	245.930	2.804	245.780	0.442 *	245.810	1.045 *	245.630	0.000 *	245.500	0.000 *
8	245.940	2.971	245.930	2.784	245.770	0.386	245.800	1.017	245.620	0.000 *	245.490	0.000 *
9	245.940	2.917	245.940	2.411	245.770	0.418	245.790	0.808	245.610	0.000 *	245.490	0.000 *
10	245.940	2.919	245.940	2.710 *	245.760	0.371	245.790	0.796	245.610	0.000 *	245.490	0.000 *
11	246.000	6.059	245.930	2.690	245.750	0.288	245.780	0.795	245.610	0.000 *	245.490	0.000 *
12	246.040	9.013	245.930	2.790	245.740	0.197	245.780	0.788	245.600	0.000 *	245.480	0.000 *
13	246.020	6.580 *	245.920	2.618	245.730	0.178	245.780	0.779 *	245.590	0.000 *	245.480	0.000 *
14	245.960	4.232	245.920	2.604	245.730	0.177 *	245.780	0.742	245.580	0.000 *	245.475	0.000 *
15	245.950	3.948	245.910	2.398	245.720	0.196	245.770	0.262	245.575	0.000 *	245.470	0.000 *
16	245.940	3.415	245.920	2.603	245.760	0.341	245.760	0.245	245.570	0.000 *	245.470	0.000 *
17	245.940	3.421	245.900	2.000 *	245.745	0.188	245.760	0.244	245.570	0.000 *	245.460	0.000 *
18	245.950	3.563	245.910	1.904	245.740	0.129	245.760	0.250	245.570	0.000 *	245.460	0.000 *
19	245.960	4.183	245.900	1.795	245.740	0.125	245.755	0.228	245.570	0.000 *	245.450	0.000 *
20	245.950	4.100 *	245.900	1.793	245.750	0.209	245.750	0.224 *	245.565	0.000 *	245.440	0.000 *
21	246.060	9.551	245.900	1.839	245.750	0.208 *	245.740	0.194	245.560	0.000 *	245.440	0.000 *
22	246.030	8.165	245.900	1.907	245.760	0.210	245.730	0.165	245.550	0.000 *	245.430	0.000 *
23	245.970	4.760	245.880	1.767	245.750	0.140	245.730	0.157	245.550	0.000 *	245.430	0.000 *
24	245.970	4.690	245.880	1.720 *	245.750	0.140	245.730	0.155 *	245.545	0.000 *	245.420	0.000 *
25	245.970	4.600 *	245.870	1.323	245.740	0.179	245.730	0.156 *	245.540	0.000 *	245.420	0.000 *
26	245.960	4.248	245.865	1.665 *	245.740	0.184	245.730	0.156	245.540	0.000 *	245.420	0.000 *
27	245.960	4.200 *	245.860	1.330	245.760	0.274	245.730	0.154 *	245.540	0.000 *	245.420	0.000 *
28	245.950	3.838	245.850	1.377	245.750	0.270 *	245.720	0.073	245.540	0.000 *	245.415	0.000 *
29	245.950	3.870	245.840	1.310	245.810	1.013	245.720	0.078	245.540	0.000 *	245.410	0.000 *
30	245.950	3.861	245.830	1.098			245.710	0.071	245.540	0.000 *	245.410	0.000 *
31	245.950	3.914	245.830	1.098 *			245.710	0.078			245.400	0.000 *
Ten-Daily Mean												
I Ten-Daily	245.989	6.378	245.937	2.963	245.788	0.573	245.816	1.066	245.656	0.023	245.509	0.000
II Ten-Daily	245.971	4.852	245.914	2.319	245.741	0.203	245.768	0.456	245.580	0.000	245.467	0.000
III Ten-Daily	245.975	5.063	245.864	1.494	245.757	0.291	245.725	0.131	245.545	0.000	245.420	0.000
Monthly												
Min.	245.920	2.200	245.830	1.098	245.720	0.125	245.710	0.071	245.540	0.000	245.400	0.000
Max.	246.160	20.37	245.950	3.679	245.820	1.013	245.840	1.270	245.710	0.078	245.540	0.000
Mean	245.978	5.419	245.904	2.234	245.762	0.358	245.768	0.537	245.594	0.008	245.464	0

Peak Computed Discharge = 630.0 cumecs on 20/09/2015

Corres. Water Level :248.3 m

Lowest Computed Discharge = 0.000 cumecs on 02/06/2015

Corres. Water Level :245.83 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

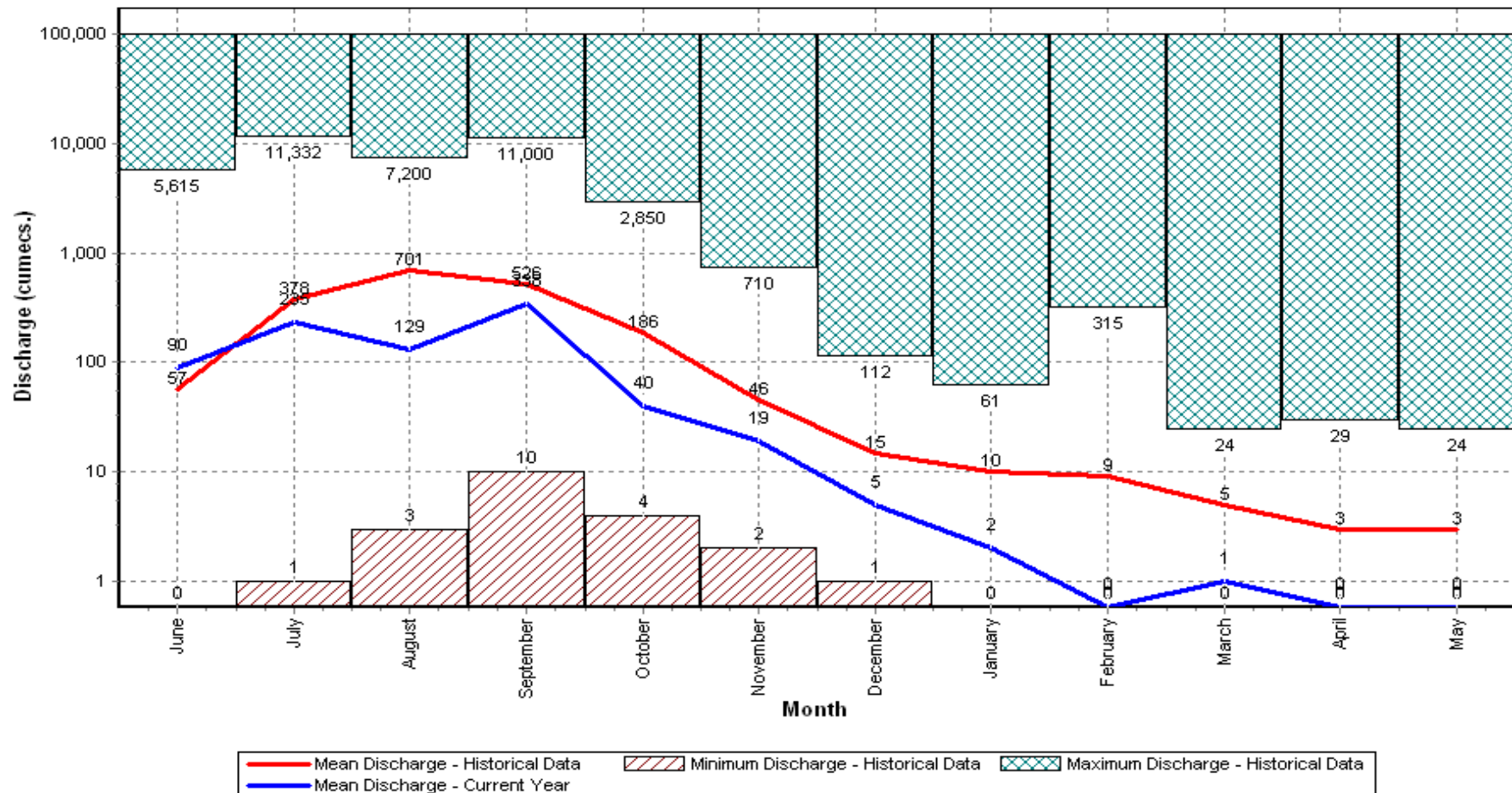
Station Name : Simga (EMP00J1)

Data considered : 1972-2016

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : UMSD,CWC,Raipur



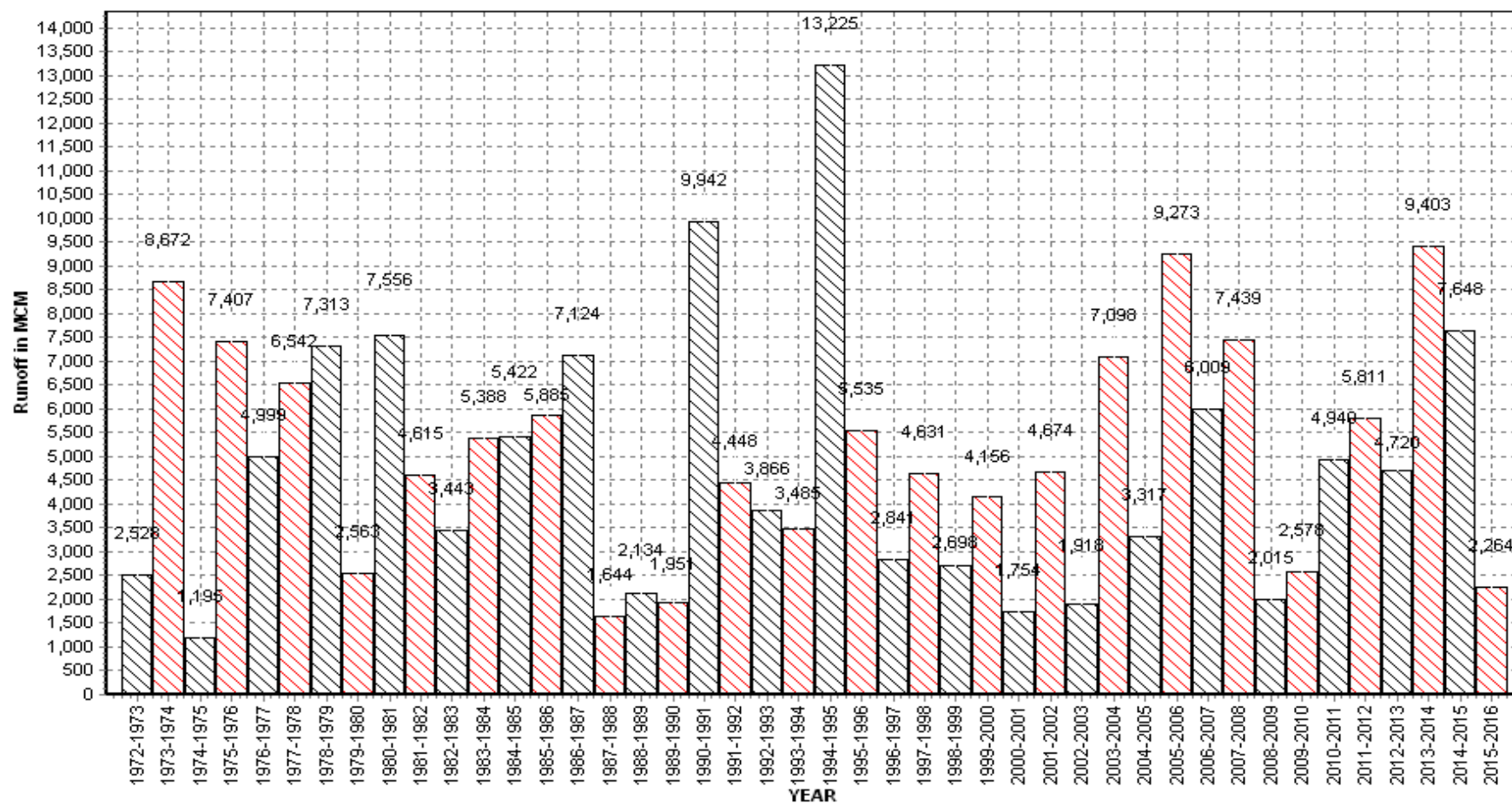
Annual Runoff Values for the period: 1972 - 2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

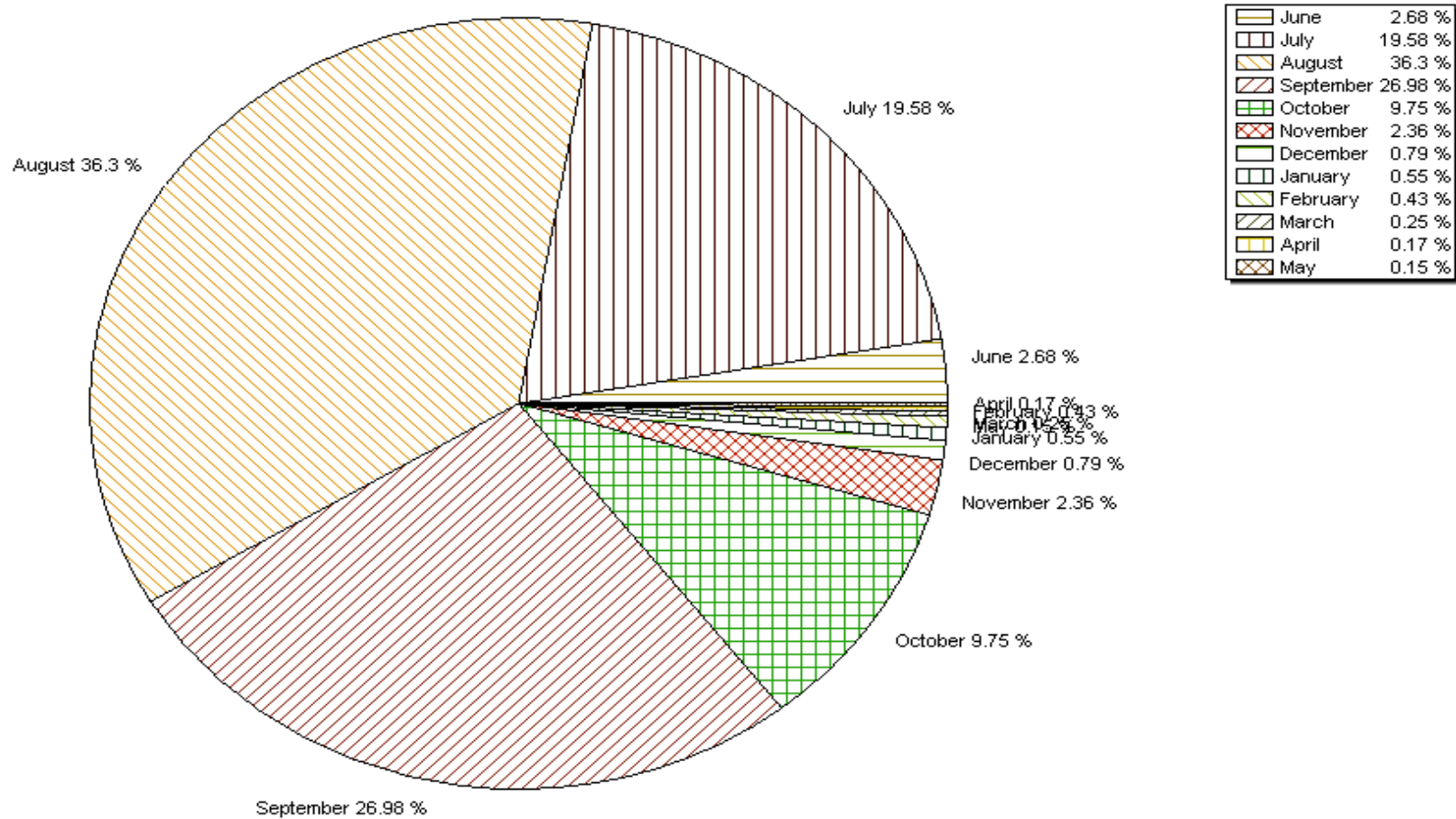


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1972-2015

Station Name : Simga (EMP00J1)
Local River : Seonath

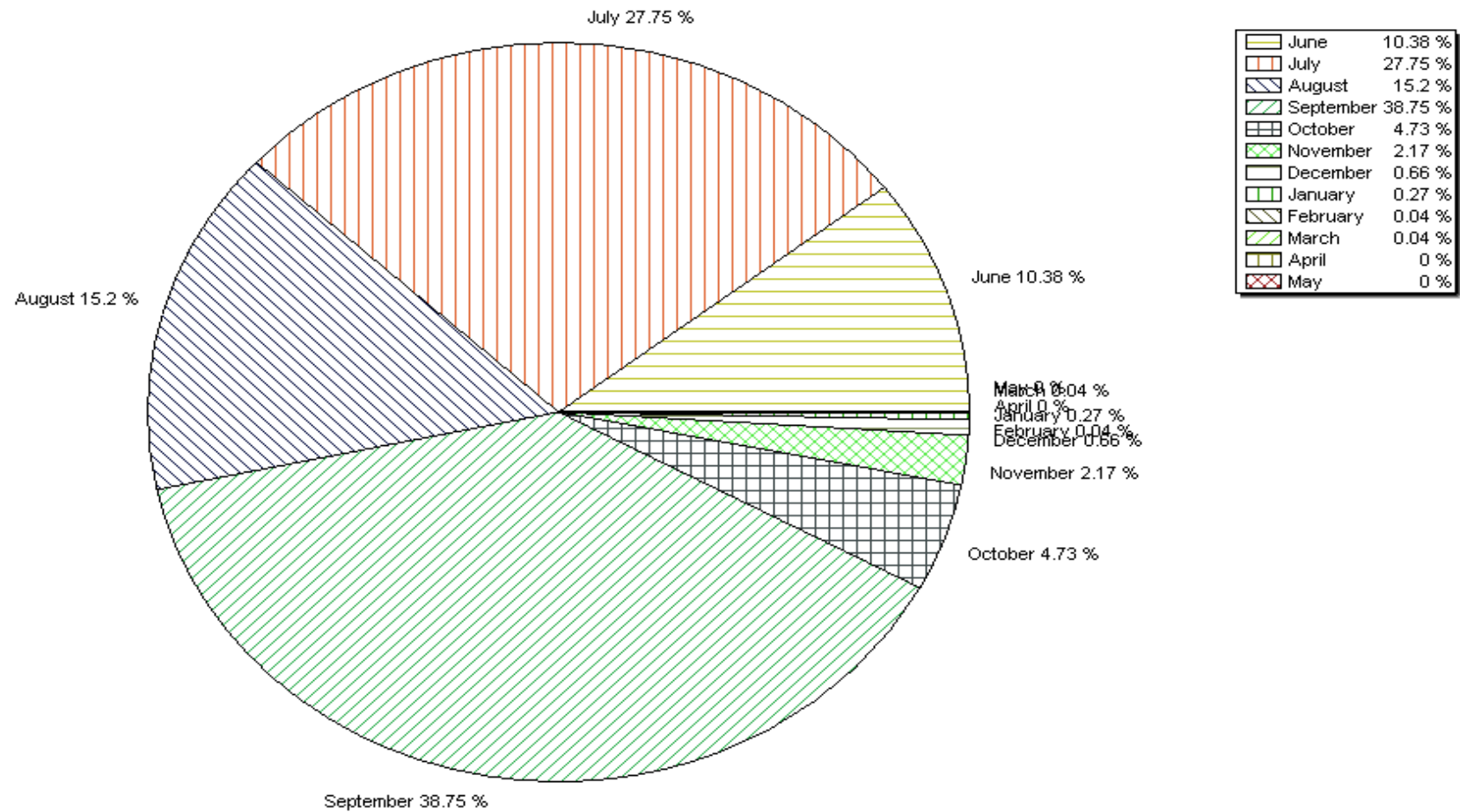
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Monthly Runoff for the Year : 2015-2016

Station Name : Simga (EMP00J1)
Local River : Seonath

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



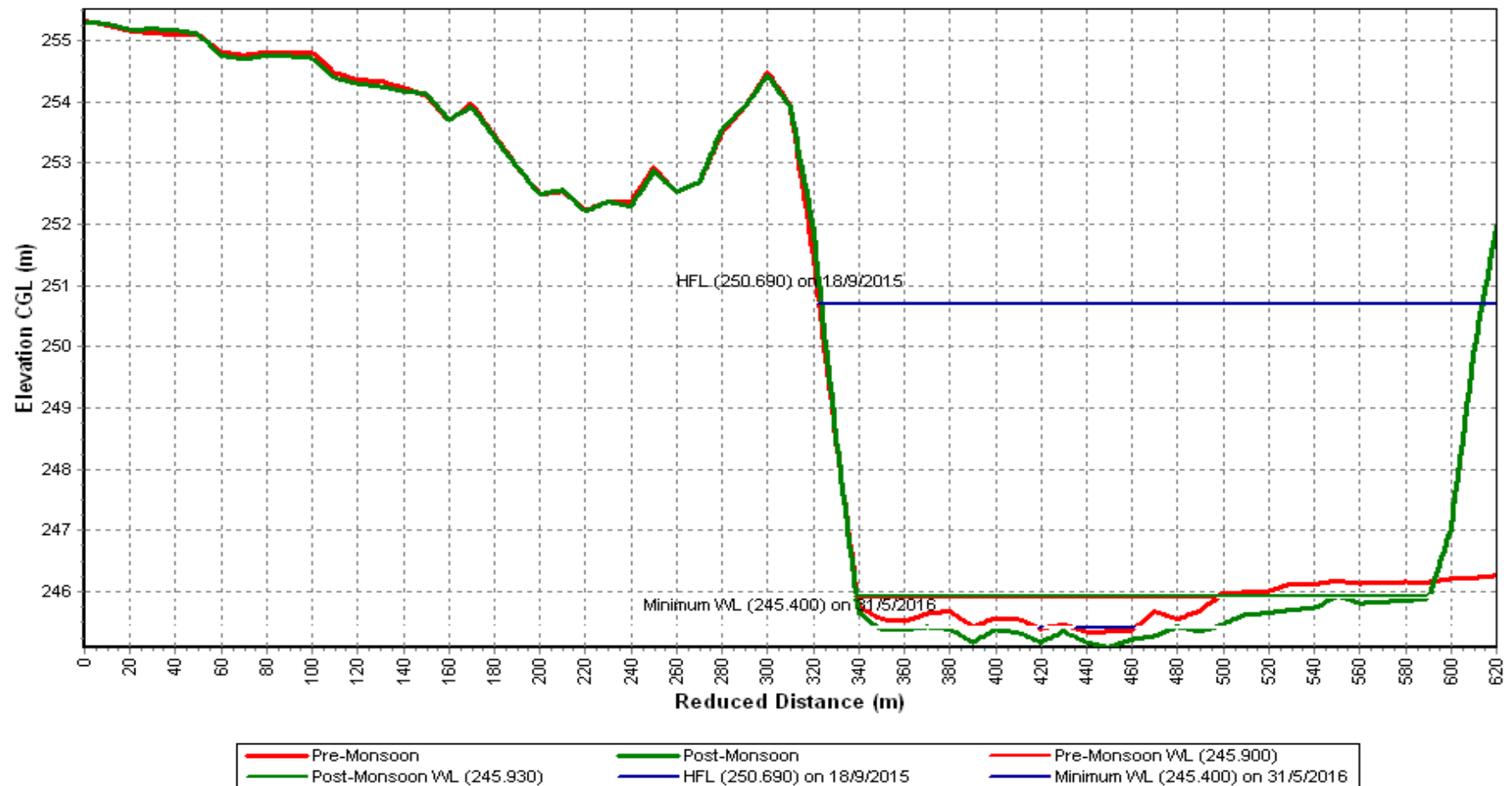
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



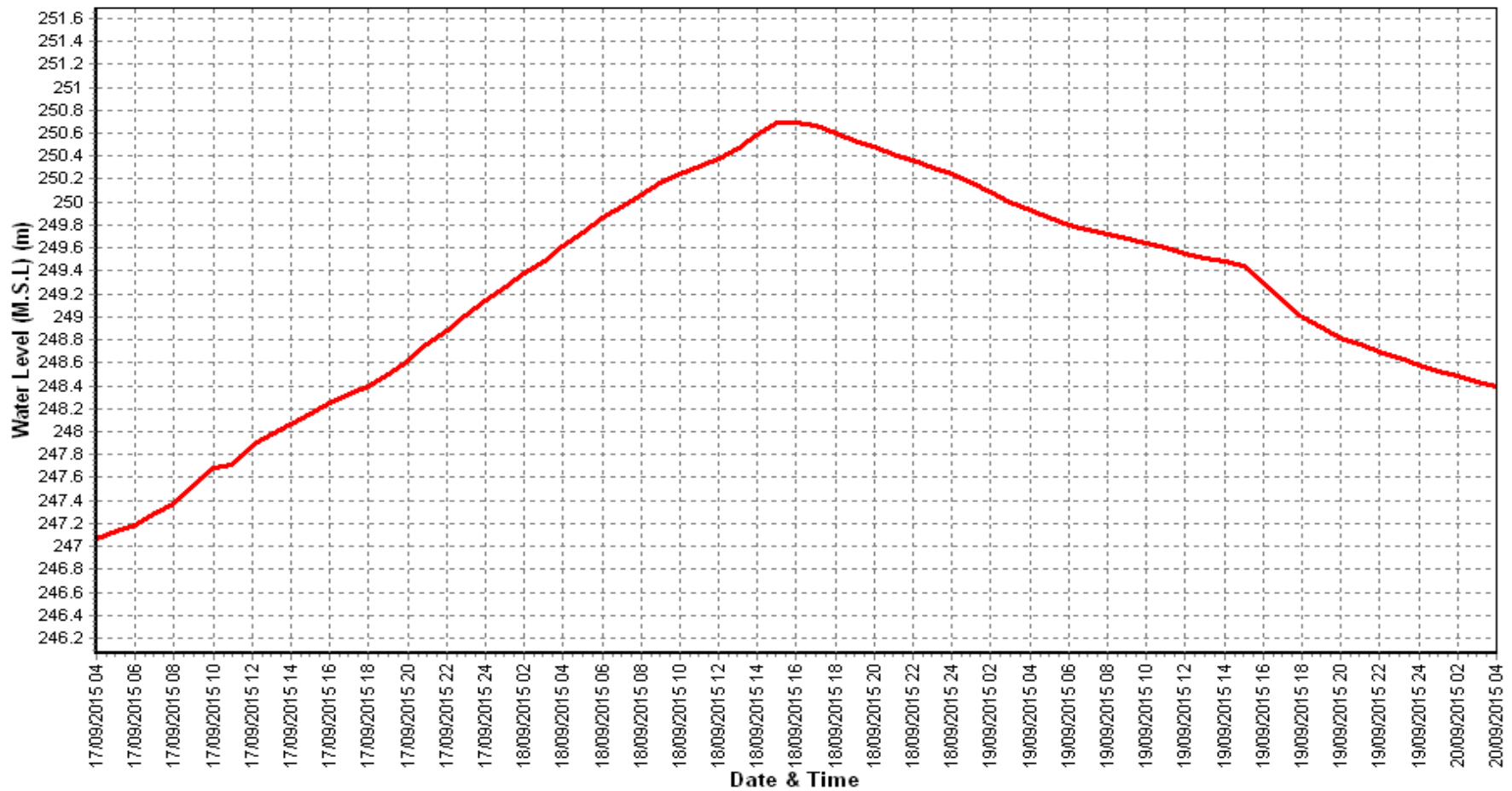
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



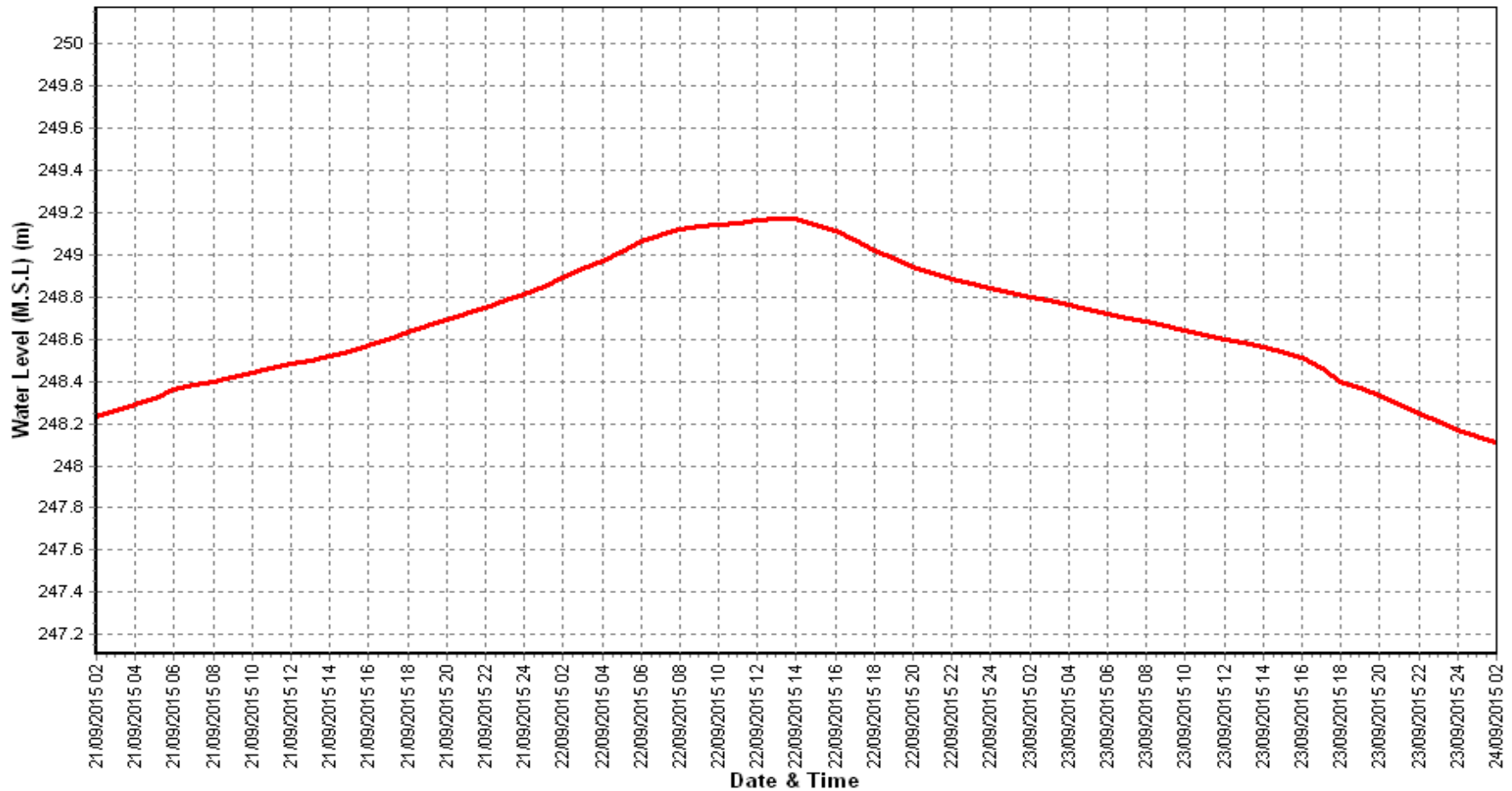
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

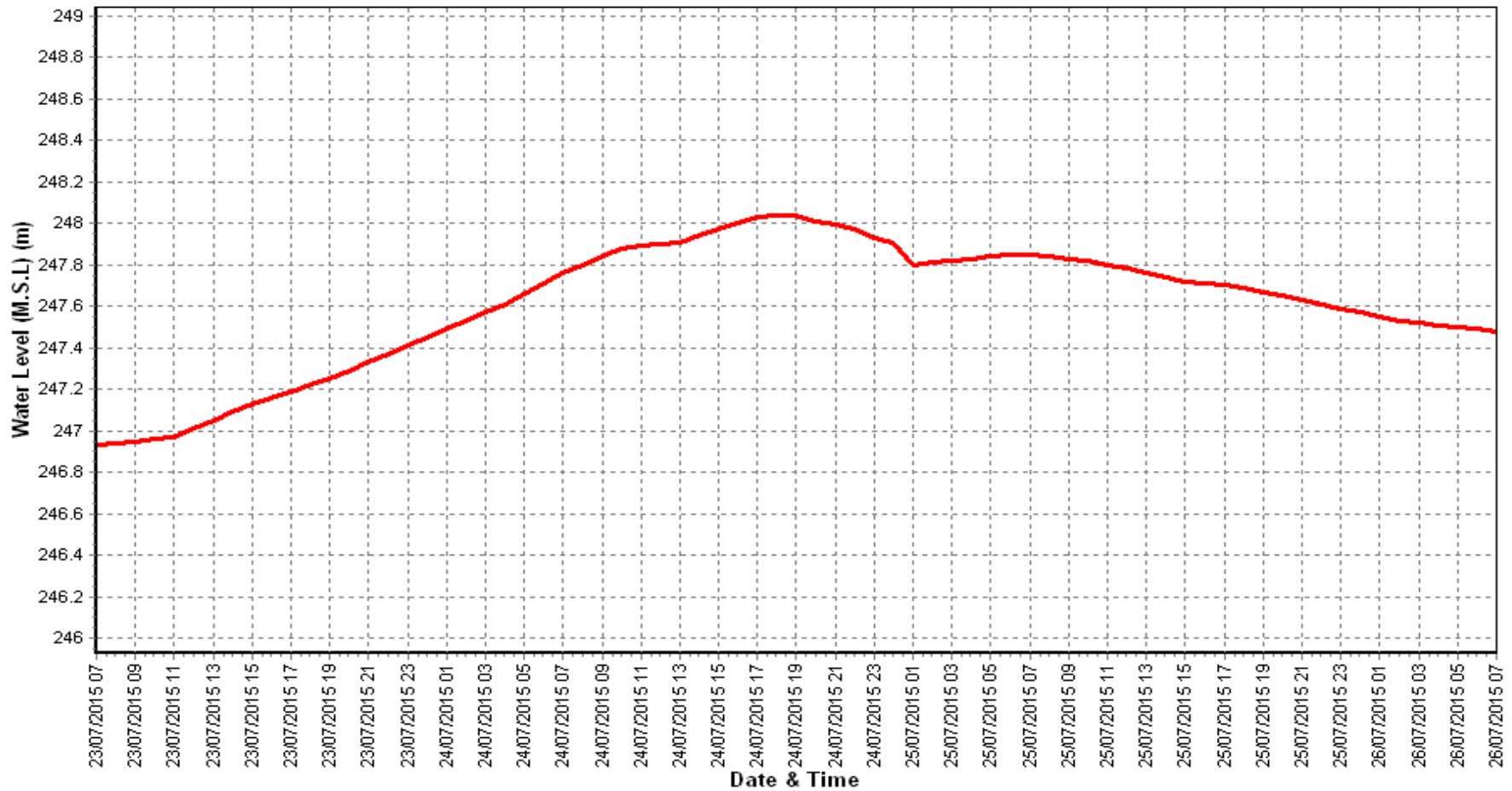
Sub-Division : UMSD,CWC,Raipur

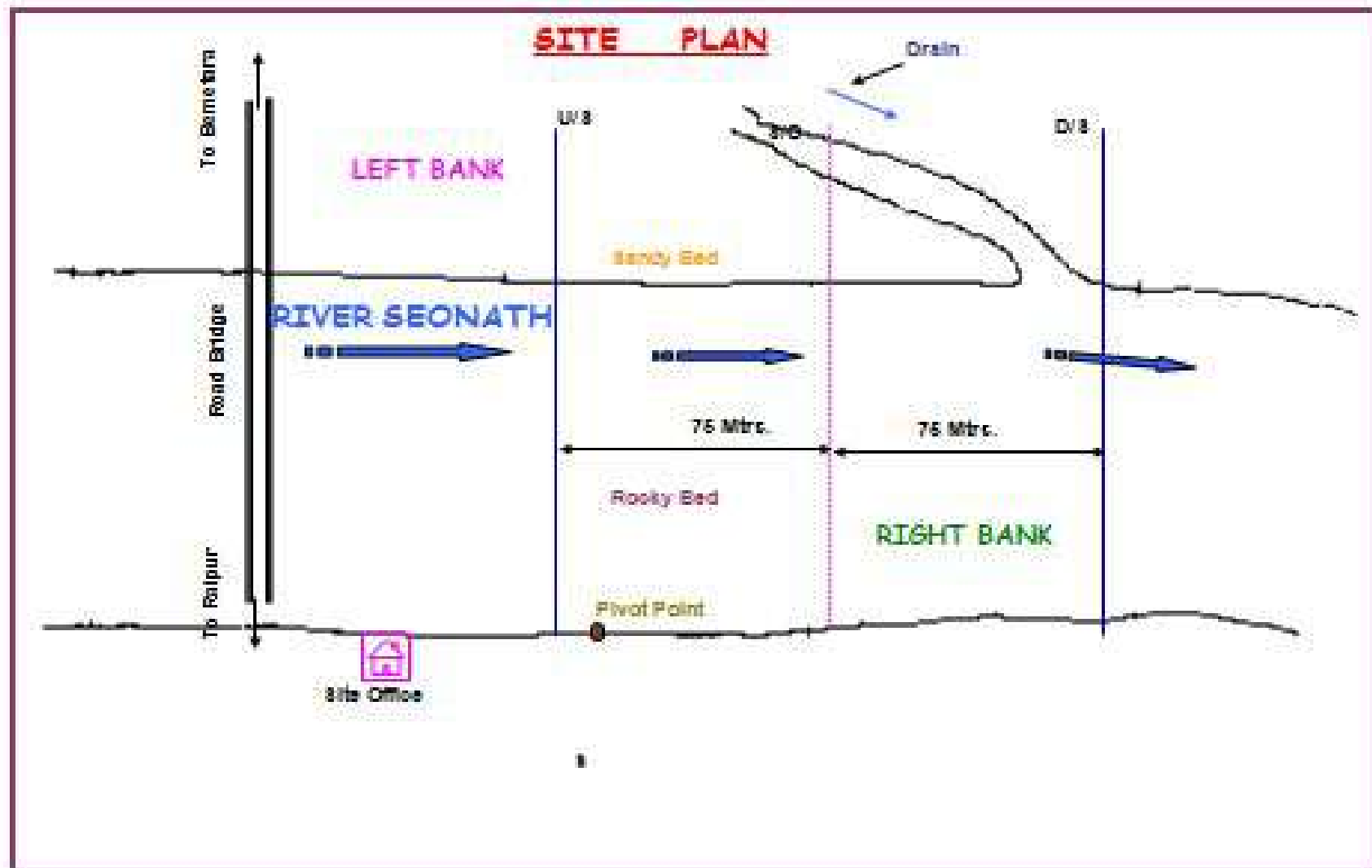


Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Simga (EMP00J1)
Local River : Seonath

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	199.4	0.000	0.000	0.080	0.080	1378	48.81	0.000	0.000	0.073	0.073	306
2	0.000	0.000	0.000	0.000	0.000	0	240.4	0.000	0.000	0.130	0.130	2701	42.36	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	331.6	0.000	0.000	0.155	0.155	4441	41.82	0.000	0.000	0.078	0.078	280
4	0.000	0.000	0.000	0.000	0.000	0	301.2	0.000	0.000	0.140	0.140	3644	211.4	0.000	0.000	0.125	0.125	2283
5	0.000	0.000	0.000	0.000	0.000	0	248.4	0.000	0.000	0.000	0.000	0	256.1	0.000	0.000	0.150	0.150	3319
6	0.000	0.000	0.000	0.000	0.000	0	191.4	0.000	0.000	0.160	0.160	2645	212.8	0.000	0.000	0.098	0.098	1793
7	0.000	0.000	0.000	0.000	0.000	0	84.43	0.000	0.000	0.093	0.093	678	162.8	0.000	0.000	0.150	0.150	2110
8	0.000	0.000	0.000	0.000	0.000	0	39.70	0.000	0.000	0.104	0.104	357	54.44	0.000	0.000	0.076	0.076	359
9	0.000	0.000	0.000	0.000	0.000	0	40.51	0.000	0.000	0.107	0.107	374	46.52	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	215.8	0.000	0.000	0.099	0.099	1846	35.17	0.000	0.000	0.076	0.076	232
11	0.000	0.000	0.000	0.000	0.000	0	303.2	0.000	0.000	0.145	0.145	3798	47.46	0.000	0.000	0.077	0.077	314
12	0.000	0.000	0.000	0.000	0.000	0	284.4	0.000	0.000	0.000	0.000	0	46.73	0.000	0.000	0.074	0.074	298
13	0.000	0.000	0.000	0.000	0.000	0	255.3	0.000	0.000	0.189	0.189	4170	175.1	0.000	0.000	0.037	0.037	558
14	0.000	0.000	0.000	0.000	0.000	0	233.2	0.000	0.000	0.158	0.158	3183	268.9	0.000	0.000	0.203	0.203	4705
15	25.93	0.000	0.000	0.095	0.095	213	243.9	0.000	0.000	0.133	0.133	2802	278.5	0.000	0.000	0.000	0.000	0
16	28.45	0.000	0.000	0.121	0.121	298	208.0	0.000	0.000	0.186	0.186	3343	187.4	0.000	0.000	0.000	0.000	0
17	36.49	0.000	0.000	0.104	0.104	327	157.6	0.000	0.000	0.030	0.030	409	230.9	0.000	0.000	0.145	0.145	2883
18	27.17	0.000	0.000	0.069	0.069	163	216.3	0.000	0.000	0.000	0.000	0	309.1	0.000	0.000	0.150	0.150	4005
19	33.66	0.000	0.000	0.103	0.103	298	227.9	0.000	0.000	0.000	0.000	0	235.3	0.000	0.000	0.160	0.160	3253
20	20.58	0.000	0.000	0.113	0.113	200	219.9	0.000	0.000	0.132	0.132	2508	175.6	0.000	0.000	0.150	0.150	2276
21	21.54	0.000	0.000	0.000	0.000	0	179.6	0.000	0.000	0.160	0.160	2483	62.10	0.000	0.000	0.084	0.084	450
22	142.2	0.000	0.000	0.178	0.178	2180	164.9	0.000	0.000	0.142	0.142	2023	49.04	0.000	0.000	0.087	0.087	368
23	391.9	0.000	0.000	0.188	0.188	6349	220.5	0.000	0.000	0.140	0.140	2668	47.30	0.000	0.000	0.000	0.000	0
24	499.8	0.000	0.000	0.118	0.118	5074	540.3	0.000	0.000	0.220	0.220	10270	38.70	0.000	0.000	0.074	0.074	247
25	336.1	0.000	0.000	0.163	0.163	4719	503.4	0.000	0.000	0.204	0.204	8872	28.74	0.000	0.000	0.071	0.071	177
26	246.8	0.000	0.000	0.133	0.133	2825	432.5	0.000	0.000	0.000	0.000	0	33.40	0.000	0.000	0.075	0.075	216
27	254.2	0.000	0.000	0.155	0.155	3405	298.1	0.000	0.000	0.192	0.192	4945	37.18	0.000	0.000	0.086	0.086	277
28	245.6	0.000	0.000	0.000	0.000	0	254.0	0.000	0.000	0.218	0.218	4784	53.27	0.000	0.000	0.071	0.071	328
29	212.6	0.000	0.000	0.098	0.098	1801	206.0	0.000	0.000	0.191	0.191	3400	64.82	0.000	0.000	0.073	0.073	406
30	191.3	0.000	0.000	0.079	0.079	1306	164.2	0.000	0.000	0.156	0.156	2213	223.8	0.000	0.000	0.000	0.000	0
31							65.19	0.000	0.000	0.078	0.078	439	278.4	0.000	0.000	0.140	0.140	3368
<u>Ten Daily Mean</u>																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	189.3	0.000	0.000	0.107	0.107	1806	111.2	0.000	0.000	0.083	0.083	1068
Ten Daily II	17.23	0.000	0.000	0.060	0.060	150	235.0	0.000	0.000	0.097	0.097	2021	195.5	0.000	0.000	0.099	0.099	1829
Ten Daily III	254.2	0.000	0.000	0.111	0.111	2766	275.3	0.000	0.000	0.155	0.155	3827	83.34	0.000	0.000	0.069	0.069	531
<u>Monthly</u>																		
Total						29157						80373						34811

Annual Sediment Load (Metric Tonnes) : 287032

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	385.4	0.000	0.000	0.130	0.130	4329	72.82	0.000	0.000	0.173	0.173	1085	28.50	0.000	0.000	0.000	0.000	0
2	386.8	0.000	0.000	0.025	0.025	835	75.50	0.000	0.000	0.000	0.000	0	24.84	0.000	0.000	0.020	0.020	43
3	424.3	0.000	0.000	0.250	0.250	9164	63.34	0.000	0.000	0.140	0.140	766	28.79	0.000	0.000	0.201	0.201	500
4	289.1	0.000	0.000	0.182	0.182	4545	59.60	0.000	0.000	0.000	0.000	0	29.20	0.000	0.000	0.202	0.202	509
5	243.9	0.000	0.000	0.213	0.213	4488	50.91	0.000	0.000	0.141	0.141	618	28.45	0.000	0.000	0.199	0.199	489
6	76.50	0.000	0.000	0.000	0.000	0	66.93	0.000	0.000	0.160	0.160	924	27.37	0.000	0.000	0.141	0.141	332
7	74.14	0.000	0.000	0.240	0.240	1537	49.87	0.000	0.000	0.127	0.127	546	29.52	0.000	0.000	0.162	0.162	413
8	74.73	0.000	0.000	0.190	0.190	1227	45.37	0.000	0.000	0.126	0.126	492	29.10	0.000	0.000	0.000	0.000	0
9	59.78	0.000	0.000	0.320	0.320	1653	45.11	0.000	0.000	0.123	0.123	479	21.81	0.000	0.000	0.153	0.153	287
10	55.48	0.000	0.000	0.025	0.025	120	51.75	0.000	0.000	0.124	0.124	552	16.35	0.000	0.000	0.010	0.010	14
11	43.40	0.000	0.000	0.150	0.150	562	52.30	0.000	0.000	0.000	0.000	0	16.20	0.000	0.000	0.000	0.000	0
12	41.47	0.000	0.000	0.130	0.130	466	36.60	0.000	0.000	0.101	0.101	320	15.64	0.000	0.000	0.009	0.009	12
13	40.20	0.000	0.000	0.000	0.000	0	38.18	0.000	0.000	0.100	0.100	330	15.38	0.000	0.000	0.001	0.001	1
14	25.24	0.000	0.000	0.250	0.250	545	37.30	0.000	0.000	0.100	0.100	322	19.92	0.000	0.000	0.113	0.113	194
15	24.09	0.000	0.000	0.220	0.220	458	30.14	0.000	0.000	0.100	0.100	260	19.50	0.000	0.000	0.000	0.000	0
16	23.28	0.000	0.000	0.221	0.221	444	30.36	0.000	0.000	0.099	0.099	259	18.68	0.000	0.000	0.012	0.012	19
17	300.0	0.000	0.000	0.000	0.000	0	33.69	0.000	0.000	0.097	0.097	281	16.19	0.000	0.000	0.010	0.010	14
18	1066	0.000	0.000	0.150	0.150	13812	38.50	0.000	0.000	0.000	0.000	0	18.70	0.000	0.000	0.010	0.010	16
19	1177	0.000	0.000	0.135	0.135	13729	39.49	0.000	0.000	0.117	0.117	398	15.35	0.000	0.000	0.005	0.005	7
20	630.0	0.000	0.000	0.000	0.000	0	47.68	0.000	0.000	0.110	0.110	452	15.11	0.000	0.000	0.004	0.004	5
21	654.6	0.000	0.000	0.235	0.235	13290	38.56	0.000	0.000	0.107	0.107	355	14.68	0.000	0.000	0.004	0.004	5
22	1100	0.000	0.000	0.320	0.320	30414	34.80	0.000	0.000	0.000	0.000	0	16.05	0.000	0.000	0.000	0.000	0
23	758.5	0.000	0.000	0.095	0.095	6226	35.38	0.000	0.000	0.090	0.090	275	19.89	0.000	0.000	0.009	0.009	15
24	516.7	0.000	0.000	0.210	0.210	9374	30.20	0.000	0.000	0.000	0.000	0	17.17	0.000	0.000	0.008	0.008	12
25	485.0	0.000	0.000	0.000	0.000	0	29.40	0.000	0.000	0.000	0.000	0	16.98	0.000	0.000	0.000	0.000	0
26	300.6	0.000	0.000	0.035	0.035	909	22.51	0.000	0.000	0.073	0.073	141	10.90	0.000	0.000	0.001	0.001	1
27	231.5	0.000	0.000	0.000	0.000	0	23.19	0.000	0.000	0.052	0.052	105	10.01	0.000	0.000	0.001	0.001	1
28	228.8	0.000	0.000	0.250	0.250	4943	11.35	0.000	0.000	0.024	0.024	24	9.575	0.000	0.000	0.001	0.001	1
29	224.6	0.000	0.000	0.210	0.210	4075	8.625	0.000	0.000	0.001	0.001	1	9.500	0.000	0.000	0.000	0.000	0
30	211.9	0.000	0.000	0.200	0.200	3662	16.79	0.000	0.000	0.001	0.001	1	10.94	0.000	0.000	0.001	0.001	1
31							26.25	0.000	0.000	0.002	0.002	3						
Ten Daily Mean																		
Ten Daily I	207.0	0.000	0.000	0.158	0.158	2790	58.12	0.000	0.000	0.111	0.111	546	26.39	0.000	0.000	0.109	0.109	259
Ten Daily II	337.0	0.000	0.000	0.126	0.126	3002	38.42	0.000	0.000	0.082	0.082	262	17.07	0.000	0.000	0.016	0.016	27
Ten Daily III	471.2	0.000	0.000	0.156	0.156	7289	25.19	0.000	0.000	0.032	0.032	82	13.57	0.000	0.000	0.002	0.002	4
Monthly																		
Total						130808						8990						2890

Annual Sediment Load (Metric Tonnes) : 287032

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	8.881	0.000	0.000	0.000	0.000	0	3.018	0.000	0.000	0.000	0.000	0	0.789	0.000	0.000	0.000	0.000	0
2	12.17	0.000	0.000	0.000	0.000	0	2.913	0.000	0.000	0.000	0.000	0	0.776	0.000	0.000	0.000	0.000	0
3	20.37	0.000	0.000	0.000	0.000	0	2.900	0.000	0.000	0.000	0.000	0	0.849	0.000	0.000	0.000	0.000	0
4	5.952	0.000	0.000	0.000	0.000	0	3.069	0.000	0.000	0.001	0.001	0	0.588	0.000	0.000	0.000	0.000	0
5	2.506	0.000	0.000	0.000	0.000	0	3.340	0.000	0.000	0.000	0.000	0	0.667	0.000	0.000	0.000	0.000	0
6	2.200	0.000	0.000	0.000	0.000	0	3.679	0.000	0.000	0.000	0.000	0	0.443	0.000	0.000	0.000	0.000	0
7	2.900	0.000	0.000	0.000	0.000	0	2.804	0.000	0.000	0.000	0.000	0	0.442	0.000	0.000	0.000	0.000	0
8	2.971	0.000	0.000	0.000	0.000	0	2.784	0.000	0.000	0.000	0.000	0	0.386	0.000	0.000	0.000	0.000	0
9	2.917	0.000	0.000	0.000	0.000	0	2.411	0.000	0.000	0.000	0.000	0	0.418	0.000	0.000	0.000	0.000	0
10	2.919	0.000	0.000	0.000	0.000	0	2.710	0.000	0.000	0.000	0.000	0	0.371	0.000	0.000	0.000	0.000	0
11	6.059	0.000	0.000	0.000	0.000	0	2.690	0.000	0.000	0.001	0.001	0	0.288	0.000	0.000	0.000	0.000	0
12	9.013	0.000	0.000	0.000	0.000	0	2.790	0.000	0.000	0.000	0.000	0	0.197	0.000	0.000	0.000	0.000	0
13	6.580	0.000	0.000	0.000	0.000	0	2.618	0.000	0.000	0.000	0.000	0	0.178	0.000	0.000	0.000	0.000	0
14	4.232	0.000	0.000	0.001	0.001	0	2.604	0.000	0.000	0.000	0.000	0	0.177	0.000	0.000	0.000	0.000	0
15	3.948	0.000	0.000	0.000	0.000	0	2.398	0.000	0.000	0.000	0.000	0	0.196	0.000	0.000	0.000	0.000	0
16	3.415	0.000	0.000	0.000	0.000	0	2.603	0.000	0.000	0.000	0.000	0	0.341	0.000	0.000	0.000	0.000	0
17	3.421	0.000	0.000	0.000	0.000	0	2.000	0.000	0.000	0.000	0.000	0	0.188	0.000	0.000	0.000	0.000	0
18	3.563	0.000	0.000	0.000	0.000	0	1.904	0.000	0.000	0.001	0.001	0	0.129	0.000	0.000	0.000	0.000	0
19	4.183	0.000	0.000	0.000	0.000	0	1.795	0.000	0.000	0.000	0.000	0	0.125	0.000	0.000	0.000	0.000	0
20	4.100	0.000	0.000	0.000	0.000	0	1.793	0.000	0.000	0.000	0.000	0	0.209	0.000	0.000	0.000	0.000	0
21	9.551	0.000	0.000	0.001	0.001	1	1.839	0.000	0.000	0.000	0.000	0	0.208	0.000	0.000	0.000	0.000	0
22	8.165	0.000	0.000	0.000	0.000	0	1.907	0.000	0.000	0.000	0.000	0	0.210	0.000	0.000	0.000	0.000	0
23	4.760	0.000	0.000	0.000	0.000	0	1.767	0.000	0.000	0.000	0.000	0	0.140	0.000	0.000	0.000	0.000	0
24	4.690	0.000	0.000	0.000	0.000	0	1.720	0.000	0.000	0.000	0.000	0	0.140	0.000	0.000	0.000	0.000	0
25	4.600	0.000	0.000	0.000	0.000	0	1.323	0.000	0.000	0.000	0.000	0	0.179	0.000	0.000	0.000	0.000	0
26	4.248	0.000	0.000	0.000	0.000	0	1.665	0.000	0.000	0.000	0.000	0	0.184	0.000	0.000	0.000	0.000	0
27	4.200	0.000	0.000	0.000	0.000	0	1.330	0.000	0.000	0.000	0.000	0	0.274	0.000	0.000	0.000	0.000	0
28	3.838	0.000	0.000	0.001	0.001	0	1.377	0.000	0.000	0.000	0.000	0	0.270	0.000	0.000	0.000	0.000	0
29	3.870	0.000	0.000	0.000	0.000	0	1.310	0.000	0.000	0.000	0.000	0	1.013	0.000	0.000	0.000	0.000	0
30	3.861	0.000	0.000	0.000	0.000	0	1.098	0.000	0.000	0.000	0.000	0						
31	3.914	0.000	0.000	0.000	0.000	0	1.098	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	6.378	0.000	0.000	0.000	0.000	0	2.963	0.000	0.000	0.000	0.000	0	0.573	0.000	0.000	0.000	0.000	0
Ten Daily II	4.852	0.000	0.000	0.000	0.000	0	2.319	0.000	0.000	0.000	0.000	0	0.203	0.000	0.000	0.000	0.000	0
Ten Daily III	5.063	0.000	0.000	0.000	0.000	0	1.494	0.000	0.000	0.000	0.000	0	0.291	0.000	0.000	0.000	0.000	0
Monthly																		
Total						1						0						0

Annual Sediment Load (Metric Tonnes) : 287032

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	1.256	0.000	0.000	0.000	0.000	0	0.076	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	1.234	0.000	0.000	0.000	0.000	0	0.078	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	1.270	0.000	0.000	0.000	0.000	0	0.058	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	1.103	0.000	0.000	0.000	0.000	0	0.013	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	1.066	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	1.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	1.045	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	1.017	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.808	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.796	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.795	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.788	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.779	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.742	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.262	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.245	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.244	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.250	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.228	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.224	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.194	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.165	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.157	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.155	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.156	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.156	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.154	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.073	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.078	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.071	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.078	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
<u>Ten Daily Mean</u>																		
Ten Daily I	1.066	0.000	0.000	0.000	0.000	0	0.023	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.456	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.131	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 287032

Annual Sediment Load for period : 1973-2016

Station Name : Simga (EMP00J1)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : UMSD,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1973-1974	8633624	488	8634112	8672
1974-1975	552567	242	552809	1195
1975-1976	2636789	329	2637119	7407
1976-1977	3280499	172	3280670	4999
1977-1978	3272656	897	3273552	6542
1978-1979	1555367	2625	1557992	7313
1979-1980	287152	921	288073	2563
1980-1981	2473978	953	2474931	7556
1981-1982	1750534	1247	1751782	4615
1982-1983	1129926	1225	1131151	3443
1983-1984	1942544	1786	1944330	5388
1984-1985	2027292	2378	2029670	5422
1985-1986	1775076	1803	1776879	5885
1986-1987	2708448	2408	2710856	7124
1987-1988	852238	2135	854373	1644
1988-1989	995421	339	995761	2134
1989-1990	752008	16	752024	1951
1990-1991	4511713	0	4511713	9942
1991-1992	1633701	0	1633701	4448
1992-1993	1366421	27	1366447	3866
1993-1994	1516760	107	1516867	3485
1994-1995	5793115	514	5793630	13225
1995-1996	1964637	0	1964637	5535
1996-1997	809059	59	809118	2841
1997-1998	2621519	2169	2623688	4631
1998-1999	400209	356	400566	2698
1999-2000	986930	293	987223	4156
2000-2001	407804	1	407805	1754
2001-2002	1294363	119	1294482	4674
2002-2003	564989	8	564998	1918
2003-2004	1318798	535	1319333	7098
2004-2005	905870	210	906080	3317
2005-2006	1387681	20	1387702	9273
2006-2007	1334956	15	1334971	6009
2007-2008	1523035	58	1523093	7439
2008-2009	77129	3	77132	2015
2009-2010	333474	5	333479	2578
2010-2011	536078	30	536108	4940
2011-2012	3312	31	3342	5811
2012-2013	992401	15	992416	4720
2013-2014	1782673	33	1782706	9403
2014-2015	1587090	26	1587117	7648
2015-2016	287030	2	287032	2264

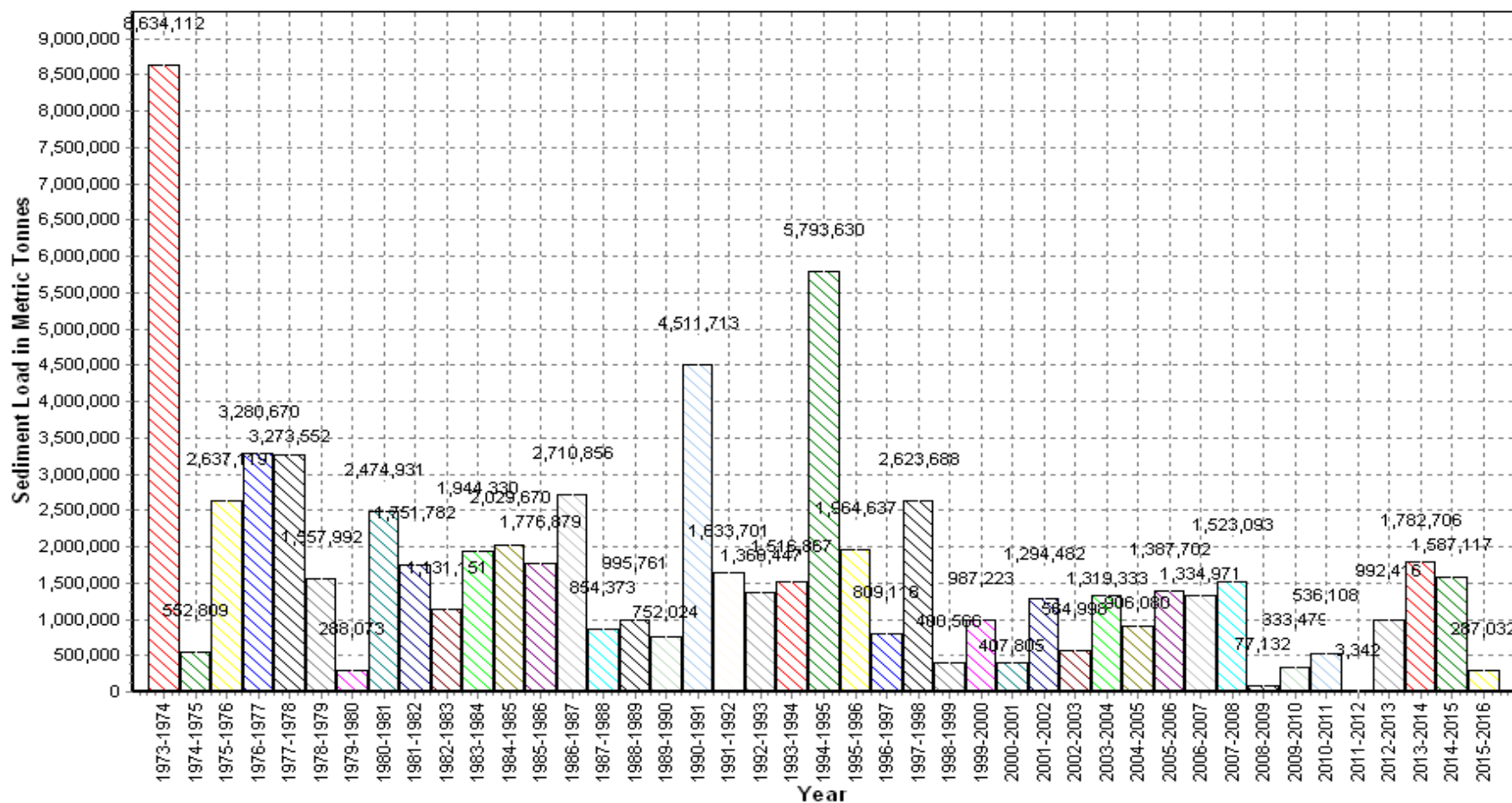
Annual Sediment Load for the period: 1973-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

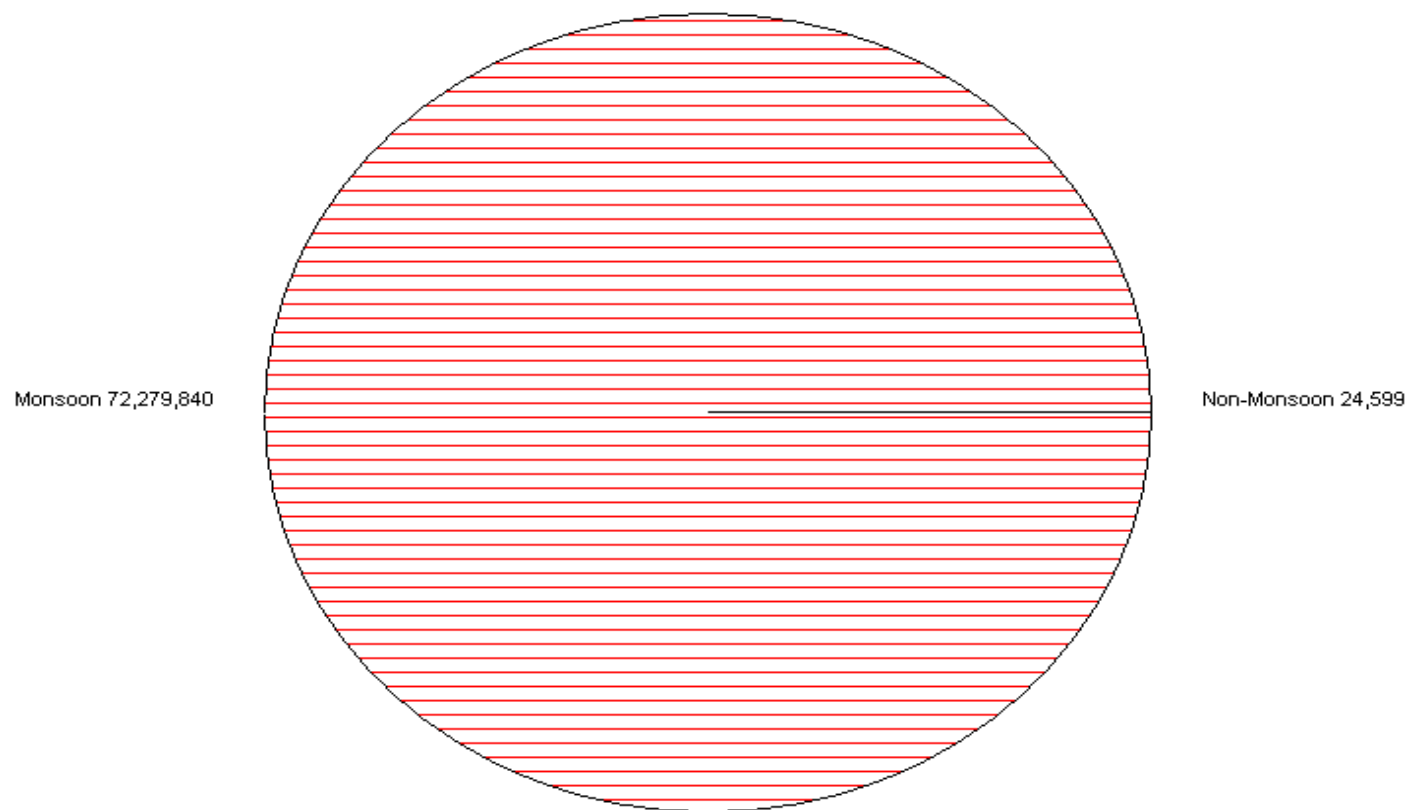
Sub-Division : UMSD,CWC,Raipur



Seasonal Sediment Load for the period : 1973-2015

Station Name : Simga (EMP00J1)
Local River : Seonath

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



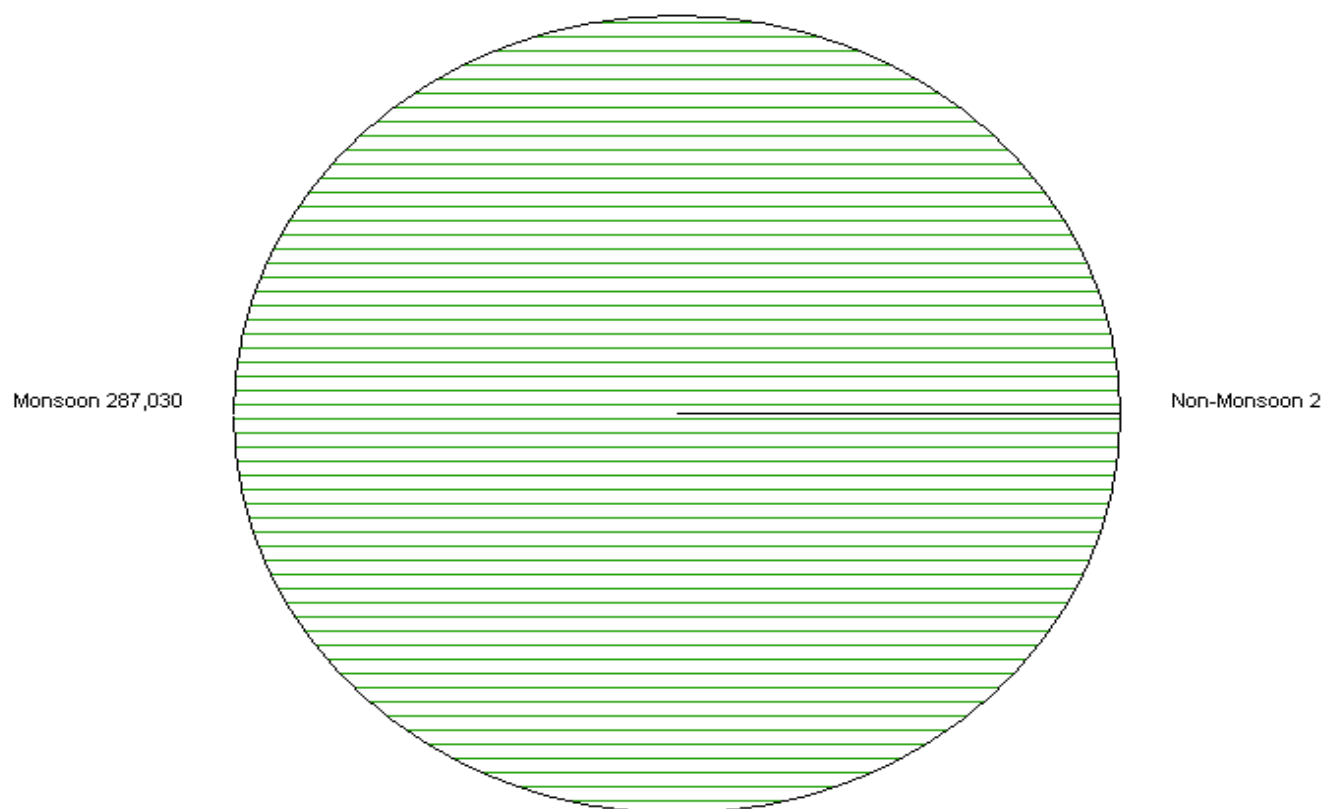
Seasonal Sediment Load for the Year: 2015-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

River Water Analysis

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	199.4	48.81	385.4	72.82	24.84	8.881	3.018	0.789	1.256	0.076	0.000
2	Colour_Cod (-)		Clear	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	
3	EC_FLD (µmho/cm)		921	943	413	369	370	482	442	587	621	709	
4	EC_GEN (µmho/cm)		376	278	344	272	314	374	389	497	515	703	
5	Odour_Code (-)		odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	
6	pH_FLD (pH units)		8.2	8.5	8.7	9.0	7.8	7.0	6.5	5.8	6.3	5.3	
7	pH_GEN (pH units)		7.7	7.7	8.0	8.1	8.3	8.5	8.5	8.1	8.5	8.1	
8	Temp (deg C)		28.0	30.0	28.0	24.5	25.0	25.0	21.0	21.5	26.8	29.0	
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)		13.9	6.0	0.0	0.0	3.4	27.0	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)		232	220	303	308	135	354	280	296	252	200	
3	Ca (mg/L)		30	40	27	38	30	24	32	29	40	60	
4	Cl (mg/L)		46.0	28.0	31.0	21.0	13.0	48.0	55.0	91.0	95.0	105.0	
5	CO3 (mg/L)		16.8	7.2	0.0	0.0	4.1	32.5	0.0	0.0	0.0	0.0	
6	HCO3 (mg/L)		124	127	185	188	78	183	171	181	154	122	
7	K (mg/L)		8.5	5.7	8.7	8.0	10.3	7.4	10.2	10.7	14.2	15.2	
8	Mg (mg/L)		11.7	11.7	21.4	12.6	14.6	33.1	11.7	12.6	9.7	1.9	
9	Na (mg/L)		18.5	14.3	28.3	27.9	16.3	36.1	41.3	42.5	46.7	38.6	
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)		2.9	0.1	1.7	0.2	1.0	0.1	1.7	0.9	2.2	1.9	
2	DO (mg/L)		4.7	5.8	6.3	5.4	6.6	7.3	9.4	7.4	7.3	5.8	
3	DO_SAT% (%)		60	77	80	64	80	88	105	83	90	75	
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)		76	100	68	96	76	60	80	72	100	150	
2	HAR_Total (mgCaCO3/L)		125	149	157	149	137	198	129	125	141	158	
3	Na% (%)		23	17	27	28	19	28	39	40	39	32	
4	RSC (-)		0.1	0.0	0.0	0.1	0.0	0.2	0.2	0.5	0.0	0.0	
5	SAR (-)		0.7	0.5	1.0	1.0	0.6	1.1	1.6	1.7	1.7	1.3	
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Simga (EMP00J1)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : UMSD,CWC,Raipur

River Water Summary					
S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
PHYSICAL					
1	Q (cumec)	366	1177	0.000	71.58
2	EC_FLD (μmho/cm)	10	943	369	586
3	EC_GEN (μmho/cm)	10	703	272	406
4	pH_FLD (pH units)	10	9.0	5.3	7.3
5	pH_GEN (pH units)	10	8.5	7.7	8.1
6	Temp (deg C)	10	30.0	21.0	25.9
CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	10	27.0	0.0	5
2	ALK-TOT (mgCaCO3/L)	10	354	135	258
3	Ca (mg/L)	10	60	24	35
4	Cl (mg/L)	10	105.0	13.0	53.3
5	CO3 (mg/L)	10	32.5	0.0	6.1
6	HCO3 (mg/L)	10	188	78	151
7	K (mg/L)	10	15.2	5.7	9.9
8	Mg (mg/L)	10	33.1	1.9	14.1
9	Na (mg/L)	10	46.7	14.3	31.1
BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	10	2.9	0.1	1.3
2	DO (mg/L)	10	9.4	4.7	6.6
3	DO_SAT% (%)	10	105	60	80
TRACE & TOXIC					
CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	10	150	60	88
2	HAR_Total (mgCaCO3/L)	10	198	125	147
3	Na% (%)	10	40	17	29
4	RSC (-)	10	0.5	0.0	0.1
5	SAR (-)	10	1.7	0.5	1.1
PESTICIDES					

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	117.2	164.6	489.6	196.7	763.1	852.2	2484	82.91	104.3	222.8	333.2	384.7	1498	214.7	141.3	13.04	7.203	63.78	23.69	38.06
2	EC_FLD (µmho/cm)	273	254	171	304	288	310	300	303	339	314	375	307	426	393	661	388	358	383	459	398
3	EC_GEN (µmho/cm)	273	254	171	304	288	310	245	320	313	280	348	265	243	344	317	388	358	383	459	398
4	pH_FLD (pH units)	7.7	8.0	8.0	8.0	7.9	7.9	7.8	7.8	7.7	7.8	7.5	8.4	8.2	7.5	8.6	8.1	8.4	8.1	8.1	7.2
5	pH_GEN (pH units)	7.7	8.0	8.0	8.0	7.9	7.9	7.7	7.7	7.9	7.5	7.4	7.8	8.0	7.9	7.9	8.1	8.4	8.1	8.1	7.2
6	Temp (deg C)	28.1	28.1	30.0	30.8	30.2	29.0	27.2	29.4	29.2	27.5	25.8	29.0	27.4	28.7	27.6	21.1	21.5	22.5	23.3	24.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	0.3	0.0	0.0	3.4		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	6.1	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	257	158	180	298	154		172	224	229	195	239	184	206	272	266	313	247	367	309	271
3	B (mg/L)					0.06		0.01	0.00	0.00	0.00	0.00	0.00								0.09
4	Ca (mg/L)	29	30	20	39	18		18	25	27	19	32	26	26	31	34	38	37	41	30	29
5	Cl (mg/L)	6.6	6.3	41.3	72.2	22.2		22.8	27.4	27.6	8.7	15.0	11.2	18.8	25.0	31.5	11.2	6.8	25.3	46.0	43.8
6	CO3 (mg/L)	0.0	0.3	0.0	0.0	4.1		0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.0	0.0	7.3	0.0	0.0	0.0
7	F (mg/L)			1.37		0.23		0.15	0.12	0.21	0.22	0.22	0.21						1.01	0.38	0.11
8	Fe (mg/L)					0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.1								0.0
9	HCO3 (mg/L)	157	96	110	175	90		105	137	140	119	146	112	126	166	156	191	143	199	189	165
10	K (mg/L)	3.0	4.6			5.2		3.2	4.5	5.7	4.8	6.5	3.4	6.0	8.6	7.7	2.3	1.9		4.1	3.8
11	Mg (mg/L)	7.6	5.3	7.3	21.7	9.1		9.9	10.8	14.0	11.8	18.6	14.4	7.8	10.1	14.3	9.7	7.0	12.2	17.2	17.1
12	Na (mg/L)	10.3	4.3			22.6		19.9	24.9	12.5	15.1	24.9	18.9	9.6	32.9	22.3	7.2	13.4		38.5	29.6
13	NO2+NO3 (mg N/L)	0.34	0.61			0.10	0.09	0.11	0.63								0.09			2.62	0.11
14	NO2-N (mgN/L)					0.00	0.01	0.02	0.02	0.02	0.02	0.05	0.06								0.00
15	NO3-N (mgN/L)					0.07	0.13	0.09	0.61												0.11
16	o-PO4-P (mg P/L)								0.098												
17	P-Tot (mgP/L)			0.015		0.005		0.016	0.046	0.052	0.035	0.060	0.085						0.030	0.020	
18	SiO2 (mg/L)					9.5		19.0	18.9	21.9	14.6	21.8	18.1								12.8
19	SO4 (mg/L)	8.5	7.8	9.0	6.5	14.6		16.8	13.6	21.4	16.2	19.4	19.4				9.3	10.5	7.8	18.7	15.1
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	1.1	1.0	1.7	1.1	0.9	0.5	1.2	0.8	1.7	1.6	1.9	1.8	1.1	0.4	1.2	1.4	1.3	0.7	1.1	0.9
2	COD (mg/L)							23.0	22.8	23.2	27.0	26.4	29.0								
3	DO (mg/L)	7.4	7.9	5.9	6.0	6.0	6.0	6.3	5.4	6.0	5.4	4.6	5.8	4.9	5.2	5.6	9.9	8.5	5.7	8.4	8.3
4	DO_SAT% (%)	94	101	75	81	79	78	79	71	78	68	57	75	61	66	70	107	96	72	98	100
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	73	76	50	98	45		44	63	67	48	81	64	64	79	85	94	93	103	76	73
2	HAR_Total (mgCaCO3/L)	104	121	80	188	83		86	108	125	97	159	124	97	121	145	134	121	153	147	144
3	Na% (%)	19	9			30		33	31	16	24	24	25	17	33	24	11	19		37	30
4	RSC (-)	0.4	0.0	0.2	0.0	0.0		0.1	0.2	0.0	0.2	0.1	0.0	0.2	0.4	0.1	0.5	0.2	0.6	0.6	0.1
5	SAR (-)	0.5	0.2			1.0		1.0	1.1	0.5	0.7	0.8	0.8	0.4	1.3	0.8	0.3	0.5		1.4	1.1
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Simga (EMP00J1)

Local River : Seonath

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	14.52	20.98	6.633	11.87	29.77	16.30	15.41	67.09	30.71	9.383	0.613	1.254	2.793	2.635	1.088	0.792	5.397		0.348	4.901
2	EC_FLD (µmho/cm)	327	460	445	402	432	362	289	420	387	470	423	513	516	458	441		421	520	498	512
3	EC_GEN (µmho/cm)	327	367	495	414	468	430	457	444	453	394	423	513	516	458	441		384	464	500	577
4	pH_FLD (pH units)	8.2	8.0	8.1	7.5	7.5	8.1	8.3	7.5	7.0	6.8	8.3	8.4	8.1	8.0	7.9		7.9	8.9	7.8	7.4
5	pH_GEN (pH units)	8.2	7.9	7.8	8.0	7.5	8.0	7.8	8.0	8.3	8.3	8.3	8.4	8.1	8.0	7.9		8.0	8.5	8.1	7.2
6	Temp (deg C)	25.5	19.6	19.5	21.0	21.4	22.3	23.0	23.8	21.0	23.1	23.3	26.5	26.0	30.3	32.0		27.3	24.0	24.0	22.7
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		0.0	1.8	2.8	0.0	2.5	1.3	0.0	2.5	7.6	0.0	7.4	0.0	0.0	0.0		0.0	14.7	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		232	304	248	321	293	333	339	327	266	319	324	495	244	308		217	314	361	286
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00	0.00								0.07		0.01	0.00	0.00	0.00
4	Ca (mg/L)		29	37	26	36	34	39	55	40	29	41	49	48	24	32		25	34	37	24
5	Cl (mg/L)		46.2	50.3	24.5	40.3	34.7	25.7	36.0	48.8	51.8	22.2	5.0	40.0	30.0	74.4		40.1	19.4	53.9	51.6
6	CO3 (mg/L)		0.0	2.2	3.3	0.0	3.0	1.6	0.0	3.0	9.1	0.0	13.3	0.0	0.0	0.0		0.0	17.7	0.0	0.0
7	F (mg/L)		0.22	0.16	0.21	0.17	0.22	0.25							0.62	0.09		0.19	0.15	0.34	0.42
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1	0.2	0.1		0.1						0.1	0.0	0.0	0.0	0.0	0.3
9	HCO3 (mg/L)		141	183	148	196	175	202	207	196	153	194	184	302	149	188		132	173	220	174
10	K (mg/L)		5.2	5.5	6.9	13.2	5.2	1.9	15.3	9.3	9.6	2.9	5.9		8.4	6.8		6.5	9.1	12.2	7.9
11	Mg (mg/L)		18.2	18.2	16.2	21.9	20.3	19.4	13.8	23.3	18.0	9.7	9.6	17.8	10.4	17.0		15.3	19.4	22.4	17.8
12	Na (mg/L)		26.5	36.1	20.9	42.2	27.1	49.5	53.1	41.7	34.1	7.5	31.4		46.4	46.0		34.4	30.7	66.0	44.0
13	NO2+NO3 (mg N/L)	0.12	0.18	0.63						0.25		2.00			0.40	0.10	0.10	0.54	0.43		
14	NO2-N (mgN/L)	0.03	0.01	0.02	0.03	0.07	0.14	0.04		0.04						0.00	0.01	0.02	0.03	0.10	0.49
15	NO3-N (mgN/L)	0.09	0.16	0.61						0.21						0.10	0.09	0.52	0.40		
16	o-PO4-P (mg P/L)																				
17	P-Tot (mgP/L)		0.017	0.060	0.052	0.083	0.120	0.080		0.070					0.020			0.030	0.040	0.060	0.127
18	SiO2 (mg/L)		16.7	24.9	21.7	25.1	17.5	15.6		17.8						20.9		20.4	28.0	10.2	19.1
19	SO4 (mg/L)		19.5	34.1	26.3	40.2	40.2	25.9		23.0		15.2		25.6	31.1	16.1		23.2	40.0	33.0	43.5
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.3	1.1	0.9	0.9	1.8	1.4	1.4	1.1	1.6	0.9	4.0	1.7	0.6	0.4	1.3		1.6	1.2	2.6	2.4
2	COD (mg/L)		26.0	36.0	46.0	97.0	30.0	24.0										25.3	64.0	80.0	46.7
3	DO (mg/L)	7.6	8.4	6.6	7.0	6.9	7.3	6.4	7.1	8.1	7.7	10.1	7.6	6.6	5.3	7.5		6.8	5.5	1.4	5.8
4	DO_SAT% (%)	92	91	73	78	77	83	74	83	91	89	113	94	86	68	102		85	65	17	67
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		72	92	66	91	86	98	137	101	72	103	124	121	59	81		62	86	92	59
2	HAR_Total (mgCaCO3/L)		148	168	134	182	170	179	195	198	147	143	163	194	102	152		125	167	186	133
3	Na% (%)		26	31	23	31	25	37	32	29	31	12			46	39		36	27	42	44
4	RSC (-)		0.1	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.2	0.3	0.2	1.7	0.4	0.3		0.2	0.1	0.0	0.3
5	SAR (-)		0.9	1.2	0.8	1.4	0.9	1.6	1.6	1.3	1.2	0.3			2.0	1.7		1.3	1.0	2.1	1.9
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Simga (EMP00J1)
Local River : Seonath

River Water

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	2.241	2.601	11.03	0.279	0.444
2	EC_FLD (µmho/cm)	334		427		665
3	EC_GEN (µmho/cm)	490		514		609
4	pH_FLD (pH units)	8.5		7.5		5.8
5	pH_GEN (pH units)	7.7		7.9		8.3
6	Temp (deg C)	27.7		25.3		27.9
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0		0.0		0.0
2	ALK-TOT (mgCaCO3/L)	333		269		226
3	B (mg/L)	0.00				
4	Ca (mg/L)	37		38		50
5	Cl (mg/L)	42.5		55.0		100.0
6	CO3 (mg/L)	0.0		0.0		0.0
7	F (mg/L)	0.27				
8	Fe (mg/L)	0.3				
9	HCO3 (mg/L)	203		164		138
10	K (mg/L)	8.0		6.5		14.7
11	Mg (mg/L)	20.9		16.5		5.8
12	Na (mg/L)	53.2		49.3		42.7
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)	0.29				
15	NO3-N (mgN/L)					
16	o-PO4-P (mg P/L)					
17	P-Tot (mgP/L)	0.247				
18	SiO2 (mg/L)	20.2				
19	SO4 (mg/L)	39.1				
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.6		1.0		2.1
2	COD (mg/L)	29.3				
3	DO (mg/L)	4.1		5.6		6.6
4	DO_SAT% (%)	52		70		83
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	94		96		125
2	HAR_Total (mgCaCO3/L)	181		165		149
3	Na% (%)	38		35		36
4	RSC (-)	0.0		0.0		0.0
5	SAR (-)	1.7		1.7		1.5
	PESTICIDES					

SITE ANDHIARKHORE

HISTORY SHEET

Water Year : 2015-2016

Site : Andhiarkhore

Code : EMP60E5

State : Chhattisgarh

District : Bemetra

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Seonath

Sub Tributary :

Sub-Sub Tributary :

Local River : Hamp

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Drainage Area : 2210 Sq. Km.

Bank : Right

Latitude : 21°47'00"

Longitude : 81°36'30"

Zero of Gauge (m) : 252 (m.s.l)

9/27/1977 - 9/27/2007

Opening Date

Closing Date

Gauge : 9/27/1977

Discharge :

Sediment : 7/12/1980

Water Quality : 6/1/1980

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1978-1979	414.8	256.700	8/24/1978	0.323	253.790	5/26/1979
1979-1980	694.6	258.930	8/9/1979	0.100	253.795	4/26/1980
1980-1981	240.5	256.160	9/5/1980	0.100	253.785	6/1/1980
1981-1982	126.9	255.550	9/29/1981	0.287	253.790	6/19/1981
1982-1983	133.9	255.300	8/14/1982	0.173	253.720	5/9/1983
1983-1984	367.7	256.440	9/30/1983	0.175	253.730	6/16/1983
1984-1985	141.0	256.075	8/24/1984	0.262	253.725	5/7/1985
1985-1986	220.0	256.100	8/9/1985	0.285	253.740	6/6/1985
1986-1987	129.2	256.200	8/7/1986	0.290	253.735	5/30/1987
1987-1988	240.3	256.265	9/16/1987	0.190	253.700	5/31/1988
1988-1989	269.0	256.620	8/2/1988	0.145	253.670	5/19/1989
1989-1990	267.9	256.445	9/1/1989	0.150	253.710	4/26/1990
1990-1991	425.9	257.500	9/26/1990	0.548	253.795	5/27/1991
1991-1992	443.9	257.280	8/24/1991	0.148	253.695	5/25/1992
1992-1993	264.6	256.435	8/21/1992	0.122	253.690	6/9/1992
1993-1994	196.7	255.670	8/16/1993	0.117	253.740	5/19/1994
1994-1995	990.0	258.920	10/9/1994	0.263	253.760	6/11/1994
1995-1996	228.3	256.020	7/24/1995	0.284	253.755	5/25/1996
1996-1997	236.8	256.200	8/20/1996	0.148	253.715	5/19/1997
1997-1998	196.3	257.090	8/23/1997	0.168	253.685	6/3/1997
1998-1999	852.0	258.225	9/13/1998	0.094	253.805	4/20/1999
1999-2000	364.7	257.080	9/19/1999	0.238	253.835	5/3/2000

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2000-2001	46.74	254.955	6/20/2000	0.065	253.730	5/21/2001
2001-2002	442.3	257.200	8/15/2001	0.058	253.710	5/27/2002
2002-2003	413.4	256.970	9/7/2002	0.029	253.815	5/17/2003
2003-2004	275.5	256.550	9/3/2003	0.073	253.835	4/24/2004
2004-2005	383.6	256.940	8/9/2004	0.085	253.970	1/2/2005
2005-2006	583.9	258.285	9/15/2005	0.249	253.860	4/12/2006
2006-2007	154.6	256.350	9/6/2006	0.136	253.840	2/11/2007
2007-2008	205.2	256.685	9/30/2007	0.036	253.795	3/6/2008
2008-2009	99.29	255.550	9/19/2008	0.059	253.690	12/31/2008
2009-2010	38.23	254.833	7/17/2009	0.017	253.700	10/14/2009
2010-2011	192.4	256.540	9/8/2010	0.044	253.645	3/1/2011
2011-2012	361.3	258.300	9/8/2011	0.021	253.600	3/21/2012
2012-2013	74.52	255.800	9/7/2012	0.030	253.585	4/19/2013
2013-2014	160.4	257.220	8/20/2013	0.044	253.660	5/20/2014
2014-2015	329.3	258.850	8/6/2014	0.000	253.590	6/13/2014

Stage-Discharge Data for the period 2015 - 2016

Station Name : Andhiarkhore (EMP60E5)

Division : MD,CWC,Burla

Local River : Hamp

Sub-Division : UMSD,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	253.700	0.000	254.000	5.031	253.710	0.425	254.195	15.70	253.950	4.731	253.830	2.000 *
2	253.665	0.000 *	254.150	11.06	253.695	0.410 *	254.090	8.452	253.930	3.220 *	253.930	3.546
3	253.645	0.000 *	253.970	5.332	253.710	0.436	254.020	6.070	253.910	3.205	253.960	4.798
4	253.575	0.000 *	254.080	8.287	254.315	22.11	253.980	5.541	253.880	2.000 *	253.970	4.791
5	253.555	0.000 *	253.950	4.000 *	254.520	26.00 *	254.000	6.152	253.820	1.957	253.940	3.552
6	253.540	0.000 *	253.920	3.561	254.185	14.64	253.970	4.750 *	253.800	1.293	253.955	4.597
7	253.535	0.000 *	253.860	2.468	254.045	7.291	253.960	4.724	253.780	0.980	253.900	2.711
8	253.670	0.000 *	253.840	1.644	253.960	4.634	253.920	3.883	253.780	1.000	253.890	2.550 *
9	253.665	0.000 *	254.070	7.560	253.945	4.600 *	254.145	11.42	253.780	0.701	253.860	2.501
10	253.660	0.000 *	253.940	3.903	253.910	3.656	253.930	4.004	253.770	0.805	253.860	2.465
11	253.655	0.000 *	254.210	13.00	253.910	3.567	253.885	4.456	253.770	1.060 *	253.855	2.450 *
12	253.650	0.000 *	254.285	16.25 *	254.335	22.95	253.845	2.366	253.765	1.068	253.870	2.459
13	253.650	0.000 *	254.160	11.28	254.250	19.50	253.820	2.300 *	253.755	0.951	253.865	2.339
14	253.655	0.000 *	254.065	7.412	254.233	16.68	253.760	1.291	253.755	1.031	253.865	2.297
15	253.655	0.000 *	254.035	6.020	254.320	17.64 *	253.740	0.854	253.745	0.833	253.860	2.280 *
16	253.700	0.000 *	253.980	5.058	254.270	15.21 *	253.760	1.051	253.740	0.872	253.855	2.303
17	253.720	0.000 *	253.935	3.708	254.360	22.01	253.840	2.350 *	253.735	0.634	253.850	2.246
18	254.000	3.099	253.930	3.590 *	254.185	14.42	253.903	4.630	253.850	2.000 *	253.850	2.153
19	253.965	2.790	253.860	3.158 *	254.110	8.959	254.585	53.15	253.810	1.413	253.850	2.122
20	254.003	3.134	253.870	2.520	254.010	5.956	254.280	20.00 *	253.820	1.586	253.865	2.324
21	253.900	4.850 *	253.920	3.302	253.995	5.512	254.358	25.08	253.820	1.585	253.860	2.180
22	254.210	9.450	253.910	3.005	253.958	4.464	254.815	75.65	253.810	1.500 *	253.860	2.180 *
23	255.205	67.44	253.920	3.405	253.875	3.200 *	254.590	53.80	253.820	1.483	253.850	2.091
24	254.310	19.49	254.200	11.38	253.810	1.469	254.400	28.58	253.775	1.400 *	253.850	2.070
25	254.085	8.490	253.975	4.517	253.830	2.380	254.260	18.00 *	253.770	1.350 *	253.850	2.070 *
26	253.970	8.174	253.910	3.000 *	253.815	1.783	254.130	10.36	253.790	1.477	253.850	2.051
27	253.940	3.779	253.850	2.456	253.795	1.187	254.050	10.00 *	253.885	3.152	253.850	2.342
28	253.900	4.850 *	253.790	1.225	254.040	7.437	253.905	2.926	253.833	1.859	253.850	2.320
29	254.285	19.04	253.770	0.894	253.970	4.497	253.920	3.467	253.805	1.595	253.850	2.330 *
30	253.930	3.703	253.740	0.563	253.950	4.300 *	253.915	3.849	253.985	5.786	253.850	2.290
31			253.765	0.846	254.350	21.52			253.900	2.853		
Ten-Daily Mean												
I Ten-Daily	253.621	0.000	253.978	5.285	253.999	8.420	254.021	7.070	253.840	1.989	253.910	3.351
II Ten-Daily	253.765	0.902	254.033	7.199	254.198	14.69	253.942	9.245	253.775	1.145	253.858	2.297
III Ten-Daily	254.173	14.93	253.886	3.145	253.944	5.250	254.234	23.17	253.836	2.185	253.852	2.192
Monthly												
Min.	253.535	0.000	253.740	0.563	253.695	0.410	253.740	0.854	253.735	0.634	253.830	2.000
Max.	255.205	67.44	254.285	16.25	254.520	26.00	254.815	75.65	253.985	5.786	253.970	4.798
Mean	253.853	5.276	253.963	5.143	254.044	9.318	254.066	13.16	253.817	1.786	253.873	2.614

Annual Runoff in MCM = 104 Annual Runoff in mm = 47

Peak Observed Discharge = 75.65 cumecs on 22/09/2015 Corres. Water Level :254.815 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2015 Corres. Water Level :253.7 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2015 - 2016

Station Name : Andhiarkhore (EMP60E5)

Division : MD,CWC,Burla

Local River : Hamp

Sub-Division : UMSD,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	253.860	2.262	253.775	1.087	253.720	0.348	253.675	0.108	253.660	0.000 *	253.620	0.000 *
2	253.850	2.225	253.775	1.090	253.720	0.343	253.670	0.097	253.660	0.000 *	253.620	0.000 *
3	253.840	2.128	253.775	1.090 *	253.720	0.343	253.675	0.116	253.660	0.000 *	253.620	0.000 *
4	253.845	2.169	253.775	1.086	253.700	0.222	253.675	0.120	253.660	0.000 *	253.620	0.000 *
5	253.830	1.592	253.775	1.073	253.700	0.220	253.675	0.119	253.660	0.000 *	253.620	0.000 *
6	253.820	1.560 *	253.770	0.864	253.695	0.212	253.675	0.110 *	253.660	0.000 *	253.650	0.000 *
7	253.820	1.565	253.765	0.832	253.695	0.212 *	253.675	0.117 *	253.660	0.000 *	253.650	0.000 *
8	253.810	1.529	253.765	0.823	253.680	0.104	253.670	0.083	253.660	0.000 *	253.650	0.000 *
9	253.800	1.491	253.760	0.785	253.680	0.113	253.670	0.082	253.660	0.000 *	253.650	0.000 *
10	253.795	1.408	253.740	0.650 *	253.680	0.113	253.670	0.081	253.660	0.000 *	253.645	0.000 *
11	253.790	0.954	253.740	0.652	253.680	0.111	253.670	0.084	253.660	0.000 *	253.660	0.000 *
12	253.785	0.938	253.730	0.704	253.675	0.121	253.670	0.074	253.655	0.000 *	253.660	0.000 *
13	253.780	0.920 *	253.725	0.627	253.675	0.114	253.665	0.071 *	253.650	0.000 *	253.650	0.000 *
14	253.780	0.920	253.725	0.620	253.675	0.114 *	253.665	0.021	253.650	0.000 *	253.630	0.000 *
15	253.775	0.868	253.725	0.598	253.765	0.108	253.660	0.000 *	253.645	0.000 *	253.620	0.000 *
16	253.790	0.956	253.720	0.580	253.675	0.108	253.655	0.000 *	253.645	0.000 *	253.580	0.000 *
17	253.800	1.484	253.720	0.400 *	253.675	0.106	253.655	0.000 *	253.645	0.000 *	253.540	0.000 *
18	253.795	1.403	253.760	0.755	253.670	0.099	253.655	0.000 *	253.640	0.000 *	253.510	0.000 *
19	253.790	1.353	253.755	0.711	253.670	0.100	253.650	0.000 *	253.640	0.000 *	253.495	0.000 *
20	253.780	1.240 *	253.765	0.834	253.670	0.099	253.650	0.000 *	253.640	0.000 *	253.460	0.000 *
21	253.785	1.305	253.750	0.705	253.670	0.098 *	253.645	0.000 *	253.640	0.000 *	253.435	0.000 *
22	253.785	1.271	253.765	0.841	253.670	0.097	253.640	0.000 *	253.640	0.000 *	253.420	0.000 *
23	253.780	1.249	253.760	0.754	253.670	0.095	253.635	0.000 *	253.635	0.000 *	253.400	0.000 *
24	253.780	1.245 *	253.755	0.711 *	253.670	0.088	253.635	0.000 *	253.635	0.000 *	253.360	0.000 *
25	253.780	1.245 *	253.750	0.716	253.670	0.089	253.635	0.000 *	253.635	0.000 *	253.315	0.000 *
26	253.780	1.247	253.750	0.716 *	253.670	0.093	253.635	0.000 *	253.630	0.000 *	253.255	0.000 *
27	253.780	1.240 *	253.750	0.706	253.675	0.108	253.635	0.000 *	253.630	0.000 *	253.150	0.000 *
28	253.780	1.214	253.745	0.683	253.675	0.108 *	253.630	0.000 *	253.630	0.000 *	252.000	0.000 *
29	253.780	1.195	253.745	0.648	253.675	0.111	253.630	0.000 *	253.625	0.000 *	252.000	0.000 *
30	253.780	1.171	253.720	0.346			253.660	0.000 *	253.625	0.000 *	252.000	0.000 *
31	253.780	1.141	253.705	0.320			253.660	0.000 *			252.000	0.000 *
Ten-Daily Mean												
I Ten-Daily	253.827	1.793	253.768	0.938	253.699	0.223	253.673	0.103	253.660	0.000	253.634	0.000
II Ten-Daily	253.787	1.104	253.736	0.648	253.683	0.108	253.660	0.025	253.647	0.000	253.580	0.000
III Ten-Daily	253.781	1.229	253.745	0.649	253.672	0.098	253.640	0.000	253.632	0.000	252.849	0.000
Monthly												
Min.	253.775	0.868	253.705	0.320	253.670	0.088	253.630	0.000	253.625	0.000	252.000	0.000
Max.	253.860	2.262	253.775	1.090	253.765	0.348	253.675	0.120	253.660	0.000	253.660	0.000
Mean	253.798	1.371	253.750	0.742	253.685	0.145	253.657	0.041	253.646	0	253.338	0

Peak Computed Discharge = 26.00 cumecs on 05/08/2015

Corres. Water Level :254.52 m

Lowest Computed Discharge = 0.000 cumecs on 02/06/2015

Corres. Water Level :253.665 m

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

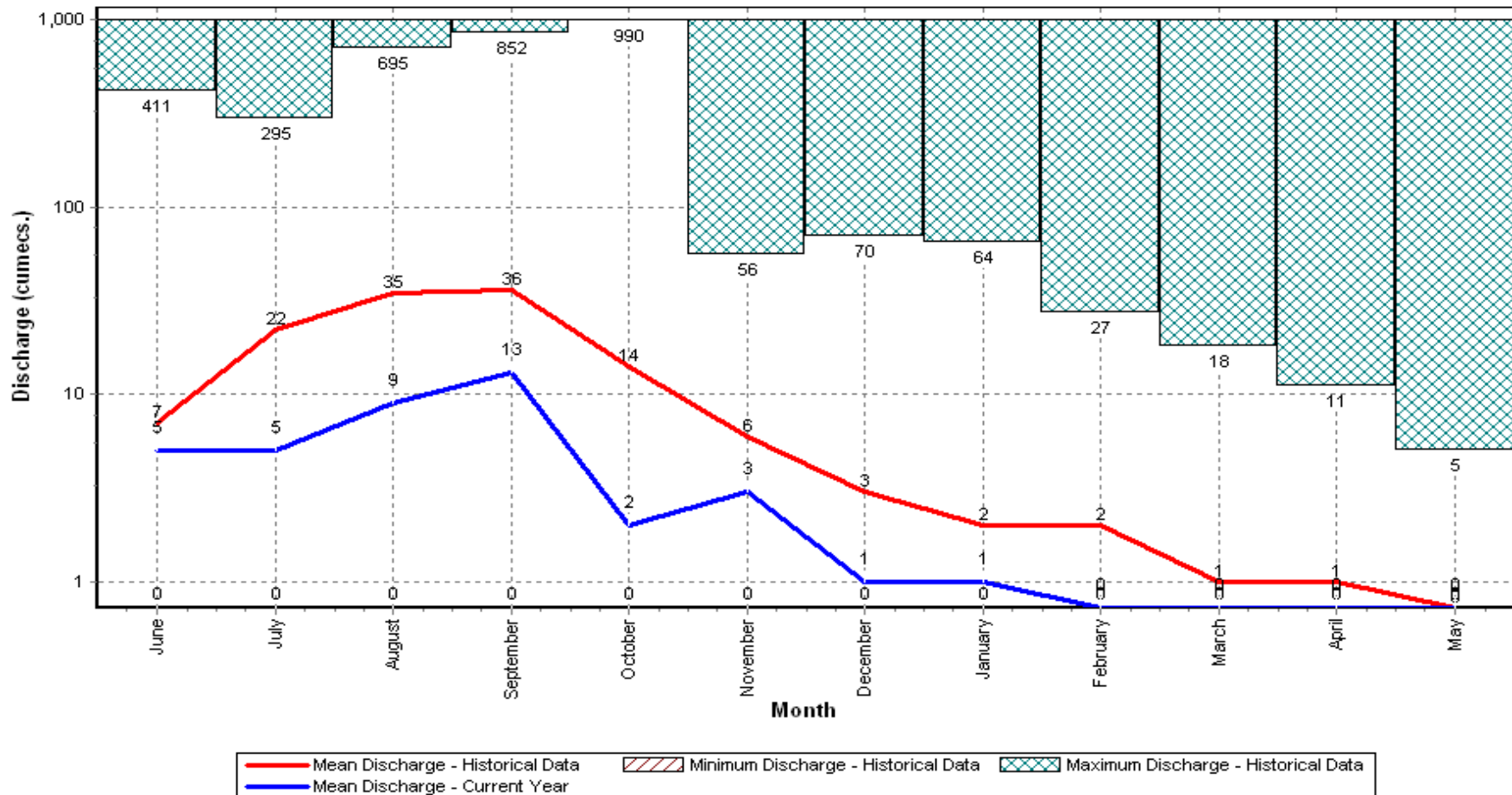
Station Name : Andhiarkhore (EMP60E5)

Data considered : 1978-2016

Division : MD,CWC,Burla

Local River : Hamp

Sub-Division : UMSD,CWC,Raipur



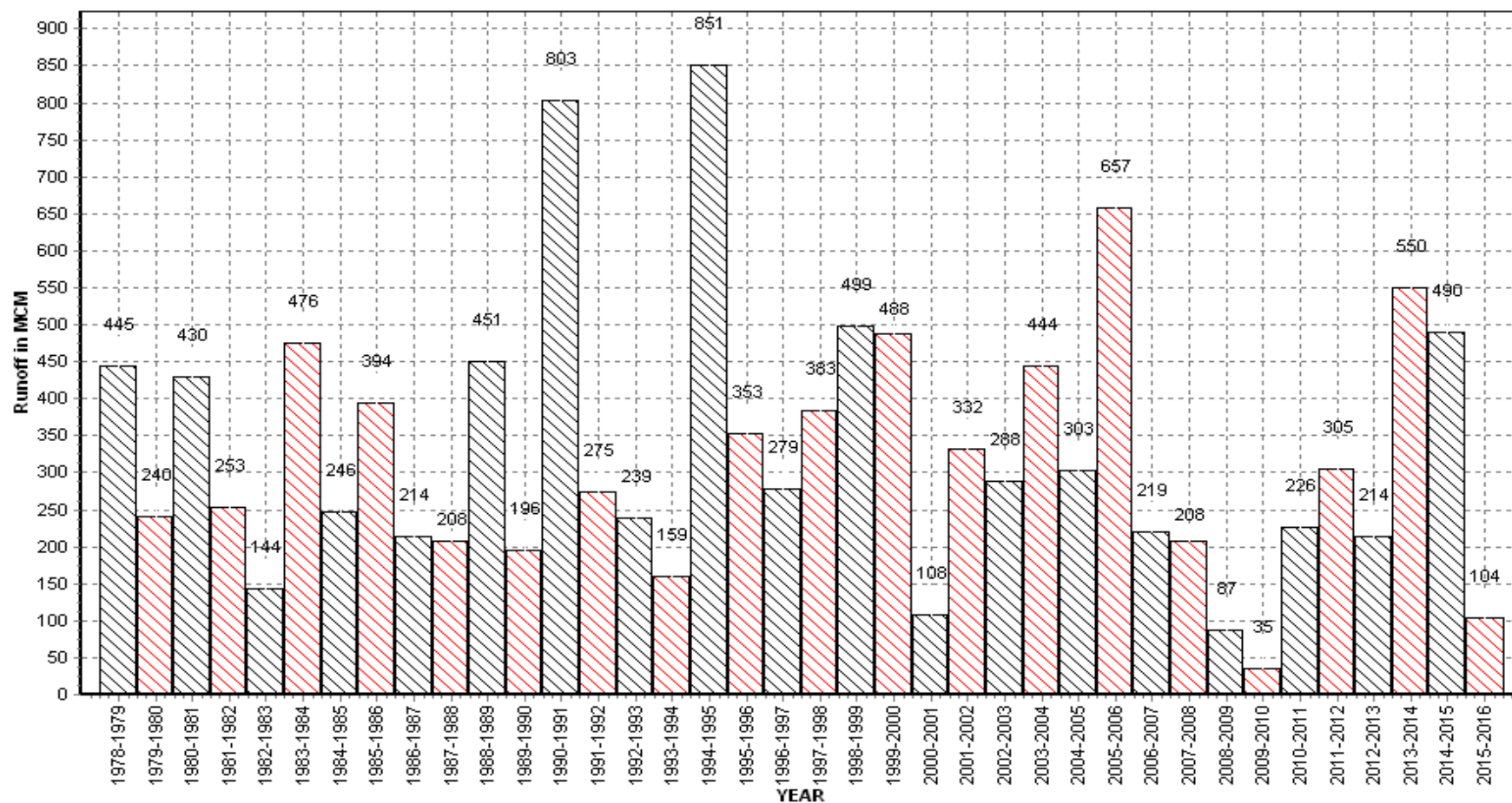
Annual Runoff Values for the period: 1978 - 2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



Note: Missing values have not been considered while arriving at Annual Runoff

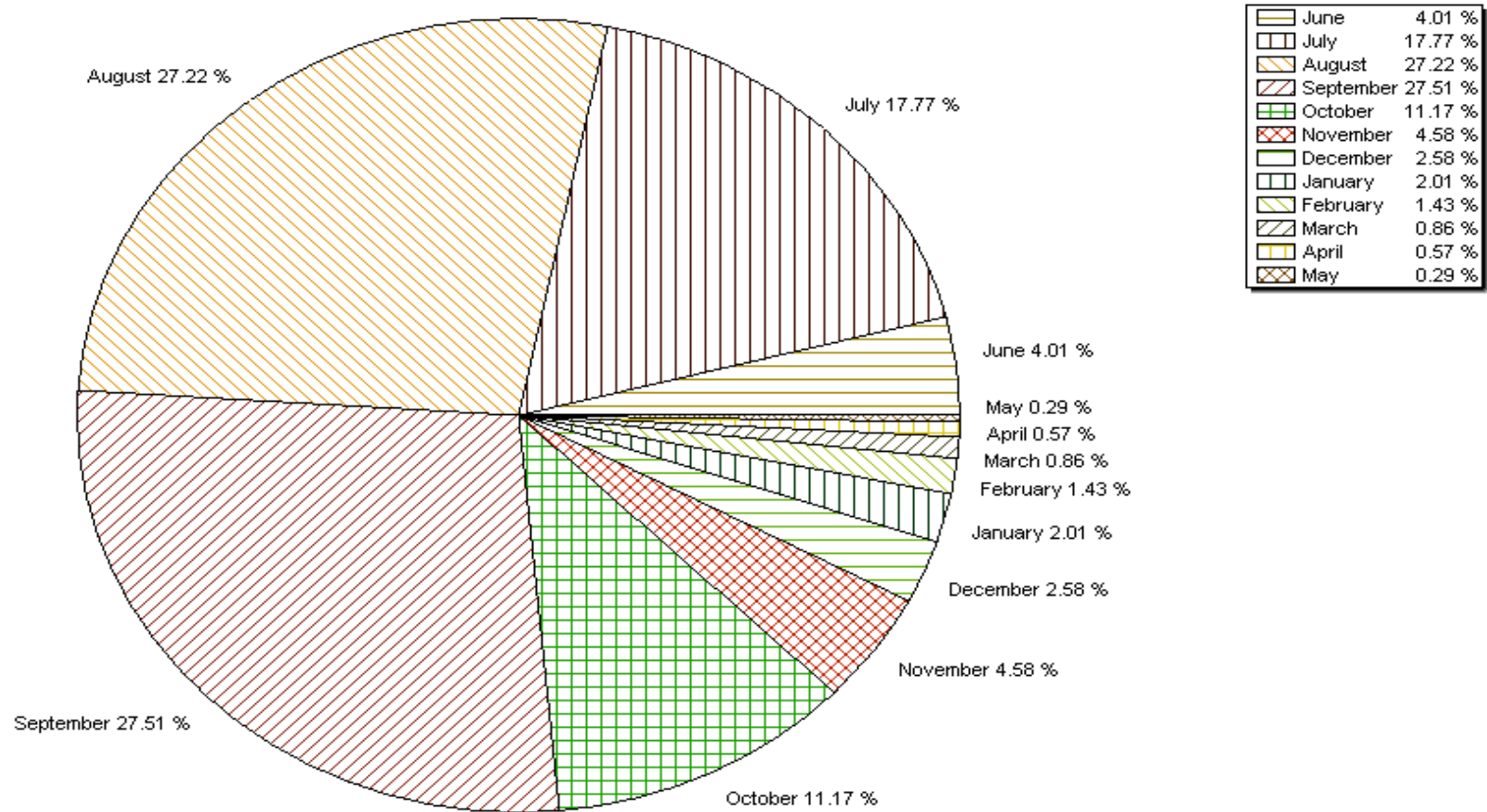
Monthly Average Runoff based on period : 1978-2015

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



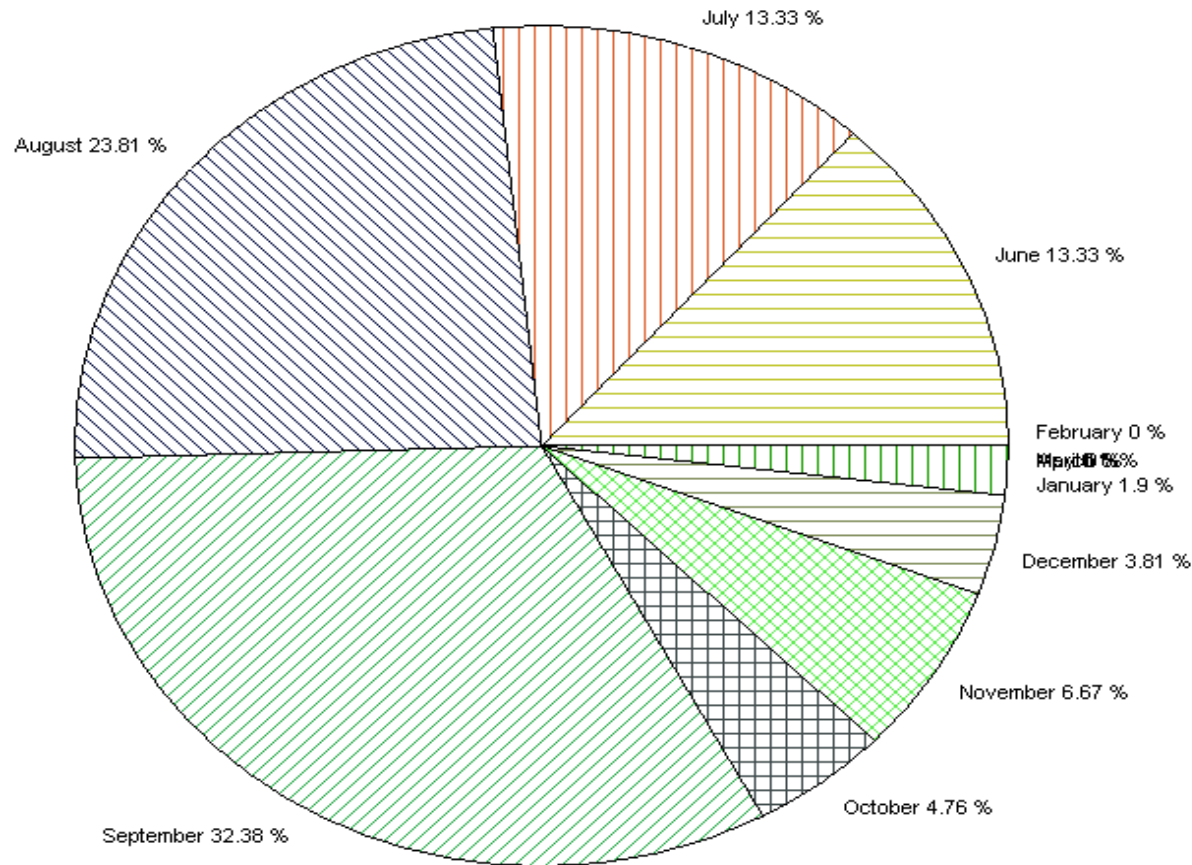
Monthly Runoff for the Year : 2015-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



June	13.33 %
July	13.33 %
August	23.81 %
September	32.38 %
October	4.76 %
November	6.67 %
December	3.81 %
January	1.9 %
February	0 %
March	0 %
April	0 %
May	0 %

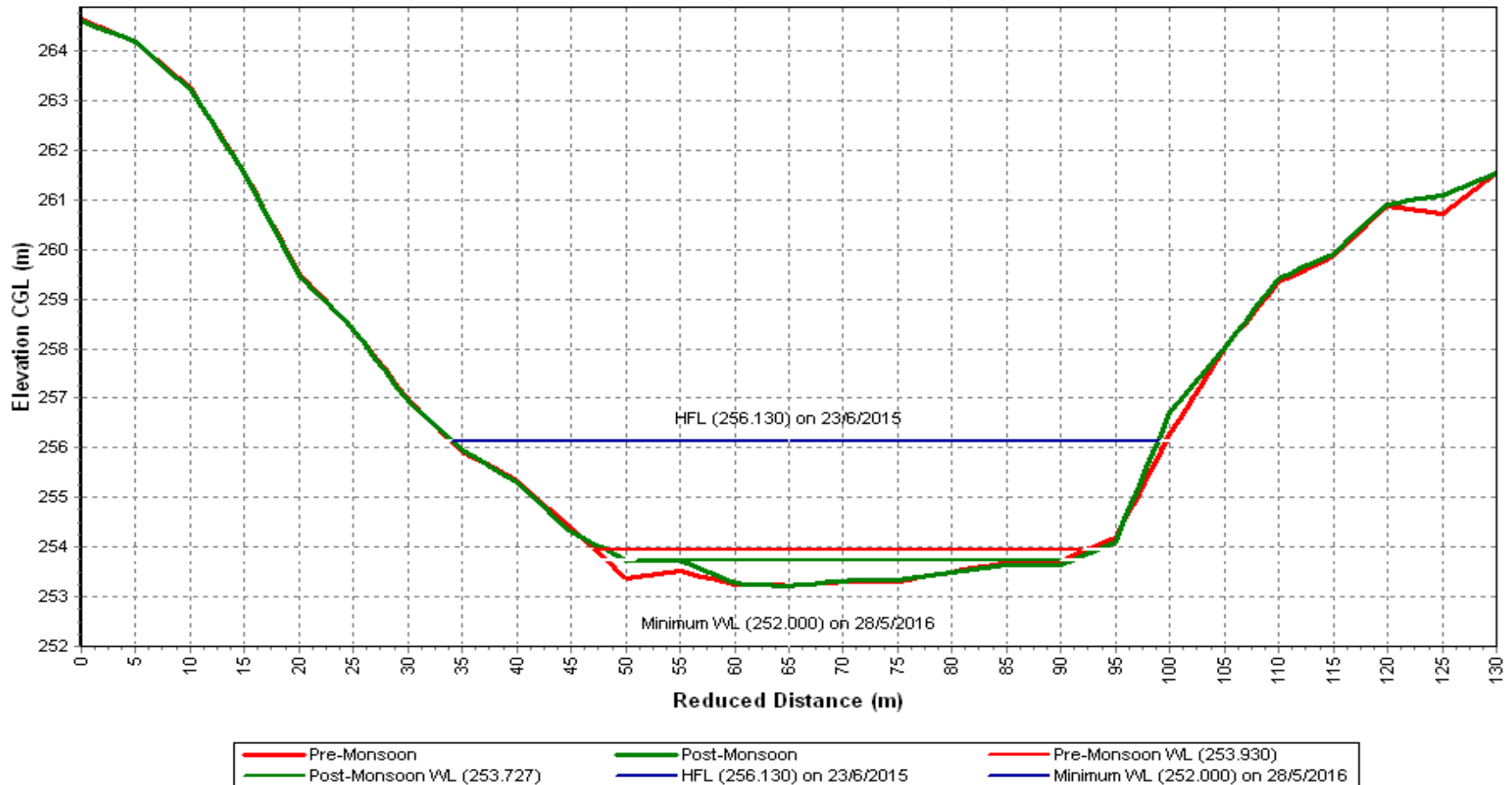
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

Division : MD,CWC,Burla

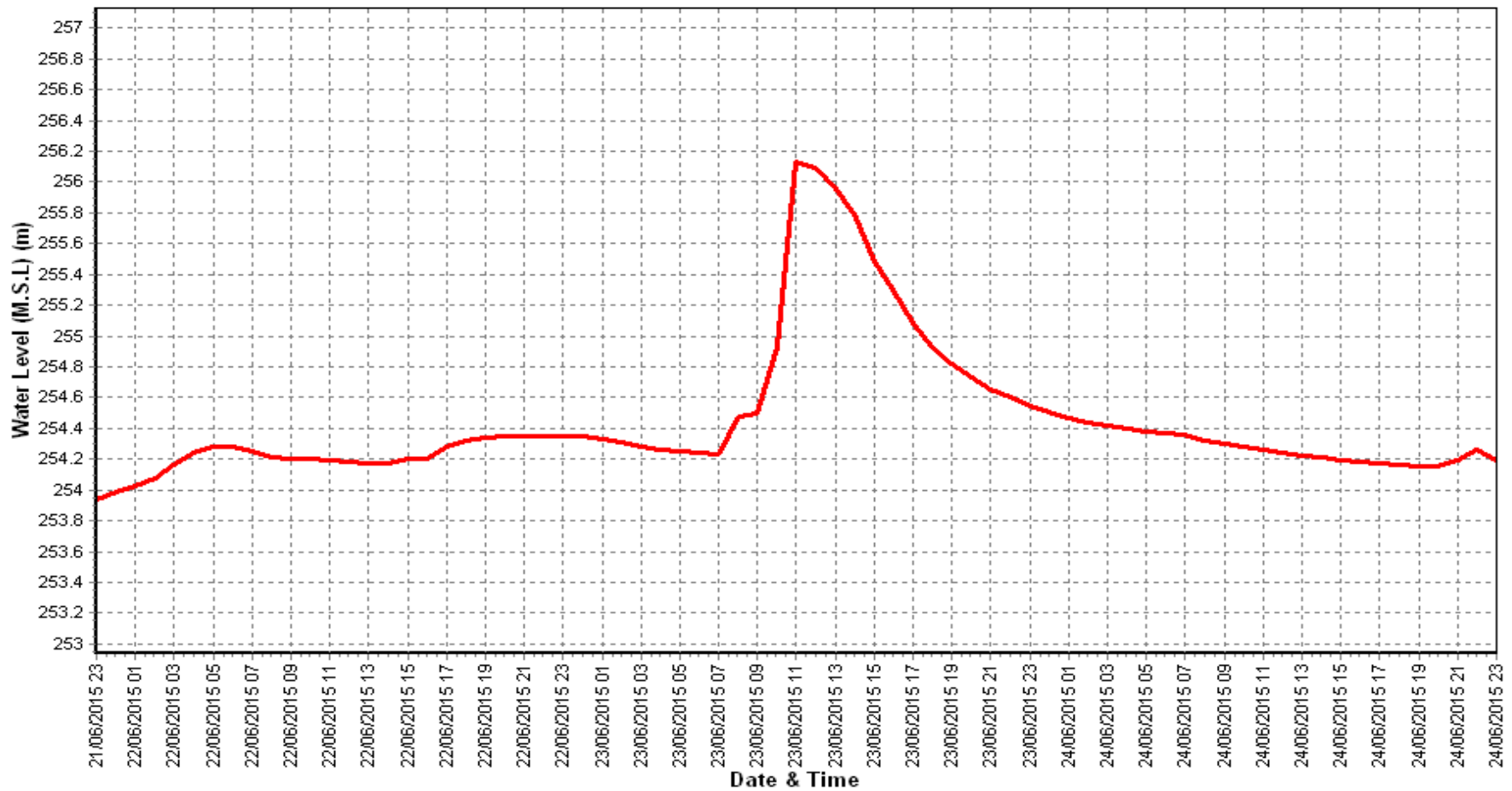
Sub-Division : UMSD,CWC,Raipur



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Andhiarkhore (EMP60E5)
Local River : Hamp

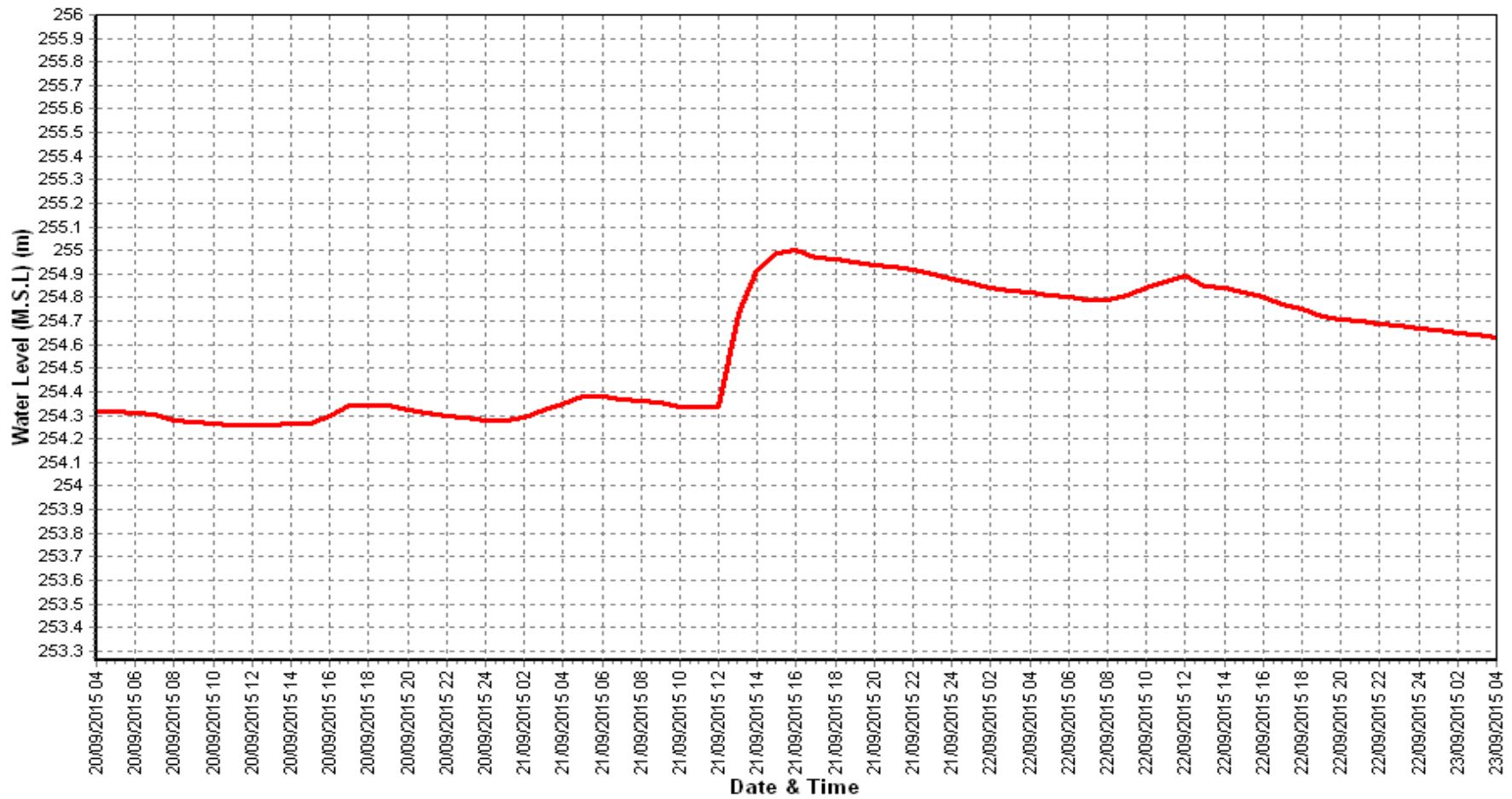
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Andhiarkhore (EMP60E5)
Local River : Hamp

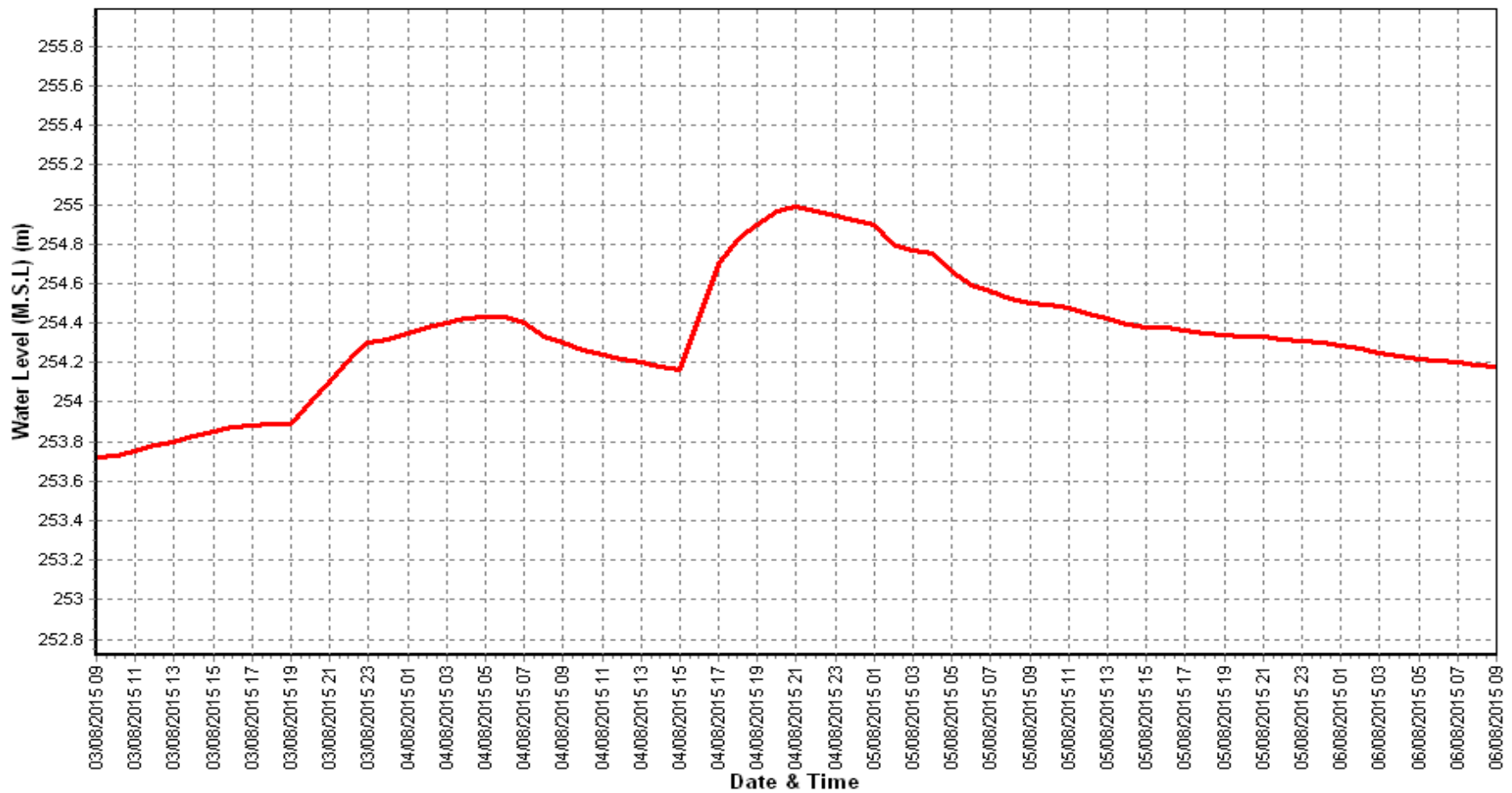
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



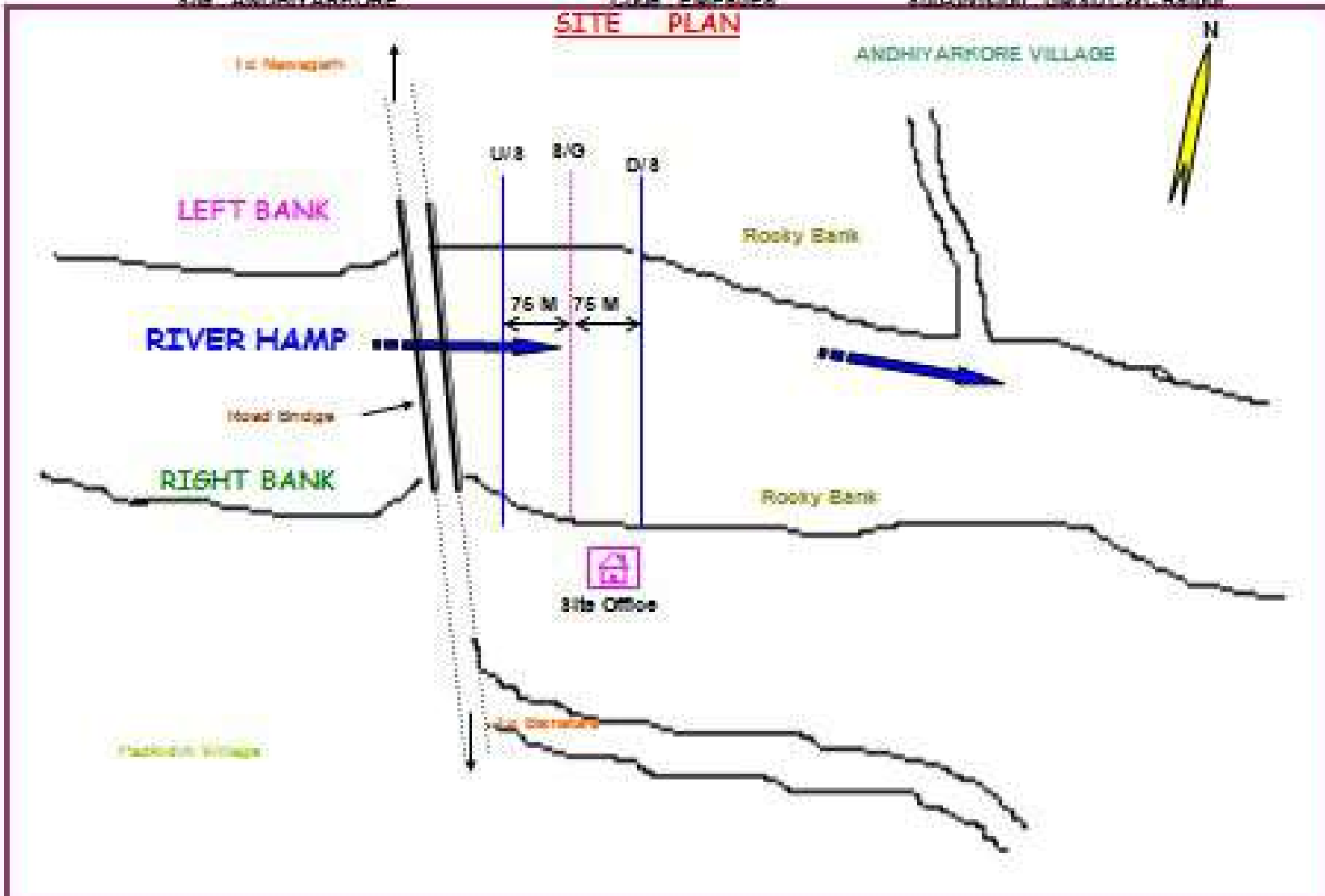
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Andhiarkhore (EMP60E5)
Local River : Hamp

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



SITE PLAN



SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	5.031	0.000	0.000	0.127	0.127	55	0.425	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	11.06	0.000	0.000	0.091	0.091	87	0.410	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	5.332	0.000	0.000	0.258	0.258	119	0.436	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	8.287	0.000	0.000	0.079	0.079	57	22.11	0.000	0.000	0.037	0.037	71
5	0.000	0.000	0.000	0.000	0.000	0	4.000	0.000	0.000	0.000	0.000	0	26.00	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	3.561	0.000	0.000	0.045	0.045	14	14.64	0.000	0.000	0.142	0.142	180
7	0.000	0.000	0.000	0.000	0.000	0	2.468	0.000	0.000	0.173	0.173	37	7.291	0.000	0.000	0.004	0.004	2
8	0.000	0.000	0.000	0.000	0.000	0	1.644	0.000	0.000	0.264	0.264	37	4.634	0.000	0.000	0.103	0.103	41
9	0.000	0.000	0.000	0.000	0.000	0	7.560	0.000	0.000	0.101	0.101	66	4.600	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	3.903	0.000	0.000	0.137	0.137	46	3.656	0.000	0.000	0.065	0.065	21
11	0.000	0.000	0.000	0.000	0.000	0	13.00	0.000	0.000	0.220	0.220	247	3.567	0.000	0.000	0.045	0.045	14
12	0.000	0.000	0.000	0.000	0.000	0	16.25	0.000	0.000	0.000	0.000	0	22.95	0.000	0.000	0.037	0.037	72
13	0.000	0.000	0.000	0.000	0.000	0	11.28	0.000	0.000	0.472	0.472	460	19.50	0.000	0.000	0.042	0.042	71
14	0.000	0.000	0.000	0.000	0.000	0	7.412	0.000	0.000	0.173	0.173	111	16.68	0.000	0.000	0.021	0.021	30
15	0.000	0.000	0.000	0.000	0.000	0	6.020	0.000	0.000	0.081	0.081	42	17.64	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	5.058	0.000	0.000	0.058	0.058	25	15.21	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	3.708	0.000	0.000	0.065	0.065	21	22.01	0.000	0.000	0.062	0.062	117
18	3.099	0.000	0.000	0.016	0.016	4	3.590	0.000	0.000	0.000	0.000	0	14.42	0.000	0.000	0.026	0.026	32
19	2.790	0.000	0.000	0.015	0.015	4	3.158	0.000	0.000	0.000	0.000	0	8.959	0.000	0.000	0.049	0.049	38
20	3.134	0.000	0.000	0.025	0.025	7	2.520	0.000	0.000	0.181	0.181	39	5.956	0.000	0.000	0.038	0.038	20
21	4.850	0.000	0.000	0.000	0.000	0	3.302	0.000	0.000	0.091	0.091	26	5.512	0.000	0.000	0.032	0.032	15
22	9.450	0.000	0.000	0.188	0.188	153	3.005	0.000	0.000	0.074	0.074	19	4.464	0.000	0.000	0.101	0.101	39
23	67.44	0.000	0.000	0.178	0.178	1037	3.405	0.000	0.000	0.054	0.054	16	3.200	0.000	0.000	0.000	0.000	0
24	19.49	0.000	0.000	1.438	1.438	2422	11.38	0.000	0.000	0.048	0.048	47	1.469	0.000	0.000	0.129	0.129	16
25	8.490	0.000	0.000	0.472	0.472	346	4.517	0.000	0.000	0.050	0.050	19	2.380	0.000	0.000	0.075	0.075	15
26	8.174	0.000	0.000	0.293	0.293	207	3.000	0.000	0.000	0.000	0.000	0	1.783	0.000	0.000	0.058	0.058	9
27	3.779	0.000	0.000	0.180	0.180	59	2.456	0.000	0.000	0.071	0.071	15	1.187	0.000	0.000	0.054	0.054	6
28	4.850	0.000	0.000	0.000	0.000	0	1.225	0.000	0.000	0.101	0.101	11	7.437	0.000	0.000	0.006	0.006	4
29	19.04	0.000	0.000	0.242	0.242	398	0.894	0.000	0.000	0.168	0.168	13	4.497	0.000	0.000	0.102	0.102	40
30	3.703	0.000	0.000	0.191	0.191	61	0.563	0.000	0.000	0.082	0.082	4	4.300	0.000	0.000	0.000	0.000	0
31							0.846	0.000	0.000	0.083	0.083	6	21.52	0.000	0.000	0.061	0.061	113
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	5.285	0.000	0.000	0.127	0.127	52	8.420	0.000	0.000	0.035	0.035	31
Ten Daily II	0.902	0.000	0.000	0.006	0.006	1	7.199	0.000	0.000	0.125	0.125	95	14.69	0.000	0.000	0.032	0.032	39
Ten Daily III	14.93	0.000	0.000	0.318	0.318	468	3.145	0.000	0.000	0.075	0.075	16	5.250	0.000	0.000	0.056	0.056	23
Monthly																		
Total						4697						1640						965

Annual Sediment Load (Metric Tonnes) : 15151

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	15.70	0.000	0.000	0.162	0.162	219	4.731	0.000	0.000	0.016	0.016	6	2.000	0.000	0.000	0.000	0.000	0
2	8.452	0.000	0.000	0.044	0.044	32	3.220	0.000	0.000	0.000	0.000	0	3.546	0.000	0.000	0.021	0.021	6
3	6.070	0.000	0.000	0.005	0.005	3	3.205	0.000	0.000	0.023	0.023	6	4.798	0.000	0.000	0.011	0.011	4
4	5.541	0.000	0.000	0.033	0.033	16	2.000	0.000	0.000	0.000	0.000	0	4.791	0.000	0.000	0.010	0.010	4
5	6.152	0.000	0.000	0.017	0.017	9	1.957	0.000	0.000	0.022	0.022	4	3.552	0.000	0.000	0.029	0.029	9
6	4.750	0.000	0.000	0.000	0.000	0	1.293	0.000	0.000	0.027	0.027	3	4.597	0.000	0.000	0.027	0.027	11
7	4.724	0.000	0.000	0.013	0.013	5	0.980	0.000	0.000	0.019	0.019	2	2.711	0.000	0.000	0.030	0.030	7
8	3.883	0.000	0.000	0.021	0.021	7	1.000	0.000	0.000	0.025	0.025	2	2.550	0.000	0.000	0.000	0.000	0
9	11.42	0.000	0.000	0.221	0.221	218	0.701	0.000	0.000	0.031	0.031	2	2.501	0.000	0.000	0.046	0.046	10
10	4.004	0.000	0.000	0.026	0.026	9	0.805	0.000	0.000	0.033	0.033	2	2.465	0.000	0.000	0.029	0.029	6
11	4.456	0.000	0.000	0.071	0.071	27	1.060	0.000	0.000	0.000	0.000	0	2.450	0.000	0.000	0.000	0.000	0
12	2.366	0.000	0.000	0.075	0.075	15	1.068	0.000	0.000	0.000	0.000	0	2.459	0.000	0.000	0.036	0.036	8
13	2.300	0.000	0.000	0.000	0.000	0	0.951	0.000	0.000	0.000	0.000	0	2.339	0.000	0.000	0.037	0.037	7
14	1.291	0.000	0.000	0.056	0.056	6	1.031	0.000	0.000	0.000	0.000	0	2.297	0.000	0.000	0.037	0.037	7
15	0.854	0.000	0.000	0.068	0.068	5	0.833	0.000	0.000	0.000	0.000	0	2.280	0.000	0.000	0.000	0.000	0
16	1.051	0.000	0.000	0.118	0.118	11	0.872	0.000	0.000	0.000	0.000	0	2.303	0.000	0.000	0.032	0.032	6
17	2.350	0.000	0.000	0.000	0.000	0	0.634	0.000	0.000	0.000	0.000	0	2.246	0.000	0.000	0.018	0.018	3
18	4.630	0.000	0.000	0.103	0.103	41	2.000	0.000	0.000	0.000	0.000	0	2.153	0.000	0.000	0.011	0.011	2
19	53.15	0.000	0.000	0.374	0.374	1716	1.413	0.000	0.000	0.050	0.050	6	2.122	0.000	0.000	0.009	0.009	2
20	20.00	0.000	0.000	0.000	0.000	0	1.586	0.000	0.000	0.036	0.036	5	2.324	0.000	0.000	0.011	0.011	2
21	25.08	0.000	0.000	0.041	0.041	89	1.585	0.000	0.000	0.034	0.034	5	2.180	0.000	0.000	0.012	0.012	2
22	75.65	0.000	0.000	0.592	0.592	3869	1.500	0.000	0.000	0.000	0.000	0	2.180	0.000	0.000	0.000	0.000	0
23	53.80	0.000	0.000	0.229	0.229	1065	1.483	0.000	0.000	0.034	0.034	4	2.091	0.000	0.000	0.007	0.007	1
24	28.58	0.000	0.000	0.104	0.104	257	1.400	0.000	0.000	0.000	0.000	0	2.070	0.000	0.000	0.012	0.012	2
25	18.00	0.000	0.000	0.000	0.000	0	1.350	0.000	0.000	0.000	0.000	0	2.070	0.000	0.000	0.000	0.000	0
26	10.36	0.000	0.000	0.020	0.020	17	1.477	0.000	0.000	0.000	0.000	0	2.051	0.000	0.000	0.014	0.014	2
27	10.00	0.000	0.000	0.000	0.000	0	3.152	0.000	0.000	0.023	0.023	6	2.342	0.000	0.000	0.012	0.012	2
28	2.926	0.000	0.000	0.020	0.020	5	1.859	0.000	0.000	0.000	0.000	0	2.320	0.000	0.000	0.019	0.019	4
29	3.467	0.000	0.000	0.016	0.016	5	1.595	0.000	0.000	0.000	0.000	0	2.330	0.000	0.000	0.000	0.000	0
30	3.849	0.000	0.000	0.017	0.017	6	5.786	0.000	0.000	0.015	0.015	7	2.290	0.000	0.000	0.022	0.022	4
31							2.853	0.000	0.000	0.029	0.029	7						
Ten Daily Mean																		
Ten Daily I	7.070	0.000	0.000	0.054	0.054	52	1.989	0.000	0.000	0.020	0.020	3	3.351	0.000	0.000	0.020	0.020	6
Ten Daily II	9.245	0.000	0.000	0.087	0.087	182	1.145	0.000	0.000	0.009	0.009	1	2.297	0.000	0.000	0.019	0.019	4
Ten Daily III	23.17	0.000	0.000	0.104	0.104	531	2.185	0.000	0.000	0.012	0.012	3	2.192	0.000	0.000	0.010	0.010	2
Monthly																		
Total						7654						68						115

Annual Sediment Load (Metric Tonnes) : 15151

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	2.262	0.000	0.000	0.000	0.000	0	1.087	0.000	0.000	0.000	0.000	0	0.348	0.000	0.000	0.000	0.000	0
2	2.225	0.000	0.000	0.000	0.000	0	1.090	0.000	0.000	0.000	0.000	0	0.343	0.000	0.000	0.000	0.000	0
3	2.128	0.000	0.000	0.000	0.000	0	1.090	0.000	0.000	0.000	0.000	0	0.343	0.000	0.000	0.000	0.000	0
4	2.169	0.000	0.000	0.000	0.000	0	1.086	0.000	0.000	0.026	0.026	2	0.222	0.000	0.000	0.000	0.000	0
5	1.592	0.000	0.000	0.000	0.000	0	1.073	0.000	0.000	0.000	0.000	0	0.220	0.000	0.000	0.000	0.000	0
6	1.560	0.000	0.000	0.000	0.000	0	0.864	0.000	0.000	0.000	0.000	0	0.212	0.000	0.000	0.000	0.000	0
7	1.565	0.000	0.000	0.020	0.020	3	0.832	0.000	0.000	0.000	0.000	0	0.212	0.000	0.000	0.000	0.000	0
8	1.529	0.000	0.000	0.000	0.000	0	0.823	0.000	0.000	0.000	0.000	0	0.104	0.000	0.000	0.000	0.000	0
9	1.491	0.000	0.000	0.000	0.000	0	0.785	0.000	0.000	0.000	0.000	0	0.113	0.000	0.000	0.000	0.000	0
10	1.408	0.000	0.000	0.000	0.000	0	0.650	0.000	0.000	0.000	0.000	0	0.113	0.000	0.000	0.000	0.000	0
11	0.954	0.000	0.000	0.000	0.000	0	0.652	0.000	0.000	0.000	0.000	0	0.111	0.000	0.000	0.000	0.000	0
12	0.938	0.000	0.000	0.000	0.000	0	0.704	0.000	0.000	0.000	0.000	0	0.121	0.000	0.000	0.000	0.000	0
13	0.920	0.000	0.000	0.000	0.000	0	0.627	0.000	0.000	0.000	0.000	0	0.114	0.000	0.000	0.000	0.000	0
14	0.920	0.000	0.000	0.025	0.025	2	0.620	0.000	0.000	0.000	0.000	0	0.114	0.000	0.000	0.000	0.000	0
15	0.868	0.000	0.000	0.000	0.000	0	0.598	0.000	0.000	0.000	0.000	0	0.108	0.000	0.000	0.000	0.000	0
16	0.956	0.000	0.000	0.000	0.000	0	0.580	0.000	0.000	0.000	0.000	0	0.108	0.000	0.000	0.000	0.000	0
17	1.484	0.000	0.000	0.000	0.000	0	0.400	0.000	0.000	0.000	0.000	0	0.106	0.000	0.000	0.000	0.000	0
18	1.403	0.000	0.000	0.000	0.000	0	0.755	0.000	0.000	0.000	0.000	0	0.099	0.000	0.000	0.000	0.000	0
19	1.353	0.000	0.000	0.000	0.000	0	0.711	0.000	0.000	0.000	0.000	0	0.100	0.000	0.000	0.000	0.000	0
20	1.240	0.000	0.000	0.000	0.000	0	0.834	0.000	0.000	0.000	0.000	0	0.099	0.000	0.000	0.000	0.000	0
21	1.305	0.000	0.000	0.021	0.021	2	0.705	0.000	0.000	0.000	0.000	0	0.098	0.000	0.000	0.000	0.000	0
22	1.271	0.000	0.000	0.000	0.000	0	0.841	0.000	0.000	0.000	0.000	0	0.097	0.000	0.000	0.000	0.000	0
23	1.249	0.000	0.000	0.000	0.000	0	0.754	0.000	0.000	0.000	0.000	0	0.095	0.000	0.000	0.000	0.000	0
24	1.245	0.000	0.000	0.000	0.000	0	0.711	0.000	0.000	0.000	0.000	0	0.088	0.000	0.000	0.000	0.000	0
25	1.245	0.000	0.000	0.000	0.000	0	0.716	0.000	0.000	0.000	0.000	0	0.089	0.000	0.000	0.000	0.000	0
26	1.247	0.000	0.000	0.000	0.000	0	0.716	0.000	0.000	0.000	0.000	0	0.093	0.000	0.000	0.000	0.000	0
27	1.240	0.000	0.000	0.000	0.000	0	0.706	0.000	0.000	0.000	0.000	0	0.108	0.000	0.000	0.000	0.000	0
28	1.214	0.000	0.000	0.026	0.026	3	0.683	0.000	0.000	0.000	0.000	0	0.108	0.000	0.000	0.000	0.000	0
29	1.195	0.000	0.000	0.000	0.000	0	0.648	0.000	0.000	0.000	0.000	0	0.111	0.000	0.000	0.000	0.000	0
30	1.171	0.000	0.000	0.000	0.000	0	0.346	0.000	0.000	0.000	0.000	0						
31	1.141	0.000	0.000	0.000	0.000	0	0.320	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	1.793	0.000	0.000	0.002	0.002	0	0.938	0.000	0.000	0.003	0.003	0	0.223	0.000	0.000	0.000	0.000	0
Ten Daily II	1.104	0.000	0.000	0.003	0.003	0	0.648	0.000	0.000	0.000	0.000	0	0.108	0.000	0.000	0.000	0.000	0
Ten Daily III	1.229	0.000	0.000	0.004	0.004	0	0.649	0.000	0.000	0.000	0.000	0	0.098	0.000	0.000	0.000	0.000	0
Monthly																		
Total						10						2						0

Annual Sediment Load (Metric Tonnes) : 15151

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.108	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.097	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.116	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.120	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.119	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.110	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.117	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.083	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.082	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.081	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.084	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.074	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.071	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.021	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.103	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.025	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load for period : 1981-2016

Station Name : Andhiarkhore (EMP60E5)

Division : MD,CWC,Burla

Local River : Hamp

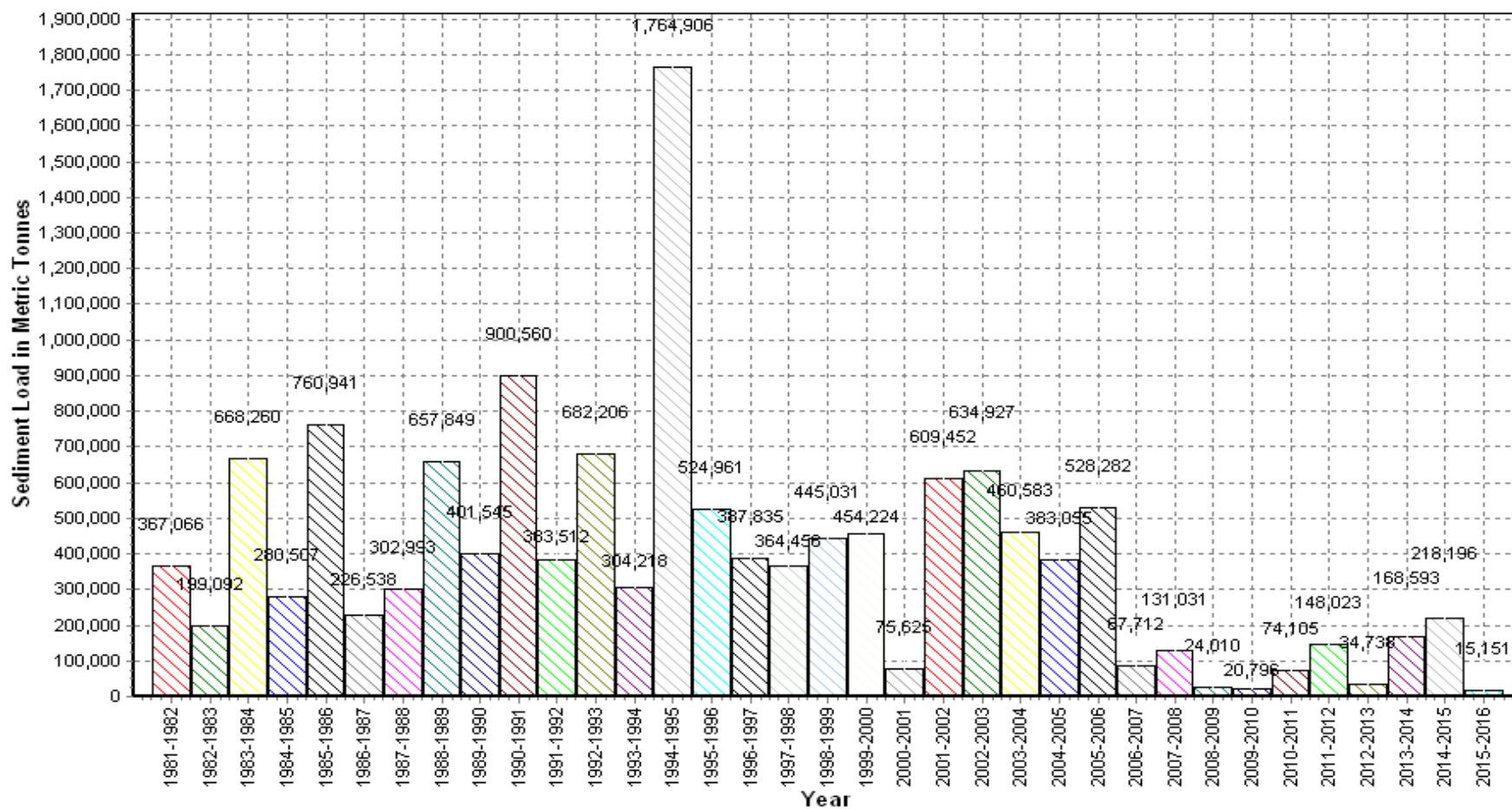
Sub-Division : UMSD,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1981-1982	366761	305	367066	253
1982-1983	198763	329	199092	144
1983-1984	666010	2250	668260	476
1984-1985	280497	10	280507	246
1985-1986	747637	13305	760941	394
1986-1987	226302	236	226538	214
1987-1988	302283	710	302993	208
1988-1989	657821	29	657849	451
1989-1990	401497	48	401545	196
1990-1991	900465	95	900560	803
1991-1992	383501	11	383512	275
1992-1993	682188	18	682206	239
1993-1994	304165	52	304218	159
1994-1995	1764637	269	1764906	851
1995-1996	524816	146	524961	353
1996-1997	387777	58	387835	279
1997-1998	352580	11876	364456	383
1998-1999	444938	93	445031	499
1999-2000	454147	77	454224	488
2000-2001	75625	0	75625	108
2001-2002	609448	3	609452	332
2002-2003	634926	0	634927	288
2003-2004	460567	17	460583	444
2004-2005	383042	13	383055	303
2005-2006	528279	3	528282	657
2006-2007	87708	4	87712	219
2007-2008	131031	0	131031	208
2008-2009	24004	6	24010	87
2009-2010	20796	0	20796	35
2010-2011	74081	24	74105	226
2011-2012	147975	48	148023	305
2012-2013	34729	10	34738	214
2013-2014	168566	27	168593	550
2014-2015	218195	1	218196	490
2015-2016	15139	12	15151	104

Annual Sediment Load for the period: 1981-2016

Station Name : Andhiarkhore (EMP60E5)
Local River : Hamp

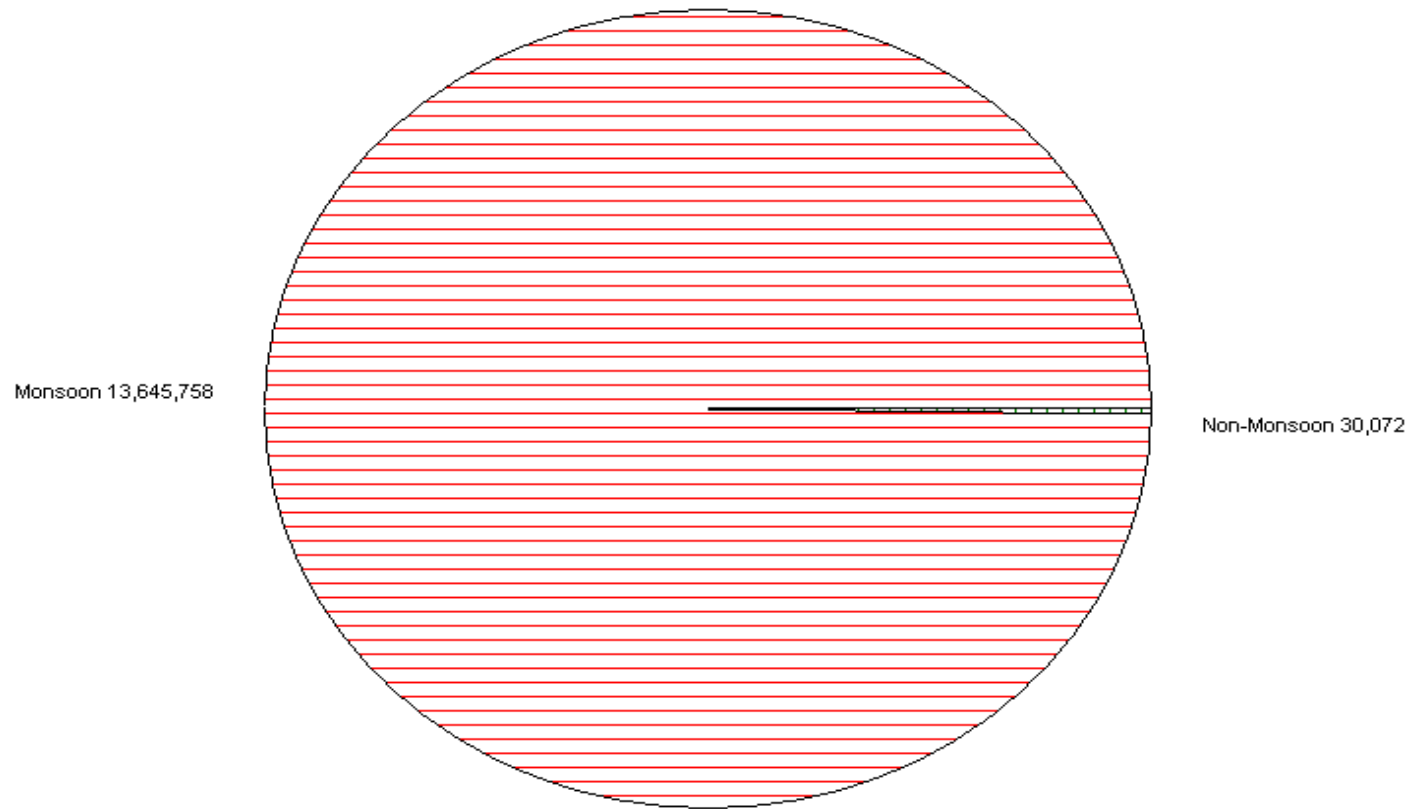
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Seasonal Sediment Load for the period : 1981-2015

Station Name : Andhiarkhore (EMP60E5)
Local River : Hamp

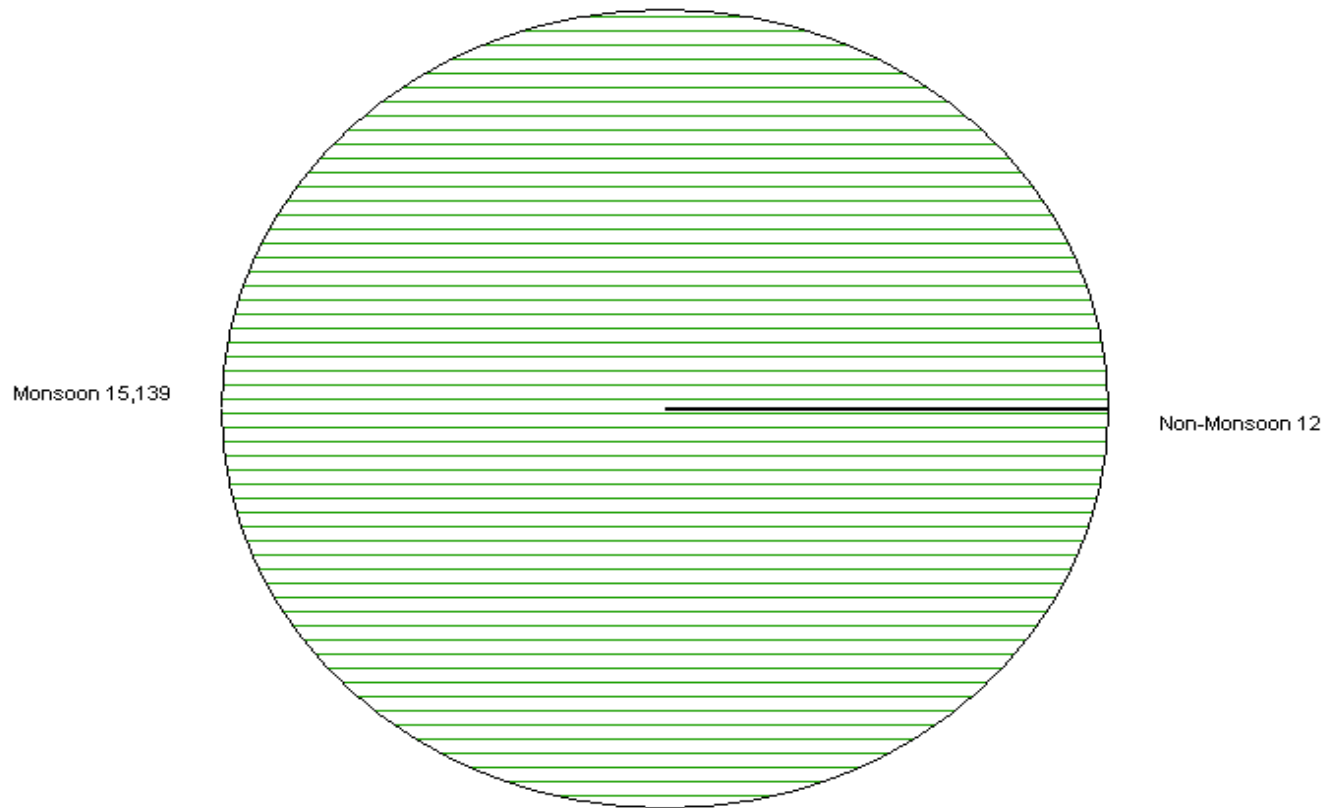
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Seasonal Sediment Load for the Year: 2015-2016

Station Name : Andhiarkhore (EMP60E5)
Local River : Hamp

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
	A	A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	5.031	0.425	15.70	4.731	3.546	2.262	1.087	0.348	0.108	0.000	0.000
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Clear		
3	EC_FLD (µmho/cm)	106	551	755	357	617	603	490	466	484	589		
4	EC_GEN (µmho/cm)	849	372	642	306	578	567	467	521	401	580		
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free		
6	pH_FLD (pH units)	8.4	8.1	7.8	8.1	7.5	6.6	6.5	7.1	7.3	7.5		
7	pH_GEN (pH units)	8.4	7.9	8.0	7.9	8.1	8.4	8.4	8.6	8.3	8.4		
8	Temp (deg C)	27.5	27.0	28.5	28.0	30.0	24.0	22.5	17.0	19.5	24.0		
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	6.0	15.9	21.9	0.0	0.0	10.0	15.9	10.0	15.9	0.0		
2	ALK-TOT (mgCaCO3/L)	540	220	428	295	308	208	384	472	472	516		
3	Ca (mg/L)	30	34	40	25	18	24	38	29	27	27		
4	Cl (mg/L)	46.0	27.0	29.0	21.0	22.0	14.0	25.0	22.0	27.0	30.0		
5	CO3 (mg/L)	7.2	19.2	26.4	0.0	0.0	12.0	19.2	12.0	19.2	0.0		
6	HCO3 (mg/L)	322	115	234	180	188	115	215	276	268	315		
7	K (mg/L)	12.8	7.7	5.7	6.3	13.1	13.1	9.9	8.2	5.8	5.6		
8	Mg (mg/L)	44.7	11.7	35.0	13.6	20.4	25.3	30.1	25.3	21.4	27.2		
9	Na (mg/L)	67.6	41.2	39.6	26.1	31.8	31.8	31.4	39.6	36.4	41.9		
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	7.2	1.8	0.5	0.7	1.1	0.9	0.8	0.7	1.1	2.0		
2	DO (mg/L)	6.4	6.3	4.9	6.4	7.3	7.1	6.1	8.0	6.2	4.1		
3	DO_SAT% (%)	80	79	63	82	97	84	70	83	67	49		
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	76	84	100	63	44	60	96	72	68	68		
2	HAR_Total (mgCaCO3/L)	262	133	246	120	129	165	222	177	157	182		
3	Na% (%)	35	39	26	31	32	28	23	32	33	33		
4	RSC (-)	0.3	0.0	0.0	0.6	0.5	0.0	0.0	1.4	1.9	1.6		
5	SAR (-)	1.8	1.6	1.1	1.0	1.2	1.1	0.9	1.3	1.3	1.4		
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Andhiarkhore (EMP60E5)

Division : MD,CWC,Burla

Local River : Hamp

Sub-Division : UMSD,CWC,Raipur

River Water Summary					
S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
PHYSICAL					
1	Q (cumec)	366	75.65	0.000	3.296
2	EC_FLD (μmho/cm)	10	755	106	502
3	EC_GEN (μmho/cm)	10	849	306	528
4	pH_FLD (pH units)	10	8.4	6.5	7.5
5	pH_GEN (pH units)	10	8.6	7.9	8.3
6	Temp (deg C)	10	30.0	17.0	24.8
CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	10	21.9	0.0	9.6
2	ALK-TOT (mgCaCO3/L)	10	540	208	384
3	Ca (mg/L)	10	40	18	29
4	Cl (mg/L)	10	46.0	14.0	26.3
5	CO3 (mg/L)	10	26.4	0.0	11.5
6	HCO3 (mg/L)	10	322	115	223
7	K (mg/L)	10	13.1	5.6	8.8
8	Mg (mg/L)	10	44.7	11.7	25.5
9	Na (mg/L)	10	67.6	26.1	38.7
BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	10	7.2	0.5	1.7
2	DO (mg/L)	10	8.0	4.1	6.3
3	DO_SAT% (%)	10	97	49	75
TRACE & TOXIC					
CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	10	100	44	73
2	HAR_Total (mgCaCO3/L)	10	262	120	179
3	Na% (%)	10	39	23	31
4	RSC (-)	10	1.9	0.0	0.6
5	SAR (-)	10	1.8	0.9	1.3
PESTICIDES					

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	5.138	8.050	48.54	18.31	68.08	37.74	23.31	6.028	2.549	6.549	14.96	5.954	37.39	16.39	5.178	3.879	0.935	16.12	6.806	4.293
2	EC_FLD (µmho/cm)	554	660	277	375	386	349	305	768		232	541	134			477	538	643	487	600	570
3	EC_GEN (µmho/cm)	554	660	277	375	386	349	277	371	333	323	365	370	365	459	549	538	643	487	600	570
4	pH_FLD (pH units)	7.8	8.0	7.8	8.2	7.9	7.8	7.7	7.5	7.9	7.7	8.2				8.0	8.1	7.9	8.1	8.0	7.2
5	pH_GEN (pH units)	7.8	8.0	7.8	8.2	7.9	7.8	7.6	7.6	7.9	7.5	7.5	8.0	8.3	8.2	8.1	8.1	7.9	8.1	8.0	7.2
6	Temp (deg C)	27.1	26.8	30.0	30.8	29.4	28.8	28.4	26.9	27.8	27.1	26.0	27.4	27.9	29.4	28.2	18.5	19.0	22.5	23.3	24.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	1.7	0.0	4.5	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.8	1.3	1.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	358	453	296	262	231		221	261	148	219	254	247	360	395	358	395	455	486	386	395
3	B (mg/L)					0.02		0.01	0.01	0.00	0.00	0.00	0.00								0.10
4	Ca (mg/L)	41	71	31	39	29		21	25	9	23	32	32	40	45	29	45	61	42	40	46
5	Cl (mg/L)	16.6	15.4	21.7	19.2	40.4		13.6	31.9	23.6	10.0	12.2	12.3	21.8	18.3	29.0	18.0	11.0	18.7	9.3	74.3
6	CO3 (mg/L)	0.0	2.0	0.0	13.4	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.6	1.5	1.3	0.0	0.0	0.0
7	F (mg/L)			1.70		0.26		0.22	0.14	0.19	0.53	0.23	0.25						1.08	0.38	0.16
8	Fe (mg/L)					0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1								0.1
9	HCO3 (mg/L)	218	274	180	182	141		134	159	90	134	155	151	220	241	208	239	276	287	235	241
10	K (mg/L)	5.3	6.6			3.6		2.1	4.7	3.6	4.5	5.2	3.3	5.6	6.5	9.1	13.2	4.6		4.2	2.3
11	Mg (mg/L)	11.3	8.1	8.8	28.6	11.8		13.0	12.8	6.5	14.5	19.7	18.0	11.4	14.7	25.1	16.1	14.2	14.2	32.3	22.5
12	Na (mg/L)	13.5	22.4			22.4		26.2	25.4	8.6	19.2	24.6	29.5	24.1	39.2	41.2	7.4	39.0		43.0	50.4
13	NO2+NO3 (mg N/L)	0.45				0.12	0.14	0.31	0.66								0.33			0.30	0.10
14	NO2-N (mgN/L)					0.00	0.01	0.02	0.02	0.02	0.04	0.06	0.10								0.00
15	NO3-N (mgN/L)					0.11	0.17	0.29	0.64												0.10
16	P-Tot (mgP/L)					0.003		0.012	0.042	0.040	0.035	0.050	0.130							0.020	0.008
17	SiO2 (mg/L)					9.6		19.5	24.2	22.0	16.1	22.0	24.3								25.1
18	SO4 (mg/L)	20.9	18.8	17.2	13.0	22.9		19.3	39.4	22.3	26.3	32.2	23.4				13.5	52.3	34.3	31.5	42.0
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.9	0.8	1.3	1.3	0.6		4.3	0.7	2.2	1.5	1.2	1.5	0.2	1.0	2.3	2.7	1.3	0.8	2.1	0.9
2	COD (mg/L)							18.4	21.0	53.0	48.0	28.0	32.0								
3	DO (mg/L)	7.5	8.3	5.6	6.0	5.3		7.1	5.4	5.1	6.5	6.0	6.5	6.5	6.6	6.3	11.9	7.8	5.5	7.0	7.3
4	DO_SAT% (%)	95	104	78	82	69		91	67	65	81	73	81	83	86	80	121	81	82	82	88
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	102	178	77	96	72		53	63	23	59	80	79	99	113	74	113	152	104	99	116
2	HAR_Total (mgCaCO3/L)	148	176	113	214	121		107	116	50	119	162	154	147	174	178	179	211	163	232	210
3	Na% (%)	12	21			26		35	31	31	24	24	31	26	31	32	8	25		37	34
4	RSC (-)	0.5	0.4	0.4	0.0	0.0		0.2	0.3	0.5	0.0	0.0	0.0	0.7	0.5	0.3	0.4	0.5	1.5	0.7	0.1
5	SAR (-)	0.3	0.7			0.8		1.1	1.2	0.6	0.7	0.8	1.2	0.9	1.3	1.3	0.2	0.9		1.5	1.5
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	1.136	1.332	0.646	0.305	3.099	2.210	2.442	10.24	8.450	1.811	0.539	0.425	0.906	0.807	0.522	0.244	0.103			0.044
2	EC_FLD (µmho/cm)	683		531	476	606	598	317			511	613	737	700	707	685					
3	EC_GEN (µmho/cm)	683	648	566	604	593	525	633	542	528	489	625	737	700	707	685		619			719
4	pH_FLD (pH units)	8.2	8.2	8.0	7.4	7.8					6.9	7.7	8.3	8.1	7.8	7.6		7.8			
5	pH_GEN (pH units)	8.2	7.8	8.0	7.9	7.7	8.1	7.8	8.2	8.4	8.4	7.8	8.3	8.1	7.8	7.6		8.0			7.6
6	Temp (deg C)	24.0	20.0	17.8	13.3	20.0	19.4	19.6	20.5	20.6	20.8	24.2	27.5	26.5	30.3	30.5		22.5			24.5
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		0.0	2.5	0.0	0.0	0.0	10.0	0.0	3.0	12.9	0.0	9.7	0.0	0.0	0.0		0.0			0.0
2	ALK-TOT (mgCaCO3/L)		389	487	443	421	377	470	501	404	384	460	379	699	402	503		345			396
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00	0.00								0.10		0.01			0.00
4	Ca (mg/L)		40	43	43	46	43	42	55	32	30	53	57	69	34	50		27			39
5	Cl (mg/L)		79.3	130.8	35.1	56.4	43.9	19.8	22.5	24.8	22.0	21.9	5.0	21.5	92.0	99.0		70.6			44.5
6	CO3 (mg/L)		0.0	3.0	0.0	0.0	0.0	12.0	0.0	3.6	15.6	0.0	17.5	0.0	0.0	0.0		0.0			0.0
7	F (mg/L)		0.34	0.32	0.63	0.39	0.26	0.31							0.39	0.14		0.21			0.62
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.1	0.2	0.1		0.1						0.1	0.0	0.0			0.9
9	HCO3 (mg/L)		237	294	270	257	230	274	306	243	218	279	213	426	245	307		210			241
10	K (mg/L)		3.5	3.1	4.4	5.1	3.6	1.4	10.9	4.9	9.2	2.7	12.6		4.9	4.3		3.0			8.1
11	Mg (mg/L)		25.3	26.4	25.3	24.7	24.3	30.2	21.0	29.9	25.5	18.8	11.3	14.9	16.2	19.9		18.0			25.5
12	Na (mg/L)		48.2	93.3	33.8	37.4	36.7	58.3	59.0	40.8	34.8	10.1	53.2		78.3	67.6		60.0			37.0
13	NO2+NO3 (mg N/L)	0.08	0.10	0.54						0.19		1.82			0.12	0.09	0.06	0.27			
14	NO2-N (mgN/L)	0.01	0.01	0.05	0.05	0.29	0.09	0.07		0.07					0.00	0.00	0.02				0.37
15	NO3-N (mgN/L)	0.06	0.09	0.48						0.12						0.09	0.06	0.25			
16	P-Tot (mgP/L)		0.030	0.177	0.130	0.122	0.250	0.153		0.160				0.030	0.044			0.085			0.320
17	SiO2 (mg/L)		24.8	23.9	47.6	28.3	12.7	17.9		15.0					22.5			23.2			20.4
18	SO4 (mg/L)		38.8	35.3	66.0	58.1	46.4	45.8		35.0		13.8		40.3	50.0	27.3		45.5			62.8
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)		1.2	1.0	0.9	1.7	1.7	1.2	0.7	1.3	0.9	2.2	0.6	0.8	1.6	1.6		1.9			1.8
2	COD (mg/L)		29.0	52.0	96.0	170.0	33.0	25.0										48.0			122.0
3	DO (mg/L)		8.1	6.1	6.7	7.5	7.2	7.8	8.1	8.9	6.8	7.9	7.6	7.5	6.8	4.4		5.9			3.3
4	DO_SAT% (%)		88	64	64	82	78	84	89	98	76	92	94	92	87	59		68			40
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		99	108	107	116	108	106	136	80	74	133	142	171	85	126		68			98
2	HAR_Total (mgCaCO3/L)		204	218	213	219	209	232	224	205	180	210	189	233	152	209		143			205
3	Na% (%)		33	48	26	26	27	33	34	29	29	9			52	41		47			27
4	RSC (-)		0.4	0.6	0.2	0.2	0.0	0.8	0.7	0.1	0.8	0.4	0.3	2.9	1.1	0.9		0.6			0.0
5	SAR (-)		1.5	2.8	1.0	1.1	1.1	1.7	1.7	1.2	1.1	0.3			2.8	2.1		2.2			1.1
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Andhiarkhore (EMP60E5)

Local River : Hamp

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	0.730	0.436	1.657	0.688	0.036
2	EC_FLD (µmho/cm)		155			589
3	EC_GEN (µmho/cm)	564	615	625	614	580
4	pH_FLD (pH units)					7.4
5	pH_GEN (pH units)	7.7	8.4	8.0	8.3	8.4
6	Temp (deg C)	21.5	23.2	26.7	25.8	24.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	6.6	0.2	25.2	0.0
2	ALK-TOT (mgCaCO3/L)	427	569	443	472	516
3	B (mg/L)	0.00	0.00			
4	Ca (mg/L)	43	35	34	33	27
5	Cl (mg/L)	50.8	25.5	32.3	37.3	30.0
6	CO3 (mg/L)	0.0	7.9	0.2	30.4	0.0
7	F (mg/L)	0.26	0.21			
8	Fe (mg/L)	0.4	0.2		0.1	
9	HCO3 (mg/L)	260	339	270	257	315
10	K (mg/L)	3.1	11.8	8.0	7.8	5.6
11	Mg (mg/L)	24.3	22.4	32.4	31.8	27.2
12	Na (mg/L)	81.4	62.7	72.5	60.5	41.9
13	NO2+NO3 (mg N/L)				0.26	
14	NO2-N (mgN/L)	0.30	0.14		0.14	
15	NO3-N (mgN/L)				0.12	
16	P-Tot (mgP/L)	0.220	0.145		0.157	
17	SiO2 (mg/L)	19.4	16.5		14.6	
18	SO4 (mg/L)	37.2	37.0		36.0	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	1.1	1.1	1.4	2.0
2	COD (mg/L)	32.0	26.0			
3	DO (mg/L)	5.5	3.9	5.9	6.7	4.1
4	DO_SAT% (%)	62	45	73	82	49
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	108	88	85	81	68
2	HAR_Total (mgCaCO3/L)	210	181	220	214	182
3	Na% (%)	46	41	42	36	33
4	RSC (-)	0.1	2.2	0.3	1.0	1.6
5	SAR (-)	2.5	2.0	2.2	1.8	1.4
	PESTICIDES					

SITE GHATORA

HISTORY SHEET

Water Year : 2015-2016

Site : Ghatora

Code : EMP40F2

State : Chhattisgarh

District : Bilaspur

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Seonath

Sub Tributary :

Sub-Sub Tributary :

Local River : Arpa

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Drainage Area : 3035 Sq. Km.

Bank :

Latitude : 22°02'04"

Longitude : 82°13'34"

Zero of Gauge (m) : 246 (m.s.l)

9/17/1979 - 10/1/2020

Opening Date

Closing Date

Gauge : 10/15/1977

10/1/2020

Discharge : 9/17/1979

10/1/2020

Sediment : 11/1/2000

10/1/2020

Water Quality : 11/1/1991

10/1/2020

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1980-1981	1300	252.155	9/20/1980	0.135	247.640	6/5/1980
1981-1982	545.0	251.045	8/23/1981	0.053	247.500	5/20/1982
1982-1983	275.3	249.690	9/13/1982	0.229	247.480	5/9/1983
1983-1984	472.2	250.600	9/5/1983	0.235	247.480	6/10/1983
1984-1985	588.4	251.340	8/10/1984	0.334	247.555	5/27/1985
1985-1986	728.2	250.905	8/3/1985	0.360	247.555	6/1/1985
1986-1987	500.1	250.425	7/9/1986	0.059	247.565	5/30/1987
1987-1988	600.0	250.680	9/16/1987	0.280	247.675	5/19/1988
1988-1989	627.5	250.840	8/11/1988	0.185	247.585	5/29/1989
1989-1990	137.2	249.010	8/7/1989	0.229	247.600	6/3/1989
1990-1991	453.6	250.400	9/15/1990	0.337	247.560	5/13/1991
1991-1992	1260	252.450	9/24/1991	0.119	247.510	5/23/1992
1992-1993	649.9	250.780	9/11/1992	0.040	247.355	5/16/1993
1993-1994	1316	252.200	8/20/1993	0.120	247.430	6/2/1993
1994-1995	2872	253.500	7/21/1994	0.216	247.420	6/1/1994
1995-1996	499.2	250.300	8/9/1995	0.179	247.010	5/23/1996
1996-1997	1019	251.025	8/20/1996	0.056	247.065	2/21/1997
1997-1998	450.4	250.130	9/9/1997	0.244	247.110	6/9/1997
1998-1999	1280	251.800	9/13/1998	0.495	247.080	6/1/1998
1999-2000	658.2	250.490	8/9/1999	0.618	247.045	2/15/2000
2000-2001	220.8	249.010	7/20/2000	0.080	246.975	4/30/2001
2001-2002	749.5	250.320	8/24/2001	0.120	247.100	4/14/2002

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2002-2003	383.2	250.030	9/9/2002	0.155	247.260	3/31/2003
2003-2004	464.4	250.080	9/10/2003	0.112	247.050	6/17/2003
2004-2005	444.0	250.385	8/13/2004	0.800	247.090	2/27/2005
2005-2006	635.9	250.700	8/5/2005	0.411	247.010	2/11/2006
2006-2007	159.5	248.500	8/1/2006	0.390	247.025	1/6/2007
2007-2008	240.8	248.925	8/21/2007	0.099	246.945	1/29/2008
2008-2009	348.7	248.650	9/20/2008	0.042	246.990	1/23/2009
2009-2010	111.6	247.890	8/22/2009	0.127	246.925	10/31/2009
2010-2011	343.5	248.680	9/20/2010	0.492	247.000	12/10/2010
2011-2012	670.0	250.375	9/7/2011	5.798	247.110	7/29/2011
2012-2013	468.3	248.180	8/28/2012	5.490	246.960	11/4/2012
2013-2014	528.9	248.535	10/5/2013	0.229	246.450	5/10/2014
2014-2015	923.1	250.415	8/6/2014	0.000	246.310	4/27/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : Ghatora (EMP40F2)

Division : MD,CWC,Burla

Local River : Arpa

Sub-Division : MMSD I,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	246.120	0.000 *	246.650	2.206	246.730	10.72	246.495	31.11	246.725	11.38	246.540	1.180 *
2	246.120	0.000 *	246.860	11.73	246.630	1.970 *	246.060	32.55	246.690	6.800 *	246.540	1.186
3	246.110	0.000 *	246.735	4.484	246.630	1.972	246.980	31.27	246.755	12.18	246.530	1.129
4	246.100	0.000 *	246.660	3.642	246.850	16.02	247.200	53.85	246.760	12.30 *	246.550	1.408
5	246.100	0.000 *	246.660	2.150 *	247.730	654.3	246.340	71.46	246.695	6.854	246.540	1.148
6	246.100	0.000 *	246.730	4.239	247.505	512.6	247.270	55.00 *	246.670	4.884	246.830	15.97
7	246.100	0.000 *	246.690	3.822	247.160	42.08	246.990	31.57	246.640	4.299	246.700	6.237
8	246.100	0.000 *	246.700	3.912	246.938	30.31	246.890	22.59	246.625	3.293	246.720	6.400 *
9	246.100	0.000 *	246.710	3.989	246.850	19.00 *	246.985	31.40	246.620	3.212	246.630	3.284
10	246.100	0.000 *	246.660	3.622	246.855	19.25	246.910	23.42	246.600	2.926	246.620	3.217
11	246.100	0.000 *	246.980	34.35	246.800	15.50	246.720	6.513	246.590	2.700 *	246.570	1.600 *
12	246.100	0.000 *	246.870	18.00 *	246.945	26.27	246.760	13.40	246.590	2.713	246.550	1.402
13	246.100	0.000 *	246.910	21.86	247.145	50.74	246.810	8.500 *	246.590	2.628	246.540	1.151
14	246.110	0.000 *	246.900	18.49	247.185	52.40	246.700	6.674	246.580	2.432	246.530	1.135
15	246.110	0.000 *	246.840	15.55	247.180	52.20 *	246.805	15.12	246.580	2.430 *	246.520	1.100 *
16	246.100	0.000 *	246.840	15.50	247.160	52.10 *	246.740	7.094	246.580	2.425	246.520	1.118
17	246.090	0.000 *	246.810	15.03	247.190	52.54	246.960	250.0 *	246.615	3.153	246.520	1.121
18	246.090	0.000 *	246.870	18.00 *	247.750	612.3	246.275	55.43	246.660	4.700 *	246.560	1.386
19	246.090	0.000 *	246.880	18.17 *	247.660	556.5	246.220	54.18	246.655	4.583	246.530	1.133
20	246.090	0.000 *	247.170	44.38	247.685	605.4	247.130	52.00 *	246.655	4.634	246.640	4.272
21	246.090	0.000 *	246.980	32.23	247.400	86.09	246.545	100.2	246.630	3.281	246.585	2.446
22	246.100	0.000 *	246.870	16.39	247.240	54.31	247.980	721.1	246.620	3.000 *	246.570	1.500 *
23	246.370	0.000 *	246.965	22.33	246.970	26.00 *	247.645	555.4	246.600	2.758	246.560	1.435
24	247.105	30.02	247.715	597.8	246.720	5.003	247.375	72.77	246.590	2.000 *	246.540	1.157
25	247.315	0.000	247.355	75.55	246.880	21.69	247.300	72.00 *	246.510	1.100 *	246.540	1.150 *
26	247.220	0.000	247.360	79.00 *	246.930	24.94	246.125	48.49	246.525	1.080	246.540	1.156
27	246.430	8.521	247.210	50.28	246.985	31.86	246.950	25.00 *	246.530	1.131	246.560	1.428
28	246.550	2.300 *	247.070	48.58	246.935	26.00	246.980	26.19	246.530	1.129	246.550	1.405
29	246.540	1.347	246.840	15.88	247.225	48.84	246.940	22.47	246.530	1.133	246.510	0.745 *
30	247.600	1.872	246.830	14.95	247.090	47.00 *	246.895	18.47	246.530	1.131	246.510	0.745
31			246.770	12.07	247.215	47.53			246.540	1.149		
Ten-Daily Mean												
I Ten-Daily	246.105	0.000	246.705	4.380	246.988	130.8	246.812	38.42	246.678	6.814	246.620	4.116
II Ten-Daily	246.098	0.000	246.907	21.93	247.270	207.6	246.712	46.89	246.609	3.240	246.548	1.542
III Ten-Daily	246.732	4.406	247.088	87.73	247.054	38.12	247.073	166.2	246.558	1.717	246.547	1.317
Monthly												
Min.	246.090	0.000	246.650	2.150	246.630	1.970	246.060	6.513	246.510	1.080	246.510	0.745
Max.	247.600	30.02	247.715	597.8	247.750	654.3	247.980	721.1	246.760	12.30	246.830	15.97
Mean	246.312	1.469	246.906	39.62	247.102	122.7	246.866	83.84	246.613	3.852	246.571	2.325

Annual Runoff in MCM = 681 Annual Runoff in mm = 224

Peak Observed Discharge = 721.1 cumecs on 22/09/2015 Corres. Water Level :247.98 m

Lowest Observed Discharge = 0.000 cumecs on 25/06/2015 Corres. Water Level :247.315 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2015 - 2016

Station Name : Ghatora (EMP40F2)

Division : MD,CWC,Burla

Local River : Arpa

Sub-Division : MMSD I,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	246.500	0.714	246.510	0.776	246.500	0.714	246.350	0.000 *	246.180	0.000 *	246.130	0.000 *
2	246.680	5.330	246.510	0.734	246.450	0.451	246.330	0.000 *	246.180	0.000 *	246.120	0.000 *
3	246.670	5.166	246.510	0.750 *	246.440	0.299	246.300	0.000 *	246.180	0.000 *	246.110	0.000 *
4	246.630	3.298	246.600	2.751	246.440	0.296	246.300	0.000 *	246.170	0.000 *	246.100	0.000 *
5	246.610	3.143	246.590	2.668	246.440	0.280	246.280	0.000 *	246.170	0.000 *	246.100	0.000 *
6	246.600	2.720 *	246.560	1.433	246.430	0.269	246.280	0.000 *	246.150	0.000 *	246.100	0.000 *
7	246.590	2.471	246.550	1.396	246.430	0.260 *	246.270	0.000 *	246.150	0.000 *	246.100	0.000 *
8	246.600	2.721	246.540	1.096	246.430	0.263	246.270	0.000 *	246.150	0.000 *	246.100	0.000 *
9	246.600	2.746	246.520	0.914	246.420	0.250	246.250	0.000 *	246.250	0.000 *	246.090	0.000 *
10	246.580	2.441	246.520	0.900 *	246.420	0.245	246.250	0.000 *	246.240	0.000 *	246.090	0.000 *
11	246.560	1.422	246.500	0.733	246.420	0.259	246.240	0.000 *	246.180	0.000 *	246.090	0.000 *
12	246.550	1.405	246.510	0.778	246.420	0.257	246.240	0.000 *	246.170	0.000 *	246.090	0.000 *
13	246.550	1.400 *	246.510	0.915	246.410	0.222	246.240	0.000 *	246.170	0.000 *	246.090	0.000 *
14	246.540	1.160	246.530	0.964	246.410	0.220 *	246.240	0.000 *	246.170	0.000 *	246.090	0.000 *
15	246.620	3.468	246.540	1.093	246.400	0.214	246.230	0.000 *	246.170	0.000 *	246.090	0.000 *
16	246.640	4.276	246.520	0.936	246.400	0.212	246.230	0.000 *	246.160	0.000 *	246.090	0.000 *
17	246.660	4.997	246.510	0.730 *	246.390	0.212	246.200	0.000 *	246.160	0.000 *	246.090	0.000 *
18	246.610	3.166	246.500	0.762	246.380	0.000 *	246.200	0.000 *	246.160	0.000 *	246.090	0.000 *
19	246.570	2.406	246.490	0.703	246.380	0.000 *	246.200	0.000 *	246.160	0.000 *	246.090	0.000 *
20	246.570	2.400 *	246.480	0.653	246.380	0.000 *	246.200	0.000 *	246.150	0.000 *	246.090	0.000 *
21	246.550	1.444	246.480	0.656	246.630	0.000 *	246.200	0.000 *	246.150	0.000 *	246.090	0.000 *
22	246.540	1.156	246.490	0.706	246.520	0.000 *	246.190	0.000 *	246.150	0.000 *	246.080	0.000 *
23	246.530	1.185	246.500	0.735	246.430	0.000 *	246.190	0.000 *	246.150	0.000 *	246.080	0.000 *
24	246.540	1.150 *	246.500	0.745 *	246.420	0.000 *	246.190	0.000 *	246.150	0.000 *	246.080	0.000 *
25	246.540	1.150 *	246.500	0.759	246.400	0.000 *	246.190	0.000 *	246.150	0.000 *	246.080	0.000 *
26	246.550	1.405	246.490	0.680 *	246.380	0.000 *	246.190	0.000 *	246.140	0.000 *	246.080	0.000 *
27	246.550	1.400 *	246.470	0.607	246.360	0.000 *	246.190	0.000 *	246.140	0.000 *	246.080	0.000 *
28	246.540	1.149	246.460	0.606	246.360	0.000 *	246.190	0.000 *	246.140	0.000 *	246.080	0.000 *
29	246.530	0.973	246.460	0.543	246.350	0.000 *	246.190	0.000 *	246.130	0.000 *	246.070	0.000 *
30	246.520	0.945	246.460	0.540			246.180	0.000 *	246.130	0.000 *	246.070	0.000 *
31	246.510	0.782	246.460	0.530			246.180	0.000 *			246.070	0.000 *
Ten-Daily Mean												
I Ten-Daily	246.606	3.075	246.541	1.342	246.440	0.333	246.288	0.000	246.182	0.000	246.104	0.000
II Ten-Daily	246.587	2.610	246.509	0.827	246.399	0.160	246.222	0.000	246.165	0.000	246.090	0.000
III Ten-Daily	246.536	1.158	246.479	0.646	246.428	0.000	246.189	0.000	246.143	0.000	246.078	0.000
Monthly												
Min.	246.500	0.714	246.460	0.530	246.350	0.000	246.180	0.000	246.130	0.000	246.070	0.000
Max.	246.680	5.330	246.600	2.751	246.630	0.714	246.350	0.000	246.250	0.000	246.130	0.000
Mean	246.575	2.245	246.509	0.929	246.422	0.17	246.232	0	246.163	0	246.090	0

Peak Computed Discharge = 250.0 cumecs on 17/09/2015

Corres. Water Level :246.96 m

Lowest Computed Discharge = 0.000 cumecs on 01/06/2015

Corres. Water Level :246.12 m

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

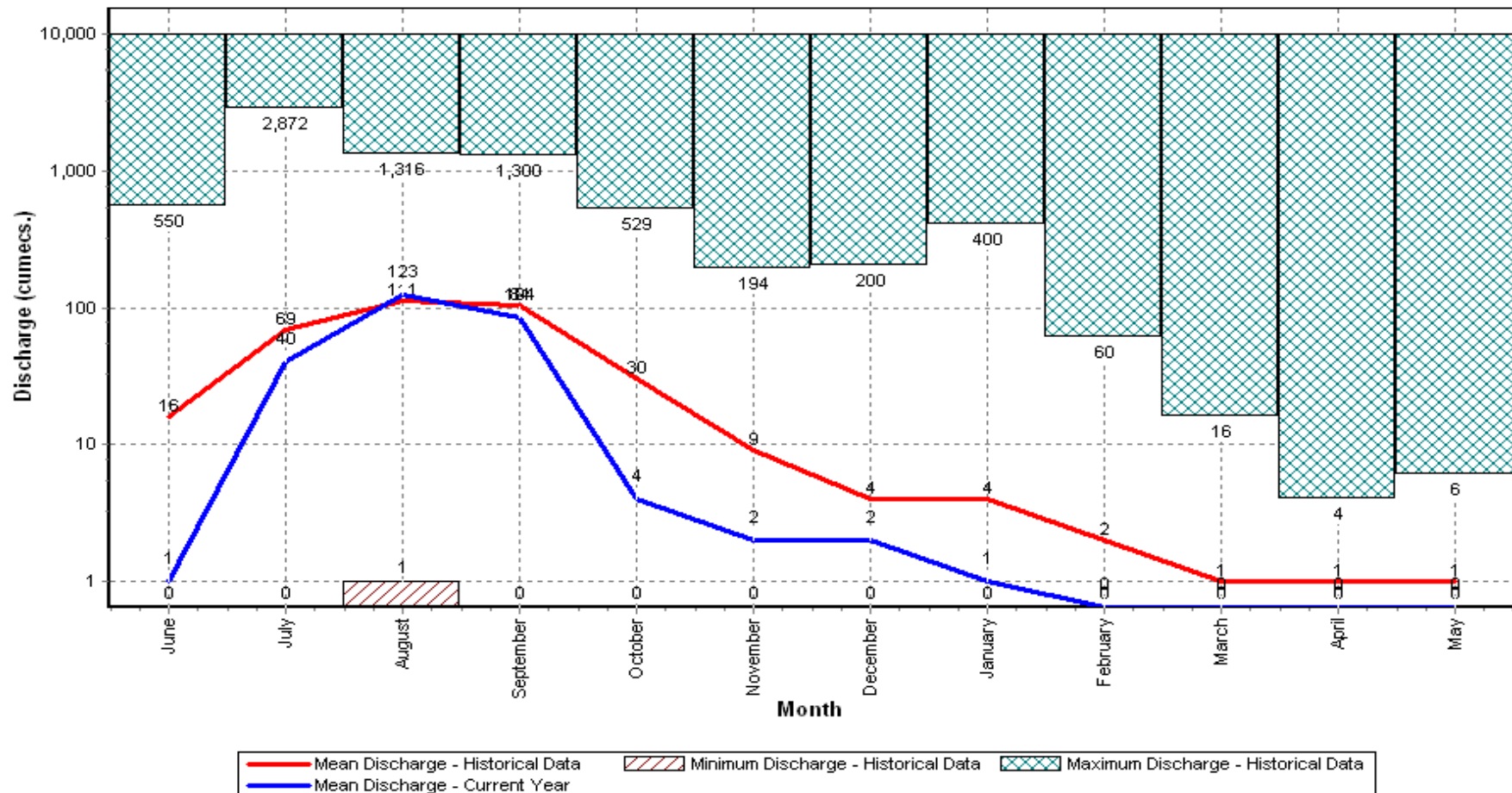
Station Name : Ghatora (EMP40F2)

Data considered : 1980-2016

Division : MD,CWC,Burla

Local River : Arpa

Sub-Division : MMSD I,CWC,Raipur



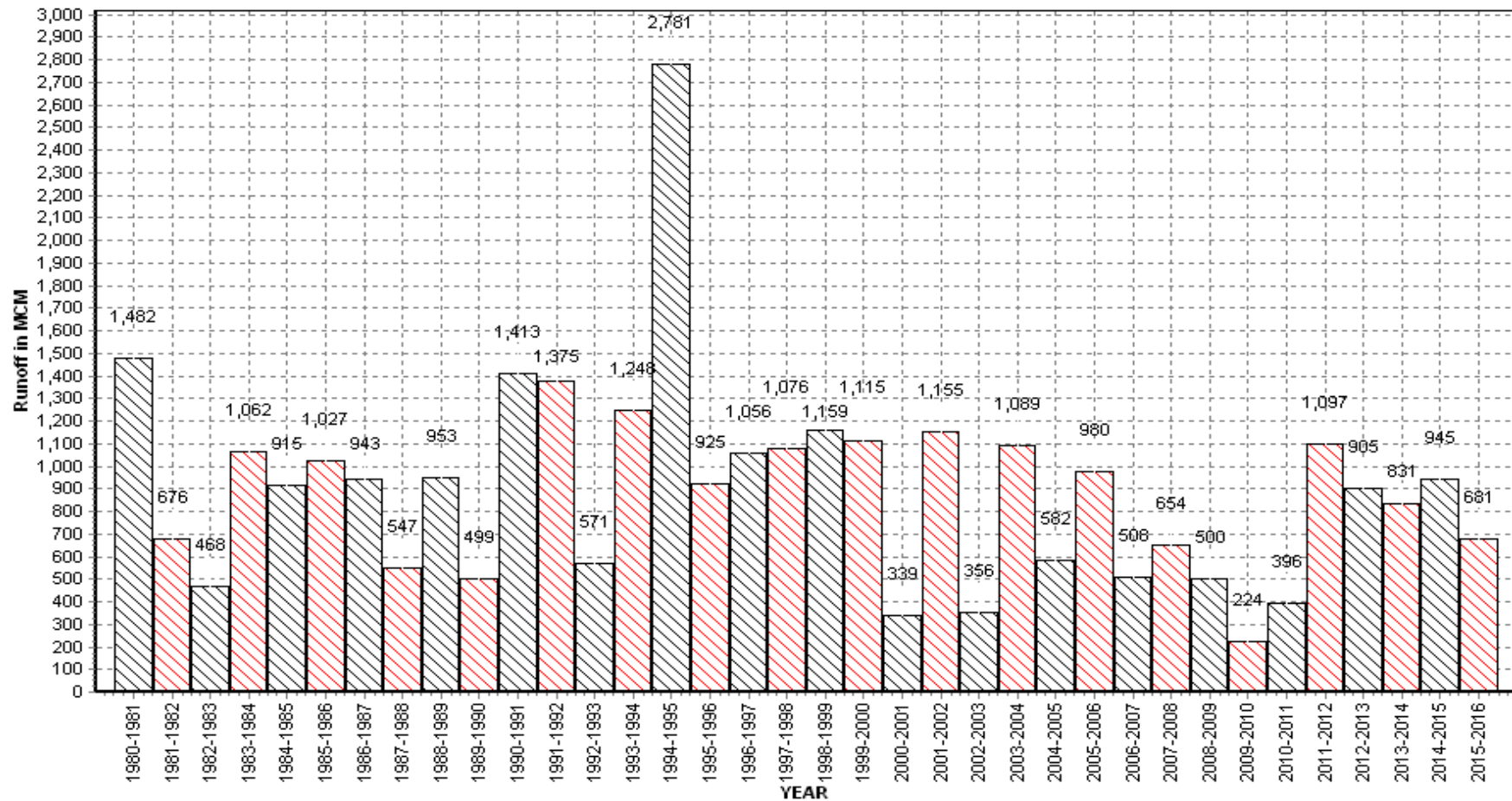
Annual Runoff Values for the period: 1980 - 2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



Note: Missing values have not been considered while arriving at Annual Runoff

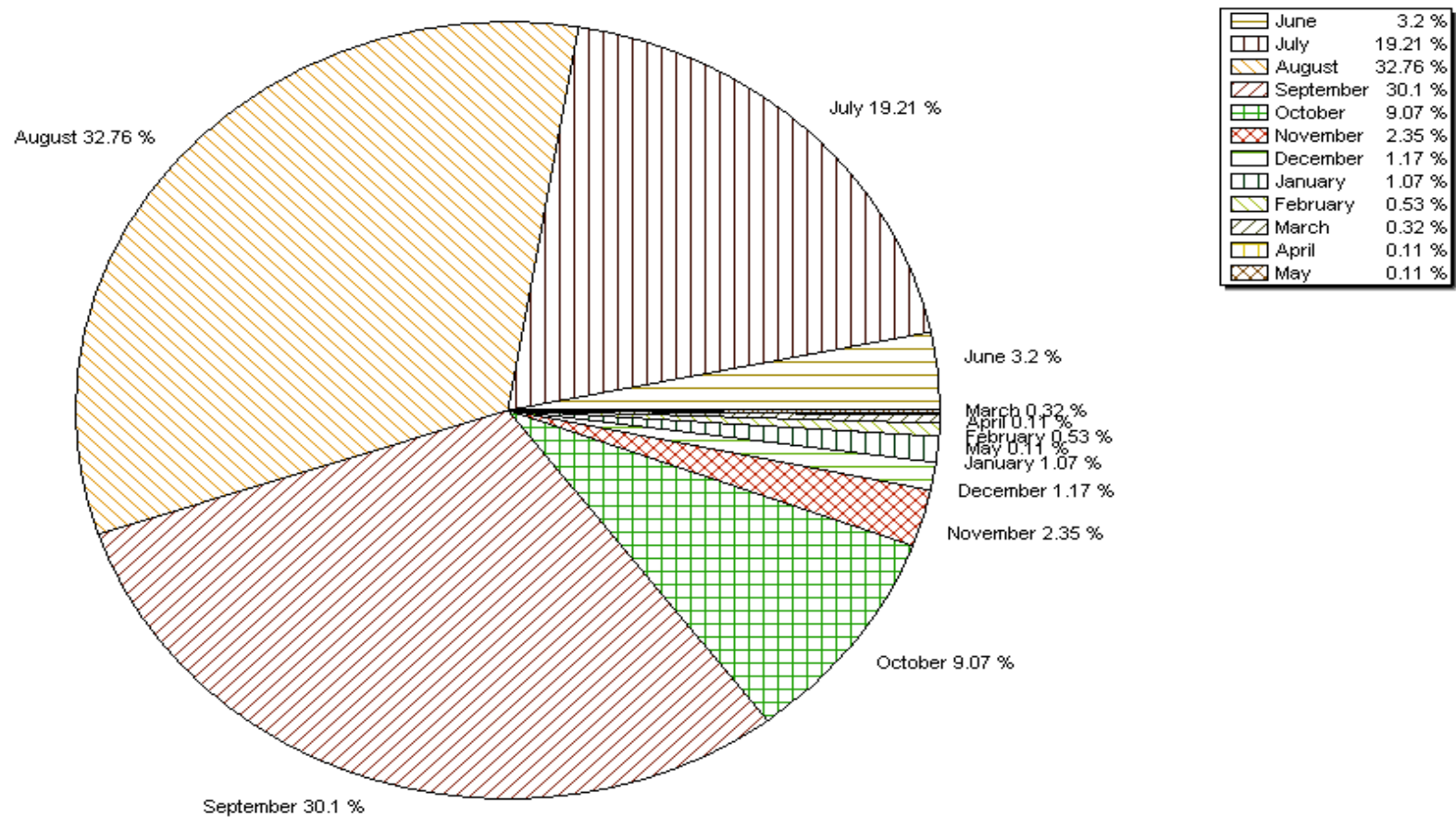
Monthly Average Runoff based on period : 1980-2015

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

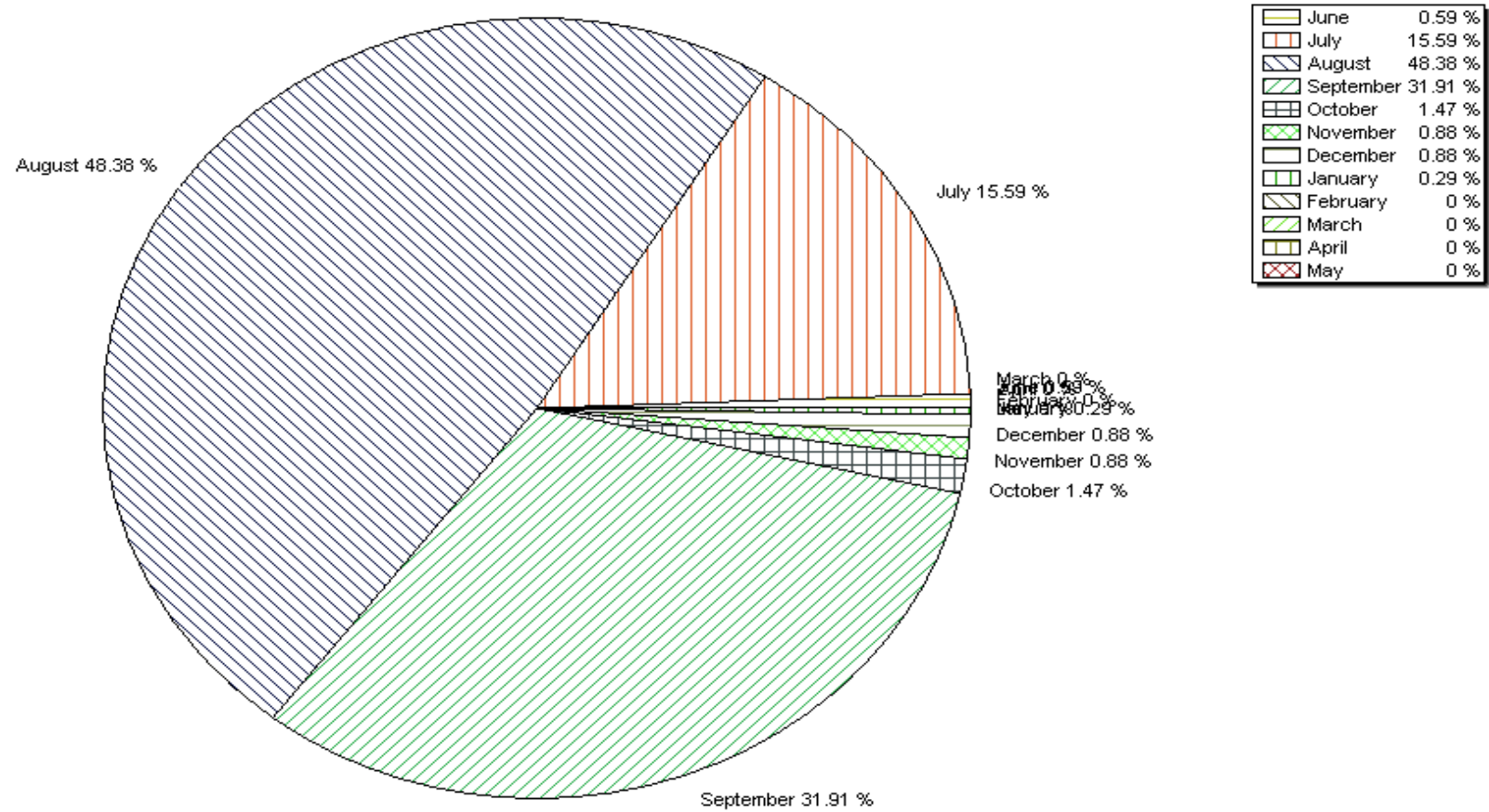
Sub-Division : MMSD I,CWC,Raipur



Monthly Runoff for the Year : 2015-2016

Station Name : Ghatora (EMP40F2)
Local River : Arpa

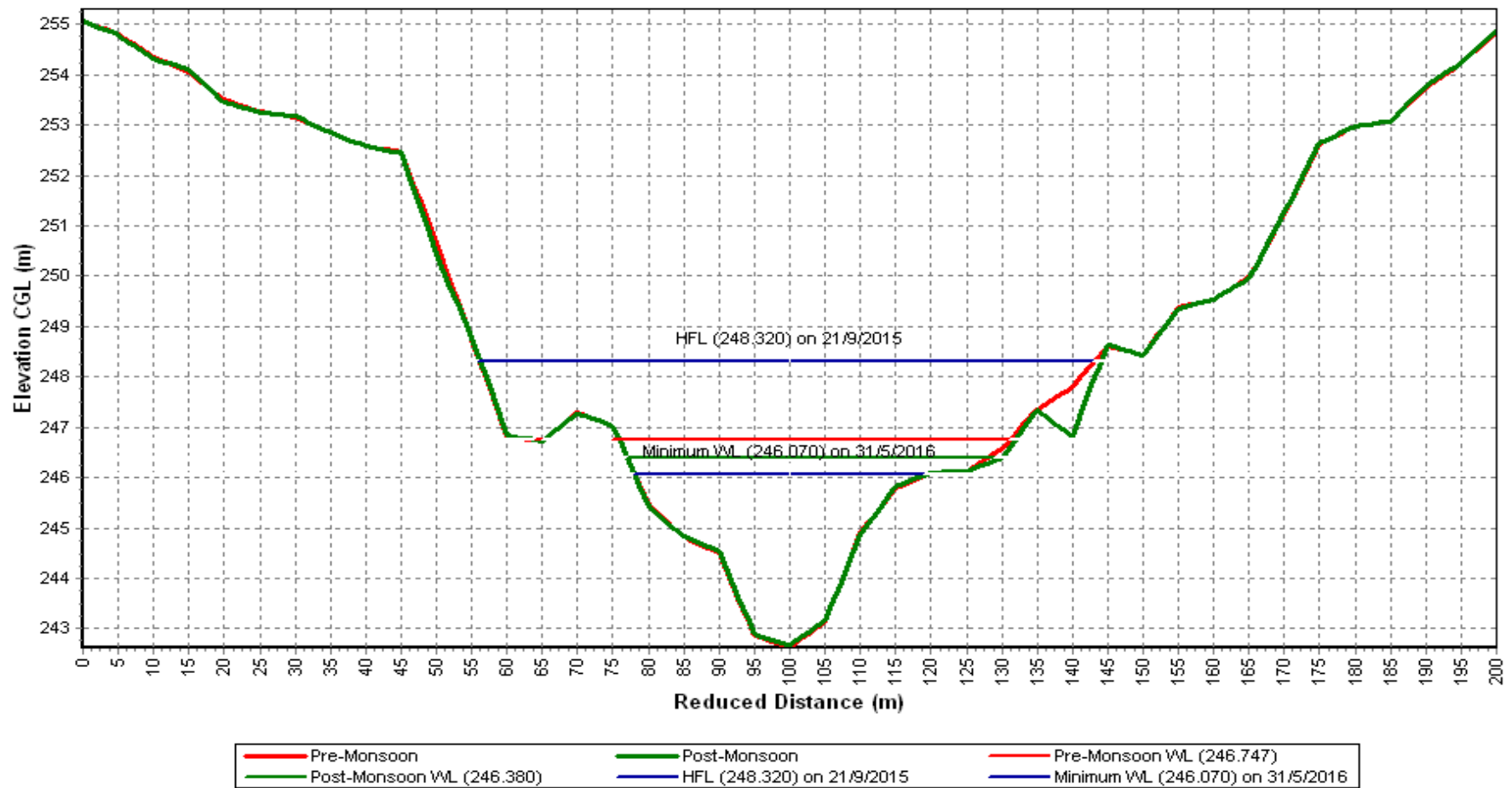
Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Ghatora (EMP40F2)
Local River : Arpa

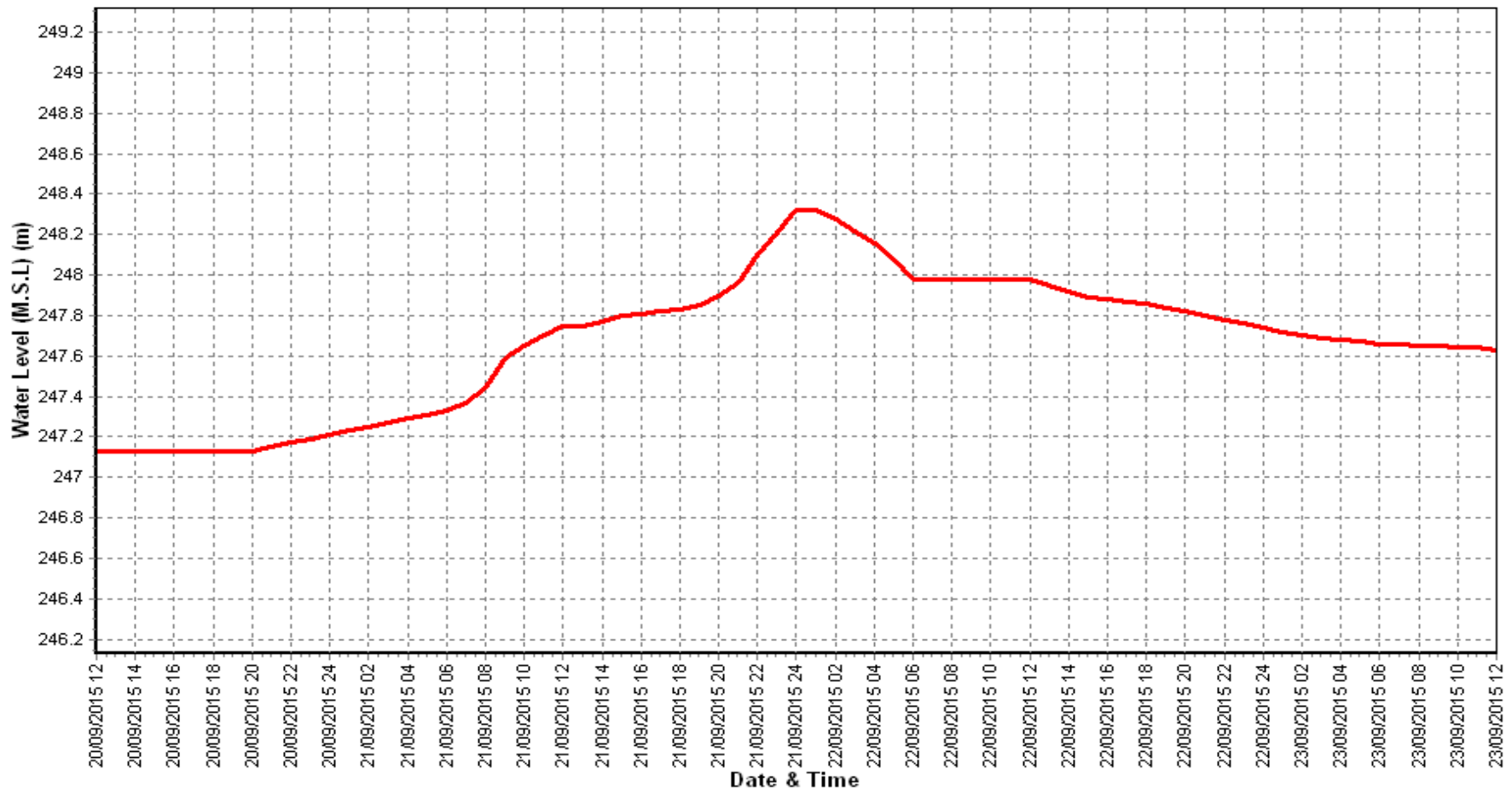
Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Ghatora (EMP40F2)
Local River : Arpa

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



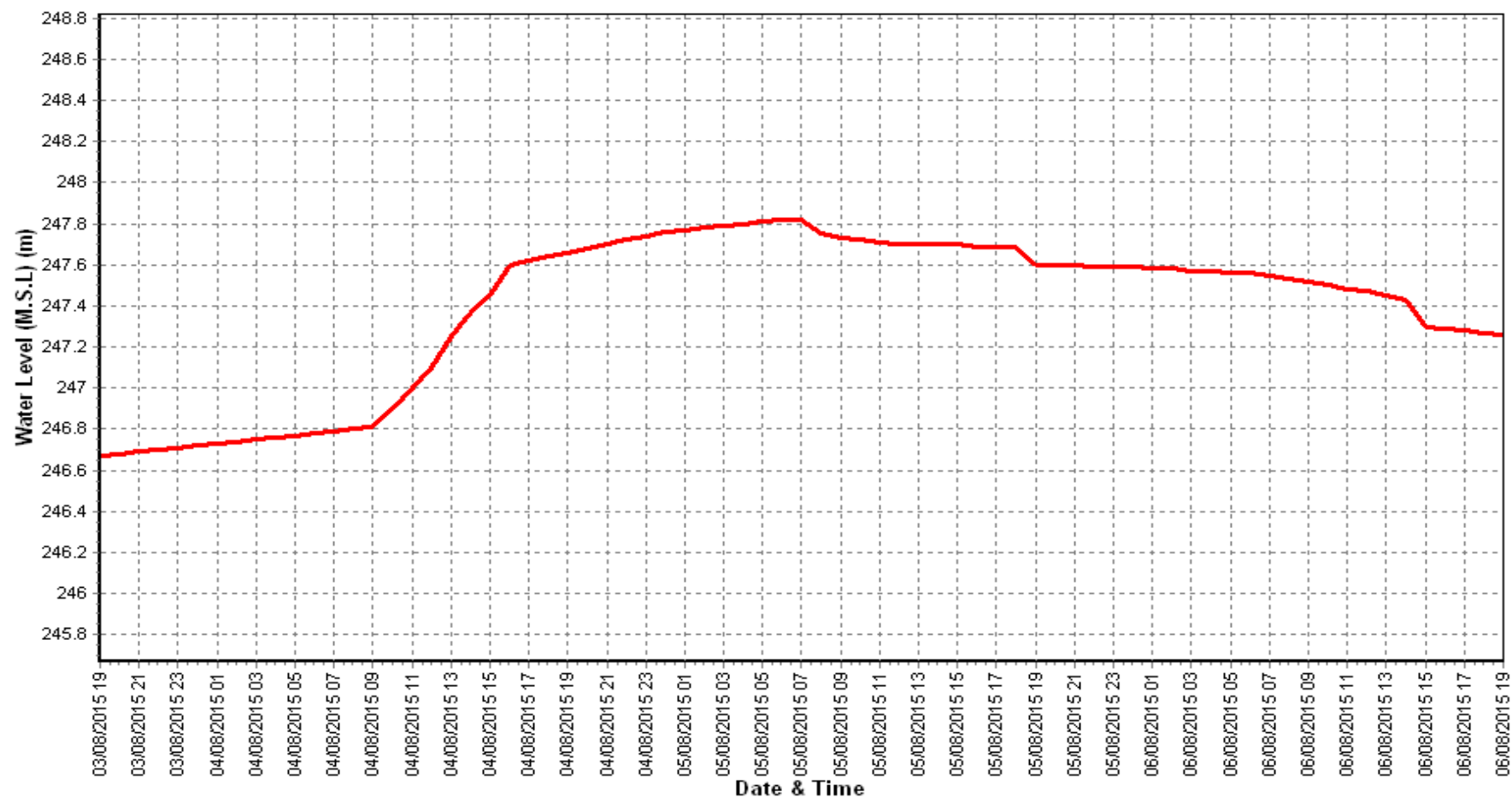
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



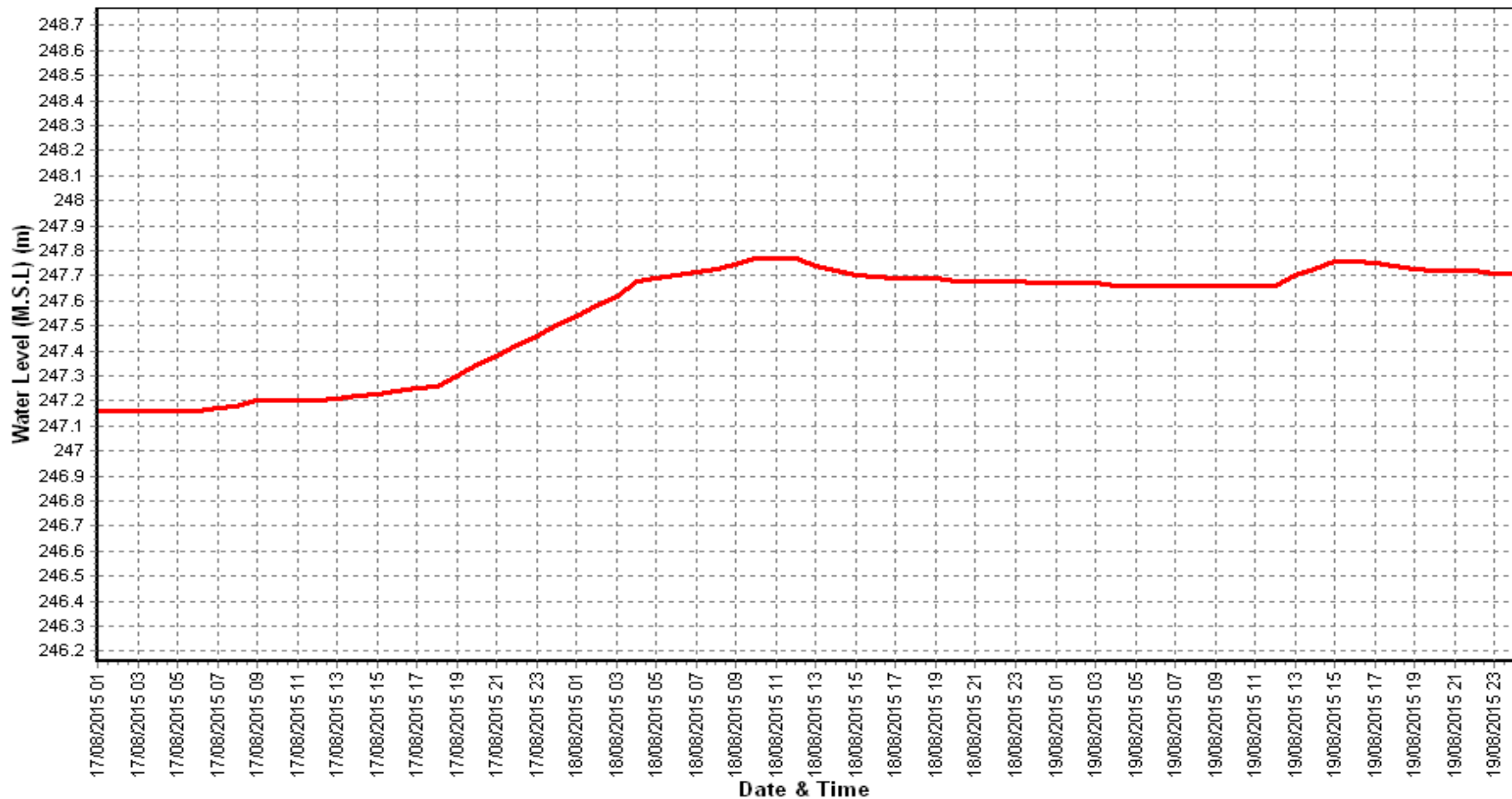
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

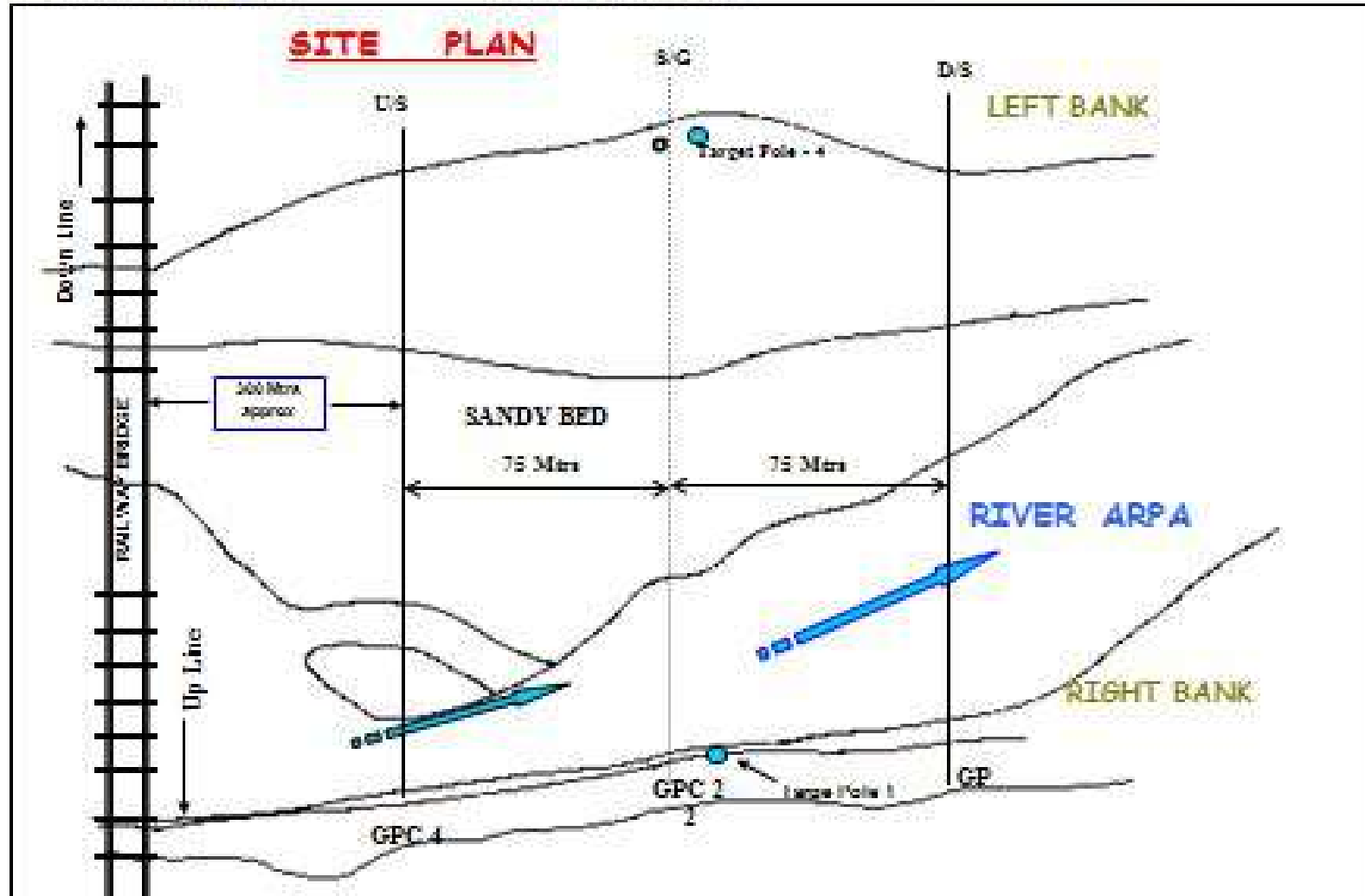


CENTRAL WATER COMMISSION, MAHANADI DIVISION, CWC BURLA

Site : GHATORA

Code : EMP40F2

Sub-Division : MMSD-I CWC Raipur



SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	2.206	0.000	0.000	0.008	0.008	1	10.72	0.000	0.000	0.025	0.025	23
2	0.000	0.000	0.000	0.000	0.000	0	11.73	0.000	0.000	0.013	0.013	13	1.970	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	4.484	0.000	0.000	0.005	0.005	2	1.972	0.000	0.000	0.043	0.043	7
4	0.000	0.000	0.000	0.000	0.000	0	3.642	0.000	0.000	0.028	0.028	9	16.02	0.000	0.000	0.063	0.063	87
5	0.000	0.000	0.000	0.000	0.000	0	2.150	0.000	0.000	0.000	0.000	0	654.3	0.000	0.000	0.180	0.180	10176
6	0.000	0.000	0.000	0.000	0.000	0	4.239	0.000	0.000	0.005	0.005	2	512.6	0.000	0.000	0.073	0.073	3211
7	0.000	0.000	0.000	0.000	0.000	0	3.822	0.000	0.000	0.010	0.010	3	42.08	0.000	0.000	0.035	0.035	127
8	0.000	0.000	0.000	0.000	0.000	0	3.912	0.000	0.000	0.010	0.010	3	30.31	0.000	0.000	0.040	0.040	105
9	0.000	0.000	0.000	0.000	0.000	0	3.989	0.000	0.000	0.013	0.013	4	19.00	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	3.622	0.000	0.000	0.055	0.055	17	19.25	0.000	0.000	0.023	0.023	37
11	0.000	0.000	0.000	0.000	0.000	0	34.35	0.000	0.000	0.055	0.055	163	15.50	0.000	0.000	0.035	0.035	47
12	0.000	0.000	0.000	0.000	0.000	0	18.00	0.000	0.000	0.000	0.000	0	26.27	0.000	0.000	0.028	0.028	62
13	0.000	0.000	0.000	0.000	0.000	0	21.86	0.000	0.000	0.020	0.020	38	50.74	0.000	0.000	0.050	0.050	219
14	0.000	0.000	0.000	0.000	0.000	0	18.49	0.000	0.000	0.010	0.010	16	52.40	0.000	0.000	0.050	0.050	226
15	0.000	0.000	0.000	0.000	0.000	0	15.55	0.000	0.000	0.013	0.013	17	52.20	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	15.50	0.000	0.000	0.015	0.015	20	52.10	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	15.03	0.000	0.000	0.010	0.010	13	52.54	0.000	0.000	0.040	0.040	182
18	0.000	0.000	0.000	0.000	0.000	0	18.00	0.000	0.000	0.000	0.000	0	612.3	0.000	0.000	0.153	0.153	8067
19	0.000	0.000	0.000	0.000	0.000	0	18.17	0.000	0.000	0.000	0.000	0	556.5	0.000	0.000	0.085	0.085	4087
20	0.000	0.000	0.000	0.000	0.000	0	44.38	0.000	0.000	0.193	0.193	738	605.4	0.000	0.000	0.093	0.093	4839
21	0.000	0.000	0.000	0.000	0.000	0	32.23	0.000	0.000	0.103	0.103	285	86.09	0.000	0.000	0.060	0.060	446
22	0.000	0.000	0.000	0.000	0.000	0	16.39	0.000	0.000	0.058	0.058	81	54.31	0.000	0.000	0.033	0.033	153
23	0.000	0.000	0.000	0.000	0.000	0	22.33	0.000	0.000	0.063	0.063	121	26.00	0.000	0.000	0.000	0.000	0
24	30.02	0.000	0.000	0.000	0.000	0	597.8	0.000	0.000	0.043	0.043	2195	5.003	0.000	0.000	0.045	0.045	19
25	0.000	0.000	0.000	0.000	0.000	0	75.55	0.000	0.000	0.108	0.108	702	21.69	0.000	0.000	0.025	0.025	47
26	0.000	0.000	0.000	0.000	0.000	0	79.00	0.000	0.000	0.000	0.000	0	24.94	0.000	0.000	0.048	0.048	102
27	8.521	0.000	0.000	0.023	0.023	17	50.28	0.000	0.000	0.098	0.098	424	31.86	0.000	0.000	0.038	0.038	103
28	2.300	0.000	0.000	0.000	0.000	0	48.58	0.000	0.000	0.105	0.105	441	26.00	0.000	0.000	0.018	0.018	39
29	1.347	0.000	0.000	0.020	0.020	2	15.88	0.000	0.000	0.020	0.020	27	48.84	0.000	0.000	0.038	0.038	158
30	1.872	0.000	0.000	0.003	0.003	0	14.95	0.000	0.000	0.053	0.053	68	47.00	0.000	0.000	0.000	0.000	0
31							12.07	0.000	0.000	0.048	0.048	50	47.53	0.000	0.000	0.023	0.023	92
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	4.380	0.000	0.000	0.015	0.015	5	130.8	0.000	0.000	0.048	0.048	1377
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	21.93	0.000	0.000	0.032	0.032	100	207.6	0.000	0.000	0.053	0.053	1773
Ten Daily III	4.406	0.000	0.000	0.005	0.005	2	87.73	0.000	0.000	0.063	0.063	399	38.12	0.000	0.000	0.030	0.030	106
Monthly																		
Total						19						5453						32663

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	31.11	0.000	0.000	0.035	0.035	94	11.38	0.000	0.000	0.028	0.028	27	1.180	0.000	0.000	0.000	0.000	0
2	32.55	0.000	0.000	0.030	0.030	84	6.800	0.000	0.000	0.000	0.000	0	1.186	0.000	0.000	0.005	0.005	1
3	31.27	0.000	0.000	0.033	0.033	88	12.18	0.000	0.000	0.015	0.015	16	1.129	0.000	0.000	0.000	0.000	0
4	53.85	0.000	0.000	0.080	0.080	372	12.30	0.000	0.000	0.000	0.000	0	1.408	0.000	0.000	0.000	0.000	0
5	71.46	0.000	0.000	0.063	0.063	386	6.854	0.000	0.000	0.023	0.023	13	1.148	0.000	0.000	0.000	0.000	0
6	55.00	0.000	0.000	0.000	0.000	0	4.884	0.000	0.000	0.013	0.013	5	15.97	0.000	0.000	0.000	0.000	0
7	31.57	0.000	0.000	0.040	0.040	109	4.299	0.000	0.000	0.015	0.015	6	6.237	0.000	0.000	0.000	0.000	0
8	22.59	0.000	0.000	0.023	0.023	44	3.293	0.000	0.000	0.043	0.043	12	6.400	0.000	0.000	0.000	0.000	0
9	31.40	0.000	0.000	0.018	0.018	47	3.212	0.000	0.000	0.008	0.008	2	3.284	0.000	0.000	0.008	0.008	2
10	23.42	0.000	0.000	0.060	0.060	121	2.926	0.000	0.000	0.008	0.008	2	3.217	0.000	0.000	0.000	0.000	0
11	6.513	0.000	0.000	0.005	0.005	3	2.700	0.000	0.000	0.000	0.000	0	1.600	0.000	0.000	0.000	0.000	0
12	13.40	0.000	0.000	0.078	0.078	90	2.713	0.000	0.000	0.013	0.013	3	1.402	0.000	0.000	0.000	0.000	0
13	8.500	0.000	0.000	0.000	0.000	0	2.628	0.000	0.000	0.023	0.023	5	1.151	0.000	0.000	0.000	0.000	0
14	6.674	0.000	0.000	0.018	0.018	10	2.432	0.000	0.000	0.008	0.008	2	1.135	0.000	0.000	0.000	0.000	0
15	15.12	0.000	0.000	0.013	0.013	16	2.430	0.000	0.000	0.008	0.008	2	1.100	0.000	0.000	0.000	0.000	0
16	7.094	0.000	0.000	0.038	0.038	23	2.425	0.000	0.000	0.023	0.023	5	1.118	0.000	0.000	0.018	0.018	2
17	250.0	0.000	0.000	0.000	0.000	0	3.153	0.000	0.000	0.013	0.013	3	1.121	0.000	0.000	0.000	0.000	0
18	55.43	0.000	0.000	0.035	0.035	168	4.700	0.000	0.000	0.000	0.000	0	1.386	0.000	0.000	0.000	0.000	0
19	54.18	0.000	0.000	0.095	0.095	445	4.583	0.000	0.000	0.018	0.018	7	1.133	0.000	0.000	0.000	0.000	0
20	52.00	0.000	0.000	0.000	0.000	0	4.634	0.000	0.000	0.020	0.020	8	4.272	0.000	0.000	0.000	0.000	0
21	100.2	0.000	0.000	0.020	0.020	173	3.281	0.000	0.000	0.018	0.018	5	2.446	0.000	0.000	0.000	0.000	0
22	721.1	0.000	0.000	0.203	0.203	12616	3.000	0.000	0.000	0.000	0.000	0	1.500	0.000	0.000	0.000	0.000	0
23	555.4	0.000	0.000	0.058	0.058	2759	2.758	0.000	0.000	0.013	0.013	3	1.435	0.000	0.000	0.013	0.013	2
24	72.77	0.000	0.000	0.020	0.020	126	2.000	0.000	0.000	0.000	0.000	0	1.157	0.000	0.000	0.000	0.000	0
25	72.00	0.000	0.000	0.000	0.000	0	1.100	0.000	0.000	0.000	0.000	0	1.150	0.000	0.000	0.000	0.000	0
26	48.49	0.000	0.000	0.015	0.015	63	1.080	0.000	0.000	0.010	0.010	1	1.156	0.000	0.000	0.000	0.000	0
27	25.00	0.000	0.000	0.000	0.000	0	1.131	0.000	0.000	0.010	0.010	1	1.428	0.000	0.000	0.000	0.000	0
28	26.19	0.000	0.000	0.015	0.015	34	1.129	0.000	0.000	0.015	0.015	1	1.405	0.000	0.000	0.000	0.000	0
29	22.47	0.000	0.000	0.015	0.015	29	1.133	0.000	0.000	0.025	0.025	2	0.745	0.000	0.000	0.000	0.000	0
30	18.47	0.000	0.000	0.040	0.040	64	1.131	0.000	0.000	0.013	0.013	1	0.745	0.000	0.000	0.005	0.005	0
31							1.149	0.000	0.000	0.008	0.008	1						
<u>Ten Daily Mean</u>																		
Ten Daily I	38.42	0.000	0.000	0.038	0.038	135	6.814	0.000	0.000	0.015	0.015	8	4.116	0.000	0.000	0.001	0.001	0
Ten Daily II	46.89	0.000	0.000	0.028	0.028	75	3.240	0.000	0.000	0.012	0.012	3	1.542	0.000	0.000	0.002	0.002	0
Ten Daily III	166.2	0.000	0.000	0.039	0.039	1586	1.717	0.000	0.000	0.010	0.010	1	1.317	0.000	0.000	0.002	0.002	0
<u>Monthly</u>																		
Total						17965						133						6

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.714	0.000	0.000	0.000	0.000	0	0.776	0.000	0.000	0.000	0.000	0	0.714	0.000	0.000	0.013	0.013	1
2	5.330	0.000	0.000	0.000	0.000	0	0.734	0.000	0.000	0.000	0.000	0	0.451	0.000	0.000	0.000	0.000	0
3	5.166	0.000	0.000	0.000	0.000	0	0.750	0.000	0.000	0.000	0.000	0	0.299	0.000	0.000	0.000	0.000	0
4	3.298	0.000	0.000	0.000	0.000	0	2.751	0.000	0.000	0.010	0.010	2	0.296	0.000	0.000	0.000	0.000	0
5	3.143	0.000	0.000	0.000	0.000	0	2.668	0.000	0.000	0.000	0.000	0	0.280	0.000	0.000	0.000	0.000	0
6	2.720	0.000	0.000	0.000	0.000	0	1.433	0.000	0.000	0.000	0.000	0	0.269	0.000	0.000	0.000	0.000	0
7	2.471	0.000	0.000	0.008	0.008	2	1.396	0.000	0.000	0.000	0.000	0	0.260	0.000	0.000	0.000	0.000	0
8	2.721	0.000	0.000	0.000	0.000	0	1.096	0.000	0.000	0.000	0.000	0	0.263	0.000	0.000	0.013	0.013	0
9	2.746	0.000	0.000	0.000	0.000	0	0.914	0.000	0.000	0.000	0.000	0	0.250	0.000	0.000	0.000	0.000	0
10	2.441	0.000	0.000	0.000	0.000	0	0.900	0.000	0.000	0.000	0.000	0	0.245	0.000	0.000	0.000	0.000	0
11	1.422	0.000	0.000	0.000	0.000	0	0.733	0.000	0.000	0.008	0.008	0	0.259	0.000	0.000	0.000	0.000	0
12	1.405	0.000	0.000	0.000	0.000	0	0.778	0.000	0.000	0.000	0.000	0	0.257	0.000	0.000	0.000	0.000	0
13	1.400	0.000	0.000	0.000	0.000	0	0.915	0.000	0.000	0.000	0.000	0	0.222	0.000	0.000	0.000	0.000	0
14	1.160	0.000	0.000	0.008	0.008	1	0.964	0.000	0.000	0.000	0.000	0	0.220	0.000	0.000	0.000	0.000	0
15	3.468	0.000	0.000	0.000	0.000	0	1.093	0.000	0.000	0.000	0.000	0	0.214	0.000	0.000	0.010	0.010	0
16	4.276	0.000	0.000	0.000	0.000	0	0.936	0.000	0.000	0.000	0.000	0	0.212	0.000	0.000	0.000	0.000	0
17	4.997	0.000	0.000	0.000	0.000	0	0.730	0.000	0.000	0.000	0.000	0	0.212	0.000	0.000	0.000	0.000	0
18	3.166	0.000	0.000	0.000	0.000	0	0.762	0.000	0.000	0.010	0.010	1	0.000	0.000	0.000	0.000	0.000	0
19	2.406	0.000	0.000	0.000	0.000	0	0.703	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	2.400	0.000	0.000	0.000	0.000	0	0.653	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	1.444	0.000	0.000	0.008	0.008	1	0.656	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	1.156	0.000	0.000	0.000	0.000	0	0.706	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	1.185	0.000	0.000	0.000	0.000	0	0.735	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	1.150	0.000	0.000	0.000	0.000	0	0.745	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	1.150	0.000	0.000	0.000	0.000	0	0.759	0.000	0.000	0.013	0.013	1	0.000	0.000	0.000	0.000	0.000	0
26	1.405	0.000	0.000	0.000	0.000	0	0.680	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	1.400	0.000	0.000	0.000	0.000	0	0.607	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	1.149	0.000	0.000	0.008	0.008	1	0.606	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.973	0.000	0.000	0.000	0.000	0	0.543	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.945	0.000	0.000	0.000	0.000	0	0.540	0.000	0.000	0.000	0.000	0						
31	0.782	0.000	0.000	0.000	0.000	0	0.530	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	3.075	0.000	0.000	0.001	0.001	0	1.342	0.000	0.000	0.001	0.001	0	0.333	0.000	0.000	0.003	0.003	0
Ten Daily II	2.610	0.000	0.000	0.001	0.001	0	0.827	0.000	0.000	0.002	0.002	0	0.160	0.000	0.000	0.001	0.001	0
Ten Daily III	1.158	0.000	0.000	0.001	0.001	0	0.646	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						4						4						1

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 56249

Annual Sediment Load for period : 2001-2016

Station Name : Ghatora (EMP40F2)

Division : MD,CWC,Burla

Local River : Arpa

Sub-Division : MMSD I,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2001-2002	808571	2	808572	1155
2002-2003	107997	7	108004	356
2003-2004	137127	12	137139	1089
2004-2005	118565	44	118609	582
2005-2006	164436	133	164569	980
2006-2007	39354	7	39362	508
2007-2008	61839	97	61935	654
2008-2009	47845	0	47845	500
2009-2010	41551	0	41551	224
2010-2011	112886	5	112891	396
2011-2012	392455	0	392455	1097
2012-2013	190570	0	190570	905
2013-2014	163884	134	164017	831
2014-2015	273837	53	273890	945
2015-2016	56240	10	56249	681

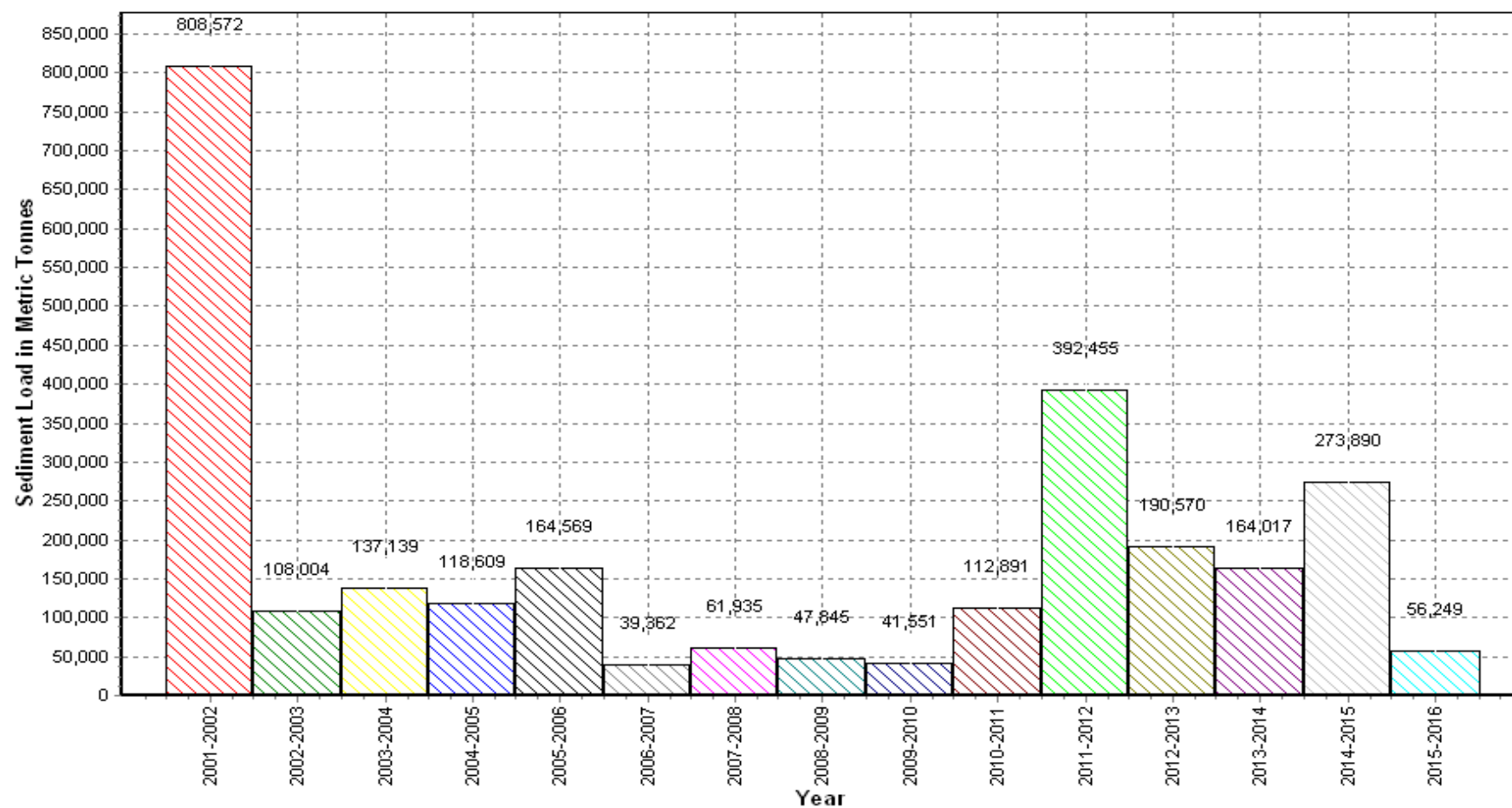
Annual Sediment Load for the period: 2001-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

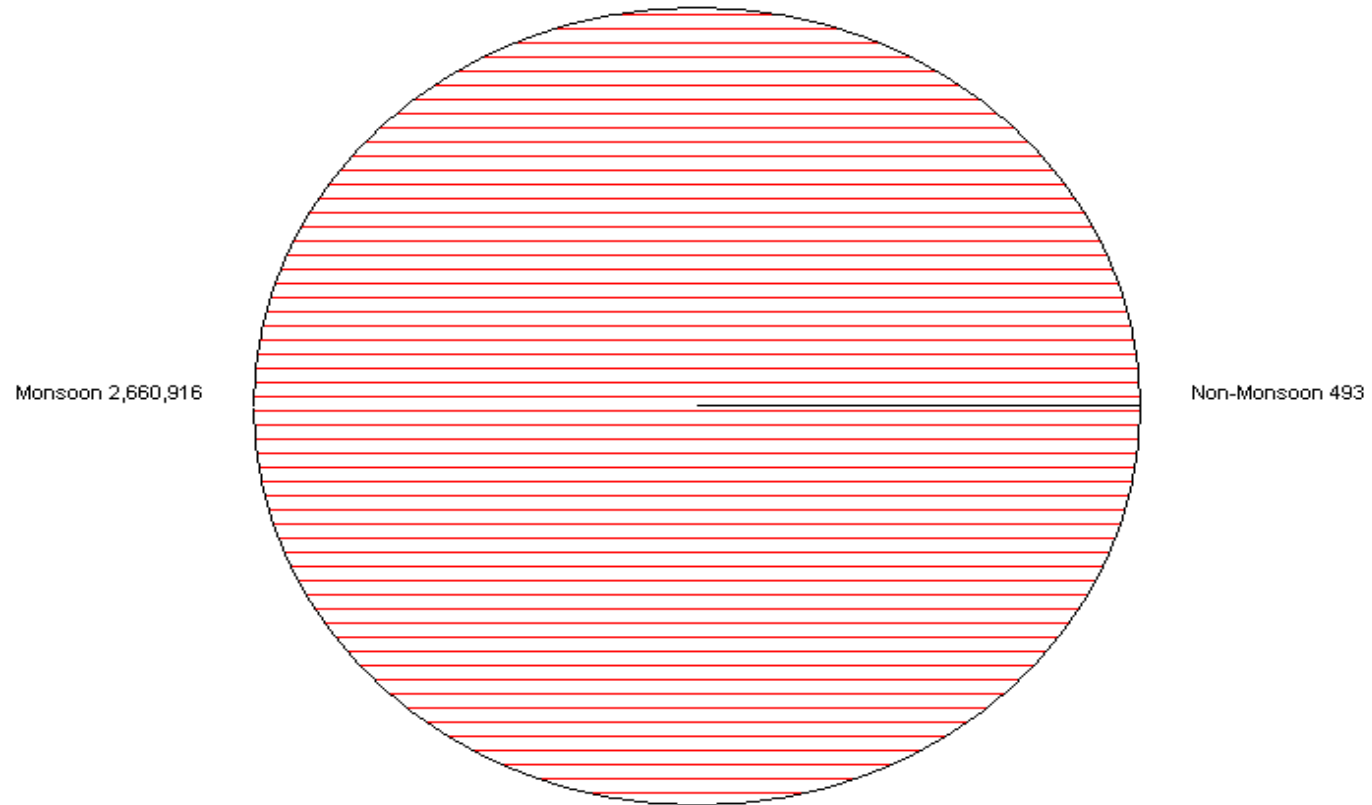
Sub-Division : MMSD I,CWC,Raipur



Seasonal Sediment Load for the period : 2001-2015

Station Name : Ghatora (EMP40F2)
Local River : Arpa

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



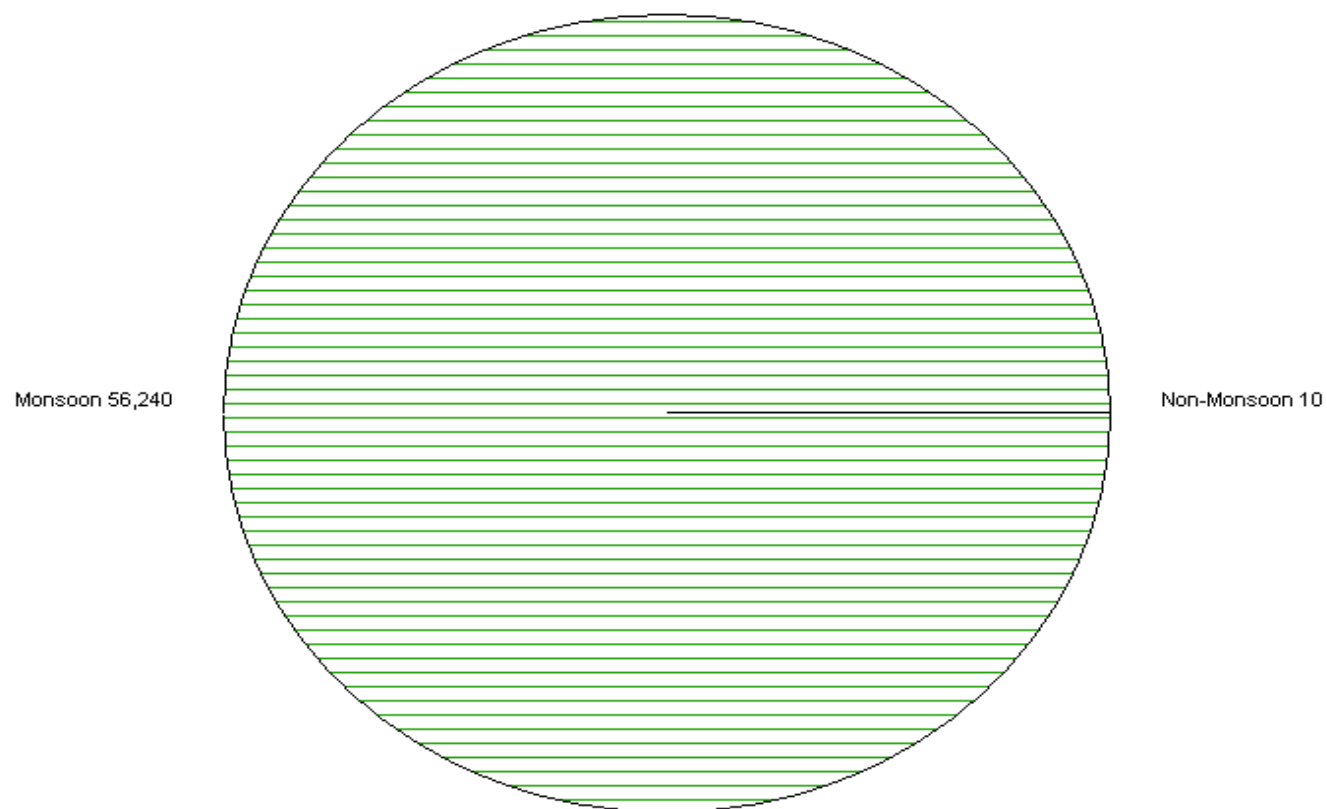
Seasonal Sediment Load for the Year: 2015-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	2.206	10.72	31.11	11.38	1.186	0.714	0.776	0.714	0.000	0.000	0.000
2	Colour_Cod (-)		Clear	Clear	Brown	Clear	Clear	Clear	Clear	Clear			
3	EC_GEN (umho/cm)		558	357	220	257	349	441	554	663			
4	Odour_Code (-)		odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free			
5	pH_GEN (pH units)		7.6	7.3	7.6	8.1	7.9	7.9	7.9	7.8			
6	Temp (deg C)		27.0	28.0	29.0	29.0	24.5	22.5	19.0	20.5			
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)		12.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
2	ALK-TOT (mgCaCO3/L)		488	320	224	248	204	440	508	604			
3	Ca (mg/L)		48	40	30	38	40	42	61	55			
4	Cl (mg/L)		62.0	31.0	23.0	21.0	16.0	39.0	54.0	77.0			
5	CO3 (mg/L)		14.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
6	HCO3 (mg/L)		283	195	137	151	124	268	310	368			
7	K (mg/L)		5.6	5.3	5.8	13.0	7.2	6.2	9.0	8.6			
8	Mg (mg/L)		28.2	15.6	8.8	18.5	20.4	28.2	18.5	13.6			
9	Na (mg/L)		19.0	21.4	13.4	16.8	21.8	27.2	38.3	36.9			
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)		1.8	5.4	2.0	2.0	1.6	1.3	2.7	2.8			
2	DO (mg/L)		3.8	7.4	5.6	5.8	5.5	4.5	5.7	5.9			
3	DO_SAT% (%)		48	95	73	75	65	52	61	65			
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)		120	100	76	96	100	104	152	136			
2	HAR_Total (mgCaCO3/L)		238	165	113	173	185	222	229	193			
3	Na% (%)		15	21	20	16	20	21	26	28			
4	RSC (-)		0.4	0.0	0.0	0.0	0.0	0.0	0.5	2.2			
5	SAR (-)		0.5	0.7	0.6	0.6	0.7	0.8	1.1	1.2			
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Ghatora (EMP40F2)

Division : MD,CWC,Burla

Local River : Arpa

Sub-Division : MMSD I,CWC,Raipur

River Water Summary					
S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
PHYSICAL					
1	Q (cumec)	366	721.1	0.000	21.54
2	EC_GEN (µmho/cm)	8	663	220	425
3	pH_GEN (pH units)	8	8.1	7.3	7.7
4	Temp (deg C)	8	29.0	19.0	24.9
CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	8	12.0	0.0	1.5
2	ALK-TOT (mgCaCO3/L)	8	604	204	380
3	Ca (mg/L)	8	61	30	44
4	Cl (mg/L)	8	77.0	16.0	40.4
5	CO3 (mg/L)	8	14.4	0.0	1.8
6	HCO3 (mg/L)	8	368	124	230
7	K (mg/L)	8	13.0	5.3	7.6
8	Mg (mg/L)	8	28.2	8.8	19
9	Na (mg/L)	8	38.3	13.4	24.3
BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	8	5.4	1.3	2.5
2	DO (mg/L)	8	7.4	3.8	5.5
3	DO_SAT% (%)	8	95	48	67
TRACE & TOXIC					
CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	8	152	76	111
2	HAR_Total (mgCaCO3/L)	8	238	113	190
3	Na% (%)	8	28	15	21
4	RSC (-)	8	2.2	0.0	0.4
5	SAR (-)	8	1.2	0.5	0.8
PESTICIDES					

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Flood																			
		Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	94.61	28.14	100.1	22.03	142.4	99.57	63.58	31.60	20.65	16.79	60.73	48.59	50.33	52.89	11.08	4.201	1.505	14.32	9.985	2.740
2	EC_FLD (µmho/cm)	342	259	152	289	194	146	282	272	337	210						410	498	366	534	472
3	EC_GEN (µmho/cm)	342	259	132	289	194	146	261	252	378	202	193	195	215	370	348	410	498	366	534	472
4	pH_FLD (pH units)	7.8	7.9	7.7	7.9	7.6	7.4	7.0	7.5	7.5	7.2						7.6	7.6	7.9	7.7	7.4
5	pH_GEN (pH units)	7.9	7.9	7.7	8.0	7.7	7.4	7.4	7.6	7.7	7.6	7.7	7.7	8.1	7.9	7.6	7.6	7.6	7.9	7.7	7.4
6	Temp (deg C)	23.7	25.8	27.3	30.8	29.4	20.0	27.7	29.0	29.5	29.3	27.0	28.3	27.0	29.5	28.3	17.0	20.0	22.5	23.3	24.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	165	139	168	207	113		89	190	277	144	134	142	200	371	320	316	282	368	324	319
3	B (mg/L)		0.32			0.08		0.01	0.01	0.00	0.00	0.00	0.00					0.11			0.08
4	Ca (mg/L)	31	26	17	29	13		22	16	30	14	13	24	25	28	39	38	46	27	40	36
5	Cl (mg/L)	42.0	17.5	20.5	25.2	21.5		8.5	12.9	11.5	5.1	5.8	8.8	14.0	29.4	34.3	20.6	33.6	18.3	19.5	56.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)			1.39		0.20		0.11	0.12	0.22	0.18	0.23	0.21						0.99	0.47	0.13
8	Fe (mg/L)	0.2	0.1			0.1		0.0	0.0	0.1	0.0	0.0	0.0				0.9	0.1			0.1
9	HCO3 (mg/L)	101	84	102	202	69		54	116	169	88	82	87	122	226	192	193	172	180	197	195
10	K (mg/L)	2.4	1.9			3.1		2.9	2.0	2.7	3.0	2.1	1.8	4.2	8.6	7.4	2.5	2.7		4.6	4.0
11	Mg (mg/L)	12.9	9.0	5.8	22.4	4.7		12.0	8.7	15.9	8.9	8.0	13.4	6.2	20.2	17.7	15.0	19.4	14.9	16.1	17.7
12	Na (mg/L)	19.2	11.1			11.7		18.2	8.9	10.1	9.0	8.1	14.8	9.3	45.4	17.7	19.7	20.1		36.5	32.5
13	NH3-N (mg N/L)																				
14	NO2+NO3 (mg N/L)	1.22	2.79			0.07	0.05	0.12	0.40								1.24	1.94		0.26	0.26
15	NO2-N (mgN/L)					0.00	0.00	0.01	0.05	0.03	0.01	0.02	0.05								0.00
16	NO3-N (mgN/L)					0.06	0.04	0.11	0.35												0.26
17	P-Tot (mgP/L)			0.030		0.033		0.010	0.025	0.300	0.030	0.040	0.073						0.335	0.032	0.007
18	SiO2 (mg/L)	14.9	17.5			6.1		10.2	22.7	24.9	12.1	11.3	15.1				15.8	25.5			18.4
19	SO4 (mg/L)	11.8	9.5	9.7	7.2	9.5		14.2	11.7	37.7	13.5	10.5	15.9				11.7	15.7	6.6	8.9	14.7
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.9	31.9	1.0	0.8	1.0		1.6	1.7	2.7	0.9	1.3	1.4	1.8	1.9	2.8	1.9	11.1	0.8	3.4	2.5
2	COD (mg/L)							19.2	18.0	33.3	20.0	24.0	22.7								
3	DO (mg/L)	5.2	5.1	5.7	5.4	4.7		6.6	5.6	4.8	5.2	6.3	7.0	7.0	6.0	5.7	6.0	3.8	5.2	6.0	5.4
4	DO_SAT% (%)	61	62	70	73	62		83	73	66	68	79	90	87	78	73	62	42	58	71	66
	TRACE & TOXIC																				
1	Al (mg/L)	0.16	0.19														0.18	0.10			
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	79	66	43	73	33		54	41	76	34	32	60	61	70	98	94	116	66	100	91
2	HAR_Total (mgCaCO3/L)	132	103	67	166	53		104	77	142	71	65	116	87	154	172	156	196	128	167	165
3	Na% (%)	22	21			32		27	20	13	21	21	22	18	34	18	21	19		30	28
4	RSC (-)	0.0	0.0	0.2	0.0	0.1		0.0	0.4	0.0	0.1	0.0	0.0	0.4	0.7	0.1	0.2	0.0	0.6	0.4	0.1
5	SAR (-)	0.6	0.5			0.7		0.8	0.5	0.4	0.5	0.4	0.6	0.4	1.5	0.6	0.7	0.6		1.2	1.1
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	4.432	6.290	2.678		3.492	21.47	9.449	11.23	12.02	0.847	0.531	0.297	2.797	1.068						
2	EC_FLD (µmho/cm)	365	420	612	365	290						760	930	511	604						
3	EC_GEN (µmho/cm)	365	387	639	365	287	314	353	331	366	502	760	930	511	604						
4	pH_FLD (pH units)	8.0	7.6	7.7	7.6	8.0						7.9	7.9	7.8	7.8						
5	pH_GEN (pH units)	8.0	7.9	7.8	8.2	8.0	7.8	7.9	7.9	7.7	7.9	7.9	7.9	7.8	7.8						
6	Temp (deg C)	14.0	20.3	20.3	23.0	22.0	22.0	24.0	22.0	21.5	21.6	22.7	22.0	28.0	28.0						
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0			
2	ALK-TOT (mgCaCO3/L)		261	379	194	198	213	298	315	335	439	544	676	506	574			34			
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00	0.00					0.11					0.01			
4	Ca (mg/L)		26	43	24	19	21	45	46	46	49	65	93	57	42			32			
5	Cl (mg/L)		41.1	49.5	9.4	24.0	28.0	18.5	24.7	29.0	46.5	58.9	53.7	37.0	32.0			51.1			
6	CO3 (mg/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0			
7	F (mg/L)		0.23	0.35	0.22	0.12	0.24	0.32							0.30			0.33			
8	Fe (mg/L)	0.0	0.0	0.1	0.0	0.0	0.0	0.0		0.1		0.4	0.1								
9	HCO3 (mg/L)		159	231	118	121	130	182	192	204	268	332	412	309	350			21			
10	K (mg/L)		3.4	4.0	2.3	16.2	2.6	1.8	14.7	6.2	7.8	1.5	4.2		7.2			3.7			
11	Mg (mg/L)		16.2	23.2	14.1	14.8	13.6	26.2	8.1	16.3	20.2	28.2	37.9	14.6	22.4			19.9			
12	Na (mg/L)		24.0	37.2	10.0	39.6	18.8	8.1	44.5	24.4	31.0	46.1	33.6		53.9			28.9			
13	NH3-N (mg N/L)												0.54								
14	NO2+NO3 (mg N/L)	0.08	0.11	0.75						0.11		1.34	2.57		1.48						
15	NO2-N (mgN/L)	0.01	0.01	0.08	0.04	0.01	0.02	0.03		0.03											
16	NO3-N (mgN/L)	0.08	0.10	0.68						0.08											
17	P-Tot (mgP/L)		0.022	0.147	0.030	0.050	0.040	0.030		0.060			0.130		0.017			0.020			
18	SiO2 (mg/L)		18.6	40.9	23.0	13.0	12.0	17.2		9.2		18.3	28.1					26.0			
19	SO4 (mg/L)		15.1	53.8	27.0	15.8	16.6	17.5		15.0		10.8	19.0	8.3	16.0			12.0			
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)		1.5	1.6	1.8	2.4	1.3	1.6	10.0	3.6	2.1	76.0	55.0	0.9	4.5			1.2			
2	COD (mg/L)		24.0	65.0	32.0	22.0	16.0	24.0										28.0			
3	DO (mg/L)		5.9	6.4	5.3	4.9	5.6	5.5	6.9	7.5	5.4	3.0	2.4	5.9	5.0						
4	DO_SAT% (%)		65	72	62	62	64	65	79	85	61	35	28	88	64						
	TRACE & TOXIC																				
1	Al (mg/L)											0.10	0.12								
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		66	109	60	48	52	112	115	114	123	163	232	143	104			80			
2	HAR_Total (mgCaCO3/L)		133	205	119	110	109	221	149	182	207	279	388	203	196			163			
3	Na% (%)		28	28	15	39	27	7	32	20	24	25	16		36			27			
4	RSC (-)		0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.7	0.2	0.0	1.7	1.8			0.0			
5	SAR (-)		0.9	1.1	0.4	1.7	0.8	0.2	1.5	0.8	0.9	1.2	0.8		1.7			1.0			
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Ghatora (EMP40F2)

Local River : Arpa

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)			1.287	0.132	0.000
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)			681	596	
4	pH_FLD (pH units)					
5	pH_GEN (pH units)			7.7	7.9	
6	Temp (deg C)			26.2	23.0	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			0.5	0.0	
2	ALK-TOT (mgCaCO3/L)			445	504	
3	B (mg/L)					
4	Ca (mg/L)			67	51	
5	Cl (mg/L)			65.3	12.0	
6	CO3 (mg/L)			0.6	0.0	
7	F (mg/L)					
8	Fe (mg/L)				0.1	
9	HCO3 (mg/L)			271	307	
10	K (mg/L)			8.4	4.1	
11	Mg (mg/L)			22.4	30.1	
12	Na (mg/L)			68.2	19.5	
13	NH3-N (mg N/L)					
14	NO2+NO3 (mg N/L)					
15	NO2-N (mgN/L)					
16	NO3-N (mgN/L)					
17	P-Tot (mgP/L)				0.040	
18	SiO2 (mg/L)				9.3	
19	SO4 (mg/L)				17.0	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			2.3	4.8	
2	COD (mg/L)					
3	DO (mg/L)			5.6	7.6	
4	DO_SAT% (%)			69	89	
	TRACE & TOXIC					
1	Al (mg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			167	128	
2	HAR_Total (mgCaCO3/L)			260	254	
3	Na% (%)			35	14	
4	RSC (-)			0.0	0.0	
5	SAR (-)			1.9	0.5	
	PESTICIDES					

SITE JONDHRA

HISTORY SHEET

Water Year : 2015-2016

Site : Jondhra

Code : EMP00A4

State : Chhattisgarh

District : Bilaspur

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Seonath

Sub Tributary :

Sub-Sub Tributary :

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Drainage Area : 29645 Sq. Km.

Bank :

Latitude : 21°43'00"

Longitude : 82°20'34"

Zero of Gauge (m) : 219 (m.s.l)

1/24/1979 - 2/1/2025

Opening Date

Closing Date

Gauge : 1/24/1979

Discharge : 7/21/1979

Sediment : 10/11/1980

Water Quality : 6/2/1980

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1980-1981	11033	229.950	9/20/1980	0.560	219.710	6/2/1980
1981-1982	4444	226.280	8/11/1981	3.340	219.725	5/12/1982
1982-1983	4372	225.820	8/10/1982	2.500	219.720	5/4/1983
1983-1984	4902	225.210	9/8/1983	1.600	219.685	6/11/1983
1984-1985	7284	227.140	8/19/1984	3.400	219.740	5/10/1985
1985-1986	5953	227.265	9/13/1985	3.800	219.725	6/1/1985
1986-1987	6248	227.145	6/28/1986	4.700	219.800	5/31/1987
1987-1988	2063	223.760	9/16/1987	4.500	219.795	6/1/1987
1988-1989	3737	225.435	8/5/1988	1.170	219.545	4/30/1989
1989-1990	1720	223.750	9/2/1989	0.145	219.715	4/20/1990
1990-1991	7132	228.380	9/15/1990	2.200	219.690	5/26/1991
1991-1992	5376	227.860	8/25/1991	0.858	219.630	5/27/1992
1992-1993	3978	227.775	8/22/1992	0.061	219.500	5/28/1993
1993-1994	4528	227.050	8/20/1993	0.018	219.500	6/1/1993
1994-1995	12700	230.570	7/14/1994	0.669	219.595	6/9/1994
1995-1996	4239	227.275	7/26/1995	3.000	220.210	6/18/1995
1996-1997	3785	226.110	8/3/1996	0.076	219.790	5/27/1997
1997-1998	5980	227.080	8/24/1997	3.411	219.990	6/21/1997
1998-1999	4341	227.730	9/14/1998	0.430	219.810	5/12/1999
1999-2000	3681	225.565	9/1/1999	0.839	219.815	6/11/1999
2000-2001	2811	225.110	7/21/2000	0.038	219.620	4/26/2001
2001-2002	4469	226.200	8/22/2001	0.087	219.590	4/20/2002

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2002-2003	1600	224.200	9/8/2002	0.240	219.655	4/20/2003
2003-2004	5721	229.300	8/30/2003	0.494	219.660	5/31/2004
2004-2005	2772	225.900	8/10/2004	0.493	219.730	5/31/2005
2005-2006	7526	229.060	9/18/2005	0.167	219.690	5/29/2006
2006-2007	6068	228.380	8/14/2006	0.000	219.660	5/11/2007
2007-2008	6874	227.720	7/3/2007	0.000	219.465	5/13/2008
2008-2009	4209	226.663	9/20/2008	0.000	219.430	4/17/2009
2009-2010	3056	225.997	7/17/2009	0.000	221.315	3/7/2010
2010-2011	3203	226.325	9/21/2010	0.000	222.285	1/25/2011
2011-2012	9193	229.905	9/10/2011	0.000	220.960	4/6/2012
2012-2013	3812	226.505	9/7/2012	0.000	222.320	12/22/2012
2013-2014	6529	227.965	8/3/2013	0.000	220.560	6/19/2013
2014-2015	9676	229.220	8/7/2014	0.000	222.600	4/5/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : Jondhra (EMP00A4)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : MMSD I,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	222.580	0.000	221.800	0.000	221.670	33.41	222.940	378.9	222.760	418.4	222.700	0.000 *
2	222.580	0.000 *	221.820	0.000 *	221.600	32.00 *	223.150	504.0	222.700	150.0 *	222.670	0.000 *
3	222.580	0.000 *	221.960	0.000 *	221.790	49.94	223.150	504.3	222.510	232.7	222.670	0.000 *
4	222.580	0.000 *	222.200	0.000 *	221.920	56.04	223.120	490.7	222.540	130.0 *	222.690	0.000 *
5	222.580	0.000 *	222.700	0.000 *	222.865	225.5	223.005	447.2	222.510	236.7	222.660	0.000 *
6	222.580	0.000 *	222.500	0.000 *	223.055	447.9	222.835	608.0 *	222.470	219.4	222.660	0.000 *
7	222.580	0.000 *	221.960	0.000 *	222.875	297.7	222.655	285.9	222.400	201.0	222.660	0.000 *
8	222.580	0.000 *	221.835	0.000 *	222.825	248.7	222.190	139.6	222.705	192.0	222.700	0.000 *
9	222.580	0.000 *	221.750	0.000 *	221.010	20.00 *	222.065	105.4	222.650	172.8	222.680	0.000 *
10	222.580	0.000 *	221.690	0.000 *	221.718	62.05	222.150	124.9	222.520	152.0	222.680	0.000 *
11	222.580	0.000 *	221.800	0.000 *	221.700	59.95	222.085	101.3	222.480	120.0 *	222.680	0.000 *
12	222.580	0.000 *	222.940	0.000 *	221.835	73.89	222.020	110.1	222.410	106.6	222.680	0.000 *
13	222.580	0.000 *	222.910	212.4	222.150	100.2	221.670	80.00 *	222.560	132.4	222.680	0.000 *
14	221.880	0.000 *	222.775	190.5	222.820	225.5	222.035	108.1	223.025	221.8	222.680	0.000 *
15	221.860	0.000 *	222.645	147.9	223.050	447.0 *	221.950	97.88	223.160	252.2	222.630	0.000 *
16	221.860	0.000 *	222.445	119.6	223.020	446.0 *	221.993	91.09	223.160	253.0	222.620	0.000 *
17	221.860	0.000 *	221.973	56.72	223.460	527.2	222.390	145.0 *	223.160	254.2	222.610	0.000 *
18	221.700	0.000 *	221.830	50.00 *	223.415	512.1	222.270	156.4	223.140	250.0 *	222.600	0.000 *
19	221.800	0.000 *	221.710	40.00 *	223.230	451.7	224.425	1822	223.140	247.6	222.600	0.000 *
20	221.800	0.000 *	221.810	49.79	223.010	382.1	223.750	925.0 *	223.140	259.1	222.600	0.000 *
21	221.420	0.000 *	221.900	61.72	222.925	326.8	223.625	1239	223.140	244.3	222.600	0.000 *
22	221.480	0.000 *	222.020	68.45	222.745	277.8	224.720	2083	223.140	255.0 *	222.600	0.000 *
23	221.490	0.000 *	222.000	61.43	222.390	150.0 *	224.595	1958	223.140	227.6	222.600	0.000 *
24	221.870	0.000 *	222.850	226.3	221.740	102.9	223.730	1358	223.080	210.0 *	222.600	0.000 *
25	222.940	0.000 *	223.500	555.7	221.658	98.47	223.360	632.0 *	222.760	170.0 *	222.600	0.000 *
26	222.780	0.000 *	223.280	442.0 *	221.560	92.92	223.200	930.0	222.740	168.9	222.570	0.000 *
27	222.470	0.000 *	223.270	421.7	221.598	96.59	223.050	485.0 *	222.885	184.4	222.530	0.000 *
28	222.090	0.000 *	222.885	249.5	221.540	94.48	222.935	648.7	222.595	139.3	222.480	0.000 *
29	221.870	0.000 *	222.710	191.5	221.543	93.33	222.845	609.9	222.500	123.4	222.420	0.000 *
30	221.830	0.000 *	222.350	115.1	222.120	90.00 *	222.800	572.2	222.630	142.3	222.300	0.000 *
31			221.805	68.42	222.808	281.5			222.770	165.5		
Ten-Daily Mean												
I Ten-Daily	222.580	0.000	222.021	0.000	222.133	147.3	222.726	358.9	222.576	210.5	222.677	0.000
II Ten-Daily	222.050	0.000	222.284	86.69	222.769	322.6	222.459	363.7	222.938	209.7	222.638	0.000
III Ten-Daily	222.024	0.000	222.597	223.8	222.057	155.0	223.486	1052	222.853	184.6	222.530	0.000
Monthly												
Min.	221.420	0.000	221.690	0.000	221.010	20.00	221.670	80.00	222.400	106.6	222.300	0.000
Max.	222.940	0.000	223.500	555.7	223.460	527.2	224.720	2083	223.160	418.4	222.700	0.000
Mean	222.218	0	222.310	107.4	222.311	206.6	222.890	591.4	222.791	201	222.615	0

Annual Runoff in MCM = 2969 Annual Runoff in mm = 100

Peak Observed Discharge = 2083 cumecs on 22/09/2015 Corres. Water Level :224.72 m

Lowest Observed Discharge = 0.000 cumecs on 01/06/2015 Corres. Water Level :222.58 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2015 - 2016

Station Name : Jondhra (EMP00A4)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : MMSD I,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	222.200	32.63	222.480	5.500	222.870	6.229	222.880	4.019	222.540	0.000 *	222.100	0.000 *
2	222.130	33.27	222.450	4.950 *	222.870	6.342	222.880	4.179	222.500	0.000 *	222.100	0.000 *
3	221.980	32.22	222.450	5.000 *	222.810	5.946	222.880	3.079	222.450	0.000 *	222.100	0.000 *
4	221.810	30.50	220.920	2.530	222.790	5.187	222.880	3.417	222.400	0.000 *	222.050	0.000 *
5	221.650	30.05	222.720	8.173	222.760	4.798	222.880	3.452	222.350	0.000 *	221.990	0.000 *
6	221.470	25.00 *	222.720	7.987	222.730	4.647	222.880	3.700 *	222.300	0.000 *	221.970	0.000 *
7	221.700	30.37	222.720	8.230	222.710	2.000 *	222.880	3.650 *	222.250	0.000 *	221.920	0.000 *
8	222.000	2.823	222.720	8.006	222.680	5.246	222.880	3.522	222.220	0.000 *	221.870	0.000 *
9	222.140	3.500 *	222.720	8.115	222.680	5.191	222.880	3.607	222.200	0.000 *	221.800	0.000 *
10	222.370	0.000 *	222.720	8.000 *	222.655	4.888	222.880	3.636	222.140	0.000 *	221.700	0.000 *
11	222.490	0.000 *	222.720	6.917	222.655	4.874	222.880	3.024	222.070	0.000 *	221.650	0.000 *
12	222.490	0.000 *	222.620	7.253	222.700	1.080	222.870	3.009	222.030	0.000 *	221.600	0.000 *
13	222.490	0.000 *	222.710	7.129	222.770	0.924	222.870	3.200 *	222.020	0.000 *	221.500	0.000 *
14	222.490	2.897	222.670	6.640	222.840	4.200 *	222.870	2.885	222.020	0.000 *	221.400	0.000 *
15	222.490	2.423	222.670	6.342	222.930	0.914	222.870	2.476	222.020	0.000 *	221.300	0.000 *
16	222.480	2.444	222.670	6.154	222.680	4.809	222.870	2.247	222.020	0.000 *	221.260	0.000 *
17	222.480	2.542	222.670	6.100 *	222.880	4.197	222.870	1.906	222.020	0.000 *	221.230	0.000 *
18	222.450	2.347	222.650	5.634	222.880	3.396	222.870	1.666	222.020	0.000 *	221.220	0.000 *
19	222.450	2.137	222.650	5.630	222.880	3.792	222.870	3.009	222.020	0.000 *	221.200	0.000 *
20	222.450	2.130 *	222.650	7.432	222.880	4.084	222.860	3.000 *	222.050	0.000 *	221.100	0.000 *
21	222.510	2.417	222.650	7.539	222.880	6.000 *	222.850	1.460	222.070	0.000 *	221.040	0.000 *
22	222.550	2.440	222.670	6.827	222.880	3.660	222.840	1.456	222.080	0.000 *	220.940	0.000 *
23	222.580	2.442	222.670	6.272	222.880	3.568	222.830	1.364	222.080	0.000 *	220.890	0.000 *
24	222.580	2.440 *	222.650	6.650 *	222.880	3.528	222.800	2.100 *	222.080	0.000 *	220.840	0.000 *
25	222.580	2.435 *	222.650	6.679	222.880	3.562	222.780	1.500 *	222.090	0.000 *	220.750	0.000 *
26	222.580	2.270	222.650	6.500 *	222.880	3.497	222.860	1.153	222.100	0.000 *	220.700	0.000 *
27	222.580	2.430 *	222.650	6.098	222.880	3.453	222.750	1.200 *	222.100	0.000 *	220.700	0.000 *
28	222.580	0.000 *	222.650	5.495	222.880	6.100 *	222.870	0.937	222.100	0.000 *	220.700	0.000 *
29	222.580	0.000 *	222.580	6.436	222.880	5.026	222.710	0.855	222.100	0.000 *	220.700	0.000 *
30	222.580	0.000 *	222.870	6.351			222.700	0.657	222.100	0.000 *	220.700	0.000 *
31	222.580	0.000 *	222.870	6.345 *			222.600	0.243			220.700	0.000 *
Ten-Daily Mean												
I Ten-Daily	221.945	22.04	222.462	6.649	222.755	5.047	222.880	3.626	222.335	0.000	221.960	0.000
II Ten-Daily	222.476	1.692	222.668	6.523	222.809	3.227	222.870	2.642	222.029	0.000	221.346	0.000
III Ten-Daily	222.571	1.534	222.687	6.472	222.880	4.266	222.781	1.175	222.090	0.000	220.787	0.000
Monthly												
Min.	221.470	0.000	220.919	2.530	222.655	0.914	222.600	0.243	222.020	0.000	220.700	0.000
Max.	222.580	33.27	222.870	8.230	222.930	6.342	222.880	4.179	222.540	0.000	222.100	0.000
Mean	222.338	8.199	222.608	6.546	222.813	4.177	222.842	2.439	222.151	0	221.346	0

Peak Computed Discharge = 925.0 cumecs on 20/09/2015

Corres. Water Level :223.75 m

Lowest Computed Discharge = 0.000 cumecs on 02/06/2015

Corres. Water Level :222.58 m

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

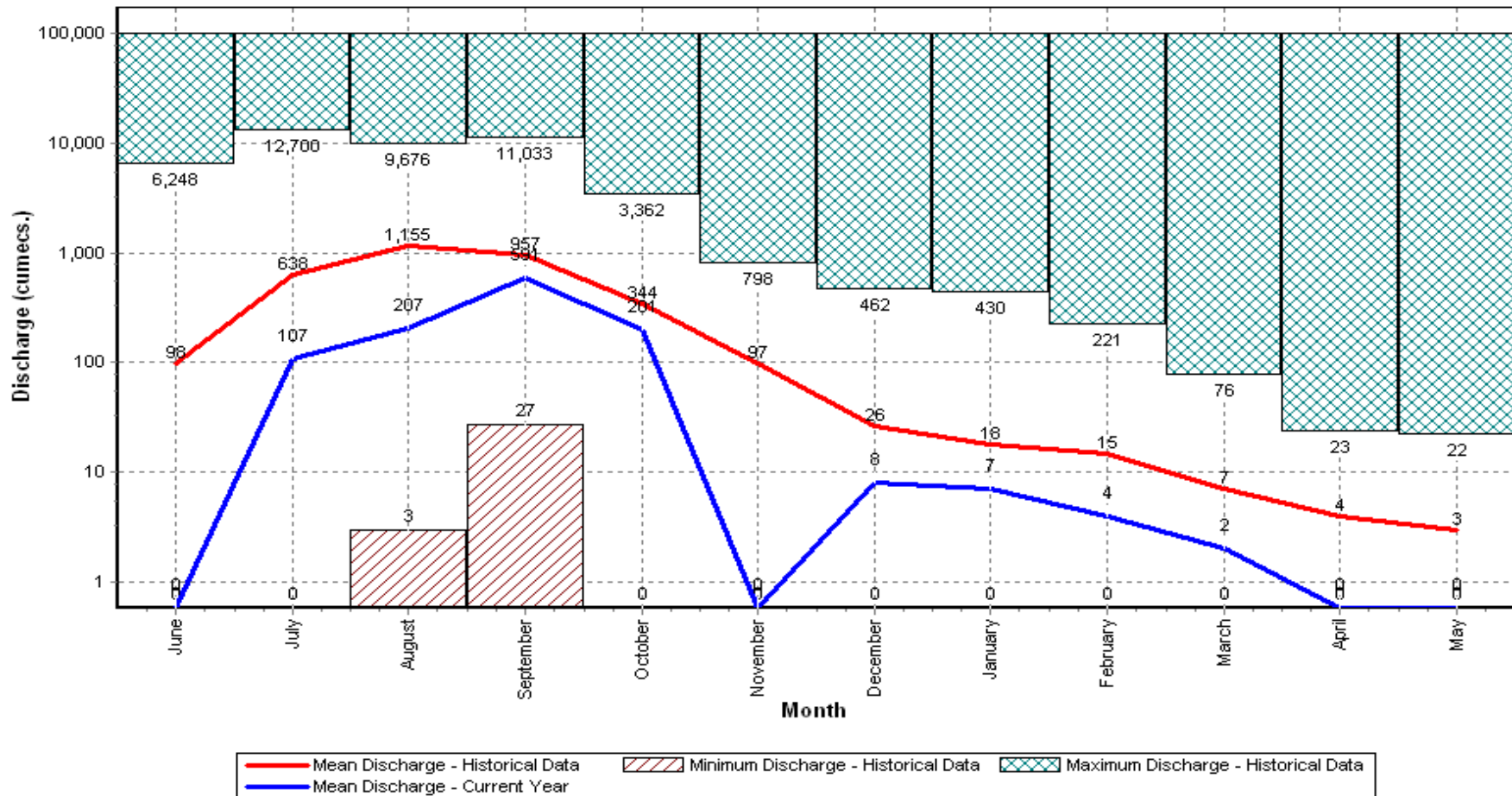
Station Name : Jondhra (EMP00A4)

Data considered : 1980-2016

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : MMSD I,CWC,Raipur



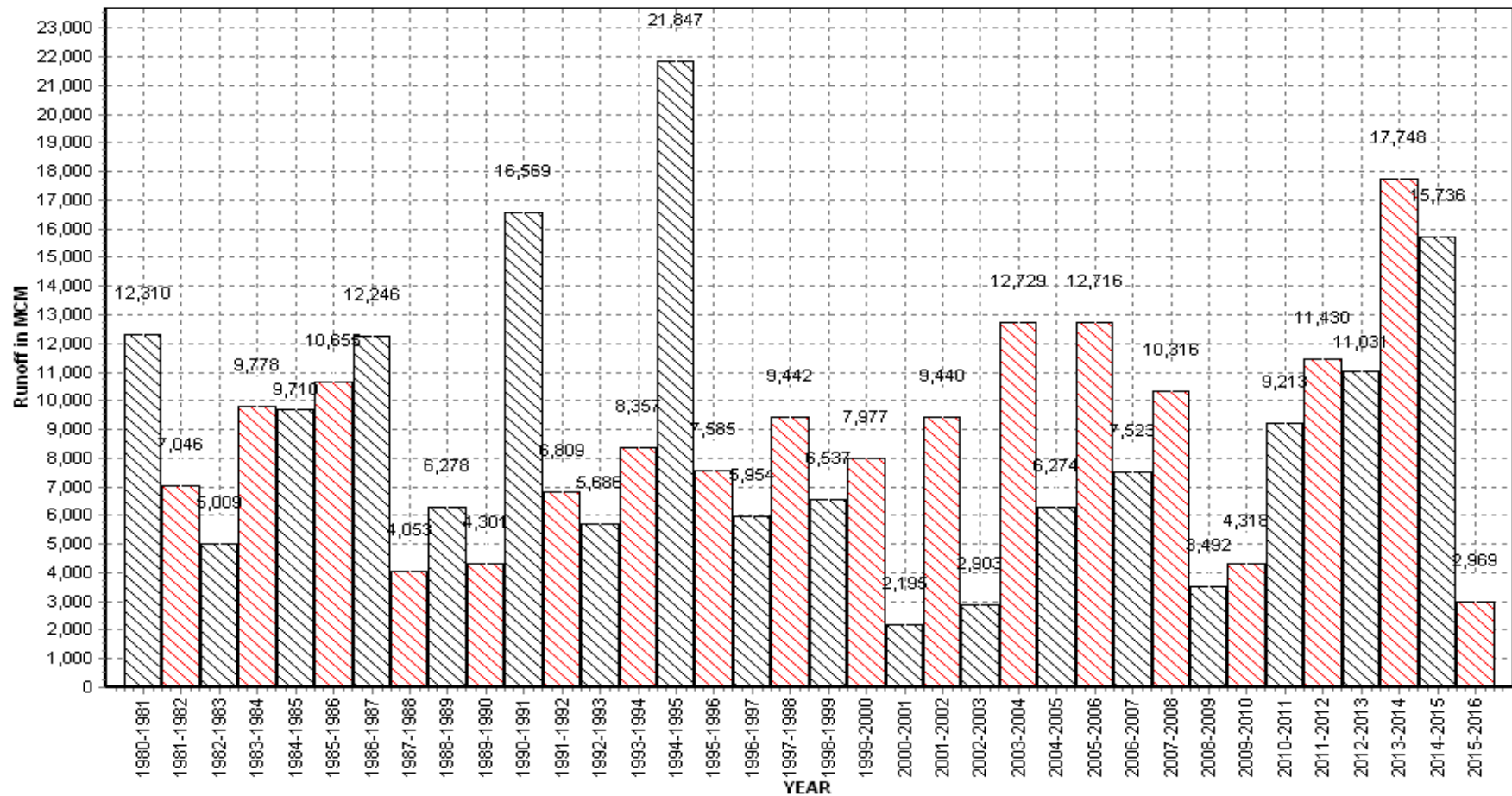
Annual Runoff Values for the period: 1980 - 2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

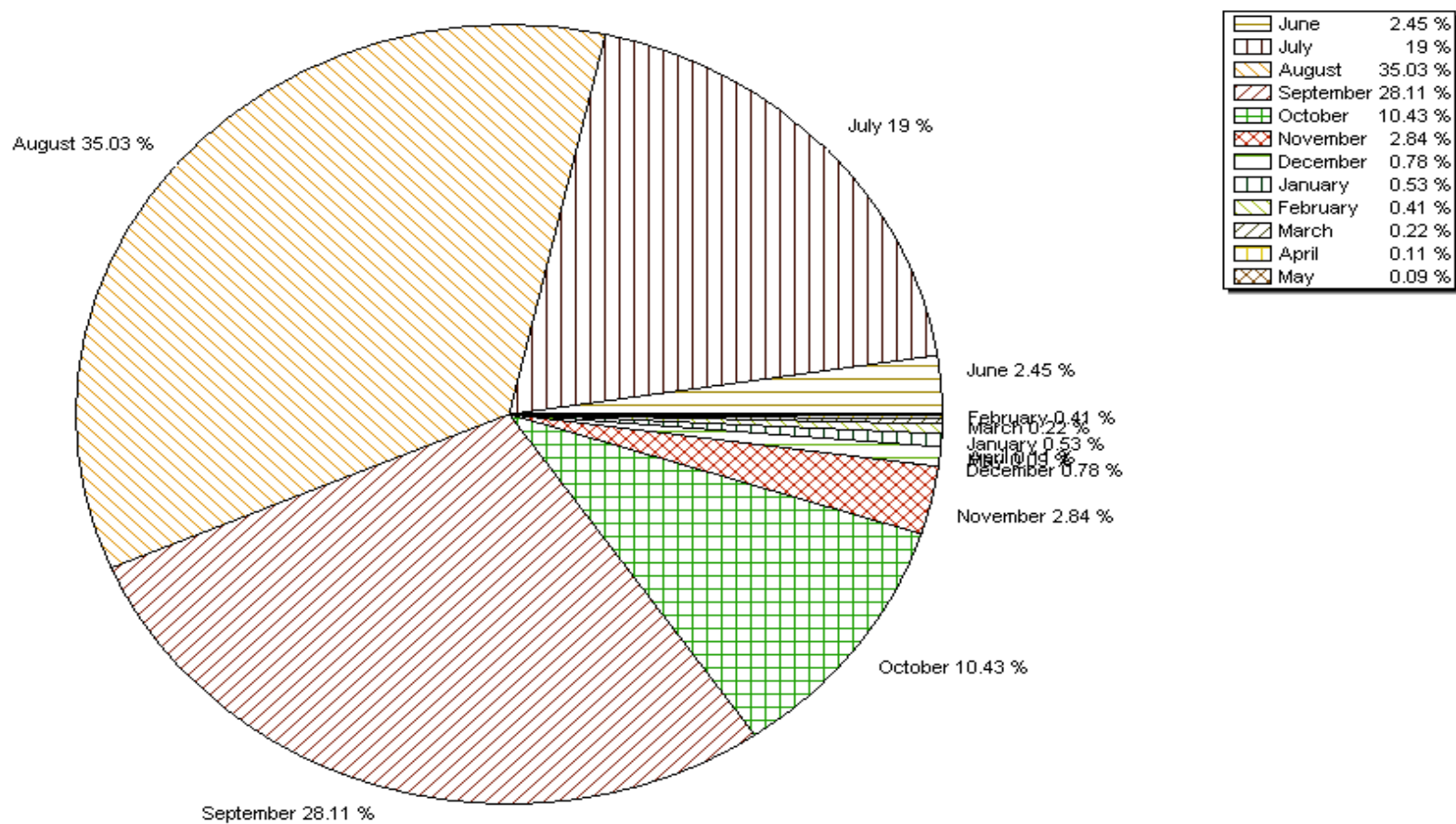


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1980-2015

Station Name : Jondhra (EMP00A4)
Local River : Seonath

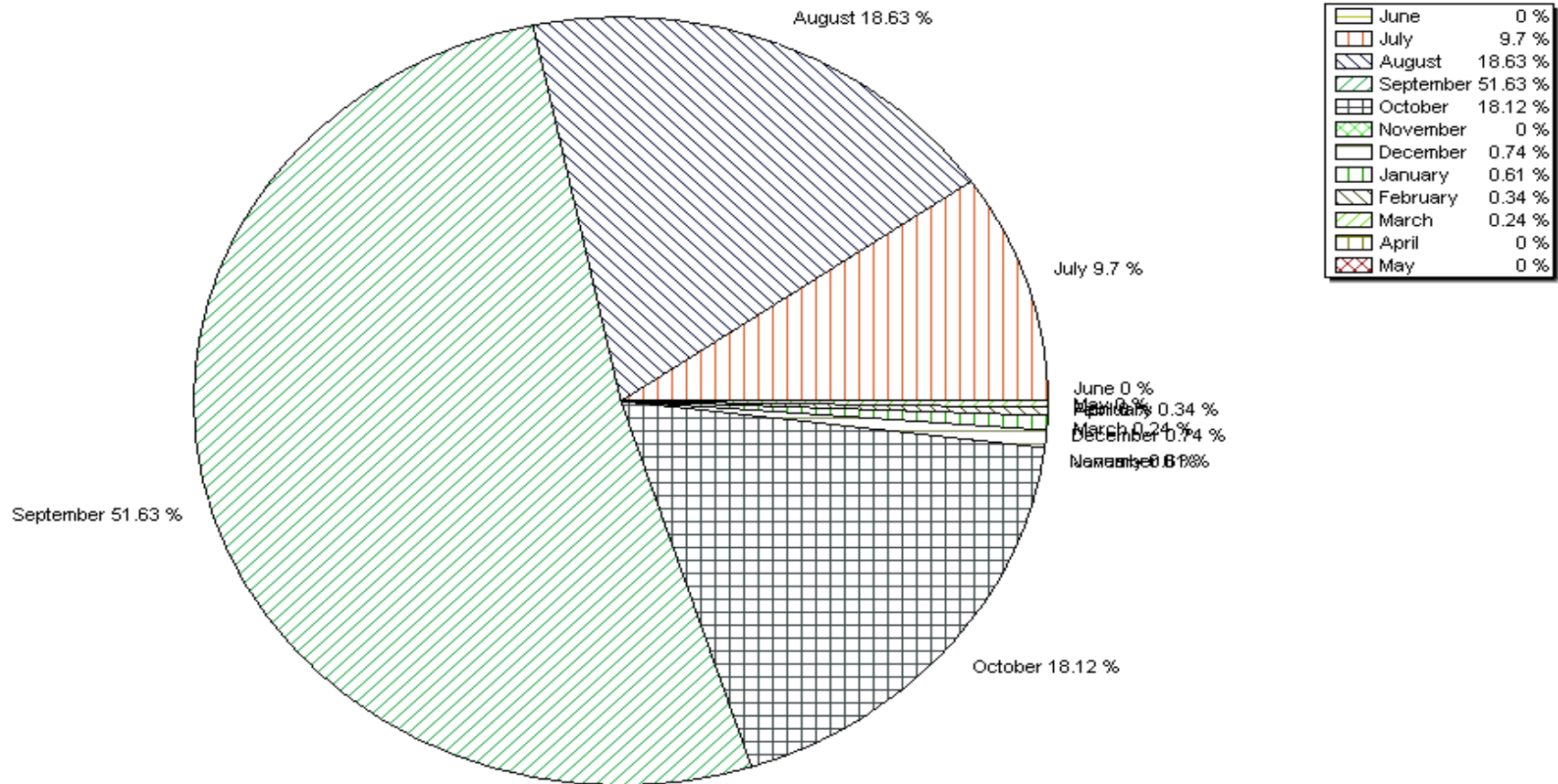
Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



Monthly Runoff for the Year : 2015-2016

Station Name : Jondhra (EMP00A4)
Local River : Seonath

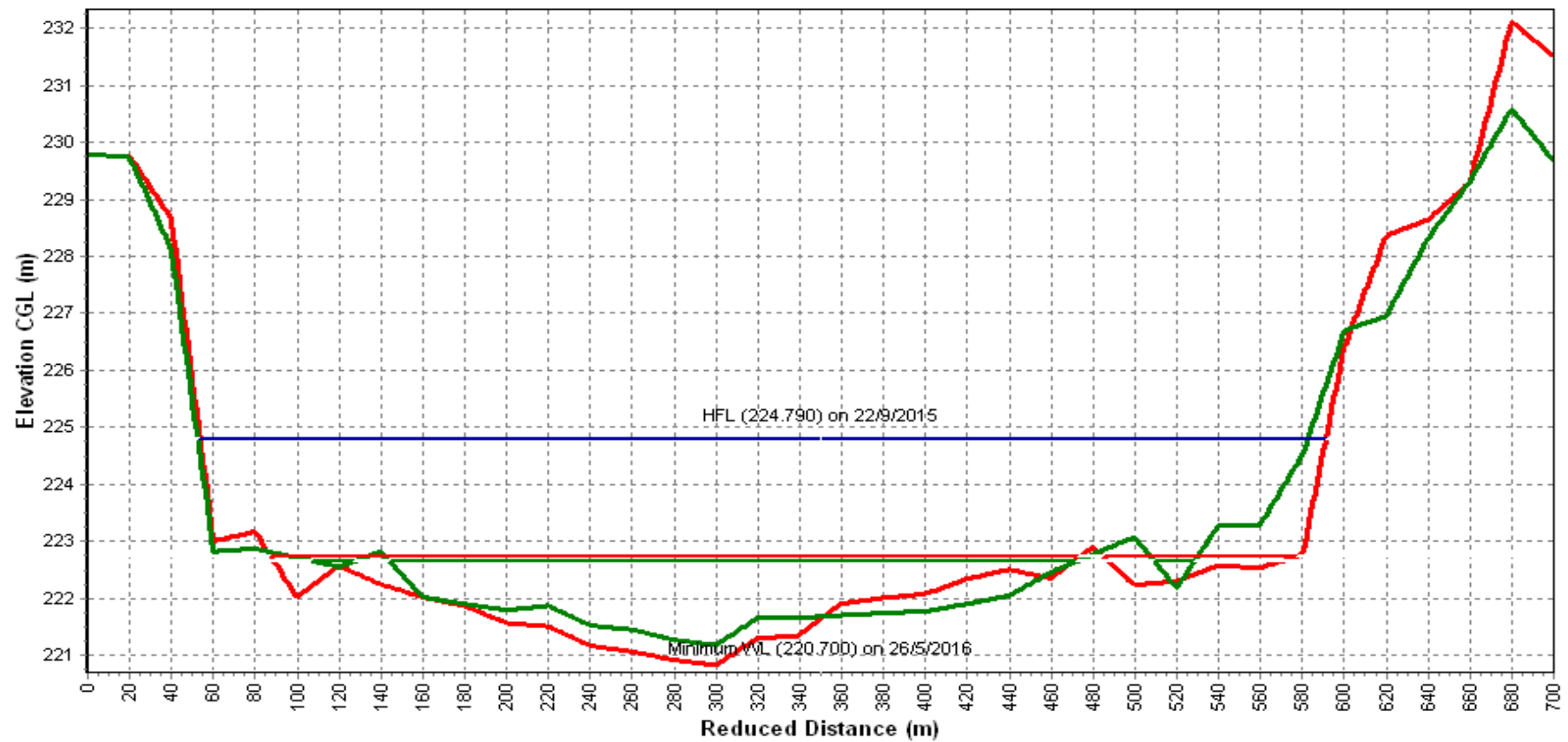
Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Jondhra (EMP00A4)
Local River : Seonath

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



Pre-Monsoon	Post-Monsoon	Pre-Monsoon WL (222.730)
Post-Monsoon WL (222.650)	HFL (224.790) on 22/9/2015	Minimum WL (220.700) on 26/5/2016

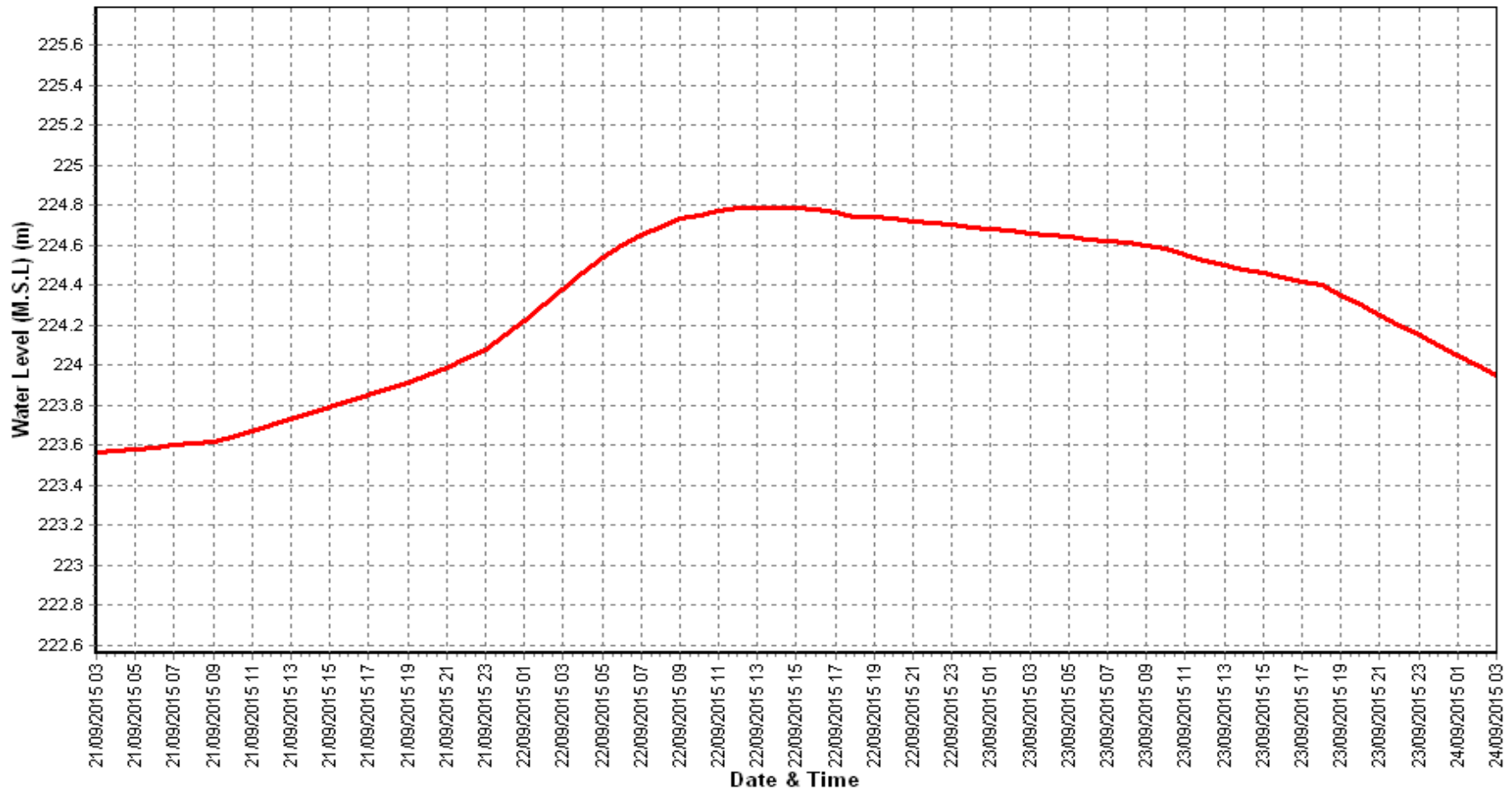
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



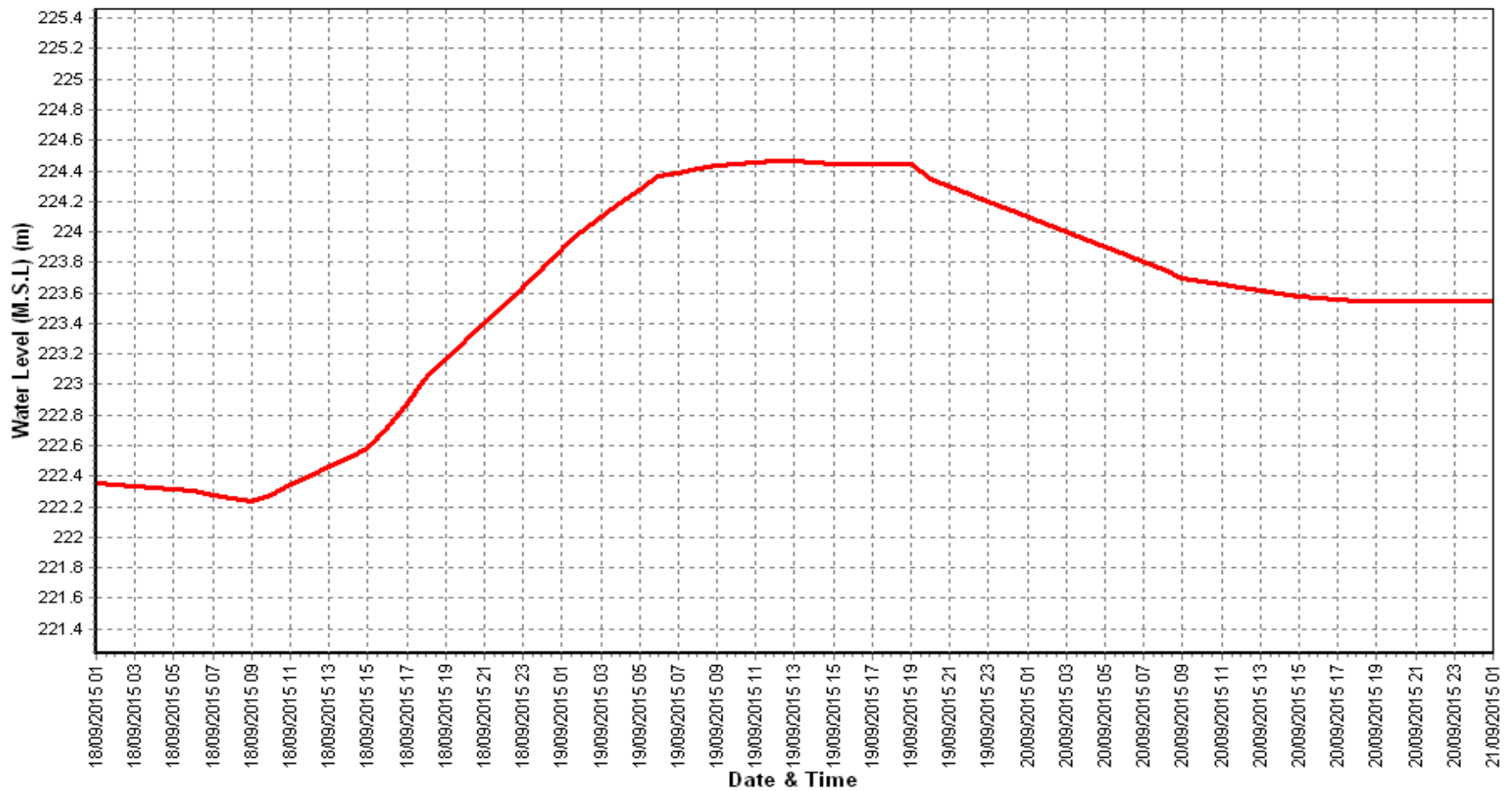
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



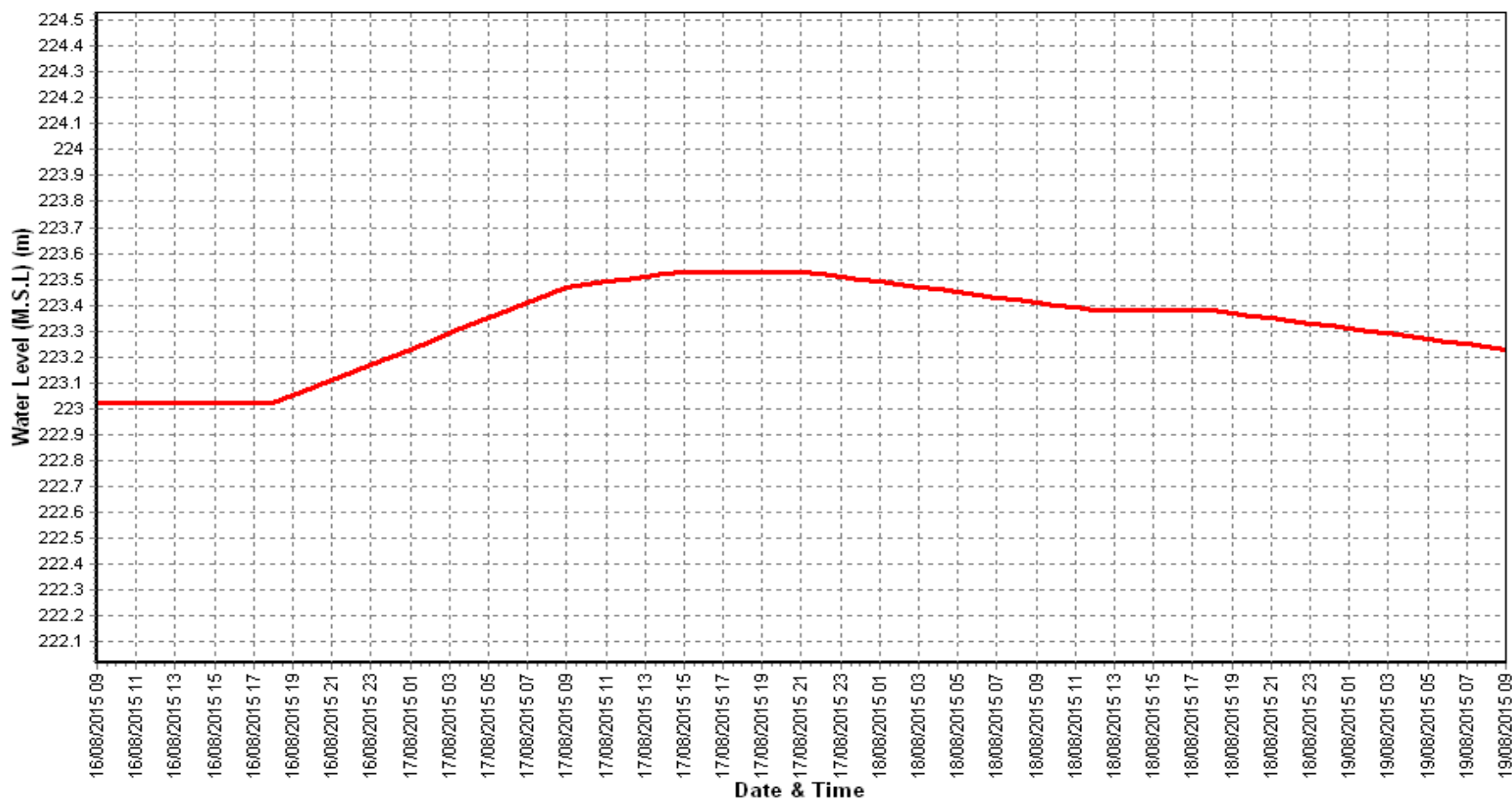
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

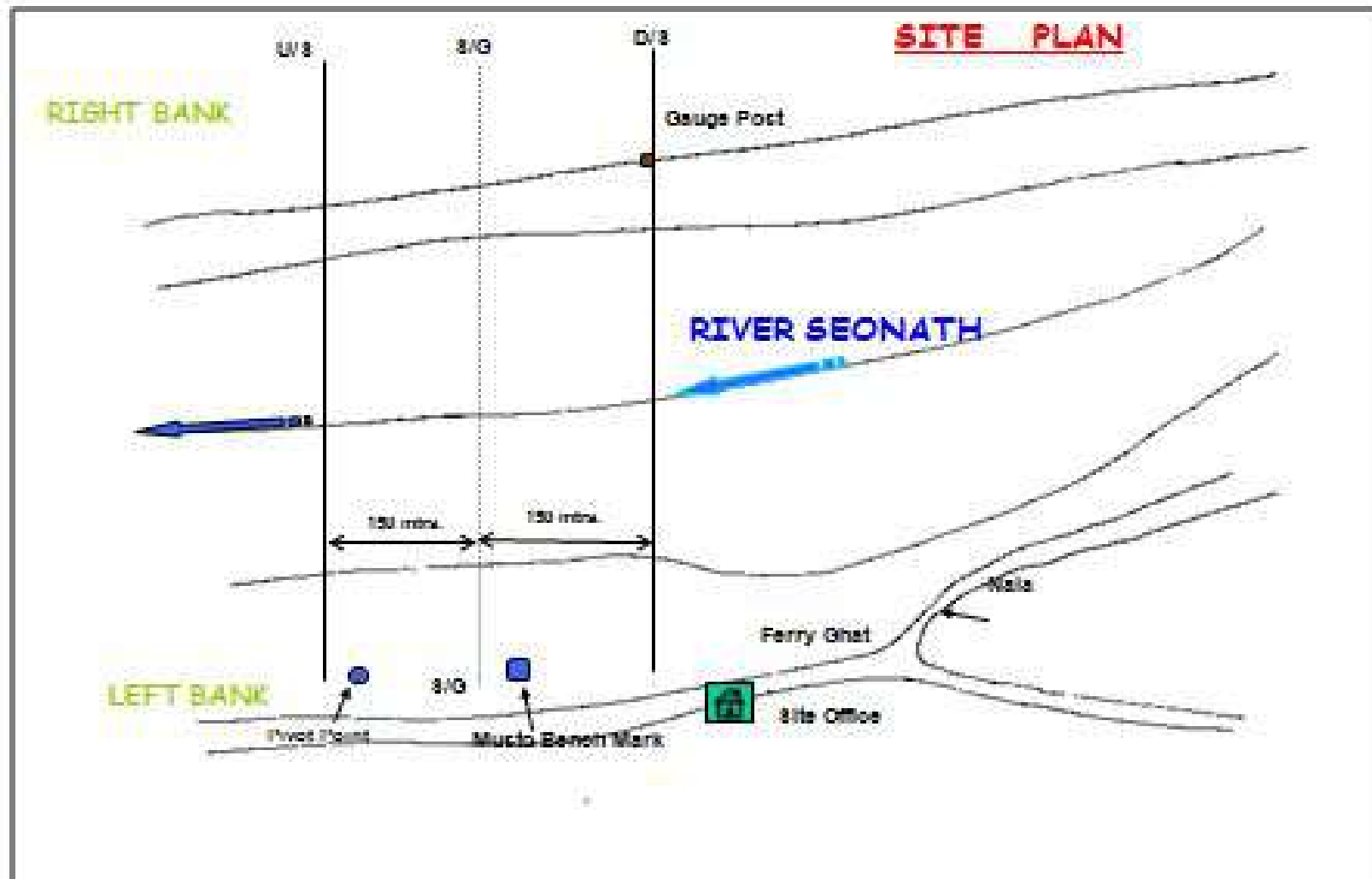
Station Name : Jondhra (EMP00A4)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	33.41	0.000	0.000	1.170	1.170	3377
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	32.00	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	49.94	0.000	0.000	1.670	1.670	7205
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	56.04	0.000	0.000	0.021	0.021	103
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	225.5	0.000	0.000	0.110	0.110	2144
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	447.9	0.000	0.000	0.010	0.010	387
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	297.7	0.000	0.000	0.880	0.880	22631
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	248.7	0.000	0.000	2.370	2.370	50933
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	20.00	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	62.05	0.000	0.000	2.360	2.360	12653
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	59.95	0.000	0.000	2.680	2.680	13881
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	73.89	0.000	0.000	2.570	2.570	16408
13	0.000	0.000	0.000	0.000	0.000	0	212.4	0.000	0.000	0.550	0.550	10093	100.2	0.000	0.000	2.270	2.270	19649
14	0.000	0.000	0.000	0.000	0.000	0	190.5	0.000	0.000	0.620	0.620	10202	225.5	0.000	0.000	2.490	2.490	48520
15	0.000	0.000	0.000	0.000	0.000	0	147.9	0.000	0.000	0.470	0.470	6006	447.0	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	119.6	0.000	0.000	0.200	0.200	2067	446.0	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	56.72	0.000	0.000	0.400	0.400	1960	527.2	0.000	0.000	2.450	2.450	111592
18	0.000	0.000	0.000	0.000	0.000	0	50.00	0.000	0.000	0.000	0.000	0	512.1	0.000	0.000	2.320	2.320	102640
19	0.000	0.000	0.000	0.000	0.000	0	40.00	0.000	0.000	0.000	0.000	0	451.7	0.000	0.000	2.350	2.350	91706
20	0.000	0.000	0.000	0.000	0.000	0	49.79	0.000	0.000	0.230	0.230	989	382.1	0.000	0.000	2.340	2.340	77246
21	0.000	0.000	0.000	0.000	0.000	0	61.72	0.000	0.000	0.120	0.120	640	326.8	0.000	0.000	2.270	2.270	64099
22	0.000	0.000	0.000	0.000	0.000	0	68.45	0.000	0.000	0.280	0.280	1656	277.8	0.000	0.000	2.220	2.220	53276
23	0.000	0.000	0.000	0.000	0.000	0	61.43	0.000	0.000	1.210	1.210	6422	150.0	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	226.3	0.000	0.000	0.700	0.700	13686	102.9	0.000	0.000	2.290	2.290	20363
25	0.000	0.000	0.000	0.000	0.000	0	555.7	0.000	0.000	1.230	1.230	59055	98.47	0.000	0.000	2.270	2.270	19313
26	0.000	0.000	0.000	0.000	0.000	0	442.0	0.000	0.000	0.000	0.000	0	92.92	0.000	0.000	2.260	2.260	18144
27	0.000	0.000	0.000	0.000	0.000	0	421.7	0.000	0.000	1.092	1.092	39790	96.59	0.000	0.000	2.210	2.210	18444
28	0.000	0.000	0.000	0.000	0.000	0	249.5	0.000	0.000	0.820	0.820	17674	94.48	0.000	0.000	2.200	2.200	17960
29	0.000	0.000	0.000	0.000	0.000	0	191.5	0.000	0.000	0.871	0.871	14412	93.33	0.000	0.000	2.330	2.330	18788
30	0.000	0.000	0.000	0.000	0.000	0	115.1	0.000	0.000	0.792	0.792	7874	90.00	0.000	0.000	0.000	0.000	0
31							68.42	0.000	0.000	0.631	0.631	3730	281.5	0.000	0.000	2.320	2.320	56435
<u>Ten Daily Mean</u>																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	147.3	0.000	0.000	0.859	0.859	9943
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	86.69	0.000	0.000	0.247	0.247	3132	322.6	0.000	0.000	1.947	1.947	48164
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	223.8	0.000	0.000	0.704	0.704	14995	155.0	0.000	0.000	1.852	1.852	26075
<u>Monthly</u>																		
Total						0						196258						867897

Annual Sediment Load (Metric Tonnes) : 1064156

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	378.9	0.000	0.000	0.000	0.000	0	418.4	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	504.0	0.000	0.000	0.000	0.000	0	150.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	504.3	0.000	0.000	0.000	0.000	0	232.7	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	490.7	0.000	0.000	0.000	0.000	0	130.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	447.2	0.000	0.000	0.000	0.000	0	236.7	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	608.0	0.000	0.000	0.000	0.000	0	219.4	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	285.9	0.000	0.000	0.000	0.000	0	201.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	139.6	0.000	0.000	0.000	0.000	0	192.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	105.4	0.000	0.000	0.000	0.000	0	172.8	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	124.9	0.000	0.000	0.000	0.000	0	152.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	101.3	0.000	0.000	0.000	0.000	0	120.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	110.1	0.000	0.000	0.000	0.000	0	106.6	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	80.00	0.000	0.000	0.000	0.000	0	132.4	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	108.1	0.000	0.000	0.000	0.000	0	221.8	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	97.88	0.000	0.000	0.000	0.000	0	252.2	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	91.09	0.000	0.000	0.000	0.000	0	253.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	145.0	0.000	0.000	0.000	0.000	0	254.2	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	156.4	0.000	0.000	0.000	0.000	0	250.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	1822	0.000	0.000	0.000	0.000	0	247.6	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	925.0	0.000	0.000	0.000	0.000	0	259.1	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	1239	0.000	0.000	0.000	0.000	0	244.3	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	2083	0.000	0.000	0.000	0.000	0	255.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	1958	0.000	0.000	0.000	0.000	0	227.6	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	1358	0.000	0.000	0.000	0.000	0	210.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	632.0	0.000	0.000	0.000	0.000	0	170.0	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	930.0	0.000	0.000	0.000	0.000	0	168.9	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	485.0	0.000	0.000	0.000	0.000	0	184.4	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	648.7	0.000	0.000	0.000	0.000	0	139.3	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	609.9	0.000	0.000	0.000	0.000	0	123.4	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	572.2	0.000	0.000	0.000	0.000	0	142.3	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31							165.5	0.000	0.000	0.000	0.000	0						
<u>Ten Daily Mean</u>																		
Ten Daily I	358.9	0.000	0.000	0.000	0.000	0	210.5	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	363.7	0.000	0.000	0.000	0.000	0	209.7	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	1052	0.000	0.000	0.000	0.000	0	184.6	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 1064156

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	32.63	0.000	0.000	0.000	0.000	0	5.500	0.000	0.000	0.000	0.000	0	6.229	0.000	0.000	0.000	0.000	0
2	33.27	0.000	0.000	0.000	0.000	0	4.950	0.000	0.000	0.000	0.000	0	6.342	0.000	0.000	0.000	0.000	0
3	32.22	0.000	0.000	0.000	0.000	0	5.000	0.000	0.000	0.000	0.000	0	5.946	0.000	0.000	0.000	0.000	0
4	30.50	0.000	0.000	0.000	0.000	0	2.530	0.000	0.000	0.000	0.000	0	5.187	0.000	0.000	0.000	0.000	0
5	30.05	0.000	0.000	0.000	0.000	0	8.173	0.000	0.000	0.000	0.000	0	4.798	0.000	0.000	0.000	0.000	0
6	25.00	0.000	0.000	0.000	0.000	0	7.987	0.000	0.000	0.000	0.000	0	4.647	0.000	0.000	0.000	0.000	0
7	30.37	0.000	0.000	0.000	0.000	0	8.230	0.000	0.000	0.000	0.000	0	2.000	0.000	0.000	0.000	0.000	0
8	2.823	0.000	0.000	0.000	0.000	0	8.006	0.000	0.000	0.000	0.000	0	5.246	0.000	0.000	0.000	0.000	0
9	3.500	0.000	0.000	0.000	0.000	0	8.115	0.000	0.000	0.000	0.000	0	5.191	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	8.000	0.000	0.000	0.000	0.000	0	4.888	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	6.917	0.000	0.000	0.000	0.000	0	4.874	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	7.253	0.000	0.000	0.000	0.000	0	1.080	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	7.129	0.000	0.000	0.000	0.000	0	0.924	0.000	0.000	0.000	0.000	0
14	2.897	0.000	0.000	0.000	0.000	0	6.640	0.000	0.000	0.000	0.000	0	4.200	0.000	0.000	0.000	0.000	0
15	2.423	0.000	0.000	0.000	0.000	0	6.342	0.000	0.000	0.000	0.000	0	0.914	0.000	0.000	0.000	0.000	0
16	2.444	0.000	0.000	0.000	0.000	0	6.154	0.000	0.000	0.000	0.000	0	4.809	0.000	0.000	0.000	0.000	0
17	2.542	0.000	0.000	0.000	0.000	0	6.100	0.000	0.000	0.000	0.000	0	4.197	0.000	0.000	0.000	0.000	0
18	2.347	0.000	0.000	0.000	0.000	0	5.634	0.000	0.000	0.000	0.000	0	3.396	0.000	0.000	0.000	0.000	0
19	2.137	0.000	0.000	0.000	0.000	0	5.630	0.000	0.000	0.000	0.000	0	3.792	0.000	0.000	0.000	0.000	0
20	2.130	0.000	0.000	0.000	0.000	0	7.432	0.000	0.000	0.000	0.000	0	4.084	0.000	0.000	0.000	0.000	0
21	2.417	0.000	0.000	0.000	0.000	0	7.539	0.000	0.000	0.000	0.000	0	6.000	0.000	0.000	0.000	0.000	0
22	2.440	0.000	0.000	0.000	0.000	0	6.827	0.000	0.000	0.000	0.000	0	3.660	0.000	0.000	0.000	0.000	0
23	2.442	0.000	0.000	0.000	0.000	0	6.272	0.000	0.000	0.000	0.000	0	3.568	0.000	0.000	0.000	0.000	0
24	2.440	0.000	0.000	0.000	0.000	0	6.650	0.000	0.000	0.000	0.000	0	3.528	0.000	0.000	0.000	0.000	0
25	2.435	0.000	0.000	0.000	0.000	0	6.679	0.000	0.000	0.000	0.000	0	3.562	0.000	0.000	0.000	0.000	0
26	2.270	0.000	0.000	0.000	0.000	0	6.500	0.000	0.000	0.000	0.000	0	3.497	0.000	0.000	0.000	0.000	0
27	2.430	0.000	0.000	0.000	0.000	0	6.098	0.000	0.000	0.000	0.000	0	3.453	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	5.495	0.000	0.000	0.000	0.000	0	6.100	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	6.436	0.000	0.000	0.000	0.000	0	5.026	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	6.351	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	6.345	0.000	0.000	0.000	0.000	0						
<u>Ten Daily Mean</u>																		
Ten Daily I	22.04	0.000	0.000	0.000	0.000	0	6.649	0.000	0.000	0.000	0.000	0	5.047	0.000	0.000	0.000	0.000	0
Ten Daily II	1.692	0.000	0.000	0.000	0.000	0	6.523	0.000	0.000	0.000	0.000	0	3.227	0.000	0.000	0.000	0.000	0
Ten Daily III	1.534	0.000	0.000	0.000	0.000	0	6.472	0.000	0.000	0.000	0.000	0	4.266	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						0						0						0

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	4.019	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	4.179	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	3.079	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	3.417	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	3.452	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	3.700	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	3.650	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	3.522	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	3.607	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	3.636	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	3.024	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	3.009	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	3.200	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	2.885	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	2.476	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	2.247	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	1.906	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	1.666	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	3.009	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	3.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	1.460	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	1.456	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	1.364	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	2.100	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	1.500	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	1.153	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	1.200	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.937	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.855	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.657	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.243	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
<u>Ten Daily Mean</u>																		
Ten Daily I	3.626	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	2.642	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	1.175	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						0						0						0

Annual Sediment Load for period : 1981-2016

Station Name : Jondhra (EMP00A4)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : MMSD I,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1981-1982	2701888	2011	2703899	7046
1982-1983	3658286	5202	3663488	5009
1983-1984	5135428	1308	5136736	9778
1984-1985	8157193	1735	8158928	9710
1985-1986	5425689	9220	5434909	10655
1986-1987	8187572	33010	8220582	12246
1987-1988	2655124	1929	2657052	4053
1988-1989	8515717	0	8515717	6278
1989-1990	1237887	16	1237903	4301
1990-1991	5108016	3258	5111274	16569
1991-1992	1021262	1232	1022494	6809
1992-1993	3050087	284	3050371	5686
1993-1994	3122400	1977	3124377	8357
1994-1995	13426735	2620	13429354	21847
1995-1996	2552604	1193	2553797	7585
1996-1997	2390221	26	2390248	5954
1997-1998	3805375	13454	3818829	9442
1998-1999	2054269	1364	2055633	6537
1999-2000	2213743	256	2213999	7977
2000-2001	553284	143	553428	2195
2001-2002	4547058	343	4547401	9440
2002-2003	1119259	124	1119384	2903
2003-2004	3093789	2013	3095803	12729
2004-2005	3093620	2614	3096234	6274
2005-2006	5875061	172	5875233	12716
2006-2007	4143875	366	4144241	7523
2007-2008	4596384	255	4596639	10316
2008-2009	2940115	1588	2941703	3492
2009-2010	1732725	402	1733127	4318
2010-2011	4725718	0	4725718	9213
2011-2012	4353170	0	4353170	11430
2012-2013	1273982	0	1273982	11031
2013-2014	4531292	0	4531292	17748
2014-2015	10841746	0	10841746	15736
2015-2016	1064156	0	1064156	2969

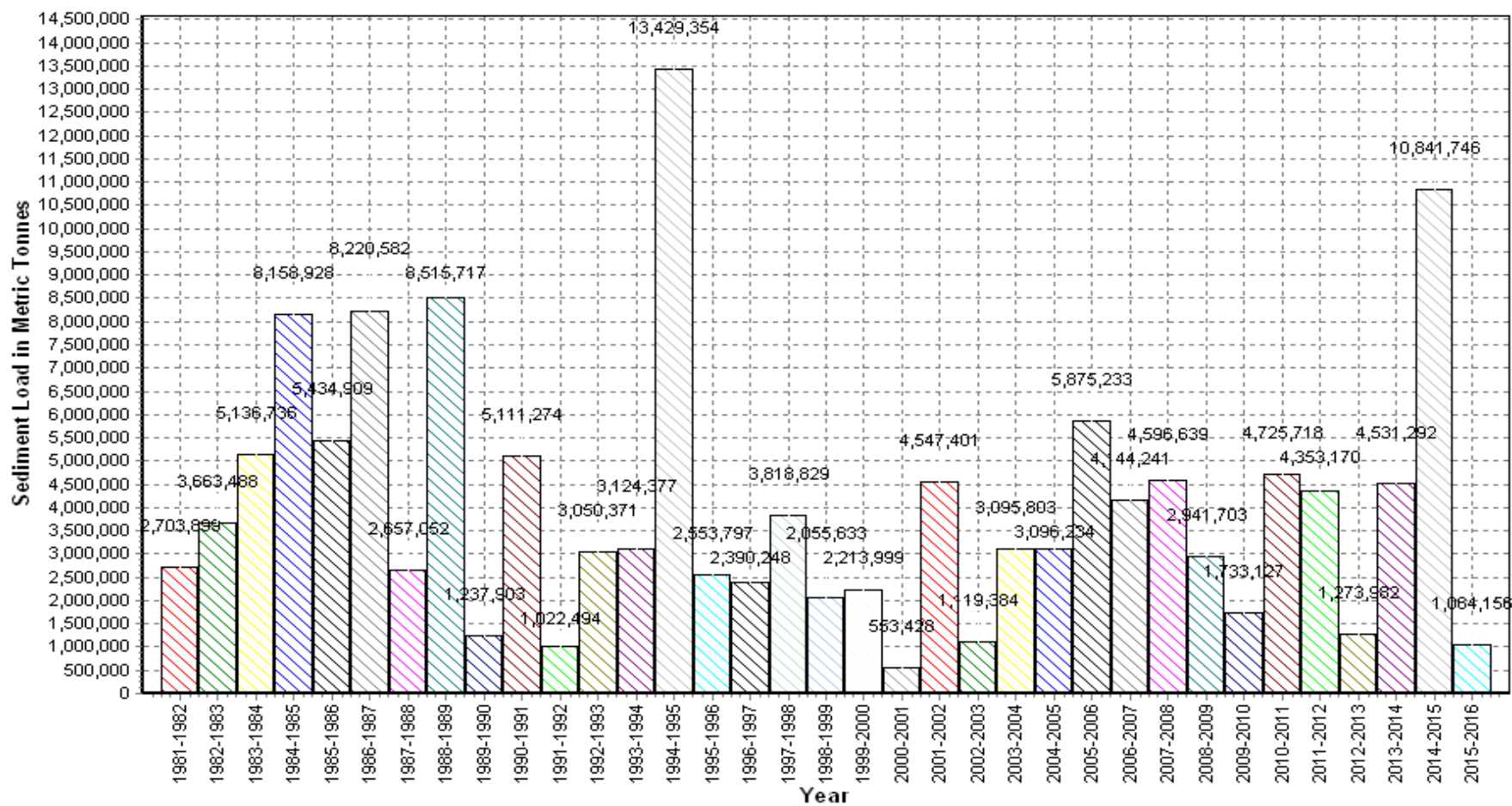
Annual Sediment Load for the period: 1981-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

Division : MD,CWC,Burla

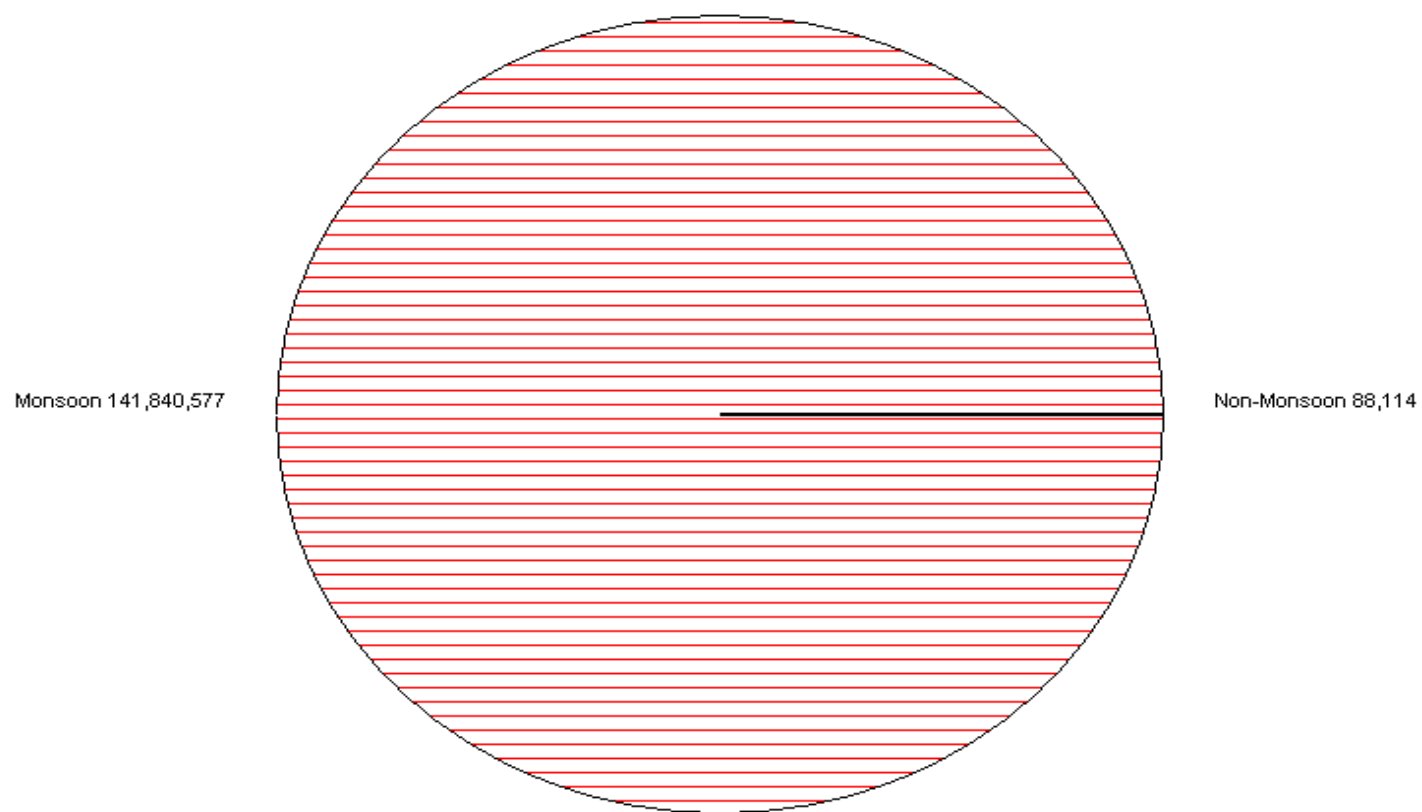
Sub-Division : MMSD I,CWC,Raipur



Seasonal Sediment Load for the period : 1981-2015

Station Name : Jondhra (EMP00A4)
Local River : Seonath

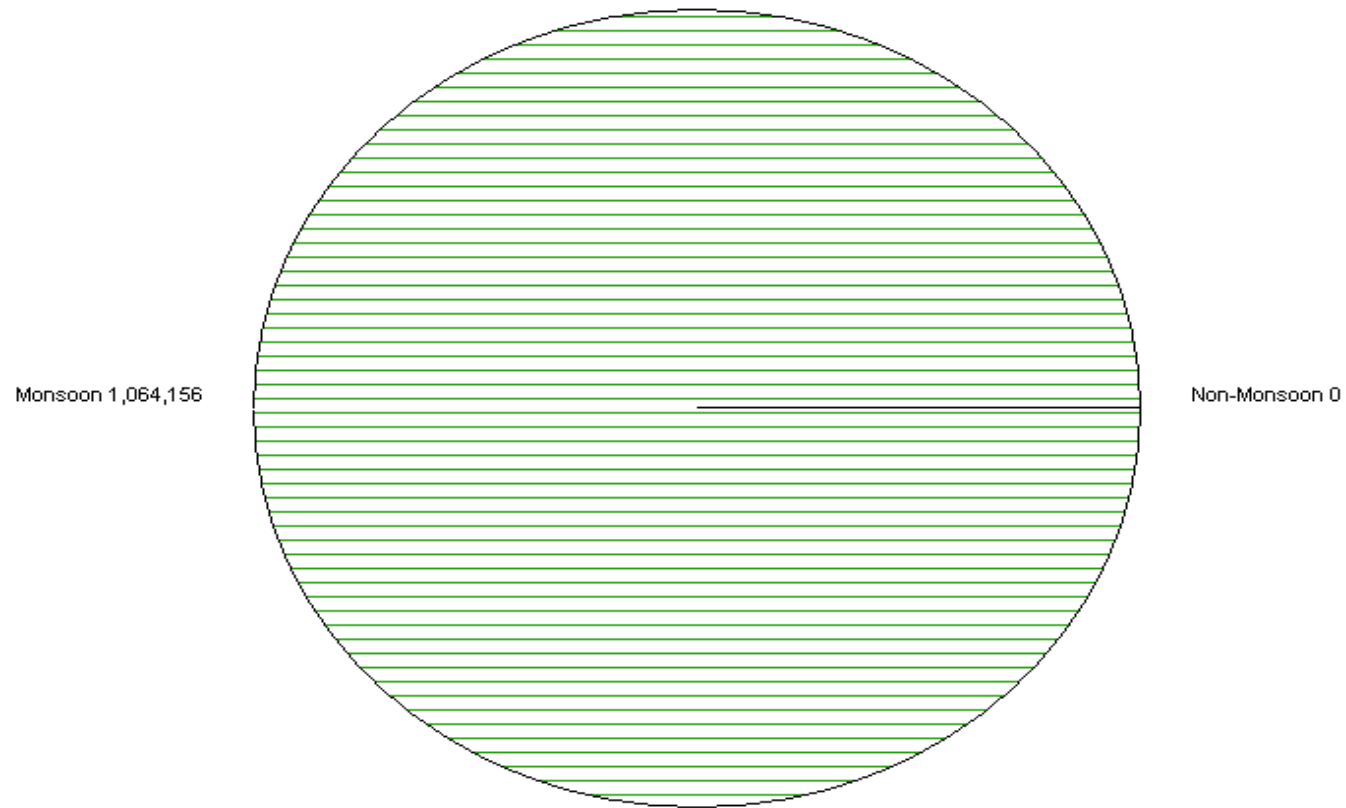
Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



Seasonal Sediment Load for the Year: 2015-2016

Station Name : Jondhra (EMP00A4)
Local River : Seonath

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	6/1/2015 A	7/1/2015 A	8/1/2015 A	9/1/2015 A	10/1/2015 A	11/2/2015 A	12/1/2015 A	1/1/2016 A	2/1/2016 A	3/1/2016 A	4/1/2016 A	5/2/2016 A
	PHYSICAL												
1	Q (cumec)	0.000	0.000	33.41	378.9	418.4	0.000	32.63	5.500	6.229	4.019	0.000	0.000
2	Colour_Cod (-)			Clear	Brown	Clear	Clear			Clear	Clear	Clear	
3	EC_GEN (µmho/cm)			262	307	248	324			350	370	498	
4	Odour_Code (-)			odour free	odour free	odour free	odour free			odour free	odour free	odour free	
5	pH_GEN (pH units)			7.9	8.1	8.1	8.5			8.9	9.0	9.0	
6	Temp (deg C)			29.0	29.5	29.0	24.0			18.5	26.0	28.0	
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)			12.0	11.6	8.0	8.0			0.0	6.1	0.0	
2	ALK-TOT (mgCaCO3/L)			241	256	252	132			336	296	198	
3	Ca (mg/L)			37	35	34	30			29	30	30	
4	Cl (mg/L)			22.0	27.0	19.0	11.0			36.0	37.0	49.0	
5	CO3 (mg/L)			14.4	14.0	9.6	9.6			0.0	7.3	0.0	
6	HCO3 (mg/L)			132	142	144	71			205	173	121	
7	K (mg/L)			5.0	8.1	12.7	4.4			5.3	12.3	8.7	
8	Mg (mg/L)			13.6	17.5	12.6	12.6			12.6	15.6	15.6	
9	Na (mg/L)			12.0	21.7	23.3	17.4			29.2	38.8	32.1	
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)			0.1	1.5	0.6	1.4			0.3	0.5	1.2	
2	DO (mg/L)			5.3	6.8	7.1	9.2			10.3	7.5	5.6	
3	DO_SAT% (%)			69	88	92	109			109	92	72	
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)			93	88	84	76			72	76	76	
2	HAR_Total (mgCaCO3/L)			149	161	137	129			125	141	141	
3	Na% (%)			14	22	25	22			33	35	32	
4	RSC (-)			0.0	0.0	0.0	0.0			0.9	0.3	0.0	
5	SAR (-)			0.4	0.7	0.9	0.7			1.1	1.4	1.2	
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Jondhra (EMP00A4)

Division : MD,CWC,Burla

Local River : Seonath

Sub-Division : MMSD I,CWC,Raipur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	2083	0.000	93.88
2	EC_GEN (µmho/cm)	7	498	248	337
3	pH_GEN (pH units)	7	9.0	7.9	8.5
4	Temp (deg C)	7	29.5	18.5	26.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	7	12.0	0.0	6.5
2	ALK-TOT (mgCaCO3/L)	7	336	132	244
3	Ca (mg/L)	7	37	29	32
4	Cl (mg/L)	7	49.0	11.0	28.7
5	CO3 (mg/L)	7	14.4	0.0	7.8
6	HCO3 (mg/L)	7	205	71	141
7	K (mg/L)	7	12.7	4.4	8.1
8	Mg (mg/L)	7	17.5	12.6	14.3
9	Na (mg/L)	7	38.8	12.0	24.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	7	1.5	0.1	0.8
2	DO (mg/L)	7	10.3	5.3	7.4
3	DO_SAT% (%)	7	109	69	90
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	7	93	72	81
2	HAR_Total (mgCaCO3/L)	7	161	125	140
3	Na% (%)	7	35	14	26
4	RSC (-)	7	0.9	0.0	0.2
5	SAR (-)	7	1.4	0.4	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	418.9	241.6	1271	373.3	1150	925.3	1779	162.3	133.1	518.5	634.6	688.2	1507	873.0	166.1	30.31	11.85	152.7	39.20	90.31
2	EC_FLD (µmho/cm)	304	236	165	297	261	286	181									428	373	371	505	426
3	EC_GEN (µmho/cm)	304	236	165	297	261	286	180	253	263	245	287	277	241	246	272	428	373	371	505	426
4	pH_FLD (pH units)	7.8	7.9	7.6	8.1	8.0	7.9	7.7	7.6	7.7	7.4	7.4					8.1	8.4	8.1	8.1	7.5
5	pH_GEN (pH units)	7.8	7.9	7.7	8.1	8.0	7.9	7.5	7.6	8.0	7.6	7.6	7.8	8.2	8.0	8.0	8.1	8.4	8.1	8.1	7.5
6	Temp (deg C)	25.7	27.0	30.0	30.8	30.2	25.5	28.0	29.1	29.0	29.7	27.9	29.2	28.9	28.7	29.2	22.0	22.5	22.5	23.3	24.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	2.2	1.6	0.0	0.0	3.0		0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	10.5	3.2	4.2	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	202	134	66	253	153		138	187	183	173	202	185	208	239	249	323	275	308	316	308
3	B (mg/L)					0.09		0.01	0.01	0.00	0.00	0.00	0.00								0.08
4	Ca (mg/L)	20	23	21	37	17		15	17	19	20	24	23	29	35	35	38	33	46	36	33
5	Cl (mg/L)	5.3	8.5	23.0	20.8	37.7		8.0	20.5	12.3	6.2	8.9	11.0	18.8	16.0	22.7	12.2	11.5	20.0	14.5	51.6
6	CO3 (mg/L)	2.7	2.0	0.0	0.0	3.6		0.0	0.0	5.9	0.0	0.0	0.0	0.0	0.0	12.7	3.8	5.1	0.0	0.0	0.0
7	F (mg/L)			4.55		0.18		0.10	0.13	0.19	0.16	0.21	0.21						1.09		0.20
8	Fe (mg/L)					0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0								0.0
9	HCO3 (mg/L)	120	80	40	199	89		84	114	106	105	123	113	127	146	139	193	163	153	192	188
10	K (mg/L)	7.8	6.2			5.4		2.4	2.2	2.7	3.2	3.1	2.2	5.3	5.1	8.6	2.2	5.7		2.3	2.8
11	Mg (mg/L)	5.0	8.1	3.5	21.6	8.6		8.8	8.5	10.5	12.4	13.1	13.3	7.5	11.3	14.6	12.3	10.1	14.2	18.7	19.2
12	Na (mg/L)	8.9	8.8			22.3		15.7	9.0	6.7	11.2	12.5	13.4	10.7	18.3	19.0	7.5	34.7		43.6	32.6
13	NO2+NO3 (mg N/L)	0.57				0.04		0.09	0.50								0.07			0.22	0.05
14	NO2-N (mgN/L)					0.00		0.01	0.02	0.02	0.02	0.03	0.05								0.00
15	NO3-N (mgN/L)					0.04	0.14	0.08	0.48												0.05
16	P-Tot (mgP/L)							0.012	0.030	0.107	0.037	0.037	0.047							0.030	0.011
17	SiO2 (mg/L)					10.6		7.1	22.5	26.1	13.0	17.6	15.5								11.3
18	SO4 (mg/L)	4.1	14.0	11.5	7.2	13.5		13.8	9.6	13.7	16.7	18.0	20.3				6.8	8.2	26.9	28.6	26.1
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	1.2	0.8	0.8	0.8	1.0	0.6	3.4	0.7	1.4	1.4	1.4	0.9	0.8	1.2	0.7	2.2	0.8	0.7	1.0	0.9
2	COD (mg/L)							14.3	72.0	20.0	22.7	29.0	22.7								
3	DO (mg/L)	8.4	8.1	3.9	5.5	4.9	5.5	6.6	4.6	6.4	6.3	6.3	7.6	7.0	6.5	6.4	13.7	8.4	5.6	8.0	8.4
4	DO_SAT% (%)	102	101	53	75	65	67	84	60	83	83	80	99	90	84	83	155	96	84	94	100
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	51	57	56	92	42		37	43	47	49	59	57	72	87	88	95	83	97	89	81
2	HAR_Total (mgCaCO3/L)	72	90	73	180	78		73	78	91	101	113	113	103	134	149	146	125	151	166	161
3	Na% (%)	19	18			32		32	18	13	19	18	20	17	23	20	10	15		37	30
4	RSC (-)	0.3	0.1	0.0	0.0	0.1		0.0	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.4	0.3		0.2	0.1
5	SAR (-)	0.4	0.4			1.0		0.8	0.4	0.3	0.5	0.5	0.5	0.5	0.7	0.7	0.3	0.5		1.5	1.1
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	32.88	47.19	18.01	12.80	0.000	0.000	39.71	199.5	119.3	11.09	2.962	2.664	5.982	4.317	2.350	1.530	3.174	0.127	0.000	0.000
2	EC_FLD (µmho/cm)	337	452									465	525	620	427	405		514			
3	EC_GEN (µmho/cm)	337	436	451	361			396	279	339	337	465	525	620	427	405		495	464		
4	pH_FLD (pH units)	8.2	8.2	7.2	7.6							8.5	8.8	8.1	8.1	8.1		8.2	6.8		
5	pH_GEN (pH units)	8.2	8.2	8.2	8.5			7.8	7.8	8.4	8.7	8.5	8.8	8.1	8.1	8.1		8.3	8.8		
6	Temp (deg C)	23.0	21.4	22.0	23.8			20.0	24.5	21.5	21.3	27.5	28.0	26.5	30.3	32.0		29.7	24.5		
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		2.3	6.0	18.1			0.0	0.0	0.0	4.0	4.1	7.0	0.0	3.3	4.0		4.3	22.1		
2	ALK-TOT (mgCaCO3/L)		295	310	158			247	284	318	234	331	356	601	251	272		319	302		
3	B (mg/L)		0.01	0.00	0.00			0.00								0.07		0.01	0.00		
4	Ca (mg/L)		30	32	28			34	37	42	30	40	43	58	24	31		30	35		
5	Cl (mg/L)		40.7	46.2	12.6			13.5	20.0	28.0	23.5	9.4	4.0	38.0	8.1	40.0		60.7	36.5		
6	CO3 (mg/L)		2.8	7.2	21.8			0.0	0.0	0.0	4.8	4.9	8.4	0.0	3.9	4.8		5.2	26.6		
7	F (mg/L)		0.23	0.17	0.15			0.30							0.22	0.05		0.17	0.15		
8	Fe (mg/L)	0.0	0.0	0.1	0.0			0.0								0.1	0.0	0.0	0.0		
9	HCO3 (mg/L)		177	182	74			151	173	194	138	197	208	366	149	161		189	157		
10	K (mg/L)		4.1	3.3	3.5			2.4	24.5	4.2	4.8	4.5			23.9	4.4		6.4	6.0		
11	Mg (mg/L)		19.2	19.1	21.4			18.4	8.8	18.5	12.6	14.0	15.3	16.9	11.5	12.8		18.2	20.4		
12	Na (mg/L)		23.8	31.8	13.5			35.8	20.4	24.0	23.3	7.6			41.7	40.2		53.8	36.4		
13	NO2+NO3 (mg N/L)		0.11	0.51								0.82			0.26	0.09		0.42	0.33		
14	NO2-N (mgN/L)		0.01	0.02	0.03			0.03							0.01			0.02	0.03		
15	NO3-N (mgN/L)	0.05	0.10	0.49											0.08			0.41	0.30		
16	P-Tot (mgP/L)		0.025	0.092	0.027			0.035							0.020	0.066		0.040	0.040		
17	SiO2 (mg/L)		18.0	21.5	24.2			14.3								10.3		18.5	28.4		
18	SO4 (mg/L)		31.8	37.3	28.3			18.2				7.1		24.1	16.9	23.7		24.7	27.2		
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.2	1.0	0.5	1.7			1.4	0.5	1.3	0.8	2.1	1.4	1.1	1.0	1.4		1.4	2.4		
2	COD (mg/L)		23.0	37.0	46.7			24.0										32.0	64.0		
3	DO (mg/L)	7.2	9.5	8.7	9.9			8.2	8.3	9.6	9.8	9.8	9.2	7.5	6.0	6.5		9.2	6.2		
4	DO_SAT% (%)	84	106	99	117			89	99	109	109	124	117	90	77	90		120	74		
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		75	81	70			85	92	106	74	99	109	144	61	77		76	86		
2	HAR_Total (mgCaCO3/L)		155	160	159			162	129	183	127	157	172	214	108	130		151	171		
3	Na% (%)		24	30	15			31	22	21	27	9			41	36		43	31		
4	RSC (-)		0.1	0.1	0.0			0.0	0.3	0.0	0.4	0.3	0.3	2.4	0.5	0.3		0.5	0.1		
5	SAR (-)		0.8	1.1	0.5			1.2	0.8	0.8	0.9	0.3			1.8	1.4		1.9	1.2		
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Jondhra (EMP00A4)

Local River : Seonath

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	0.000	0.000	0.000	4.160	1.340
2	EC_FLD (μmho/cm)					
3	EC_GEN (μmho/cm)					434
4	pH_FLD (pH units)					
5	pH_GEN (pH units)					9.0
6	Temp (deg C)					27.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)					3.0
2	ALK-TOT (mgCaCO3/L)					247
3	B (mg/L)					
4	Ca (mg/L)					30
5	Cl (mg/L)					43.0
6	CO3 (mg/L)					3.7
7	F (mg/L)					
8	Fe (mg/L)					
9	HCO3 (mg/L)					147
10	K (mg/L)					10.5
11	Mg (mg/L)					15.6
12	Na (mg/L)					35.5
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	P-Tot (mgP/L)					
17	SiO2 (mg/L)					
18	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)					0.9
2	COD (mg/L)					
3	DO (mg/L)					6.5
4	DO_SAT% (%)					82
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)					76
2	HAR_Total (mgCaCO3/L)					141
3	Na% (%)					33
4	RSC (-)					0.1
5	SAR (-)					1.3
	PESTICIDES					

JONK SUB-BASIN

SITE RAMPUR

HISTORY SHEET

Water Year : 2015-2016

Site : Rampur

Code : EMN00B3

State : Chhattisgarh

District : Baloda Bazar

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Jonk

Sub Tributary :

Sub-Sub Tributary :

Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Drainage Area : 2920 Sq. Km.

Bank :

Latitude : 21°39'57"

Longitude : 82°31'30"

Zero of Gauge (m) : 219 (m.s.l)

9/1/1971 - 12/31/2010

Opening Date

Closing Date

Gauge : 1/29/1971

Discharge :

Sediment : 7/5/1976

Water Quality : 1/15/1972

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1971-1972	1290	223.290	7/28/1971	0.001	220.115	5/31/1972
1972-1973	1397	224.660	8/14/1972	0.100	220.265	1/28/1973
1973-1974	3320	227.195	7/15/1973	0.006	220.210	5/31/1974
1974-1975	356.0	225.000	8/18/1974	0.003	220.255	4/24/1975
1975-1976	1341	224.540	8/13/1975	0.002	220.310	5/23/1976
1976-1977	2132	225.145	8/14/1976	0.008	220.400	2/5/1977
1977-1978	1367	224.250	9/13/1977	0.019	220.450	2/19/1978
1978-1979	2472	226.000	8/29/1978	0.010	220.505	2/28/1979
1979-1980	1811	225.260	8/9/1979	0.036	220.360	1/8/1980
1980-1981	3163	226.730	9/19/1980	0.140	220.490	2/17/1981
1981-1982	712.8	223.180	8/22/1981	0.029	220.210	4/20/1982
1982-1983	4100	227.510	8/31/1982	0.003	220.255	6/3/1982
1983-1984	996.7	223.625	8/20/1983	0.024	220.395	6/21/1983
1984-1985	1433	224.965	8/9/1984	0.050	220.315	4/3/1985
1985-1986	1794	225.160	7/17/1985	0.008	220.430	5/27/1986
1986-1987	2063	225.025	8/21/1986	0.001	220.420	6/1/1986
1987-1988	2582	225.800	7/23/1987	0.010	220.255	3/29/1988
1988-1989	90.00	221.400	9/25/1988	0.020	220.160	2/6/1989
1989-1990	364.6	222.555	7/29/1989	0.021	220.170	2/24/1990
1990-1991	2850	226.130	9/4/1990	0.100	220.325	2/27/1991
1991-1992	863.7	223.720	7/30/1991	0.010	220.200	2/6/1992
1992-1993	3240	226.880	8/21/1992	0.076	220.295	2/17/1993

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1993-1994	2250	225.285	8/20/1993	0.067	220.195	2/10/1994
1994-1995	2815	226.575	7/10/1994	0.100	220.320	2/27/1995
1995-1996	2764	226.200	7/25/1995	0.086	220.205	2/8/1996
1996-1997	231.2	222.040	8/26/1996	0.047	220.215	12/20/1996
1997-1998	2520	226.010	8/30/1997	0.073	220.150	3/24/1998
1998-1999	316.6	222.350	9/11/1998	0.030	220.060	2/28/1999
1999-2000	1044	223.610	8/9/1999	0.072	220.015	3/24/2000
2000-2001	113.0	221.660	7/20/2000	0.500	220.110	4/10/2001
2001-2002	1383	224.100	7/9/2001	0.390	220.100	6/2/2001
2002-2003	619.7	222.870	9/12/2002	0.050	220.115	5/8/2003
2003-2004	10958	229.655	8/29/2003	0.143	220.040	3/20/2004
2004-2005	910.7	223.715	6/15/2004	0.200	220.040	3/8/2005
2005-2006	1583	224.940	8/1/2005	0.300	220.040	1/5/2006
2006-2007	3000	226.470	8/13/2006	0.500	220.100	12/31/2006
2007-2008	2100	225.340	7/1/2007	1.023	220.230	1/2/2008
2008-2009	3380	226.100	9/19/2008	0.496	220.370	12/1/2008
2009-2010	1000	228.750	7/22/2009	0.200	219.950	1/10/2010
2010-2011	368.1	223.750	7/26/2010	0.281	219.865	1/13/2011
2011-2012	2849	227.600	9/8/2011	0.248	220.120	2/21/2012
2012-2013	527.0	224.350	8/5/2012	0.228	220.010	1/11/2013
2013-2014	850.0	225.000	8/1/2013	0.428	219.820	5/1/2014
2014-2015	812.4	226.080	7/22/2014	0.000	219.800	3/25/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : Rampur (EMN00B3)

Division : MD,CWC,Burla

Local River : Jonk

Sub-Division : UMSD,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	219.865	0.000 *	220.300	6.406	220.200	8.311	220.963	105.6	220.293	11.72	220.150	3.500 *
2	219.860	0.000 *	220.245	6.028	220.170	7.895 *	220.800	64.06	220.295	11.65 *	220.140	3.442
3	219.860	0.000 *	220.295	9.466	221.248	190.4	221.108	138.7	220.230	5.516	220.140	3.435
4	219.865	0.000 *	220.225	5.556	222.700	450.3 *	220.813	66.19	220.210	5.400 *	220.140	3.466
5	219.860	0.000 *	220.210	5.521 *	221.450	212.4	220.615	42.33	220.200	5.257	220.140	3.345
6	219.860	0.000 *	220.185	4.781	221.073	172.0	220.475	24.70 *	220.200	5.181	220.140	3.187
7	219.855	0.000 *	220.170	4.608	220.833	60.15	220.370	12.77	220.195	5.221	220.150	3.666
8	219.850	0.000 *	220.140	2.559	220.655	41.94	220.340	7.988	220.270	9.752	220.210	5.970 *
9	219.850	0.000 *	220.185	3.461	220.530	36.50 *	220.308	6.791	220.255	9.246	220.230	7.241
10	219.845	0.000 *	220.245	5.025	220.373	21.19	220.280	5.949	220.240	7.298	220.240	7.219
11	219.840	0.000 *	220.695	22.73	220.330	15.06	220.270	5.017	220.205	5.300 *	220.240	7.200 *
12	219.850	0.000 *	220.870	39.62 *	220.473	29.77	220.270	4.711	220.180	5.917	220.230	7.045
13	219.920	0.000 *	220.728	36.34	220.463	22.49	220.265	4.350 *	220.180	5.994	220.230	6.967
14	219.975	0.000 *	220.545	29.03	220.473	21.73	220.265	4.366	220.175	5.949	220.230	7.094
15	219.980	0.000 *	220.425	24.88	220.860	108.3 *	220.280	5.646	220.180	4.102	220.250	7.250 *
16	219.865	0.000 *	220.673	41.85	220.860	107.7 *	220.345	8.132	220.180	4.137	220.230	6.876
17	219.930	0.000 *	220.428	16.39	220.958	116.4	220.325	4.430 *	220.170	3.949	220.200	5.967
18	220.063	5.076	220.940	84.37 *	221.020	118.2	221.328	210.6	220.160	3.700 *	220.100	3.279
20	220.030	3.525	220.725	41.95	220.798	55.14	220.890	64.10 *	220.150	3.802	220.180	4.182
21	220.020	3.450 *	220.650	32.68	220.725	41.13	221.128	186.5	220.140	3.694	220.180	3.962
22	220.058	5.225	220.530	27.10	220.568	28.91	222.000	304.5	220.150	3.500 *	220.100	2.630
23	220.813	65.09	220.803	51.61	220.440	16.50 *	221.670	218.2	220.150	3.702	220.100	2.620
24	221.518	186.9	221.155	173.9	220.350	11.14	221.405	153.2	220.175	3.900 *	220.100	2.392
25	220.958	100.0	220.815	78.18	220.265	8.017	220.880	64.09	220.160	3.700 *	220.100	2.390
26	220.718	47.30	220.780	49.21 *	220.220	5.358	220.948	122.3	220.150	3.663	220.100	2.380
27	220.560	27.16	220.548	29.48	220.310	9.287	220.640	42.40	220.150	3.669	220.100	2.367
28	220.370	20.95 *	220.420	27.51	221.130	168.6	220.453	24.63	220.140	3.442	220.030	2.360
29	220.360	20.80	220.345	19.00	221.240	188.0	220.370	22.92	220.130	3.307	220.100	2.355
30	220.273	7.376	220.300	9.450	221.200	183.5 *	220.333	12.44	220.130	3.256	220.100	2.354
31			220.250	10.08	221.203	166.8			220.150	3.518		
Ten-Daily Mean												
I Ten-Daily	219.857	0.000	220.220	5.341	220.923	120.1	220.607	47.51	220.239	7.624	220.168	4.447
II Ten-Daily	219.948	1.202	220.680	38.58	220.711	68.83	220.535	48.99	220.173	4.668	220.199	5.858
III Ten-Daily	220.564	48.43	220.600	46.20	220.695	75.20	220.982	115.1	220.148	3.578	220.101	2.581
Monthly												
Min.	219.840	0.000	220.140	2.559	220.170	5.358	220.265	4.350	220.130	3.256	220.030	2.354
Max.	221.518	186.9	221.155	173.9	222.700	450.3	222.000	304.5	220.295	11.72	220.250	7.250
Mean	220.123	16.54	220.503	30.56	220.774	87.64	220.708	70.54	220.185	5.235	220.156	4.295

Annual Runoff in MCM = 571 Annual Runoff in mm = 195

Peak Observed Discharge = 304.5 cumecs on 22/09/2015 Corres. Water Level :222 m

Lowest Observed Discharge = 0.000 cumecs on 22/12/2015 Corres. Water Level :220.01 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : Rampur (EMN00B3)

Division : MD,CWC,Burla

Local River : Jonk

Sub-Division : UMSD,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	220.090	2.156	220.005	0.000 *	219.940	0.000 *	219.960	0.000 *	219.920	0.000 *	219.870	0.000 *
2	220.090	2.239	220.000	0.000 *	219.940	0.000 *	219.960	0.000 *	219.920	0.000 *	219.860	0.000 *
3	220.090	2.179	220.000	0.000 *	219.950	0.000 *	219.950	0.000 *	219.920	0.000 *	219.860	0.000 *
4	220.070	2.062	220.000	0.000 *	219.950	0.000 *	219.950	0.000 *	219.920	0.000 *	219.850	0.000 *
5	220.070	2.044	220.000	0.000 *	219.960	0.000 *	219.950	0.000 *	219.920	0.000 *	219.850	0.000 *
6	220.070	2.060 *	220.000	0.000 *	219.960	0.000 *	219.950	0.000 *	219.920	0.000 *	219.850	0.000 *
7	220.060	2.001	220.000	0.000 *	219.960	0.000 *	219.950	0.000 *	219.920	0.000 *	219.850	0.000 *
8	220.060	1.985	219.990	0.000 *	219.960	0.000 *	219.960	0.000 *	219.920	0.000 *	219.850	0.000 *
9	220.060	1.996	219.990	0.000 *	219.960	0.000 *	219.960	0.000 *	219.920	0.000 *	219.850	0.000 *
10	220.060	2.025	219.990	0.000 *	219.960	0.000 *	219.950	0.000 *	219.920	0.000 *	219.850	0.000 *
11	220.060	1.962	219.980	0.000 *	219.960	0.000 *	219.950	0.000 *	219.920	0.000 *	219.840	0.000 *
12	220.070	1.909	219.970	0.000 *	219.950	0.000 *	219.950	0.000 *	219.915	0.000 *	219.840	0.000 *
13	220.070	1.900 *	219.970	0.000 *	219.950	0.000 *	219.960	0.000 *	219.915	0.000 *	219.840	0.000 *
14	220.050	1.761	219.970	0.000 *	219.950	0.000 *	219.960	0.000 *	219.910	0.000 *	219.840	0.000 *
15	220.040	1.573	219.960	0.000 *	219.950	0.000 *	219.960	0.000 *	219.910	0.000 *	219.830	0.000 *
16	220.040	1.622	219.960	0.000 *	219.960	0.000 *	219.960	0.000 *	219.910	0.000 *	219.820	0.000 *
17	220.040	1.626	219.960	0.000 *	219.950	0.000 *	219.960	0.000 *	219.910	0.000 *	219.810	0.000 *
18	220.040	1.600	219.950	0.000 *	219.950	0.000 *	219.960	0.000 *	219.910	0.000 *	219.800	0.000 *
20	220.030	1.990	219.940	0.000 *	219.960	0.000 *	219.960	0.000 *	219.910	0.000 *	219.800	0.000 *
21	220.010	0.000 *	219.940	0.000 *	219.960	0.000 *	219.960	0.000 *	219.910	0.000 *	219.800	0.000 *
22	220.010	0.000	219.940	0.000 *	219.960	0.000 *	219.960	0.000 *	219.900	0.000 *	219.800	0.000 *
23	220.010	0.000 *	219.940	0.000 *	219.950	0.000 *	219.950	0.000 *	219.890	0.000 *	219.790	0.000 *
24	220.010	0.000 *	219.930	0.000 *	219.950	0.000 *	219.950	0.000 *	219.890	0.000 *	219.780	0.000 *
25	220.010	0.000	219.930	0.000 *	219.950	0.000 *	219.940	0.000 *	219.880	0.000 *	219.780	0.000 *
26	220.010	0.000 *	219.930	0.000 *	219.950	0.000 *	219.940	0.000 *	219.880	0.000 *	219.780	0.000 *
27	220.010	0.000 *	219.930	0.000 *	219.960	0.000 *	219.940	0.000 *	219.880	0.000 *	219.780	0.000 *
28	220.010	0.000	219.930	0.000 *	219.960	0.000 *	219.930	0.000 *	219.880	0.000 *	219.780	0.000 *
29	220.010	0.000	219.930	0.000 *	219.960	0.000 *	219.930	0.000 *	219.880	0.000 *	219.780	0.000 *
30	220.010	0.000	219.940	0.000 *			219.920	0.000 *	219.880	0.000 *	219.780	0.000 *
31	220.005	0.000	219.940	0.000 *			219.920	0.000 *			219.770	0.000 *
Ten-Daily Mean												
I Ten-Daily	220.072	2.075	219.998	0.000	219.954	0.000	219.954	0.000	219.920	0.000	219.854	0.000
II Ten-Daily	220.047	1.794	219.961	0.000	219.954	0.000	219.958	0.000	219.912	0.000	219.822	0.000
III Ten-Daily	220.010	0.000	219.935	0.000	219.956	0.000	219.940	0.000	219.887	0.000	219.784	0.000
Monthly												
Min.	220.005	0.000	219.930	0.000	219.940	0.000	219.920	0.000	219.880	0.000	219.770	0.000
Max.	220.090	2.239	220.005	0.000	219.960	0.000	219.960	0.000	219.920	0.000	219.870	0.000
Mean	220.042	1.248	219.963	0	219.954	0	219.950	0	219.906	0	219.819	0

Peak Computed Discharge = 450.3 cumecs on 04/08/2015

Corres. Water Level :222.7 m

Lowest Computed Discharge = 0.000 cumecs on 01/06/2015

Corres. Water Level :219.865 m

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

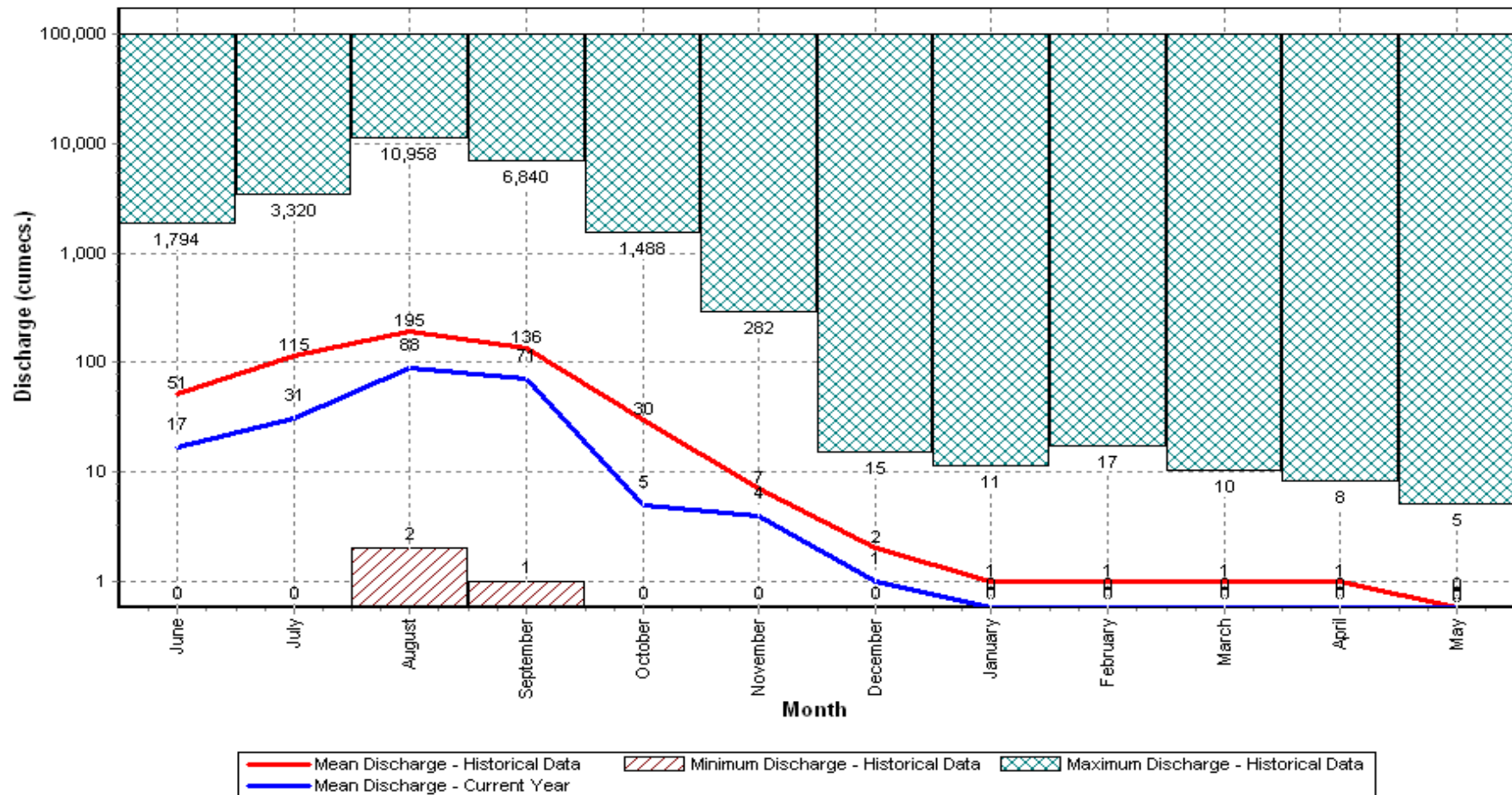
Station Name : Rampur (EMN00B3)

Data considered : 1971-2016

Division : MD,CWC,Burla

Local River : Jonk

Sub-Division : UMSD,CWC,Raipur



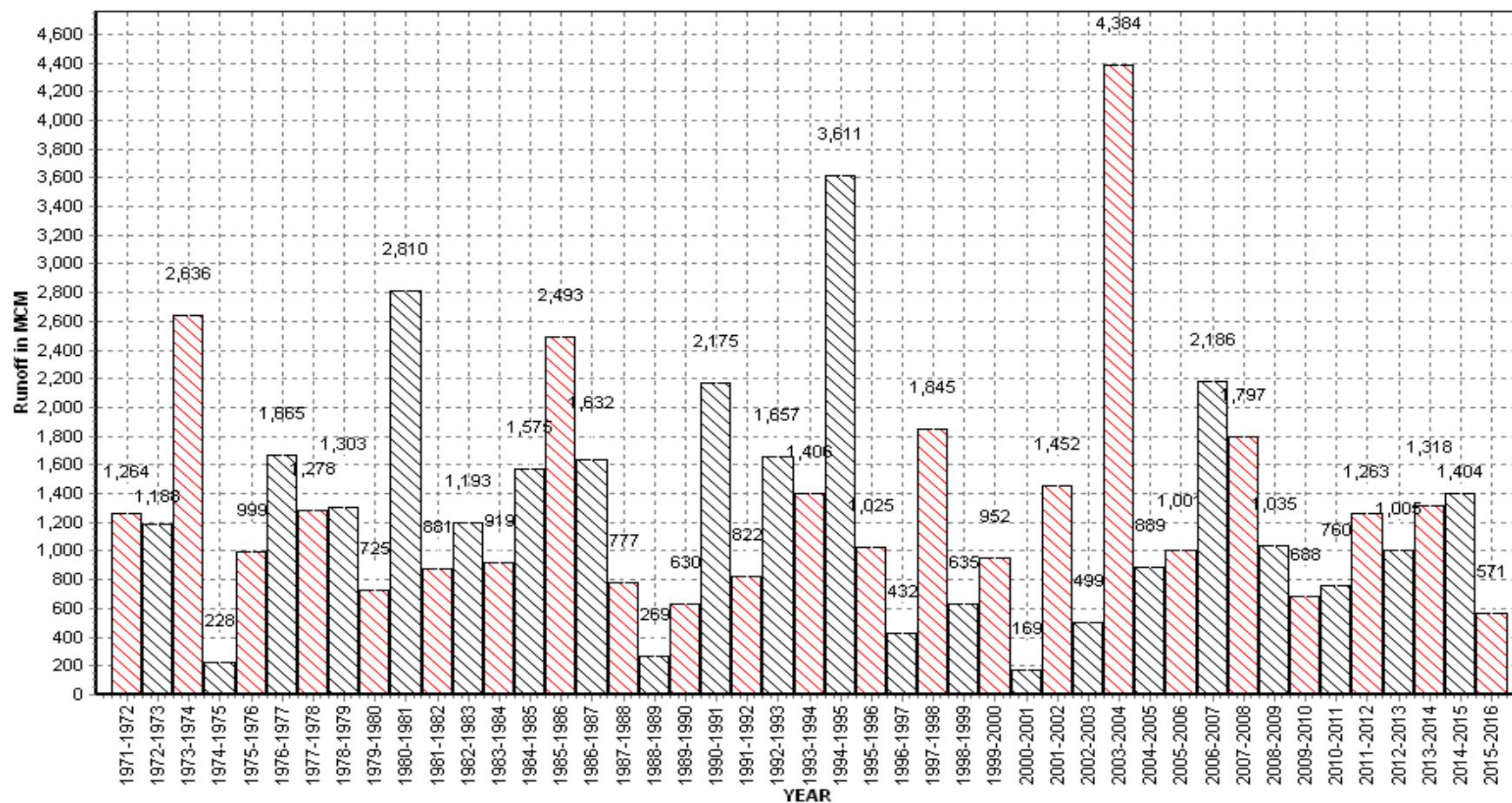
Annual Runoff Values for the period: 1971 - 2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

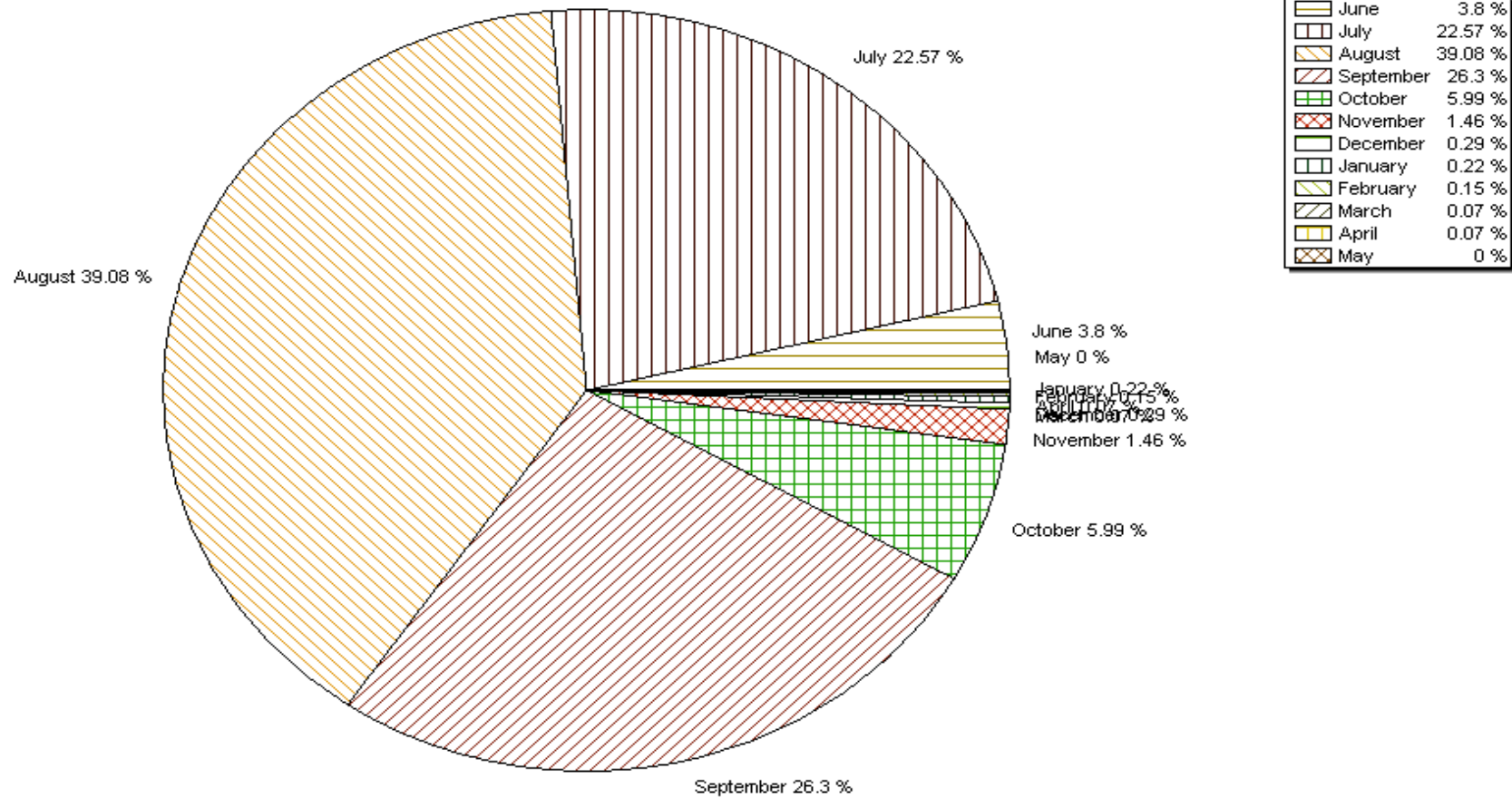


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1971-2015

Station Name : Rampur (EMN00B3)
Local River : Jonk

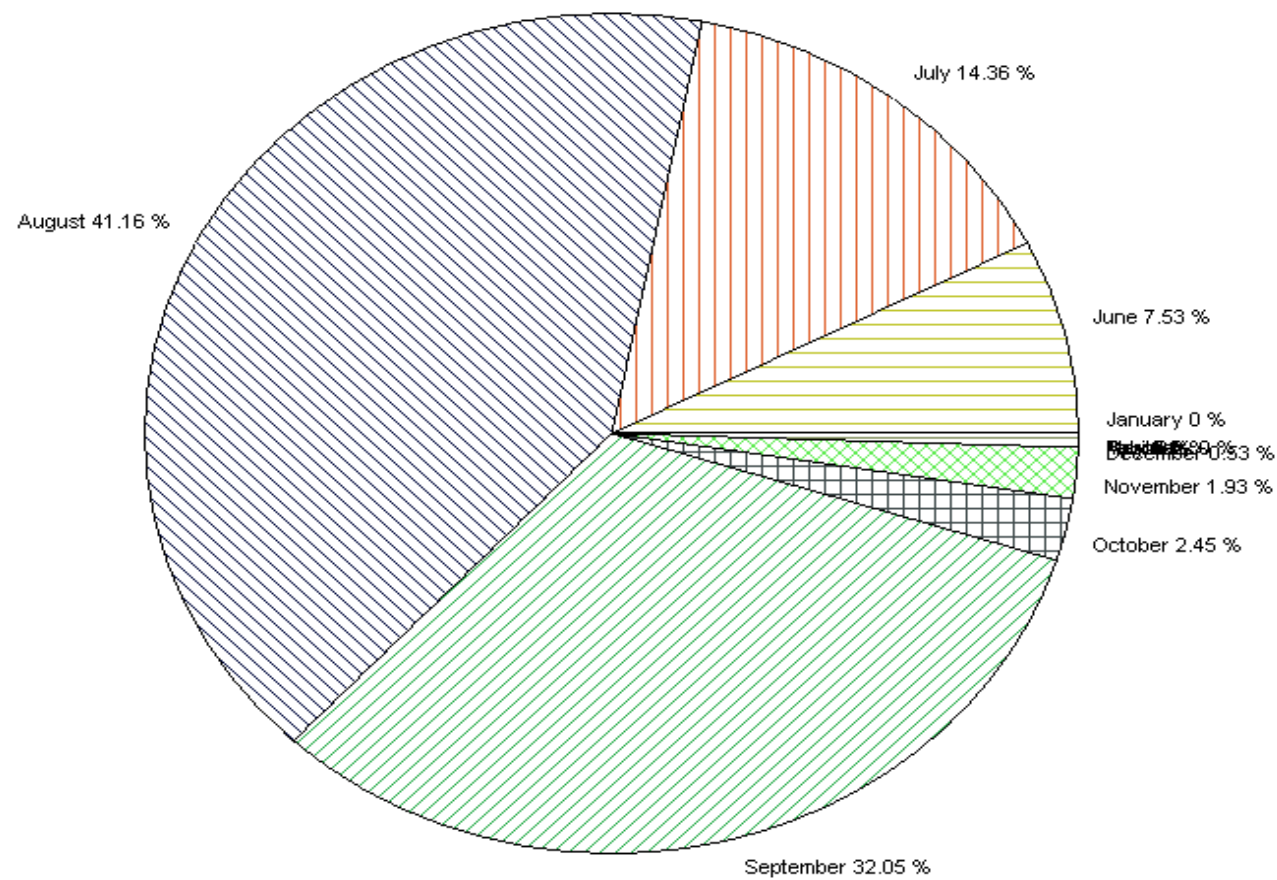
Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



Monthly Runoff for the Year : 2015-2016

Station Name : Rampur (EMN00B3)
Local River : Jonk

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur

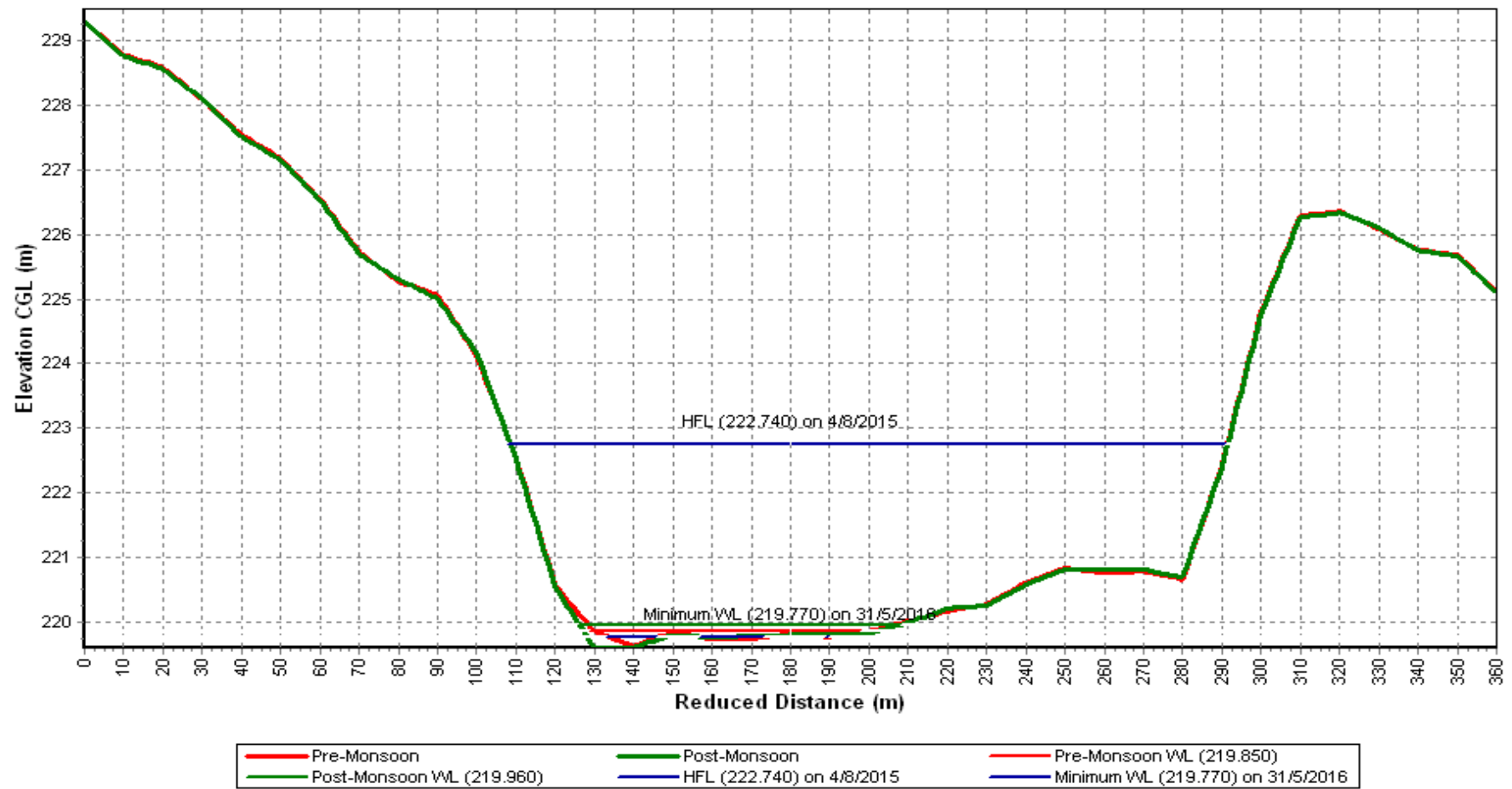


June	7.53 %
July	14.36 %
August	41.16 %
September	32.05 %
October	2.45 %
November	1.93 %
December	0.53 %
January	0 %
February	0 %
March	0 %
April	0 %
May	0 %

Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Rampur (EMN00B3)
Local River : Jonk

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



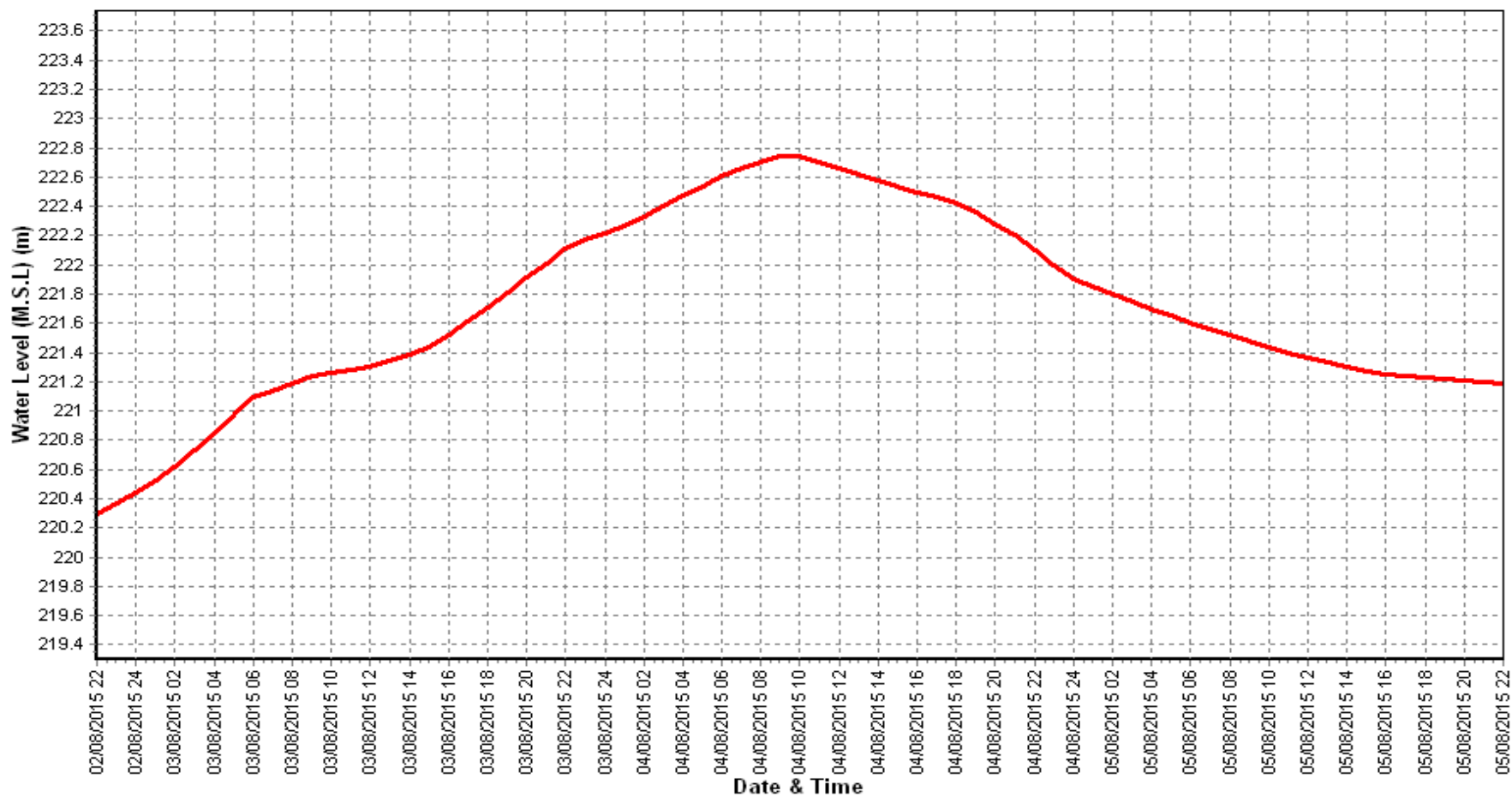
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



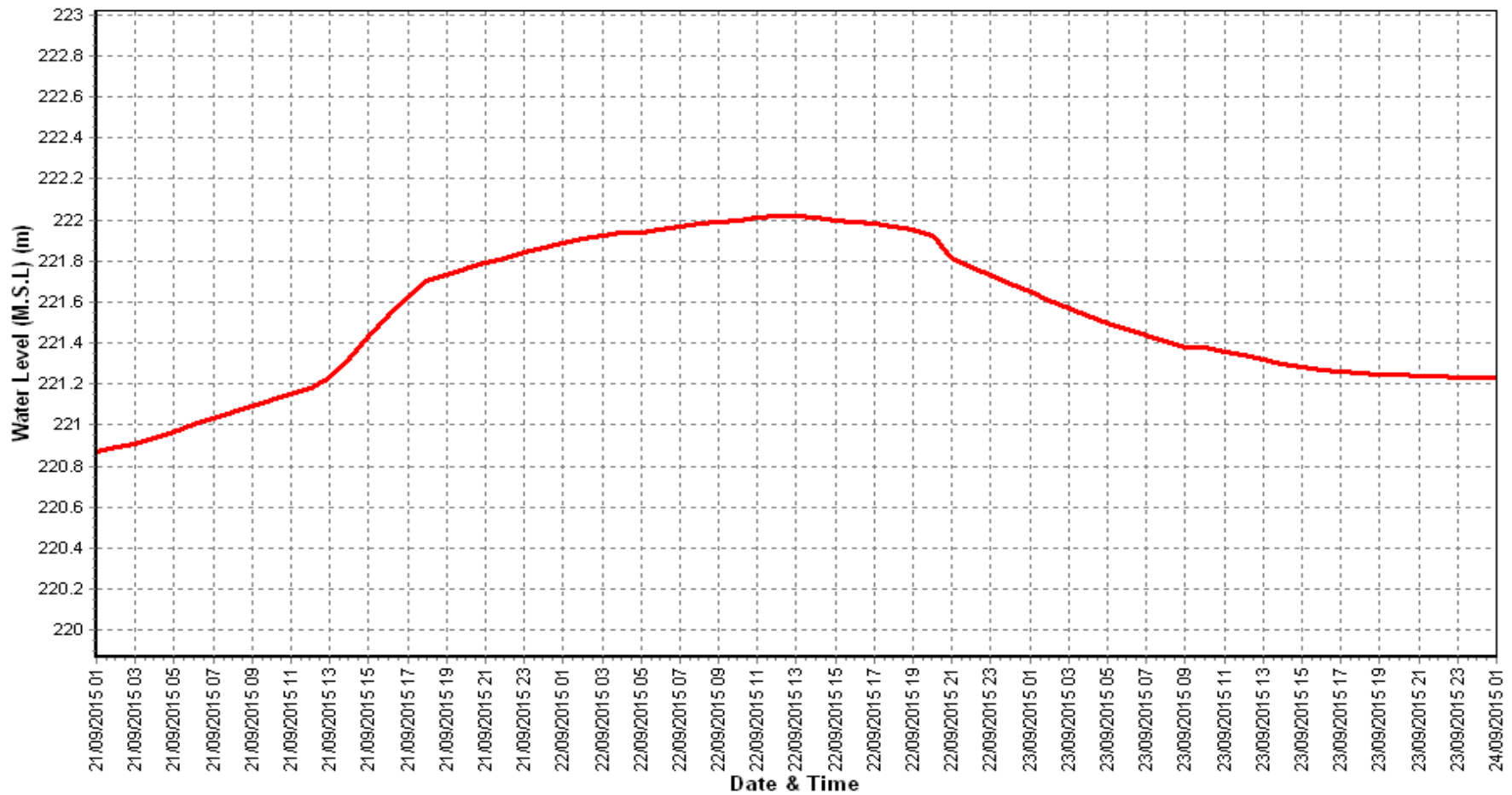
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



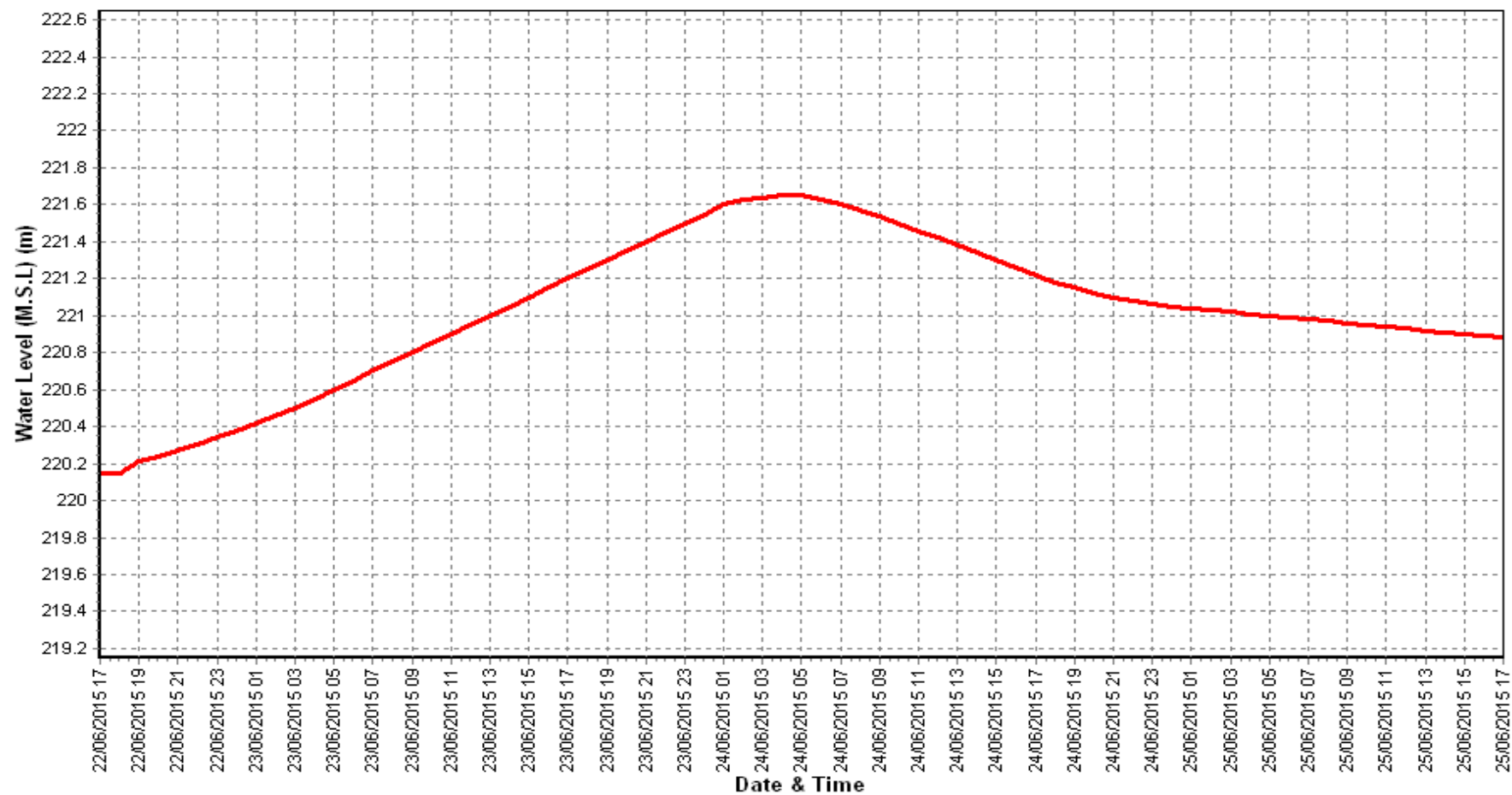
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Rampur (EMN00B3)

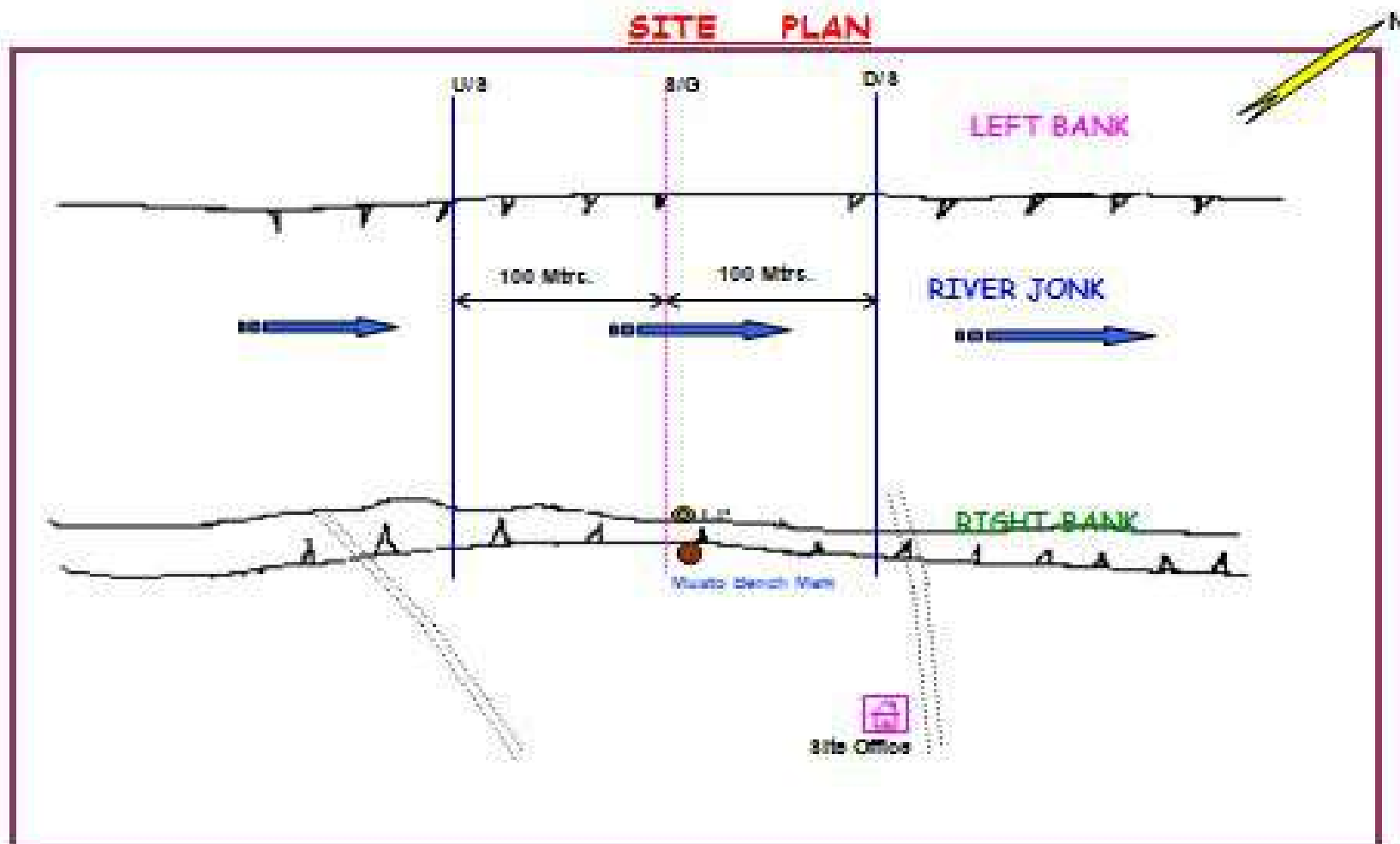
Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



SITE PLAN



SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	6.406	0.000	0.000	0.107	0.107	59	8.311	0.000	0.000	0.147	0.147	106
2	0.000	0.000	0.000	0.000	0.000	0	6.028	0.000	0.000	0.026	0.026	14	7.895	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	9.466	0.000	0.000	0.023	0.023	19	190.4	0.000	0.000	0.117	0.117	1925
4	0.000	0.000	0.000	0.000	0.000	0	5.556	0.000	0.000	0.038	0.038	18	450.3	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	5.521	0.000	0.000	0.000	0.000	0	212.4	0.000	0.000	0.143	0.143	2624
6	0.000	0.000	0.000	0.000	0.000	0	4.781	0.000	0.000	0.039	0.039	16	172.0	0.000	0.000	0.192	0.192	2853
7	0.000	0.000	0.000	0.000	0.000	0	4.608	0.000	0.000	0.071	0.071	28	60.15	0.000	0.000	0.127	0.127	660
8	0.000	0.000	0.000	0.000	0.000	0	2.559	0.000	0.000	0.066	0.066	15	41.94	0.000	0.000	0.120	0.120	435
9	0.000	0.000	0.000	0.000	0.000	0	3.461	0.000	0.000	0.048	0.048	14	36.50	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	5.025	0.000	0.000	0.038	0.038	16	21.19	0.000	0.000	0.136	0.136	249
11	0.000	0.000	0.000	0.000	0.000	0	22.73	0.000	0.000	0.033	0.033	65	15.06	0.000	0.000	0.150	0.150	195
12	0.000	0.000	0.000	0.000	0.000	0	39.62	0.000	0.000	0.000	0.000	0	29.77	0.000	0.000	0.194	0.194	499
13	0.000	0.000	0.000	0.000	0.000	0	36.34	0.000	0.000	0.071	0.071	223	22.49	0.000	0.000	0.154	0.154	299
14	0.000	0.000	0.000	0.000	0.000	0	29.03	0.000	0.000	0.103	0.103	258	21.73	0.000	0.000	0.126	0.126	237
15	0.000	0.000	0.000	0.000	0.000	0	24.88	0.000	0.000	0.111	0.111	239	108.3	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	41.85	0.000	0.000	0.107	0.107	387	107.7	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	16.39	0.000	0.000	0.100	0.100	142	116.4	0.000	0.000	0.144	0.144	1448
18	5.076	0.000	0.000	0.828	0.828	363	84.37	0.000	0.000	0.000	0.000	0	118.2	0.000	0.000	0.133	0.133	1359
20	3.525	0.000	0.000	0.870	0.870	265	41.95	0.000	0.000	0.113	0.113	410	55.14	0.000	0.000	0.125	0.125	595
21	3.450	0.000	0.000	0.000	0.000	0	32.68	0.000	0.000	0.110	0.110	311	41.13	0.000	0.000	0.146	0.146	519
22	5.225	0.000	0.000	0.821	0.821	371	27.10	0.000	0.000	0.124	0.124	290	28.91	0.000	0.000	0.134	0.134	335
23	65.09	0.000	0.000	0.282	0.282	1586	51.61	0.000	0.000	0.125	0.125	557	16.50	0.000	0.000	0.000	0.000	0
24	186.9	0.000	0.000	0.214	0.214	3457	173.9	0.000	0.000	0.108	0.108	1622	11.14	0.000	0.000	0.166	0.166	160
25	100.0	0.000	0.000	0.295	0.295	2549	78.18	0.000	0.000	0.167	0.167	1128	8.017	0.000	0.000	0.145	0.145	100
26	47.30	0.000	0.000	0.270	0.270	1103	49.21	0.000	0.000	0.000	0.000	0	5.358	0.000	0.000	0.053	0.053	25
27	27.16	0.000	0.000	0.251	0.251	589	29.48	0.000	0.000	0.117	0.117	298	9.287	0.000	0.000	0.123	0.123	99
28	20.95	0.000	0.000	0.000	0.000	0	27.51	0.000	0.000	0.145	0.145	345	168.6	0.000	0.000	0.114	0.114	1661
29	20.80	0.000	0.000	0.135	0.135	243	19.00	0.000	0.000	0.133	0.133	218	188.0	0.000	0.000	0.112	0.112	1819
30	7.376	0.000	0.000	0.129	0.129	82	9.450	0.000	0.000	0.163	0.163	133	183.5	0.000	0.000	0.000	0.000	0
31							10.08	0.000	0.000	0.149	0.149	130	166.8	0.000	0.000	0.108	0.108	1556
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	5.341	0.000	0.000	0.046	0.046	20	120.1	0.000	0.000	0.098	0.098	885
Ten Daily II	1.202	0.000	0.000	0.253	0.253	87	38.58	0.000	0.000	0.064	0.064	172	68.83	0.000	0.000	0.117	0.117	576
Ten Daily III	48.43	0.000	0.000	0.240	0.240	998	46.20	0.000	0.000	0.122	0.122	458	75.20	0.000	0.000	0.100	0.100	570
Monthly																		
Total							10852					6955						20888

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	105.6	0.000	0.000	0.031	0.031	283	11.72	0.000	0.000	0.013	0.013	13	3.500	0.000	0.000	0.000	0.000	0
2	64.06	0.000	0.000	0.137	0.137	758	11.65	0.000	0.000	0.000	0.000	0	3.442	0.000	0.000	0.011	0.011	3
3	138.7	0.000	0.000	0.029	0.029	348	5.516	0.000	0.000	0.011	0.011	5	3.435	0.000	0.000	0.012	0.012	4
4	66.19	0.000	0.000	0.024	0.024	137	5.400	0.000	0.000	0.000	0.000	0	3.466	0.000	0.000	0.013	0.013	4
5	42.33	0.000	0.000	0.021	0.021	77	5.257	0.000	0.000	0.010	0.010	5	3.345	0.000	0.000	0.011	0.011	3
6	24.70	0.000	0.000	0.000	0.000	0	5.181	0.000	0.000	0.012	0.012	5	3.187	0.000	0.000	0.011	0.011	3
7	12.77	0.000	0.000	0.021	0.021	23	5.221	0.000	0.000	0.011	0.011	5	3.666	0.000	0.000	0.014	0.014	4
8	7.988	0.000	0.000	0.068	0.068	47	9.752	0.000	0.000	0.010	0.010	8	5.970	0.000	0.000	0.000	0.000	0
9	6.791	0.000	0.000	0.069	0.069	40	9.246	0.000	0.000	0.011	0.011	9	7.241	0.000	0.000	0.018	0.018	11
10	5.949	0.000	0.000	0.064	0.064	33	7.298	0.000	0.000	0.011	0.011	7	7.219	0.000	0.000	0.019	0.019	12
11	5.017	0.000	0.000	0.063	0.063	27	5.300	0.000	0.000	0.000	0.000	0	7.200	0.000	0.000	0.000	0.000	0
12	4.711	0.000	0.000	0.062	0.062	25	5.917	0.000	0.000	0.011	0.011	6	7.045	0.000	0.000	0.017	0.017	10
13	4.350	0.000	0.000	0.000	0.000	0	5.994	0.000	0.000	0.011	0.011	6	6.967	0.000	0.000	0.016	0.016	10
14	4.366	0.000	0.000	0.061	0.061	23	5.949	0.000	0.000	0.010	0.010	5	7.094	0.000	0.000	0.015	0.015	9
15	5.646	0.000	0.000	0.056	0.056	27	4.102	0.000	0.000	0.011	0.011	4	7.250	0.000	0.000	0.000	0.000	0
16	8.132	0.000	0.000	0.094	0.094	66	4.137	0.000	0.000	0.010	0.010	4	6.876	0.000	0.000	0.018	0.018	11
17	4.430	0.000	0.000	0.000	0.000	0	3.949	0.000	0.000	0.010	0.010	3	5.967	0.000	0.000	0.016	0.016	8
18	210.6	0.000	0.000	0.081	0.081	1474	3.700	0.000	0.000	0.000	0.000	0	3.279	0.000	0.000	0.016	0.016	5
20	64.10	0.000	0.000	0.000	0.000	0	3.802	0.000	0.000	0.011	0.011	4	4.182	0.000	0.000	0.016	0.016	6
21	186.5	0.000	0.000	0.078	0.078	1257	3.694	0.000	0.000	0.012	0.012	4	3.962	0.000	0.000	0.016	0.016	5
22	304.5	0.000	0.000	0.119	0.119	3131	3.500	0.000	0.000	0.000	0.000	0	2.630	0.000	0.000	0.000	0.000	0
23	218.2	0.000	0.000	0.076	0.076	1433	3.702	0.000	0.000	0.012	0.012	4	2.620	0.000	0.000	0.015	0.015	3
24	153.2	0.000	0.000	0.066	0.066	874	3.900	0.000	0.000	0.000	0.000	0	2.392	0.000	0.000	0.015	0.015	3
25	64.09	0.000	0.000	0.000	0.000	0	3.700	0.000	0.000	0.000	0.000	0	2.390	0.000	0.000	0.000	0.000	0
26	122.3	0.000	0.000	0.046	0.046	486	3.663	0.000	0.000	0.012	0.012	4	2.380	0.000	0.000	0.015	0.015	3
27	42.40	0.000	0.000	0.000	0.000	0	3.669	0.000	0.000	0.011	0.011	3	2.367	0.000	0.000	0.014	0.014	3
28	24.63	0.000	0.000	0.024	0.024	51	3.442	0.000	0.000	0.011	0.011	3	2.360	0.000	0.000	0.014	0.014	3
29	22.92	0.000	0.000	0.014	0.014	28	3.307	0.000	0.000	0.012	0.012	3	2.355	0.000	0.000	0.000	0.000	0
30	12.44	0.000	0.000	0.013	0.013	14	3.256	0.000	0.000	0.013	0.013	4	2.354	0.000	0.000	0.014	0.014	3
31							3.518	0.000	0.000	0.012	0.012	4						
Ten Daily Mean																		
Ten Daily I	47.51	0.000	0.000	0.046	0.046	175	7.624	0.000	0.000	0.009	0.009	6	4.447	0.000	0.000	0.011	0.011	4
Ten Daily II	48.99	0.000	0.000	0.051	0.051	303	4.668	0.000	0.000	0.009	0.009	3	5.858	0.000	0.000	0.013	0.013	6
Ten Daily III	115.1	0.000	0.000	0.044	0.044	727	3.578	0.000	0.000	0.009	0.009	3	2.581	0.000	0.000	0.010	0.010	2
Monthly																		
Total						12050						121						130

Annual Sediment Load (Metric Tonnes) : 51020

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	2.156	0.000	0.000	0.010	0.010	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	2.239	0.000	0.000	0.010	0.010	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	2.179	0.000	0.000	0.010	0.010	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	2.062	0.000	0.000	0.009	0.009	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	2.044	0.000	0.000	0.009	0.009	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	2.060	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	2.001	0.000	0.000	0.009	0.009	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	1.985	0.000	0.000	0.009	0.009	2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	1.996	0.000	0.000	0.008	0.008	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	2.025	0.000	0.000	0.008	0.008	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	1.962	0.000	0.000	0.008	0.008	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	1.909	0.000	0.000	0.008	0.008	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	1.900	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	1.761	0.000	0.000	0.007	0.007	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	1.573	0.000	0.000	0.007	0.007	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	1.622	0.000	0.000	0.007	0.007	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	1.626	0.000	0.000	0.007	0.007	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	1.600	0.000	0.000	0.010	0.010	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	1.990	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
31	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	2.075	0.000	0.000	0.008	0.008	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	1.794	0.000	0.000	0.005	0.005	1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						23						0						0

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load for period : 1977-2016

Station Name : Rampur (EMN00B3)

Division : MD,CWC,Burla

Local River : Jonk

Sub-Division : UMSD,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1977-1978	341426	0	341426	1278
1978-1979	478071	0	478071	1303
1979-1980	478115	0	478115	725
1980-1981	949109	26	949135	2810
1981-1982	305288	0	305288	881
1982-1983	578258	2	578260	1193
1983-1984	201661	62	201723	919
1984-1985	692295	5	692299	1575
1985-1986	1911047	232	1911280	2493
1986-1987	648688	0	648688	1632
1987-1988	536720	69	536789	777
1988-1989	34583	0	34583	269
1989-1990	179528	0	179528	630
1990-1991	942621	0	942621	2175
1991-1992	317836	15	317851	822
1992-1993	808429	0	808429	1657
1993-1994	426506	0	426506	1406
1994-1995	1291178	0	1291178	3611
1995-1996	530956	0	530956	1025
1997-1998	1022540	0	1022540	1845
1998-1999	108712	0	108712	635
1999-2000	214914	0	214914	952
2000-2001	5310	0	5310	169
2001-2002	554196	0	554196	1452
2002-2003	86156	0	86156	499
2003-2004	4243551	21	4243572	4384
2004-2005	287184	0	287184	889
2005-2006	337641	0	337641	1001
2006-2007	750015	0	750015	2186
2007-2008	843645	0	843645	1797
2008-2009	5227121	0	5227121	1035
2009-2010	210913	0	210913	688
2010-2011	30933	0	30933	760
2011-2012	42899	0	42899	1263
2012-2013	112214	0	112214	1005
2013-2014	108043	1	108044	1318
2014-2015	118735	2	118737	1404
2015-2016	50997	23	51020	571

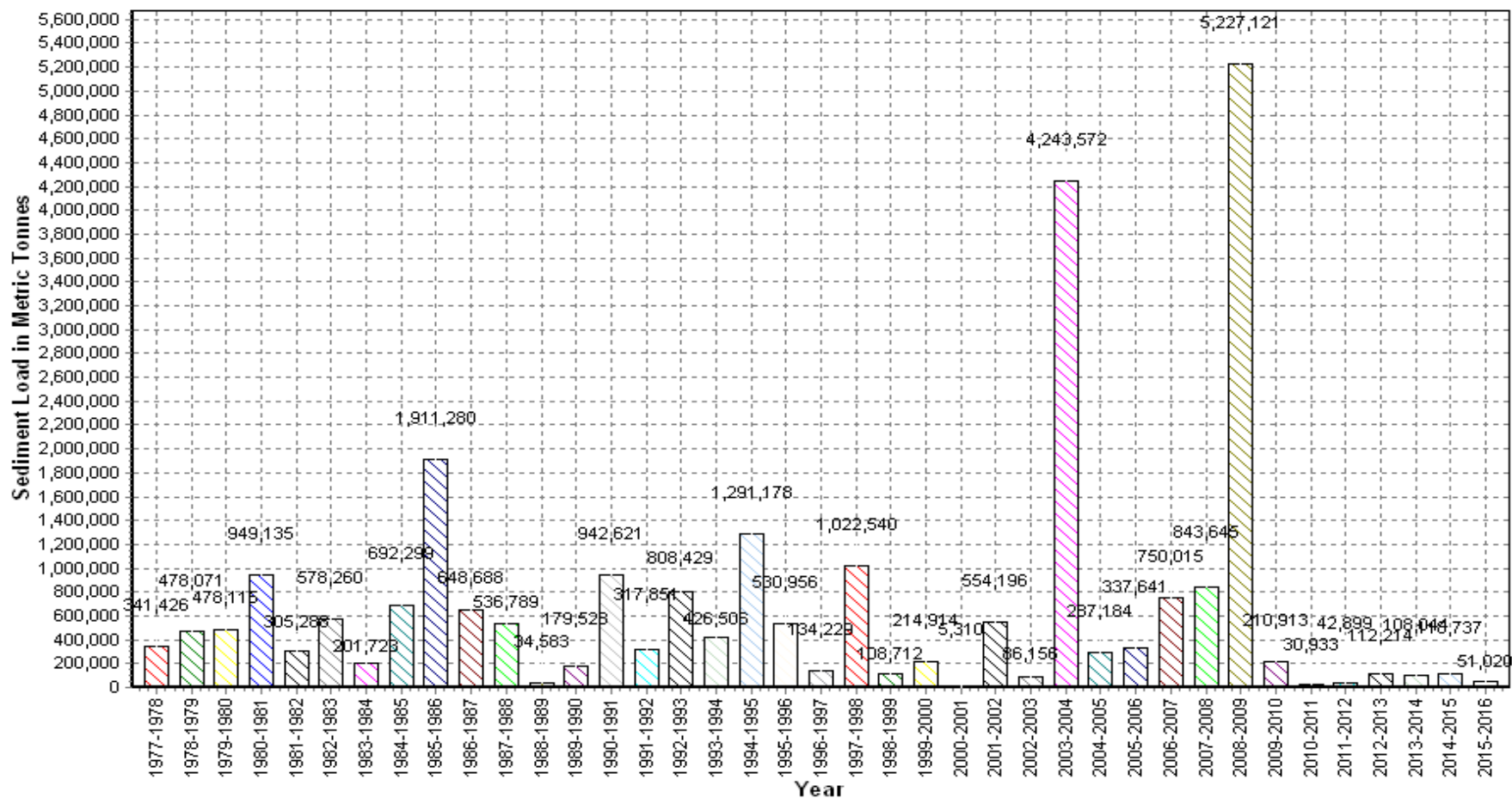
Annual Sediment Load for the period: 1977-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur



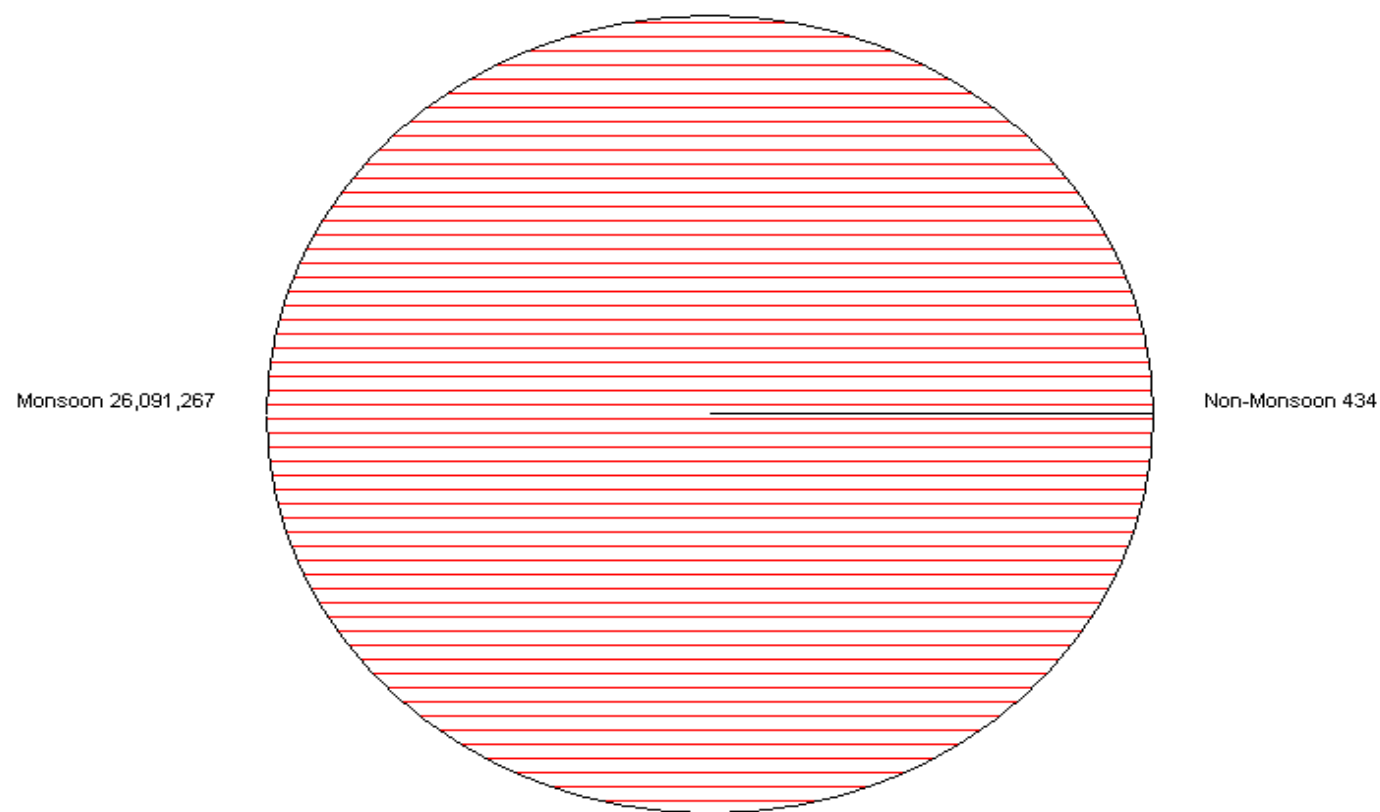
Seasonal Sediment Load for the period : 1977-2015

Station Name : Rampur (EMN00B3)

Local River : Jonk

Division : MD,CWC,Burla

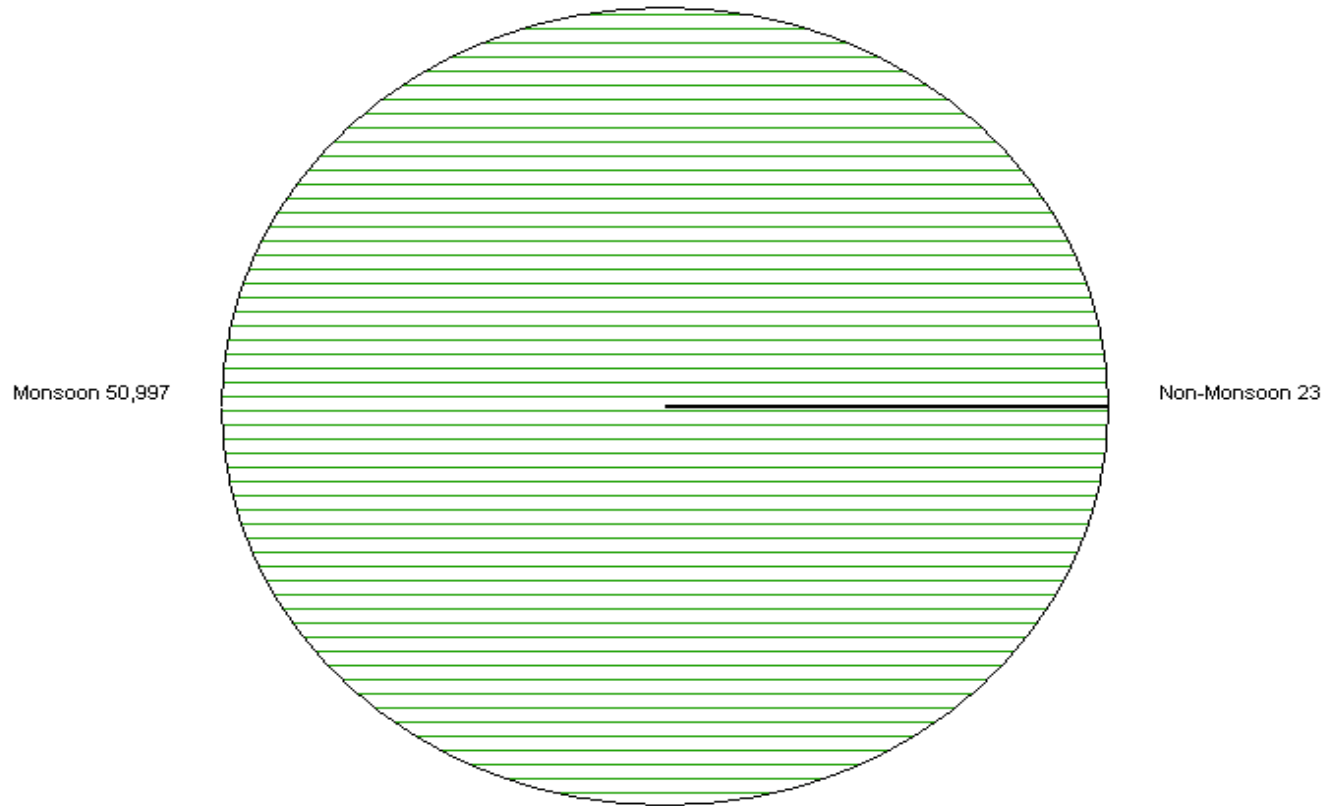
Sub-Division : UMSD,CWC,Raipur



Seasonal Sediment Load for the Year: 2015-2016

Station Name : Rampur (EMN00B3)
Local River : Jonk

Division : MD,CWC,Burla
Sub-Division : UMSD,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	6.406	8.311	105.6	11.72	3.442	2.156	0.000	0.000	0.000	0.000	0.000
2	Colour_Cod (-)		Light Brown	Brown	Light Brown	Clear	Clear	Dark Green					
3	EC_FLD (μmho/cm)				286	294	270	235					
4	EC_GEN (μmho/cm)		162	218	186	187	226	210					
5	Odour_Code (-)		odour free	odour free	odour free	odour free	odour free	odour free					
6	pH_FLD (pH units)			7.7	7.7	7.8	7.6	7.7					
7	pH_GEN (pH units)		8.0	7.9	7.8	7.8	8.0	8.1					
8	Temp (deg C)			28.6	29.5	29.5	25.5	23.5					
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)		12.0	12.0	0.0	0.0	0.0	0.0					
2	ALK-TOT (mgCaCO3/L)		160	208	209	240	136	252					
3	Ca (mg/L)		23	24	22	32	35	35					
4	Cl (mg/L)		18.0	17.0	15.0	10.0	10.0	6.0					
5	CO3 (mg/L)		14.4	14.4	0.0	0.0	0.0	0.0					
6	HCO3 (mg/L)		83	112	127	146	83	154					
7	K (mg/L)		5.7	2.0	1.7	5.6	4.5	6.7					
8	Mg (mg/L)		11.7	9.7	10.7	5.8	4.9	12.6					
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)		0.5	0.5	0.1	0.6	0.7	0.1					
2	DO (mg/L)		6.2	6.6	6.5	6.2	6.2	6.9					
3	DO_SAT% (%)			84	85	81	75	81					
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)		57	60	56	80	88	88					
2	HAR_Total (mgCaCO3/L)		106	101	101	104	108	141					
3	Na% (%)		24	20	23	30	17	21					
4	RSC (-)		0.0	0.3	0.1	0.3	0.0	0.0					
5	SAR (-)		0.7	0.5	0.6	0.9	0.4	0.7					
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Rampur (EMN00B3)

Division : MD,CWC,Burla

Local River : Jonk

Sub-Division : UMSD,CWC,Raipur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	450.3	0.000	18.05
2	EC_FLD (μmho/cm)	4	294	235	271
3	EC_GEN (μmho/cm)	6	226	162	198
4	pH_FLD (pH units)	5	7.8	7.6	7.7
5	pH_GEN (pH units)	6	8.1	7.8	7.9
6	Temp (deg C)	5	29.5	23.5	27.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	6	12.0	0.0	4
2	ALK-TOT (mgCaCO3/L)	6	252	136	201
3	Ca (mg/L)	6	35	22	29
4	Cl (mg/L)	6	18.0	6.0	12.7
5	CO3 (mg/L)	6	14.4	0.0	4.8
6	HCO3 (mg/L)	6	154	83	118
7	K (mg/L)	6	6.7	1.7	4.4
8	Mg (mg/L)	6	12.6	4.9	9.2
9	Na (mg/L)	6	21.6	10.5	15.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	6	0.7	0.1	0.4
3	DO_SAT% (%)	5	85	75	81
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	6	88	56	72
2	HAR_Total (mgCaCO3/L)	6	141	101	110
3	Na% (%)	6	30	17	22
4	RSC (-)	6	0.3	0.0	0.1
5	SAR (-)	6	0.9	0.4	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	51.04	102.3	114.9	29.59	405.2	264.7	184.8	40.07	35.84	46.61	49.08	52.05	286.1	107.1	26.40	5.813	3.010	16.79	2.161	4.868
2	EC_FLD (µmho/cm)	178	154	196	221	186	164	96	163	164						290	270	200	258	313	280
3	EC_GEN (µmho/cm)	178	154	196	221	186	164	123	173	171	190	218	207	151	181	188	270	200	258	313	280
4	pH_FLD (pH units)	7.6	7.8	7.6	7.8	7.5	7.7	7.4	8.2	8.2	7.6	7.3	7.5	7.4	7.5	7.7	7.9	7.9	8.0	7.8	7.2
5	pH_GEN (pH units)	7.6	7.8	7.6	7.8	7.5	7.7	7.6	7.5	7.9	7.5	7.4	7.4	8.1	7.9	7.8	7.9	7.9	8.0	7.8	7.2
6	Temp (deg C)	28.1	28.3	27.2	30.0	30.0	27.7	28.4	28.0	29.5	29.8	28.0	28.3	27.6	28.8	29.2	22.5	26.5	24.3	24.5	26.0
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	4.7	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	6.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	97	299	123	108	113		90	141	108	129	146	138	143	221	204	155	455	248	222	187
3	B (mg/L)					0.02		0.01	0.01	0.01	0.00	0.00	0.00								0.11
4	Ca (mg/L)	12	18	14	42	17		9	13	12	14	16	17	18	25	25	18	31	47	29	24
5	Cl (mg/L)	4.2	15.4	23.0	9.5	17.9		6.3	13.6	6.1	4.4	6.7	9.4	15.3	11.0	15.0	4.9	6.0	45.3	8.0	28.4
6	CO3 (mg/L)	0.0	5.7	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	7.2	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)			1.10		0.29		0.06	0.11	0.12	0.12	0.19	0.20						0.93		0.08
8	Fe (mg/L)					0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.1
10	K (mg/L)	2.4	3.4			1.1		1.3	0.8	1.2	1.5	2.0	1.2	2.6	3.1	3.7	1.2	3.3			1.8
11	Mg (mg/L)	1.9	6.1	3.7	8.6	4.7		5.8	7.4	6.7	8.1	9.0	9.4	5.3	5.6	9.5	4.1	5.1	11.1	20.2	11.2
12	Na (mg/L)	2.9	7.0			11.3		3.4	9.0	5.4	11.1	10.5	10.7	6.4	16.2	15.9	5.0	8.8			13.0
13	NO2+NO3 (mg N/L)	0.82	1.00		1.17	0.03	0.05	0.07	0.36								0.12			1.37	0.05
14	NO2-N (mgN/L)					0.00	0.00	0.01	0.02	0.02	0.01	0.02	0.03								0.00
15	NO3-N (mgN/L)					0.03	0.05	0.06	0.34												0.05
16	P-Tot (mgP/L)			0.020		0.013		0.010	0.020	0.020	0.023	0.025	0.080						0.010		0.013
17	SiO2 (mg/L)					9.9		14.4	21.1	17.9	9.6	18.9	18.4								17.5
18	SO4 (mg/L)	8.4	7.0	9.3	3.2	8.1		7.4	9.8	13.0	10.3	15.6	17.3				3.2		11.6	2.9	5.8
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	1.3	0.8	0.7	0.7	0.6	0.4	1.6	0.9	1.0	0.9	0.9	1.6	0.4	1.0	0.4	2.8	0.4	0.4	0.8	0.8
2	COD (mg/L)						17.6	14.4	14.0	17.3	18.7	22.0	25.0								
3	DO (mg/L)	7.7	7.7	5.7	5.6	5.6	6.7	6.9	6.1	6.5	5.6	5.8	6.7	6.9	6.7	6.4	10.0	6.3	5.9	7.3	7.3
4	DO_SAT% (%)	98	99	71	74	74	85	88	78	85	74	74	85	87	87	83	108	78	76	87	89
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	29	44	36	106	41		22	33	31	34	39	43	45	63	63	46	77	116	72	59
2	HAR_Total (mgCaCO3/L)	37	78	51	142	61		46	64	58	68	76	82	67	86	103	63	98	162	155	106
3	Na% (%)	16	16			29		14	24	16	26	22	23	17	29	24	15	16			20
4	RSC (-)	0.3	2.8	0.3	0.0	0.1		0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.5	0.2	0.3	2.6	0.1	0.1	0.0
5	SAR (-)	0.2	0.3			0.6		0.2	0.5	0.3	0.6	0.5	0.5	0.3	0.8	0.7	0.3	0.4			0.5
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters	Winter Nov - Feb										Summer Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	2.657	3.092	0.748	2.314	3.797	1.180	2.373	7.911	5.287	1.400	5.333	2.150	1.800	1.190	1.900					
2	EC_FLD (µmho/cm)	250		285							253			289				192			
3	EC_GEN (µmho/cm)	250	231	280	299	343	255	315	281	252	218			289				150			
4	pH_FLD (pH units)	8.0		7.7	7.7	7.4	7.5	7.4	7.3	7.4	7.6			8.2				8.8			
5	pH_GEN (pH units)	8.0	8.2	7.6	7.6	7.6	8.0	8.1	8.3	8.0	8.0			8.2				8.0			
6	Temp (deg C)	23.0	19.3	21.9	22.2	22.3	21.3	19.5	20.5	20.3	24.5							28.0			
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0	0.0	2.7	0.0	3.9	0.0			0.0				0.0			
2	ALK-TOT (mgCaCO3/L)		200	203	216	239	180	232	312	263	194			275				229			
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00	0.00										0.01			
4	Ca (mg/L)		20	20	22	27	20	31	31	35	35			36				17			
5	Cl (mg/L)		23.9	23.8	8.5	19.6	17.1	12.1	17.0	16.3	8.0			15.0				17.5			
6	CO3 (mg/L)		0.0	0.0	0.0	0.0	0.0	3.2	0.0	4.8	0.0			0.0				0.0			
7	F (mg/L)		0.16	0.09	0.12	0.11	0.14	0.20										0.13			
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.1	0.0		0.1								0.1			
10	K (mg/L)		1.2	1.4	1.7	2.8	1.5	1.1	7.4	2.9	5.6							1.7			
11	Mg (mg/L)		12.3	12.4	12.3	15.9	11.8	16.5	13.1	17.5	8.8			5.0				10.7			
12	Na (mg/L)		15.4	16.8	8.7	20.2	16.0	37.2	23.7	18.8	14.3							16.6			
13	NO2+NO3 (mg N/L)	0.11	0.08	0.52						0.21								0.54			
14	NO2-N (mgN/L)	0.01	0.01	0.01	0.03	0.04	0.02	0.03		0.03								0.04			
15	NO3-N (mgN/L)	0.11	0.07	0.50						0.18								0.50			
16	P-Tot (mgP/L)		0.020	0.020	0.037	0.060	0.057	0.050		0.040								0.060			
17	SiO2 (mg/L)		26.1	23.0	21.2	18.3	14.7	16.1		13.2								20.0			
18	SO4 (mg/L)		16.5	28.7	22.7	31.3	25.3	18.9		22.0				3.0				12.0			
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.3	0.5	0.5	1.4	0.4	0.8	1.1	0.9	1.1	0.4			0.5				2.1			
2	COD (mg/L)	24.0	18.7	28.0	28.0	28.0	22.0	17.3										28.0			
3	DO (mg/L)	6.6	7.6	7.3	6.7	7.1	7.9	7.6	8.1	8.2	6.5			6.8				8.4			
4	DO_SAT% (%)	77	81	82	77	81	88	83	89	90	78							107			
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		49	51	54	67	50	78	78	88	88			90				42			
2	HAR_Total (mgCaCO3/L)		101	103	105	133	99	146	133	161	125			110				87			
3	Na% (%)		25	26	15	25	25	35	27	20	19							29			
4	RSC (-)		0.1	0.0	0.1	0.0	0.0	0.0	0.5	0.0	0.0			0.5				0.6			
5	SAR (-)		0.7	0.7	0.4	0.8	0.7	1.3	0.9	0.6	0.6							0.8			
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Rampur (EMN00B3)

Local River : Jonk

River Water

Division : MD,CWC,Burla

Sub-Division : UMSD,CWC,Raipur

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)			1.532	0.000	0.000
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)			261		
4	pH_FLD (pH units)			7.7		
5	pH_GEN (pH units)			8.0		
6	Temp (deg C)			25.3		
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			0.1		
2	ALK-TOT (mgCaCO3/L)			271		
3	B (mg/L)					
4	Ca (mg/L)			37		
5	Cl (mg/L)			18.7		
6	CO3 (mg/L)			0.1		
7	F (mg/L)					
8	Fe (mg/L)					
10	K (mg/L)			2.7		
11	Mg (mg/L)			11.7		
12	Na (mg/L)			20.9		
13	NO2+NO3 (mg N/L)					
14	NO2-N (mgN/L)					
15	NO3-N (mgN/L)					
16	P-Tot (mgP/L)					
17	SiO2 (mg/L)					
18	SO4 (mg/L)					
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			0.5	1.7	
2	COD (mg/L)					
3	DO (mg/L)			6.7		
4	DO_SAT% (%)			81		
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			91		
2	HAR_Total (mgCaCO3/L)			140		
3	Na% (%)			24		
4	RSC (-)			0.1		
5	SAR (-)			0.8		
	PESTICIDES					

HASDEO SUB-BASIN

SITE MANENDRAGARH

HISTORY SHEET

Water Year : 2015-2016

Site : Manendragarh

Code : EMM00T7

State : Chhattisgarh

District : Korla

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Hasdeo

Sub Tributary :

Sub-Sub Tributary :

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Drainage Area : 1100 Sq. Km.

Bank :

Latitude : 23°12'10"

Longitude : 82°12'54"

Zero of Gauge (m) : 411 (m.s.l)

6/21/1987 - 5/31/2015

Opening Date

Closing Date

Gauge : 6/21/1987

Discharge : 6/21/1989

Sediment : 7/9/1993

Water Quality : 10/1/1992

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1990-1991	2329	420.440	7/12/1990	0.171	412.630	4/4/1991
1991-1992	465.3	415.200	8/23/1991	0.062	412.410	3/31/1992
1992-1993	97.51	414.245	9/12/1992	0.310	412.450	2/9/1993
1993-1994	709.4	416.510	9/16/1993	0.099	412.240	3/21/1994
1994-1995	541.5	416.595	10/8/1994	0.202	411.580	4/24/1995
1995-1996	310.8	415.750	7/18/1995	0.450	411.560	6/30/1995
1996-1997	290.7	414.605	9/4/1996	1.145	412.435	12/31/1996
1997-1998	130.0	414.000	8/7/1997	0.450	412.110	11/17/1997
1998-1999	990.0	416.000	7/19/1998	0.217	412.130	4/6/1999
1999-2000	175.5	414.330	8/3/1999	1.250	412.210	6/22/1999
2000-2001	240.0	414.670	9/3/2000	0.244	412.470	2/14/2001
2001-2002	374.3	415.610	7/13/2001	0.140	412.260	5/3/2002
2002-2003	355.3	415.870	9/12/2002	0.070	412.340	4/10/2003
2003-2004	328.1	415.570	9/27/2003	0.368	412.355	4/20/2004
2004-2005	170.0	414.670	8/8/2004	0.657	411.900	4/6/2005
2005-2006	169.7	414.380	7/1/2005	0.532	412.270	2/28/2006
2006-2007	174.8	414.950	7/31/2006	0.440	411.720	3/31/2007
2007-2008	115.0	413.960	9/2/2007	0.496	411.650	1/18/2008
2008-2009	212.2	414.900	8/7/2008	0.402	411.700	2/20/2009
2009-2010	112.9	413.745	7/21/2009	0.120	411.540	3/10/2010
2010-2011	119.1	413.750	8/5/2010	0.329	411.600	12/31/2010
2011-2012	448.0	412.810	9/5/2011	0.718	411.560	12/20/2011
2012-2013	235.4	415.225	7/10/2012	0.620	411.510	1/11/2013
2013-2014	85.00	413.490	7/28/2013	0.600	411.520	3/23/2014
2014-2015	279.2	414.735	8/5/2014	0.000	411.000	5/1/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : Manendragarh (EMM00T7)

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	411.000	0.040 *	411.740	1.339	411.700	2.038	411.990	14.05	411.545	1.405	411.670	7.300 *
2	411.000	0.040 *	412.050	5.588	411.680	2.100 *	411.840	8.288	411.585	1.800 *	411.610	1.978
3	411.000	0.040 *	412.420	23.56	411.755	2.437	412.235	33.28	411.580	1.682	411.590	1.423
4	411.520	0.047	412.060	4.427	412.235	18.70	412.105	23.50	411.575	1.500 *	411.580	1.311
5	411.530	0.092	411.735	5.000 *	411.890	0.123	411.975	12.98	411.570	1.440	411.570	1.097
6	411.540	0.112	411.640	1.070	411.760	2.680	411.850	10.00 *	411.560	1.337	411.570	1.122
7	411.560	0.230 *	411.990	2.424	411.720	2.373	411.805	6.483	411.555	1.061	411.565	1.102
8	411.570	0.245	411.615	1.004	411.710	2.155	411.720	4.227	411.555	1.168	411.560	1.000 *
9	411.570	0.224	413.758	127.8	411.695	3.000 *	411.685	3.290	411.550	1.067	411.555	1.182
10	411.560	0.202	412.685	31.28	411.680	2.109	411.670	3.091	411.545	0.975	411.550	1.146
11	411.550	0.116	412.755	34.06	411.803	6.451	411.610	2.339	411.545	0.970 *	411.545	1.100 *
12	411.540	0.106	413.000	36.00 *	412.035	14.02	411.595	2.259	411.558	1.036	411.535	0.842
13	411.535	0.091	412.175	17.11	411.770	3.395	411.585	2.000 *	411.560	0.993	411.530	0.808
14	411.530	0.090 *	411.960	9.952	411.720	2.641	411.683	3.675	411.555	0.966	411.520	0.790
15	411.645	0.362	411.825	2.731	411.690	2.800 *	411.870	16.01	411.550	0.868	411.520	0.790 *
16	411.660	0.477	411.775	2.463	411.780	4.000 *	411.843	13.51	411.548	1.229	411.515	0.892
17	411.895	0.883	411.960	9.878	412.490	33.50	411.745	6.000 *	411.550	1.170	411.515	0.842
18	411.595	0.498	411.760	7.000 *	412.640	37.30	411.720	10.30	411.560	1.330 *	411.520	0.758
19	411.600	0.444	411.720	6.500 *	412.665	39.47	411.695	3.053	411.555	0.921	411.520	0.750
20	411.620	0.509	411.810	3.526	412.275	33.73	411.685	3.200 *	411.555	0.891	411.520	0.666
21	411.570	0.470 *	411.685	3.049	412.080	18.53	411.875	8.770	411.550	0.932	411.520	0.648
22	411.590	0.589	411.625	1.752	411.895	7.614	412.060	12.39	411.550	0.930 *	411.520	0.650 *
23	411.580	0.560	412.510	35.65	411.840	6.000 *	411.853	9.741	411.545	0.927	411.515	0.640
24	411.850	5.814	411.970	13.62	411.773	5.532	411.810	8.131	411.545	0.920 *	411.515	0.627
25	411.700	2.403	412.630	36.71	411.710	4.376	411.710	4.500 *	411.540	0.920 *	411.515	0.620 *
26	411.670	1.681	412.100	6.000 *	411.690	3.407	411.635	2.546	411.540	0.908	411.515	0.611
27	411.660	1.522	411.980	8.992	411.680	2.739	411.590	2.200 *	411.540	0.890	411.510	0.599
28	411.600	0.515 *	411.868	4.174	411.670	2.361	411.565	2.012	411.560	0.910	411.510	0.568
29	411.725	1.594	411.795	3.512	411.665	1.945	411.560	1.763	412.065	30.65	411.510	0.570 *
30	411.740	1.627	411.740	2.100	411.655	1.500 *	411.550	1.664	411.975	12.34	411.505	0.557
31			411.720	2.101	411.820	6.706			411.670	7.329		
Ten-Daily Mean												
I Ten-Daily	411.385	0.127	412.169	20.35	411.783	3.772	411.888	11.92	411.562	1.343	411.582	1.866
II Ten-Daily	411.617	0.358	412.074	12.92	412.087	17.73	411.703	6.234	411.554	1.037	411.524	0.824
III Ten-Daily	411.669	1.677	411.966	10.70	411.771	5.519	411.721	5.371	411.644	5.242	411.514	0.609
Monthly												
Min.	411.000	0.040	411.615	1.004	411.655	0.123	411.550	1.664	411.540	0.868	411.505	0.557
Max.	411.895	5.814	413.758	127.8	412.665	39.47	412.235	33.28	412.065	30.65	411.670	7.300
Mean	411.557	0.721	412.066	14.53	411.876	8.895	411.770	7.841	411.588	2.628	411.540	1.1

Annual Runoff in MCM = 98 Annual Runoff in mm = 89

Peak Observed Discharge = 127.8 cumecs on 09/07/2015 Corres. Water Level :413.7575 m

Lowest Observed Discharge = 0.047 cumecs on 04/06/2015 Corres. Water Level :411.52 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : Manendragarh (EMM00T7)

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	411.500	0.555	411.485	0.376	411.490	0.335	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
2	411.500	0.550	411.485	0.366	411.480	0.334	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
3	411.500	0.533	411.485	0.360 *	411.430	0.239	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
4	411.495	0.519	411.480	0.402	411.400	0.212	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
5	411.495	0.510	411.480	0.381	411.385	0.178	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
6	411.495	0.510 *	411.480	0.354	411.380	0.188	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
7	411.500	0.552	411.490	0.300	411.380	0.180 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
8	411.490	0.446	411.490	0.290	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
9	411.490	0.440	411.490	0.276	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
10	411.490	0.441	411.490	0.270 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
11	411.490	0.438	411.490	0.432	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
12	411.490	0.435	411.485	0.450	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
13	411.495	0.510 *	411.485	0.269	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
14	411.490	0.519	411.485	0.280	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
15	411.490	0.511	411.485	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
16	411.490	0.490	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
17	411.490	0.473	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
18	411.495	0.496	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
19	411.490	0.479	411.510	0.702	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
20	411.490	0.479 *	411.560	1.426	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
21	411.500	0.617	411.600	1.717	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
22	411.500	0.518	411.580	1.651	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
23	411.500	0.508	411.570	1.620	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
24	411.495	0.480 *	411.540	1.200 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
25	411.495	0.483 *	411.500	0.480	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
26	411.495	0.483	411.495	0.490 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
27	411.495	0.480 *	411.495	0.491	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
28	411.490	0.443	411.495	0.426	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
29	411.490	0.417	411.490	0.367	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
30	411.490	0.396	411.490	0.355			411.000	0.000 *	411.000	0.000 *	411.000	0.000 *
31	411.490	0.388	411.490	0.350 *			411.000	0.000 *			411.000	0.000 *
Ten-Daily Mean												
I Ten-Daily	411.496	0.506	411.486	0.338	411.294	0.166	411.000	0.000	411.000	0.000	411.000	0.000
II Ten-Daily	411.491	0.483	411.350	0.356	411.000	0.000	411.000	0.000	411.000	0.000	411.000	0.000
III Ten-Daily	411.495	0.474	411.522	0.832	411.000	0.000	411.000	0.000	411.000	0.000	411.000	0.000
Monthly												
Min.	411.490	0.388	411.000	0.000	411.000	0.000	411.000	0.000	411.000	0.000	411.000	0.000
Max.	411.500	0.617	411.600	1.717	411.490	0.335	411.000	0.000	411.000	0.000	411.000	0.000
Mean	411.494	0.487	411.455	0.519	411.102	0.057	411.000	0	411.000	0	411.000	0

Peak Computed Discharge = 36.00 cumecs on 12/07/2015

Corres. Water Level :413 m

Lowest Computed Discharge = 0.000 cumecs on 15/01/2016

Corres. Water Level :411.485 m

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

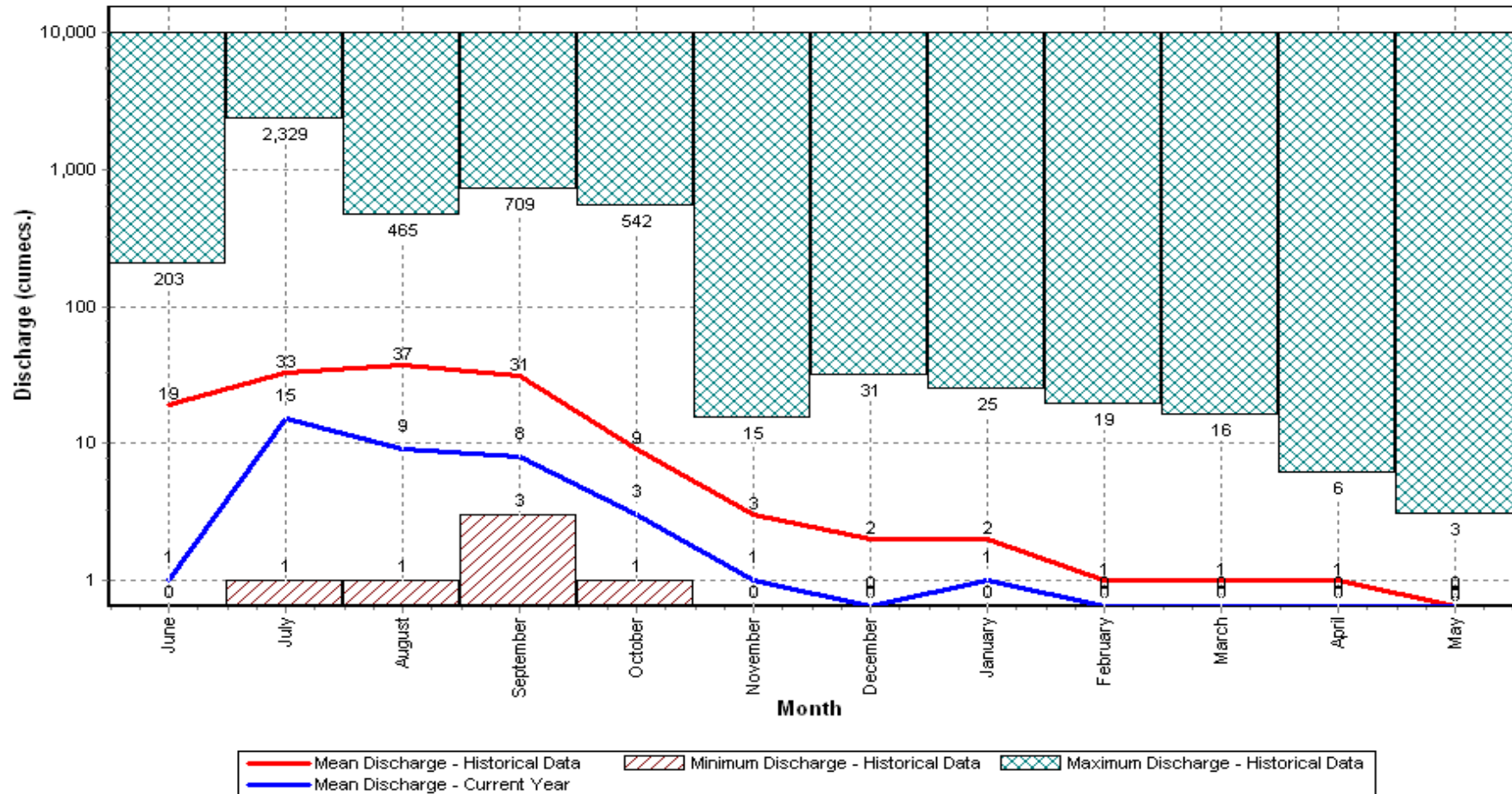
Station Name : Manendragarh (EMM00T7)

Data considered : 1990-2016

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur



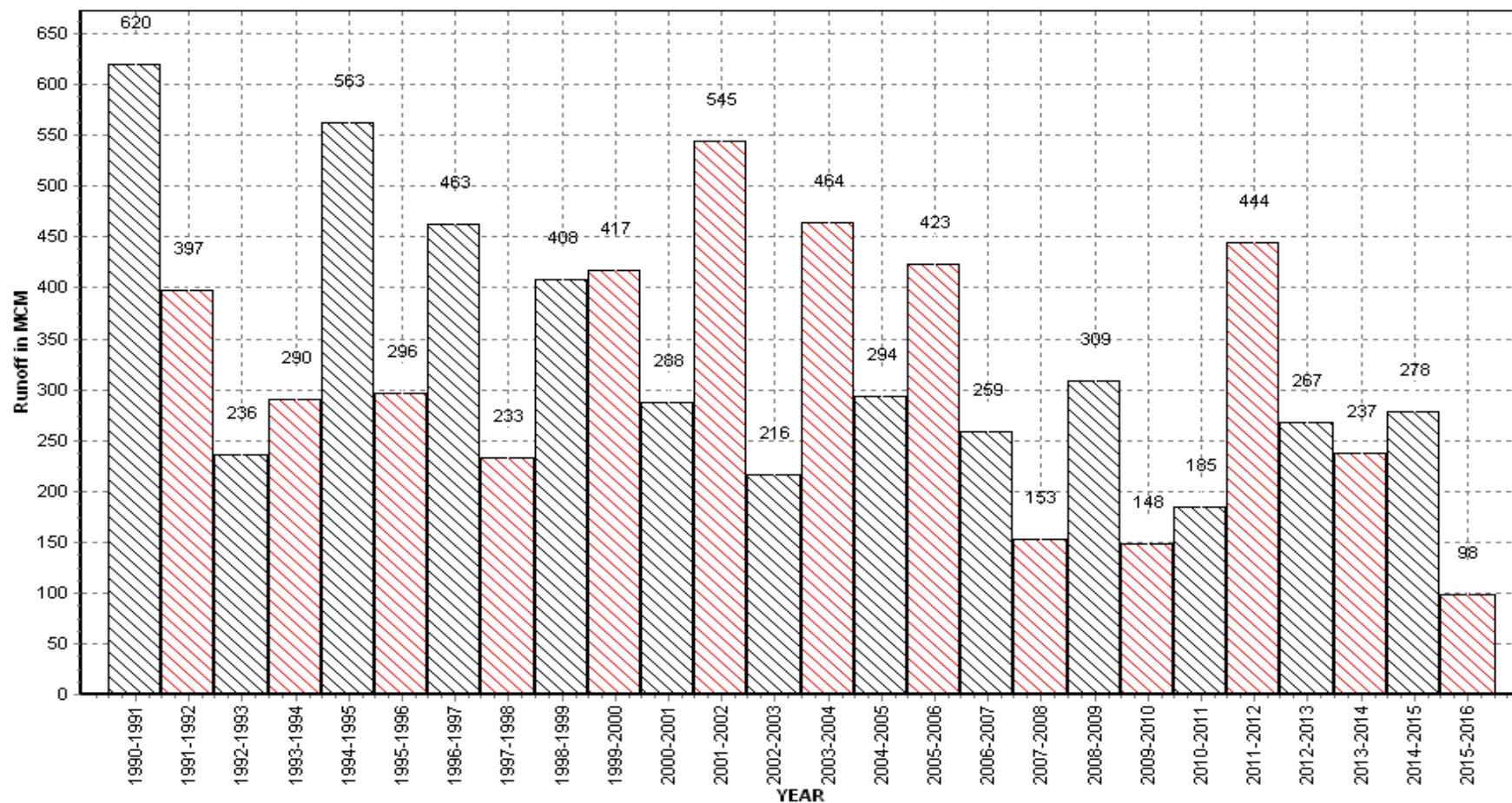
Annual Runoff Values for the period: 1990 - 2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



Note: Missing values have not been considered while arriving at Annual Runoff

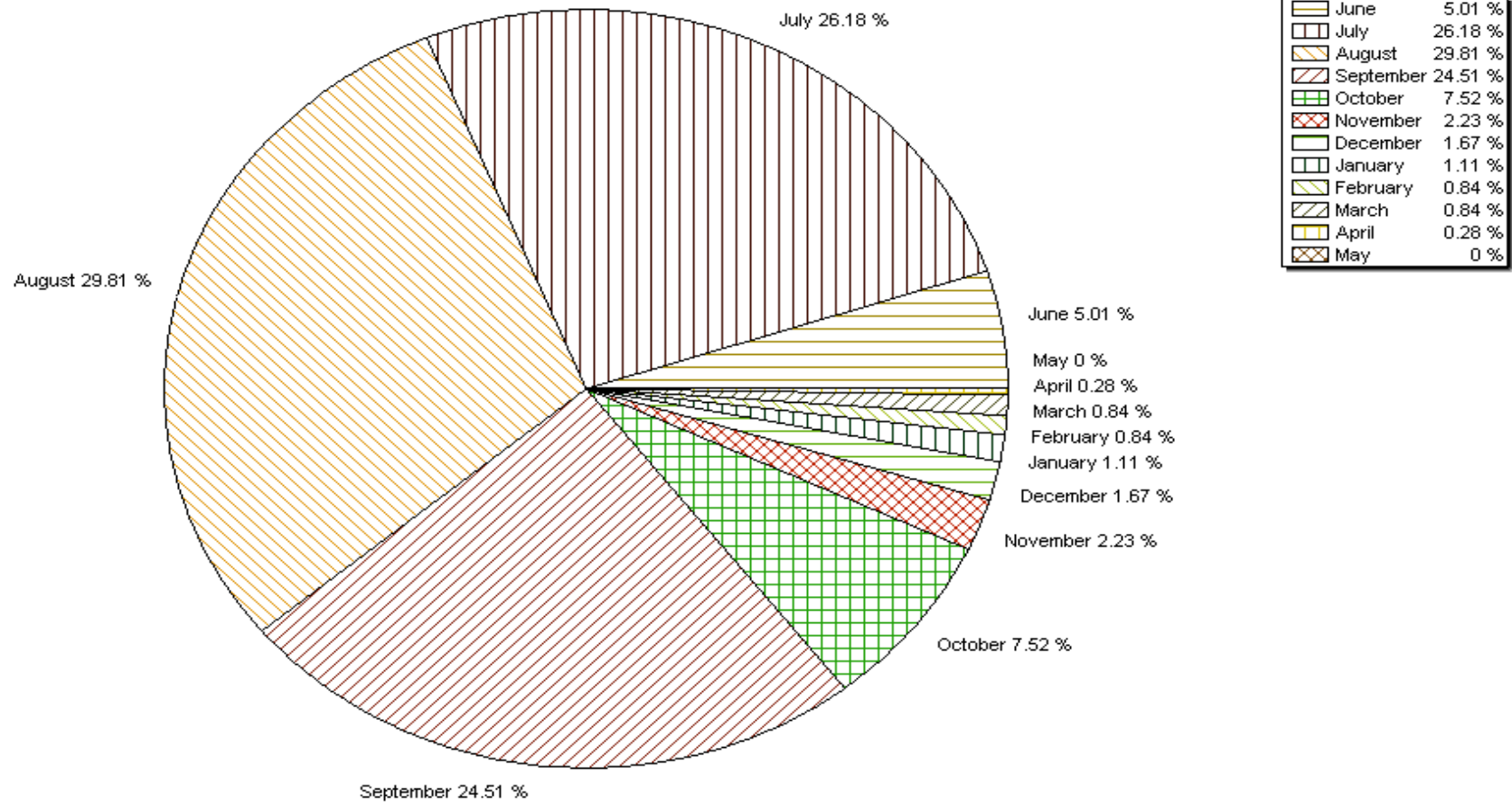
Monthly Average Runoff based on period : 1990-2015

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



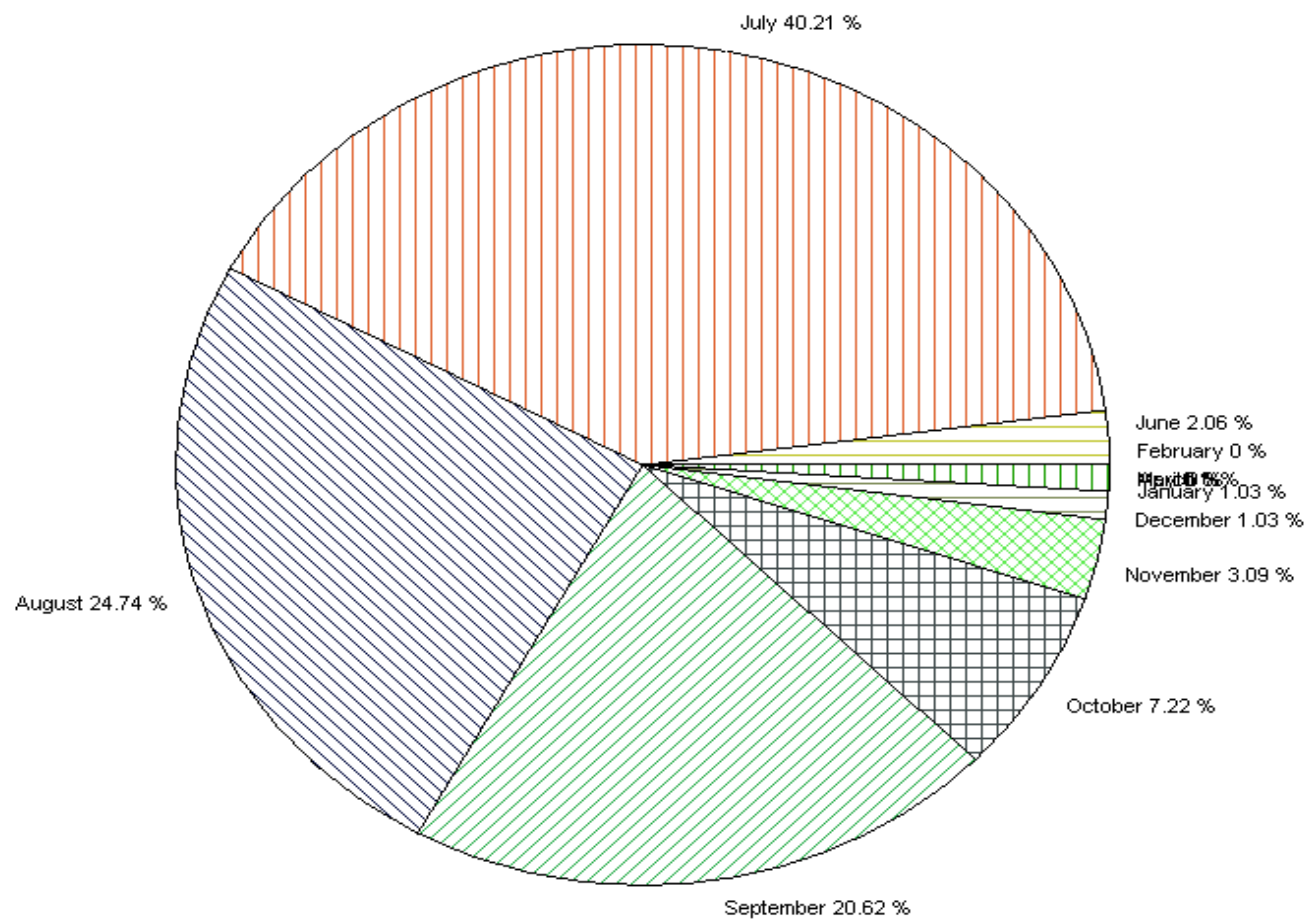
Monthly Runoff for the Year : 2015-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



June	2.06 %
July	40.21 %
August	24.74 %
September	20.62 %
October	7.22 %
November	3.09 %
December	1.03 %
January	1.03 %
February	0 %
March	0 %
April	0 %
May	0 %

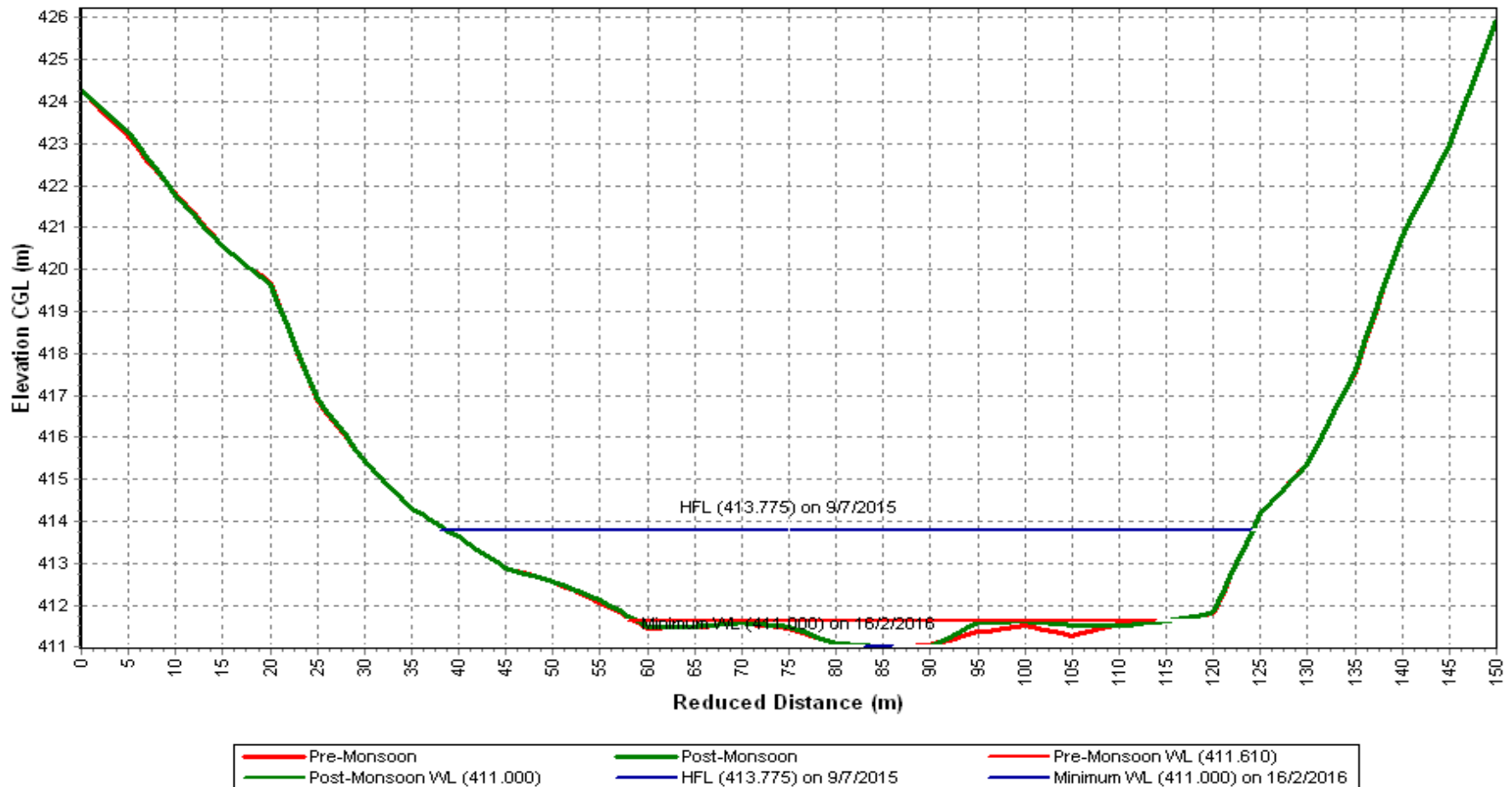
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



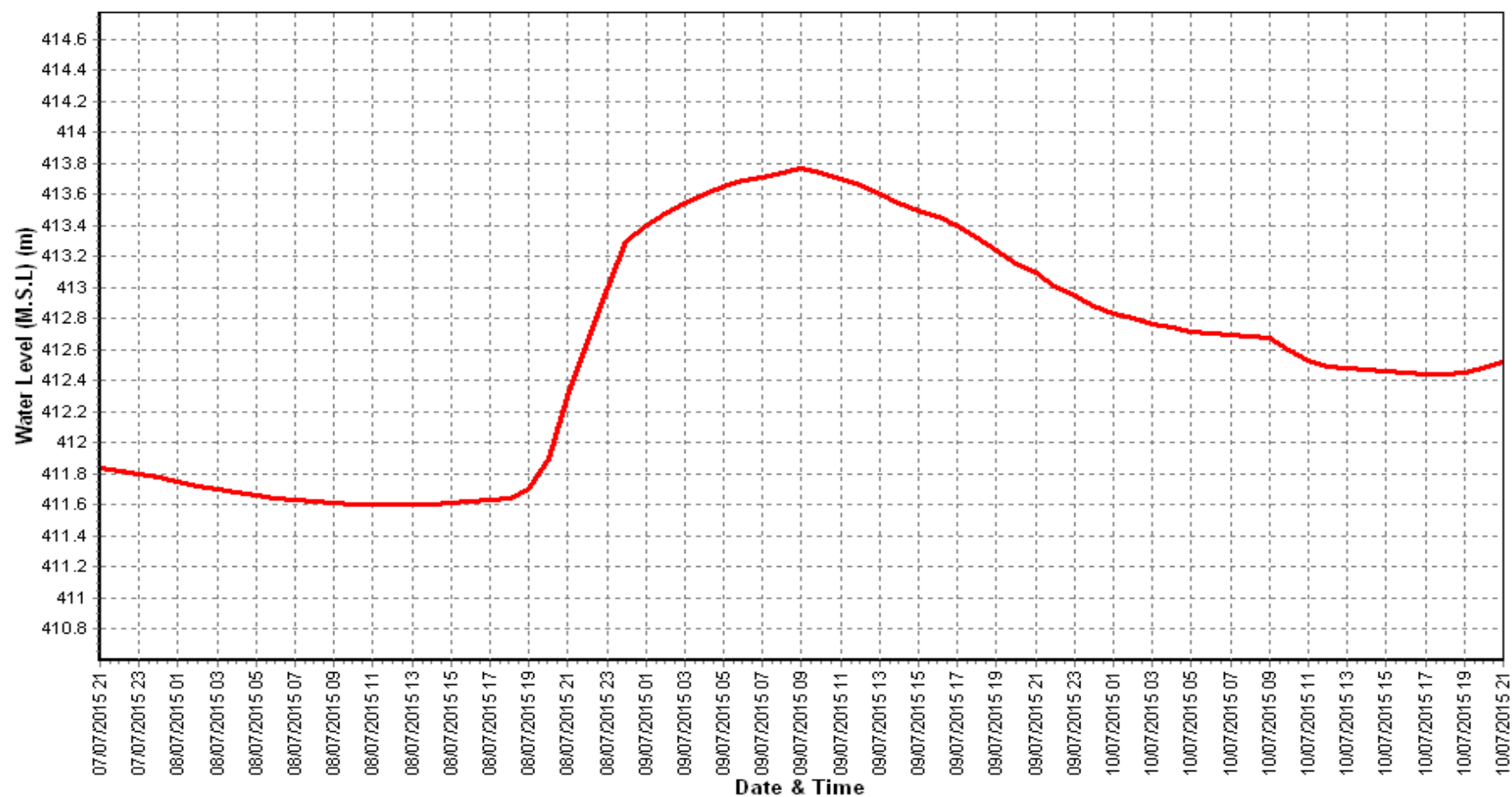
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



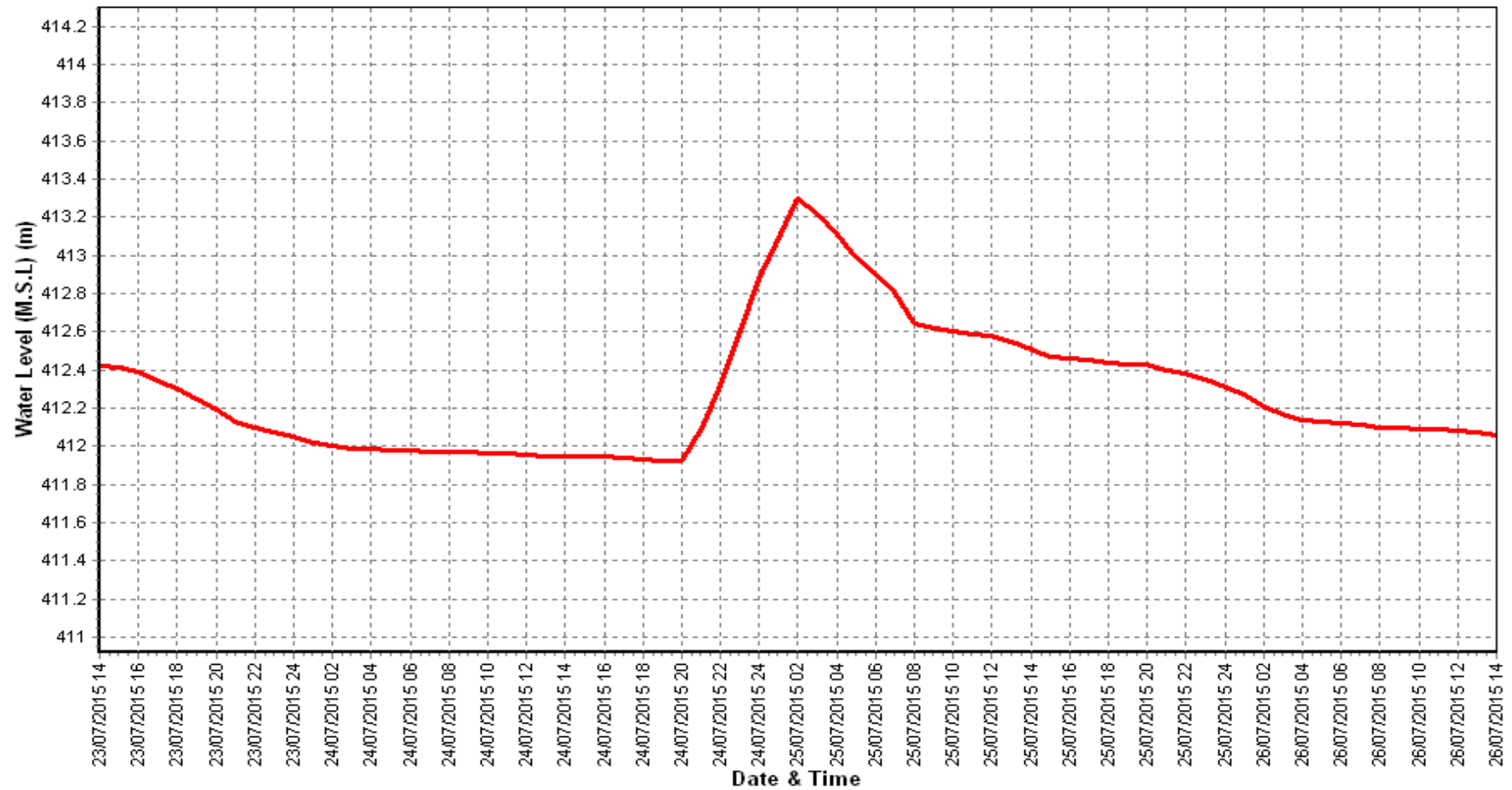
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



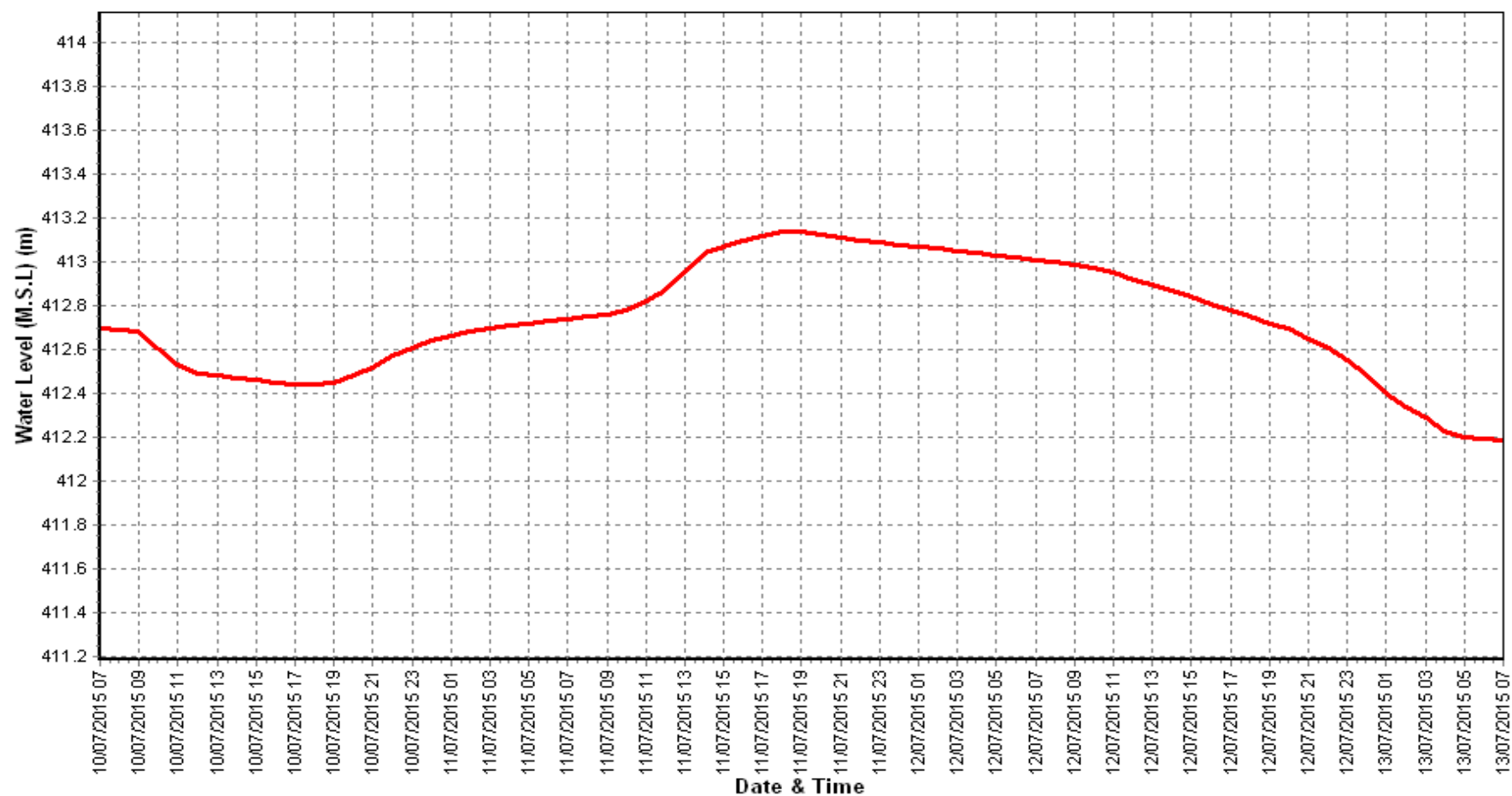
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

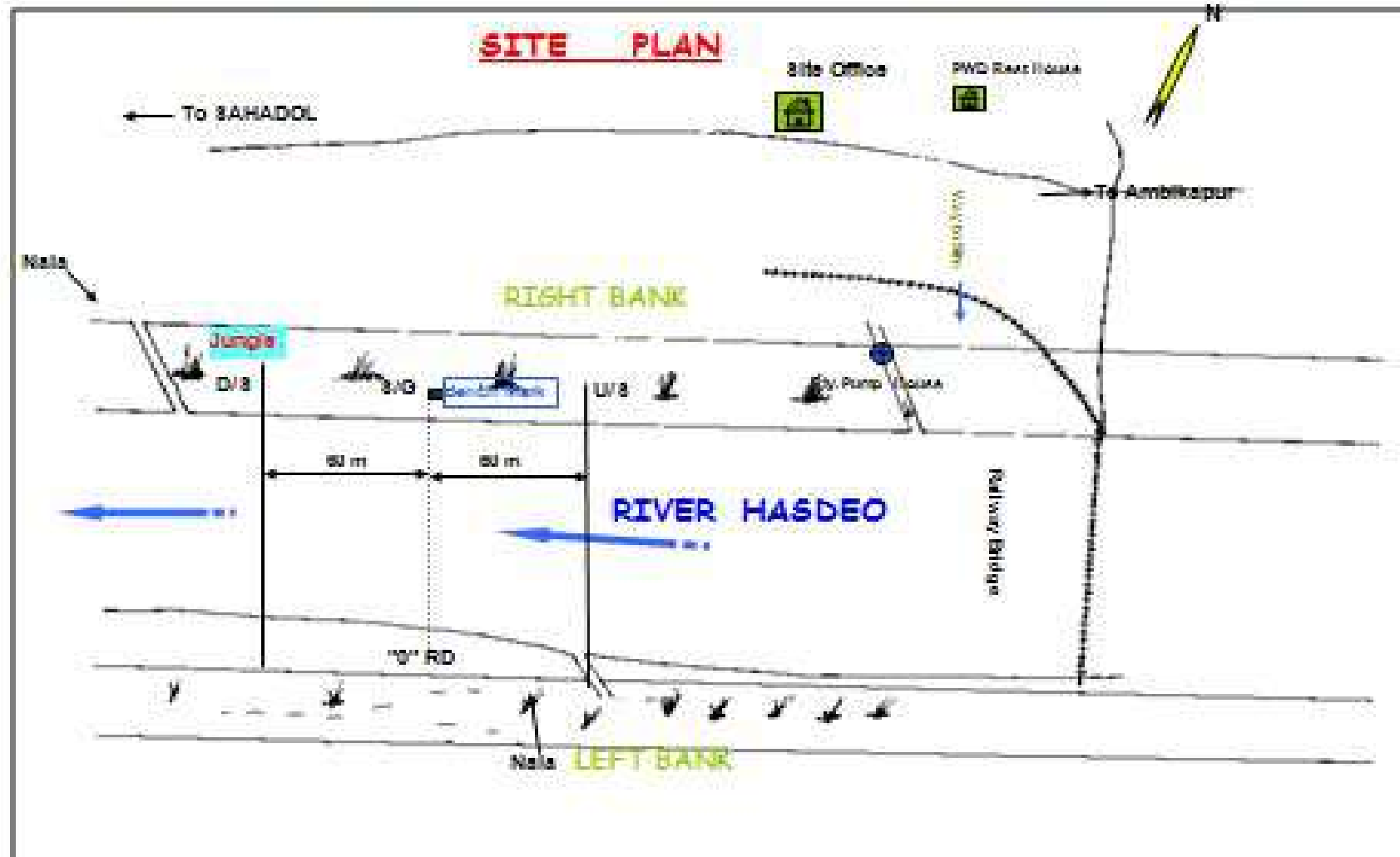


CENTRAL WATER COMMISSION, MAHANADI DIVISION, BURLA

809 : MANENDRAGARH

Code : ENW007

Sub-Division: MM 8-D-4 CWC Rspur



SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Manendragarh (EMM00T7)

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.040	0.000	0.000	0.000	0.000	0	1.339	0.000	0.000	0.014	0.014	2	2.038	0.000	0.000	0.000	0.000	0
2	0.040	0.000	0.000	0.000	0.000	0	5.588	0.000	0.000	0.021	0.021	10	2.100	0.000	0.000	0.000	0.000	0
3	0.040	0.000	0.000	0.000	0.000	0	23.56	0.000	0.000	0.028	0.028	57	2.437	0.000	0.000	0.010	0.010	2
4	0.047	0.000	0.000	0.010	0.010	0	4.427	0.000	0.000	0.014	0.014	5	18.70	0.000	0.000	0.018	0.018	29
5	0.092	0.000	0.000	0.000	0.000	0	5.000	0.000	0.000	0.000	0.000	0	0.123	0.000	0.000	0.012	0.012	0
6	0.112	0.000	0.000	0.006	0.006	0	1.070	0.000	0.000	0.010	0.010	1	2.680	0.000	0.000	0.009	0.009	2
7	0.230	0.000	0.000	0.000	0.000	0	2.424	0.000	0.000	0.008	0.008	2	2.373	0.000	0.000	0.008	0.008	2
8	0.245	0.000	0.000	0.008	0.008	0	1.004	0.000	0.000	0.009	0.009	1	2.155	0.000	0.000	0.010	0.010	2
9	0.224	0.000	0.000	0.024	0.024	0	127.8	0.000	0.000	0.037	0.037	409	3.000	0.000	0.000	0.000	0.000	0
10	0.202	0.000	0.000	0.008	0.008	0	31.28	0.000	0.000	0.039	0.039	105	2.109	0.000	0.000	0.009	0.009	2
11	0.116	0.000	0.000	0.012	0.012	0	34.06	0.000	0.000	0.026	0.026	77	6.451	0.000	0.000	0.014	0.014	8
12	0.106	0.000	0.000	0.010	0.010	0	36.00	0.000	0.000	0.000	0.000	0	14.02	0.000	0.000	0.017	0.017	21
13	0.091	0.000	0.000	0.010	0.010	0	17.11	0.000	0.000	0.012	0.012	18	3.395	0.000	0.000	0.010	0.010	3
14	0.090	0.000	0.000	0.000	0.000	0	9.952	0.000	0.000	0.012	0.012	10	2.641	0.000	0.000	0.007	0.007	2
15	0.362	0.000	0.000	0.032	0.032	1	2.731	0.000	0.000	0.000	0.000	0	2.800	0.000	0.000	0.000	0.000	0
16	0.477	0.000	0.000	0.026	0.026	1	2.463	0.000	0.000	0.000	0.000	0	4.000	0.000	0.000	0.000	0.000	0
17	0.883	0.000	0.000	0.028	0.028	2	9.878	0.000	0.000	0.013	0.013	11	33.50	0.000	0.000	0.026	0.026	75
18	0.498	0.000	0.000	0.034	0.034	1	7.000	0.000	0.000	0.000	0.000	0	37.30	0.000	0.000	0.030	0.030	97
19	0.444	0.000	0.000	0.020	0.020	1	6.500	0.000	0.000	0.000	0.000	0	39.47	0.000	0.000	0.039	0.039	133
20	0.509	0.000	0.000	0.024	0.024	1	3.526	0.000	0.000	0.029	0.029	9	33.73	0.000	0.000	0.032	0.032	93
21	0.470	0.000	0.000	0.000	0.000	0	3.049	0.000	0.000	0.045	0.045	12	18.53	0.000	0.000	0.024	0.024	38
22	0.589	0.000	0.000	0.010	0.010	1	1.752	0.000	0.000	0.043	0.043	7	7.614	0.000	0.000	0.013	0.013	9
23	0.560	0.000	0.000	0.028	0.028	1	35.65	0.000	0.000	0.024	0.024	74	6.000	0.000	0.000	0.000	0.000	0
24	5.814	0.000	0.000	0.016	0.016	8	13.62	0.000	0.000	0.018	0.018	21	5.532	0.000	0.000	0.011	0.011	5
25	2.403	0.000	0.000	0.026	0.026	5	36.71	0.000	0.000	0.018	0.018	57	4.376	0.000	0.000	0.014	0.014	5
26	1.681	0.000	0.000	0.026	0.026	4	6.000	0.000	0.000	0.000	0.000	0	3.407	0.000	0.000	0.010	0.010	3
27	1.522	0.000	0.000	0.040	0.040	5	8.992	0.000	0.000	0.008	0.008	6	2.739	0.000	0.000	0.008	0.008	2
28	0.515	0.000	0.000	0.000	0.000	0	4.174	0.000	0.000	0.009	0.009	3	2.361	0.000	0.000	0.010	0.010	2
29	1.594	0.000	0.000	0.008	0.008	1	3.512	0.000	0.000	0.005	0.005	2	1.945	0.000	0.000	0.007	0.007	1
30	1.627	0.000	0.000	0.006	0.006	1	2.100	0.000	0.000	0.005	0.005	1	1.500	0.000	0.000	0.000	0.000	0
31							2.101	0.000	0.000	0.012	0.012	2	6.706	0.000	0.000	0.009	0.009	5
Ten Daily Mean																		
Ten Daily I	0.127	0.000	0.000	0.006	0.006	0	20.35	0.000	0.000	0.018	0.018	59	3.772	0.000	0.000	0.008	0.008	4
Ten Daily II	0.358	0.000	0.000	0.020	0.020	1	12.92	0.000	0.000	0.009	0.009	12	17.73	0.000	0.000	0.018	0.018	43
Ten Daily III	1.677	0.000	0.000	0.016	0.016	3	10.70	0.000	0.000	0.017	0.017	17	5.519	0.000	0.000	0.010	0.010	6
Monthly																		
Total						35						901						540

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	14.05	0.000	0.000	0.012	0.012	15	1.405	0.000	0.000	0.010	0.010	1	7.300	0.000	0.000	0.000	0.000	0
2	8.288	0.000	0.000	0.010	0.010	7	1.800	0.000	0.000	0.000	0.000	0	1.978	0.000	0.000	0.009	0.009	2
3	33.28	0.000	0.000	0.026	0.026	75	1.682	0.000	0.000	0.009	0.009	1	1.423	0.000	0.000	0.000	0.000	0
4	23.50	0.000	0.000	0.025	0.025	51	1.500	0.000	0.000	0.000	0.000	0	1.311	0.000	0.000	0.000	0.000	0
5	12.98	0.000	0.000	0.013	0.013	15	1.440	0.000	0.000	0.011	0.011	1	1.097	0.000	0.000	0.000	0.000	0
6	10.00	0.000	0.000	0.000	0.000	0	1.337	0.000	0.000	0.010	0.010	1	1.122	0.000	0.000	0.000	0.000	0
7	6.483	0.000	0.000	0.012	0.012	7	1.061	0.000	0.000	0.008	0.008	1	1.102	0.000	0.000	0.000	0.000	0
8	4.227	0.000	0.000	0.009	0.009	3	1.168	0.000	0.000	0.011	0.011	1	1.000	0.000	0.000	0.000	0.000	0
9	3.290	0.000	0.000	0.008	0.008	2	1.067	0.000	0.000	0.007	0.007	1	1.182	0.000	0.000	0.010	0.010	1
10	3.091	0.000	0.000	0.009	0.009	2	0.975	0.000	0.000	0.009	0.009	1	1.146	0.000	0.000	0.000	0.000	0
11	2.339	0.000	0.000	0.008	0.008	2	0.970	0.000	0.000	0.000	0.000	0	1.100	0.000	0.000	0.000	0.000	0
12	2.259	0.000	0.000	0.007	0.007	1	1.036	0.000	0.000	0.010	0.010	1	0.842	0.000	0.000	0.000	0.000	0
13	2.000	0.000	0.000	0.000	0.000	0	0.993	0.000	0.000	0.012	0.012	1	0.808	0.000	0.000	0.000	0.000	0
14	3.675	0.000	0.000	0.010	0.010	3	0.966	0.000	0.000	0.008	0.008	1	0.790	0.000	0.000	0.000	0.000	0
15	16.01	0.000	0.000	0.011	0.011	15	0.868	0.000	0.000	0.009	0.009	1	0.790	0.000	0.000	0.000	0.000	0
16	13.51	0.000	0.000	0.010	0.010	12	1.229	0.000	0.000	0.008	0.008	1	0.892	0.000	0.000	0.008	0.008	1
17	6.000	0.000	0.000	0.000	0.000	0	1.170	0.000	0.000	0.007	0.007	1	0.842	0.000	0.000	0.000	0.000	0
18	10.30	0.000	0.000	0.009	0.009	8	1.330	0.000	0.000	0.000	0.000	0	0.758	0.000	0.000	0.000	0.000	0
19	3.053	0.000	0.000	0.009	0.009	2	0.921	0.000	0.000	0.010	0.010	1	0.750	0.000	0.000	0.000	0.000	0
20	3.200	0.000	0.000	0.000	0.000	0	0.891	0.000	0.000	0.011	0.011	1	0.666	0.000	0.000	0.000	0.000	0
21	8.770	0.000	0.000	0.013	0.013	10	0.932	0.000	0.000	0.009	0.009	1	0.648	0.000	0.000	0.000	0.000	0
22	12.39	0.000	0.000	0.023	0.023	25	0.930	0.000	0.000	0.000	0.000	0	0.650	0.000	0.000	0.000	0.000	0
23	9.741	0.000	0.000	0.011	0.011	9	0.927	0.000	0.000	0.008	0.008	1	0.640	0.000	0.000	0.009	0.009	0
24	8.131	0.000	0.000	0.011	0.011	8	0.920	0.000	0.000	0.000	0.000	0	0.627	0.000	0.000	0.000	0.000	0
25	4.500	0.000	0.000	0.000	0.000	0	0.920	0.000	0.000	0.000	0.000	0	0.620	0.000	0.000	0.000	0.000	0
26	2.546	0.000	0.000	0.008	0.008	2	0.908	0.000	0.000	0.010	0.010	1	0.611	0.000	0.000	0.000	0.000	0
27	2.200	0.000	0.000	0.000	0.000	0	0.890	0.000	0.000	0.011	0.011	1	0.599	0.000	0.000	0.000	0.000	0
28	2.012	0.000	0.000	0.008	0.008	1	0.910	0.000	0.000	0.009	0.009	1	0.568	0.000	0.000	0.000	0.000	0
29	1.763	0.000	0.000	0.007	0.007	1	30.65	0.000	0.000	0.019	0.019	50	0.570	0.000	0.000	0.000	0.000	0
30	1.664	0.000	0.000	0.007	0.007	1	12.34	0.000	0.000	0.018	0.018	19	0.557	0.000	0.000	0.007	0.007	0
31							7.329	0.000	0.000	0.014	0.014	9						
Ten Daily Mean																		
Ten Daily I	11.92	0.000	0.000	0.012	0.012	18	1.343	0.000	0.000	0.008	0.008	1	1.866	0.000	0.000	0.002	0.002	0
Ten Daily II	6.234	0.000	0.000	0.006	0.006	4	1.037	0.000	0.000	0.008	0.008	1	0.824	0.000	0.000	0.001	0.001	0
Ten Daily III	5.371	0.000	0.000	0.009	0.009	6	5.242	0.000	0.000	0.009	0.009	7	0.609	0.000	0.000	0.002	0.002	0
Monthly																		
Total						277						97						4

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.555	0.000	0.000	0.000	0.000	0	0.376	0.000	0.000	0.000	0.000	0	0.335	0.000	0.000	0.000	0.000	0
2	0.550	0.000	0.000	0.000	0.000	0	0.366	0.000	0.000	0.000	0.000	0	0.334	0.000	0.000	0.000	0.000	0
3	0.533	0.000	0.000	0.000	0.000	0	0.360	0.000	0.000	0.000	0.000	0	0.239	0.000	0.000	0.000	0.000	0
4	0.519	0.000	0.000	0.000	0.000	0	0.402	0.000	0.000	0.007	0.007	0	0.212	0.000	0.000	0.000	0.000	0
5	0.510	0.000	0.000	0.000	0.000	0	0.381	0.000	0.000	0.000	0.000	0	0.178	0.000	0.000	0.000	0.000	0
6	0.510	0.000	0.000	0.000	0.000	0	0.354	0.000	0.000	0.000	0.000	0	0.188	0.000	0.000	0.000	0.000	0
7	0.552	0.000	0.000	0.010	0.010	0	0.300	0.000	0.000	0.000	0.000	0	0.180	0.000	0.000	0.000	0.000	0
8	0.446	0.000	0.000	0.000	0.000	0	0.290	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.440	0.000	0.000	0.000	0.000	0	0.276	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.441	0.000	0.000	0.000	0.000	0	0.270	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.438	0.000	0.000	0.000	0.000	0	0.432	0.000	0.000	0.008	0.008	0	0.000	0.000	0.000	0.000	0.000	0
12	0.435	0.000	0.000	0.000	0.000	0	0.450	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.510	0.000	0.000	0.000	0.000	0	0.269	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.519	0.000	0.000	0.009	0.009	0	0.280	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.511	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.490	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.473	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.496	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.479	0.000	0.000	0.000	0.000	0	0.702	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.479	0.000	0.000	0.000	0.000	0	1.426	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.617	0.000	0.000	0.008	0.008	0	1.717	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.518	0.000	0.000	0.000	0.000	0	1.651	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.508	0.000	0.000	0.000	0.000	0	1.620	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.480	0.000	0.000	0.000	0.000	0	1.200	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.483	0.000	0.000	0.000	0.000	0	0.480	0.000	0.000	0.009	0.009	0	0.000	0.000	0.000	0.000	0.000	0
26	0.483	0.000	0.000	0.000	0.000	0	0.490	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.480	0.000	0.000	0.000	0.000	0	0.491	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.443	0.000	0.000	0.009	0.009	0	0.426	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.417	0.000	0.000	0.000	0.000	0	0.367	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.396	0.000	0.000	0.000	0.000	0	0.355	0.000	0.000	0.000	0.000	0						
31	0.388	0.000	0.000	0.000	0.000	0	0.350	0.000	0.000	0.000	0.000	0						
<u>Ten Daily Mean</u>																		
Ten Daily I	0.506	0.000	0.000	0.001	0.001	0	0.338	0.000	0.000	0.001	0.001	0	0.166	0.000	0.000	0.000	0.000	0
Ten Daily II	0.483	0.000	0.000	0.001	0.001	0	0.356	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.474	0.000	0.000	0.002	0.002	0	0.832	0.000	0.000	0.001	0.001	0	0.000	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						2						1						0

Annual Sediment Load (Metric Tonnes) : 1856

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.000	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 1856

Annual Sediment Load for period : 1994-2016

Station Name : Manendragarh (EMM00T7)

Division : MD,CWC,Burla

Local River : Hasdeo

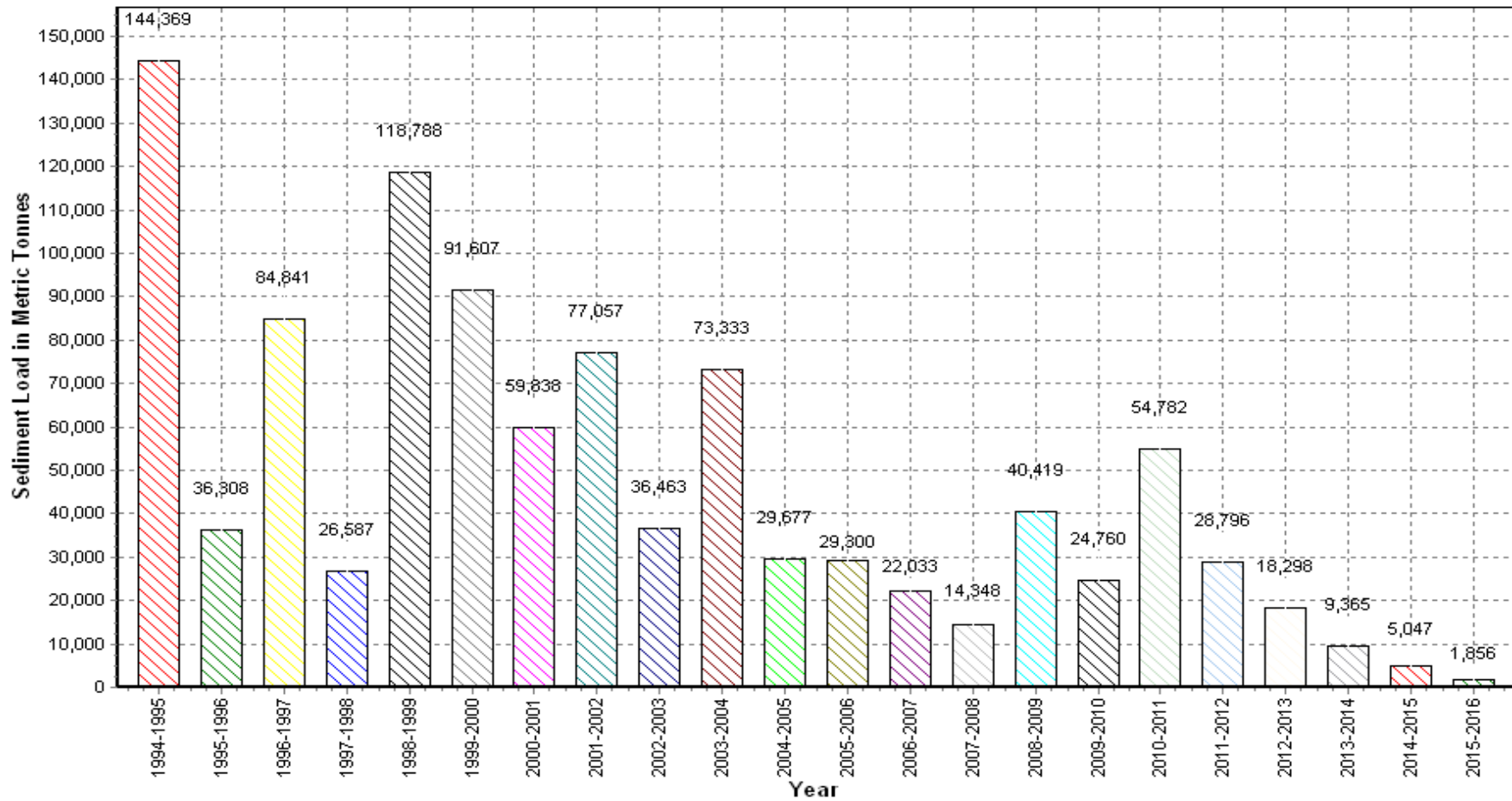
Sub-Division : MMSD I,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1994-1995	144367	2	144369	563
1995-1996	36308	0	36308	296
1996-1997	84841	0	84841	463
1997-1998	26587	0	26587	233
1998-1999	118788	0	118788	408
1999-2000	91607	0	91607	417
2000-2001	59838	0	59838	288
2001-2002	77057	0	77057	545
2002-2003	36463	0	36463	216
2003-2004	73333	0	73333	464
2004-2005	29668	8	29677	294
2005-2006	29300	0	29300	423
2006-2007	22033	0	22033	259
2007-2008	14348	0	14348	153
2008-2009	40410	9	40419	309
2009-2010	24719	41	24760	148
2010-2011	54762	20	54782	185
2011-2012	28796	0	28796	444
2012-2013	18291	7	18298	267
2013-2014	9361	5	9365	237
2014-2015	5009	37	5047	278
2015-2016	1854	3	1856	98

Annual Sediment Load for the period: 1994-2016

Station Name : Manendragarh (EMM00T7)
Local River : Hasdeo

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



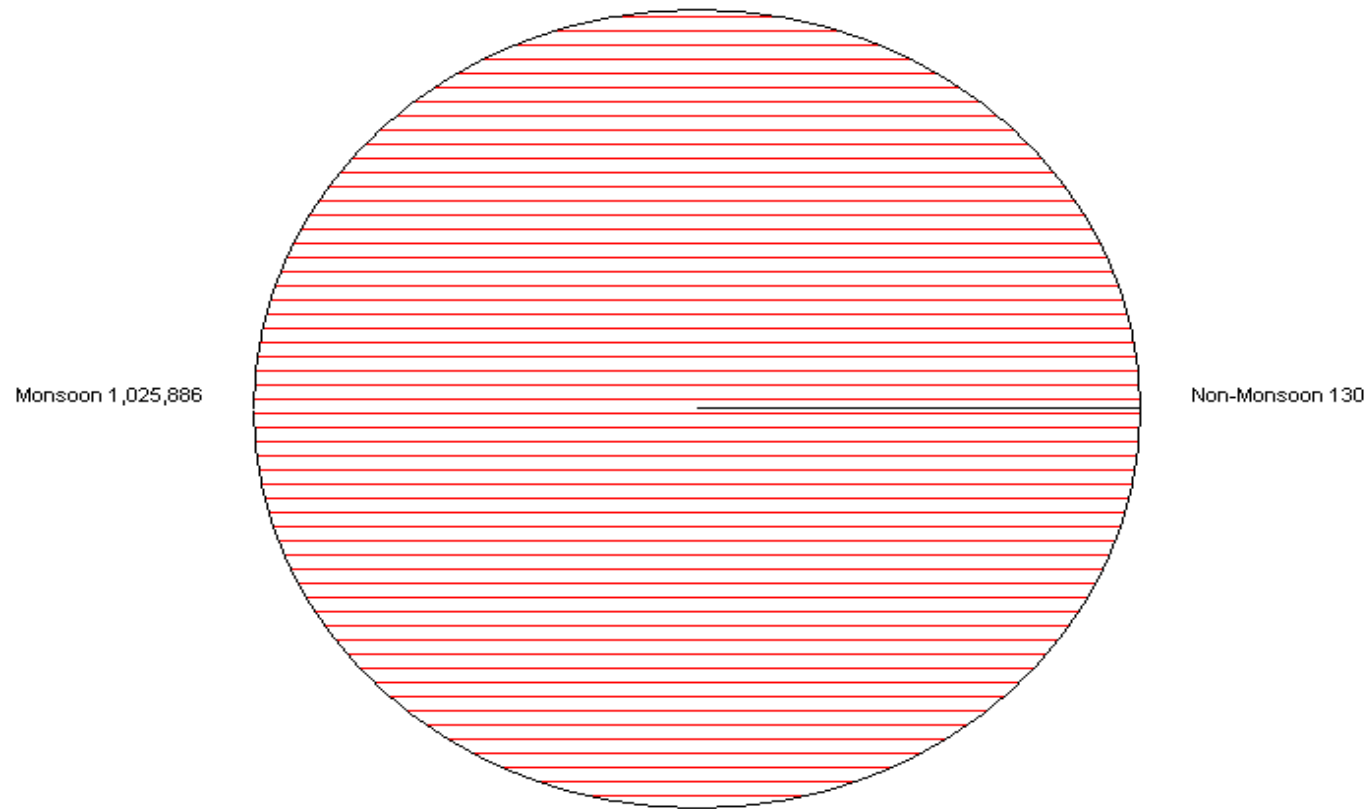
Seasonal Sediment Load for the period : 1994-2015

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

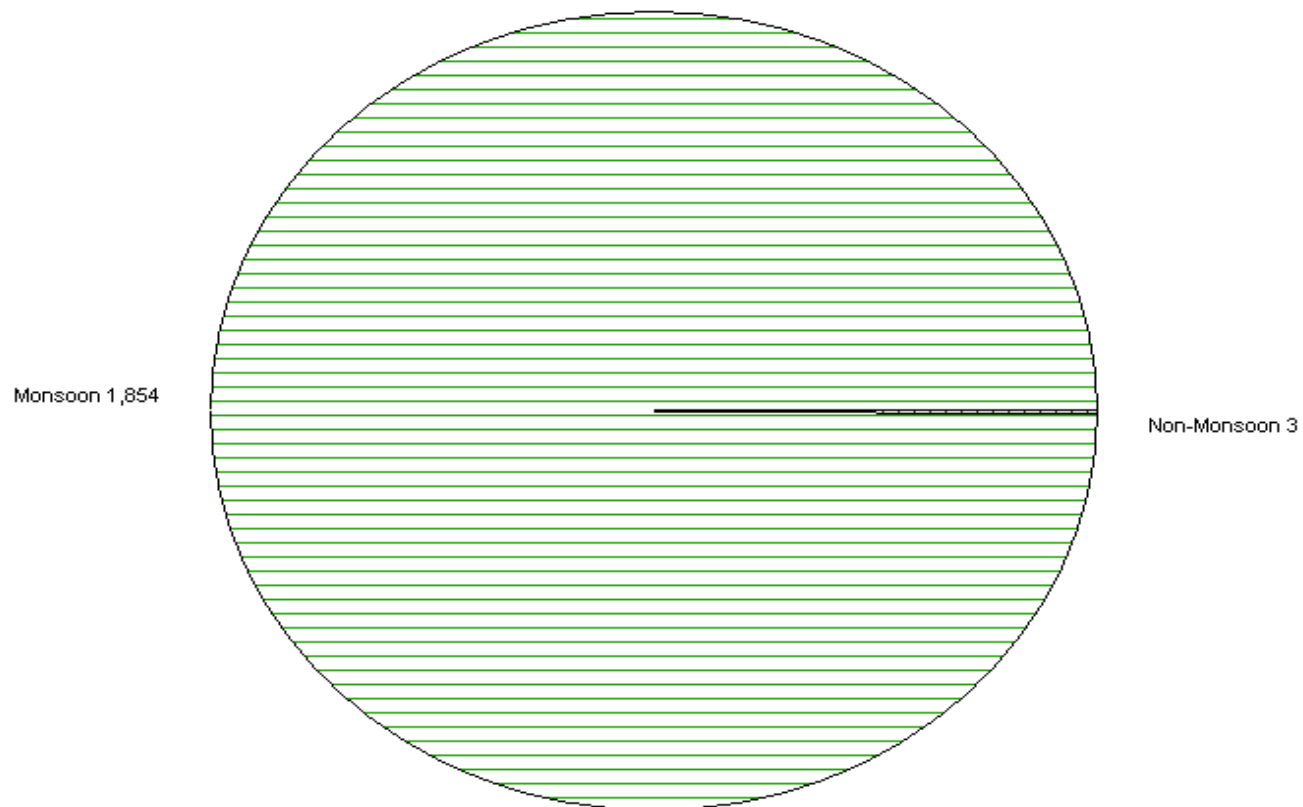
Sub-Division : MMSD I,CWC,Raipur



Seasonal Sediment Load for the Year: 2015-2016

Station Name : Manendragarh (EMM00T7)
Local River : Hasdeo

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

River Water Analysis

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.040	1.339	2.038	14.05	1.405	1.978	0.555	0.376	0.335	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Brown	Clear	Brown	Clear	Clear	Clear			
3	EC_FLD (μmho/cm)	146	840	78	62	41	36	32	136	134			
4	EC_GEN (μmho/cm)	253	119	116	96	98	114	150	161	147			
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free			
6	pH_FLD (pH units)	7.8	5.8	6.8	6.8	8.4	7.3	7.3	6.3	6.4			
7	pH_GEN (pH units)	8.3	8.1	7.4	7.2	8.4	7.8	8.2	8.3	8.8			
8	Temp (deg C)	35.0	24.0	27.0	24.0	27.5	19.5	21.0	13.5	19.0			
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	15.9	0.0	0.0	0.0	12.0	0.0	0.0	0.0	0.0			
2	ALK-TOT (mgCaCO3/L)	156	128	96	102	80	92	132	116	116			
3	Ca (mg/L)	29	16	22	10	18	8	18	26	24			
4	Cl (mg/L)	22.0	17.0	17.0	17.0	16.0	9.0	13.0	15.0	20.0			
5	CO3 (mg/L)	19.2	0.0	0.0	0.0	14.4	0.0	0.0	0.0	0.0			
6	HCO3 (mg/L)	76	78	59	62	34	56	81	71	71			
7	K (mg/L)	10.4	8.8	3.4	3.3	9.1	4.1	4.5	7.7	6.3			
8	Mg (mg/L)	12.6	9.7	7.8	9.7	9.7	11.7	9.7	6.8	7.8			
9	Na (mg/L)	26.8	23.6	6.7	7.1	24.1	19.2	14.7	21.8	16.0			
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.1	1.6	0.2	1.8	0.6	0.8	0.6	0.6	1.5			
2	DO (mg/L)	4.6	6.5	6.0	5.7	6.7	6.7	7.6	9.1	9.1			
3	DO_SAT% (%)	66	77	75	68	84	72	85	86	98			
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	72	40	56	24	44	19	44	64	60			
2	HAR_Total (mgCaCO3/L)	125	81	89	65	85	68	85	93	93			
3	Na% (%)	30	36	14	19	35	37	26	32	26			
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
5	SAR (-)	1.0	1.1	0.3	0.4	1.1	1.0	0.7	1.0	0.7			
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Manendragarh (EMM00T7)

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	127.8	0.000	3.088
2	EC_FLD (μmho/cm)	9	840	32	167
3	EC_GEN (μmho/cm)	9	253	96	139
4	pH_FLD (pH units)	9	8.4	5.8	7
5	pH_GEN (pH units)	9	8.8	7.2	8
6	Temp (deg C)	9	35.0	13.5	23.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	9	15.9	0.0	3.1
2	ALK-TOT (mgCaCO3/L)	9	156	80	113
3	Ca (mg/L)	9	29	8	19
4	Cl (mg/L)	9	22.0	9.0	16.2
5	CO3 (mg/L)	9	19.2	0.0	3.7
6	HCO3 (mg/L)	9	81	34	65
7	K (mg/L)	9	10.4	3.3	6.4
8	Mg (mg/L)	9	12.6	6.8	9.5
9	Na (mg/L)	9	26.8	6.7	17.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	9	1.8	0.2	1
2	DO (mg/L)	9	9.1	4.6	6.9
3	DO_SAT% (%)	9	98	66	79
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	9	72	19	47
2	HAR_Total (mgCaCO3/L)	9	125	65	87
3	Na% (%)	9	37	14	28
4	RSC (-)	9	0.0	0.0	0
5	SAR (-)	9	1.1	0.3	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	45.67	6.529	38.07	8.658			26.89	21.73	16.87	21.59	32.40	18.48	16.10	14.84	3.774	3.204	0.699	4.587	5.423	
2	EC_FLD (µmho/cm)	115	167	80	106			172	89	189		85		149		233	185	149	192	198	
3	EC_GEN (µmho/cm)	115	167	80	106			139	154	177	112	121	139	100	244	136	185	149	192	198	
4	pH_FLD (pH units)	7.1	7.8	7.4	7.7			7.5	7.6	7.6	7.1	7.4		7.2		7.1	7.6	8.3	7.6	7.8	
5	pH_GEN (pH units)	7.1	7.8	7.4	7.7			7.5	7.6	7.7	7.6	7.6	7.8	8.1	7.9	7.8	7.6	8.3	7.6	7.8	
6	Temp (deg C)	25.1	26.1	24.3	30.0			27.3	22.8	27.0	27.0	25.2	26.5	27.9	27.3	27.5	18.3	18.9	22.5	24.0	
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	0.6	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	1.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	90	100	91	103			59	131	131	78	87	105	88	118	113	137	93	187	151	
3	B (mg/L)							0.01	0.00	0.00	0.00	0.00	0.00								
4	Ca (mg/L)	8	16	9	15			6	12	14	8	10	14	12	16	19	13	13	40	11	
5	Cl (mg/L)	2.9	5.3	15.6	12.0			3.6	7.1	3.7	3.6	7.5	8.8	13.8	14.0	17.8	4.9	5.1	17.0	5.7	
6	CO3 (mg/L)	0.0	0.7	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.7	0.0	1.3	0.0	0.0	
7	F (mg/L)			1.07				0.05	0.08	0.06	0.08	0.16	0.13						0.47		
8	Fe (mg/L)							0.0	0.0	0.0	0.0	0.0	0.0								
9	HCO3 (mg/L)	55	60	56	86			36	80	80	47	53	64	54	72	62	84	55	69	92	
10	K (mg/L)	1.7	7.9					0.8	1.3	1.4	1.4	1.9	1.2	2.8	3.1	7.0	1.5	3.0		1.2	
11	Mg (mg/L)	3.2	5.8	2.4	8.1			3.2	6.1	7.5	4.4	5.8	6.0	4.9	7.0	9.9	4.3	2.8	-5.2	8.8	
12	Na (mg/L)	3.0	5.0					11.7	5.5	3.6	10.9	3.7	5.3	3.4	17.4	17.6	6.0	4.8		4.9	
13	NO2+NO3 (mg N/L)	2.72			1.36			0.05	0.64								0.07			1.48	
14	NO2-N (mgN/L)							0.01	0.02	0.02	0.01	0.02	0.02								
15	NO3-N (mgN/L)							0.05	0.62												
16	P-Tot (mgP/L)			0.030				0.010	0.020	0.050	0.015	0.027	0.043								
17	SiO2 (mg/L)							5.8	13.1	11.3	6.6	7.6	10.3								
18	SO4 (mg/L)	3.1	7.6	25.5	6.5			8.5	5.8	13.0	9.4	7.7	13.0				3.6	6.9	19.7	16.7	
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.8	0.8	1.2	0.9			0.6	1.1	1.4	0.9	0.9	1.4	1.0	0.8	1.1	0.8	0.9	0.6	0.7	
2	COD (mg/L)							8.0	18.0	18.0	14.0	28.0	18.7								
3	DO (mg/L)	8.1	8.5	5.2	5.0			8.3	7.2	6.5	6.1	6.9	7.9	6.9	6.0	5.9	10.0	9.4	5.1	8.5	
4	DO_SAT% (%)	97	104	61	66			100	83	82	77	84	97	88	75	74	105	101		101	
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	21	40	24	37			15	31	35	20	24	34	31	40	47	34	34	100	27	
2	HAR_Total (mgCaCO3/L)	34	64	34	70			28	56	66	38	48	59	51	69	89	52	45	79	63	
3	Na% (%)	15	14					49	17	10	34	15	16	12	34	27	19	13		14	
4	RSC (-)	0.2	0.2	0.1	0.0			0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.5	
5	SAR (-)	0.2	0.3					1.0	0.3	0.2	0.7	0.2	0.3	0.2	0.9	0.8	0.4	0.2		0.3	
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)		1.076	1.435	0.932	0.679	2.914	1.594	2.077	2.479	0.811	0.672	0.476	0.896	0.860					0.292	
2	EC_FLD (µmho/cm)		199	108	149	294	140		83	760	85	287	185	284							
3	EC_GEN (µmho/cm)		162	148	176	230	176		216	199	143	287	185	284				157			
4	pH_FLD (pH units)		7.7	7.6	8.1	7.4	7.8		6.7	6.5	6.8	7.6	8.5	7.9							
5	pH_GEN (pH units)		8.0	7.6	8.3	7.7	8.1		8.2	7.9	8.3	7.6	8.5	8.0				8.4			
6	Temp (deg C)		10.5	15.0	18.5	26.0	18.5		17.8	16.9	18.3	19.3	20.0					15.0			
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	8.3	0.0	0.0		1.0	0.0	0.0	0.0	3.6	0.0				9.2			
2	ALK-TOT (mgCaCO3/L)		120	131	94	163	129		198	192	114	172	96	279				103			
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00											0.01			
4	Ca (mg/L)		13	13	13	17	13		31	28	19	19	12	15				11			
5	Cl (mg/L)		18.0	11.0	7.1	8.1	6.2		23.3	20.3	14.3	8.1	3.0	15.0				18.4			
6	CO3 (mg/L)		0.0	0.0	9.9	0.0	0.0		1.2	0.0	0.0	0.0	4.3	0.0				11.1			
7	F (mg/L)		0.08	0.09	0.18	0.18	0.14											0.07			
8	Fe (mg/L)		0.0	0.0	0.0	0.0	0.0			0.1								0.1			
9	HCO3 (mg/L)		73	80	47	99	78		120	117	70	105	54	170				52			
10	K (mg/L)		2.5	2.2	1.9	1.4	1.6		9.8	5.4	5.7	1.8						1.0			
11	Mg (mg/L)		6.3	6.6	6.6	10.2	7.8		20.9	18.7	9.0	5.4	2.6	7.5				5.8			
12	Na (mg/L)		14.8	8.8	6.5	3.5	7.4		23.0	21.0	17.9	4.1						14.0			
13	NO2+NO3 (mg N/L)		0.18	0.86						0.13		0.09						0.28			
14	NO2-N (mgN/L)		0.01	0.01	0.01	0.02	0.01			0.02								0.01			
15	NO3-N (mgN/L)		0.17	0.85						0.11								0.27			
16	P-Tot (mgP/L)		0.020	0.035	0.010	0.030	0.020			0.020								0.020			
17	SiO2 (mg/L)		13.0	12.5	8.4	13.2	4.2			10.0								11.8			
18	SO4 (mg/L)		28.5	16.0	37.5	26.6	21.6			18.5		3.3		30.0				16.0			
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)		1.2	0.5	0.8	0.4	0.5		1.7	2.6	0.9	1.0		0.7				1.4			
2	COD (mg/L)		20.0	22.0	14.0	20.0	16.0											16.0			
3	DO (mg/L)		9.7	8.2	8.7	7.7	8.5		8.3	7.8	8.1	8.3	7.4	7.3							
4	DO_SAT% (%)		88	81	92	95	90		87	80	86	88	78								
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		33	32	33	42	32		78	71	47	47	30	38				28			
2	HAR_Total (mgCaCO3/L)		59	60	60	85	65		165	149	84	69	41	69				52			
3	Na% (%)		34	24	18	8	20		20	22	30	12						36			
4	RSC (-)		0.0	0.1	0.0	0.0	0.0		0.0	0.0	0.0	0.3	0.2	1.4				0.2			
5	SAR (-)		0.8	0.5	0.4	0.2	0.4		0.8	0.7	0.9	0.2						0.8			
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Manendragarh (EMM00T7)

Local River : Hasdeo

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)			1.304	0.200	0.000
2	EC_FLD (µmho/cm)				785	
3	EC_GEN (µmho/cm)			520	409	
4	pH_FLD (pH units)				6.6	
5	pH_GEN (pH units)			7.6	7.9	
6	Temp (deg C)			17.0	24.3	
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)			0.0	6.0	
2	ALK-TOT (mgCaCO3/L)			320	232	
3	B (mg/L)					
4	Ca (mg/L)			61	53	
5	Cl (mg/L)			48.0	33.0	
6	CO3 (mg/L)			0.0	7.2	
7	F (mg/L)					
8	Fe (mg/L)				0.1	
9	HCO3 (mg/L)			195	134	
10	K (mg/L)			3.6	7.1	
11	Mg (mg/L)			10.9	20.4	
12	Na (mg/L)			40.9	20.3	
13	NO2+NO3 (mg N/L)				0.17	
14	NO2-N (mgN/L)				0.06	
15	NO3-N (mgN/L)				0.10	
16	P-Tot (mgP/L)				0.015	
17	SiO2 (mg/L)				10.7	
18	SO4 (mg/L)				14.8	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)			0.8	10.8	
2	COD (mg/L)					
3	DO (mg/L)			5.0	6.1	
4	DO_SAT% (%)			52	72	
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)			152	132	
2	HAR_Total (mgCaCO3/L)			198	217	
3	Na% (%)			31	21	
4	RSC (-)			0.0	0.0	
5	SAR (-)			1.3	0.8	
	PESTICIDES					

SITE BAHMNIDHI

HISTORY SHEET

Water Year : 2015-2016

Site : Bamnidhi

Code : EMM00B3

State : Chhattisgarh

District : Janjgir-champa

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Hasdeo

Sub Tributary :

Sub-Sub Tributary :

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Drainage Area : 9730 Sq. Km.

Bank :

Latitude : 21°53'55"

Longitude : 82°42'29"

Zero of Gauge (m) : 223 (m.s.l)

1/29/1971 - 12/31/2025

Opening Date

Closing Date

Gauge : 1/29/1971

Discharge : 2/18/1971

Sediment : 1/1/1973

Water Quality : 9/1/1972

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1971-1972	8843	228.510	7/28/1971	1.000	224.425	5/28/1972
1972-1973	4688	227.948	9/13/1972	1.100	224.410	6/15/1972
1973-1974	5801	228.340	9/4/1973	1.200	224.380	6/1/1973
1974-1975	1955	227.555	8/18/1974	1.600	224.680	5/14/1975
1975-1976	12700	228.883	8/22/1975	2.194	224.420	4/30/1976
1976-1977	5445	228.250	8/15/1976	1.491	224.390	2/10/1977
1977-1978	5802	228.055	7/16/1977	2.057	224.385	6/2/1977
1978-1979	2900	227.375	8/12/1978	1.000	224.350	5/31/1979
1979-1980	2348	227.315	8/9/1979	0.864	224.330	5/10/1980
1980-1981	4916	228.250	9/20/1980	1.292	224.360	6/2/1980
1981-1982	2665	228.600	8/23/1981	3.245	224.395	6/2/1981
1982-1983	2571	227.600	8/31/1982	2.850	224.515	4/16/1983
1983-1984	2001	227.665	9/9/1983	2.000	224.520	6/12/1983
1984-1985	4502	228.200	8/9/1984	3.460	224.710	6/2/1984
1985-1986	3500	227.350	8/8/1985	2.950	224.765	6/2/1985
1986-1987	3480	228.185	6/28/1986	2.200	224.525	6/12/1986
1987-1988	6658	228.453	9/15/1987	3.580	224.675	6/2/1987
1988-1989	1547	227.070	8/11/1988	2.531	224.490	5/12/1989
1989-1990	914.0	226.395	7/28/1989	2.511	224.485	6/3/1989
1990-1991	1381	226.750	7/20/1990	5.255	224.525	6/6/1990
1991-1992	1691	227.050	8/14/1991	3.500	224.630	5/24/1992
1992-1993	758.9	226.380	8/20/1992	5.000	224.655	3/21/1993

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1993-1994	1259	226.645	9/27/1993	7.000	224.700	6/13/1993
1994-1995	5169	228.560	8/4/1994	17.93	224.735	2/26/1995
1995-1996	1551	227.370	7/18/1995	17.69	224.655	5/28/1996
1996-1997	1701	227.020	7/26/1996	9.846	224.625	5/15/1997
1997-1998	814.3	226.390	9/9/1997	18.97	224.690	6/22/1997
1998-1999	4163	227.600	9/12/1998	11.00	224.645	5/16/1999
1999-2000	1719	227.220	8/9/1999	16.72	224.820	5/12/2000
2000-2001	930.8	226.550	7/27/2000	20.88	224.850	5/11/2001
2001-2002	3036	227.840	7/24/2001	29.31	224.870	6/19/2001
2002-2003	805.9	226.110	6/25/2002	13.37	224.480	5/12/2003
2003-2004	6731	228.520	9/8/2003	9.500	224.450	6/15/2003
2004-2005	4691	228.257	8/12/2004	21.27	224.830	4/25/2005
2005-2006	3267	227.730	8/5/2005	10.86	224.580	5/8/2006
2006-2007	1640	226.880	8/23/2006	22.95	224.785	1/9/2007
2007-2008	1379	226.615	8/21/2007	4.520	224.600	5/18/2008
2008-2009	752.9	226.355	9/19/2008	8.232	224.640	6/4/2008
2009-2010	346.7	225.925	7/14/2009	1.884	224.560	5/21/2010
2010-2011	803.3	226.155	8/6/2010	4.002	224.480	5/24/2011
2011-2012	7732	228.620	9/10/2011	2.500	224.350	5/27/2012
2012-2013	827.4	226.380	8/23/2012	2.460	224.330	6/4/2012
2013-2014	718.7	226.275	8/29/2013	2.914	224.330	5/19/2014
2014-2015	7392	228.615	8/6/2014	4.280	224.280	7/4/2014

Stage-Discharge Data for the period 2015 - 2016

Station Name : Bamnidhi (EMM00B3)

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	224.930	51.84	225.440	51.32	224.633	41.59	225.105	163.4	224.195	38.39	224.480	20.00 *
2	224.810	38.03	225.465	72.32	224.550	35.00 *	225.060	142.5	224.190	38.00 *	224.500	21.04
3	224.990	58.87	225.435	65.45	224.620	39.44	224.945	119.4	224.175	33.67	224.470	19.64
4	224.920	44.07	225.415	57.84	225.335	193.9	224.990	140.6	224.170	33.00 *	224.450	18.00 *
5	224.950	45.05	225.375	50.00 *	225.813	288.0	224.740	119.6	224.160	32.50	224.470	18.37
6	224.973	47.69	225.400	63.52	225.330	190.9	224.615	90.00 *	224.160	31.70	224.540	23.11
7	224.945	45.00 *	225.330	51.55	225.248	167.9	224.530	68.80	224.160	31.86	224.590	26.01
8	224.980	46.19	225.395	57.94	224.910	128.5	224.460	59.51	224.150	30.54	224.550	22.20
9	224.885	36.68	225.595	85.72	224.800	110.0 *	224.485	64.21	224.150	29.04	224.460	20.15
10	224.885	37.79	225.300	47.30	224.625	74.42	224.413	61.50	224.415	46.85	224.550	22.25
11	224.835	28.15	225.655	142.2	224.708	77.66	224.395	57.69	224.580	41.50 *	224.520	22.00
12	224.940	40.96	225.830	250.0 *	224.763	80.78	224.350	53.29	224.580	41.71	224.470	20.61
13	224.945	37.69	225.320	117.7	224.665	82.31	224.340	45.00 *	224.580	39.17	224.440	18.51
14	224.970	47.00 *	225.360	130.1	225.020	102.3	224.345	49.43	224.580	36.78	224.680	36.14
15	224.920	38.91	224.850	69.83	224.945	85.00 *	224.340	46.98	224.575	29.01	224.570	25.00
16	224.970	45.56	224.915	77.17	224.940	85.00 *	224.340	46.83	224.575	28.52	224.420	17.93
17	224.980	47.63	225.400	163.3	224.953	89.91	224.390	50.00 *	224.580	29.27	224.610	33.50
18	224.970	45.55	225.100	110.0 *	226.300	811.5	224.440	53.14	224.580	32.08	224.540	30.27
19	225.135	41.92	224.870	80.00 *	225.733	416.2	224.655	73.76	224.575	30.86	224.480	24.11
20	225.145	43.14	224.935	97.28	225.270	206.7	224.420	46.00 *	224.580	31.50	224.440	22.39
21	225.225	50.00 *	224.865	91.33	225.040	135.6	224.415	46.30	224.585	32.00 *	224.590	30.49
22	225.200	50.30	224.728	46.44	224.965	92.77	224.650	121.4	224.600	33.40 *	224.540	30.20
23	225.560	49.84	224.945	84.64	224.755	70.00 *	224.765	133.5	224.600	33.49	224.420	17.54
24	225.580	54.89	225.340	162.5	224.650	59.72	224.555	68.28	224.600	33.40 *	224.780	40.16
25	225.495	43.83	225.600	201.9	224.610	85.82	224.465	70.00 *	224.595	45.00 *	224.740	40.00
26	225.440	54.91	225.140	120.0 *	224.505	77.80	224.365	48.86	224.575	28.96	224.825	62.28
27	225.175	36.11	224.930	79.23	224.498	74.84	224.305	50.00 *	224.565	25.72	224.930	71.79
28	225.375	50.00 *	224.830	56.86	224.460	71.58	224.250	48.23	224.550	25.09	224.430	18.70
29	225.300	48.76	224.665	27.71	224.905	116.6	224.215	42.98	224.503	21.49	224.710	38.00
30	225.330	51.93	224.575	16.96	224.865	90.00 *	224.205	41.98	224.465	20.56	224.515	19.51
31			224.535	16.47	224.970	120.6			224.465	18.96		
Ten-Daily Mean												
I Ten-Daily	224.927	45.12	225.415	60.30	224.986	127.0	224.734	103.0	224.193	34.55	224.506	21.08
II Ten-Daily	224.981	41.65	225.224	123.8	225.130	203.7	224.401	52.21	224.578	34.04	224.517	25.05
III Ten-Daily	225.368	49.06	224.923	82.18	224.747	90.49	224.419	67.15	224.555	28.92	224.648	36.87
Monthly												
Min.	224.810	28.15	224.535	16.47	224.460	35.00	224.205	41.98	224.150	18.96	224.420	17.54
Max.	225.580	58.87	225.830	250.0	226.300	811.5	225.105	163.4	224.600	46.85	224.930	71.79
Mean	225.092	45.28	225.179	88.53	224.948	138.8	224.518	74.11	224.446	32.39	224.557	27.66

Annual Runoff in MCM = 1285 Annual Runoff in mm = 132

Peak Observed Discharge = 811.5 cumecs on 18/08/2015 Corres. Water Level :226.3 m

Lowest Observed Discharge = 1.589 cumecs on 12/05/2016 Corres. Water Level :224.24 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : Bamnidhi (EMM00B3)

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	224.470	17.49	224.460	14.70	224.480	17.92	224.480	16.99	224.380	7.435	224.370	4.400 *
2	224.450	16.09	224.460	14.19	224.470	16.90	224.470	15.53	224.380	6.858	224.360	4.785
3	224.530	19.12	224.460	14.18 *	224.470	16.34	224.460	14.89	224.430	9.000 *	224.360	4.363
4	224.580	21.71	224.440	14.34	224.450	15.28	224.450	13.75	224.480	14.98	224.350	3.889
5	224.460	17.17	224.440	13.62	224.450	15.80	224.430	13.40	224.470	14.12	224.280	2.585
6	224.530	19.10 *	224.440	13.40	224.430	14.92	224.450	14.20 *	224.470	12.83	224.250	2.159
7	224.480	17.20	224.520	19.88	224.370	10.00 *	224.440	14.00 *	224.460	11.95	224.220	2.055
8	224.420	15.30	224.470	16.36	224.410	13.82	224.380	12.16	224.440	10.50	224.250	2.200 *
9	224.420	14.92	224.710	25.81	224.430	14.82	224.500	16.54	224.440	10.06	224.250	2.132
10	224.645	27.62	224.500	16.20 *	224.480	16.19	224.300	8.547	224.470	13.00 *	224.240	1.956
11	224.500	18.79	224.380	11.61	224.320	9.213	224.300	8.373	224.520	19.69	224.260	2.017
12	224.490	17.27	224.410	12.36	224.390	11.07	224.420	12.84	224.400	8.536	224.240	1.589
13	224.440	16.00 *	224.520	15.09	224.500	17.85	224.360	10.10 *	224.390	8.334	224.240	1.835
14	224.470	18.24	224.510	17.65	224.420	13.90 *	224.520	18.92	224.560	21.00 *	224.300	6.756
15	224.490	18.85	224.490	16.11	224.450	14.62	224.620	30.78	224.460	15.09	224.300	3.100 *
16	224.450	17.08	224.480	15.53	224.450	14.03	224.580	26.27	224.450	13.37	224.320	7.738
17	224.450	16.73	224.480	15.53 *	224.440	13.41	224.560	23.00	224.445	10.50 *	224.330	8.411
18	224.480	18.59	224.470	15.23	224.440	13.14	224.440	14.68	224.440	12.51	224.340	4.685
19	224.430	15.70	224.470	14.70	224.520	16.66	224.400	11.87	224.410	11.30	224.480	15.49
20	224.440	16.00 *	224.480	14.57	224.430	12.33	224.400	12.00 *	224.370	5.100 *	224.450	10.80
21	224.480	19.25	224.540	19.88	224.480	16.19 *	224.470	15.09	224.360	6.025	224.440	10.00 *
22	224.470	17.46	224.560	21.16	224.430	12.90	224.410	12.76	224.360	5.489	224.440	10.10 *
23	224.470	17.60	224.515	18.76	224.320	8.857	224.400	11.50	224.360	5.444	224.440	9.476
24	224.470	17.50 *	224.515	18.76 *	224.500	16.46	224.450	14.21 *	224.370	5.000 *	224.320	5.514
25	224.480	18.00 *	224.565	20.92	224.470	16.10	224.520	18.10 *	224.370	5.366	224.310	5.224
26	224.490	18.62	224.520	18.80 *	224.470	15.72	224.525	18.06	224.370	4.860	224.320	7.793
27	224.480	18.00 *	224.570	21.23	224.400	11.76	224.410	12.91	224.370	4.674	224.330	7.270
28	224.470	17.39	224.510	19.06	224.480	16.19 *	224.410	13.05	224.390	6.137	224.320	6.241
29	224.470	16.52	224.585	21.96	224.490	18.07	224.390	10.68	224.380	5.569	224.320	3.570 *
30	224.470	16.10	224.490	18.01			224.380	9.063	224.370	5.233	224.330	6.397
31	224.470	15.62	224.485	14.60 *			224.390	8.066			224.470	11.91
Ten-Daily Mean												
I Ten-Daily	224.499	18.57	224.490	16.27	224.444	15.20	224.436	14.00	224.442	11.07	224.293	3.052
II Ten-Daily	224.464	17.33	224.469	14.84	224.436	13.62	224.460	16.88	224.444	12.54	224.326	6.242
III Ten-Daily	224.475	17.46	224.532	19.38	224.449	14.69	224.432	13.04	224.370	5.380	224.367	7.591
Monthly												
Min.	224.420	14.92	224.380	11.61	224.320	8.857	224.300	8.066	224.360	4.674	224.220	1.589
Max.	224.645	27.62	224.710	25.81	224.520	18.07	224.620	30.78	224.560	21.00	224.480	15.49
Mean	224.479	17.78	224.498	16.91	224.443	14.5	224.442	14.59	224.419	9.666	224.330	5.692

Peak Computed Discharge = 250.0 cumecs on 12/07/2015

Corres. Water Level :225.83 m

Lowest Computed Discharge = 2.200 cumecs on 08/05/2016

Corres. Water Level :224.25 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

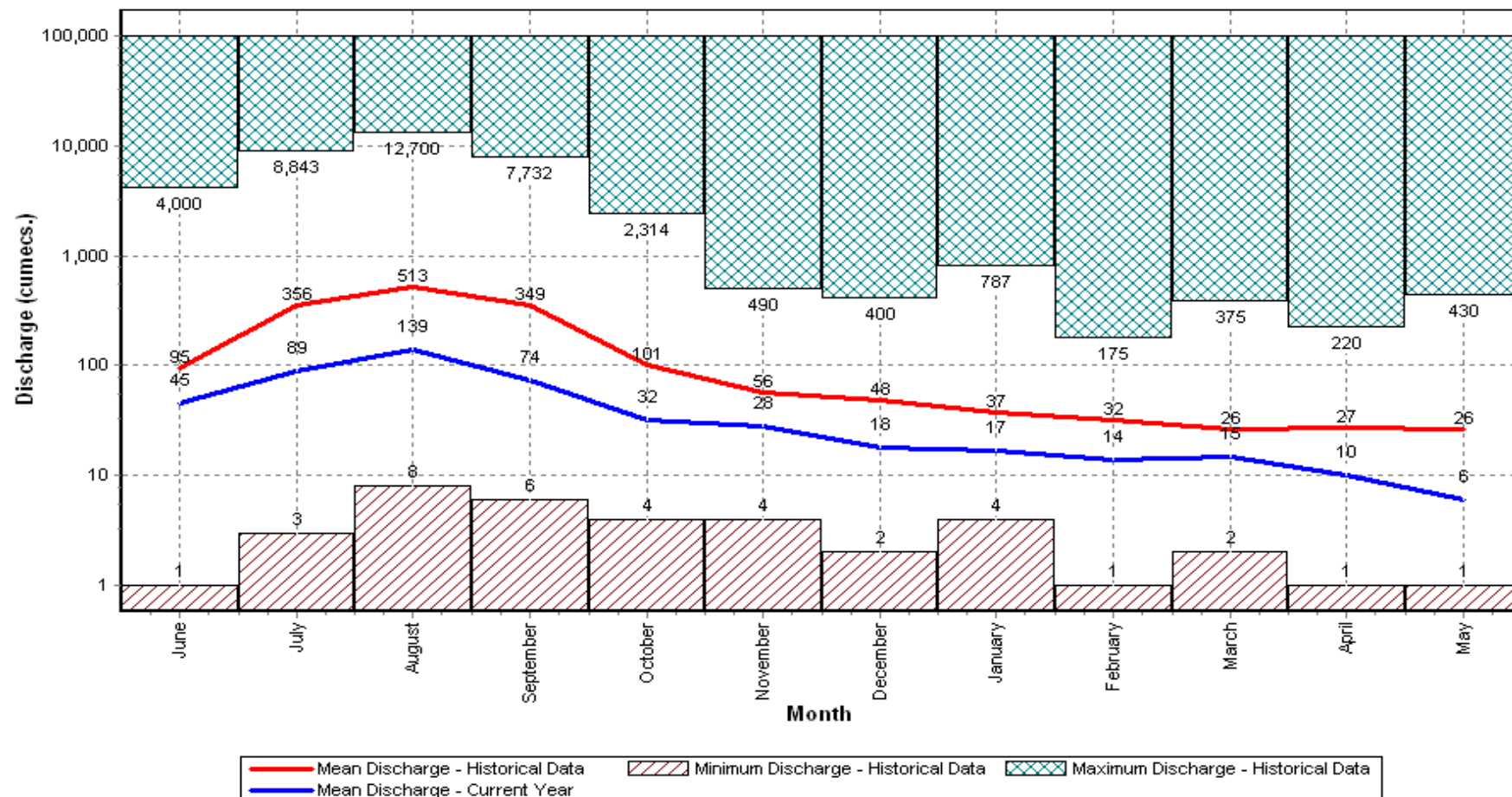
Station Name : Bamnidhi (EMM00B3)

Data considered : 1971-2016

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur



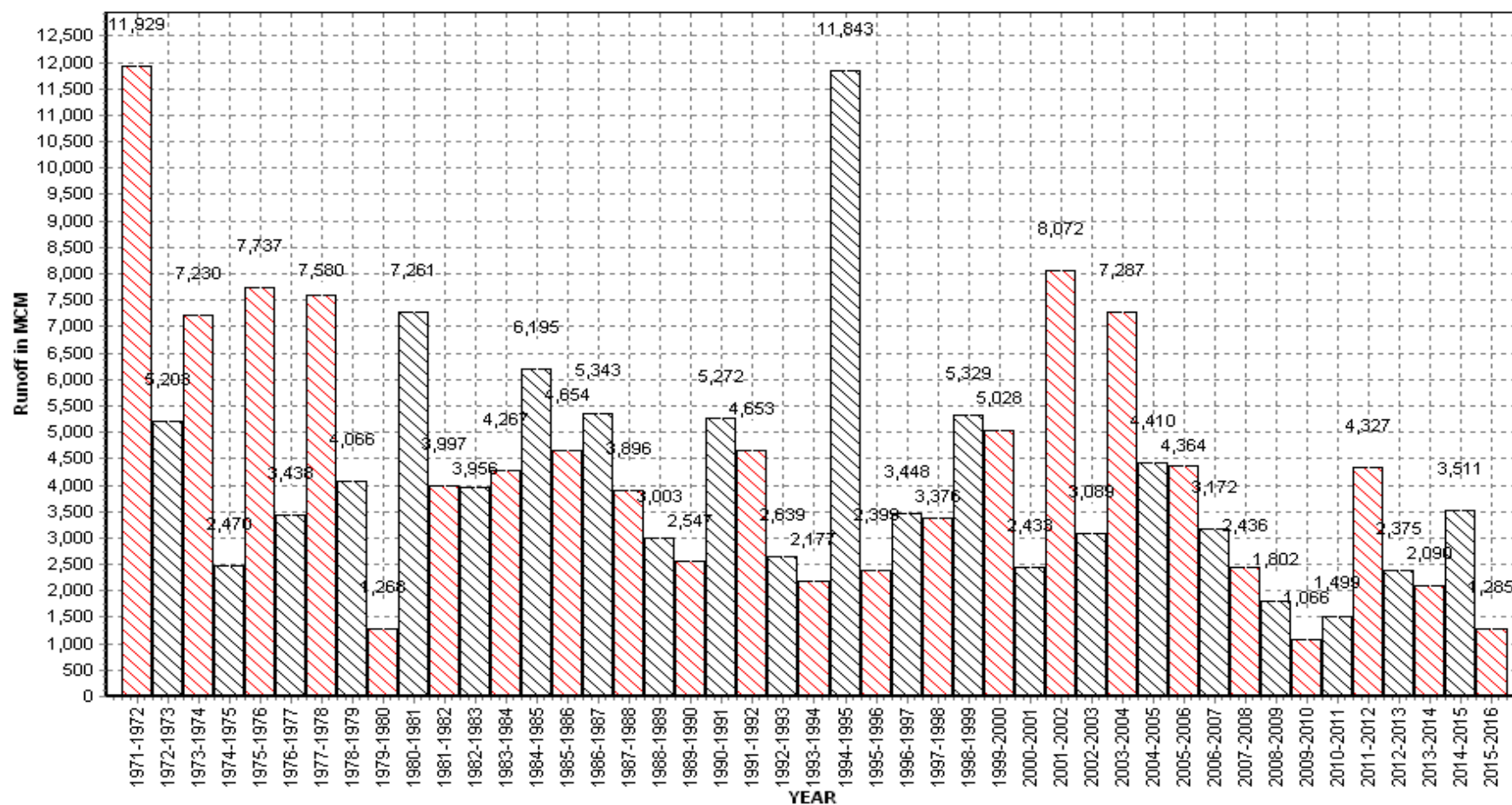
Annual Runoff Values for the period: 1971 - 2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

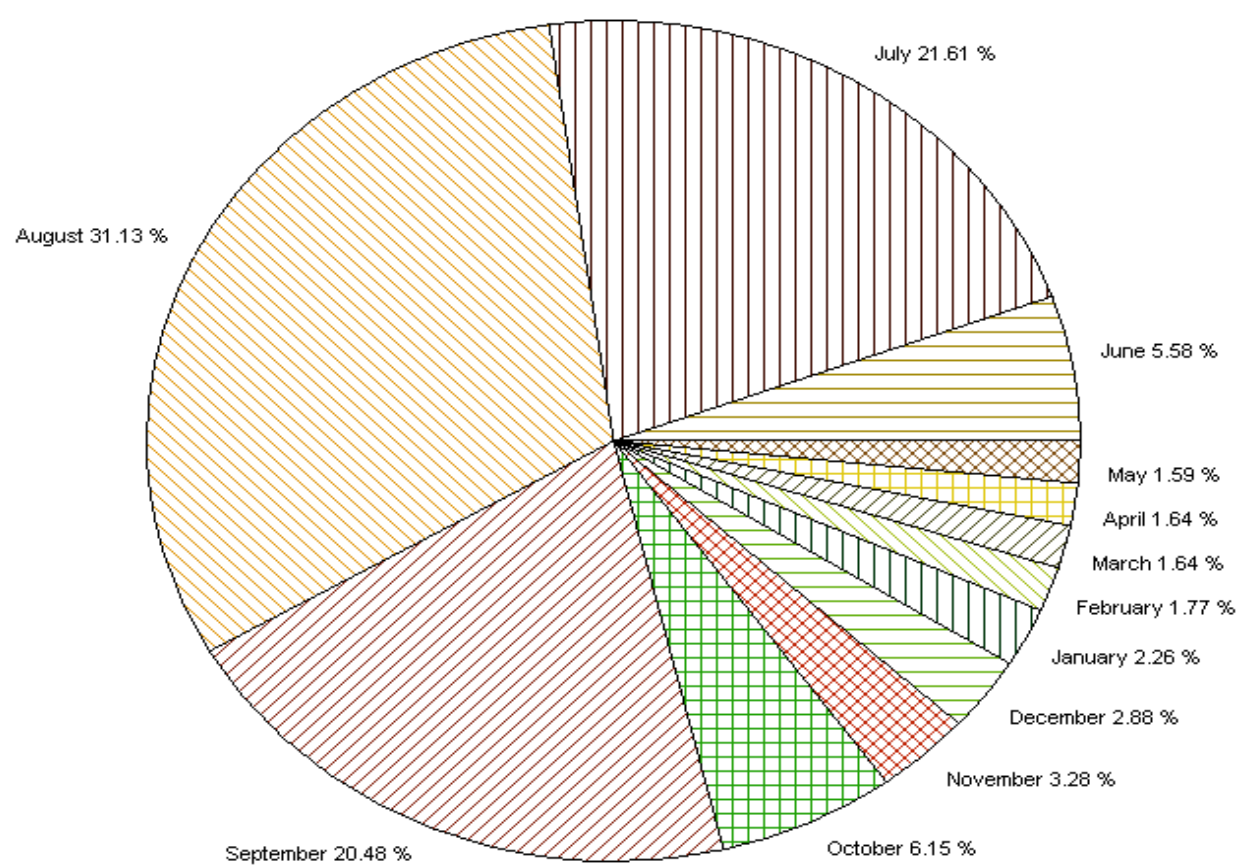


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1971-2015

Station Name : Bamnidhi (EMM00B3)
Local River : Hasdeo

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



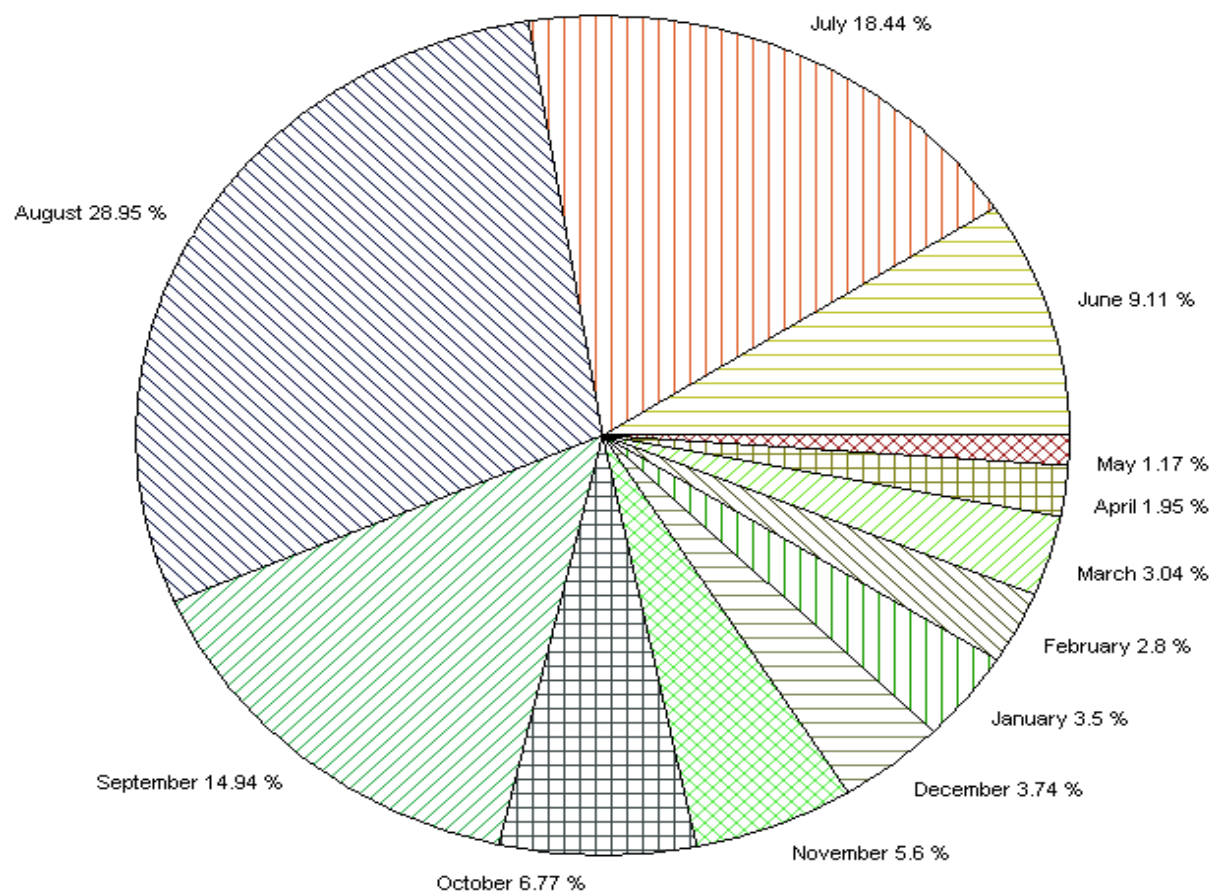
Monthly Runoff for the Year : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



June	9.11 %
July	18.44 %
August	28.95 %
September	14.94 %
October	6.77 %
November	5.6 %
December	3.74 %
January	3.5 %
February	2.8 %
March	3.04 %
April	1.95 %
May	1.17 %

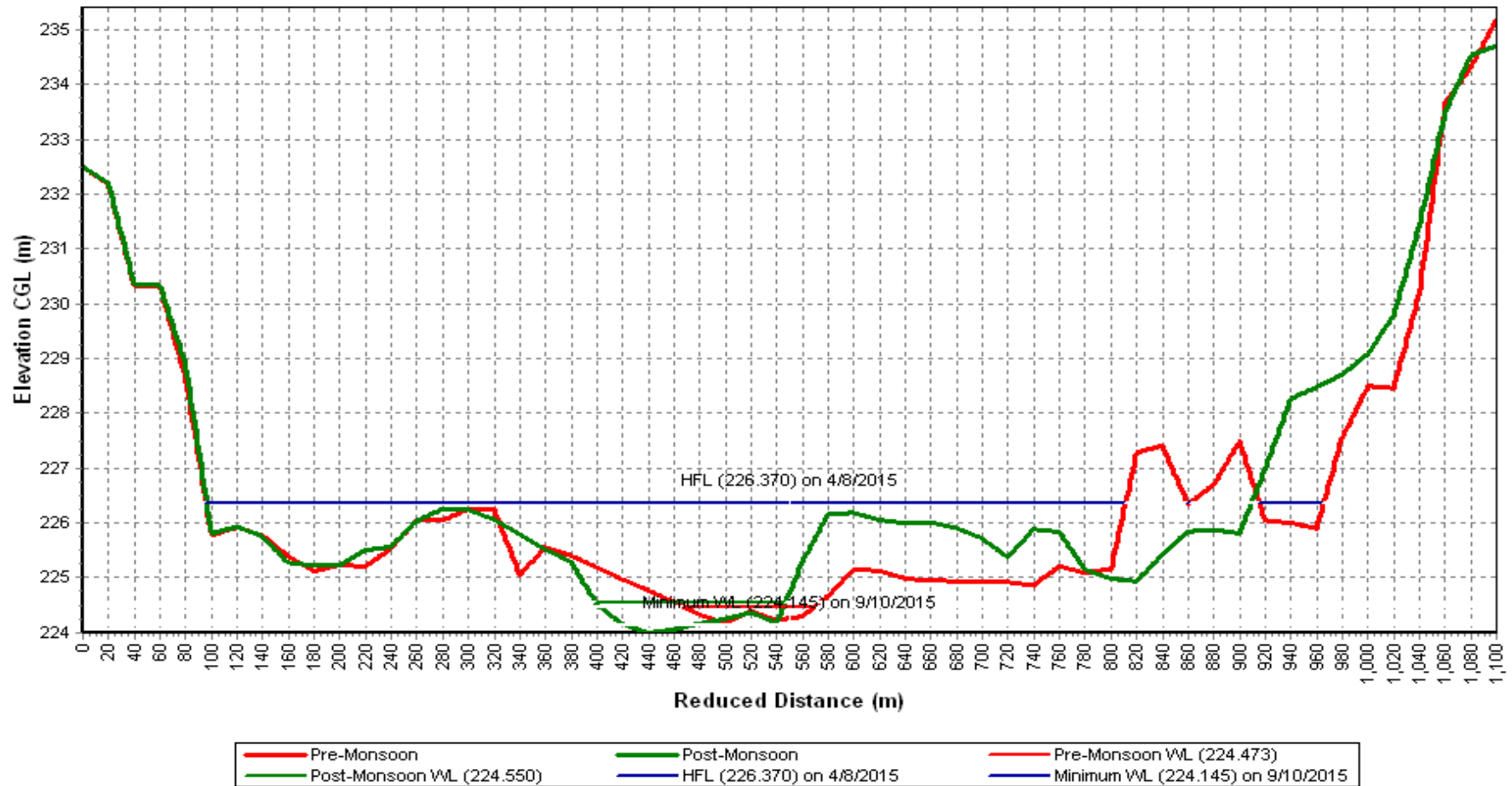
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



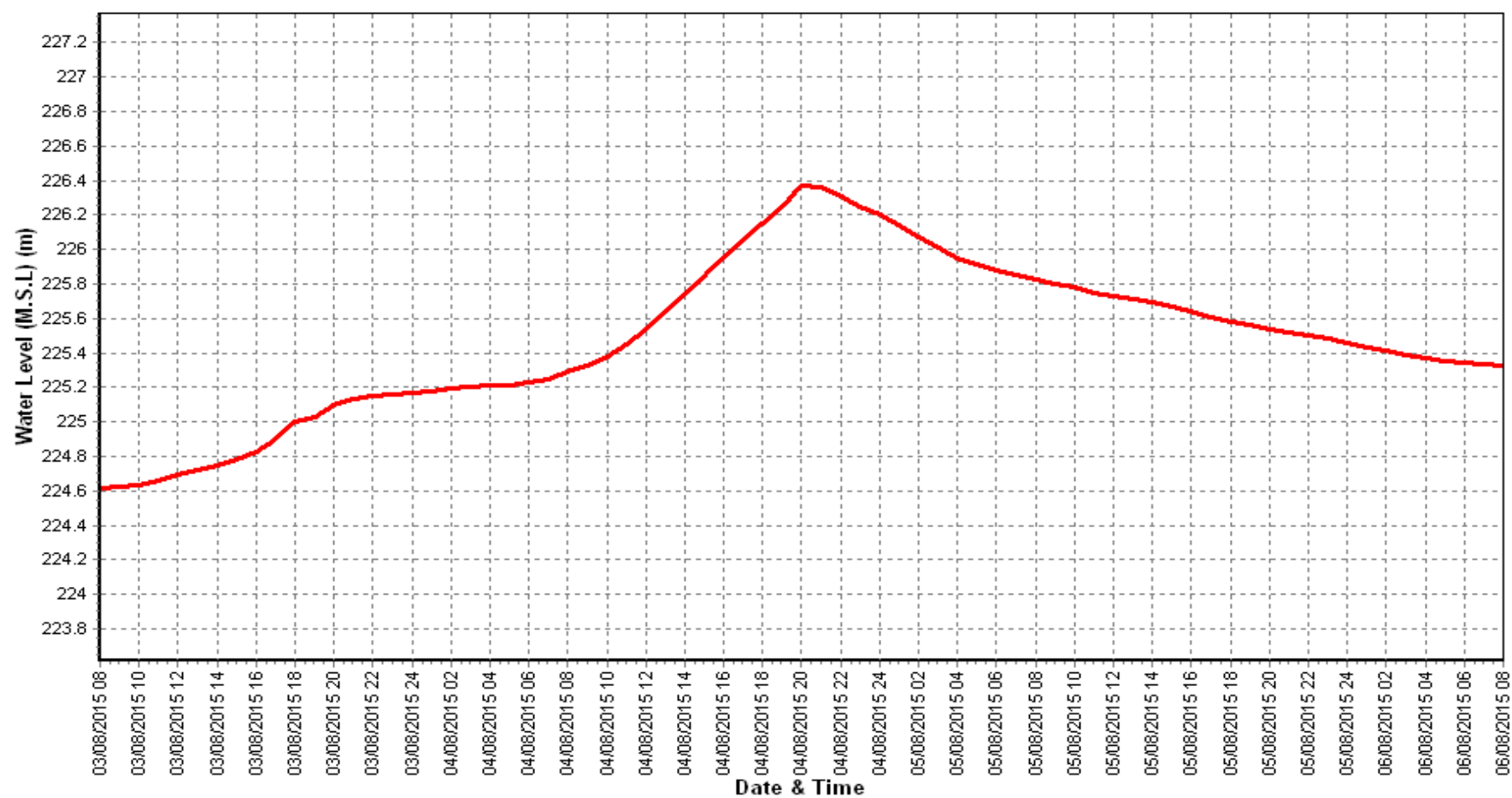
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



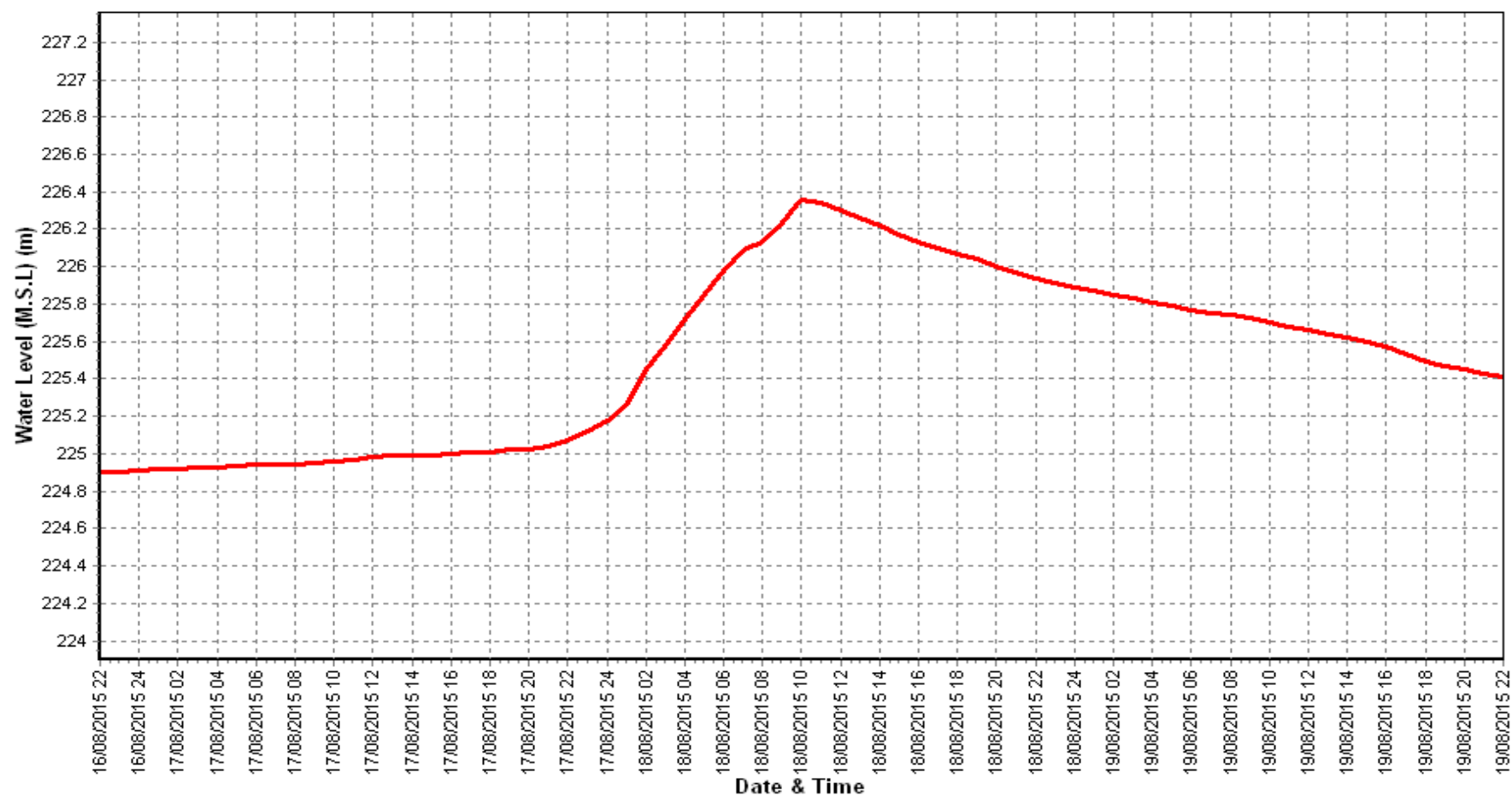
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



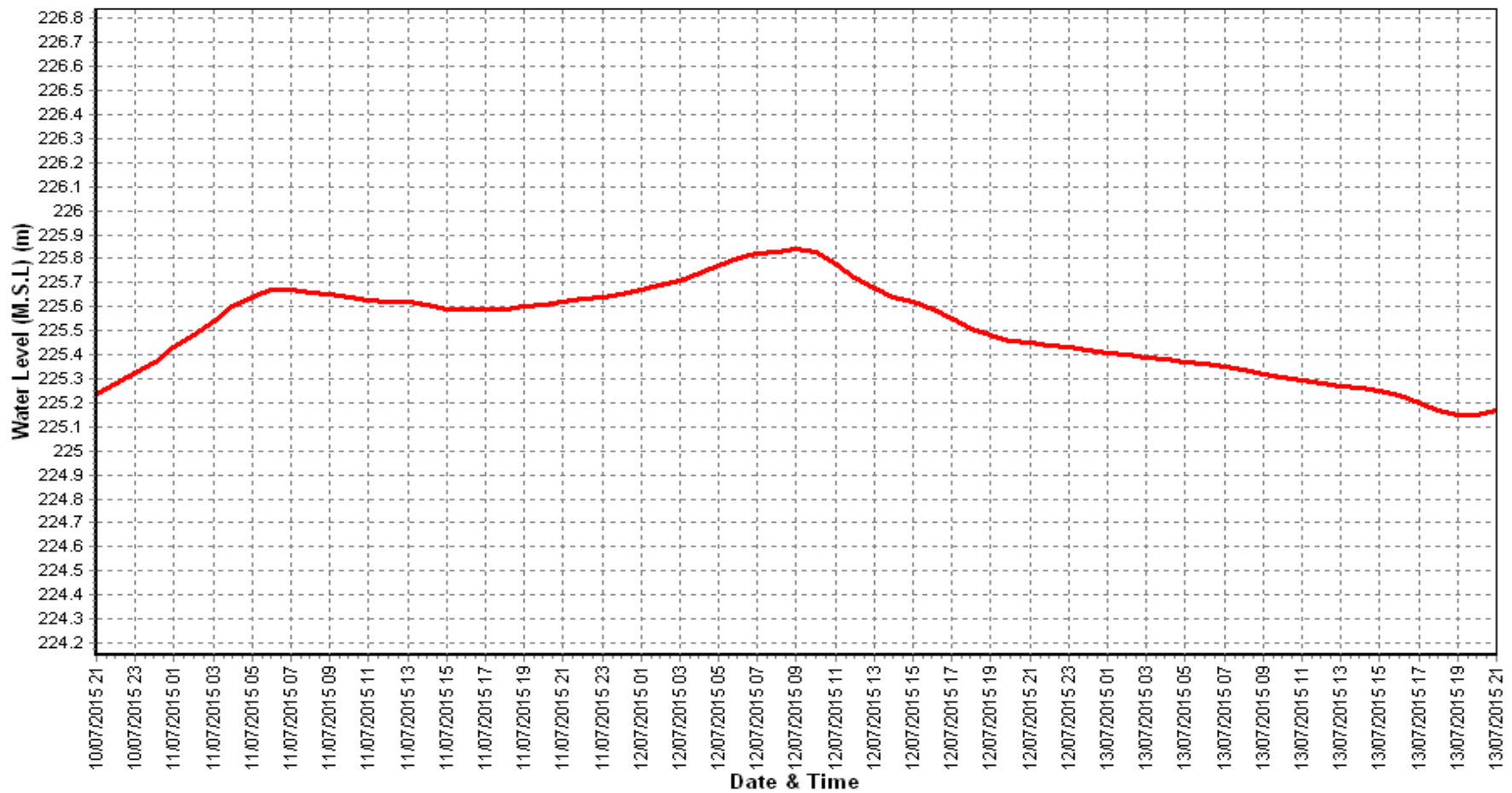
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : Bamnidhi (EMM00B3)

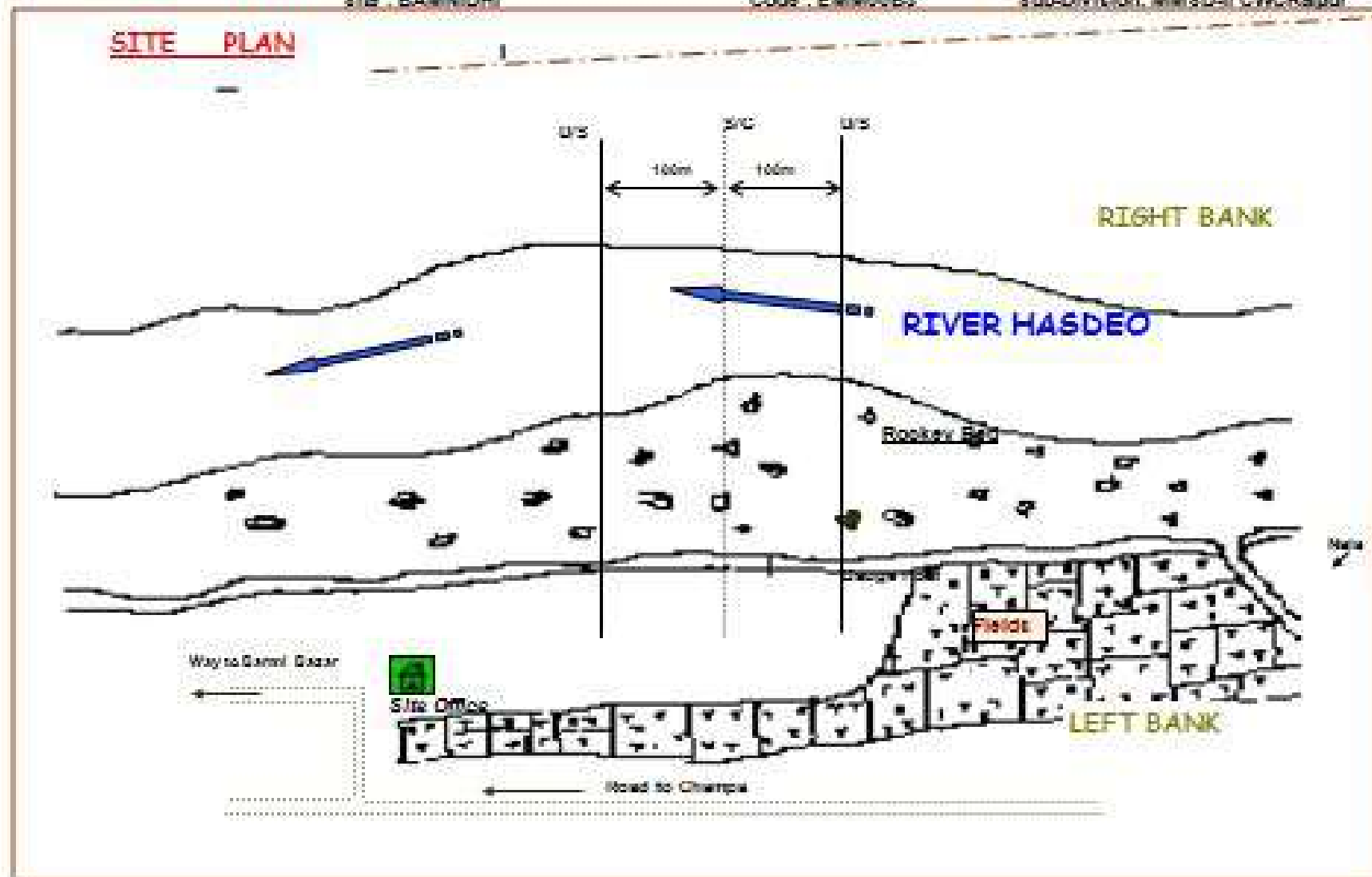
Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur



SITE PLAN



SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	51.84	0.000	0.000	0.035	0.035	157	51.32	0.000	0.000	0.054	0.054	239	41.59	0.000	0.000	0.055	0.055	198
2	38.03	0.000	0.000	0.034	0.034	112	72.32	0.000	0.000	0.058	0.058	362	35.00	0.000	0.000	0.000	0.000	0
3	58.87	0.000	0.000	0.033	0.033	168	65.45	0.000	0.000	0.056	0.056	317	39.44	0.000	0.000	0.058	0.058	198
4	44.07	0.000	0.000	0.036	0.036	137	57.84	0.000	0.000	0.057	0.057	285	193.9	0.000	0.000	0.067	0.067	1123
5	45.05	0.000	0.000	0.034	0.034	132	50.00	0.000	0.000	0.000	0.000	0	288.0	0.000	0.000	0.063	0.063	1568
6	47.69	0.000	0.000	0.032	0.032	132	63.52	0.000	0.000	0.065	0.065	357	190.9	0.000	0.000	0.057	0.057	940
7	45.00	0.000	0.000	0.000	0.000	0	51.55	0.000	0.000	0.058	0.058	258	167.9	0.000	0.000	0.055	0.055	798
8	46.19	0.000	0.000	0.035	0.035	140	57.94	0.000	0.000	0.063	0.063	315	128.5	0.000	0.000	0.058	0.058	644
9	36.68	0.000	0.000	0.037	0.037	117	85.72	0.000	0.000	0.069	0.069	511	110.0	0.000	0.000	0.000	0.000	0
10	37.79	0.000	0.000	0.038	0.038	124	47.30	0.000	0.000	0.065	0.065	266	74.42	0.000	0.000	0.053	0.053	341
11	28.15	0.000	0.000	0.034	0.034	83	142.2	0.000	0.000	0.065	0.065	799	77.66	0.000	0.000	0.067	0.067	450
12	40.96	0.000	0.000	0.036	0.036	127	250.0	0.000	0.000	0.000	0.000	0	80.78	0.000	0.000	0.058	0.058	405
13	37.69	0.000	0.000	0.035	0.035	114	117.7	0.000	0.000	0.058	0.058	590	82.31	0.000	0.000	0.056	0.056	398
14	47.00	0.000	0.000	0.000	0.000	0	130.1	0.000	0.000	0.063	0.063	708	102.3	0.000	0.000	0.054	0.054	477
15	38.91	0.000	0.000	0.033	0.033	111	69.83	0.000	0.000	0.055	0.055	332	85.00	0.000	0.000	0.000	0.000	0
16	45.56	0.000	0.000	0.044	0.044	173	77.17	0.000	0.000	0.048	0.048	320	85.00	0.000	0.000	0.000	0.000	0
17	47.63	0.000	0.000	0.032	0.032	132	163.3	0.000	0.000	0.056	0.056	790	89.91	0.000	0.000	0.065	0.065	505
18	45.55	0.000	0.000	0.036	0.036	142	110.0	0.000	0.000	0.000	0.000	0	811.5	0.000	0.000	0.015	0.015	1052
19	41.92	0.000	0.000	0.035	0.035	127	80.00	0.000	0.000	0.000	0.000	0	416.2	0.000	0.000	0.095	0.095	3416
20	43.14	0.000	0.000	0.034	0.034	127	97.28	0.000	0.000	0.052	0.052	437	206.7	0.000	0.000	0.094	0.094	1679
21	50.00	0.000	0.000	0.000	0.000	0	91.33	0.000	0.000	0.045	0.045	355	135.6	0.000	0.000	0.106	0.106	1242
22	50.30	0.000	0.000	0.037	0.037	161	46.44	0.000	0.000	0.055	0.055	221	92.77	0.000	0.000	0.105	0.105	842
23	49.84	0.000	0.000	0.036	0.036	155	84.64	0.000	0.000	0.065	0.065	475	70.00	0.000	0.000	0.000	0.000	0
24	54.89	0.000	0.000	0.034	0.034	161	162.5	0.000	0.000	0.063	0.063	884	59.72	0.000	0.000	0.065	0.065	335
25	43.83	0.000	0.000	0.036	0.036	136	201.9	0.000	0.000	0.065	0.065	1134	85.82	0.000	0.000	0.015	0.015	111
26	54.91	0.000	0.000	0.035	0.035	166	120.0	0.000	0.000	0.000	0.000	0	77.80	0.000	0.000	0.066	0.066	444
27	36.11	0.000	0.000	0.036	0.036	112	79.23	0.000	0.000	0.063	0.063	431	74.84	0.000	0.000	0.065	0.065	420
28	50.00	0.000	0.000	0.000	0.000	0	56.86	0.000	0.000	0.066	0.066	324	71.58	0.000	0.000	0.105	0.105	649
29	48.76	0.000	0.000	0.037	0.037	156	27.71	0.000	0.000	0.065	0.065	156	116.6	0.000	0.000	0.115	0.115	1158
30	51.93	0.000	0.000	0.034	0.034	153	16.96	0.000	0.000	0.056	0.056	82	90.00	0.000	0.000	0.000	0.000	0
31							16.47	0.000	0.000	0.055	0.055	78	120.6	0.000	0.000	0.105	0.105	1094
Ten Daily Mean																		
Ten Daily I	45.12	0.000	0.000	0.031	0.031	122	60.30	0.000	0.000	0.055	0.055	291	127.0	0.000	0.000	0.047	0.047	581
Ten Daily II	41.65	0.000	0.000	0.032	0.032	114	123.8	0.000	0.000	0.040	0.040	398	203.7	0.000	0.000	0.050	0.050	838
Ten Daily III	49.06	0.000	0.000	0.029	0.029	120	82.18	0.000	0.000	0.054	0.054	376	90.49	0.000	0.000	0.068	0.068	572
Monthly																		
Total						3554						11026						20486

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	163.4	0.000	0.000	0.085	0.085	1200	38.39	0.000	0.000	0.025	0.025	83	20.00	0.000	0.000	0.000	0.000	0
2	142.5	0.000	0.000	0.066	0.066	812	38.00	0.000	0.000	0.000	0.000	0	21.04	0.000	0.000	0.015	0.015	27
3	119.4	0.000	0.000	0.055	0.055	567	33.67	0.000	0.000	0.016	0.016	47	19.64	0.000	0.000	0.000	0.000	0
4	140.6	0.000	0.000	0.056	0.056	681	33.00	0.000	0.000	0.000	0.000	0	18.00	0.000	0.000	0.000	0.000	0
5	119.6	0.000	0.000	0.054	0.054	558	32.50	0.000	0.000	0.013	0.013	37	18.37	0.000	0.000	0.000	0.000	0
6	90.00	0.000	0.000	0.000	0.000	0	31.70	0.000	0.000	0.015	0.015	41	23.11	0.000	0.000	0.000	0.000	0
7	68.80	0.000	0.000	0.065	0.065	386	31.86	0.000	0.000	0.017	0.017	47	26.01	0.000	0.000	0.000	0.000	0
8	59.51	0.000	0.000	0.060	0.060	309	30.54	0.000	0.000	0.018	0.018	48	22.20	0.000	0.000	0.000	0.000	0
9	64.21	0.000	0.000	0.055	0.055	305	29.04	0.000	0.000	0.016	0.016	40	20.15	0.000	0.000	0.016	0.016	28
10	61.50	0.000	0.000	0.048	0.048	255	46.85	0.000	0.000	0.018	0.018	73	22.25	0.000	0.000	0.000	0.000	0
11	57.69	0.000	0.000	0.045	0.045	224	41.50	0.000	0.000	0.000	0.000	0	22.00	0.000	0.000	0.000	0.000	0
12	53.29	0.000	0.000	0.032	0.032	147	41.71	0.000	0.000	0.016	0.016	58	20.61	0.000	0.000	0.000	0.000	0
13	45.00	0.000	0.000	0.000	0.000	0	39.17	0.000	0.000	0.015	0.015	51	18.51	0.000	0.000	0.000	0.000	0
14	49.43	0.000	0.000	0.035	0.035	149	36.78	0.000	0.000	0.016	0.016	51	36.14	0.000	0.000	0.000	0.000	0
15	46.98	0.000	0.000	0.040	0.040	162	29.01	0.000	0.000	0.019	0.019	48	25.00	0.000	0.000	0.000	0.000	0
16	46.83	0.000	0.000	0.035	0.035	142	28.52	0.000	0.000	0.017	0.017	42	17.93	0.000	0.000	0.016	0.016	24
17	50.00	0.000	0.000	0.000	0.000	0	29.27	0.000	0.000	0.018	0.018	46	33.50	0.000	0.000	0.000	0.000	0
18	53.14	0.000	0.000	0.045	0.045	207	32.08	0.000	0.000	0.017	0.017	47	30.27	0.000	0.000	0.000	0.000	0
19	73.76	0.000	0.000	0.055	0.055	351	30.86	0.000	0.000	0.014	0.014	37	24.11	0.000	0.000	0.000	0.000	0
20	46.00	0.000	0.000	0.000	0.000	0	31.50	0.000	0.000	0.013	0.013	35	22.39	0.000	0.000	0.000	0.000	0
21	46.30	0.000	0.000	0.065	0.065	260	32.00	0.000	0.000	0.000	0.000	0	30.49	0.000	0.000	0.000	0.000	0
22	121.4	0.000	0.000	0.055	0.055	577	33.40	0.000	0.000	0.000	0.000	0	30.20	0.000	0.000	0.000	0.000	0
23	133.5	0.000	0.000	0.045	0.045	519	33.49	0.000	0.000	0.010	0.010	29	17.54	0.000	0.000	0.015	0.015	23
24	68.28	0.000	0.000	0.032	0.032	189	33.40	0.000	0.000	0.000	0.000	0	40.16	0.000	0.000	0.000	0.000	0
25	70.00	0.000	0.000	0.000	0.000	0	45.00	0.000	0.000	0.000	0.000	0	40.00	0.000	0.000	0.000	0.000	0
26	48.86	0.000	0.000	0.025	0.025	106	28.96	0.000	0.000	0.015	0.015	38	62.28	0.000	0.000	0.000	0.000	0
27	50.00	0.000	0.000	0.000	0.000	0	25.72	0.000	0.000	0.016	0.016	36	71.79	0.000	0.000	0.000	0.000	0
28	48.23	0.000	0.000	0.026	0.026	108	25.09	0.000	0.000	0.014	0.014	30	18.70	0.000	0.000	0.000	0.000	0
29	42.98	0.000	0.000	0.035	0.035	130	21.49	0.000	0.000	0.015	0.015	28	38.00	0.000	0.000	0.000	0.000	0
30	41.98	0.000	0.000	0.035	0.035	127	20.56	0.000	0.000	0.016	0.016	28	19.51	0.000	0.000	0.015	0.015	25
31							18.96	0.000	0.000	0.014	0.014	23						
<u>Ten Daily Mean</u>																		
Ten Daily I	103.0	0.000	0.000	0.054	0.054	507	34.55	0.000	0.000	0.014	0.014	41	21.08	0.000	0.000	0.003	0.003	6
Ten Daily II	52.21	0.000	0.000	0.029	0.029	138	34.04	0.000	0.000	0.015	0.015	41	25.05	0.000	0.000	0.002	0.002	2
Ten Daily III	67.15	0.000	0.000	0.032	0.032	202	28.92	0.000	0.000	0.009	0.009	19	36.87	0.000	0.000	0.003	0.003	5
<u>Monthly</u>																		
Total						8471						1040						127

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	17.49	0.000	0.000	0.000	0.000	0	14.70	0.000	0.000	0.000	0.000	0	17.92	0.000	0.000	0.015	0.015	23
2	16.09	0.000	0.000	0.000	0.000	0	14.19	0.000	0.000	0.000	0.000	0	16.90	0.000	0.000	0.000	0.000	0
3	19.12	0.000	0.000	0.000	0.000	0	14.18	0.000	0.000	0.000	0.000	0	16.34	0.000	0.000	0.000	0.000	0
4	21.71	0.000	0.000	0.000	0.000	0	14.34	0.000	0.000	0.015	0.015	19	15.28	0.000	0.000	0.000	0.000	0
5	17.17	0.000	0.000	0.000	0.000	0	13.62	0.000	0.000	0.000	0.000	0	15.80	0.000	0.000	0.000	0.000	0
6	19.10	0.000	0.000	0.000	0.000	0	13.40	0.000	0.000	0.000	0.000	0	14.92	0.000	0.000	0.000	0.000	0
7	17.20	0.000	0.000	0.015	0.015	22	19.88	0.000	0.000	0.000	0.000	0	10.00	0.000	0.000	0.000	0.000	0
8	15.30	0.000	0.000	0.000	0.000	0	16.36	0.000	0.000	0.000	0.000	0	13.82	0.000	0.000	0.016	0.016	19
9	14.92	0.000	0.000	0.000	0.000	0	25.81	0.000	0.000	0.000	0.000	0	14.82	0.000	0.000	0.000	0.000	0
10	27.62	0.000	0.000	0.000	0.000	0	16.20	0.000	0.000	0.000	0.000	0	16.19	0.000	0.000	0.000	0.000	0
11	18.79	0.000	0.000	0.000	0.000	0	11.61	0.000	0.000	0.016	0.016	16	9.213	0.000	0.000	0.000	0.000	0
12	17.27	0.000	0.000	0.000	0.000	0	12.36	0.000	0.000	0.000	0.000	0	11.07	0.000	0.000	0.000	0.000	0
13	16.00	0.000	0.000	0.000	0.000	0	15.09	0.000	0.000	0.000	0.000	0	17.85	0.000	0.000	0.000	0.000	0
14	18.24	0.000	0.000	0.016	0.016	24	17.65	0.000	0.000	0.000	0.000	0	13.90	0.000	0.000	0.000	0.000	0
15	18.85	0.000	0.000	0.000	0.000	0	16.11	0.000	0.000	0.000	0.000	0	14.62	0.000	0.000	0.016	0.016	20
16	17.08	0.000	0.000	0.000	0.000	0	15.53	0.000	0.000	0.000	0.000	0	14.03	0.000	0.000	0.000	0.000	0
17	16.73	0.000	0.000	0.000	0.000	0	15.53	0.000	0.000	0.000	0.000	0	13.41	0.000	0.000	0.000	0.000	0
18	18.59	0.000	0.000	0.000	0.000	0	15.23	0.000	0.000	0.016	0.016	21	13.14	0.000	0.000	0.000	0.000	0
19	15.70	0.000	0.000	0.000	0.000	0	14.70	0.000	0.000	0.000	0.000	0	16.66	0.000	0.000	0.000	0.000	0
20	16.00	0.000	0.000	0.000	0.000	0	14.57	0.000	0.000	0.000	0.000	0	12.33	0.000	0.000	0.000	0.000	0
21	19.25	0.000	0.000	0.016	0.016	27	19.88	0.000	0.000	0.000	0.000	0	16.19	0.000	0.000	0.000	0.000	0
22	17.46	0.000	0.000	0.000	0.000	0	21.16	0.000	0.000	0.000	0.000	0	12.90	0.000	0.000	0.016	0.016	17
23	17.60	0.000	0.000	0.000	0.000	0	18.76	0.000	0.000	0.000	0.000	0	8.857	0.000	0.000	0.000	0.000	0
24	17.50	0.000	0.000	0.000	0.000	0	18.76	0.000	0.000	0.000	0.000	0	16.46	0.000	0.000	0.000	0.000	0
25	18.00	0.000	0.000	0.000	0.000	0	20.92	0.000	0.000	0.000	0.000	0	16.10	0.000	0.000	0.000	0.000	0
26	18.62	0.000	0.000	0.000	0.000	0	18.80	0.000	0.000	0.000	0.000	0	15.72	0.000	0.000	0.000	0.000	0
27	18.00	0.000	0.000	0.000	0.000	0	21.23	0.000	0.000	0.016	0.016	28	11.76	0.000	0.000	0.000	0.000	0
28	17.39	0.000	0.000	0.015	0.015	23	19.06	0.000	0.000	0.000	0.000	0	16.19	0.000	0.000	0.000	0.000	0
29	16.52	0.000	0.000	0.000	0.000	0	21.96	0.000	0.000	0.000	0.000	0	18.07	0.000	0.000	0.016	0.016	25
30	16.10	0.000	0.000	0.000	0.000	0	18.01	0.000	0.000	0.000	0.000	0						
31	15.62	0.000	0.000	0.000	0.000	0	14.60	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	18.57	0.000	0.000	0.002	0.002	2	16.27	0.000	0.000	0.002	0.002	2	15.20	0.000	0.000	0.003	0.003	4
Ten Daily II	17.33	0.000	0.000	0.002	0.002	2	14.84	0.000	0.000	0.003	0.003	4	13.62	0.000	0.000	0.002	0.002	2
Ten Daily III	17.46	0.000	0.000	0.003	0.003	4	19.38	0.000	0.000	0.001	0.001	3	14.69	0.000	0.000	0.004	0.004	5
Monthly																		
Total						96						84						104

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	16.99	0.000	0.000	0.000	0.000	0	7.435	0.000	0.000	0.000	0.000	0	4.400	0.000	0.000	0.000	0.000	0
2	15.53	0.000	0.000	0.000	0.000	0	6.858	0.000	0.000	0.000	0.000	0	4.785	0.000	0.000	0.017	0.017	7
3	14.89	0.000	0.000	0.000	0.000	0	9.000	0.000	0.000	0.000	0.000	0	4.363	0.000	0.000	0.000	0.000	0
4	13.75	0.000	0.000	0.000	0.000	0	14.98	0.000	0.000	0.016	0.016	21	3.889	0.000	0.000	0.000	0.000	0
5	13.40	0.000	0.000	0.000	0.000	0	14.12	0.000	0.000	0.000	0.000	0	2.585	0.000	0.000	0.000	0.000	0
6	14.20	0.000	0.000	0.000	0.000	0	12.83	0.000	0.000	0.000	0.000	0	2.159	0.000	0.000	0.000	0.000	0
7	14.00	0.000	0.000	0.000	0.000	0	11.95	0.000	0.000	0.000	0.000	0	2.055	0.000	0.000	0.000	0.000	0
8	12.16	0.000	0.000	0.000	0.000	0	10.50	0.000	0.000	0.000	0.000	0	2.200	0.000	0.000	0.000	0.000	0
9	16.54	0.000	0.000	0.000	0.000	0	10.06	0.000	0.000	0.000	0.000	0	2.132	0.000	0.000	0.018	0.018	3
10	8.547	0.000	0.000	0.000	0.000	0	13.00	0.000	0.000	0.000	0.000	0	1.956	0.000	0.000	0.000	0.000	0
11	8.373	0.000	0.000	0.000	0.000	0	19.69	0.000	0.000	0.017	0.017	28	2.017	0.000	0.000	0.000	0.000	0
12	12.84	0.000	0.000	0.000	0.000	0	8.536	0.000	0.000	0.000	0.000	0	1.589	0.000	0.000	0.000	0.000	0
13	10.10	0.000	0.000	0.000	0.000	0	8.334	0.000	0.000	0.000	0.000	0	1.835	0.000	0.000	0.000	0.000	0
14	18.92	0.000	0.000	0.000	0.000	0	21.00	0.000	0.000	0.000	0.000	0	6.756	0.000	0.000	0.000	0.000	0
15	30.78	0.000	0.000	0.000	0.000	0	15.09	0.000	0.000	0.000	0.000	0	3.100	0.000	0.000	0.000	0.000	0
16	26.27	0.000	0.000	0.000	0.000	0	13.37	0.000	0.000	0.000	0.000	0	7.738	0.000	0.000	0.018	0.018	12
17	23.00	0.000	0.000	0.000	0.000	0	10.50	0.000	0.000	0.000	0.000	0	8.411	0.000	0.000	0.000	0.000	0
18	14.68	0.000	0.000	0.000	0.000	0	12.51	0.000	0.000	0.017	0.017	18	4.685	0.000	0.000	0.000	0.000	0
19	11.87	0.000	0.000	0.000	0.000	0	11.30	0.000	0.000	0.000	0.000	0	15.49	0.000	0.000	0.000	0.000	0
20	12.00	0.000	0.000	0.000	0.000	0	5.100	0.000	0.000	0.000	0.000	0	10.80	0.000	0.000	0.000	0.000	0
21	15.09	0.000	0.000	0.000	0.000	0	6.025	0.000	0.000	0.000	0.000	0	10.00	0.000	0.000	0.000	0.000	0
22	12.76	0.000	0.000	0.000	0.000	0	5.489	0.000	0.000	0.000	0.000	0	10.10	0.000	0.000	0.000	0.000	0
23	11.50	0.000	0.000	0.000	0.000	0	5.444	0.000	0.000	0.000	0.000	0	9.476	0.000	0.000	0.018	0.018	15
24	14.21	0.000	0.000	0.000	0.000	0	5.000	0.000	0.000	0.000	0.000	0	5.514	0.000	0.000	0.000	0.000	0
25	18.10	0.000	0.000	0.000	0.000	0	5.366	0.000	0.000	0.018	0.018	8	5.224	0.000	0.000	0.000	0.000	0
26	18.06	0.000	0.000	0.000	0.000	0	4.860	0.000	0.000	0.000	0.000	0	7.793	0.000	0.000	0.000	0.000	0
27	12.91	0.000	0.000	0.000	0.000	0	4.674	0.000	0.000	0.000	0.000	0	7.270	0.000	0.000	0.000	0.000	0
28	13.05	0.000	0.000	0.000	0.000	0	6.137	0.000	0.000	0.000	0.000	0	6.241	0.000	0.000	0.000	0.000	0
29	10.68	0.000	0.000	0.000	0.000	0	5.569	0.000	0.000	0.000	0.000	0	3.570	0.000	0.000	0.000	0.000	0
30	9.063	0.000	0.000	0.000	0.000	0	5.233	0.000	0.000	0.000	0.000	0	6.397	0.000	0.000	0.019	0.019	10
31	8.066	0.000	0.000	0.000	0.000	0							11.91	0.000	0.000	0.000	0.000	0
<u>Ten Daily Mean</u>																		
Ten Daily I	14.00	0.000	0.000	0.000	0.000	0	11.07	0.000	0.000	0.002	0.002	2	3.052	0.000	0.000	0.003	0.003	1
Ten Daily II	16.88	0.000	0.000	0.000	0.000	0	12.54	0.000	0.000	0.003	0.003	5	6.242	0.000	0.000	0.002	0.002	1
Ten Daily III	13.04	0.000	0.000	0.000	0.000	0	5.380	0.000	0.000	0.002	0.002	1	7.591	0.000	0.000	0.003	0.003	2
<u>Monthly</u>																		
Total						0						75						47

Annual Sediment Load for period : 1973-2016

Station Name : Bamnidhi (EMM00B3)

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1973-1974	4985905	1145	4987050	7230
1974-1975	827802	506	828308	2470
1975-1976	5121021	658	5121679	7724
1976-1977	777248	2084	779332	3438
1977-1978	2850762	15454	2866216	7580
1978-1979	1818635	16533	1835168	4065
1979-1980	671245	70	671315	1268
1980-1981	5975583	2672	5978255	7261
1981-1982	2116994	4620	2121614	3997
1982-1983	3863897	4954	3868851	3956
1983-1984	4062501	1795	4064296	4267
1984-1985	7125910	8684	7134595	6195
1985-1986	4720960	3655	4724615	4654
1986-1987	4998838	4216	5003054	5343
1987-1988	5309089	724	5309813	3896
1988-1989	1592501	1039	1593540	3003
1989-1990	1342945	4761	1347706	2547
1990-1991	1507793	7455	1515249	5272
1991-1992	1731227	3728	1734954	4653
1992-1993	1053635	14871	1068506	2639
1993-1994	1066243	4574	1070817	2177
1994-1995	7237568	9420	7246988	11843
1995-1996	644833	3023	647855	2399
1996-1997	608151	2060	610210	3448
1997-1998	306204	6048	312252	3376
1998-1999	389270	10248	399517	5329
1999-2000	582621	6695	589316	5028
2000-2001	143985	5720	149704	2433
2001-2002	1227180	4108	1231288	8072
2002-2003	147706	1635	149342	3089
2003-2004	555515	449	555964	7287
2004-2005	246644	2833	249476	4410
2005-2006	269829	6302	276130	4364
2006-2007	204522	4380	208901	3172
2007-2008	164272	3643	167915	2436
2008-2009	94371	629	94999	1802
2009-2010	100236	870	101105	1066
2010-2011	133560	263	133823	1499
2011-2012	943246	352	943598	4327
2012-2013	320026	1032	321058	2375
2013-2014	113957	1400	115357	2090
2014-2015	186657	1136	187793	3511
2015-2016	44705	406	45111	1285

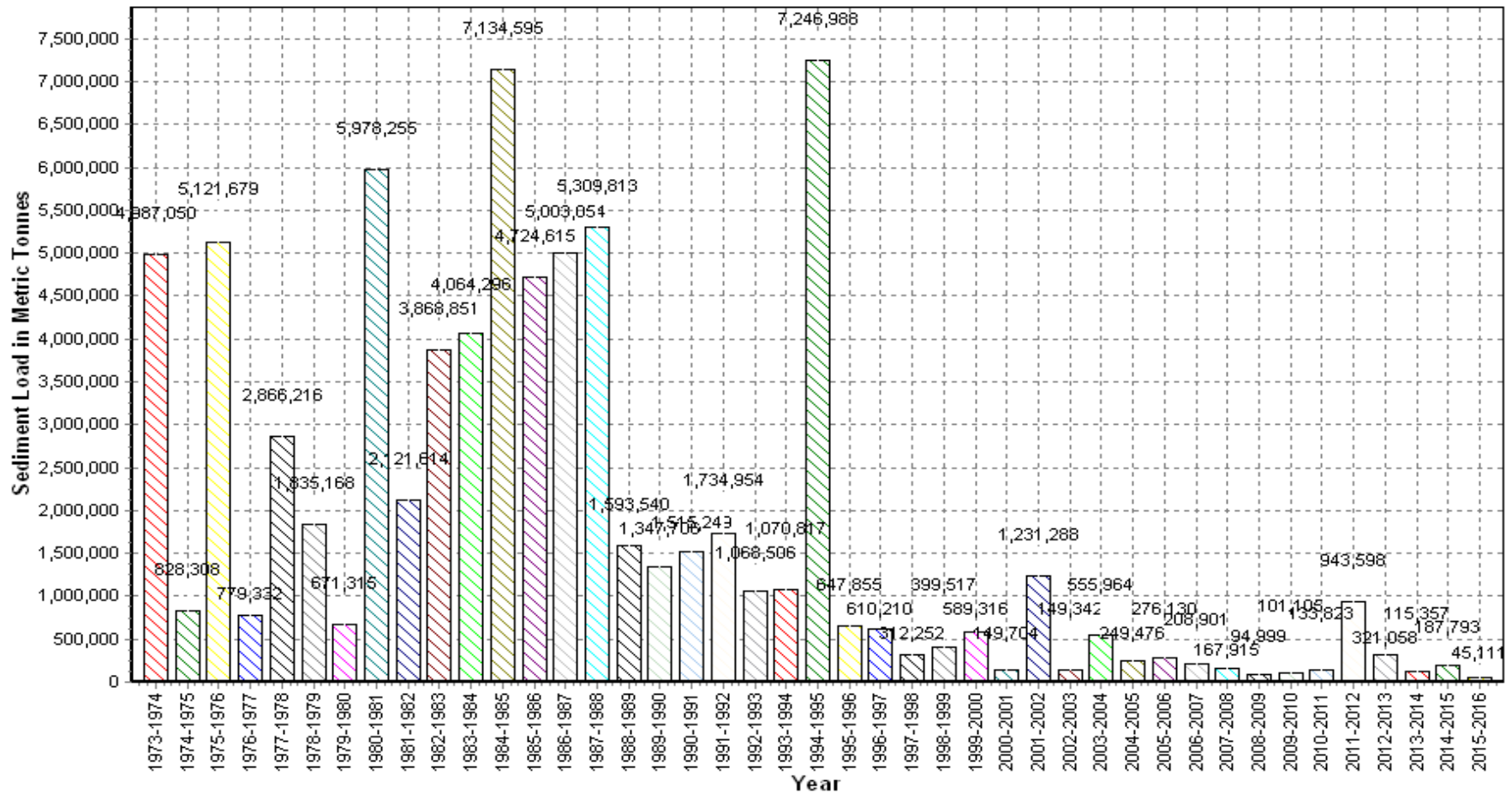
Annual Sediment Load for the period: 1973-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

Division : MD,CWC,Burla

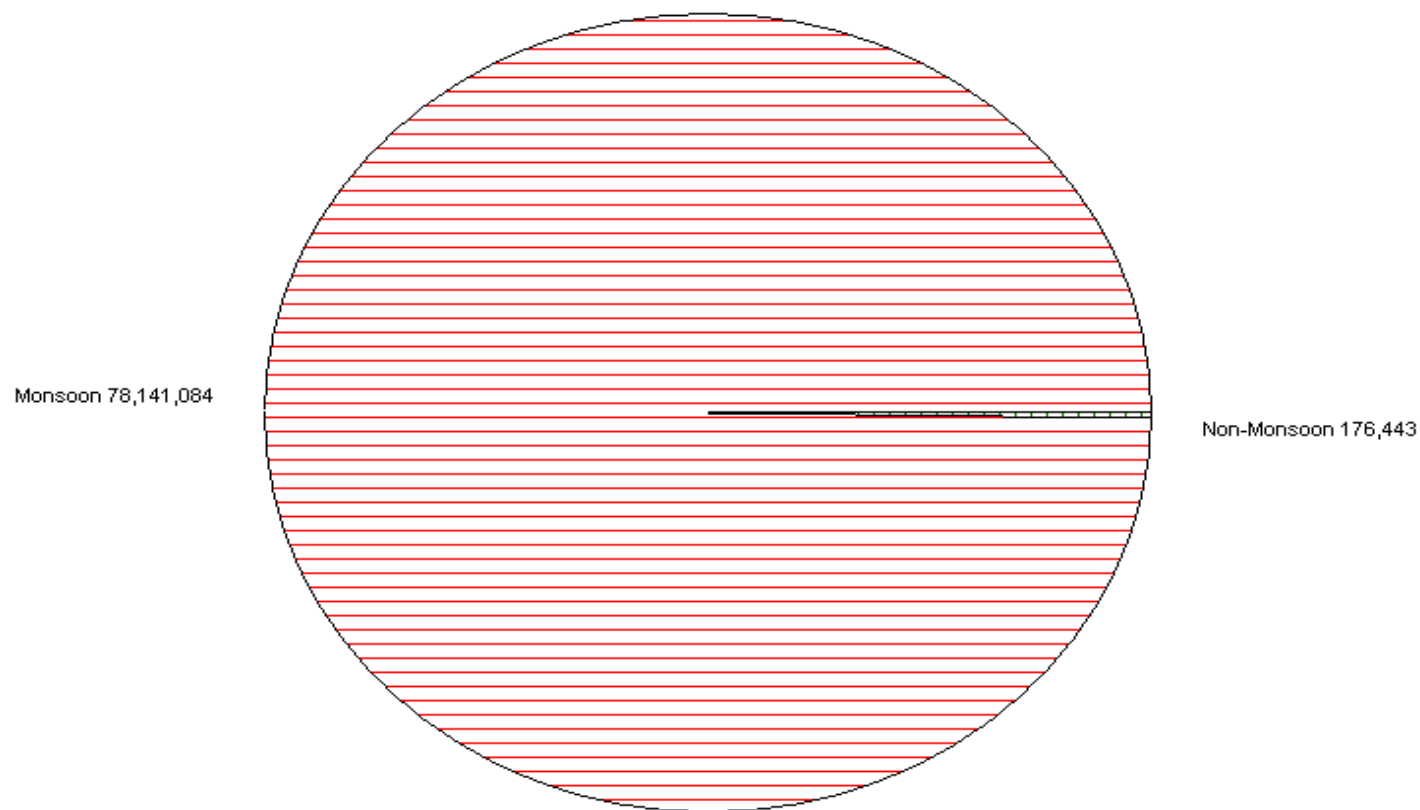
Sub-Division : MMSD I,CWC,Raipur



Seasonal Sediment Load for the period : 1973-2015

Station Name : Bamnidhi (EMM00B3)
Local River : Hasdeo

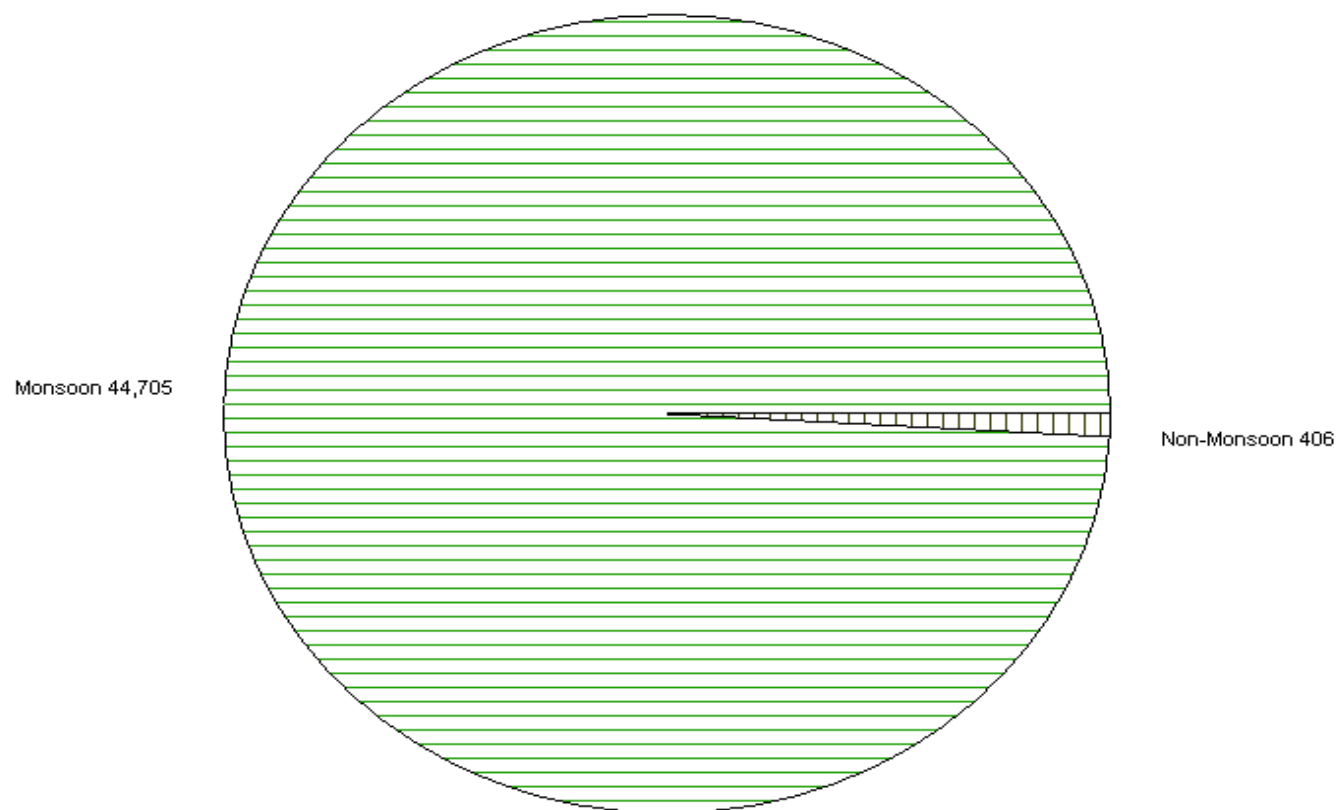
Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



Seasonal Sediment Load for the Year: 2015-2016

Station Name : Bamnidhi (EMM00B3)
Local River : Hasdeo

Division : MD,CWC,Burla
Sub-Division : MMSD I,CWC,Raipur



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	51.84	51.32	41.59	163.4	38.39	21.04	17.49	14.70	17.92	16.99	7.435	4.785
2	Colour_Cod (-)	Clear	Clear	Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	220	210	260	310	260			260	270	260	280	270
4	EC_GEN (μmho/cm)	136	136	198	131	174	194	169	202	189	202	284	243
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	6.2	5.9	6.4	6.2	5.8			5.7	6.5	6.4	6.4	6.8
7	pH_GEN (pH units)	8.5	8.0	8.0	7.7	7.8	8.5	8.1	8.1	8.2	8.4	8.2	8.2
8	Temp (deg C)	30.0	28.0	25.0	22.0	23.0	21.0	19.0	17.0	18.0	25.0	27.0	30.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	4.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	128	88	140	126	172	92	148	136	160	148	288	240
3	Ca (mg/L)	21	14	29	13	24	27	29	29	27	29	27	32
4	Cl (mg/L)	21.0	13.0	18.0	14.0	14.0	9.0	16.0	14.0	14.0	17.0	20.0	17.0
5	CO3 (mg/L)	4.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	HCO3 (mg/L)	73	49	85	77	105	56	90	83	98	90	176	146
7	K (mg/L)	5.5	8.4	3.5	4.1	11.0	5.8	5.1	5.9	4.2	4.5	9.7	19.1
8	Mg (mg/L)	4.9	8.8	3.9	5.8	8.8	3.9	7.8	2.9	3.9	3.9	10.7	6.8
9	Na (mg/L)	14.7	16.1	9.2	10.7	23.8	10.5	15.3	15.1	9.0	20.2	16.9	36.5
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.3	1.0	0.3	0.6	0.7	0.1	0.4	0.2	0.6	0.2	0.9	0.3
2	DO (mg/L)	6.2	6.7	6.4	7.0	5.6	7.7	7.7	8.7	7.8	7.6	7.4	6.1
3	DO_SAT% (%)	82	86	77	80	65	86	83	90	82	92	93	81
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	52	36	72	32	60	68	71	72	68	72	68	80
2	HAR_Total (mgCaCO3/L)	72	73	88	56	97	84	104	84	84	88	113	108
3	Na% (%)	29	30	18	27	32	20	23	26	18	32	23	37
4	RSC (-)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.2
5	SAR (-)	0.8	0.8	0.4	0.6	1.1	0.5	0.7	0.7	0.4	0.9	0.7	1.5
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Bamnidhi (EMM00B3)

Division : MD,CWC,Burla

Local River : Hasdeo

Sub-Division : MMSD I,CWC,Raipur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	811.5	1.589	40.65
2	EC_FLD (μmho/cm)	10	310	210	260
3	EC_GEN (μmho/cm)	12	284	131	188
4	pH_FLD (pH units)	10	6.8	5.7	6.2
5	pH_GEN (pH units)	12	8.5	7.7	8.1
6	Temp (deg C)	12	30.0	17.0	23.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	4.0	0.0	0.7
2	ALK-TOT (mgCaCO3/L)	12	288	88	156
3	Ca (mg/L)	12	32	13	25
4	Cl (mg/L)	12	21.0	9.0	15.6
5	CO3 (mg/L)	12	4.8	0.0	0.8
6	HCO3 (mg/L)	12	176	49	94
7	K (mg/L)	12	19.1	3.5	7.2
8	Mg (mg/L)	12	10.7	2.9	6
9	Na (mg/L)	12	36.5	9.0	16.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.3	0.1	0.6
2	DO (mg/L)	12	8.7	5.6	7.1
3	DO_SAT% (%)	12	93	65	83
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	80	32	63
2	HAR_Total (mgCaCO3/L)	12	113	56	88
3	Na% (%)	12	37	18	26
4	RSC (-)	12	0.6	0.0	0.1
5	SAR (-)	12	1.5	0.4	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Flood																			
		Jun - Oct															2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015					
	PHYSICAL																				
1	Q (cumec)	508.7	168.5	275.7	144.3	310.2	250.2	113.8	80.08	35.90	82.01	74.04	52.05	107.4	116.0	69.30	105.4	57.51	103.0	49.38	67.75
2	EC_FLD (µmho/cm)	139	139	119	210	138	143	141	136	167	257				306	252	104	142	130	153	129
3	EC_GEN (µmho/cm)	139	139	119	210	138	143	138	154	201	236	220	282	193	204	155	108	142	130	153	129
4	pH_FLD (pH units)	7.6	7.9	7.3	8.0	7.7	7.5	7.6	7.3	7.6	6.9				7.3	6.1	7.7	7.6	7.8	7.8	7.1
5	pH_GEN (pH units)	7.6	7.9	7.3	8.0	7.7	7.5	7.5	7.6	7.7	7.5	7.5	7.4	8.3	7.6	8.0	7.7	7.6	7.8	7.8	7.1
6	Temp (deg C)	25.0	25.6	27.3	30.8	30.2	28.4	27.8	27.9	28.5	27.2	27.8	27.6	27.8	27.0	25.6	18.8	17.5	22.5	23.3	24.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.4	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	1.6	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	114	81	127	84	87		96	118	145	152	111	190	150	207	131	83	99	126	102	91
3	B (mg/L)					0.03	0.01	0.01	0.09	0.00	0.00	0.00	0.00								0.09
4	Ca (mg/L)	13	11	17	34	9		11	11	13	16	15	23	19	25	20	9	13	16	12	11
5	Cl (mg/L)	0.9	12.5	20.2	13.4	14.1		8.8	18.4	10.3	7.8	10.4	13.3	22.4	12.4	16.0	0.6	11.2	12.7	4.5	13.6
6	CO3 (mg/L)	0.0	0.0	0.0	1.3	0.0		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)			0.63		0.29		0.06	0.10	0.13	0.14	0.16	0.18						0.93	0.58	0.13
8	Fe (mg/L)	0.2	0.2			0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.1				0.6	0.2			0.1
9	HCO3 (mg/L)	70	49	77	37	53	42	58	72	89	92	68	116	91	126	78	51	60	69	62	56
10	K (mg/L)	1.7	2.4	2.1		2.3		1.8	1.8	2.3	3.8	4.4	2.8	7.6	5.4	6.5	1.1	2.5		1.5	1.9
11	Mg (mg/L)	4.1	4.4	2.2	11.0	5.6		6.0	6.7	9.0	10.1	9.0	13.8	6.8	6.8	6.4	3.2	4.4	4.6	5.6	4.4
12	Na (mg/L)	8.0	9.2	4.7		8.8		4.1	8.1	8.1	16.4	12.0	14.5	17.9	15.9	14.9	5.7	8.4		6.1	8.6
13	NO2+NO3 (mg N/L)		0.67			0.06	0.07	0.06	0.26									0.81		0.11	0.06
14	NO2-N (mgN/L)					0.00	0.01	0.01	0.02	0.02	0.02	0.03	0.04								0.00
15	NO3-N (mgN/L)					0.06	0.07	0.05	0.24												0.06
16	o-PO4-P (mg P/L)								0.080												
17	P-Tot (mgP/L)		0.050	0.010		0.011		0.010	0.030	0.024	0.020	0.044	0.116					0.030	0.010	0.030	0.016
18	SiO2 (mg/L)	12.8	7.8			8.8		14.4	16.4	17.8	15.4	20.5	22.9				8.5	8.0			12.3
19	SO4 (mg/L)	3.5	8.2	15.5	10.5	11.4		9.6	14.2	14.6	15.6	21.0	22.0				3.3	5.7	14.3	11.4	13.9
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.8	1.1	0.7	0.4	0.7	0.3	1.2	0.5	0.8	0.6	0.9	0.9	0.4	0.6	0.8	0.9	0.7	0.5	0.6	0.5
2	COD (mg/L)						23.0	15.4	13.6	20.0	23.2	19.2	26.4								
3	DO (mg/L)	6.5	6.8	6.1	5.8	5.5	5.5	7.2	6.2	6.6	5.2	6.1	6.3	6.6	5.0	6.4	7.3	7.6	6.2	8.0	7.9
4	DO_SAT% (%)	80	83	75	79	73	71	92	79	85	66	77	79	83	62	78	78	79	84	91	95
	TRACE & TOXIC																				
1	Al (mg/L)	0.18	0.35														0.20	0.30			
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	32	28	43	84	24		28	27	33	41	37	57	48	62	50	23	32	39	29	28
2	HAR_Total (mgCaCO3/L)	49	46	52	129	47		53	55	71	83	75	115	76	90	77	36	50	58	52	46
3	Na% (%)	26	29	12		29		14	22	19	28	23	22	25	28	27	25	25		23	28
4	RSC (-)	0.2	0.0	0.3	0.0	0.1		0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.4	0.0	0.1	0.0	0.1	0.1	0.0
5	SAR (-)	0.5	0.6	0.2		0.6		0.3	0.5	0.4	0.8	0.6	0.6	0.8	0.8	0.7	0.4	0.5		0.4	0.6
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	53.38	36.47	24.68	17.22	18.97	21.39	21.31	31.54	22.59	17.79	174.0	25.58	52.16	50.24	61.11	71.89	23.60	14.59	6.882	6.855
2	EC_FLD (µmho/cm)	163	176	153	159				285	257	265	126	164	225	119	121	130	152	159	193	
3	EC_GEN (µmho/cm)	163	162	342	226	275	215	301	297	203	189	126	164	225	119	121	130	141	196	288	395
4	pH_FLD (pH units)	8.1	7.1	7.3	7.4				7.4	6.4	6.1	7.9	7.5	7.8	8.4	7.3	7.5	7.5	7.6	7.5	
5	pH_GEN (pH units)	8.1	7.7	7.7	8.0	7.5	7.3	7.5	8.2	8.3	8.2	7.9	7.5	7.8	8.4	7.3	7.5	8.1	8.1	7.7	7.1
6	Temp (deg C)	22.2	21.0	19.3	17.6	20.8	20.3	18.5	18.1	17.5	18.8	22.7	22.3		29.0	32.0	25.5	23.2	23.7	23.7	21.7
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0		0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		115	139	166	192	153	186	179	168	134	80	101	222	58	84		96	137	201	272
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00	0.00								0.04		0.01	0.00	0.00	0.00
4	Ca (mg/L)		11	18	18	21	17	25	29	27	28	10	12	22	11	9		10	16	21	28
5	Cl (mg/L)		17.9	17.3	8.6	18.2	13.9	15.7	21.5	17.5	13.3	0.7	15.3	20.5	6.0	8.9		10.2	9.9	12.0	30.5
6	CO3 (mg/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0		0.0	0.0	0.0	0.0
7	F (mg/L)		0.10	0.08	0.09	0.09	0.12	0.17							0.40	0.05		0.11	0.13	0.17	0.21
8	Fe (mg/L)	0.0	0.1	0.1	0.0	0.0	0.0	0.1		0.1		0.2	0.3			0.0	0.0	0.0	0.1	0.0	0.1
9	HCO3 (mg/L)	54	70	85	101	117	93	114	109	102	82	49	62	135	34	51	54	59	84	122	166
10	K (mg/L)		2.8	2.7	2.7	5.0	3.9	2.2	10.8	6.1	5.3	2.2	2.4		1.7	1.7		2.4	2.1	5.7	10.1
11	Mg (mg/L)		9.0	8.7	9.5	12.4	10.0	9.0	7.3	14.6	4.6	3.9	5.8	4.3	7.2	4.0		4.5	9.2	12.8	17.2
12	Na (mg/L)		7.8	11.1	7.8	14.0	12.7	21.8	26.2	15.9	12.5	8.0	10.8		5.7	6.6		8.7	11.7	22.8	24.3
13	NO2+NO3 (mg N/L)	0.05	0.10	0.51						0.18			2.21		0.08	0.10	0.08	0.40	2.42		
14	NO2-N (mgN/L)	0.00	0.01	0.01	0.02	0.02	0.02	0.02		0.02						0.00	0.00	0.01	0.01	0.02	0.05
15	NO3-N (mgN/L)	0.05	0.09	0.49						0.16						0.09	0.08	0.39	2.41		
16	o-PO4-P (mg P/L)																				
17	P-Tot (mgP/L)		0.010	0.025	0.032	0.042	0.042	0.055		0.040					0.020	0.020		0.017	0.010	0.033	0.100
18	SiO2 (mg/L)		20.3	18.6	14.2	14.0	9.4	11.8		12.6		11.7	7.9			18.5		15.6	17.1	18.1	25.7
19	SO4 (mg/L)		17.8	17.8	17.3	23.4	19.9	17.0		25.0		4.1	9.5	5.0	4.9	11.1		12.0	17.6	21.3	46.6
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.3	0.5	0.6	0.8	0.5	1.4	1.6	1.4	2.0	0.3	0.9	1.2	0.4	0.9	0.5	0.6	0.9	0.5	1.5	4.8
2	COD (mg/L)	18.5	22.0	21.0	24.0	23.0	24.0	24.0									25.0	15.3	24.0	25.3	25.3
3	DO (mg/L)	8.4	8.4	7.5	8.0	6.8	6.0	7.0	7.8	8.2	8.0	7.3	6.0	6.9	10.0	6.2	6.3	7.1	6.6	5.0	4.1
4	DO_SAT% (%)	96	93	81	83	76	66	75	82	85	85	84	68		128	84	76	82	78	59	49
	TRACE & TOXIC																				
1	Al (mg/L)											0.11	0.33								
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		27	45	45	52	43	63	73	67	70	25	31	54	28	23		24	41	51	69
2	HAR_Total (mgCaCO3/L)		65	81	84	103	84	100	104	128	89	41	55	72	58	40		43	79	105	141
3	Na% (%)		20	23	16	21	24	27	30	20	22	28	29		19	26		29	24	31	25
4	RSC (-)		0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.0	0.0	0.1		0.2	0.0	0.0	0.0
5	SAR (-)		0.4	0.5	0.4	0.6	0.6	1.0	1.2	0.6	0.6	0.5	0.6		0.3	0.5		0.6	0.6	1.0	0.9
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Bamnidhi (EMM00B3)

Local River : Hasdeo

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD I,CWC,Raipur

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	9.035	12.18	15.85	18.70	9.736
2	EC_FLD (µmho/cm)			332	320	270
3	EC_GEN (µmho/cm)	302	280	262	320	243
4	pH_FLD (pH units)			7.3	6.2	6.5
5	pH_GEN (pH units)	7.4	8.0	8.1	8.2	8.3
6	Temp (deg C)	23.8	25.5	22.0	22.2	27.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	205	215	183	147	225
3	B (mg/L)	0.00	0.00			
4	Ca (mg/L)	21	42	40	21	29
5	Cl (mg/L)	21.0	29.0	27.0	17.3	18.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.23	0.19			
8	Fe (mg/L)	0.1	0.1		0.1	
9	HCO3 (mg/L)	125	131	111	89	137
10	K (mg/L)	3.9	11.8	5.8	6.4	11.1
11	Mg (mg/L)	12.0	3.9	8.1	11.7	7.1
12	Na (mg/L)	17.2	44.0	19.6	15.1	24.5
13	NO2+NO3 (mg N/L)				0.57	
14	NO2-N (mgN/L)	0.09	0.06		0.05	
15	NO3-N (mgN/L)				0.52	
16	o-PO4-P (mg P/L)					
17	P-Tot (mgP/L)	0.080	0.080		0.067	
18	SIO2 (mg/L)	16.6	16.3		16.6	
19	SO4 (mg/L)	26.7	24.0		25.0	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.5	0.4	3.1	1.1	0.5
2	COD (mg/L)	20.0	16.0			
3	DO (mg/L)	4.9	4.3	6.5	6.0	7.0
4	DO_SAT% (%)	58	52	74	69	89
	TRACE & TOXIC					
1	Al (mg/L)					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	53	106	100	52	73
2	HAR_Total (mgCaCO3/L)	103	122	134	101	103
3	Na% (%)	26	42	23	23	31
4	RSC (-)	0.1	0.2	0.0	0.0	0.3
5	SAR (-)	0.7	1.8	0.7	0.7	1.1
	PESTICIDES					

MAND SUB-BASIN

SITE KURUBHATA

HISTORY SHEET

Water Year : 2015-2016

Site : KURUBHATA

Code : EMK00E2

State : Chhattisgarh

District : Raigarh

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Mand

Sub Tributary :

Sub-Sub Tributary :

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Drainage Area : 4625 Sq. Km.

Bank :

Latitude : 21°59'15"

Longitude : 83°12'15"

Zero of Gauge (m) : 215 (m.s.l)

10/23/1977 - 10/23/2025

Opening Date

Closing Date

Gauge : 10/23/1977

Discharge : 4/1/1978

Sediment : 7/22/1980

Water Quality : 7/1/1980

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1978-1979	756.0	218.440	7/1/1978	0.500	215.910	6/8/1978
1979-1980	1149	219.035	8/9/1979	0.022	215.875	4/26/1980
1980-1981	1721	219.305	8/24/1980	0.400	215.950	6/7/1980
1981-1982	789.2	218.670	8/23/1981	0.400	215.800	6/2/1981
1982-1983	1780	219.575	8/15/1982	0.500	215.840	4/15/1983
1983-1984	870.6	218.885	8/3/1983	0.300	216.150	5/21/1984
1984-1985	847.9	218.900	8/9/1984	1.100	215.970	5/4/1985
1985-1986	2119	219.830	8/8/1985	1.100	216.100	4/25/1986
1986-1987	1660	219.560	7/27/1986	0.800	216.100	4/21/1987
1987-1988	1925	219.600	8/29/1987	0.941	216.090	6/2/1987
1988-1989	930.0	218.900	8/11/1988	0.149	215.880	5/2/1989
1989-1990	1809	219.300	7/28/1989	0.450	215.930	4/29/1990
1990-1991	1167	219.140	7/20/1990	1.499	216.035	5/23/1991
1991-1992	2005	219.860	7/24/1991	1.039	215.780	5/1/1992
1992-1993	1120	218.825	9/5/1992	0.261	215.600	4/24/1993
1993-1994	1334	218.750	9/27/1993	0.175	215.620	4/28/1994
1994-1995	1963	219.690	7/20/1994	1.148	215.720	5/3/1995
1995-1996	2200	220.280	7/18/1995	0.262	215.640	5/7/1996
1996-1997	1625	219.400	7/26/1996	0.132	215.460	4/26/1997
1997-1998	1033	218.760	9/9/1997	2.300	215.700	5/11/1998
1998-1999	1828	219.300	9/14/1998	0.486	215.760	3/31/1999
1999-2000	2160	219.680	8/8/1999	0.552	215.610	3/9/2000

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2000-2001	800.0	218.220	9/3/2000	0.752	215.860	2/27/2001
2001-2002	1978	219.950	7/24/2001	2.159	215.760	3/23/2002
2002-2003	1671	219.100	9/12/2002	0.243	215.660	4/8/2003
2003-2004	1919	219.880	9/2/2003	0.116	215.550	3/13/2004
2004-2005	1910	219.560	8/12/2004	0.968	215.630	3/24/2005
2005-2006	1980	219.960	8/5/2005	0.544	215.640	2/10/2006
2006-2007	1502	219.010	7/31/2006	0.396	215.570	3/13/2007
2007-2008	1094	218.810	7/7/2007	0.929	215.680	4/3/2008
2008-2009	1545	219.470	9/19/2008	0.319	215.550	5/19/2009
2009-2010	649.5	218.040	7/21/2009	0.123	215.420	4/6/2010
2010-2011	961.7	218.650	9/21/2010	0.163	215.210	6/27/2010
2011-2012	2005	220.075	9/10/2011	0.290	215.580	3/13/2012
2012-2013	1460	218.800	8/12/2012	0.289	215.550	4/18/2013
2013-2014	1144	219.020	8/30/2013	0.150	215.290	4/13/2014
2014-2015	1337	219.330	8/4/2014	0.177	215.280	6/5/2014

Stage-Discharge Data for the period 2015 - 2016

Station Name : KURUBHATA (EMK00E2)

Division : MD,CWC,Burla

Local River : Mand

Sub-Division : MMSD II,CWC,Burla

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	215.600	0.686	216.250	38.32	216.130	54.06	217.310	338.5	216.070	34.15	215.970	40.00 *
2	215.570	0.505	216.020	23.76	216.200	48.00 *	217.280	327.9	216.050	30.00 *	216.220	75.54
3	215.550	0.471	215.940	21.28	216.880	198.4	217.070	259.7	216.020	24.64	216.010	52.35
4	215.710	6.475	215.950	22.09	218.520	989.5	216.790	195.1	216.000	24.50 *	215.920	32.52
5	215.730	7.392	215.920	21.00 *	217.880	516.3	216.700	176.8	215.980	22.17	215.880	30.58
6	215.710	6.491	215.970	23.74	217.195	310.6	216.630	165.2 *	215.960	20.90	215.820	27.26
7	215.750	8.650 *	216.230	39.40	216.770	189.7	216.670	168.9	215.940	17.47	215.800	25.57
8	215.750	8.647	216.170	30.15	216.590	160.7	216.380	96.05	215.920	17.49	215.800	25.50 *
9	215.700	6.432	217.910	668.1	216.430	102.0 *	216.300	85.01	215.900	16.55	215.800	25.21
10	215.650	5.003	217.970	707.6	216.320	87.52	216.230	77.68	215.880	15.76	215.800	25.97
11	215.620	1.186	218.600	1098	216.300	84.20	216.170	70.75	215.870	14.90 *	215.800	25.50 *
12	215.600	1.138	218.990	1400 *	216.280	82.72	216.130	51.57	215.870	14.94	215.770	21.84
13	215.590	1.088	217.380	294.5	216.370	77.68	216.340	80.00 *	215.860	10.79	215.760	20.52
14	215.710	6.450 *	216.870	198.9	216.540	110.8	216.270	63.58	215.850	10.28	215.760	19.74
15	215.740	8.429	216.560	154.2	216.410	102.0 *	216.220	58.46	215.830	9.654	215.760	19.70 *
16	215.830	12.97	216.930	192.0	216.310	89.00 *	216.280	65.26	215.820	9.178	215.750	18.57
17	215.770	10.14	217.790	704.7	216.470	104.2	216.270	63.58 *	215.800	8.812	215.750	18.74
18	215.590	6.935	217.190	240.0 *	217.540	311.9	216.230	77.29	215.790	8.700 *	215.740	18.37
19	215.540	4.270	216.970	190.0 *	218.180	860.9	216.190	71.58	215.820	14.31	215.740	18.28
20	215.510	1.950	216.610	134.9	217.600	324.6	216.150	55.00 *	215.880	11.97	215.730	18.37
21	215.510	1.935 *	216.530	123.3	217.700	528.6	216.290	65.83	215.860	10.78 *	215.720	14.59
22	215.560	4.892	216.360	102.3	217.130	284.0	216.950	220.4	215.850	10.28 *	215.720	14.50 *
23	215.690	10.57	216.710	147.5	216.650	170.0 *	217.160	288.6	215.830	11.13	215.720	14.26
24	215.770	18.09	217.780	673.5	216.600	162.8	216.630	165.2	215.810	9.000 *	215.720	13.93
25	216.530	135.6	217.790	510.5	216.570	156.7	216.470	115.0 *	215.800	8.800 *	215.720	13.40 *
26	216.280	42.77	217.140	220.0 *	216.610	157.9	216.400	87.19	215.780	8.600 *	215.720	13.43
27	216.080	26.81	216.840	189.5	216.620	161.3	216.230	77.29 *	215.770	11.36	215.720	13.64
28	215.870	17.50 *	216.480	134.8	217.160	284.0	216.180	65.92	215.770	11.40	215.720	13.34
29	215.930	20.56	216.350	78.79	217.070	254.7	216.130	38.71	215.760	10.83	215.720	13.30 *
30	215.880	17.76	216.080	50.34	217.000	240.0 *	216.100	36.51	215.760	9.003	215.710	12.11
31			216.085	51.32	217.230	305.7			215.750	8.615		
Ten-Daily Mean												
I Ten-Daily	215.672	5.075	216.433	159.5	216.892	265.7	216.736	189.1	215.972	22.36	215.902	36.05
II Ten-Daily	215.650	5.455	217.389	460.7	216.800	214.8	216.225	65.71	215.839	11.35	215.756	19.96
III Ten-Daily	215.910	29.65	216.740	207.4	216.940	246.0	216.454	116.1	215.795	9.981	215.719	13.65
Monthly												
Min.	215.510	0.471	215.920	21.00	216.130	48.00	216.100	36.51	215.750	8.600	215.710	12.11
Max.	216.530	135.6	218.990	1400	218.520	989.5	217.310	338.5	216.070	34.15	216.220	75.54
Mean	215.744	13.39	216.850	273.7	216.879	242.3	216.472	123.6	215.866	14.42	215.792	23.22

Annual Runoff in MCM = 1883 Annual Runoff in mm = 407

Peak Observed Discharge = 1098 cumecs on 11/07/2015 Corres. Water Level :218.6 m

Lowest Observed Discharge = 0.270 cumecs on 31/05/2016 Corres. Water Level :215.49 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : KURUBHATA (EMK00E2)

Division : MD,CWC,Burla

Local River : Mand

Sub-Division : MMSD II,CWC,Burla

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	215.710	12.03	215.620	6.205	215.530	2.143	215.580	2.385	215.540	0.879	215.520	0.490 *
2	215.710	12.44	215.620	6.010	215.530	2.143	215.570	2.242	215.540	0.821	215.520	0.492
3	215.700	11.86	215.610	5.900 *	215.530	2.200	215.570	2.229	215.540	0.830 *	215.520	0.493
4	215.710	14.53	215.590	4.670	215.540	2.307	215.570	2.181	215.530	0.766	215.520	0.485 *
5	215.710	14.27	215.590	4.774	215.550	2.388	215.560	2.076	215.530	0.766	215.520	0.495
6	215.710	14.20 *	215.580	4.399	215.550	2.409	215.560	1.200 *	215.530	0.787	215.510	0.436
7	215.700	13.82	215.580	4.368	215.550	2.260 *	215.560	1.215 *	215.530	0.823	215.510	0.425
8	215.690	11.37	215.580	4.559	215.500	2.078	215.560	2.126	215.520	0.700	215.510	0.420 *
9	215.690	11.61	215.570	4.285	215.490	1.854	215.500	0.884	215.520	0.736	215.510	0.426
10	215.680	11.09	215.570	4.100 *	215.490	1.846	215.500	0.842	215.520	0.728 *	215.510	0.421
11	215.680	10.74	215.520	1.822	215.490	1.924	215.500	0.883	215.520	0.706	215.510	0.409
12	215.680	10.60	215.520	1.753	215.480	1.815	215.550	2.031	215.520	0.719	215.510	0.414
13	215.670	10.50 *	215.510	1.634	215.480	1.726	215.560	1.195 *	215.510	0.678	215.510	0.384
14	215.660	10.82	215.510	1.608	215.480	1.100 *	215.560	2.157	215.510	0.668 *	215.510	0.395
15	215.660	10.52	215.540	2.282	215.480	2.047	215.560	2.124	215.510	0.694	215.510	0.390 *
16	215.660	10.43	215.550	2.397	215.480	1.352	215.690	2.943	215.520	0.718	215.500	0.364
17	215.660	10.64	215.550	2.400 *	215.480	1.276	215.680	2.781	215.520	0.700 *	215.500	0.376
18	215.650	10.09	215.540	2.366	215.480	1.277	215.680	2.821	215.530	0.691	215.500	0.361
19	215.650	9.830	215.540	2.266	215.480	1.093	215.680	2.691	215.540	0.831	215.500	0.370
20	215.640	7.320 *	215.530	2.138	215.480	1.083	215.670	2.225 *	215.540	0.830 *	215.510	0.461
21	215.640	7.319	215.530	2.100	215.480	1.105 *	215.590	2.492	215.540	0.804	215.510	0.460 *
22	215.640	7.483	215.520	1.977	215.480	1.109	215.590	2.300	215.530	0.759	215.510	0.458 *
23	215.640	7.448	215.520	1.965	215.480	1.105	215.590	2.214	215.530	0.766	215.510	0.455
24	215.640	7.400 *	215.520	1.950 *	215.470	0.979	215.580	1.300 *	215.530	0.760 *	215.510	0.440
25	215.640	7.450 *	215.540	2.337	215.470	1.016	215.580	1.285 *	215.530	0.795	215.510	0.434
26	215.640	7.313	215.540	2.340 *	215.470	0.978	215.580	2.249	215.520	0.737	215.510	0.416
27	215.640	7.300 *	215.540	2.318	215.490	1.245	215.580	1.280 *	215.520	0.779	215.520	0.442
28	215.640	7.605	215.530	2.204	215.490	1.270 *	215.570	2.151	215.530	0.823	215.510	0.417
29	215.630	6.486	215.530	2.170	215.560	2.120	215.560	2.040	215.520	0.736	215.510	0.413 *
30	215.630	6.566	215.530	2.123			215.540	0.810	215.520	0.499	215.500	0.392
31	215.630	6.451	215.530	2.120 *			215.540	0.831			215.490	0.270
Ten-Daily Mean												
I Ten-Daily	215.701	12.72	215.591	4.927	215.526	2.163	215.553	1.738	215.530	0.784	215.515	0.458
II Ten-Daily	215.661	10.15	215.531	2.067	215.481	1.469	215.613	2.185	215.522	0.724	215.506	0.392
III Ten-Daily	215.637	7.165	215.530	2.146	215.488	1.214	215.573	1.723	215.527	0.746	215.508	0.418
Monthly												
Min.	215.630	6.451	215.510	1.608	215.470	0.978	215.500	0.810	215.510	0.499	215.490	0.270
Max.	215.710	14.53	215.620	6.205	215.560	2.409	215.690	2.943	215.540	0.879	215.520	0.495
Mean	215.665	9.921	215.550	3.017	215.499	1.629	215.579	1.877	215.526	0.751	215.510	0.423

Peak Computed Discharge = 1400 cumecs on 12/07/2015

Corres. Water Level :218.99 m

Lowest Computed Discharge = 0.390 cumecs on 15/05/2016

Corres. Water Level :215.51 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

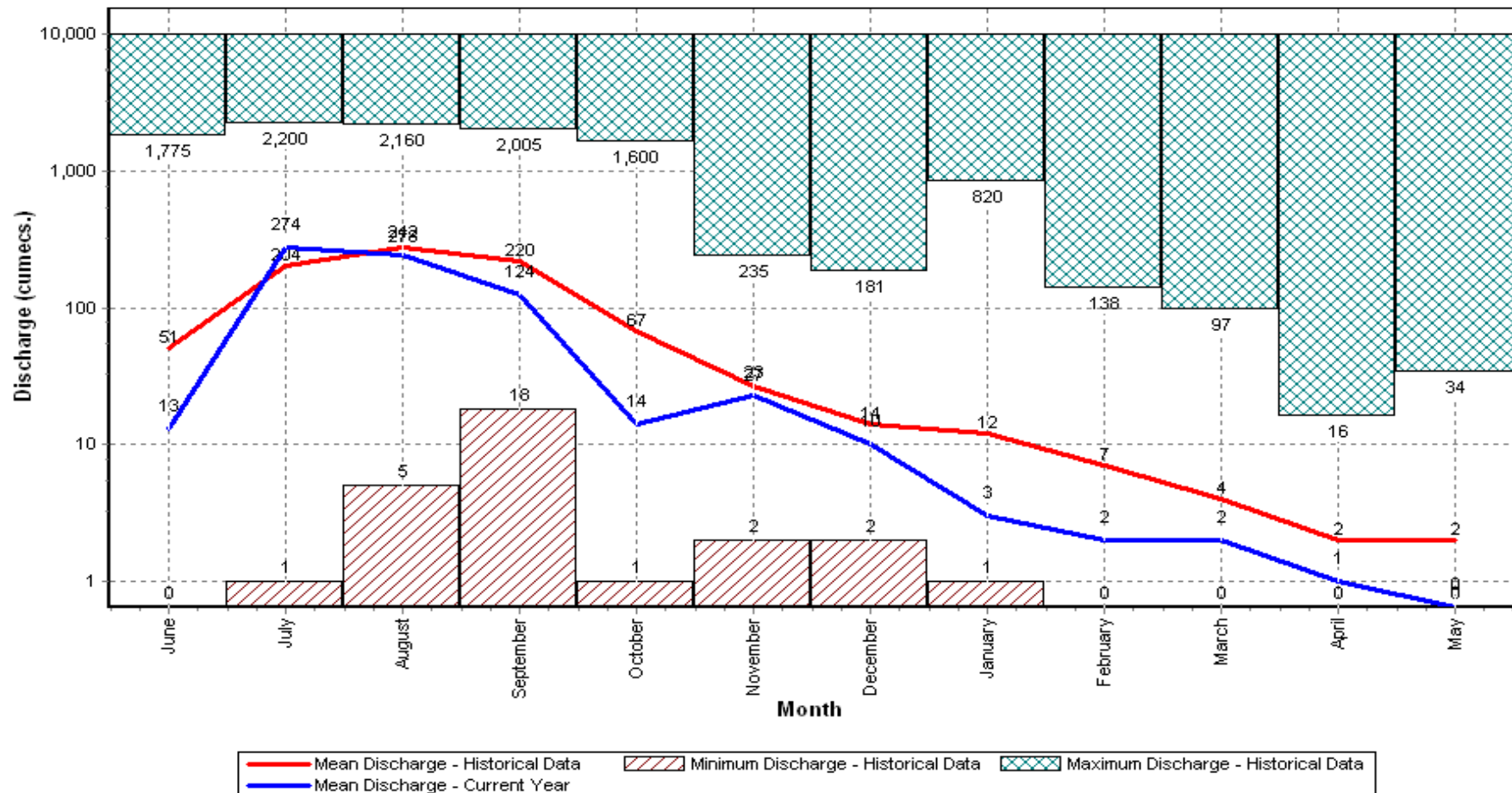
Station Name : KURUBHATA (EMK00E2)

Data considered : 1978-2016

Division : MD,CWC,Burla

Local River : Mand

Sub-Division : MMSD II,CWC,Burla



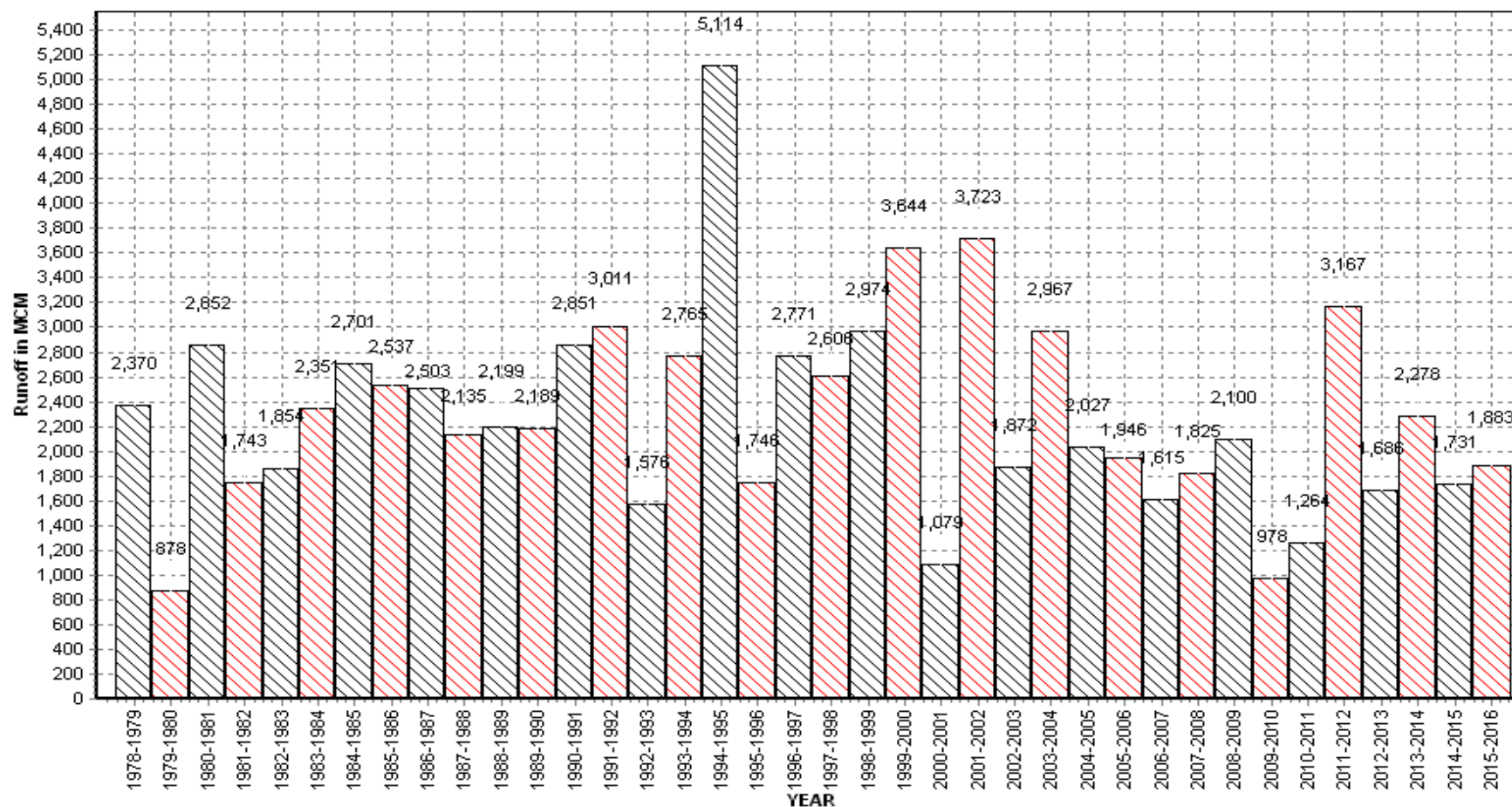
Annual Runoff Values for the period: 1978 - 2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



Note: Missing values have not been considered while arriving at Annual Runoff

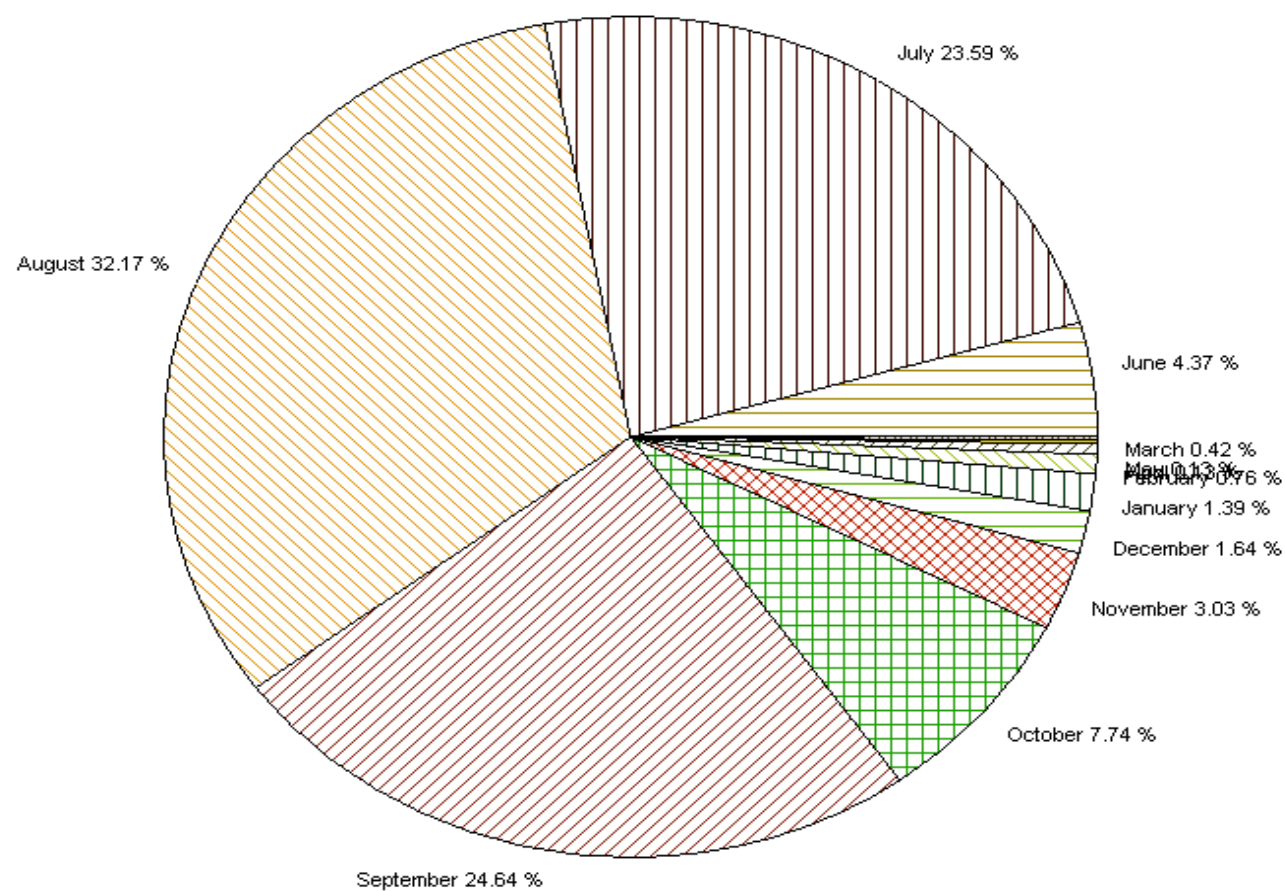
Monthly Average Runoff based on period : 1978-2015

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



June	4.37 %
July	23.59 %
August	32.17 %
September	24.64 %
October	7.74 %
November	3.03 %
December	1.64 %
January	1.39 %
February	0.76 %
March	0.42 %
April	0.13 %
May	0.13 %

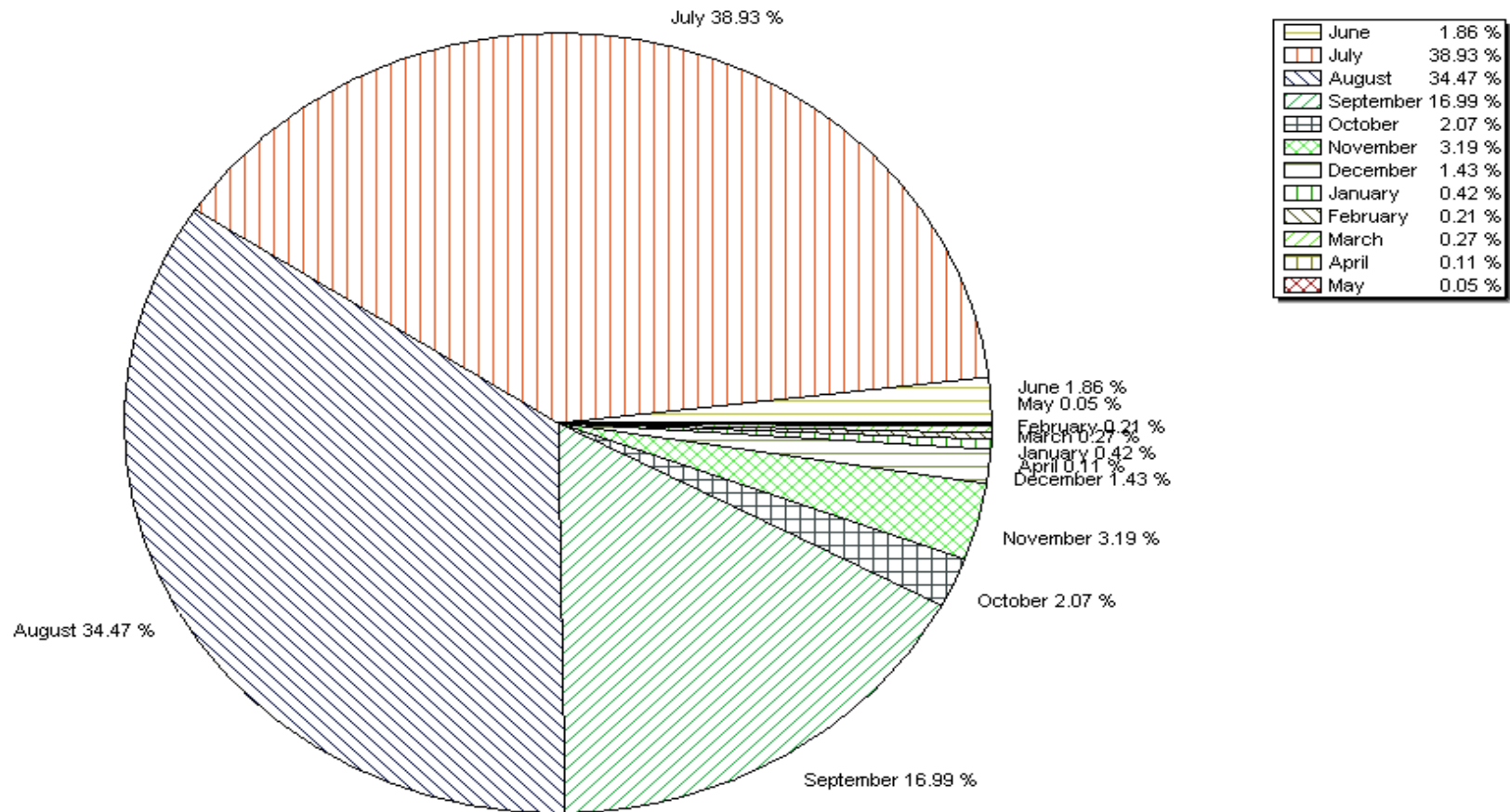
Monthly Runoff for the Year : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



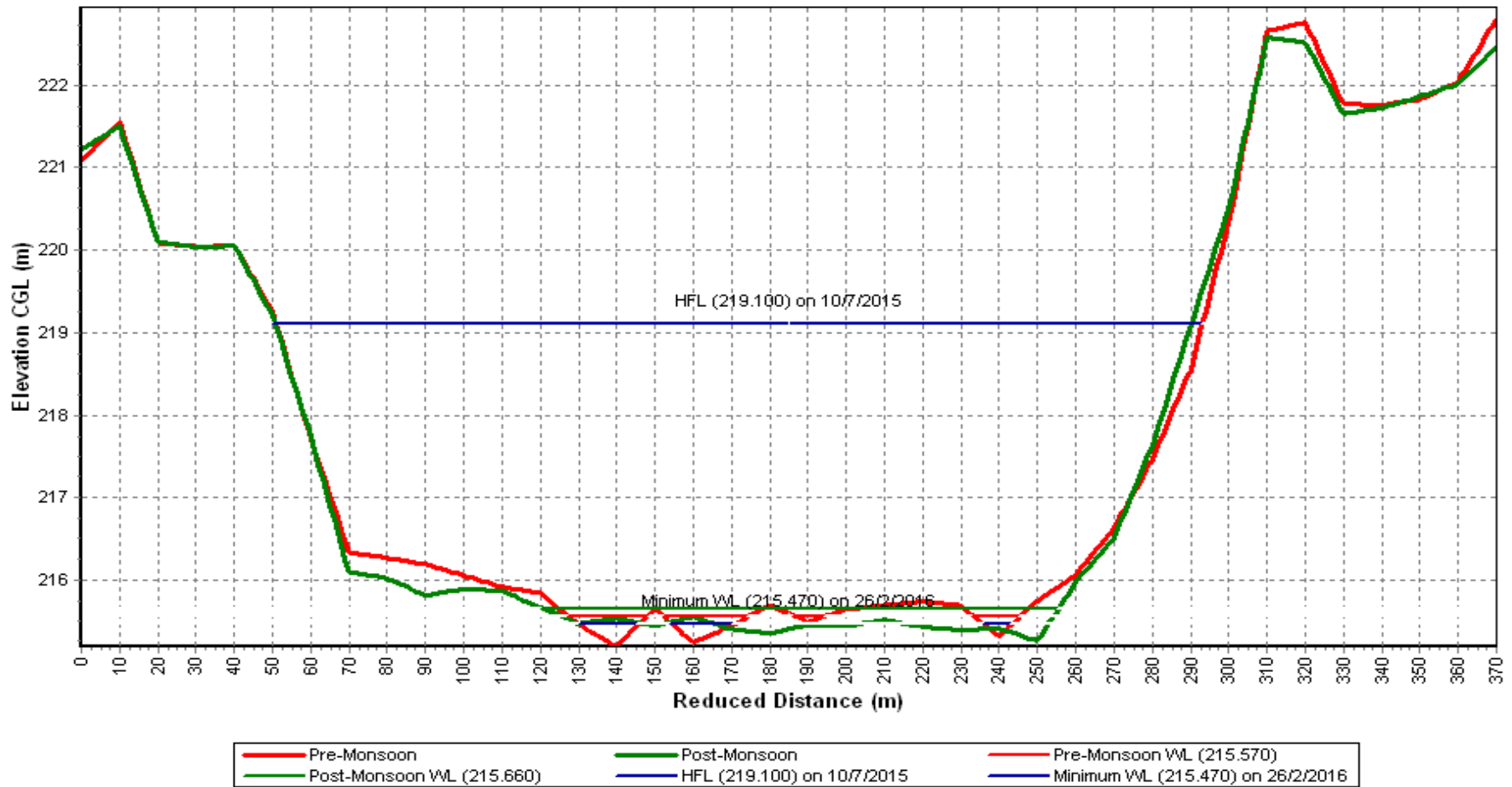
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



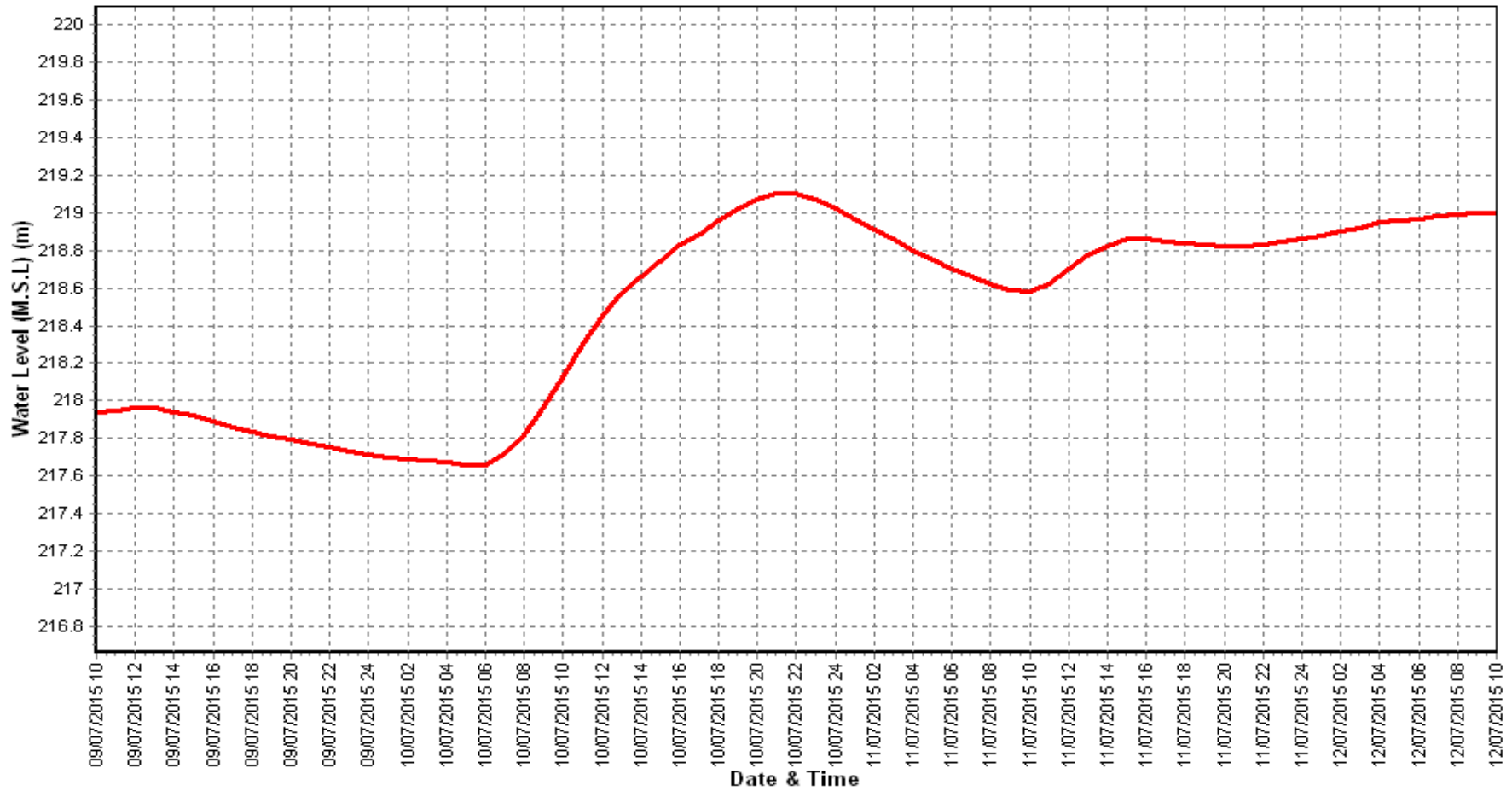
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



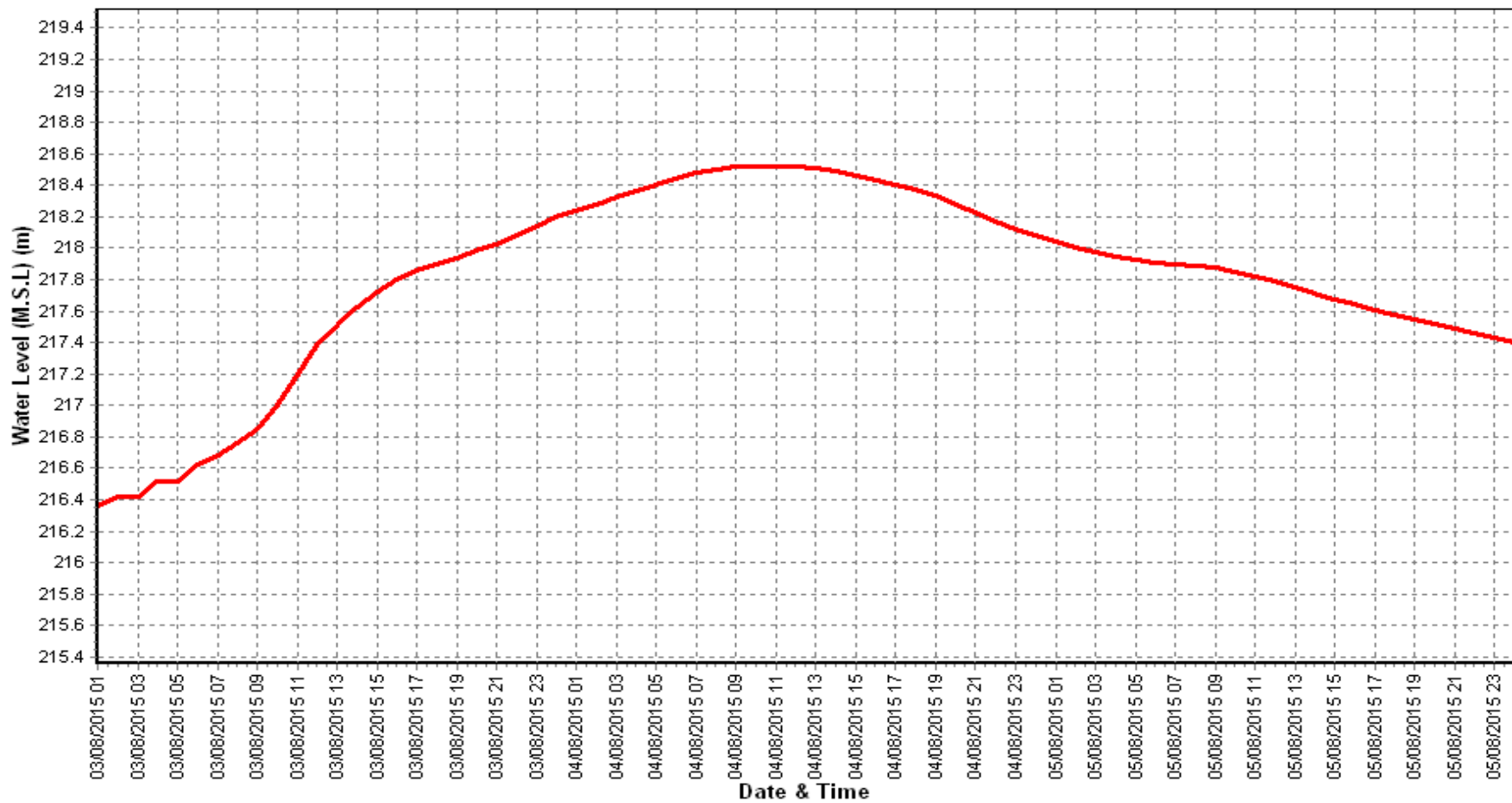
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



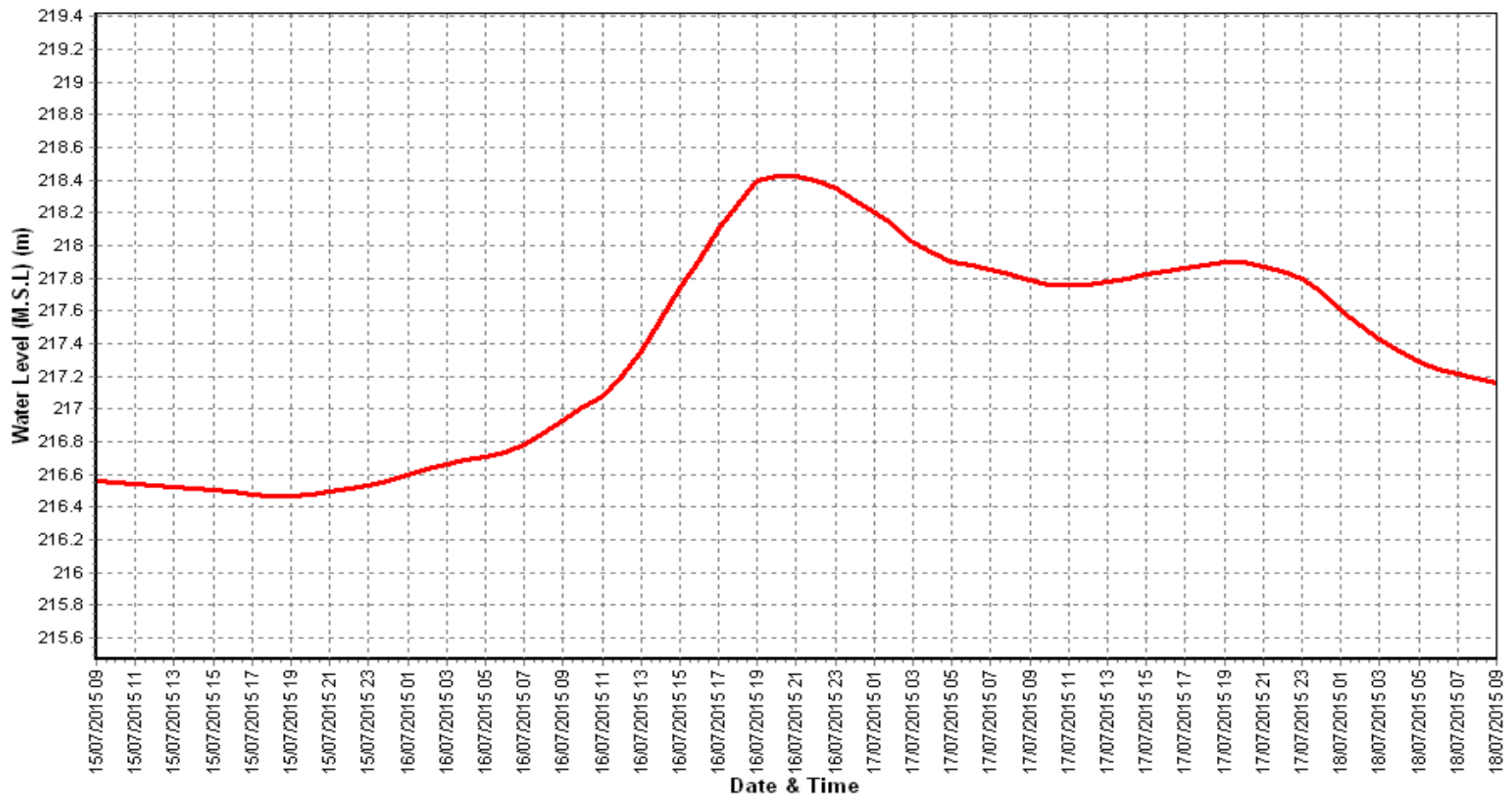
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.686	0.000	0.000	0.000	0.000	0	38.32	0.000	0.000	0.222	0.222	735	54.06	0.000	0.000	0.215	0.215	1002
2	0.505	0.000	0.000	0.000	0.000	0	23.76	0.000	0.000	0.202	0.202	415	48.00	0.000	0.000	0.000	0.000	0
3	0.471	0.000	0.000	0.000	0.000	0	21.28	0.000	0.000	0.198	0.198	364	198.4	0.000	0.000	0.228	0.228	3908
4	6.475	0.000	0.000	0.000	0.000	0	22.09	0.000	0.000	0.199	0.199	380	989.5	0.723	0.738	0.787	2.248	192179
5	7.392	0.000	0.000	0.000	0.000	0	21.00	0.000	0.000	0.000	0.000	0	516.3	0.672	0.678	0.683	2.033	90693
6	6.491	0.000	0.000	0.000	0.000	0	23.74	0.000	0.000	0.200	0.200	410	310.6	0.000	0.000	0.895	0.895	24018
7	8.650	0.000	0.000	0.000	0.000	0	39.40	0.000	0.000	0.218	0.218	742	189.7	0.000	0.000	0.721	0.721	11820
8	8.647	0.000	0.000	0.000	0.000	0	30.15	0.000	0.000	0.216	0.216	563	160.7	0.000	0.000	0.219	0.219	3033
9	6.432	0.000	0.000	0.000	0.000	0	668.1	0.682	0.789	0.610	2.081	120121	102.0	0.000	0.000	0.000	0.000	0
10	5.003	0.000	0.000	0.000	0.000	0	707.6	0.685	0.793	0.740	2.218	135596	87.52	0.000	0.000	0.213	0.213	1607
11	1.186	0.000	0.000	0.000	0.000	0	1098	0.728	0.743	0.791	2.262	214560	84.20	0.000	0.000	0.212	0.212	1542
12	1.138	0.000	0.000	0.000	0.000	0	1400	0.000	0.000	0.000	0.000	0	82.72	0.000	0.000	0.211	0.211	1508
13	1.088	0.000	0.000	0.000	0.000	0	294.5	0.000	0.000	0.408	0.408	10381	77.68	0.000	0.000	0.225	0.225	1510
14	6.450	0.000	0.000	0.000	0.000	0	198.9	0.000	0.000	0.225	0.225	3866	110.8	0.000	0.000	0.228	0.228	2182
15	8.429	0.000	0.000	0.000	0.000	0	154.2	0.000	0.000	0.218	0.218	2904	102.0	0.000	0.000	0.000	0.000	0
16	12.97	0.000	0.000	0.000	0.000	0	192.0	0.000	0.000	0.231	0.231	3832	89.00	0.000	0.000	0.000	0.000	0
17	10.14	0.000	0.000	0.000	0.000	0	704.7	0.671	0.688	0.695	2.054	125068	104.2	0.000	0.000	0.217	0.217	1954
18	6.935	0.000	0.000	0.000	0.000	0	240.0	0.000	0.000	0.000	0.000	0	311.9	0.000	0.000	0.949	0.949	25573
19	4.270	0.000	0.000	0.000	0.000	0	190.0	0.000	0.000	0.000	0.000	0	860.9	0.713	0.716	0.728	2.157	160396
20	1.950	0.000	0.000	0.000	0.000	0	134.9	0.000	0.000	0.222	0.222	2588	324.6	0.000	0.000	0.954	0.954	26755
21	1.935	0.000	0.000	0.000	0.000	0	123.3	0.000	0.000	0.216	0.216	2301	528.6	0.000	0.000	1.145	1.145	52292
22	4.892	0.000	0.000	0.000	0.000	0	102.3	0.000	0.000	0.227	0.227	2007	284.0	0.000	0.000	0.910	0.910	22326
23	10.57	0.000	0.000	0.000	0.000	0	147.5	0.000	0.000	0.222	0.222	2829	170.0	0.000	0.000	0.000	0.000	0
24	18.09	0.000	0.000	0.150	0.150	234	673.5	0.673	0.662	0.678	2.013	117132	162.8	0.000	0.000	0.222	0.222	3123
25	135.6	0.000	0.000	0.705	0.705	8258	510.5	0.671	0.671	0.673	2.015	88871	156.7	0.000	0.000	0.219	0.219	2965
26	42.77	0.000	0.000	0.225	0.225	831	220.0	0.000	0.000	0.000	0.000	0	157.9	0.000	0.000	0.224	0.224	3055
27	26.81	0.000	0.000	0.204	0.204	473	189.5	0.000	0.000	0.225	0.225	3684	161.3	0.000	0.000	0.226	0.226	3150
28	17.50	0.000	0.000	0.000	0.000	0	134.8	0.000	0.000	0.219	0.219	2551	284.0	0.000	0.000	0.914	0.914	22427
29	20.56	0.000	0.000	0.198	0.198	352	78.79	0.000	0.000	0.217	0.217	1477	254.7	0.000	0.000	0.908	0.908	19980
30	17.76	0.000	0.000	0.184	0.184	282	50.34	0.000	0.000	0.209	0.209	909	240.0	0.000	0.000	0.000	0.000	0
31							51.32	0.000	0.000	0.208	0.208	922	305.7	0.000	0.000	0.919	0.919	24264
Ten Daily Mean																		
Ten Daily I	5.075	0.000	0.000	0.000	0.000	0	159.5	0.137	0.158	0.281	0.575	25933	265.7	0.140	0.142	0.396	0.677	32826
Ten Daily II	5.455	0.000	0.000	0.000	0.000	0	460.7	0.140	0.143	0.279	0.562	36320	214.8	0.071	0.072	0.372	0.515	22142
Ten Daily III	29.65	0.000	0.000	0.167	0.167	1043	207.4	0.122	0.121	0.281	0.525	20244	246.0	0.000	0.000	0.517	0.517	13962
Monthly																		
Total						10430						845208						703263

Annual Sediment Load (Metric Tonnes) : 1717474

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	338.5	0.000	0.000	0.924	0.924	27023	34.15	0.000	0.000	0.196	0.196	578	40.00	0.000	0.000	0.000	0.000	0
2	327.9	0.000	0.000	0.920	0.920	26064	30.00	0.000	0.000	0.000	0.000	0	75.54	0.000	0.000	0.164	0.164	1070
3	259.7	0.000	0.000	0.913	0.913	20488	24.64	0.000	0.000	0.194	0.194	413	52.35	0.000	0.000	0.000	0.000	0
4	195.1	0.000	0.000	0.228	0.228	3844	24.50	0.000	0.000	0.000	0.000	0	32.52	0.000	0.000	0.000	0.000	0
5	176.8	0.000	0.000	0.219	0.219	3344	22.17	0.000	0.000	0.193	0.193	370	30.58	0.000	0.000	0.000	0.000	0
6	165.2	0.000	0.000	0.000	0.000	0	20.90	0.000	0.000	0.192	0.192	346	27.26	0.000	0.000	0.000	0.000	0
7	168.9	0.000	0.000	0.218	0.218	3181	17.47	0.000	0.000	0.190	0.190	287	25.57	0.000	0.000	0.000	0.000	0
8	96.05	0.000	0.000	0.201	0.201	1668	17.49	0.000	0.000	0.189	0.189	286	25.50	0.000	0.000	0.000	0.000	0
9	85.01	0.000	0.000	0.200	0.200	1469	16.55	0.000	0.000	0.187	0.187	267	25.21	0.000	0.000	0.126	0.126	274
10	77.68	0.000	0.000	0.195	0.195	1309	15.76	0.000	0.000	0.186	0.186	253	25.97	0.000	0.000	0.000	0.000	0
11	70.75	0.000	0.000	0.193	0.193	1180	14.90	0.000	0.000	0.000	0.000	0	25.50	0.000	0.000	0.000	0.000	0
12	51.57	0.000	0.000	0.192	0.192	855	14.94	0.000	0.000	0.184	0.184	237	21.84	0.000	0.000	0.000	0.000	0
13	80.00	0.000	0.000	0.000	0.000	0	10.79	0.000	0.000	0.182	0.182	170	20.52	0.000	0.000	0.000	0.000	0
14	63.58	0.000	0.000	0.198	0.198	1088	10.28	0.000	0.000	0.180	0.180	160	19.74	0.000	0.000	0.000	0.000	0
15	58.46	0.000	0.000	0.197	0.197	992	9.654	0.000	0.000	0.179	0.179	149	19.70	0.000	0.000	0.000	0.000	0
16	65.26	0.000	0.000	0.198	0.198	1118	9.178	0.000	0.000	0.144	0.144	114	18.57	0.000	0.000	0.098	0.098	157
17	63.58	0.000	0.000	0.000	0.000	0	8.812	0.000	0.000	0.123	0.123	94	18.74	0.000	0.000	0.000	0.000	0
18	77.29	0.000	0.000	0.197	0.197	1316	8.700	0.000	0.000	0.000	0.000	0	18.37	0.000	0.000	0.000	0.000	0
19	71.58	0.000	0.000	0.194	0.194	1200	14.31	0.000	0.000	0.126	0.126	156	18.28	0.000	0.000	0.000	0.000	0
20	55.00	0.000	0.000	0.000	0.000	0	11.97	0.000	0.000	0.128	0.128	132	18.37	0.000	0.000	0.000	0.000	0
21	65.83	0.000	0.000	0.199	0.199	1132	10.78	0.000	0.000	0.000	0.000	0	14.59	0.000	0.000	0.000	0.000	0
22	220.4	0.000	0.000	0.905	0.905	17222	10.28	0.000	0.000	0.000	0.000	0	14.50	0.000	0.000	0.000	0.000	0
23	288.6	0.000	0.000	0.915	0.915	22814	11.13	0.000	0.000	0.113	0.113	109	14.26	0.000	0.000	0.086	0.086	106
24	165.2	0.000	0.000	0.623	0.623	8892	9.000	0.000	0.000	0.000	0.000	0	13.93	0.000	0.000	0.000	0.000	0
25	115.0	0.000	0.000	0.000	0.000	0	8.800	0.000	0.000	0.000	0.000	0	13.40	0.000	0.000	0.000	0.000	0
26	87.19	0.000	0.000	0.464	0.464	3495	8.600	0.000	0.000	0.000	0.000	0	13.43	0.000	0.000	0.000	0.000	0
27	77.29	0.000	0.000	0.000	0.000	0	11.36	0.000	0.000	0.099	0.099	97	13.64	0.000	0.000	0.000	0.000	0
28	65.92	0.000	0.000	0.204	0.204	1159	11.40	0.000	0.000	0.098	0.098	97	13.34	0.000	0.000	0.000	0.000	0
29	38.71	0.000	0.000	0.199	0.199	666	10.83	0.000	0.000	0.097	0.097	91	13.30	0.000	0.000	0.000	0.000	0
30	36.51	0.000	0.000	0.197	0.197	621	9.003	0.000	0.000	0.096	0.096	75	12.11	0.000	0.000	0.082	0.082	86
31							8.615	0.000	0.000	0.094	0.094	70						
Ten Daily Mean																		
Ten Daily I	189.1	0.000	0.000	0.402	0.402	8839	22.36	0.000	0.000	0.153	0.153	280	36.05	0.000	0.000	0.029	0.029	134
Ten Daily II	65.71	0.000	0.000	0.137	0.137	775	11.35	0.000	0.000	0.125	0.125	121	19.96	0.000	0.000	0.010	0.010	16
Ten Daily III	116.1	0.000	0.000	0.371	0.371	5600	9.981	0.000	0.000	0.054	0.054	49	13.65	0.000	0.000	0.017	0.017	19
Monthly																		
Total						152140						4550						1694

Annual Sediment Load (Metric Tonnes) : 1717474

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	12.03	0.000	0.000	0.000	0.000	0	6.205	0.000	0.000	0.000	0.000	0	2.143	0.000	0.000	0.000	0.000	0
2	12.44	0.000	0.000	0.000	0.000	0	6.010	0.000	0.000	0.000	0.000	0	2.143	0.000	0.000	0.000	0.000	0
3	11.86	0.000	0.000	0.000	0.000	0	5.900	0.000	0.000	0.000	0.000	0	2.200	0.000	0.000	0.000	0.000	0
4	14.53	0.000	0.000	0.000	0.000	0	4.670	0.000	0.000	0.000	0.000	0	2.307	0.000	0.000	0.000	0.000	0
5	14.27	0.000	0.000	0.000	0.000	0	4.774	0.000	0.000	0.000	0.000	0	2.388	0.000	0.000	0.000	0.000	0
6	14.20	0.000	0.000	0.000	0.000	0	4.399	0.000	0.000	0.000	0.000	0	2.409	0.000	0.000	0.000	0.000	0
7	13.82	0.000	0.000	0.079	0.079	94	4.368	0.000	0.000	0.000	0.000	0	2.260	0.000	0.000	0.000	0.000	0
8	11.37	0.000	0.000	0.000	0.000	0	4.559	0.000	0.000	0.000	0.000	0	2.078	0.000	0.000	0.000	0.000	0
9	11.61	0.000	0.000	0.000	0.000	0	4.285	0.000	0.000	0.000	0.000	0	1.854	0.000	0.000	0.000	0.000	0
10	11.09	0.000	0.000	0.000	0.000	0	4.100	0.000	0.000	0.000	0.000	0	1.846	0.000	0.000	0.000	0.000	0
11	10.74	0.000	0.000	0.000	0.000	0	1.822	0.000	0.000	0.000	0.000	0	1.924	0.000	0.000	0.000	0.000	0
12	10.60	0.000	0.000	0.000	0.000	0	1.753	0.000	0.000	0.000	0.000	0	1.815	0.000	0.000	0.000	0.000	0
13	10.50	0.000	0.000	0.000	0.000	0	1.634	0.000	0.000	0.000	0.000	0	1.726	0.000	0.000	0.000	0.000	0
14	10.82	0.000	0.000	0.053	0.053	49	1.608	0.000	0.000	0.000	0.000	0	1.100	0.000	0.000	0.000	0.000	0
15	10.52	0.000	0.000	0.000	0.000	0	2.282	0.000	0.000	0.000	0.000	0	2.047	0.000	0.000	0.000	0.000	0
16	10.43	0.000	0.000	0.000	0.000	0	2.397	0.000	0.000	0.000	0.000	0	1.352	0.000	0.000	0.000	0.000	0
17	10.64	0.000	0.000	0.000	0.000	0	2.400	0.000	0.000	0.000	0.000	0	1.276	0.000	0.000	0.000	0.000	0
18	10.09	0.000	0.000	0.000	0.000	0	2.366	0.000	0.000	0.000	0.000	0	1.277	0.000	0.000	0.000	0.000	0
19	9.830	0.000	0.000	0.000	0.000	0	2.266	0.000	0.000	0.000	0.000	0	1.093	0.000	0.000	0.000	0.000	0
20	7.320	0.000	0.000	0.000	0.000	0	2.138	0.000	0.000	0.000	0.000	0	1.083	0.000	0.000	0.000	0.000	0
21	7.319	0.000	0.000	0.042	0.042	26	2.100	0.000	0.000	0.000	0.000	0	1.105	0.000	0.000	0.000	0.000	0
22	7.483	0.000	0.000	0.000	0.000	0	1.977	0.000	0.000	0.000	0.000	0	1.109	0.000	0.000	0.000	0.000	0
23	7.448	0.000	0.000	0.000	0.000	0	1.965	0.000	0.000	0.000	0.000	0	1.105	0.000	0.000	0.000	0.000	0
24	7.400	0.000	0.000	0.000	0.000	0	1.950	0.000	0.000	0.000	0.000	0	0.979	0.000	0.000	0.000	0.000	0
25	7.450	0.000	0.000	0.000	0.000	0	2.337	0.000	0.000	0.000	0.000	0	1.016	0.000	0.000	0.000	0.000	0
26	7.313	0.000	0.000	0.000	0.000	0	2.340	0.000	0.000	0.000	0.000	0	0.978	0.000	0.000	0.000	0.000	0
27	7.300	0.000	0.000	0.000	0.000	0	2.318	0.000	0.000	0.000	0.000	0	1.245	0.000	0.000	0.000	0.000	0
28	7.605	0.000	0.000	0.032	0.032	21	2.204	0.000	0.000	0.000	0.000	0	1.270	0.000	0.000	0.000	0.000	0
29	6.486	0.000	0.000	0.000	0.000	0	2.170	0.000	0.000	0.000	0.000	0	2.120	0.000	0.000	0.000	0.000	0
30	6.566	0.000	0.000	0.000	0.000	0	2.123	0.000	0.000	0.000	0.000	0						
31	6.451	0.000	0.000	0.000	0.000	0	2.120	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	12.72	0.000	0.000	0.008	0.008	9	4.927	0.000	0.000	0.000	0.000	0	2.163	0.000	0.000	0.000	0.000	0
Ten Daily II	10.15	0.000	0.000	0.005	0.005	5	2.067	0.000	0.000	0.000	0.000	0	1.469	0.000	0.000	0.000	0.000	0
Ten Daily III	7.165	0.000	0.000	0.007	0.007	4	2.146	0.000	0.000	0.000	0.000	0	1.214	0.000	0.000	0.000	0.000	0
Monthly																		
Total						190						0						0

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	2.385	0.000	0.000	0.000	0.000	0	0.879	0.000	0.000	0.000	0.000	0	0.490	0.000	0.000	0.000	0.000	0
2	2.242	0.000	0.000	0.000	0.000	0	0.821	0.000	0.000	0.000	0.000	0	0.492	0.000	0.000	0.000	0.000	0
3	2.229	0.000	0.000	0.000	0.000	0	0.830	0.000	0.000	0.000	0.000	0	0.493	0.000	0.000	0.000	0.000	0
4	2.181	0.000	0.000	0.000	0.000	0	0.766	0.000	0.000	0.000	0.000	0	0.485	0.000	0.000	0.000	0.000	0
5	2.076	0.000	0.000	0.000	0.000	0	0.766	0.000	0.000	0.000	0.000	0	0.495	0.000	0.000	0.000	0.000	0
6	1.200	0.000	0.000	0.000	0.000	0	0.787	0.000	0.000	0.000	0.000	0	0.436	0.000	0.000	0.000	0.000	0
7	1.215	0.000	0.000	0.000	0.000	0	0.823	0.000	0.000	0.000	0.000	0	0.425	0.000	0.000	0.000	0.000	0
8	2.126	0.000	0.000	0.000	0.000	0	0.700	0.000	0.000	0.000	0.000	0	0.420	0.000	0.000	0.000	0.000	0
9	0.884	0.000	0.000	0.000	0.000	0	0.736	0.000	0.000	0.000	0.000	0	0.426	0.000	0.000	0.000	0.000	0
10	0.842	0.000	0.000	0.000	0.000	0	0.728	0.000	0.000	0.000	0.000	0	0.421	0.000	0.000	0.000	0.000	0
11	0.883	0.000	0.000	0.000	0.000	0	0.706	0.000	0.000	0.000	0.000	0	0.409	0.000	0.000	0.000	0.000	0
12	2.031	0.000	0.000	0.000	0.000	0	0.719	0.000	0.000	0.000	0.000	0	0.414	0.000	0.000	0.000	0.000	0
13	1.195	0.000	0.000	0.000	0.000	0	0.678	0.000	0.000	0.000	0.000	0	0.384	0.000	0.000	0.000	0.000	0
14	2.157	0.000	0.000	0.000	0.000	0	0.668	0.000	0.000	0.000	0.000	0	0.395	0.000	0.000	0.000	0.000	0
15	2.124	0.000	0.000	0.000	0.000	0	0.694	0.000	0.000	0.000	0.000	0	0.390	0.000	0.000	0.000	0.000	0
16	2.943	0.000	0.000	0.000	0.000	0	0.718	0.000	0.000	0.000	0.000	0	0.364	0.000	0.000	0.000	0.000	0
17	2.781	0.000	0.000	0.000	0.000	0	0.700	0.000	0.000	0.000	0.000	0	0.376	0.000	0.000	0.000	0.000	0
18	2.821	0.000	0.000	0.000	0.000	0	0.691	0.000	0.000	0.000	0.000	0	0.361	0.000	0.000	0.000	0.000	0
19	2.691	0.000	0.000	0.000	0.000	0	0.831	0.000	0.000	0.000	0.000	0	0.370	0.000	0.000	0.000	0.000	0
20	2.225	0.000	0.000	0.000	0.000	0	0.830	0.000	0.000	0.000	0.000	0	0.461	0.000	0.000	0.000	0.000	0
21	2.492	0.000	0.000	0.000	0.000	0	0.804	0.000	0.000	0.000	0.000	0	0.460	0.000	0.000	0.000	0.000	0
22	2.300	0.000	0.000	0.000	0.000	0	0.759	0.000	0.000	0.000	0.000	0	0.458	0.000	0.000	0.000	0.000	0
23	2.214	0.000	0.000	0.000	0.000	0	0.766	0.000	0.000	0.000	0.000	0	0.455	0.000	0.000	0.000	0.000	0
24	1.300	0.000	0.000	0.000	0.000	0	0.760	0.000	0.000	0.000	0.000	0	0.440	0.000	0.000	0.000	0.000	0
25	1.285	0.000	0.000	0.000	0.000	0	0.795	0.000	0.000	0.000	0.000	0	0.434	0.000	0.000	0.000	0.000	0
26	2.249	0.000	0.000	0.000	0.000	0	0.737	0.000	0.000	0.000	0.000	0	0.416	0.000	0.000	0.000	0.000	0
27	1.280	0.000	0.000	0.000	0.000	0	0.779	0.000	0.000	0.000	0.000	0	0.442	0.000	0.000	0.000	0.000	0
28	2.151	0.000	0.000	0.000	0.000	0	0.823	0.000	0.000	0.000	0.000	0	0.417	0.000	0.000	0.000	0.000	0
29	2.040	0.000	0.000	0.000	0.000	0	0.736	0.000	0.000	0.000	0.000	0	0.413	0.000	0.000	0.000	0.000	0
30	0.810	0.000	0.000	0.000	0.000	0	0.499	0.000	0.000	0.000	0.000	0	0.392	0.000	0.000	0.000	0.000	0
31	0.831	0.000	0.000	0.000	0.000	0							0.270	0.000	0.000	0.000	0.000	0
<u>Ten Daily Mean</u>																		
Ten Daily I	1.738	0.000	0.000	0.000	0.000	0	0.784	0.000	0.000	0.000	0.000	0	0.458	0.000	0.000	0.000	0.000	0
Ten Daily II	2.185	0.000	0.000	0.000	0.000	0	0.724	0.000	0.000	0.000	0.000	0	0.392	0.000	0.000	0.000	0.000	0
Ten Daily III	1.723	0.000	0.000	0.000	0.000	0	0.746	0.000	0.000	0.000	0.000	0	0.418	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 1717474

Annual Sediment Load for period : 1978-2016

Station Name : KURUBHATA (EMK00E2)

Division : MD,CWC,Burla

Local River : Mand

Sub-Division : MMSD II,CWC,Burla

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1978-1979	0	0	0	2370
1979-1980	0	0	0	878
1980-1981	2387494	359	2387852	2852
1981-1982	1613961	3434	1617396	1743
1982-1983	2227490	7152	2234642	1854
1983-1984	2364467	4440	2368907	2351
1984-1985	2782091	9684	2791774	2701
1985-1986	2602368	4691	2607059	2537
1986-1987	2364143	4776	2368919	2503
1987-1988	3517501	10970	3528472	2135
1988-1989	2962040	168	2962208	2199
1989-1990	2477458	524	2477982	2189
1990-1991	1996120	917	1997037	2851
1991-1992	4354575	2451	4357027	3011
1992-1993	1221530	79	1221609	1576
1993-1994	2436824	216	2437040	2765
1994-1995	5220590	2133	5222723	5114
1995-1996	1389085	415	1389501	1746
1996-1997	3441848	330	3442178	2771
1997-1998	2402131	25741	2427873	2606
1998-1999	2360419	3066	2363485	2974
1999-2000	2196790	2056	2198846	3644
2000-2001	440600	22	440621	1079
2001-2002	2826376	1064	2827440	3723
2002-2003	1767900	407	1768307	1872
2003-2004	1902520	866	1903386	2967
2004-2005	627685	2078	629763	2027
2005-2006	1479334	278	1479612	1946
2006-2007	1234428	83	1234511	1615
2007-2008	1141781	109	1141890	1825
2008-2009	1325650	68	1325718	2100
2009-2010	196647	129	196776	978
2010-2011	197845	0	197845	1264
2011-2012	3248276	0	3248276	3167
2012-2013	464127	137	464264	1686
2013-2014	854229	1800	856029	2278
2014-2015	1781541	397	1781938	1731
2015-2016	1717284	190	1717474	1883

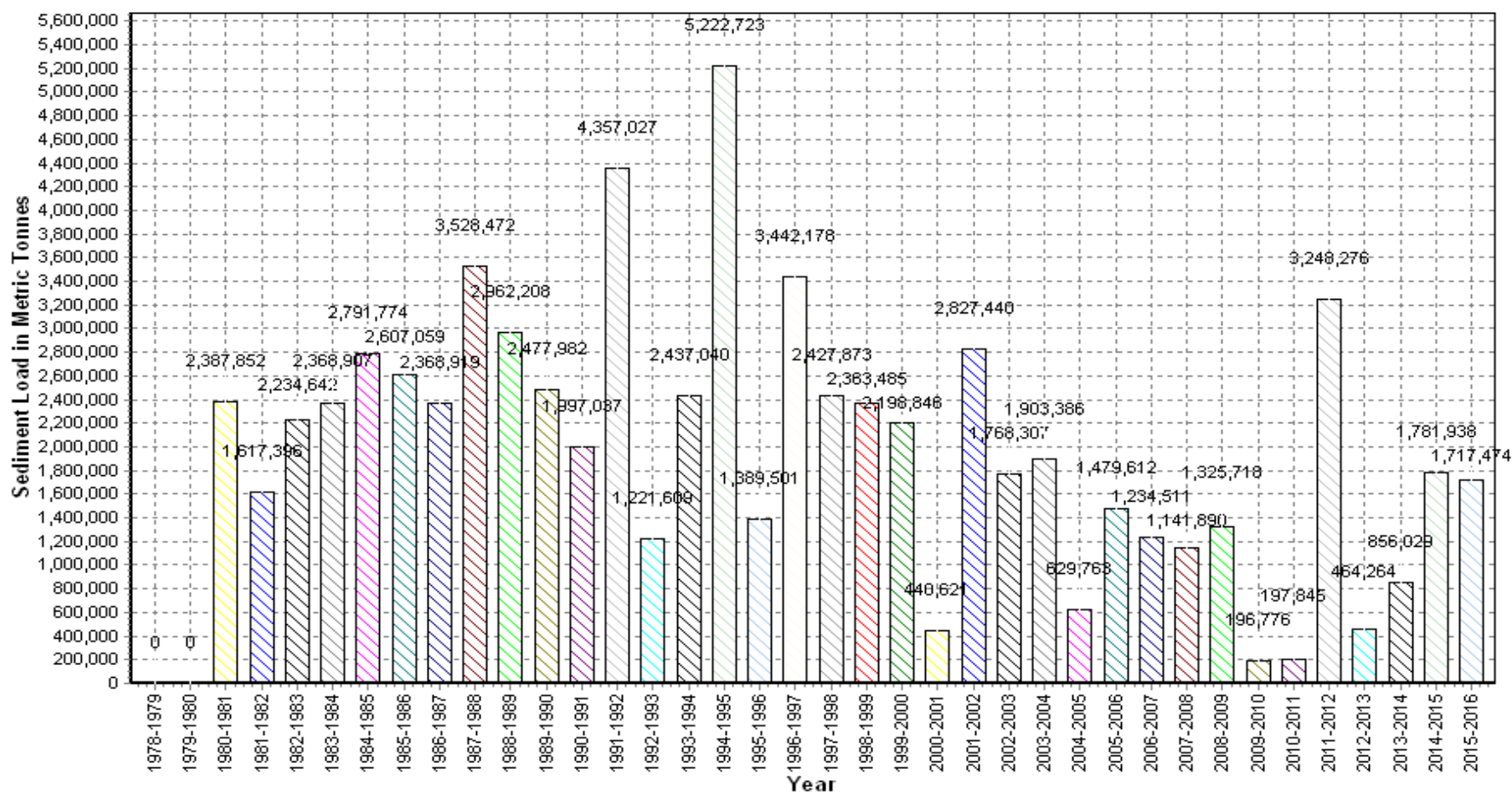
Annual Sediment Load for the period: 1978-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

Division : MD,CWC,Burla

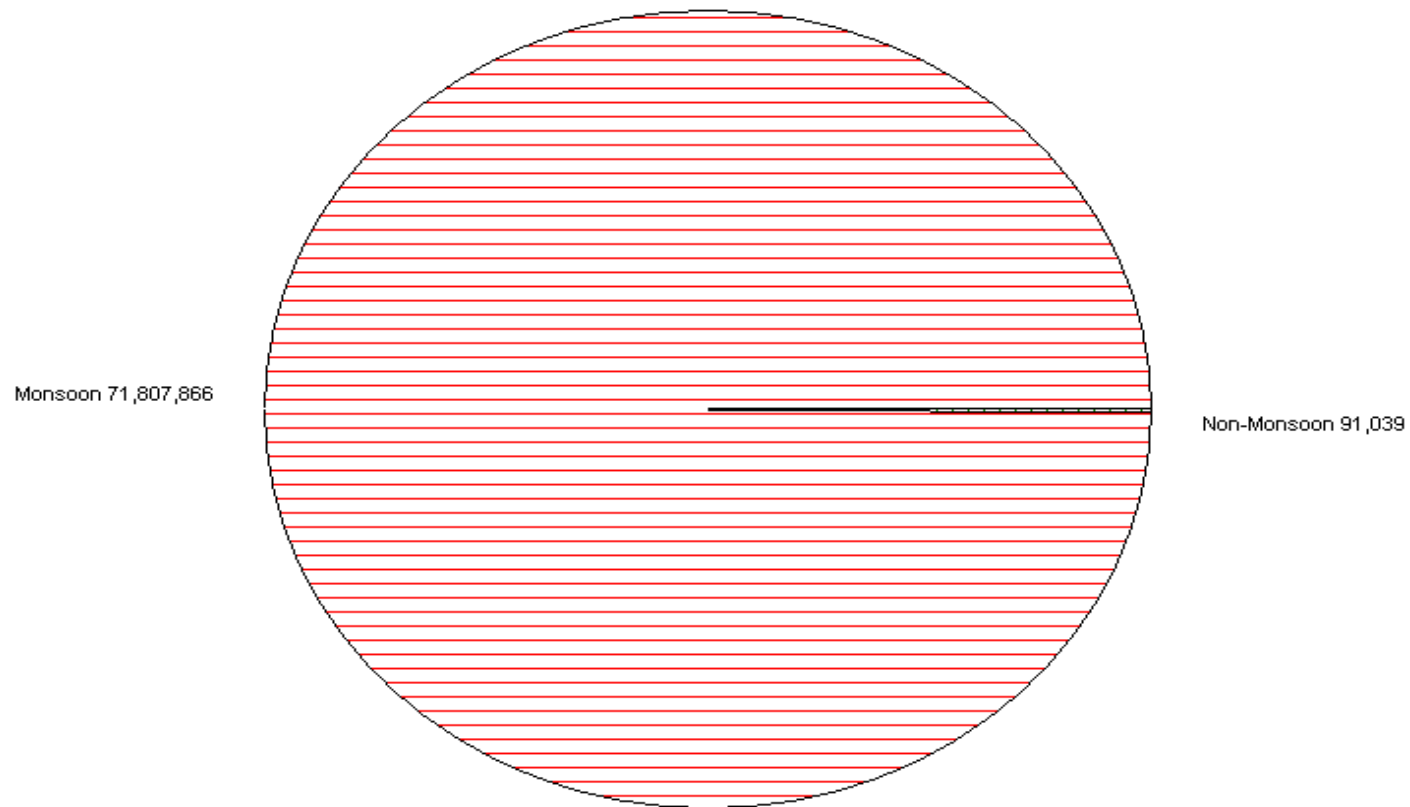
Sub-Division : MMSD II,CWC,Burla



Seasonal Sediment Load for the period : 1978-2015

Station Name : KURUBHATA (EMK00E2)
Local River : Mand

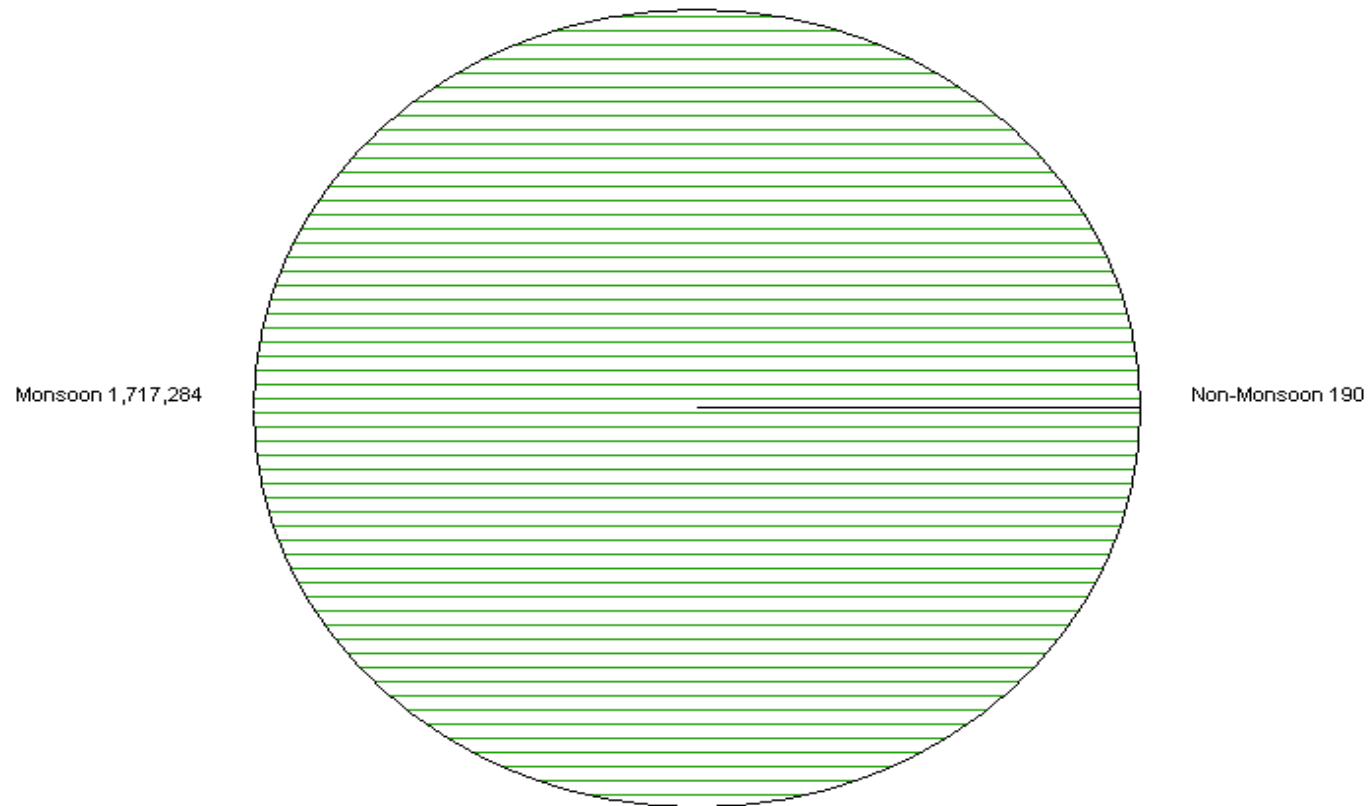
Division : MD,CWC,Burla
Sub-Division : MMSD II,CWC,Burla



Seasonal Sediment Load for the Year: 2015-2016

Station Name : KURUBHATA (EMK00E2)
Local River : Mand

Division : MD,CWC,Burla
Sub-Division : MMSD II,CWC,Burla



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
	A	A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.686	38.32	54.06	338.5	34.15	75.54	12.03	6.205	2.143	2.385	0.879	0.492
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)				161	100	153	108	94	99	139		
4	EC_GEN (μmho/cm)	136	91	95	68	125	109	120	105	109	145	199	176
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.8	7.1	7.6	7.3	7.1	7.3	7.2	7.3	7.4	7.6	8.2	8.4
7	pH_GEN (pH units)	8.2	7.7	7.7	7.4	8.0	7.8	8.1	8.5	8.1	8.5	8.3	8.2
8	Temp (deg C)	29.0	28.0	28.6	30.0	30.0	27.2	24.6	19.6	19.5	25.8	30.4	31.6
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	136	64	100	75	168	100	132	104	140	128	128	220
3	Ca (mg/L)	18	13	19	11	18	13	18	19	18	21	26	10
4	Cl (mg/L)	18.0	16.0	13.0	11.0	14.0	10.0	11.0	11.0	16.0	15.0	16.0	15.0
5	CO3 (mg/L)	7.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	HCO3 (mg/L)	76	39	61	46	103	61	81	63	85	78	78	134
7	K (mg/L)	10.0	3.5	2.9	1.9	9.1	5.7	5.2	6.8	5.9	13.8	11.1	24.6
8	Mg (mg/L)	7.8	9.7	8.8	8.8	8.8	11.7	10.7	6.8	6.8	8.8	1.9	3.9
9	Na (mg/L)	17.9	8.4	5.4	3.6	19.8	16.2	17.4	15.3	12.8	21.2	18.2	48.6
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.1	0.2	0.3	0.6	0.7	0.9	0.4	0.6	0.1	0.6	1.0	0.2
2	DO (mg/L)	6.0	6.6	6.5	7.1	6.0	7.4	7.4	8.1	7.7	7.2	6.9	6.2
3	DO_SAT% (%)	78	84	83	94	79	93	88	87	83	87	91	84
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	44	32	48	28	44	32	44	48	44	52	64	24
2	HAR_Total (mgCaCO3/L)	76	73	85	65	81	81	89	76	72	89	72	40
3	Na% (%)	31	19	12	11	32	29	29	28	26	30	32	60
4	RSC (-)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.4
5	SAR (-)	0.9	0.4	0.3	0.2	1.0	0.8	0.8	0.8	0.7	1.0	0.9	3.3
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : KURUBHATA (EMK00E2)

Division : MD,CWC,Burla

Local River : Mand

Sub-Division : MMSD II,CWC,Burla

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	1400	0.270	59.54
2	EC_FLD (µmho/cm)	7	161	94	122
3	EC_GEN (µmho/cm)	12	199	68	123
4	pH_FLD (pH units)	12	8.4	7.1	7.5
5	pH_GEN (pH units)	12	8.5	7.4	8.1
6	Temp (deg C)	12	31.6	19.5	27
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	6.0	0.0	0.5
2	ALK-TOT (mgCaCO3/L)	12	220	64	125
3	Ca (mg/L)	12	26	10	17
4	Cl (mg/L)	12	18.0	10.0	13.8
5	CO3 (mg/L)	12	7.2	0.0	0.6
6	HCO3 (mg/L)	12	134	39	75
7	K (mg/L)	12	24.6	1.9	8.4
8	Mg (mg/L)	12	11.7	1.9	7.9
9	Na (mg/L)	12	48.6	3.6	17.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.1	0.1	0.6
2	DO (mg/L)	12	8.1	6.0	6.9
3	DO_SAT% (%)	12	94	78	86
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	64	24	42
2	HAR_Total (mgCaCO3/L)	12	89	40	75
3	Na% (%)	12	60	11	28
4	RSC (-)	12	1.4	0.0	0.1
5	SAR (-)	12	3.3	0.2	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	381.5	123.8	557.1	91.17	265.1	252.8	105.2	340.3	46.96	50.21	76.02	118.8	130.5	41.21	93.14	21.26	8.977	41.76	28.52	25.59
2	EC_FLD (µmho/cm)	180	200	122	94	103	79	75								130	139	218	98	116	112
3	EC_GEN (µmho/cm)	108	200	122	94	103	79	80	196	114	113	99	116	95	114	103	139	218	98	116	112
4	pH_FLD (pH units)	8.0	8.0	6.6	8.1	7.5	7.4	7.5	7.7	7.8	7.8	7.6	6.4	6.5	6.7	7.4	6.2	7.6	7.7	7.7	7.7
5	pH_GEN (pH units)	8.0	8.0	6.6	8.1	7.5	7.5	7.7	7.8	7.9	7.5	7.7	8.0	8.3	7.9	7.8	6.2	7.6	7.7	7.7	7.7
6	Temp (deg C)	28.0	27.3	26.0	30.0	30.0	26.9	28.0	28.5	30.3	28.0	28.1	27.2	28.3	29.6	29.1	15.0	22.3	22.5	23.7	24.7
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	131	91	123	114	68		56	143	80	78	96	102	113	121	109	108	152	91	87	79
3	B (mg/L)					0.04		0.01	0.00	0.00	0.00	0.00	0.00								0.06
4	Ca (mg/L)	15		12	16	7		7	12	8	9	7	11	14	16	16	10	23	11	8	9
5	Cl (mg/L)	14.0		18.8	10.5	12.3		5.8	4.8	5.3	3.6	4.8	9.0	12.8	11.4	14.4	8.9		11.0	4.0	10.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)			0.99		0.29		0.07	0.09	0.07	0.07	0.17	0.12					1.47	0.77	19.00	0.05
8	Fe (mg/L)					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.0
9	HCO3 (mg/L)	80	55	75	92	41		34	87	49	47	58	62	69	74	65	66	93	51	53	48
10	K (mg/L)					1.3		0.8	1.2	1.6	2.3	1.9	1.3	5.1	4.1	5.5	1.7			1.6	1.9
11	Mg (mg/L)	2.4		3.0	4.0	3.1		3.3	8.3	4.4	6.0	5.4	6.1	3.5	6.8	8.8	2.9		5.7	3.7	3.7
12	Na (mg/L)					6.9		12.2	5.2	5.1	5.3	2.9	7.1	11.4	15.4	11.0	2.7			4.7	6.1
13	NO2+NO3 (mg N/L)	0.50				0.05	0.06	0.08	0.77								0.28			0.77	0.04
14	NO2-N (mgN/L)					0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.03								0.00
15	NO3-N (mgN/L)					0.05	0.05	0.07	0.76												0.04
16	P-Tot (mgP/L)					0.030		0.010	0.017	0.015	0.017	0.027	0.047						0.020	0.017	
17	SiO2 (mg/L)					5.1		6.8	15.7	8.9	5.9	12.9	12.1								18.0
18	SO4 (mg/L)	5.1		22.0	57.0	7.7		7.3	6.3	9.8	8.9	11.5	13.6				3.2		8.7	3.4	5.0
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)		0.5	1.9	0.7	0.7	0.5	1.6	0.9	0.9	0.8	0.5	0.8	0.4	0.6	0.6	1.8	0.9	0.5	0.5	0.4
2	COD (mg/L)							12.0	14.0	16.0	13.0	16.0	19.0								
3	DO (mg/L)		8.0	6.2	4.8	6.3	6.4	8.8	6.6	7.0	6.4	6.7	7.2	7.0	7.1	6.4	9.5	7.3	6.3	7.7	7.8
4	DO_SAT% (%)		101	77	63	83	80	112	84	93	81	85	90	89	92	84	94	84	85	91	94
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	37		29	40	18		17	31	20	22	19	27	36	41	39	25	57	29	20	22
2	HAR_Total (mgCaCO3/L)	47		42	57	31		31	66	38	47	41	52	51	69	76	37		52	35	38
3	Na% (%)					34		46	24	22	19	13	22	21	32	21	13			25	25
4	RSC (-)	0.4		0.4	0.0	0.1		0.1	0.1	0.1	0.0	0.1	0.1	0.3	0.0	0.0	0.3		0.0	0.2	0.1
5	SAR (-)					0.6		1.0	0.4	0.4	0.3	0.2	0.4	0.6	0.8	0.5	0.2			0.4	0.4
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	5.278	9.164	13.19	8.365	7.620	18.26	7.739	33.20	11.28	23.98	3.618	4.457	4.000	16.21		1.417	1.442	0.455	0.208	
2	EC_FLD (µmho/cm)	126								130	113	212	198	119	121						
3	EC_GEN (µmho/cm)	126	211	124	142	137	120	158	192	107	111	212	198	119	121			188	139	135	271
4	pH_FLD (pH units)	8.1		8.3	7.8	8.2	7.5	6.7	6.3	6.8	7.3	7.4	7.7	7.8	7.7			8.8	8.0	7.4	7.1
5	pH_GEN (pH units)	8.1	8.0	8.2	8.0	7.7	8.0	7.8	8.2	8.1	8.1	7.4	7.7	7.8	7.7			7.8	7.9	8.0	6.8
6	Temp (deg C)	23.0	18.6	21.9	20.0	21.8	21.4	19.3	20.3	22.1	22.7	23.2	27.8		28.0			27.2	26.5	24.1	29.0
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		154	85	100	66	90	132	138	134	119	117	96	110	128			93	99	98	173
3	B (mg/L)		0.01	0.00	0.01	0.00	0.00	0.00										0.01	0.00	0.01	0.00
4	Ca (mg/L)		11	8	10	12	10	16	22	20	17	12	10	14	16			9	10	9	21
5	Cl (mg/L)		26.9	10.2	4.5	14.2	12.9	14.3	13.8	13.8	12.0	9.4		9.0	6.0			12.3	6.4	5.7	8.6
6	CO3 (mg/L)		0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0
7	F (mg/L)		0.10	0.06	0.09	0.06	0.17	0.21							0.38			0.12	0.08	0.63	0.12
8	Fe (mg/L)		0.1	0.1	0.0	0.0	0.1	0.0		0.1								0.1	0.1	0.0	0.0
9	HCO3 (mg/L)		94	50	61	40	55	81	84	82	73	72	59	67	78			56	60	60	105
10	K (mg/L)		2.5	2.2	1.4	1.6	2.1	1.2	10.9	3.8	5.9	4.6			1.8			2.3	2.6	4.1	2.2
11	Mg (mg/L)		8.6	4.4	5.2	6.8	5.8	8.4	6.5	10.9	9.0	2.9	1.7	5.1	4.4			4.9	5.3	5.3	10.7
12	Na (mg/L)		14.6	6.9	6.9	14.5	7.7	25.3	18.8	15.7	15.4	3.8			30.4			15.2	4.1	11.0	6.4
13	NO2+NO3 (mg N/L)	0.03	0.09	0.30						0.11		0.26						0.81	1.66		
14	NO2-N (mgN/L)	0.00	0.01	0.01	0.02	0.01	0.01	0.02		0.01								0.34	0.01	0.01	0.03
15	NO3-N (mgN/L)	0.03	0.08	0.30						0.10								0.47	1.65		
16	P-Tot (mgP/L)		0.030	0.010	0.015	0.030	0.032	0.042		0.040				0.020				0.020	0.023	0.035	0.040
17	SiO2 (mg/L)		17.3	5.6	7.6	11.8	11.5	11.0		9.0								16.7	13.9	17.6	26.9
18	SO4 (mg/L)		11.0	11.2	11.0	14.7	14.9	14.2		13.8		4.6		1.6	15.2			8.0	10.5	10.5	23.0
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.5	0.7	0.5	0.6	0.8	0.4	0.8	0.7	0.6	0.5	1.0	1.0	1.4	0.8			0.9	0.4	0.8	0.7
2	COD (mg/L)		19.0	17.0	21.0	16.0	14.0	19.0										16.0	20.0	20.0	32.0
3	DO (mg/L)	7.5	8.8	8.2	7.9	8.0	8.1	8.5	8.4	8.4	7.7	8.8	8.1	7.7	7.5			7.4	6.7	6.5	6.0
4	DO_SAT% (%)	87	93	93	85	91	91	91	92	95	88	98	102		96			92	83	77	78
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		27	20	25	29	25	40	54	50	42	30	26	35	40			23	25	23	52
2	HAR_Total (mgCaCO3/L)		63	38	47	57	49	74	81	96	80	42	33	56	58			43	47	45	96
3	Na% (%)		39	27	23	34	24	36	25	25	28	15			52			42	15	32	12
4	RSC (-)		0.3	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.3	0.3	0.0	0.1			0.1	0.1	0.1	0.0
5	SAR (-)		1.0	0.5	0.5	0.8	0.5	1.3	0.9	0.7	0.8	0.3			1.7			1.0	0.3	0.7	0.3
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KURUBHATA (EMK00E2)

Local River : Mand

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	2.121	1.340	9.190	0.470	1.252
2	EC_FLD (µmho/cm)					139
3	EC_GEN (µmho/cm)	157	145	167	118	173
4	pH_FLD (pH units)	7.5	6.8	6.8	7.2	8.1
5	pH_GEN (pH units)	7.7	8.7	8.2	8.4	8.4
6	Temp (deg C)	22.6	27.5	26.9	25.5	29.3
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	4.0	0.0
2	ALK-TOT (mgCaCO3/L)	113	171	161	140	159
3	B (mg/L)	0.00	0.00			
4	Ca (mg/L)	14	15	19	18	19
5	Cl (mg/L)	15.2	20.7	14.7	14.7	15.3
6	CO3 (mg/L)	0.0	0.0	0.0	4.8	0.0
7	F (mg/L)	0.17	0.19			
8	Fe (mg/L)	0.1	0.1		0.1	
9	HCO3 (mg/L)	69	104	98	81	97
10	K (mg/L)	1.8	6.1	3.7	5.9	16.5
11	Mg (mg/L)	8.3	3.6	13.6	11.0	4.8
12	Na (mg/L)	5.8	23.6	7.7	17.1	29.4
13	NO2+NO3 (mg N/L)				0.37	
14	NO2-N (mgN/L)	0.07	0.07		0.03	
15	NO3-N (mgN/L)				0.34	
16	P-Tot (mgP/L)	0.130	0.100		0.080	
17	SiO2 (mg/L)	12.1	13.2		13.3	
18	SO4 (mg/L)	15.8	16.0		15.5	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.1	0.8	0.3	0.9	0.6
2	COD (mg/L)	28.0	21.3			
3	DO (mg/L)	7.5	6.8	6.7	7.2	6.8
4	DO_SAT% (%)	86	85	83	87	87
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	36	39	48	44	47
2	HAR_Total (mgCaCO3/L)	70	54	105	90	67
3	Na% (%)	15	37	14	27	41
4	RSC (-)	0.0	0.6	0.0	0.0	0.5
5	SAR (-)	0.3	1.4	0.3	0.8	1.8
	PESTICIDES					

IB SUB-BASIN

SITE SUNDARGARH

HISTORY SHEET

Water Year : 2015-2016

Site : SUNDERGARH

Code : EMI00H3

State : Orissa

District : Sundergarh

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Ib

Sub Tributary :

Sub-Sub Tributary :

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Drainage Area : 5870 Sq. Km.

Bank :

Latitude : 22°06'55"

Longitude : 84°00'40"

Zero of Gauge (m) : 214 (m.s.l)

8/7/1977 - 8/7/2025

Opening Date

Closing Date

Gauge : 8/7/1977

Discharge : 12/30/1977

Sediment : 7/21/1980

Water Quality : 6/2/1980

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1978-1979	2067	220.813	9/3/1978	0.100	216.660	5/31/1979
1979-1980	1180	219.753	8/9/1979	0.050	216.610	6/13/1979
1980-1981	1600	220.000	8/24/1980	0.300	216.510	4/18/1981
1981-1982	2400	220.870	8/15/1981	0.100	216.640	5/15/1982
1982-1983	1187	219.750	8/8/1982	0.100	216.925	4/15/1983
1983-1984	1403	220.190	9/19/1983	0.100	216.880	5/21/1984
1984-1985	1709	220.400	6/19/1984	0.100	216.945	6/2/1984
1985-1986	2820	220.960	8/8/1985	0.400	216.885	4/13/1986
1986-1987	1385	219.940	7/27/1986	0.090	217.200	4/17/1987
1987-1988	4000	221.140	8/29/1987	0.100	216.610	6/6/1987
1988-1989	2842	220.950	8/4/1988	1.680	216.680	5/23/1989
1989-1990	914.4	219.060	7/13/1989	0.326	216.860	4/28/1990
1990-1991	1350	219.990	7/15/1990	0.446	217.060	5/11/1991
1991-1992	4591	222.140	7/24/1991	0.683	216.690	4/29/1992
1992-1993	1639	220.430	7/22/1992	0.030	216.820	5/7/1993
1993-1994	962.0	220.120	6/26/1993	0.090	216.750	5/10/1994
1994-1995	5780	221.850	9/18/1994	0.356	216.760	6/5/1994
1995-1996	800.3	219.720	7/18/1995	0.078	216.670	5/6/1996
1996-1997	6341	222.600	6/23/1996	0.155	216.590	5/27/1997
1997-1998	1306	219.980	9/10/1997	0.021	216.550	6/4/1997
1998-1999	10404	222.300	9/11/1998	0.520	216.420	4/24/1999
1999-2000	2030	220.640	9/14/1999	0.850	216.790	4/21/2000

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2000-2001	2000	219.480	7/19/2000	0.050	216.620	5/17/2001
2001-2002	3200	221.480	7/22/2001	0.130	216.235	5/23/2002
2002-2003	1664	220.220	9/12/2002	0.073	216.240	4/30/2003
2003-2004	1150	221.250	10/25/2003	0.445	216.725	5/28/2004
2004-2005	1112	219.760	8/9/2004	0.090	217.130	12/10/2004
2005-2006	878.5	219.370	8/5/2005	0.165	216.975	4/29/2006
2006-2007	1356	219.985	7/31/2006	0.005	216.905	4/14/2007
2007-2008	1418	219.765	7/7/2007	0.100	216.815	5/21/2008
2008-2009	1346	219.900	8/16/2008	0.081	216.770	4/15/2009
2009-2010	1675	220.090	10/3/2009	0.035	216.700	4/27/2010
2010-2011	1196	219.560	9/21/2010	0.103	216.750	4/4/2011
2011-2012	3099	221.160	9/10/2011	0.300	216.530	5/31/2012
2012-2013	1420	219.710	9/10/2012	0.170	216.495	6/14/2012
2013-2014	1070	219.520	10/14/2013	0.507	216.790	4/25/2014
2014-2015	1828	219.635	8/5/2014	0.157	216.590	3/24/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : SUNDERGARH (EMI00H3)

Division : MD,CWC,Burla

Local River : Ib

Sub-Division : MMSD II,CWC,Burla

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	216.485	0.240	217.155	47.71	217.383	80.56	218.075	375.3	217.085	38.86	216.880	13.15 *
2	216.485	0.243	217.053	32.89	217.415	82.00 *	217.935	285.0	217.070	36.30 *	217.090	50.60
3	216.490	0.343	217.310	75.24	219.420	975.0	217.685	181.6	217.050	33.63	217.010	33.57
4	216.490	0.359	217.605	98.47	219.530	1181	217.735	208.3	217.060	34.95 *	216.950	25.47
5	216.635	5.066	217.560	95.00 *	218.780	711.2	217.620	169.0	217.070	37.76	216.930	21.31
6	216.615	4.965	217.455	82.22	218.175	371.6	217.480	130.0 *	217.050	34.44	216.910	18.45
7	216.625	5.000 *	217.695	148.4	217.873	216.2	217.320	87.04	217.030	27.77	216.900	17.82
8	216.595	3.979	218.180	343.8	217.675	159.0	217.350	101.1	217.015	25.98	216.890	18.22 *
9	216.570	3.123	218.460	499.5	217.525	110.0 *	217.350	96.15	217.005	24.50	216.890	18.23
10	216.638	6.731	218.270	423.4	217.405	88.96	217.310	92.05	216.993	22.14	216.880	16.25
11	216.643	5.146	222.530	5652	217.385	94.26	217.230	71.12	216.980	21.00 *	216.870	16.00 *
12	216.695	6.886	219.900	1400 *	217.680	179.3	217.185	57.17	216.960	20.08	216.860	16.20
13	216.685	6.471	218.525	449.1	217.830	232.9	217.210	60.00 *	216.955	17.53	216.850	12.87
14	216.675	6.000 *	218.090	225.3	217.505	118.4	217.223	67.58	216.950	16.25	216.840	14.28
15	216.688	6.190	216.805	116.4	217.410	80.00 *	217.173	52.31	216.940	16.54	216.830	12.00 *
16	216.760	11.81	217.770	129.3	217.730	160.0 *	217.135	44.07	216.940	18.86	216.815	10.62
17	216.750	11.71	218.655	582.3	217.865	231.4	217.140	44.00 *	216.935	18.03	216.815	11.32
18	216.730	9.376	218.200	350.0 *	218.445	535.8	217.130	42.51	216.970	19.00 *	216.815	11.35
19	216.733	9.643	218.030	218.0 *	218.360	514.0	217.145	48.66	216.950	20.99	216.805	9.407
20	216.765	11.56	217.838	148.4	218.320	489.4	217.250	75.00 *	216.940	16.55	216.800	10.68
21	216.735	9.700 *	217.660	122.5	218.310	488.5	217.770	226.2	216.925	15.50 *	216.780	10.48
22	216.715	7.666	217.580	87.54	217.830	191.7	218.095	429.1	216.905	14.00 *	216.770	10.50 *
23	216.735	9.021	219.705	1179	217.630	100.0 *	217.955	300.3	216.895	13.49	216.755	10.58
24	217.350	76.31	218.975	880.9	217.630	146.2	217.685	184.4	216.890	13.00 *	216.740	11.54
25	217.435	80.22	218.620	572.4	217.535	146.8	217.480	130.0 *	216.880	12.95 *	216.730	11.68 *
26	217.310	72.18	218.220	355.0 *	217.660	186.2	217.330	94.15	216.875	12.96	216.730	11.83
27	217.245	65.13	218.170	336.5	218.220	350.6	217.240	72.00 *	216.870	12.77	216.720	12.04
28	217.190	48.00 *	218.150	320.8	217.870	231.2	217.190	51.37	216.870	13.24	216.710	10.59
29	217.208	53.57	217.740	161.3	217.650	178.5	217.150	49.97	216.850	10.98	216.710	10.42 *
30	217.170	50.85	217.510	101.3	217.860	152.0 *	217.110	43.62	216.870	13.15	216.705	9.958
31			217.400	77.60	217.940	265.9			216.880	13.52		
Ten-Daily Mean												
I Ten-Daily	216.563	3.005	217.674	184.7	218.118	397.6	217.586	172.6	217.043	31.63	216.933	23.31
II Ten-Daily	216.712	8.480	218.634	927.1	217.853	263.6	217.182	56.24	216.952	18.48	216.830	12.47
III Ten-Daily	217.109	47.26	218.157	381.3	217.830	221.6	217.500	158.1	216.883	13.23	216.735	10.96
Monthly												
Min.	216.485	0.240	216.805	32.89	217.383	80.00	217.110	42.51	216.850	10.98	216.705	9.407
Max.	217.435	80.22	222.530	5652	219.530	1181	218.095	429.1	217.085	38.86	217.090	50.60
Mean	216.795	19.58	218.155	493.9	217.930	291.9	217.423	129	216.957	20.86	216.833	15.58

Annual Runoff in MCM = 2635 Annual Runoff in mm = 449

Peak Observed Discharge = 5652 cumecs on 11/07/2015 Corres. Water Level :222.53 m

Lowest Observed Discharge = 0.022 cumecs on 27/04/2016 Corres. Water Level :216.21 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : SUNDERGARH (EMI00H3)

Division : MD,CWC,Burla

Local River : Ib

Sub-Division : MMSD II,CWC,Burla

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	216.695	10.61	216.580	6.160	216.490	2.758	216.818	15.86	216.405	0.689	216.215	0.000 *
2	216.675	9.252	216.570	5.824	216.485	2.732	216.723	10.53	216.395	0.628	216.215	0.000 *
3	216.655	8.841	216.560	5.500 *	216.485	2.649	216.635	8.369	216.390	0.631 *	216.210	0.000 *
4	216.645	8.598	216.550	4.734	216.480	2.415	216.580	6.006	216.360	0.633	216.215	0.000 *
5	216.635	8.655	216.550	5.259	216.475	2.472	216.545	4.822	216.360	0.636	216.205	0.000 *
6	216.640	8.700 *	216.540	4.968	216.470	2.511	216.520	3.500 *	216.345	0.451	216.205	0.000 *
7	216.640	8.690	216.540	4.634	216.470	2.510 *	216.515	2.280 *	216.330	0.416	216.205	0.000 *
8	216.640	8.632	216.535	4.179	216.465	2.004	216.505	3.486	216.310	0.367	216.200	0.000 *
9	216.655	9.361	216.535	4.220	216.465	2.000	216.500	3.305	216.300	0.209	216.200	0.000 *
10	216.650	8.414	216.530	3.900 *	216.460	1.971	216.500	3.335	216.310	0.367 *	216.200	0.000 *
11	216.640	8.022	216.520	3.683	216.455	1.904	216.515	3.638	216.285	0.163	216.205	0.000 *
12	216.640	7.796	216.520	3.610	216.455	1.876	216.505	3.274	216.275	0.125	216.205	0.000 *
13	216.630	6.980 *	216.510	3.468	216.455	1.900	216.520	3.500 *	216.270	0.104	216.210	0.000 *
14	216.620	6.892	216.500	2.922	216.460	1.970 *	216.520	3.438	216.260	0.140 *	216.210	0.000 *
15	216.605	6.220	216.505	3.084	216.460	1.866	216.515	3.459	216.260	0.136	216.210	0.000 *
16	216.595	7.077	216.515	3.170	216.455	2.070	216.510	3.411	216.260	0.142	216.205	0.000 *
17	216.590	6.532	216.510	3.100 *	216.455	1.953	216.500	3.068	216.260	0.139 *	216.200	0.000 *
18	216.580	6.440	216.505	3.091	216.455	1.893	216.500	3.078	216.240	0.079	216.200	0.000 *
19	216.560	5.291	216.505	3.112	216.460	2.045	216.510	3.168	216.230	0.075	216.195	0.000 *
20	216.560	5.230 *	216.515	3.276	216.485	2.655	216.505	3.080 *	216.220	0.070 *	216.195	0.000 *
21	216.630	8.677	216.510	3.278	216.475	2.470 *	216.490	2.878	216.240	0.078	216.195	0.000 *
22	216.635	9.204	216.510	3.251	216.460	2.195	216.480	2.522	216.240	0.077	216.195	0.000 *
23	216.625	8.864	216.510	3.062	216.455	1.997	216.475	2.185	216.230	0.067	216.195	0.000 *
24	216.620	8.500 *	216.510	3.090 *	216.445	1.781	216.470	2.000 *	216.230	0.070 *	216.195	0.000 *
25	216.610	7.740 *	216.525	3.657	216.455	1.741	216.465	1.900 *	216.230	0.067	216.195	0.000 *
26	216.590	6.983	216.520	3.500 *	216.440	1.709	216.455	1.429	216.225	0.067	216.190	0.000 *
27	216.580	7.000 *	216.520	3.471	216.445	1.819	216.450	1.480 *	216.210	0.022	216.195	0.000 *
28	216.585	7.061	216.515	3.536	216.455	2.000 *	216.440	1.525	216.210	0.022 *	216.205	0.000 *
29	216.570	6.413	216.505	3.116	216.940	33.58	216.435	1.460	216.205	0.020 *	216.205	0.000 *
30	216.565	5.646	216.500	2.885			216.415	1.255	216.210	0.022 *	216.205	0.000 *
31	216.575	5.962	216.495	2.820 *			216.405	0.749			216.205	0.000 *
Ten-Daily Mean												
I Ten-Daily	216.653	8.975	216.549	4.938	216.474	2.402	216.584	6.149	216.351	0.503	216.207	0.000
II Ten-Daily	216.602	6.648	216.510	3.252	216.460	2.013	216.510	3.311	216.256	0.117	216.203	0.000
III Ten-Daily	216.599	7.459	216.511	3.242	216.508	5.477	216.453	1.762	216.223	0.051	216.198	0.000
Monthly												
Min.	216.560	5.230	216.495	2.820	216.440	1.709	216.405	0.749	216.205	0.020	216.190	0.000
Max.	216.695	10.61	216.580	6.160	216.940	33.58	216.818	15.86	216.405	0.689	216.215	0.000
Mean	216.617	7.687	216.523	3.792	216.480	3.222	216.514	3.677	216.277	0.224	216.203	0

Peak Computed Discharge = 1400 cumecs on 12/07/2015

Corres. Water Level :219.9 m

Lowest Computed Discharge = 0.000 cumecs on 01/05/2016

Corres. Water Level :216.215 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

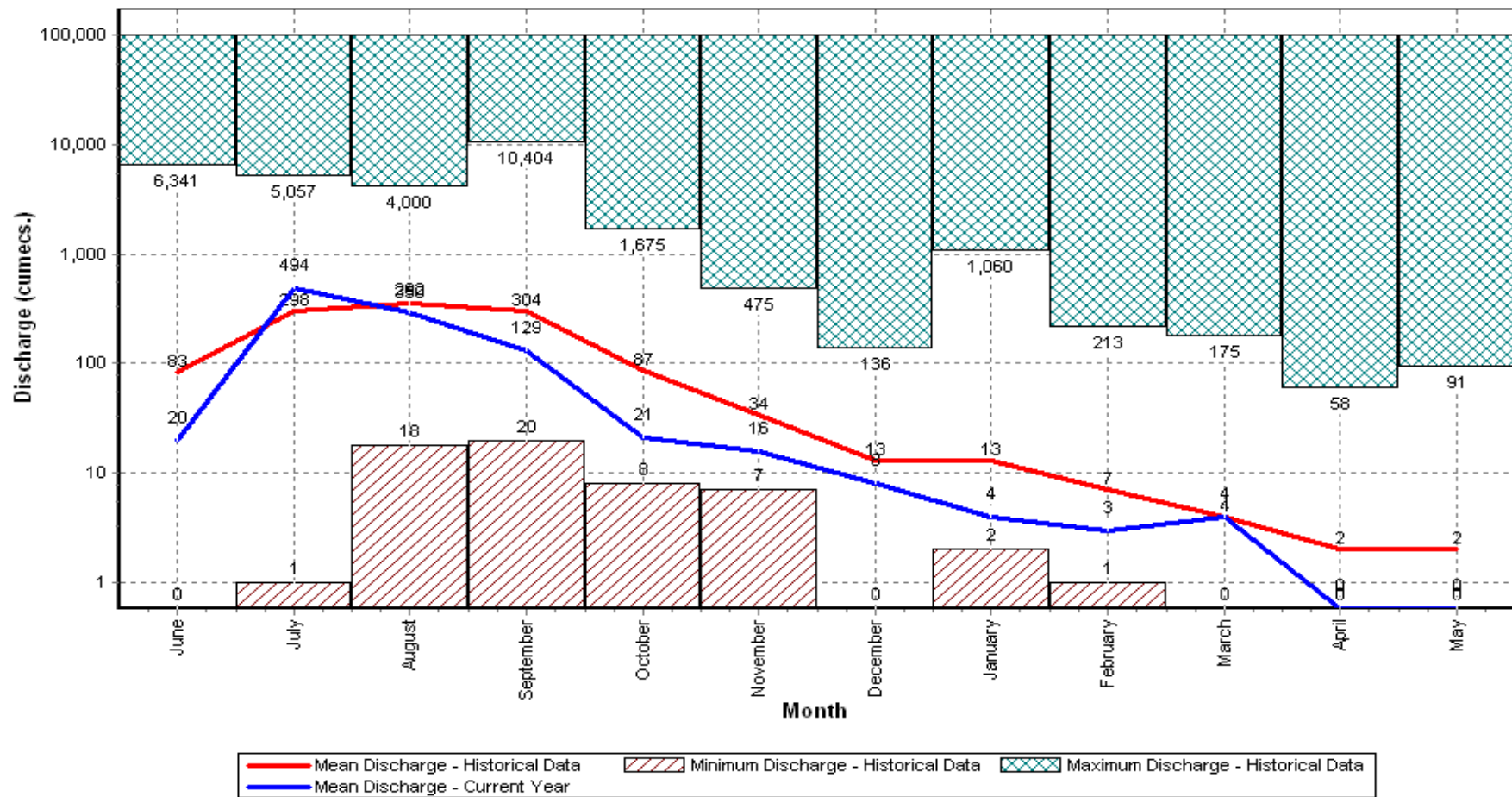
Station Name : SUNDERGARH (EMI00H3)

Data considered : 1978-2016

Division : MD,CWC,Burla

Local River : Ib

Sub-Division : MMSD II,CWC,Burla



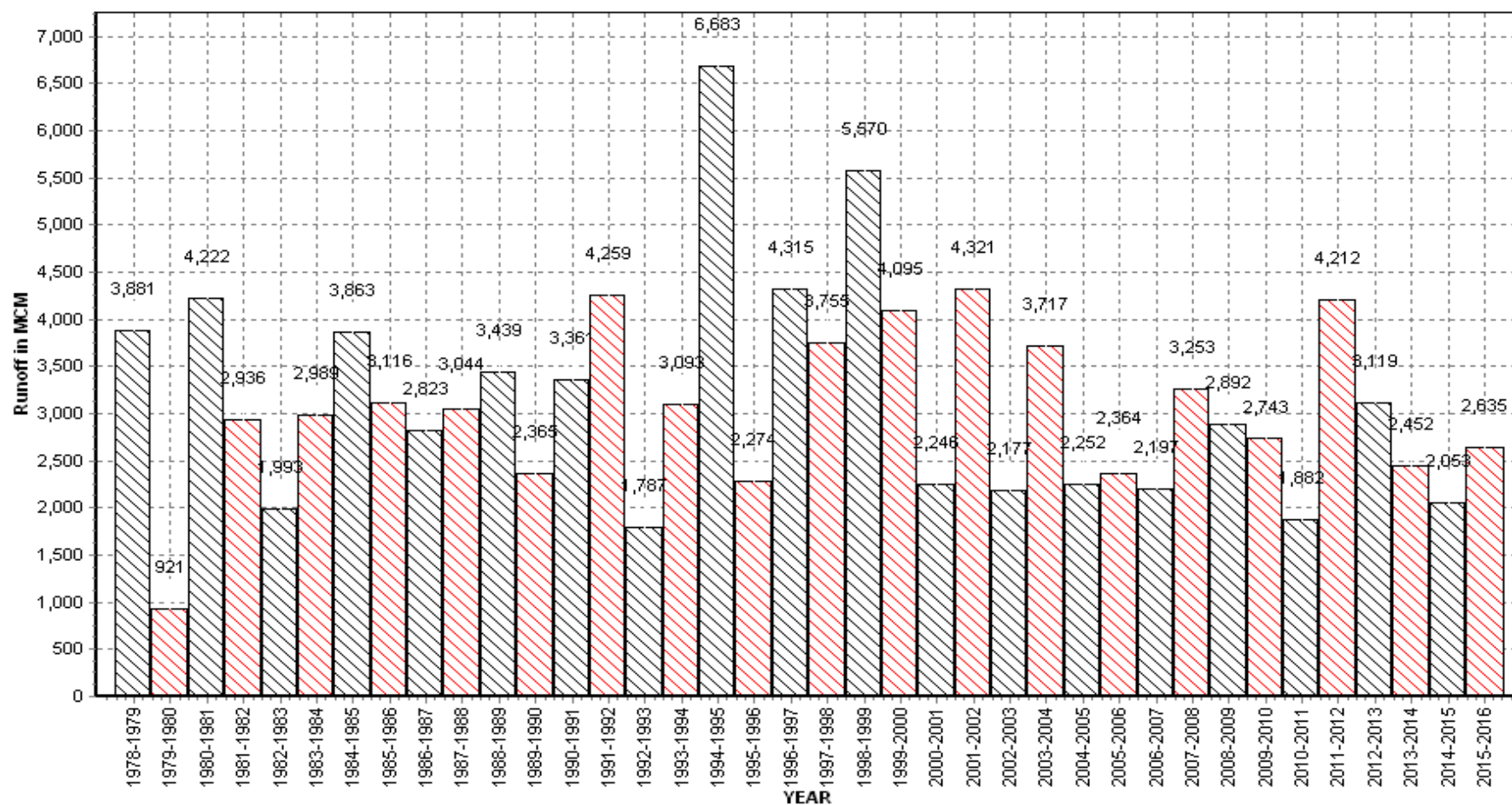
Annual Runoff Values for the period: 1978 - 2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



Note: Missing values have not been considered while arriving at Annual Runoff

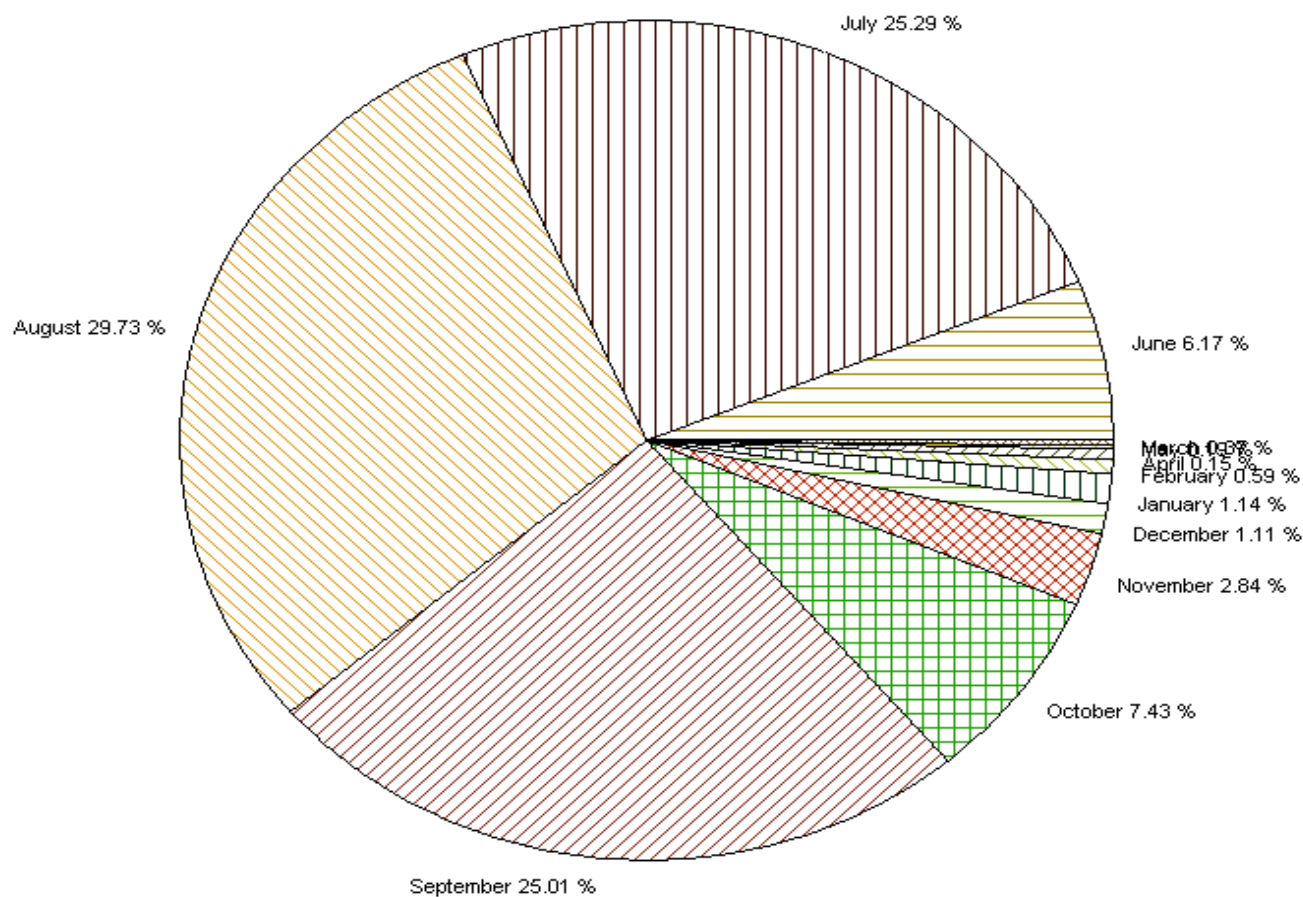
Monthly Average Runoff based on period : 1978-2015

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



June	6.17 %
July	25.29 %
August	29.73 %
September	25.01 %
October	7.43 %
November	2.84 %
December	1.11 %
January	1.14 %
February	0.59 %
March	0.37 %
April	0.15 %
May	0.19 %

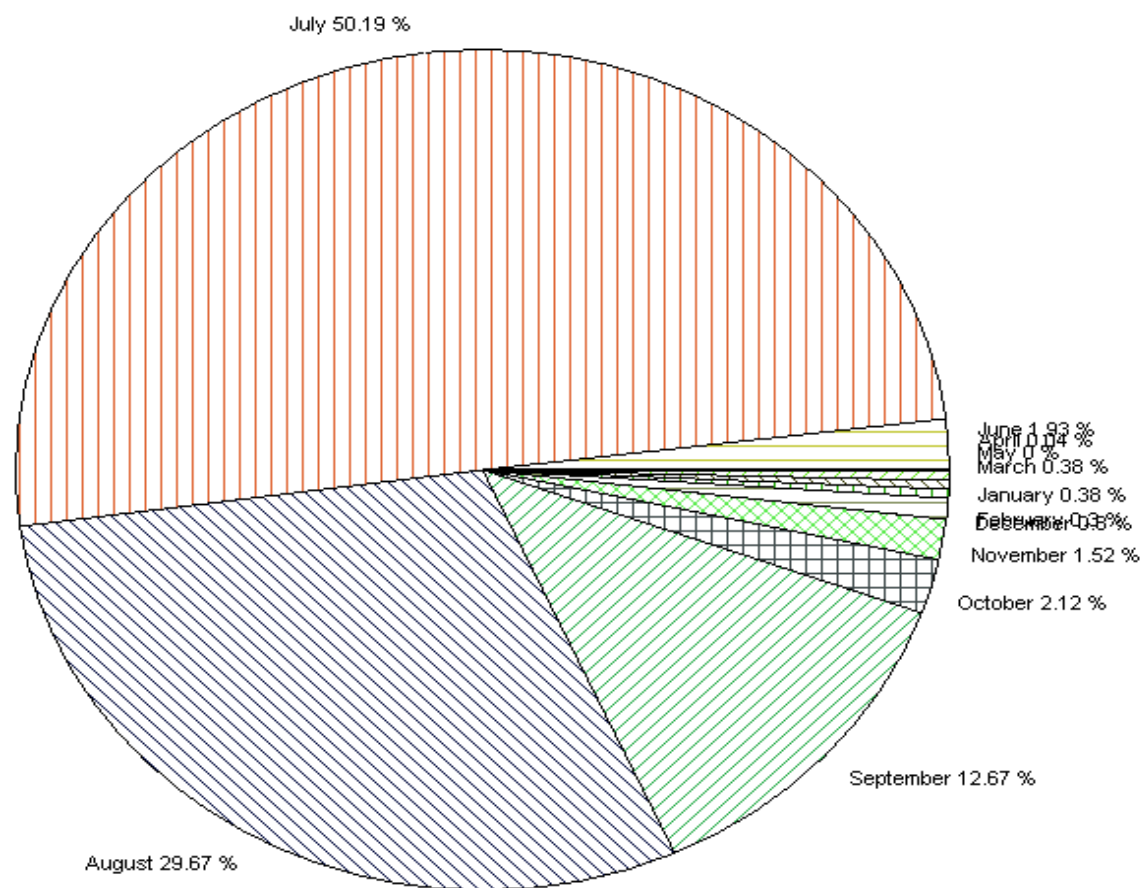
Monthly Runoff for the Year : 2015-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



June	1.93 %
July	50.19 %
August	29.67 %
September	12.67 %
October	2.12 %
November	1.52 %
December	0.8 %
January	0.38 %
February	0.3 %
March	0.38 %
April	0.04 %
May	0 %

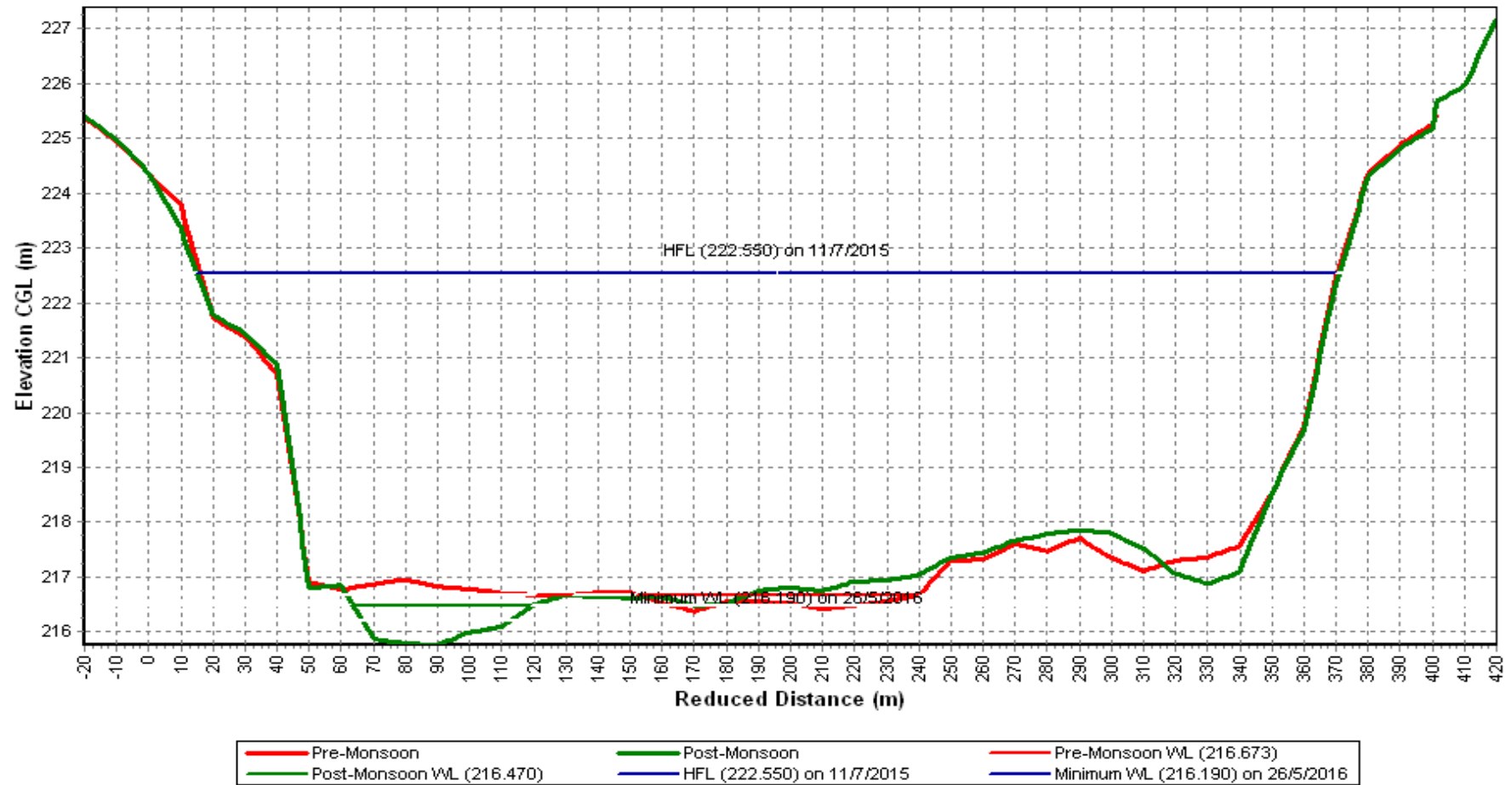
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

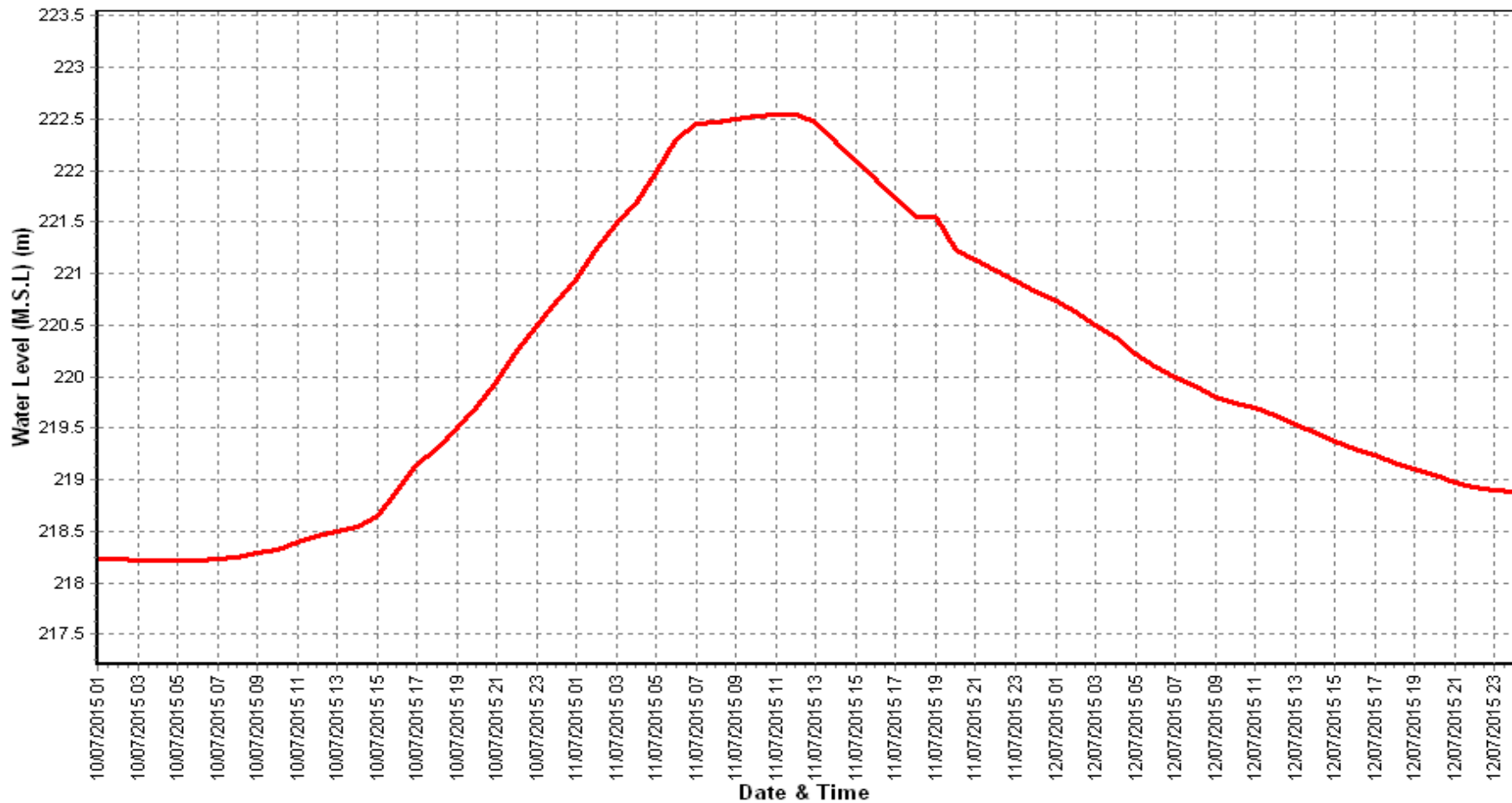
Sub-Division : MMSD II,CWC,Burla



Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : SUNDERGARH (EMI00H3)
Local River : Ib

Division : MD,CWC,Burla
Sub-Division : MMSD II,CWC,Burla



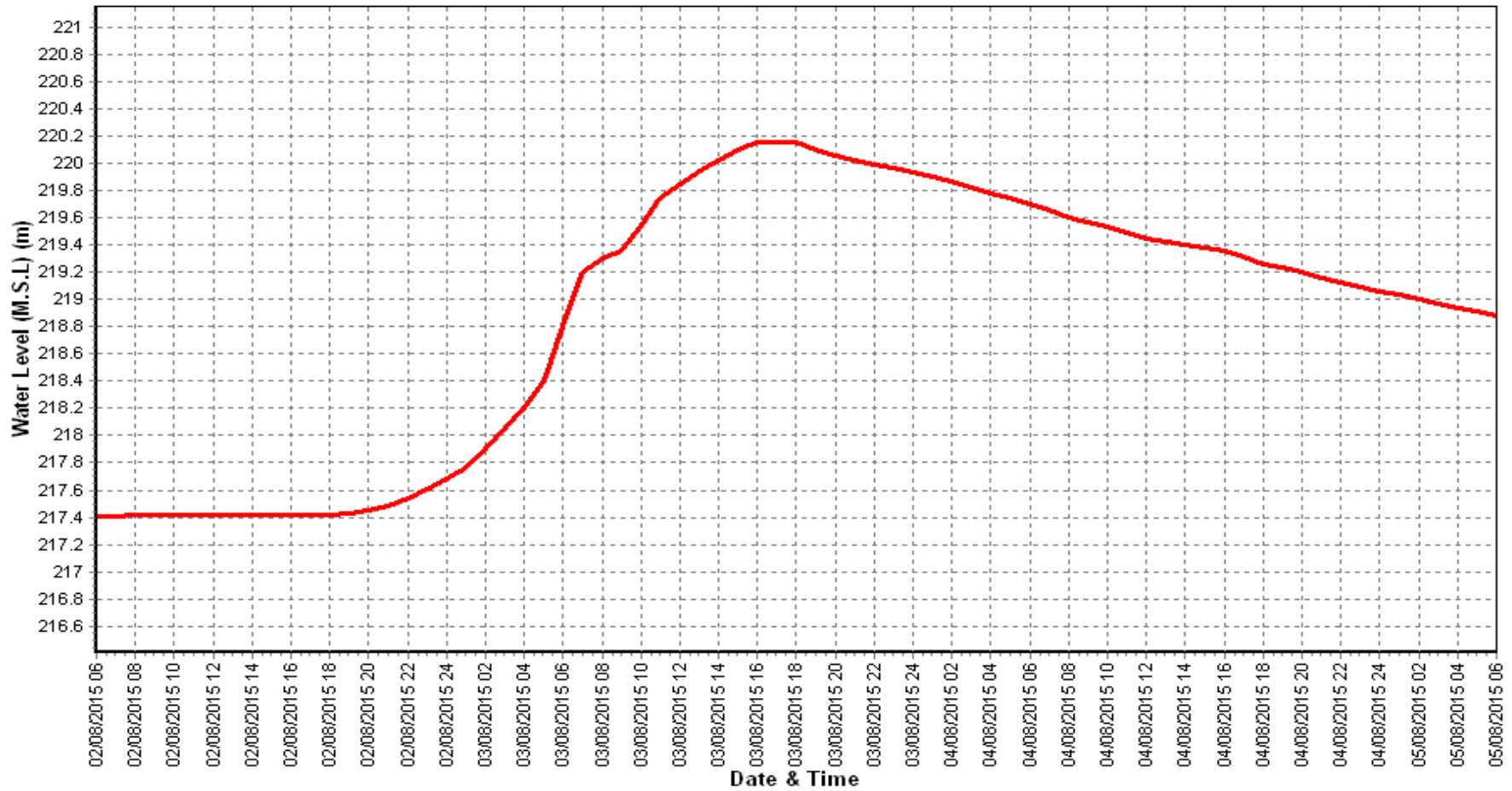
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



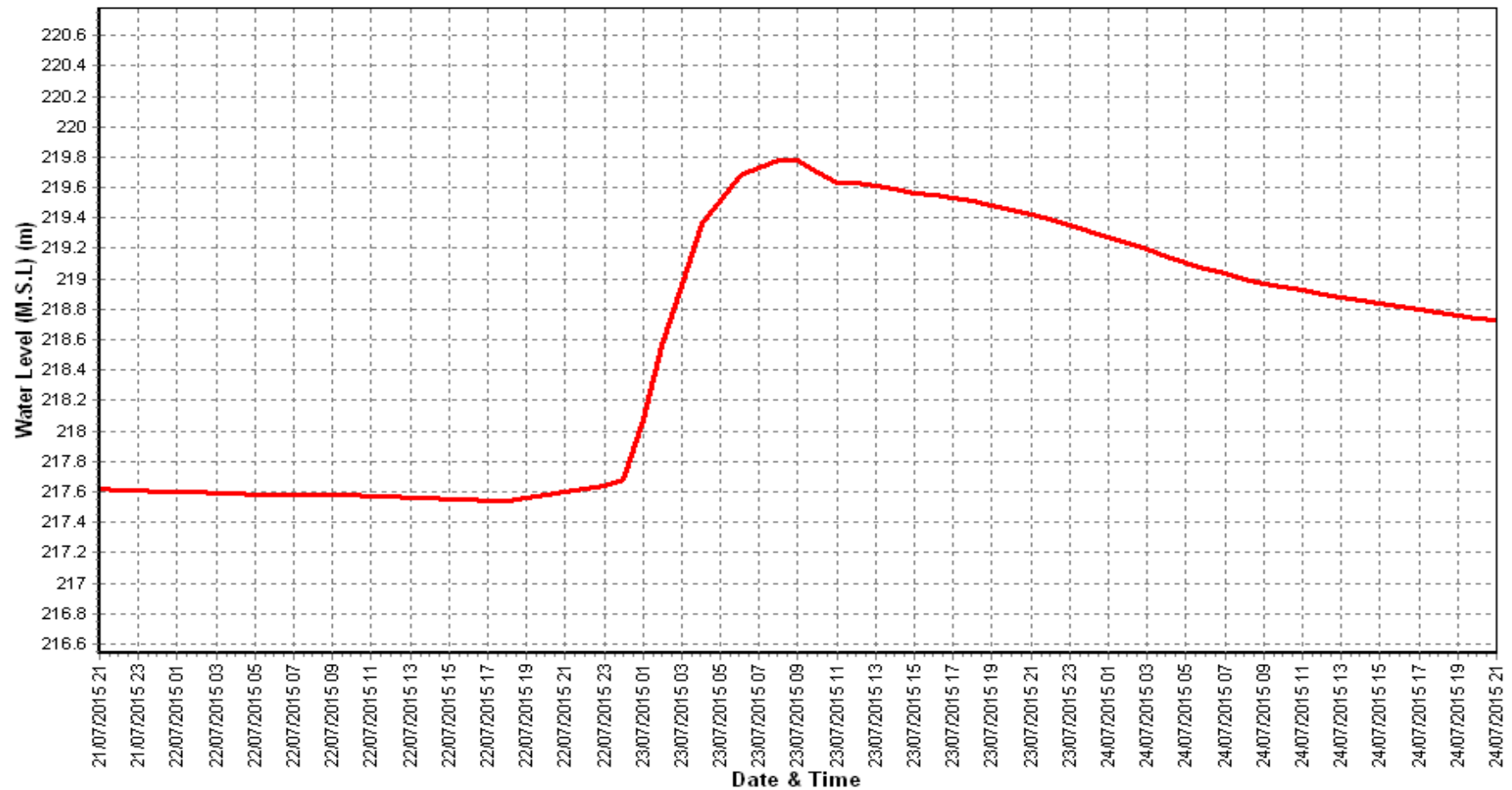
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

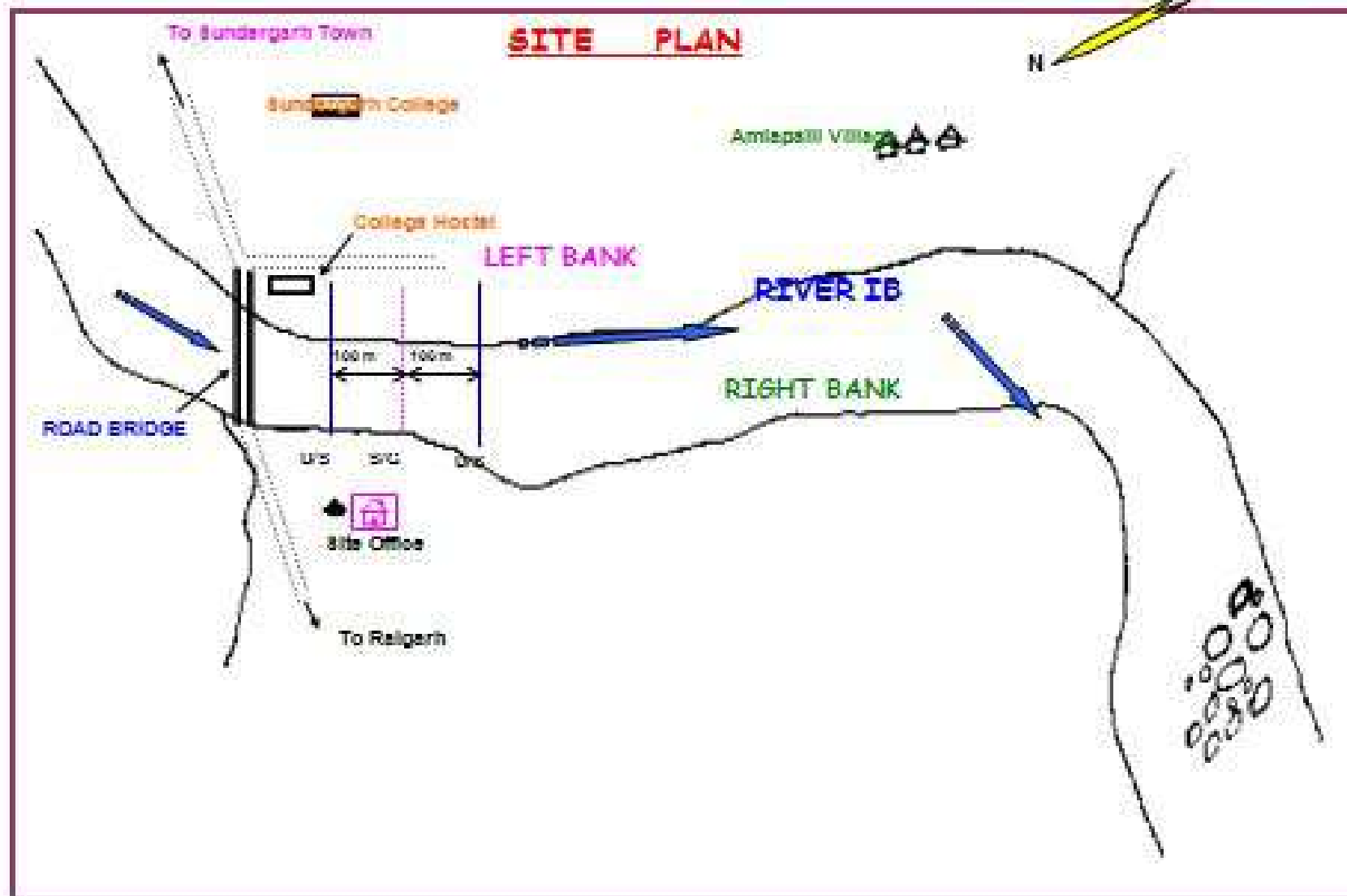
Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.240	0.000	0.000	0.000	0.000	0	47.71	0.000	0.000	0.184	0.184	757	80.56	0.000	0.000	0.113	0.113	787
2	0.243	0.000	0.000	0.000	0.000	0	32.89	0.000	0.000	0.109	0.109	310	82.00	0.000	0.000	0.000	0.000	0
3	0.343	0.000	0.000	0.000	0.000	0	75.24	0.000	0.000	0.291	0.291	1892	975.0	0.147	0.116	0.802	1.065	89689
4	0.359	0.000	0.000	0.000	0.000	0	98.47	0.000	0.000	0.547	0.547	4657	1181	0.222	0.208	0.454	0.884	90278
5	5.066	0.000	0.000	0.000	0.000	0	95.00	0.000	0.000	0.000	0.000	0	711.2	0.000	0.000	0.175	0.175	10722
6	4.965	0.000	0.000	0.000	0.000	0	82.22	0.000	0.000	0.303	0.303	2151	371.6	0.000	0.000	0.132	0.132	4231
7	5.000	0.000	0.000	0.000	0.000	0	148.4	0.000	0.000	0.578	0.578	7412	216.2	0.000	0.000	0.071	0.071	1334
8	3.979	0.000	0.000	0.000	0.000	0	343.8	0.000	0.000	0.238	0.238	7079	159.0	0.000	0.000	0.079	0.079	1079
9	3.123	0.000	0.000	0.000	0.000	0	499.5	0.000	0.000	0.857	0.857	36960	110.0	0.000	0.000	0.000	0.000	0
10	6.731	0.000	0.000	0.000	0.000	0	423.4	0.000	0.000	0.926	0.926	33873	88.96	0.000	0.000	0.023	0.023	174
11	5.146	0.000	0.000	0.000	0.000	0	5652	0.059	0.042	1.514	1.614	788353	94.26	0.000	0.000	0.033	0.033	271
12	6.886	0.000	0.000	0.000	0.000	0	1400	0.000	0.000	0.000	0.000	0	179.3	0.000	0.000	0.140	0.140	2169
13	6.471	0.000	0.000	0.000	0.000	0	449.1	0.000	0.000	0.434	0.434	16832	232.9	0.000	0.000	0.214	0.214	4311
14	6.000	0.000	0.000	0.000	0.000	0	225.3	0.000	0.000	0.193	0.193	3749	118.4	0.000	0.000	0.111	0.111	1136
15	6.190	0.000	0.000	0.000	0.000	0	116.4	0.000	0.000	0.086	0.086	866	80.00	0.000	0.000	0.000	0.000	0
16	11.81	0.000	0.000	0.000	0.000	0	129.3	0.000	0.000	0.130	0.130	1457	160.0	0.000	0.000	0.000	0.000	0
17	11.71	0.000	0.000	0.000	0.000	0	582.3	0.000	0.000	0.249	0.249	12502	231.4	0.000	0.000	0.153	0.153	3053
18	9.376	0.000	0.000	0.000	0.000	0	350.0	0.000	0.000	0.000	0.000	0	535.8	0.000	0.000	0.528	0.528	24441
19	9.643	0.000	0.000	0.000	0.000	0	218.0	0.000	0.000	0.000	0.000	0	514.0	0.000	0.000	0.270	0.270	11995
20	11.56	0.000	0.000	0.000	0.000	0	148.4	0.000	0.000	0.464	0.464	5951	489.4	0.000	0.000	0.166	0.166	7002
21	9.700	0.000	0.000	0.000	0.000	0	122.5	0.000	0.000	0.237	0.237	2511	488.5	0.000	0.000	0.144	0.144	6078
22	7.666	0.000	0.000	0.000	0.000	0	87.54	0.000	0.000	0.137	0.137	1036	191.7	0.000	0.000	0.072	0.072	1184
23	9.021	0.000	0.000	0.000	0.000	0	1179	1.036	1.150	0.657	2.843	289533	100.0	0.000	0.000	0.000	0.000	0
24	76.31	0.000	0.000	0.265	0.265	1745	880.9	0.090	0.798	0.722	1.610	122537	146.2	0.000	0.000	0.048	0.048	611
25	80.22	0.000	0.000	0.242	0.242	1675	572.4	0.000	0.000	0.356	0.356	17588	146.8	0.000	0.000	0.025	0.025	315
26	72.18	0.000	0.000	0.074	0.074	463	355.0	0.000	0.000	0.000	0.000	0	186.2	0.000	0.000	0.034	0.034	552
27	65.13	0.000	0.000	0.091	0.091	509	336.5	0.000	0.000	0.198	0.198	5756	350.6	0.000	0.000	0.421	0.421	12762
28	48.00	0.000	0.000	0.000	0.000	0	320.8	0.000	0.000	0.278	0.278	7695	231.2	0.000	0.000	0.175	0.175	3486
29	53.57	0.000	0.000	0.090	0.090	414	161.3	0.000	0.000	0.119	0.119	1659	178.5	0.000	0.000	0.040	0.040	614
30	50.85	0.000	0.000	0.085	0.085	372	101.3	0.000	0.000	0.108	0.108	943	152.0	0.000	0.000	0.000	0.000	0
31							77.60	0.000	0.000	0.049	0.049	327	265.9	0.000	0.000	0.079	0.079	1817
Ten Daily Mean																		
Ten Daily I	3.005	0.000	0.000	0.000	0.000	0	184.7	0.000	0.000	0.403	0.403	9509	397.6	0.037	0.032	0.185	0.254	19829
Ten Daily II	8.480	0.000	0.000	0.000	0.000	0	927.1	0.006	0.004	0.307	0.317	82971	263.6	0.000	0.000	0.161	0.161	5438
Ten Daily III	47.26	0.000	0.000	0.085	0.085	518	381.3	0.102	0.177	0.260	0.539	40871	221.6	0.000	0.000	0.094	0.094	2493
Monthly																		
Total						5179						1374386						280092

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	375.3	0.000	0.000	0.269	0.269	8729	38.86	0.000	0.000	0.021	0.021	69	13.15	0.000	0.000	0.000	0.000	0
2	285.0	0.000	0.000	0.165	0.165	4053	36.30	0.000	0.000	0.000	0.000	0	50.60	0.000	0.000	0.037	0.037	160
3	181.6	0.000	0.000	0.055	0.055	863	33.63	0.000	0.000	0.019	0.019	55	33.57	0.000	0.000	0.000	0.000	0
4	208.3	0.000	0.000	0.091	0.091	1630	34.95	0.000	0.000	0.000	0.000	0	25.47	0.000	0.000	0.000	0.000	0
5	169.0	0.000	0.000	0.037	0.037	546	37.76	0.000	0.000	0.022	0.022	71	21.31	0.000	0.000	0.000	0.000	0
6	130.0	0.000	0.000	0.000	0.000	0	34.44	0.000	0.000	0.041	0.041	121	18.45	0.000	0.000	0.000	0.000	0
7	87.04	0.000	0.000	0.010	0.010	77	27.77	0.000	0.000	0.035	0.035	83	17.82	0.000	0.000	0.000	0.000	0
8	101.1	0.000	0.000	0.043	0.043	372	25.98	0.000	0.000	0.027	0.027	61	18.22	0.000	0.000	0.000	0.000	0
9	96.15	0.000	0.000	0.063	0.063	522	24.50	0.000	0.000	0.024	0.024	50	18.23	0.000	0.000	0.013	0.013	20
10	92.05	0.000	0.000	0.044	0.044	351	22.14	0.000	0.000	0.022	0.022	42	16.25	0.000	0.000	0.000	0.000	0
11	71.12	0.000	0.000	0.011	0.011	65	21.00	0.000	0.000	0.000	0.000	0	16.00	0.000	0.000	0.000	0.000	0
12	57.17	0.000	0.000	0.020	0.020	97	20.08	0.000	0.000	0.012	0.012	20	16.20	0.000	0.000	0.000	0.000	0
13	60.00	0.000	0.000	0.000	0.000	0	17.53	0.000	0.000	0.015	0.015	22	12.87	0.000	0.000	0.000	0.000	0
14	67.58	0.000	0.000	0.028	0.028	162	16.25	0.000	0.000	0.027	0.027	37	14.28	0.000	0.000	0.000	0.000	0
15	52.31	0.000	0.000	0.020	0.020	88	16.54	0.000	0.000	0.018	0.018	26	12.00	0.000	0.000	0.000	0.000	0
16	44.07	0.000	0.000	0.129	0.129	490	18.86	0.000	0.000	0.018	0.018	29	10.62	0.000	0.000	0.024	0.024	22
17	44.00	0.000	0.000	0.000	0.000	0	18.03	0.000	0.000	0.035	0.035	55	11.32	0.000	0.000	0.000	0.000	0
18	42.51	0.000	0.000	0.025	0.025	92	19.00	0.000	0.000	0.000	0.000	0	11.35	0.000	0.000	0.000	0.000	0
19	48.66	0.000	0.000	0.053	0.053	221	20.99	0.000	0.000	0.036	0.036	65	9.407	0.000	0.000	0.000	0.000	0
20	75.00	0.000	0.000	0.000	0.000	0	16.55	0.000	0.000	0.024	0.024	34	10.68	0.000	0.000	0.000	0.000	0
21	226.2	0.000	0.000	0.025	0.025	485	15.50	0.000	0.000	0.000	0.000	0	10.48	0.000	0.000	0.000	0.000	0
22	429.1	0.000	0.000	0.231	0.231	8567	14.00	0.000	0.000	0.000	0.000	0	10.50	0.000	0.000	0.000	0.000	0
23	300.3	0.000	0.000	0.210	0.210	5446	13.49	0.000	0.000	0.022	0.022	25	10.58	0.000	0.000	0.023	0.023	21
24	184.4	0.000	0.000	0.091	0.091	1451	13.00	0.000	0.000	0.000	0.000	0	11.54	0.000	0.000	0.000	0.000	0
25	130.0	0.000	0.000	0.000	0.000	0	12.95	0.000	0.000	0.000	0.000	0	11.68	0.000	0.000	0.000	0.000	0
26	94.15	0.000	0.000	0.019	0.019	151	12.96	0.000	0.000	0.039	0.039	43	11.83	0.000	0.000	0.000	0.000	0
27	72.00	0.000	0.000	0.000	0.000	0	12.77	0.000	0.000	0.019	0.019	21	12.04	0.000	0.000	0.000	0.000	0
28	51.37	0.000	0.000	0.016	0.016	72	13.24	0.000	0.000	0.018	0.018	21	10.59	0.000	0.000	0.000	0.000	0
29	49.97	0.000	0.000	0.046	0.046	199	10.98	0.000	0.000	0.020	0.020	19	10.42	0.000	0.000	0.000	0.000	0
30	43.62	0.000	0.000	0.015	0.015	58	13.15	0.000	0.000	0.017	0.017	19	9.958	0.000	0.000	0.041	0.041	35
31							13.52	0.000	0.000	0.022	0.022	25						
<u>Ten Daily Mean</u>																		
Ten Daily I	172.6	0.000	0.000	0.078	0.078	1714	31.63	0.000	0.000	0.021	0.021	55	23.31	0.000	0.000	0.005	0.005	18
Ten Daily II	56.24	0.000	0.000	0.028	0.028	121	18.48	0.000	0.000	0.018	0.018	29	12.47	0.000	0.000	0.002	0.002	2
Ten Daily III	158.1	0.000	0.000	0.065	0.065	1643	13.23	0.000	0.000	0.014	0.014	16	10.96	0.000	0.000	0.006	0.006	6
<u>Monthly</u>																		
Total						34788						1013						258

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	10.61	0.000	0.000	0.000	0.000	0	6.160	0.000	0.000	0.000	0.000	0	2.758	0.000	0.000	0.000	0.000	0
2	9.252	0.000	0.000	0.000	0.000	0	5.824	0.000	0.000	0.000	0.000	0	2.732	0.000	0.000	0.000	0.000	0
3	8.841	0.000	0.000	0.000	0.000	0	5.500	0.000	0.000	0.000	0.000	0	2.649	0.000	0.000	0.000	0.000	0
4	8.598	0.000	0.000	0.000	0.000	0	4.734	0.000	0.000	0.003	0.003	1	2.415	0.000	0.000	0.000	0.000	0
5	8.655	0.000	0.000	0.000	0.000	0	5.259	0.000	0.000	0.000	0.000	0	2.472	0.000	0.000	0.000	0.000	0
6	8.700	0.000	0.000	0.000	0.000	0	4.968	0.000	0.000	0.000	0.000	0	2.511	0.000	0.000	0.000	0.000	0
7	8.690	0.000	0.000	0.008	0.008	6	4.634	0.000	0.000	0.000	0.000	0	2.510	0.000	0.000	0.000	0.000	0
8	8.632	0.000	0.000	0.000	0.000	0	4.179	0.000	0.000	0.000	0.000	0	2.004	0.000	0.000	0.000	0.000	0
9	9.361	0.000	0.000	0.000	0.000	0	4.220	0.000	0.000	0.000	0.000	0	2.000	0.000	0.000	0.000	0.000	0
10	8.414	0.000	0.000	0.000	0.000	0	3.900	0.000	0.000	0.000	0.000	0	1.971	0.000	0.000	0.000	0.000	0
11	8.022	0.000	0.000	0.000	0.000	0	3.683	0.000	0.000	0.000	0.000	0	1.904	0.000	0.000	0.000	0.000	0
12	7.796	0.000	0.000	0.000	0.000	0	3.610	0.000	0.000	0.000	0.000	0	1.876	0.000	0.000	0.000	0.000	0
13	6.980	0.000	0.000	0.000	0.000	0	3.468	0.000	0.000	0.000	0.000	0	1.900	0.000	0.000	0.000	0.000	0
14	6.892	0.000	0.000	0.004	0.004	2	2.922	0.000	0.000	0.000	0.000	0	1.970	0.000	0.000	0.000	0.000	0
15	6.220	0.000	0.000	0.000	0.000	0	3.084	0.000	0.000	0.000	0.000	0	1.866	0.000	0.000	0.000	0.000	0
16	7.077	0.000	0.000	0.000	0.000	0	3.170	0.000	0.000	0.000	0.000	0	2.070	0.000	0.000	0.000	0.000	0
17	6.532	0.000	0.000	0.000	0.000	0	3.100	0.000	0.000	0.000	0.000	0	1.953	0.000	0.000	0.000	0.000	0
18	6.440	0.000	0.000	0.000	0.000	0	3.091	0.000	0.000	0.000	0.000	0	1.893	0.000	0.000	0.000	0.000	0
19	5.291	0.000	0.000	0.000	0.000	0	3.112	0.000	0.000	0.000	0.000	0	2.045	0.000	0.000	0.000	0.000	0
20	5.230	0.000	0.000	0.000	0.000	0	3.276	0.000	0.000	0.000	0.000	0	2.655	0.000	0.000	0.000	0.000	0
21	8.677	0.000	0.000	0.006	0.006	4	3.278	0.000	0.000	0.000	0.000	0	2.470	0.000	0.000	0.000	0.000	0
22	9.204	0.000	0.000	0.000	0.000	0	3.251	0.000	0.000	0.000	0.000	0	2.195	0.000	0.000	0.000	0.000	0
23	8.864	0.000	0.000	0.000	0.000	0	3.062	0.000	0.000	0.000	0.000	0	1.997	0.000	0.000	0.000	0.000	0
24	8.500	0.000	0.000	0.000	0.000	0	3.090	0.000	0.000	0.000	0.000	0	1.781	0.000	0.000	0.000	0.000	0
25	7.740	0.000	0.000	0.000	0.000	0	3.657	0.000	0.000	0.000	0.000	0	1.741	0.000	0.000	0.000	0.000	0
26	6.983	0.000	0.000	0.000	0.000	0	3.500	0.000	0.000	0.000	0.000	0	1.709	0.000	0.000	0.000	0.000	0
27	7.000	0.000	0.000	0.000	0.000	0	3.471	0.000	0.000	0.000	0.000	0	1.819	0.000	0.000	0.000	0.000	0
28	7.061	0.000	0.000	0.011	0.011	7	3.536	0.000	0.000	0.000	0.000	0	2.000	0.000	0.000	0.000	0.000	0
29	6.413	0.000	0.000	0.000	0.000	0	3.116	0.000	0.000	0.000	0.000	0	33.58	0.000	0.000	0.342	0.342	993
30	5.646	0.000	0.000	0.000	0.000	0	2.885	0.000	0.000	0.000	0.000	0						
31	5.962	0.000	0.000	0.000	0.000	0	2.820	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	8.975	0.000	0.000	0.001	0.001	1	4.938	0.000	0.000	0.000	0.000	0	2.402	0.000	0.000	0.000	0.000	0
Ten Daily II	6.648	0.000	0.000	0.000	0.000	0	3.252	0.000	0.000	0.000	0.000	0	2.013	0.000	0.000	0.000	0.000	0
Ten Daily III	7.459	0.000	0.000	0.002	0.002	1	3.242	0.000	0.000	0.000	0.000	0	5.477	0.000	0.000	0.038	0.038	110
Monthly																		
Total						20						1						993

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	15.86	0.000	0.000	0.000	0.000	0	0.689	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	10.53	0.000	0.000	0.000	0.000	0	0.628	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	8.369	0.000	0.000	0.000	0.000	0	0.631	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	6.006	0.000	0.000	0.000	0.000	0	0.633	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	4.822	0.000	0.000	0.000	0.000	0	0.636	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	3.500	0.000	0.000	0.000	0.000	0	0.451	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	2.280	0.000	0.000	0.000	0.000	0	0.416	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	3.486	0.000	0.000	0.000	0.000	0	0.367	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	3.305	0.000	0.000	0.000	0.000	0	0.209	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	3.335	0.000	0.000	0.000	0.000	0	0.367	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	3.638	0.000	0.000	0.000	0.000	0	0.163	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	3.274	0.000	0.000	0.000	0.000	0	0.125	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	3.500	0.000	0.000	0.000	0.000	0	0.104	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	3.438	0.000	0.000	0.000	0.000	0	0.140	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	3.459	0.000	0.000	0.000	0.000	0	0.136	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	3.411	0.000	0.000	0.000	0.000	0	0.142	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	3.068	0.000	0.000	0.000	0.000	0	0.139	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	3.078	0.000	0.000	0.000	0.000	0	0.079	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	3.168	0.000	0.000	0.000	0.000	0	0.075	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	3.080	0.000	0.000	0.000	0.000	0	0.070	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	2.878	0.000	0.000	0.000	0.000	0	0.078	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	2.522	0.000	0.000	0.000	0.000	0	0.077	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	2.185	0.000	0.000	0.000	0.000	0	0.067	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	2.000	0.000	0.000	0.000	0.000	0	0.070	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	1.900	0.000	0.000	0.000	0.000	0	0.067	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	1.429	0.000	0.000	0.000	0.000	0	0.067	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	1.480	0.000	0.000	0.000	0.000	0	0.022	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	1.525	0.000	0.000	0.000	0.000	0	0.022	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	1.460	0.000	0.000	0.000	0.000	0	0.020	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	1.255	0.000	0.000	0.000	0.000	0	0.022	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.749	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	6.149	0.000	0.000	0.000	0.000	0	0.503	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	3.311	0.000	0.000	0.000	0.000	0	0.117	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	1.762	0.000	0.000	0.000	0.000	0	0.051	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Monthly																		
Total						0						0						0

Annual Sediment Load for period : 1978-2016

Station Name : SUNDERGARH (EMI00H3)

Division : MD,CWC,Burla

Local River : Ib

Sub-Division : MMSD II,CWC,Burla

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1978-1979	0	0	0	3881
1979-1980	0	0	0	921
1980-1981	1973346	1488	1974833	4222
1981-1982	2537361	14524	2551885	2936
1982-1983	1709154	14581	1723735	1993
1983-1984	2164257	1154	2165411	2989
1984-1985	4909711	4742	4914453	3863
1985-1986	4183840	3800	4187640	3116
1986-1987	3358332	790	3359122	2823
1987-1988	5786196	313	5786509	3044
1988-1989	3536298	1040	3537338	3439
1989-1990	1893644	6884	1900528	2365
1990-1991	2544599	3140	2547739	3361
1991-1992	4315397	9648	4325046	4259
1992-1993	1450421	58	1450478	1787
1993-1994	2393421	41	2393462	3093
1994-1995	7112058	948	7113006	6683
1995-1996	1812143	422	1812566	2274
1996-1997	4144785	115	4144900	4315
1997-1998	2532072	359079	2891151	3755
1998-1999	4829481	506	4829987	5570
1999-2000	2086621	242	2086863	4095
2000-2001	1365571	15	1365586	2246
2001-2002	2951179	74	2951253	4321
2002-2003	649024	140	649164	2177
2003-2004	1806451	181	1806632	3717
2004-2005	945040	0	945040	2252
2005-2006	760078	0	760078	2364
2006-2007	1111560	31	1111590	2197
2007-2008	1860640	67	1860706	3253
2008-2009	2447643	0	2447643	2892
2009-2010	2983406	82	2983487	2743
2010-2011	1077524	156	1077680	1882
2011-2012	2762936	1468	2764404	4212
2012-2013	1369843	34	1369878	3119
2013-2014	892612	3186	895799	2452
2014-2015	1450049	213	1450262	2053
2015-2016	1695717	1014	1696731	2635

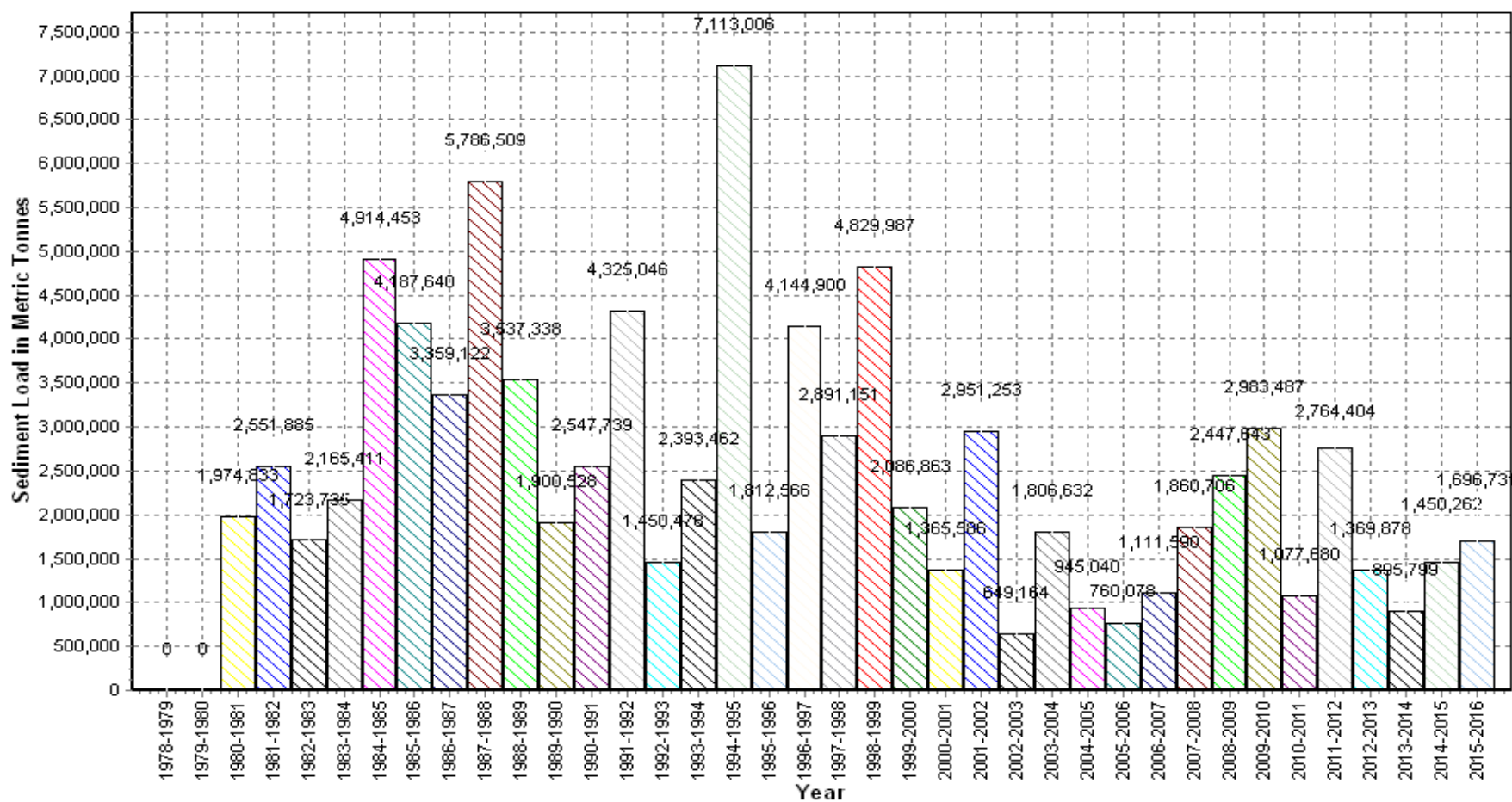
Annual Sediment Load for the period: 1978-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

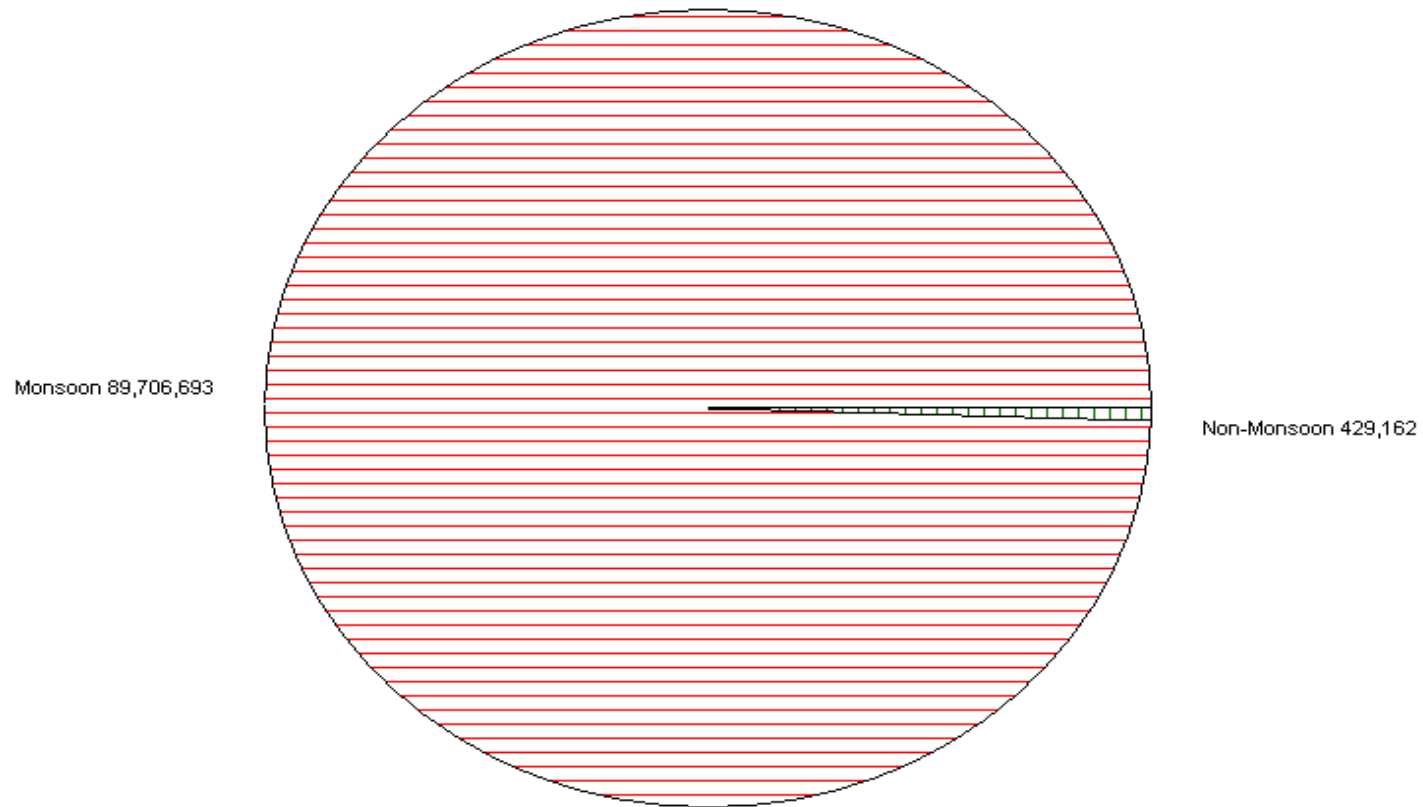
Sub-Division : MMSD II,CWC,Burla



Seasonal Sediment Load for the period : 1978-2015

Station Name : SUNDERGARH (EMI00H3)
Local River : Ib

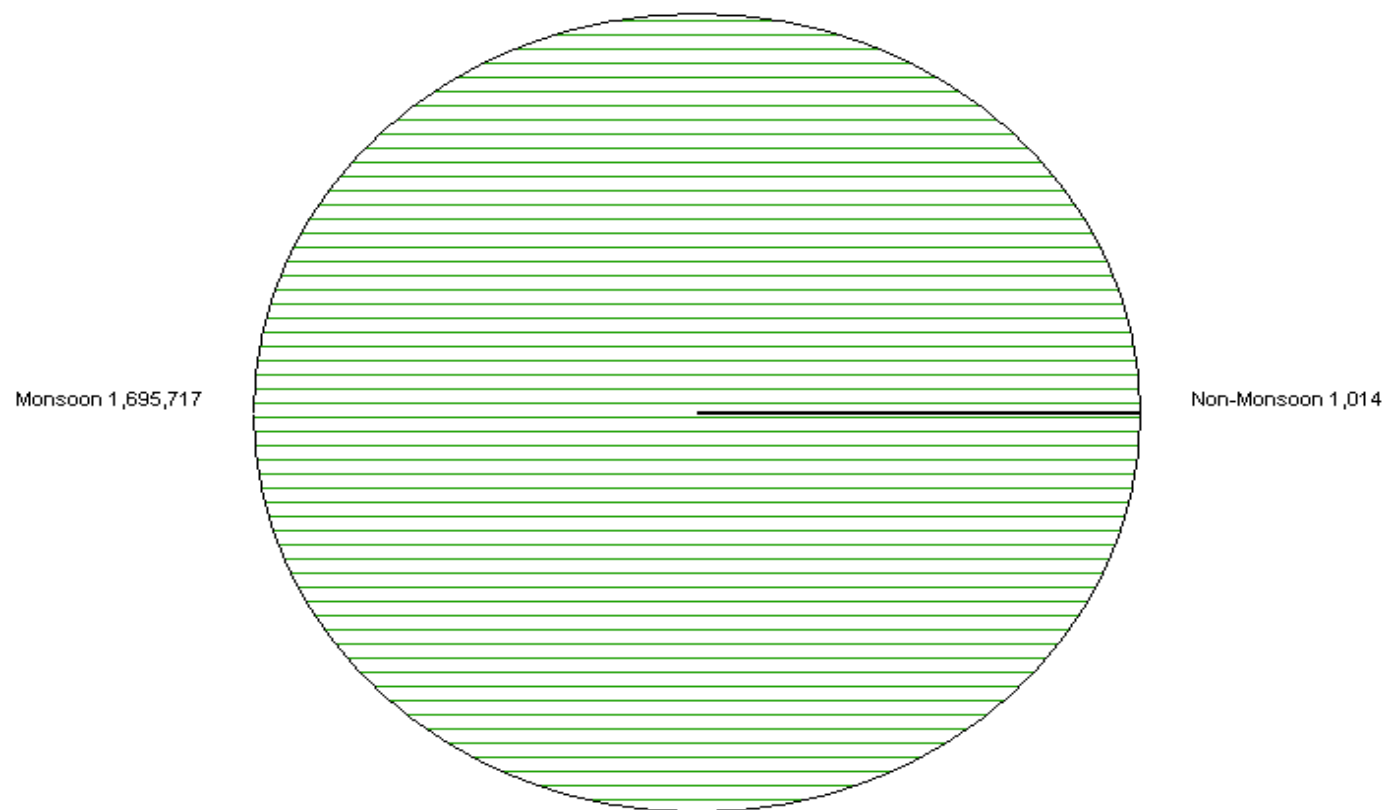
Division : MD,CWC,Burla
Sub-Division : MMSD II,CWC,Burla



Seasonal Sediment Load for the Year: 2015-2016

Station Name : SUNDERGARH (EMI00H3)
Local River : Ib

Division : MD,CWC,Burla
Sub-Division : MMSD II,CWC,Burla



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

River Water Analysis

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/1/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/1/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.240	47.71	80.56	375.3	38.86	13.15	10.61	6.160	2.758	15.86	0.689	0.000
2	Colour_Cod (-)	Clear	Light Brown	Brown	Brown	Clear	Clear	Clear		Clear	Clear	Clear	
3	EC_FLD (µmho/cm)	205	160	140	140	150	150	140		130	130	160	
4	EC_GEN (µmho/cm)	153	100	118	75	112	102	122		115	100	190	
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free		odour free	odour free	odour free	
6	pH_FLD (pH units)	7.1	7.0	7.0	7.0	7.1	7.1	7.1		7.0	7.0	7.0	
7	pH_GEN (pH units)	8.4	7.9	7.6	7.7	8.1	7.9	8.3		8.3	7.9	8.3	
8	Temp (deg C)	32.0	27.5	28.0	29.0	29.5	24.5	21.0		17.0	22.0	24.0	
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	10.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	160	124	136	106	144	120	156		144	104	148	
3	Ca (mg/L)	18	14	14	16	16	18	19		16	18	22	
4	Cl (mg/L)	20.0	13.0	17.0	9.0	16.0	11.0	14.0		12.0	10.0	23.0	
5	CO3 (mg/L)	12.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
6	HCO3 (mg/L)	85	76	83	65	88	73	95		88	63	90	
7	K (mg/L)	6.3	3.7	2.5	1.6	6.7	5.2	3.2		5.1	12.7	8.6	
8	Mg (mg/L)	9.7	8.8	8.8	7.8	5.8	7.8	6.8		9.7	5.8	2.9	
9	Na (mg/L)	28.3	8.2	9.4	17.1	16.4	12.5	18.2		15.3	26.7	29.7	
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.5	0.2	0.3	0.7	0.8	0.9	0.4		0.8	0.8	1.4	
2	DO (mg/L)	6.1	6.5	6.3	7.1	6.1	7.8	7.6		8.5	6.7	6.5	
3	DO_SAT% (%)	84	82	80	92	79	93	85		88	77	77	
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	44	36	36	40	40	44	48		40	44	56	
2	HAR_Total (mgCaCO3/L)	85	73	73	72	64	76	76		81	68	68	
3	Na% (%)	40	19	21	33	33	25	33		28	41	45	
4	RSC (-)	0.1	0.0	0.0	0.0	0.2	0.0	0.0		0.0	0.0	0.1	
5	SAR (-)	1.3	0.4	0.5	0.9	0.9	0.6	0.9		0.7	1.4	1.6	
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : SUNDERGARH (EMI00H3)

Division : MD,CWC,Burla

Local River : Ib

Sub-Division : MMSD II,CWC,Burla

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	5652	0.000	83.34
2	EC_FLD (μmho/cm)	10	205	130	151
3	EC_GEN (μmho/cm)	10	190	75	119
4	pH_FLD (pH units)	10	7.1	7.0	7
5	pH_GEN (pH units)	10	8.4	7.6	8
6	Temp (deg C)	10	32.0	17.0	25.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	10.0	0.0	1
2	ALK-TOT (mgCaCO3/L)	10	160	104	134
3	Ca (mg/L)	10	22	14	17
4	Cl (mg/L)	10	23.0	9.0	14.5
5	CO3 (mg/L)	10	12.0	0.0	1.2
6	HCO3 (mg/L)	10	95	63	81
7	K (mg/L)	10	12.7	1.6	5.6
8	Mg (mg/L)	10	9.7	2.9	7.4
9	Na (mg/L)	10	29.7	8.2	18.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	1.5	0.2	0.8
2	DO (mg/L)	10	8.5	6.1	6.9
3	DO_SAT% (%)	10	93	77	84
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	56	36	43
2	HAR_Total (mgCaCO3/L)	10	85	64	74
3	Na% (%)	10	45	19	32
4	RSC (-)	10	0.2	0.0	0
5	SAR (-)	10	1.6	0.4	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	305.8	114.0	256.9	108.0	326.2	197.0	223.2	388.0	151.3	120.9	113.0	128.2	115.0	117.2	108.5	19.94	8.369	83.39	9.759	17.45
2	EC_FLD (µmho/cm)	170	192		83	106	90	168	247	113	162	88			116	159	186	134		150	127
3	EC_GEN (µmho/cm)	170	192		83	106	90	123	211	107	106	99	129	104	116	112	186	134		150	127
4	pH_FLD (pH units)	7.3	8.1			7.4	7.5	7.6	7.7	7.8	7.7	8.0			7.0	7.0	7.9	7.9		7.8	8.2
5	pH_GEN (pH units)	7.3	8.1			7.4	7.5	7.7	7.6	7.9	7.5	7.5	7.8	8.2	7.9	7.9	7.9	7.9		7.8	8.2
6	Temp (deg C)	26.6	27.9		30.0	29.4	27.1	27.5	26.9	28.8	27.5	30.0	27.6	26.8	28.1	29.2	21.1	29.0		21.0	27.0
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	1.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.7	0.0		0.0	0.0
2	ALK-TOT (mgCaCO3/L)	129	102		99	68		93	154	68	75	124	91	124	135	134	117	121		98	98
3	B (mg/L)					0.02		0.01	0.00	0.00	0.00	0.00	0.00								0.10
4	Ca (mg/L)	15	12		12	7		10	16	6	10	8	10	14	14	16	13	10		12	10
5	Cl (mg/L)	6.0	6.3		8.7	23.4		75.1	6.0	6.1	3.9	3.3	13.0	11.8	9.4	15.0	5.0	4.0		5.0	17.2
6	CO3 (mg/L)	0.0	1.3			0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.9	0.0		0.0	0.0
7	F (mg/L)					0.15		0.06	0.10	0.05	0.09	0.18	0.21								
8	Fe (mg/L)					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.1
9	HCO3 (mg/L)	79	61			42		57	94	42	46	75	56	76	82	79	71	74		60	60
10	K (mg/L)	1.1	7.6			2.4		0.9	0.9	1.0	1.6	2.4	1.1	2.4	2.7	4.2	1.7			0.7	1.3
11	Mg (mg/L)	3.9	4.6		4.7	3.1		4.8	7.5	4.0	7.0	4.9	6.1	4.6	5.7	8.2	3.3	5.1		4.4	4.9
12	Na (mg/L)	2.4	1.5			14.0		14.9	6.1	4.3	6.8	5.9	10.3	6.5	14.9	15.9	4.1			11.7	10.7
13	NO2+NO3 (mg N/L)		0.57		0.05	0.06	0.04	0.07	0.33											0.05	0.08
14	NO2-N (mgN/L)					0.01	0.00	0.01	0.03	0.01	0.01	0.01	0.08								0.00
15	NO3-N (mgN/L)					0.05	0.04	0.06	0.30												0.08
16	P-Tot (mgP/L)					0.003	0.020	0.010	0.022	0.030	0.010	0.030	0.040							0.030	0.026
17	SiO2 (mg/L)					4.5		10.5	17.0	7.9	6.4	11.0	15.8								20.0
18	SO4 (mg/L)	6.1	8.4		7.2	13.1		7.0	7.1	7.5	10.5	15.0	12.4				2.8			3.0	4.4
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.5	0.7		0.9	0.8	0.4	1.3	0.9	0.9	0.9	1.4	0.8	0.5	0.3	0.7	0.5	0.9		0.6	0.3
2	COD (mg/L)						10.6	15.3	26.0	13.0	13.0	22.0	18.0								
3	DO (mg/L)	9.4	7.7		4.6	6.0	6.8	7.6	6.7	6.6	6.4	6.7	7.7	7.1	6.7	6.4	10.4	8.1		8.2	7.6
4	DO_SAT% (%)	119	100		60	79	85	96	83	86	81	87	98	88	86	83	113	105		92	95
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	37	29		30	18		24	40	16	25	21	25	35	35	39	33	25		30	24
2	HAR_Total (mgCaCO3/L)	53	58		49	30		44	72	32	54	41	50	54	59	73	47	46		48	44
3	Na% (%)	11	5			43		44	25	22	22	23	30	20	35	29	21			34	34
4	RSC (-)	0.2	0.2			0.1		0.1	0.1	0.0	0.0	0.4	0.0	0.2	0.2	0.1	0.3	0.3		0.0	0.1
5	SAR (-)	0.2	0.1			1.2		1.0	0.4	0.3	0.4	0.4	0.6	0.4	0.9	0.8	0.3			0.7	0.7
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	11.09	16.76	12.05	15.90	10.29	18.47	16.51	32.20	15.83	8.169	2.170	2.105	3.019	1.406	1.109	1.280	3.187	0.793	1.812	2.541
2	EC_FLD (µmho/cm)	154	134	136	136	157			183	130	140	147			163	132	158	181	166	199	176
3	EC_GEN (µmho/cm)	154	228	150	154	148	134	176	143	134	113	147			163	132	158	140	170	201	331
4	pH_FLD (pH units)	7.9	7.8	7.9	7.6	7.5			7.1	7.1	7.0	7.5			8.0	7.8	8.3	8.2	7.8	7.5	7.2
5	pH_GEN (pH units)	7.9	8.0	8.0	7.9	7.7	8.0	8.2	8.3	8.2	8.2	7.5			8.0	7.8	8.3	8.2	8.0	7.8	7.1
6	Temp (deg C)	17.5	20.7	20.4	18.9	18.5	19.9	18.9	18.6	19.3	20.8	28.8			30.3	31.0	23.8	24.3	22.8	23.8	26.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0		2.5	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		83	111	115	107	101	176	161	164	140	105			88	103		100	126	144	107
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00	0.00								0.03		0.01	0.00	0.00	0.00
4	Ca (mg/L)		13	11	12	13	12	24	20	21	18	10			12	15		11	12	22	28
5	Cl (mg/L)		60.3	14.9	5.9	13.2	14.0	14.2	14.8	15.5	12.3	3.4			12.5	12.6		15.7	10.1	9.2	21.1
6	CO3 (mg/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0		3.0	0.0	0.0	0.0
7	F (mg/L)		0.11	0.08	0.07	0.08	0.10	0.15							0.14			0.11	0.14	0.11	0.30
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.1						0.0	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)		51	68	70	65	61	108	98	100	85	64			54	63		58	77	88	66
10	K (mg/L)		1.5	1.1	1.1	1.6	1.1	0.9	8.8	3.1	4.5	1.6			6.6	1.1		1.3	2.0	1.9	1.7
11	Mg (mg/L)		10.0	5.6	6.7	6.3	6.2	9.2	9.0	10.2	8.1	3.2			5.3	4.4		4.9	6.8	8.3	17.2
12	Na (mg/L)		14.9	11.5	6.9	14.9	12.0	23.7	23.7	19.4	15.3	3.3			13.6	9.1		14.4	8.4	24.7	18.4
13	NO2+NO3 (mg N/L)	0.02	0.09	0.30						0.13					0.05	0.04	0.03	0.50	1.18		
14	NO2-N (mgN/L)	0.01	0.01	0.01	0.01	0.02	0.02	0.02		0.02						0.00	0.00	0.01	0.01	0.01	0.32
15	NO3-N (mgN/L)	0.01	0.08	0.29						0.11						0.04	48.68	0.49	1.17		
16	P-Tot (mgP/L)	0.075	0.095	0.012	0.015	0.027	0.032	0.032		0.030					0.020	0.009	0.025	0.023	0.030	0.025	0.070
17	SiO2 (mg/L)		17.3	11.6	11.5	5.9	8.9	7.1		9.5						8.0		13.3	13.7	10.3	19.8
18	SO4 (mg/L)		12.1	10.9	12.0	21.4	14.8	16.2		16.7		7.4			6.1	4.4		9.4	13.2	13.5	48.8
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.5	0.8	0.6	0.7	0.6	0.7	1.1	0.9	0.7	0.7	1.0			0.9	0.6	0.5	1.0	0.5	1.1	0.8
2	COD (mg/L)	31.3	20.0	16.0	25.0	20.0	14.0	16.0									10.4	17.3	24.0	18.0	26.0
3	DO (mg/L)	8.9	8.6	7.7	7.3	8.2	8.2	8.7	7.9	8.3	8.0	8.7			7.2	7.8	7.9	9.1	7.2	5.8	6.2
4	DO_SAT% (%)	92	95	86	78	90	90	92	83	89	89	109			92	105	94	107	82	64	77
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		34	29	30	31	30	60	50	53	44	25			30	38		27	31	55	71
2	HAR_Total (mgCaCO3/L)		75	52	58	58	55	98	88	96	78	39			52	56		47	59	89	143
3	Na% (%)		33	32	20	34	30	31	31	29	29	19			33	26		39	23	39	24
4	RSC (-)		0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.3			0.0	0.0		0.2	0.1	0.0	0.0
5	SAR (-)		0.8	0.7	0.4	0.8	0.7	1.1	1.1	0.9	0.8	0.3			0.8	0.5		0.9	0.5	1.3	0.7
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SUNDERGARH (EMI00H3)

Local River : Ib

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	1.830	3.720	5.221	4.464	5.516
2	EC_FLD (µmho/cm)			118	153	145
3	EC_GEN (µmho/cm)	161	171	171	145	145
4	pH_FLD (pH units)			7.0	7.1	7.0
5	pH_GEN (pH units)	7.6	8.5	8.1	8.4	8.1
6	Temp (deg C)	23.0	23.8	23.7	23.8	23.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	8.0	0.0	10.0	0.0
2	ALK-TOT (mgCaCO3/L)	126	167	185	175	126
3	B (mg/L)	0.00	0.00			
4	Ca (mg/L)	16	16	22	17	20
5	Cl (mg/L)	16.6	25.7	15.7	15.7	16.5
6	CO3 (mg/L)	0.0	9.6	0.0	12.0	0.0
7	F (mg/L)	0.16	0.15			
8	Fe (mg/L)	0.1	0.1		0.1	
9	HCO3 (mg/L)	77	92	113	94	77
10	K (mg/L)	1.1	2.6	2.4	4.2	10.6
11	Mg (mg/L)	8.9	4.2	13.6	10.7	4.4
12	Na (mg/L)	12.1	39.5	14.8	19.6	28.2
13	NO2+NO3 (mg N/L)				0.31	
14	NO2-N (mgN/L)	0.07	0.06		0.06	
15	NO3-N (mgN/L)				0.25	
16	P-Tot (mgP/L)	0.067	0.050		0.043	
17	SiO2 (mg/L)	11.9	11.8		9.9	
18	SO4 (mg/L)	14.1	16.2		18.5	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.6	0.4	0.9	0.5	1.1
2	COD (mg/L)	17.3	13.3			
3	DO (mg/L)	7.1	6.6	7.2	7.1	6.6
4	DO_SAT% (%)	83	77	85	84	77
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	39	40	55	43	50
2	HAR_Total (mgCaCO3/L)	77	58	111	87	68
3	Na% (%)	26	57	23	30	43
4	RSC (-)	0.0	0.7	0.2	0.2	0.1
5	SAR (-)	0.6	2.3	0.6	0.9	1.5
	PESTICIDES					

ONG SUB-BASIN

SITE SALEBHATA

HISTORY SHEET

Water Year : 2015-2016

Site : SALEBHATA

Code : EMG00E5

State : Orissa

District : Balangir

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Ong

Sub Tributary :

Sub-Sub Tributary :

Local River : Ong

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWCBurla

Drainage Area : 4650 Sq. Km.

Bank :

Latitude : 20°59'00"

Longitude : 83°32'22"

Zero of Gauge (m) : 130 (m.s.l)

7/23/1971 - 7/23/2025

Opening Date

Closing Date

Gauge : 7/23/1971

Discharge :

Sediment : 5/1/1973

Water Quality : 9/15/1972

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1973-1974	3571	135.900	7/8/1973	0.100	130.535	5/17/1974
1974-1975	3670	135.278	8/18/1974	0.001	130.585	5/17/1975
1975-1976	800.4	133.850	8/13/1975	0.100	130.605	5/30/1976
1976-1977	2123	134.930	8/14/1976	0.082	130.565	6/20/1976
1977-1978	1416	134.070	9/13/1977	0.055	130.585	5/31/1978
1978-1979	1737	134.375	8/29/1978	0.048	130.560	6/20/1978
1979-1980	1547	134.015	8/9/1979	0.010	130.605	6/11/1979
1980-1981	2850	135.090	7/2/1980	0.100	130.600	6/10/1980
1981-1982	1176	133.630	8/9/1981	0.020	130.580	5/17/1982
1982-1983	14545	139.570	8/30/1982	0.010	130.620	5/24/1983
1983-1984	3864	134.000	9/7/1983	0.100	130.270	5/25/1984
1984-1985	1701	134.570	8/8/1984	0.010	130.505	5/23/1985
1985-1986	2645	135.525	9/11/1985	0.100	130.570	4/26/1986
1986-1987	3771	137.000	8/21/1986	0.060	130.405	5/28/1987
1987-1988	838.6	134.580	7/23/1987	0.110	130.385	6/3/1987
1988-1989	411.0	132.350	7/12/1988	0.110	130.300	5/30/1989
1989-1990	489.7	132.950	7/29/1989	0.110	130.300	6/3/1989
1990-1991	1629	134.130	9/5/1990	0.154	130.530	5/17/1991
1991-1992	1260	134.190	8/14/1991	0.100	130.480	5/31/1992
1992-1993	3250	137.620	7/28/1992	0.015	130.635	5/8/1993
1993-1994	1341	134.700	8/20/1993	0.033	130.640	6/11/1993
1994-1995	3577	135.390	6/21/1994	0.569	130.720	4/25/1995

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1995-1996	2346	134.800	7/24/1995	0.100	130.390	5/24/1996
1996-1997	398.3	132.015	8/24/1996	0.016	130.510	12/16/1996
1997-1998	2428	134.950	8/21/1997	0.105	130.335	5/31/1998
1998-1999	560.0	132.755	7/12/1998	0.120	130.305	6/6/1998
1999-2000	1935	134.720	8/9/1999	0.209	130.405	6/9/1999
2000-2001	114.0	131.585	7/13/2000	0.024	130.310	1/16/2001
2001-2002	3225	135.308	7/17/2001	0.095	130.490	5/8/2002
2002-2003	1545	133.405	9/12/2002	0.660	130.600	4/28/2003
2003-2004	7916	139.580	8/29/2003	0.476	130.205	4/25/2004
2004-2005	1147	133.080	6/15/2004	0.022	130.260	5/20/2005
2005-2006	1924	135.005	7/31/2005	0.016	130.305	5/15/2006
2006-2007	4681	136.790	8/30/2006	0.061	130.290	4/28/2007
2007-2008	2419	134.350	6/30/2007	0.026	130.130	5/12/2008
2008-2009	3271	135.400	9/19/2008	0.134	130.460	4/21/2009
2009-2010	4331	135.975	7/22/2009	0.340	130.090	12/31/2009
2010-2011	787.8	132.560	7/26/2010	0.200	130.190	12/30/2010
2011-2012	4552	135.755	9/8/2011	0.067	130.150	5/20/2012
2012-2013	4880	135.850	8/4/2012	0.353	130.070	1/2/2013
2013-2014	895.3	133.000	10/9/2013	0.092	130.120	5/23/2014
2014-2015	7441	137.600	7/31/2014	0.035	130.130	5/31/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : SALEBHATA (EMG00E5)

Division : MD<CWC,Burla

Local River : Ong

Sub-Division : MMSD II,CWCBurla

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	130.120	0.000 *	130.650	25.64	130.450	10.93	131.575	280.1	130.540	14.66	130.270	3.504 *
2	130.120	0.000 *	130.505	11.98	130.450	10.90 *	131.615	291.7	130.520	13.96 *	130.270	3.511
3	130.110	0.000 *	130.675	27.71	130.650	24.08	131.470	249.5	130.490	12.92	130.280	3.699
4	130.110	0.000 *	130.610	19.35	130.815	45.03	131.255	132.4	130.480	11.98 *	130.280	3.781
5	130.110	0.000 *	130.490	11.00 *	131.615	314.4	131.053	69.51	130.460	10.11	130.270	3.314
6	130.110	0.000 *	130.460	11.79	131.290	167.1	130.920	55.00 *	130.450	9.267	130.270	3.349
7	130.110	0.000 *	130.440	11.18	131.070	85.32	130.830	40.57	130.430	8.919	130.260	3.207
8	130.100	0.000 *	130.440	10.36	130.925	57.66	130.705	25.80	130.420	10.15	130.260	3.201 *
9	130.100	0.000 *	130.535	12.84	130.840	45.05 *	130.690	26.11	130.415	8.396	130.250	3.159
10	130.100	0.000 *	130.778	41.67	130.630	19.66	130.600	18.11	130.400	8.263	130.260	3.310
11	130.100	0.000 *	131.230	118.9	130.730	32.86	130.580	14.48	130.400	8.269 *	130.260	3.273 *
12	130.100	0.000 *	131.270	130.0 *	130.650	27.61	130.555	12.76	130.340	4.263	130.260	3.502
13	130.100	0.000 *	131.090	79.85	130.960	55.86	130.530	12.00 *	130.320	4.353	130.260	3.221
14	130.950	0.000 *	130.925	56.17	130.905	57.22	130.520	12.09	130.320	4.249	130.250	2.460
15	131.168	87.75	130.745	33.75	130.840	45.05 *	130.540	13.51	130.310	4.458	130.240	2.312 *
16	130.580	12.58	130.760	35.13	130.910	57.68 *	130.600	16.86	130.300	4.397	130.200	1.930
17	130.450	8.758	131.360	144.5	131.270	158.4	130.700	27.00 *	130.300	4.428	130.170	1.467
18	130.465	9.283	131.150	100.0 *	131.700	306.3	130.800	39.42	130.300	4.429 *	130.160	0.986
19	130.410	6.703	131.200	110.0 *	131.280	190.6	131.090	85.31	130.290	4.104	130.165	1.442
20	130.350	5.707	131.160	102.2	131.115	121.2	131.040	70.00 *	130.290	3.916	130.160	1.373
21	130.330	5.000 *	131.020	67.90	130.900	57.67	131.765	367.8	130.290	3.927 *	130.150	1.217
22	130.890	34.73	130.940	37.74	130.850	45.22	131.730	356.4	130.290	3.927 *	130.150	1.217 *
23	131.665	240.7	131.025	43.86	130.730	31.30 *	131.410	193.2	130.290	3.871	130.160	0.741
24	131.425	182.2	131.950	380.7	130.710	31.28	131.155	105.7	130.280	3.839 *	130.160	0.701
25	131.240	104.1	131.460	234.3	130.865	51.25	130.980	60.00 *	130.280	3.839 *	130.160	0.701 *
26	130.950	62.46	131.200	110.0 *	130.770	34.12	130.845	39.79	130.280	3.863	130.150	0.737
27	130.795	39.24	130.975	43.56	131.065	86.49	130.780	37.00 *	130.280	3.813	130.150	0.696
28	130.680	30.00 *	130.783	39.81	131.870	361.2	130.670	24.27	130.280	3.810	130.140	0.692
29	130.485	12.84	130.710	28.27	132.440	612.5	130.645	21.92	130.270	3.435	130.150	0.706 *
30	130.640	24.60	130.630	21.98	131.790	361.1 *	130.570	15.73	130.270	3.433	130.155	0.727
31			130.480	10.93	131.430	203.3			130.260	3.406		
Ten-Daily Mean												
I Ten-Daily	130.109	0.000	130.558	18.35	130.874	78.02	131.071	118.9	130.461	10.86	130.267	3.403
II Ten-Daily	130.467	13.08	131.089	91.04	131.036	105.3	130.695	30.34	130.317	4.687	130.212	2.197
III Ten-Daily	130.910	73.58	131.016	92.65	131.220	170.5	131.055	122.2	130.279	3.742	130.153	0.813
Monthly												
Min.	130.100	0.000	130.440	10.36	130.450	10.90	130.520	12.00	130.260	3.406	130.140	0.692
Max.	131.665	240.7	131.950	380.7	132.440	612.5	131.765	367.8	130.540	14.66	130.280	3.781
Mean	130.495	28.89	130.892	68.16	131.049	119.6	130.941	90.47	130.350	6.344	130.211	2.138

Annual Runoff in MCM = 851 Annual Runoff in mm = 183

Peak Observed Discharge = 612.5 cumecs on 29/08/2015 Corres. Water Level :132.44 m

Lowest Observed Discharge = 0.074 cumecs on 13/04/2016 Corres. Water Level :130.03 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2015 - 2016

Station Name : SALEBHATA (EMG00E5)

Division : MD<CWC,Burla

Local River : Ong

Sub-Division : MMSD II,CWCBurla

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	130.150	0.651	130.060	0.281	130.200	1.585	130.335	4.327	130.160	0.956	130.000	0.000 *
2	130.140	0.594	130.060	0.289	130.150	1.205	130.330	4.096	130.170	1.094	130.000	0.000 *
3	130.130	0.566	130.065	0.315 *	130.155	1.240	130.320	3.329	130.170	1.100 *	130.000	0.000 *
4	130.125	0.552	130.075	0.368	130.160	1.435	130.325	3.337	130.160	0.745	130.000	0.000 *
5	130.140	0.615	130.075	0.352	130.200	1.582	130.310	3.234	130.140	0.713	130.000	0.000 *
6	130.140	0.614 *	130.100	0.459	130.160	1.412	130.280	2.500 *	130.140	0.829	130.000	0.000 *
7	130.110	0.487	130.130	0.568	130.160	1.426 *	130.240	2.000 *	130.130	0.641	130.000	0.000 *
8	130.105	0.477	130.140	0.596	130.160	1.440	130.190	1.635	130.130	0.654	130.000	0.000 *
9	130.110	0.491	130.160	0.923	130.200	1.664	130.190	1.598	130.130	0.647	130.000	0.000 *
10	130.105	0.464	130.180	1.254 *	130.180	1.531	130.160	1.476	130.100	0.500 *	130.000	0.000 *
11	130.105	0.466	130.200	1.584	130.165	1.483	130.150	1.427	130.070	0.217	130.000	0.000 *
12	130.100	0.441	130.220	1.738	130.180	1.535	130.150	1.401	130.040	0.108	130.000	0.000 *
13	130.100	0.441 *	130.230	1.846	130.200	1.599	130.150	0.790 *	130.030	0.074	130.000	0.000 *
14	130.100	0.442	130.240	1.932	130.200	1.549 *	130.140	1.224	130.000	0.000 *	130.000	0.000 *
15	130.125	0.544	130.250	1.995	130.240	1.929	130.145	1.286	130.000	0.000 *	130.000	0.000 *
16	130.105	0.447	130.240	1.945	130.240	1.920	130.140	1.261	130.000	0.000 *	130.000	0.000 *
17	130.080	0.406	130.240	1.945 *	130.240	1.976	130.140	1.209	130.000	0.000 *	130.000	0.000 *
18	130.085	0.412	130.250	2.083	130.250	2.008	130.140	1.198	130.000	0.000 *	130.000	0.000 *
19	130.100	0.450	130.230	1.848	130.230	1.891	130.310	3.493	130.000	0.000 *	130.000	0.000 *
20	130.100	0.450 *	130.270	2.675	130.210	1.660	130.310	3.000 *	130.000	0.000 *	130.000	0.000 *
21	130.085	0.418	130.275	2.728	130.200	1.620 *	130.300	2.940	130.000	0.000 *	130.000	0.000 *
22	130.080	0.390	130.270	2.686	130.180	1.545	130.255	2.169	130.000	0.000 *	130.000	0.000 *
23	130.080	0.406	130.260	2.617	130.180	1.531	130.250	2.120	130.000	0.000 *	130.000	0.000 *
24	130.080	0.400 *	130.250	2.203 *	130.230	1.822	130.240	2.100 *	130.000	0.000 *	130.000	0.000 *
25	130.080	0.400 *	130.245	2.000	130.230	1.814	130.230	1.900 *	130.000	0.000 *	130.000	0.000 *
26	130.080	0.393	130.235	1.890 *	130.230	1.856	130.220	1.738	130.000	0.000 *	130.000	0.000 *
27	130.080	0.394 *	130.250	2.055	130.320	3.342	130.200	1.600 *	130.000	0.000 *	130.000	0.000 *
28	130.080	0.395	130.250	2.050	130.330	4.130 *	130.150	0.810	130.000	0.000 *	130.000	0.000 *
29	130.075	0.367	130.220	1.785	130.350	5.715	130.140	0.727	130.000	0.000 *	130.000	0.000 *
30	130.065	0.314	130.200	1.643			130.130	0.591	130.000	0.000 *	130.000	0.000 *
31	130.075	0.359	130.200	1.615 *			130.125	0.571			130.000	0.000 *
Ten-Daily Mean												
I Ten-Daily	130.126	0.551	130.105	0.540	130.173	1.452	130.268	2.753	130.143	0.788	130.000	0.000
II Ten-Daily	130.100	0.450	130.237	1.959	130.215	1.755	130.178	1.629	130.014	0.040	130.000	0.000
III Ten-Daily	130.078	0.385	130.241	2.116	130.250	2.597	130.204	1.570	130.000	0.000	130.000	0.000
Monthly												
Min.	130.065	0.314	130.060	0.281	130.150	1.205	130.125	0.571	130.000	0.000	130.000	0.000
Max.	130.150	0.651	130.275	2.728	130.350	5.715	130.335	4.327	130.170	1.100	130.000	0.000
Mean	130.100	0.46	130.196	1.557	130.211	1.912	130.216	1.971	130.052	0.276	130.000	0

Peak Computed Discharge = 361.1 cumecs on 30/08/2015

Corres. Water Level :131.79 m

Lowest Computed Discharge = 0.000 cumecs on 01/06/2015

Corres. Water Level :130.12 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

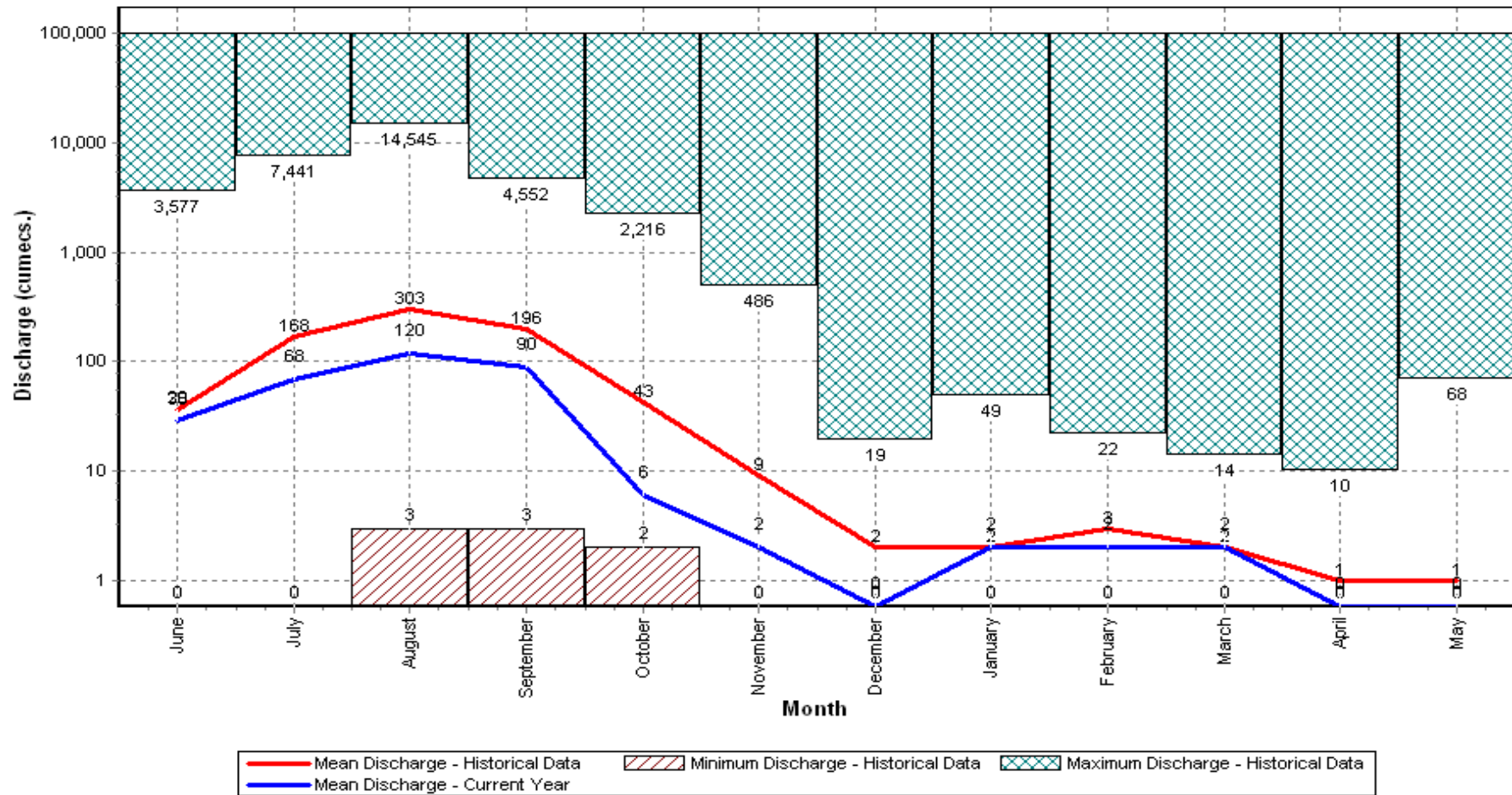
Station Name : SALEBHATA (EMG00E5)

Data considered : 1973-2016

Division : MD<CWC,Burla

Local River : Ong

Sub-Division : MMSD II,CWCBurla



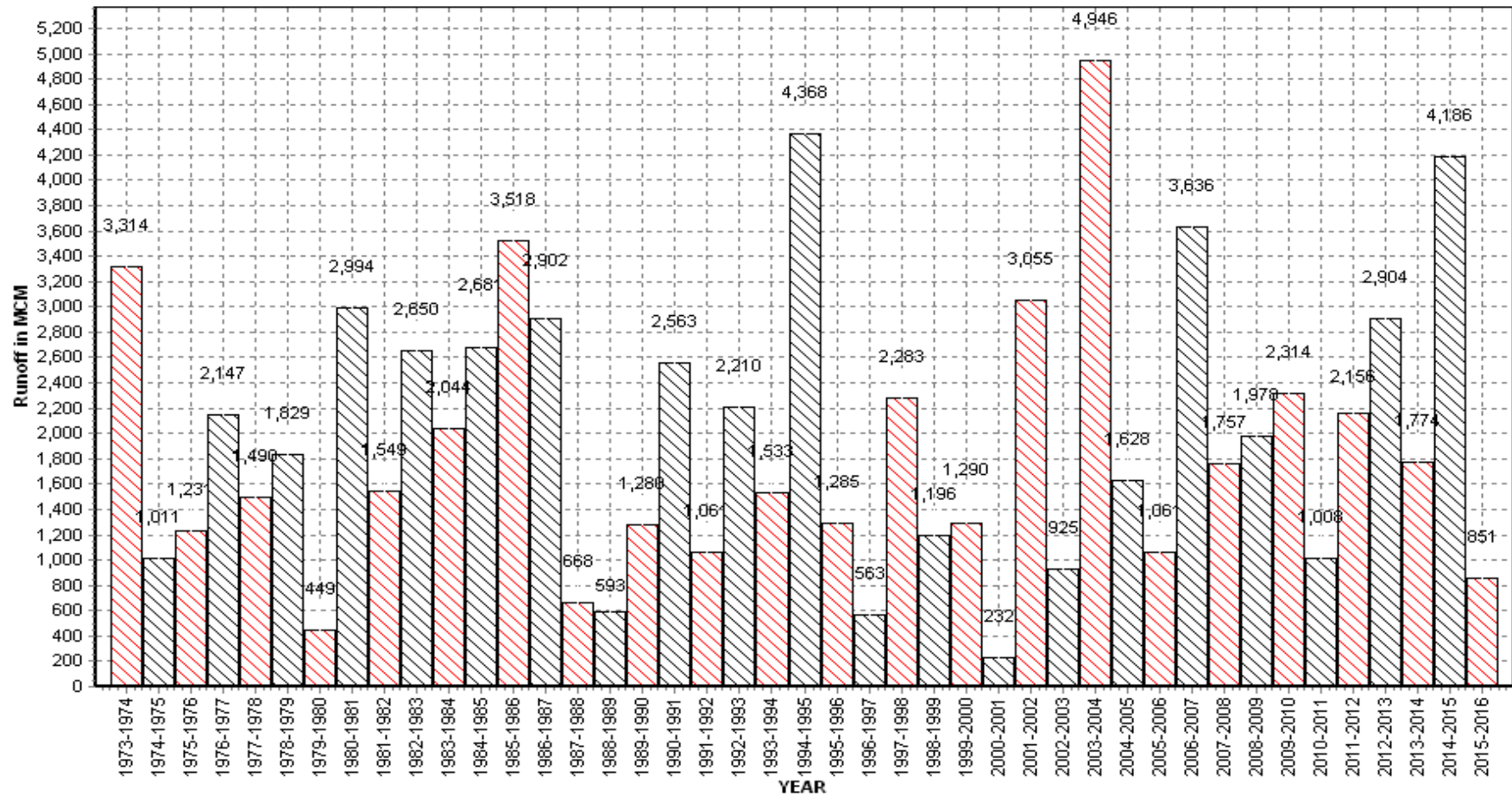
Annual Runoff Values for the period: 1973 - 2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla

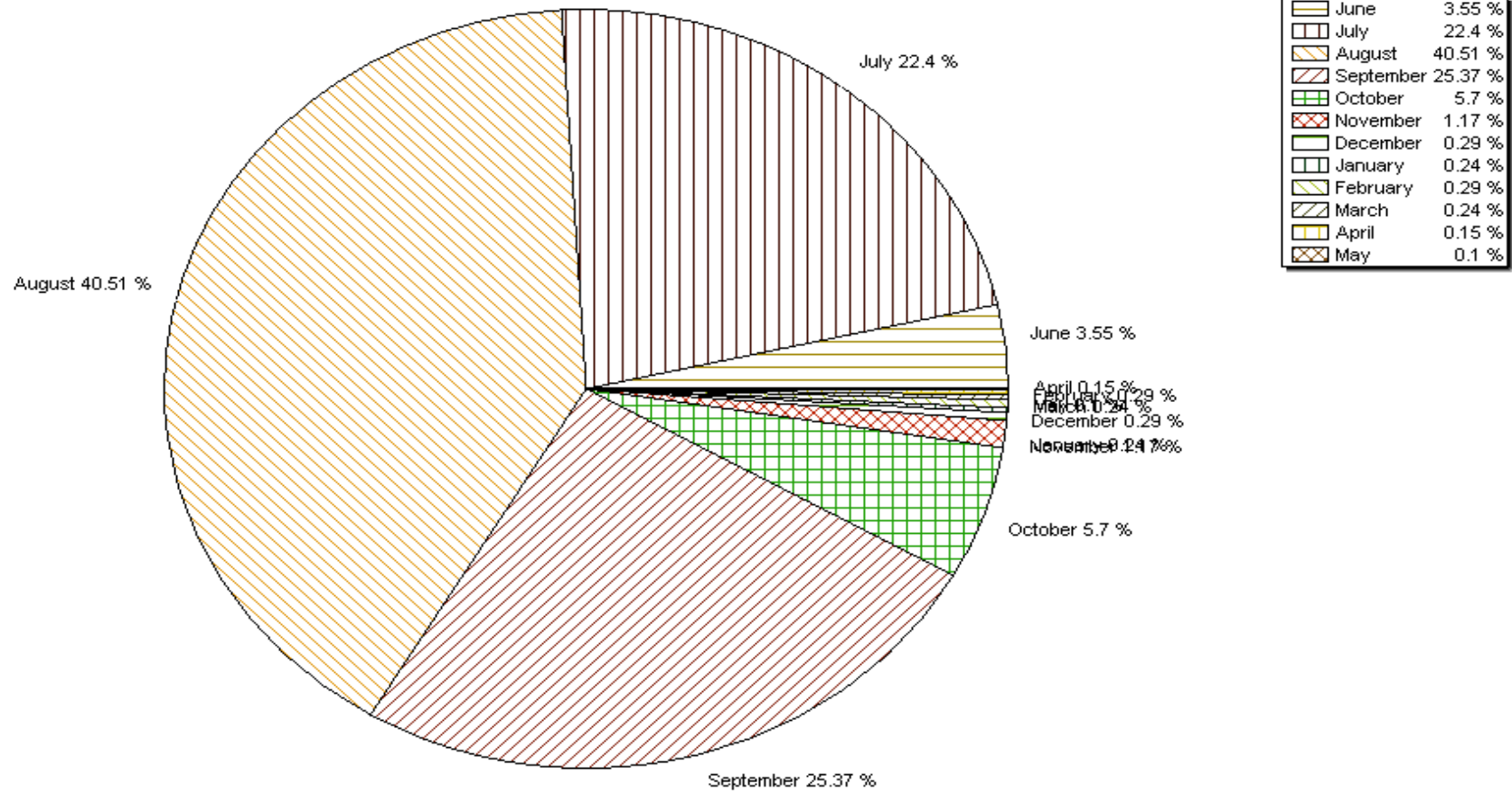


Note: Missing values have not been considered while arriving at Annual Runoff

Monthly Average Runoff based on period : 1973-2015

Station Name : SALEBHATA (EMG00E5)
Local River : Ong

Division : MD<CWC,Burla
Sub-Division : MMSD II,CWCBurla



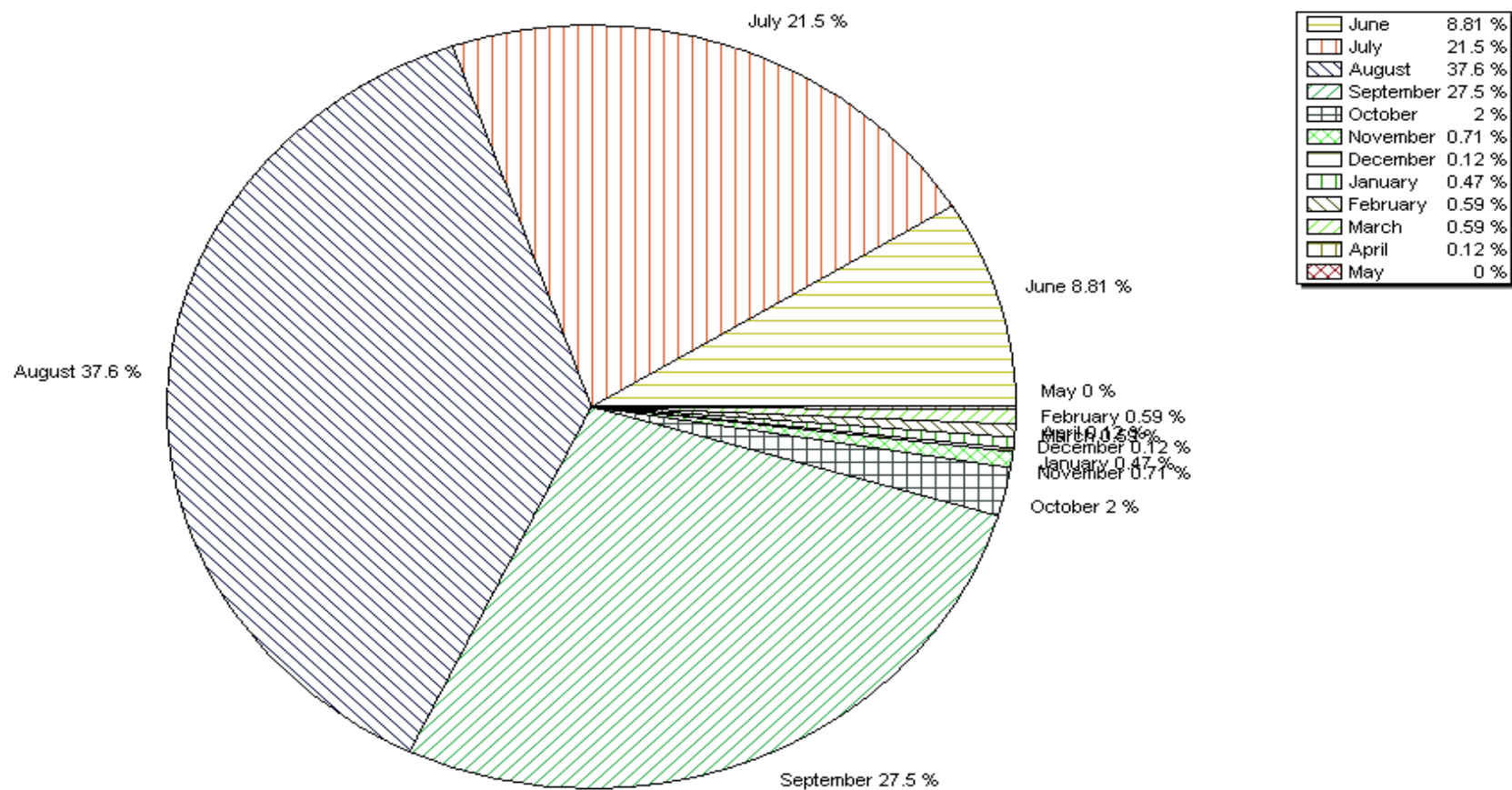
Monthly Runoff for the Year : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla



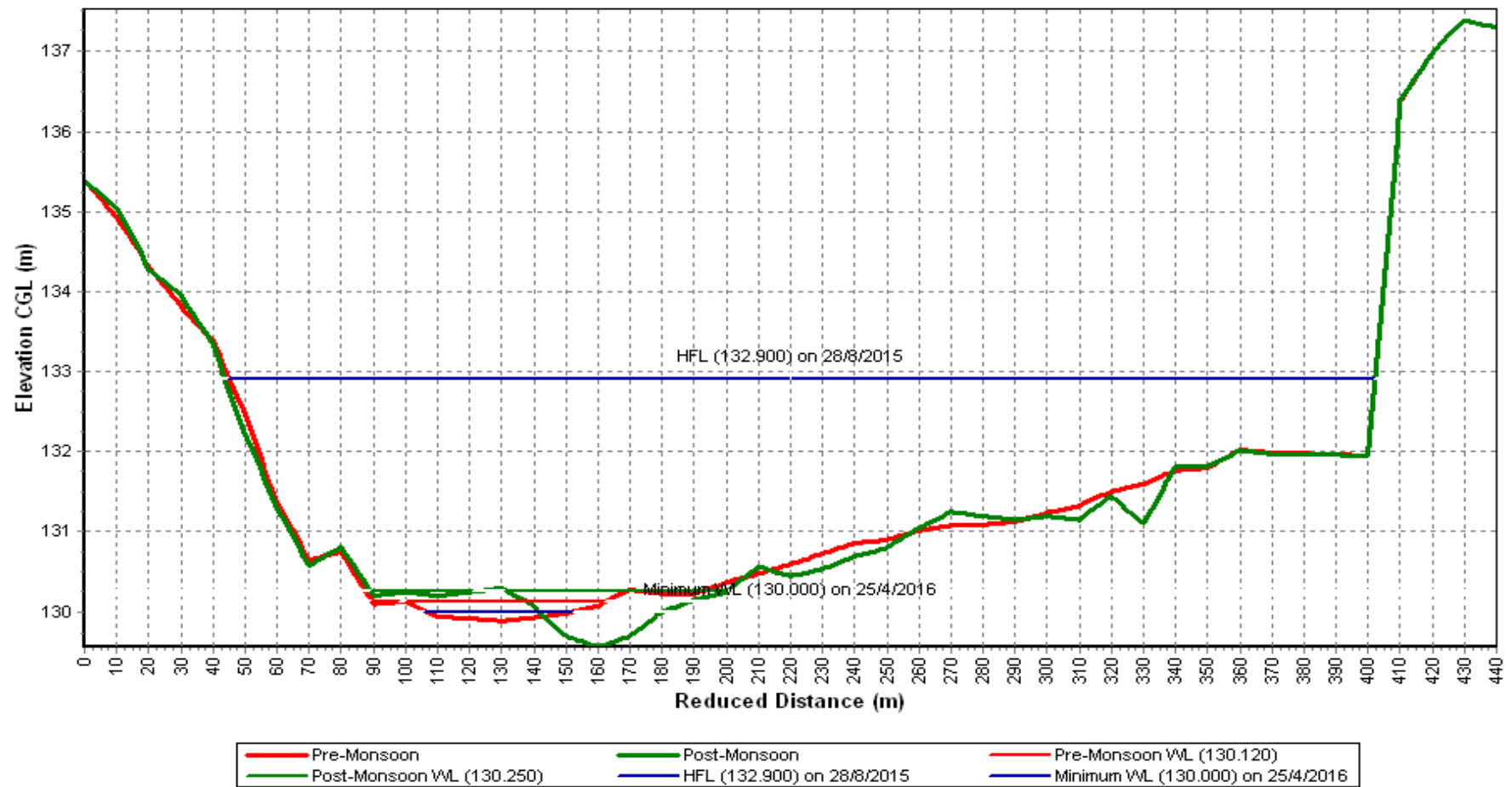
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla



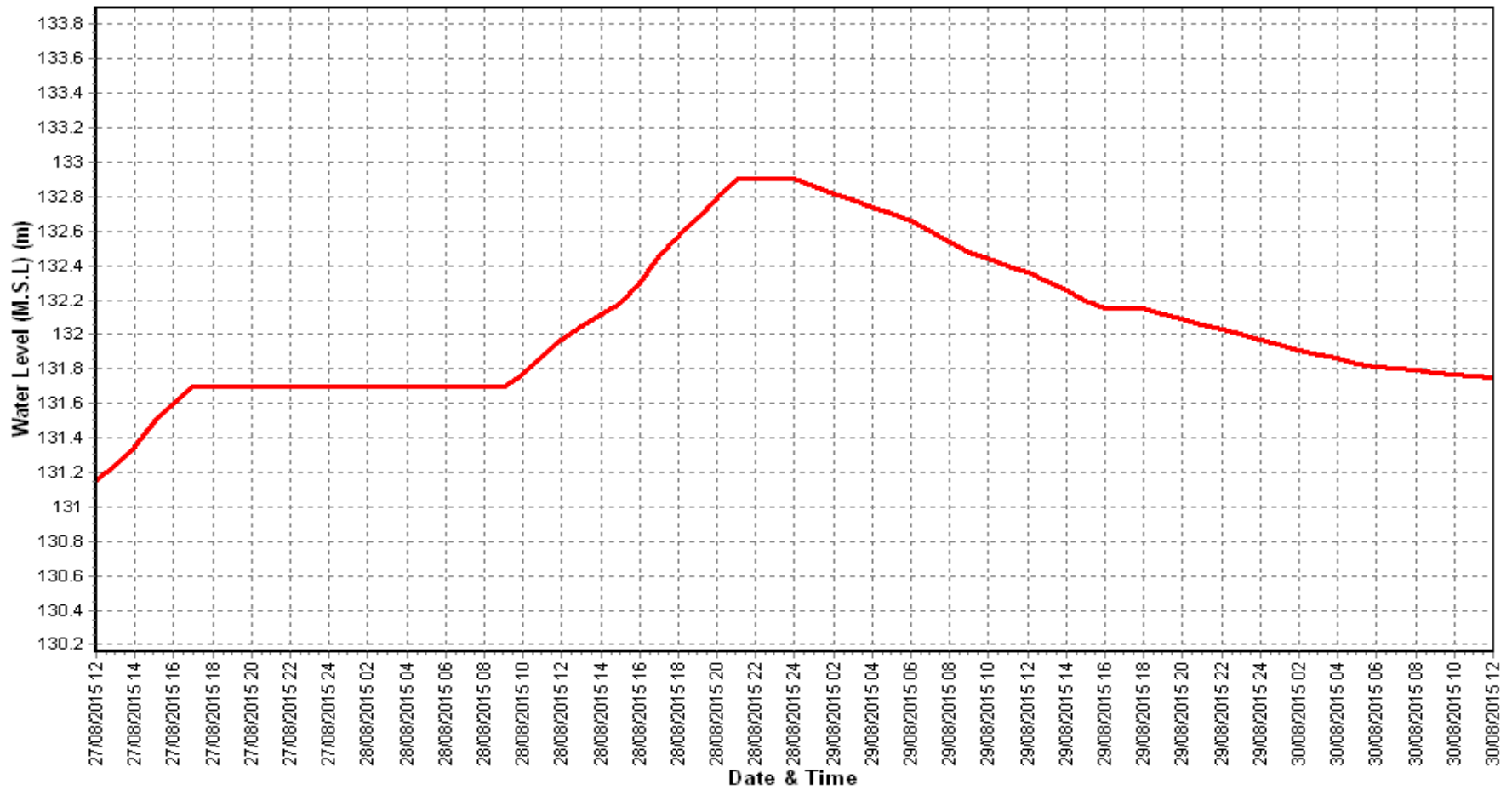
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla



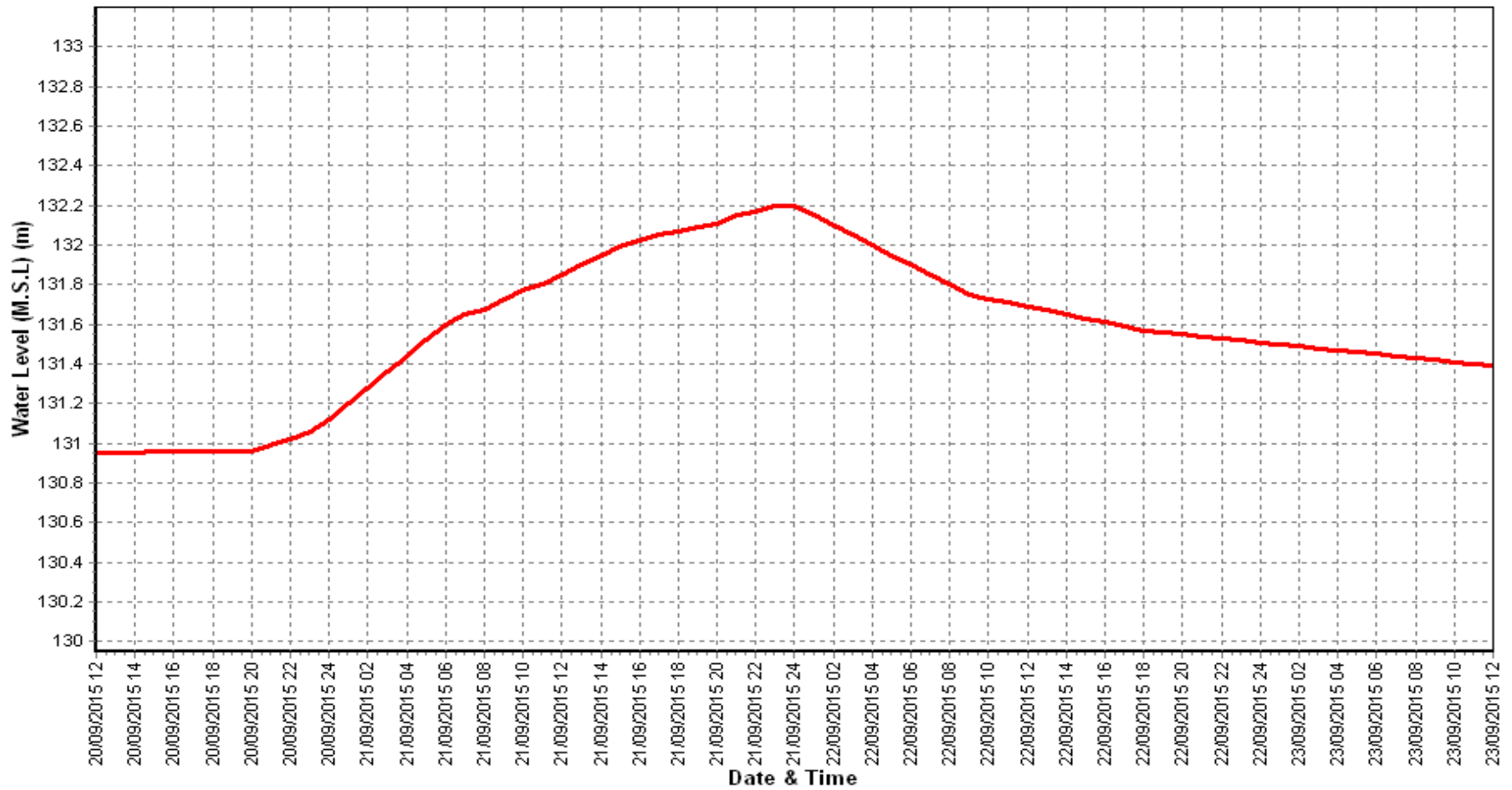
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

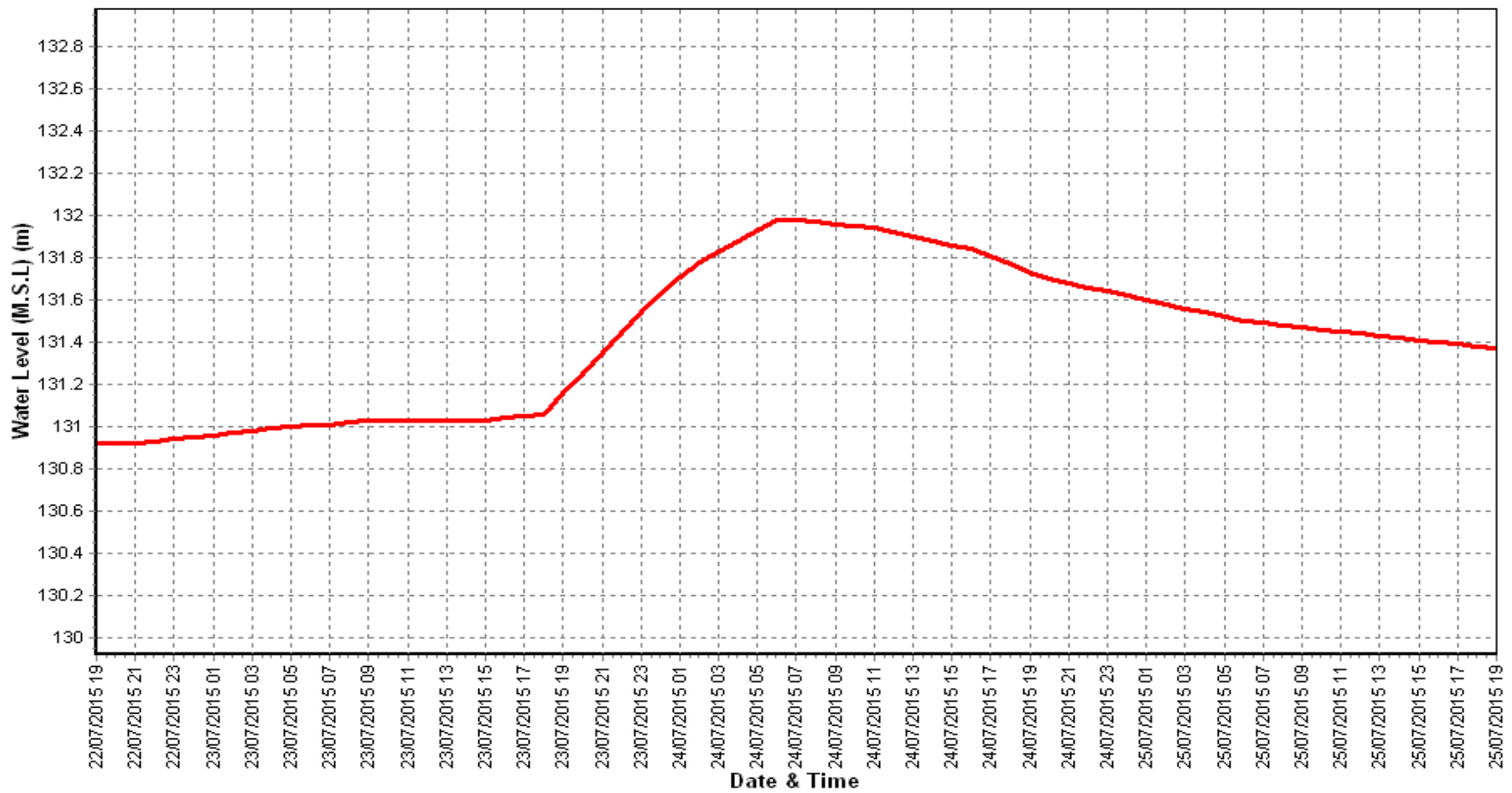
Sub-Division : MMSD II,CWCBurla

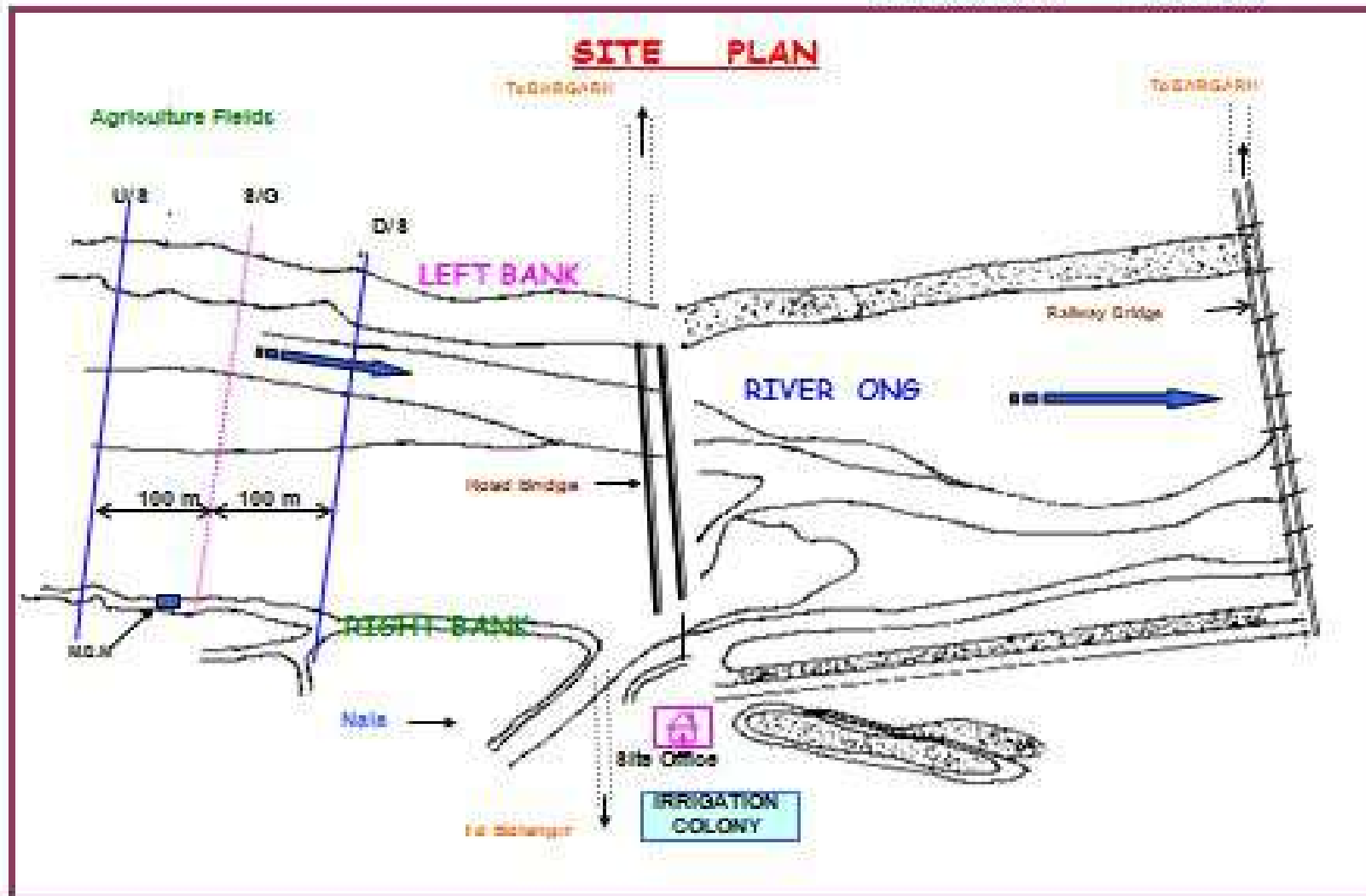


Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : SALEBHATA (EMG00E5)
Local River : Ong

Division : MD<CWC,Burla
Sub-Division : MMSD II,CWCBurla





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.000	0.000	0.000	0.000	0.000	0	25.64	0.000	0.000	0.004	0.004	8	10.93	0.000	0.000	0.006	0.006	6
2	0.000	0.000	0.000	0.000	0.000	0	11.98	0.000	0.000	0.003	0.003	3	10.90	0.000	0.000	0.000	0.000	0
3	0.000	0.000	0.000	0.000	0.000	0	27.71	0.000	0.000	0.006	0.006	14	24.08	0.000	0.000	0.178	0.178	370
4	0.000	0.000	0.000	0.000	0.000	0	19.35	0.000	0.000	0.007	0.007	12	45.03	0.000	0.000	0.037	0.037	143
5	0.000	0.000	0.000	0.000	0.000	0	11.00	0.000	0.000	0.000	0.000	0	314.4	0.000	0.000	0.074	0.074	1999
6	0.000	0.000	0.000	0.000	0.000	0	11.79	0.000	0.000	0.003	0.003	3	167.1	0.000	0.000	0.054	0.054	773
7	0.000	0.000	0.000	0.000	0.000	0	11.18	0.000	0.000	0.002	0.002	2	85.32	0.000	0.000	0.037	0.037	269
8	0.000	0.000	0.000	0.000	0.000	0	10.36	0.000	0.000	0.003	0.003	3	57.66	0.000	0.000	0.030	0.030	150
9	0.000	0.000	0.000	0.000	0.000	0	12.84	0.000	0.000	0.004	0.004	4	45.05	0.000	0.000	0.000	0.000	0
10	0.000	0.000	0.000	0.000	0.000	0	41.67	0.000	0.000	0.008	0.008	28	19.66	0.000	0.000	0.018	0.018	30
11	0.000	0.000	0.000	0.000	0.000	0	118.9	0.000	0.000	0.035	0.035	364	32.86	0.000	0.000	0.031	0.031	87
12	0.000	0.000	0.000	0.000	0.000	0	130.0	0.000	0.000	0.000	0.000	0	27.61	0.000	0.000	0.020	0.020	48
13	0.000	0.000	0.000	0.000	0.000	0	79.85	0.000	0.000	0.036	0.036	250	55.86	0.000	0.000	0.049	0.049	238
14	0.000	0.000	0.000	0.000	0.000	0	56.17	0.000	0.000	0.027	0.027	130	57.22	0.000	0.000	0.039	0.039	192
15	87.75	0.000	0.000	0.000	0.000	0	33.75	0.000	0.000	0.017	0.017	50	45.05	0.000	0.000	0.000	0.000	0
16	12.58	0.000	0.000	0.000	0.000	0	35.13	0.000	0.000	0.007	0.007	21	57.68	0.000	0.000	0.000	0.000	0
17	8.758	0.000	0.000	0.000	0.000	0	144.5	0.000	0.000	0.057	0.057	709	158.4	0.000	0.000	0.053	0.053	724
18	9.283	0.000	0.000	0.000	0.000	0	100.0	0.000	0.000	0.000	0.000	0	306.3	0.000	0.000	0.059	0.059	1569
19	6.703	0.000	0.000	0.000	0.000	0	110.0	0.000	0.000	0.000	0.000	0	190.6	0.000	0.000	0.053	0.053	864
20	5.707	0.000	0.000	0.000	0.000	0	102.2	0.000	0.000	0.031	0.031	274	121.2	0.000	0.000	0.037	0.037	391
21	5.000	0.000	0.000	0.000	0.000	0	67.90	0.000	0.000	0.023	0.023	133	57.67	0.000	0.000	0.025	0.025	123
22	34.73	0.000	0.000	0.000	0.000	0	37.74	0.000	0.000	0.030	0.030	97	45.22	0.000	0.000	0.028	0.028	109
23	240.7	0.000	0.000	0.000	0.000	0	43.86	0.000	0.000	0.091	0.091	345	31.30	0.000	0.000	0.000	0.000	0
24	182.2	0.000	0.000	0.000	0.000	0	380.7	0.000	0.000	0.271	0.271	8920	31.28	0.000	0.000	0.031	0.031	82
25	104.1	0.000	0.000	0.000	0.000	0	234.3	0.000	0.000	0.121	0.121	2451	51.25	0.000	0.000	0.020	0.020	88
26	62.46	0.000	0.000	0.000	0.000	0	110.0	0.000	0.000	0.000	0.000	0	34.12	0.000	0.000	0.023	0.023	67
27	39.24	0.000	0.000	0.000	0.000	0	43.56	0.000	0.000	0.021	0.021	81	86.49	0.000	0.000	0.054	0.054	404
28	30.00	0.000	0.000	0.000	0.000	0	39.81	0.000	0.000	0.018	0.018	61	361.2	0.000	0.000	0.078	0.078	2425
29	12.84	0.000	0.000	0.000	0.000	0	28.27	0.000	0.000	0.007	0.007	17	612.5	0.000	0.000	0.034	0.034	1783
30	24.60	0.000	0.000	0.000	0.000	0	21.98	0.000	0.000	0.010	0.010	18	361.1	0.000	0.000	0.000	0.000	0
31							10.93	0.000	0.000	0.004	0.004	4	203.3	0.000	0.000	0.117	0.117	2052
Ten Daily Mean																		
Ten Daily I	0.000	0.000	0.000	0.000	0.000	0	18.35	0.000	0.000	0.004	0.004	8	78.02	0.000	0.000	0.043	0.043	374
Ten Daily II	13.08	0.000	0.000	0.000	0.000	0	91.04	0.000	0.000	0.021	0.021	180	105.3	0.000	0.000	0.034	0.034	411
Ten Daily III	73.58	0.000	0.000	0.000	0.000	0	92.65	0.000	0.000	0.054	0.054	1102	170.5	0.000	0.000	0.037	0.037	648
Monthly																		
Total						0						14001						14985

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	280.1	0.000	0.000	0.119	0.119	2880	14.66	0.000	0.000	0.018	0.018	23	3.504	0.000	0.000	0.000	0.000	0
2	291.7	0.000	0.000	0.085	0.085	2145	13.96	0.000	0.000	0.000	0.000	0	3.511	0.000	0.000	0.000	0.000	0
3	249.5	0.000	0.000	0.066	0.066	1414	12.92	0.000	0.000	0.018	0.018	20	3.699	0.000	0.000	0.000	0.000	0
4	132.4	0.000	0.000	0.047	0.047	533	11.98	0.000	0.000	0.000	0.000	0	3.781	0.000	0.000	0.000	0.000	0
5	69.51	0.000	0.000	0.021	0.021	126	10.11	0.000	0.000	0.018	0.018	16	3.314	0.000	0.000	0.000	0.000	0
6	55.00	0.000	0.000	0.000	0.000	0	9.267	0.000	0.000	0.019	0.019	15	3.349	0.000	0.000	0.000	0.000	0
7	40.57	0.000	0.000	0.024	0.024	83	8.919	0.000	0.000	0.020	0.020	16	3.207	0.000	0.000	0.000	0.000	0
8	25.80	0.000	0.000	0.020	0.020	44	10.15	0.000	0.000	0.020	0.020	17	3.201	0.000	0.000	0.000	0.000	0
9	26.11	0.000	0.000	0.016	0.016	35	8.396	0.000	0.000	0.017	0.017	13	3.159	0.000	0.000	0.000	0.000	0
10	18.11	0.000	0.000	0.019	0.019	30	8.263	0.000	0.000	0.017	0.017	12	3.310	0.000	0.000	0.000	0.000	0
11	14.48	0.000	0.000	0.018	0.018	22	8.269	0.000	0.000	0.000	0.000	0	3.273	0.000	0.000	0.000	0.000	0
12	12.76	0.000	0.000	0.017	0.017	19	4.263	0.000	0.000	0.016	0.016	6	3.502	0.000	0.000	0.000	0.000	0
13	12.00	0.000	0.000	0.000	0.000	0	4.353	0.000	0.000	0.018	0.018	7	3.221	0.000	0.000	0.000	0.000	0
14	12.09	0.000	0.000	0.030	0.030	31	4.249	0.000	0.000	0.014	0.014	5	2.460	0.000	0.000	0.000	0.000	0
15	13.51	0.000	0.000	0.028	0.028	33	4.458	0.000	0.000	0.012	0.012	5	2.312	0.000	0.000	0.000	0.000	0
16	16.86	0.000	0.000	0.030	0.030	44	4.397	0.000	0.000	0.012	0.012	5	1.930	0.000	0.000	0.000	0.000	0
17	27.00	0.000	0.000	0.000	0.000	0	4.428	0.000	0.000	0.012	0.012	5	1.467	0.000	0.000	0.000	0.000	0
18	39.42	0.000	0.000	0.025	0.025	87	4.429	0.000	0.000	0.000	0.000	0	0.986	0.000	0.000	0.000	0.000	0
19	85.31	0.000	0.000	0.030	0.030	220	4.104	0.000	0.000	0.011	0.011	4	1.442	0.000	0.000	0.000	0.000	0
20	70.00	0.000	0.000	0.000	0.000	0	3.916	0.000	0.000	0.012	0.012	4	1.373	0.000	0.000	0.000	0.000	0
21	367.8	0.000	0.000	0.114	0.114	3632	3.927	0.000	0.000	0.000	0.000	0	1.217	0.000	0.000	0.000	0.000	0
22	356.4	0.000	0.000	0.068	0.068	2079	3.927	0.000	0.000	0.000	0.000	0	1.217	0.000	0.000	0.000	0.000	0
23	193.2	0.000	0.000	0.046	0.046	765	3.871	0.000	0.000	0.009	0.009	3	0.741	0.000	0.000	0.000	0.000	0
24	105.7	0.000	0.000	0.019	0.019	171	3.839	0.000	0.000	0.000	0.000	0	0.701	0.000	0.000	0.000	0.000	0
25	60.00	0.000	0.000	0.000	0.000	0	3.839	0.000	0.000	0.000	0.000	0	0.701	0.000	0.000	0.000	0.000	0
26	39.79	0.000	0.000	0.019	0.019	64	3.863	0.000	0.000	0.009	0.009	3	0.737	0.000	0.000	0.000	0.000	0
27	37.00	0.000	0.000	0.000	0.000	0	3.813	0.000	0.000	0.008	0.008	3	0.696	0.000	0.000	0.000	0.000	0
28	24.27	0.000	0.000	0.015	0.015	32	3.810	0.000	0.000	0.004	0.004	1	0.692	0.000	0.000	0.000	0.000	0
29	21.92	0.000	0.000	0.015	0.015	29	3.435	0.000	0.000	0.004	0.004	1	0.706	0.000	0.000	0.000	0.000	0
30	15.73	0.000	0.000	0.013	0.013	18	3.433	0.000	0.000	0.002	0.002	0	0.727	0.000	0.000	0.000	0.000	0
31							3.406	0.000	0.000	0.009	0.009	3						
Ten Daily Mean																		
Ten Daily I	118.9	0.000	0.000	0.042	0.042	729	10.86	0.000	0.000	0.015	0.015	13	3.403	0.000	0.000	0.000	0.000	0
Ten Daily II	30.34	0.000	0.000	0.018	0.018	46	4.687	0.000	0.000	0.011	0.011	4	2.197	0.000	0.000	0.000	0.000	0
Ten Daily III	122.2	0.000	0.000	0.031	0.031	679	3.742	0.000	0.000	0.004	0.004	1	0.813	0.000	0.000	0.000	0.000	0
Monthly																		
Total						14532						184						0

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	0.651	0.000	0.000	0.000	0.000	0	0.281	0.000	0.000	0.000	0.000	0	1.585	0.000	0.000	0.000	0.000	0
2	0.594	0.000	0.000	0.000	0.000	0	0.289	0.000	0.000	0.000	0.000	0	1.205	0.000	0.000	0.000	0.000	0
3	0.566	0.000	0.000	0.000	0.000	0	0.315	0.000	0.000	0.000	0.000	0	1.240	0.000	0.000	0.000	0.000	0
4	0.552	0.000	0.000	0.000	0.000	0	0.368	0.000	0.000	0.000	0.000	0	1.435	0.000	0.000	0.000	0.000	0
5	0.615	0.000	0.000	0.000	0.000	0	0.352	0.000	0.000	0.000	0.000	0	1.582	0.000	0.000	0.000	0.000	0
6	0.614	0.000	0.000	0.000	0.000	0	0.459	0.000	0.000	0.000	0.000	0	1.412	0.000	0.000	0.000	0.000	0
7	0.487	0.000	0.000	0.000	0.000	0	0.568	0.000	0.000	0.000	0.000	0	1.426	0.000	0.000	0.000	0.000	0
8	0.477	0.000	0.000	0.000	0.000	0	0.596	0.000	0.000	0.000	0.000	0	1.440	0.000	0.000	0.000	0.000	0
9	0.491	0.000	0.000	0.000	0.000	0	0.923	0.000	0.000	0.000	0.000	0	1.664	0.000	0.000	0.000	0.000	0
10	0.464	0.000	0.000	0.000	0.000	0	1.254	0.000	0.000	0.000	0.000	0	1.531	0.000	0.000	0.000	0.000	0
11	0.466	0.000	0.000	0.000	0.000	0	1.584	0.000	0.000	0.000	0.000	0	1.483	0.000	0.000	0.000	0.000	0
12	0.441	0.000	0.000	0.000	0.000	0	1.738	0.000	0.000	0.000	0.000	0	1.535	0.000	0.000	0.000	0.000	0
13	0.441	0.000	0.000	0.000	0.000	0	1.846	0.000	0.000	0.000	0.000	0	1.599	0.000	0.000	0.000	0.000	0
14	0.442	0.000	0.000	0.000	0.000	0	1.932	0.000	0.000	0.000	0.000	0	1.549	0.000	0.000	0.000	0.000	0
15	0.544	0.000	0.000	0.000	0.000	0	1.995	0.000	0.000	0.000	0.000	0	1.929	0.000	0.000	0.000	0.000	0
16	0.447	0.000	0.000	0.000	0.000	0	1.945	0.000	0.000	0.000	0.000	0	1.920	0.000	0.000	0.000	0.000	0
17	0.406	0.000	0.000	0.000	0.000	0	1.945	0.000	0.000	0.000	0.000	0	1.976	0.000	0.000	0.000	0.000	0
18	0.412	0.000	0.000	0.000	0.000	0	2.083	0.000	0.000	0.000	0.000	0	2.008	0.000	0.000	0.000	0.000	0
19	0.450	0.000	0.000	0.000	0.000	0	1.848	0.000	0.000	0.000	0.000	0	1.891	0.000	0.000	0.000	0.000	0
20	0.450	0.000	0.000	0.000	0.000	0	2.675	0.000	0.000	0.000	0.000	0	1.660	0.000	0.000	0.000	0.000	0
21	0.418	0.000	0.000	0.000	0.000	0	2.728	0.000	0.000	0.000	0.000	0	1.620	0.000	0.000	0.000	0.000	0
22	0.390	0.000	0.000	0.000	0.000	0	2.686	0.000	0.000	0.000	0.000	0	1.545	0.000	0.000	0.000	0.000	0
23	0.406	0.000	0.000	0.000	0.000	0	2.617	0.000	0.000	0.000	0.000	0	1.531	0.000	0.000	0.000	0.000	0
24	0.400	0.000	0.000	0.000	0.000	0	2.203	0.000	0.000	0.000	0.000	0	1.822	0.000	0.000	0.000	0.000	0
25	0.400	0.000	0.000	0.000	0.000	0	2.000	0.000	0.000	0.000	0.000	0	1.814	0.000	0.000	0.000	0.000	0
26	0.393	0.000	0.000	0.000	0.000	0	1.890	0.000	0.000	0.000	0.000	0	1.856	0.000	0.000	0.000	0.000	0
27	0.394	0.000	0.000	0.000	0.000	0	2.055	0.000	0.000	0.000	0.000	0	3.342	0.000	0.000	0.000	0.000	0
28	0.395	0.000	0.000	0.000	0.000	0	2.050	0.000	0.000	0.000	0.000	0	4.130	0.000	0.000	0.000	0.000	0
29	0.367	0.000	0.000	0.000	0.000	0	1.785	0.000	0.000	0.000	0.000	0	5.715	0.000	0.000	0.000	0.000	0
30	0.314	0.000	0.000	0.000	0.000	0	1.643	0.000	0.000	0.000	0.000	0						
31	0.359	0.000	0.000	0.000	0.000	0	1.615	0.000	0.000	0.000	0.000	0						
<u>Ten Daily Mean</u>																		
Ten Daily I	0.551	0.000	0.000	0.000	0.000	0	0.540	0.000	0.000	0.000	0.000	0	1.452	0.000	0.000	0.000	0.000	0
Ten Daily II	0.450	0.000	0.000	0.000	0.000	0	1.959	0.000	0.000	0.000	0.000	0	1.755	0.000	0.000	0.000	0.000	0
Ten Daily III	0.385	0.000	0.000	0.000	0.000	0	2.116	0.000	0.000	0.000	0.000	0	2.597	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						0						0						0

Annual Sediment Load (Metric Tonnes) : 43703

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	4.327	0.000	0.000	0.000	0.000	0	0.956	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
2	4.096	0.000	0.000	0.000	0.000	0	1.094	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
3	3.329	0.000	0.000	0.000	0.000	0	1.100	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
4	3.337	0.000	0.000	0.000	0.000	0	0.745	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
5	3.234	0.000	0.000	0.000	0.000	0	0.713	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
6	2.500	0.000	0.000	0.000	0.000	0	0.829	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
7	2.000	0.000	0.000	0.000	0.000	0	0.641	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
8	1.635	0.000	0.000	0.000	0.000	0	0.654	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
9	1.598	0.000	0.000	0.000	0.000	0	0.647	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
10	1.476	0.000	0.000	0.000	0.000	0	0.500	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
11	1.427	0.000	0.000	0.000	0.000	0	0.217	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
12	1.401	0.000	0.000	0.000	0.000	0	0.108	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
13	0.790	0.000	0.000	0.000	0.000	0	0.074	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
14	1.224	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
15	1.286	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
16	1.261	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
17	1.209	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
18	1.198	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
19	3.493	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
20	3.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
21	2.940	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
22	2.169	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
23	2.120	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
24	2.100	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
25	1.900	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
26	1.738	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
27	1.600	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
28	0.810	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
29	0.727	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
30	0.591	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
31	0.571	0.000	0.000	0.000	0.000	0							0.000	0.000	0.000	0.000	0.000	0
<u>Ten Daily Mean</u>																		
Ten Daily I	2.753	0.000	0.000	0.000	0.000	0	0.788	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily II	1.629	0.000	0.000	0.000	0.000	0	0.040	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
Ten Daily III	1.570	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0	0.000	0.000	0.000	0.000	0.000	0
<u>Monthly</u>																		
Total						0						0						0

Annual Sediment Load for period : 1973-2016

Station Name : SALEBHATA (EMG00E5)

Division : MD<CWC,Burla

Local River : Ong

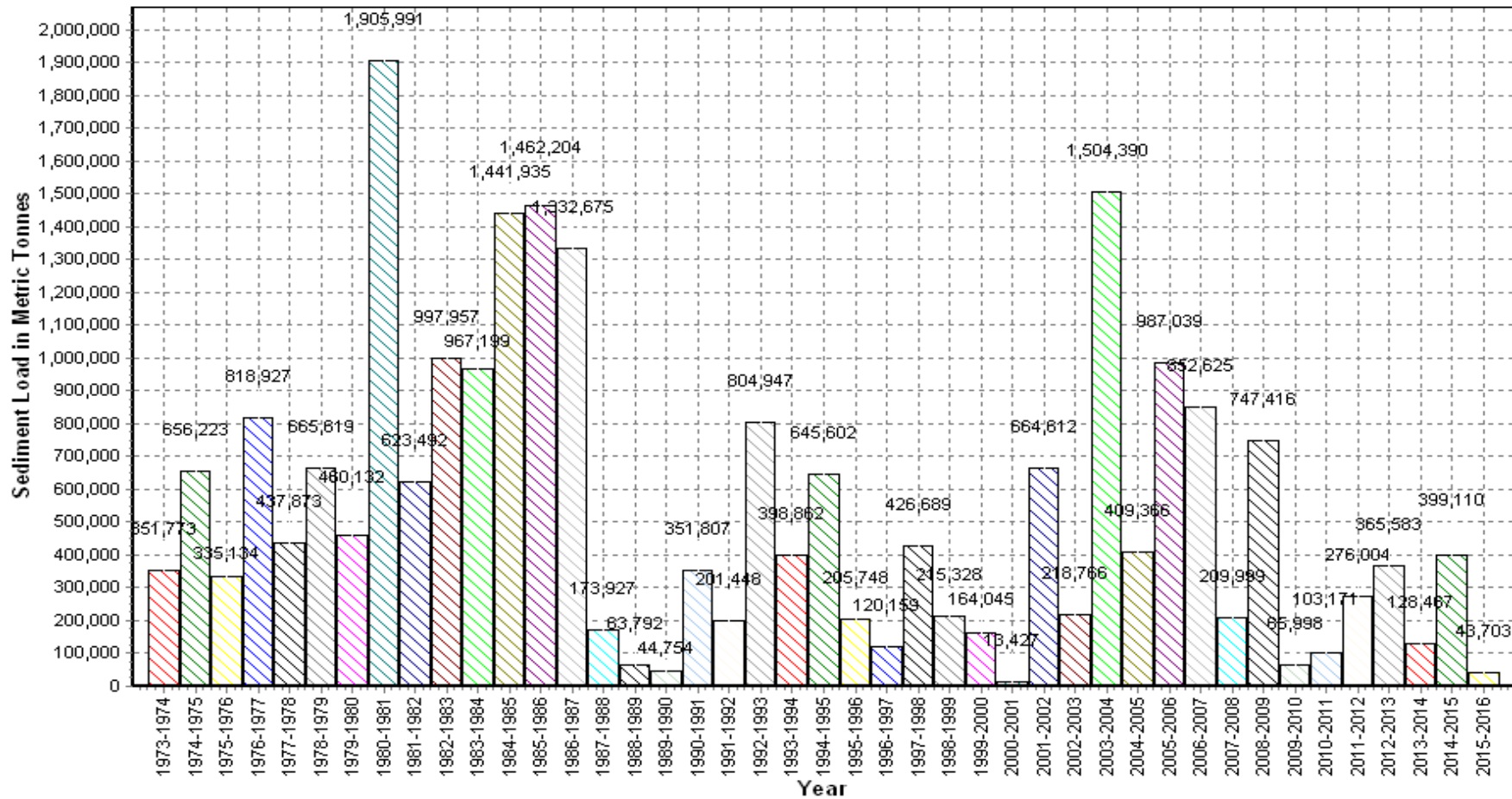
Sub-Division : MMSD II,CWCBurla

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1973-1974	351704	69	351773	3314
1974-1975	656223	0	656223	1011
1975-1976	335101	33	335134	1231
1976-1977	818927	0	818927	2147
1977-1978	437367	506	437873	1490
1978-1979	665132	487	665619	1829
1979-1980	460067	65	460132	449
1980-1981	1905525	467	1905991	2994
1981-1982	623245	247	623492	1549
1982-1983	997865	92	997957	2650
1983-1984	967114	86	967199	2044
1984-1985	1441899	35	1441935	2681
1985-1986	1461585	619	1462204	3518
1986-1987	1332653	22	1332675	2902
1987-1988	173925	3	173927	668
1988-1989	63783	9	63792	593
1989-1990	44754	0	44754	1280
1990-1991	351783	24	351807	2563
1991-1992	201445	3	201448	1061
1992-1993	804947	0	804947	2210
1993-1994	398861	2	398862	1533
1994-1995	645553	49	645602	4368
1995-1996	205745	3	205748	1285
1996-1997	120152	8	120159	563
1997-1998	426483	206	426689	2283
1998-1999	215268	60	215328	1196
1999-2000	164001	44	164045	1290
2000-2001	13418	9	13427	232
2001-2002	664612	0	664612	3055
2002-2003	218766	0	218766	925
2003-2004	1504390	0	1504390	4946
2004-2005	409366	0	409366	1628
2005-2006	987039	0	987039	1061
2006-2007	852623	2	852625	3636
2007-2008	209994	5	209999	1757
2008-2009	747416	0	747416	1978
2009-2010	65998	0	65998	2314
2010-2011	103171	0	103171	1008
2011-2012	276004	0	276004	2156
2012-2013	365583	0	365583	2904
2013-2014	128467	0	128467	1774
2014-2015	399110	0	399110	4186
2015-2016	43703	0	43703	851

Annual Sediment Load for the period: 1973-2016

Station Name : SALEBHATA (EMG00E5)
Local River : Ong

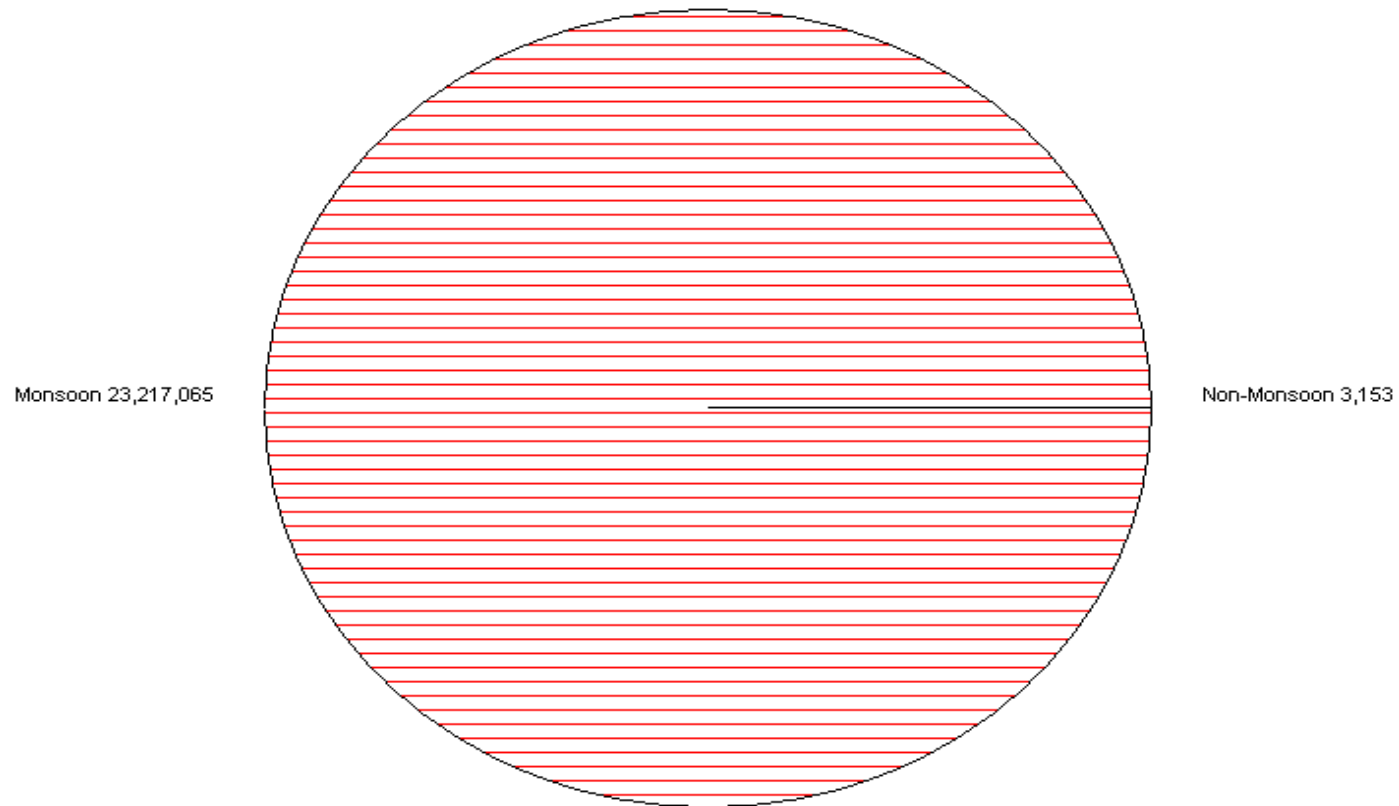
Division : MD<CWC,Burla
Sub-Division : MMSD II,CWCBurla



Seasonal Sediment Load for the period : 1973-2015

Station Name : SALEBHATA (EMG00E5)
Local River : Ong

Division : MD<CWC,Burla
Sub-Division : MMSD II,CWCBurla



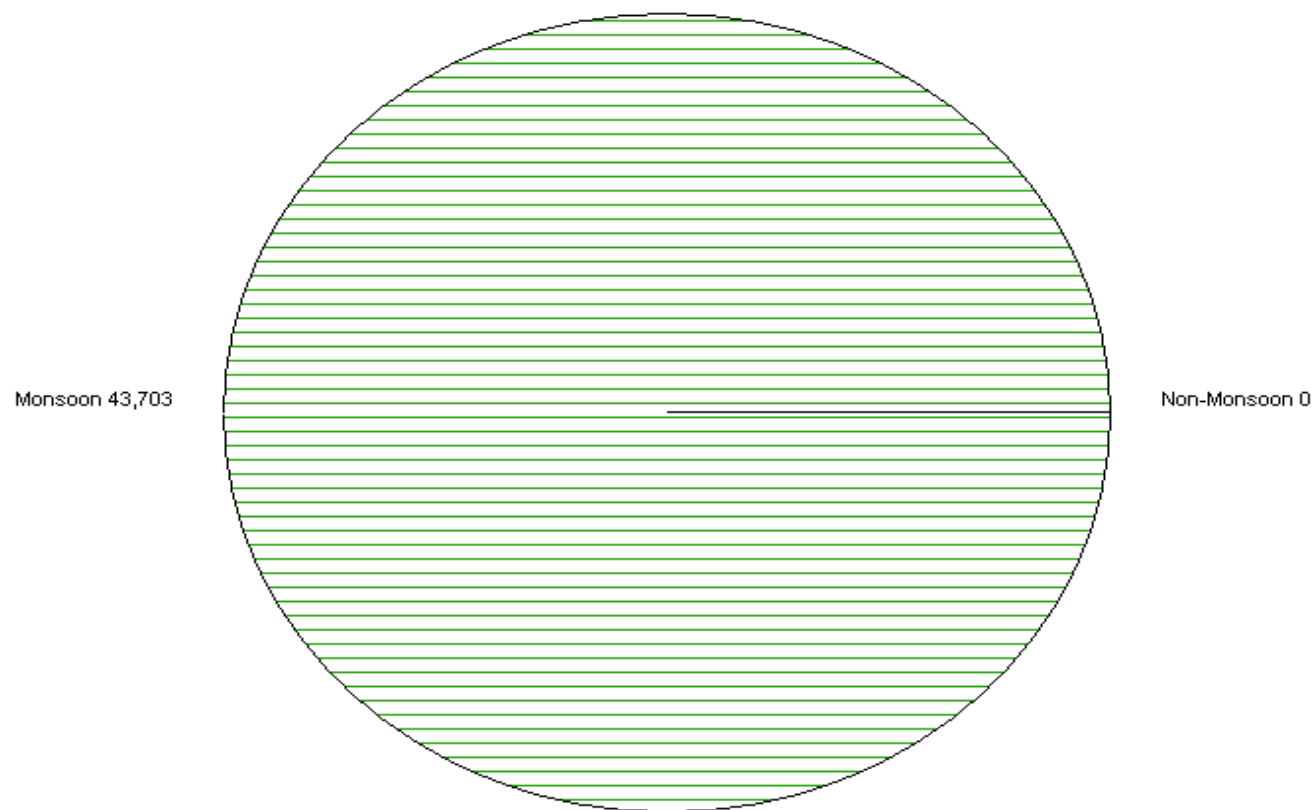
Seasonal Sediment Load for the Year: 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

River Water Analysis

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/1/2016
	PHYSICAL	A	A	A	A	A	A	A	A	A	A	A	A
1	Q (cumec)	0.000	25.64	10.93	280.1	14.66	3.511	0.651	0.281	1.585	4.327	0.956	0.000
2	Colour_Cod (-)		Light Brown	Light Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	
3	EC_FLD (µmho/cm)				267	276	314	281	249	325	296	275	
4	EC_GEN (µmho/cm)		219	261	163	234	294	276	260	291	354	404	
5	Odour_Code (-)		odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	
6	pH_FLD (pH units)		7.1	8.0	7.5	8.2	7.5	7.4	7.5	8.3	7.8	8.0	
7	pH_GEN (pH units)		8.1	8.1	7.5	8.1	8.2	8.2	8.2	8.7	8.2	8.1	
8	Temp (deg C)		28.0	30.0	27.5	30.8	27.3	24.5	21.5	23.0	27.0	27.8	
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)		8.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)		228	172	201	244	164	360	304	328	392	84	
3	Ca (mg/L)		27	6	30	30	35	36	34	28	45	24	
4	Cl (mg/L)		14.0	14.0	15.0	13.0	9.0	24.0	18.0	22.0	22.0	17.0	
5	CO3 (mg/L)		9.6	0.0	0.0	0.0	7.2	0.0	0.0	0.0	0.0	0.0	
6	HCO3 (mg/L)		129	105	122	149	93	220	185	200	239	51	
7	K (mg/L)		3.3	3.1	2.8	8.2	7.4	5.9	6.2	6.0	11.0	7.3	
8	Mg (mg/L)		13.6	5.8	7.8	17.5	12.6	11.7	6.8	7.7	13.6	27.2	
9	Na (mg/L)		9.5	16.7	12.2	24.2	26.2	23.6	31.3	27.7	32.0	49.7	
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)		0.1	0.1	0.2	0.1	0.2	0.6	1.0	1.3	0.4	0.5	
2	DO (mg/L)		6.3	6.3	5.8	6.5	8.0	7.6	8.5	6.9	6.6	5.9	
3	DO_SAT% (%)		80	83	73	86	100	90	95	80	83	74	
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)		68	16	76	76	88	89	84	70	112	60	
2	HAR_Total (mgCaCO3/L)		125	40	109	149	141	138	112	102	169	173	
3	Na% (%)		14	45	19	25	28	26	36	35	28	37	
4	RSC (-)		0.0	0.9	0.0	0.0	0.0	0.9	0.8	1.2	0.6	0.0	
5	SAR (-)		0.4	1.1	0.5	0.9	1.0	0.9	1.3	1.2	1.1	1.6	
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : SALEBHATA (EMG00E5)

Division : MD<CWC,Burla

Local River : Ong

Sub-Division : MMSD II,CWCBurla

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	612.5	0.000	26.91
2	EC_FLD (μmho/cm)	8	325	249	285
3	EC_GEN (μmho/cm)	10	404	163	276
4	pH_FLD (pH units)	10	8.3	7.1	7.7
5	pH_GEN (pH units)	10	8.7	7.5	8.1
6	Temp (deg C)	10	30.8	21.5	26.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	8.0	0.0	1.4
2	ALK-TOT (mgCaCO3/L)	10	392	84	248
3	Ca (mg/L)	10	45	6	30
4	Cl (mg/L)	10	24.0	9.0	16.8
5	CO3 (mg/L)	10	9.6	0.0	1.7
6	HCO3 (mg/L)	10	239	51	149
7	K (mg/L)	10	11.0	2.8	6.1
8	Mg (mg/L)	10	27.2	5.8	12.4
9	Na (mg/L)	10	49.7	9.5	25.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	1.3	0.1	0.4
2	DO (mg/L)	10	8.5	5.8	6.8
3	DO_SAT% (%)	10	100	73	85
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	112	16	74
2	HAR_Total (mgCaCO3/L)	10	173	40	126
3	Na% (%)	10	45	14	29
4	RSC (-)	10	1.2	0.0	0.4
5	SAR (-)	10	1.6	0.4	1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

River Water

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	180.3	105.1	261.3	32.99	245.6	251.8	183.5	65.12	41.47	35.53	97.43	191.7	285.5	354.2	66.26	1.045	1.248	17.16	5.015	6.533
2	EC_FLD (µmho/cm)	197	238	152	662	338	207	297	343							272	258	325	260	326	298
3	EC_GEN (µmho/cm)	197	238	152	662	338	207	245	319	217	276	281	214	224	270	219	258	325	260	326	298
4	pH_FLD (pH units)	7.6	8.1	8.0		8.1	7.7	7.8	7.8		7.6	7.7	7.8	7.5	7.5	7.7	7.7	8.2	8.2	7.7	7.9
5	pH_GEN (pH units)	7.6	8.1	8.0		8.0	7.7	7.9	7.6	8.1	7.5	7.7	8.0	8.2	8.1	7.9	7.7	8.2	8.2	7.7	7.9
6	Temp (deg C)	26.8	27.8	27.5	30.0	29.9	26.8	28.0	26.9	26.2	27.2	29.9	29.6	28.5	31.2	29.1	21.4	21.8		21.0	27.0
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	2.8	0.0	0.0	0.0		0.0	0.0	3.7	0.0	0.0	0.0	2.0	1.2	2.0	0.0	2.1	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	175	123	165	417	181		117	227	146	195	197	154	228	206	211	188	237	251	208	200
3	B (mg/L)					0.07		0.01	0.00	0.00	0.00	0.00	0.00								0.08
4	Ca (mg/L)	18	22	26	83	20		19	24	15	20	24	19	25	26	24	21	33	23	20	21
5	Cl (mg/L)	5.6	10.0	25.0	150.0	21.0		66.0	14.3	9.0	9.7	9.1	9.0	19.5	15.8	14.0	12.5	8.1	14.7	9.9	29.1
6	CO3 (mg/L)	0.0	3.3	0.0		0.0		0.0	0.0	4.4	0.0	0.0	0.0	2.4	1.4	2.4	0.0	2.5	0.0	0.0	0.0
7	F (mg/L)			0.48		8.78		0.14	0.11	0.14	0.20	0.22	0.17						2.27	0.45	0.10
8	Fe (mg/L)					0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.1
9	HCO3 (mg/L)	107	71	100		111		71	138	85	119	120	94	137	124	126	115	142	143	127	122
10	K (mg/L)	2.9	3.8	1.5		2.3		2.2	1.0	1.0	2.0	2.6	1.1	3.3	3.4	4.4	1.2	2.3		1.7	1.5
11	Mg (mg/L)	5.5	5.6	8.3	-31.8	6.0		10.3	12.0	8.5	12.3	13.1	9.5	8.0	8.9	11.2	4.5	7.7	8.0	12.1	14.1
12	Na (mg/L)	2.5	9.0	18.7		12.0		16.9	10.0	6.9	11.5	19.1	11.8	12.1	20.5	15.7	4.2	20.2		24.3	19.8
13	NO2+NO3 (mg N/L)	0.53				0.10	0.05	0.06	0.31								0.05				0.06
14	NO2-N (mgN/L)					0.00	0.01	0.02	0.03	0.02	0.02	0.03	0.03								0.00
15	NO3-N (mgN/L)					0.10	0.04	0.04	0.28												0.06
16	P-Tot (mgP/L)			0.050		0.046		0.012	0.053	0.047	0.027	0.020	0.060								0.020
17	SiO2 (mg/L)					10.4		14.0	26.8	21.1	12.3	19.0	13.3								16.0
18	SO4 (mg/L)	4.7	14.8	6.0		7.6		9.5	10.3	14.0	21.3	18.1	16.9				3.9	1.3	6.4	8.6	5.6
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	1.5	1.2	0.4	0.8	1.5	0.6	1.4	0.5	1.3	0.7	0.8	1.2	0.7	0.7	0.1	1.1	0.7	0.6	1.1	0.5
2	COD (mg/L)							19.8	18.0	17.3	25.0	24.0	22.0								
3	DO (mg/L)	8.2	7.8	6.0	5.5	6.8	6.6	7.7	6.7	7.0	6.5	7.1	7.3	7.0	7.3	6.2	9.8	7.6	6.1	7.0	7.1
4	DO_SAT% (%)	101	98	84	72	89	83	98	83	86	81	94	95	90	99	81	107	86		79	89
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	44	56	65	208	50		47	61	39	50	59	47	63	66	59	52	83	58	50	52
2	HAR_Total (mgCaCO3/L)	67	79	99	77	75		90	111	74	101	114	86	97	103	106	70	115	91	100	111
3	Na% (%)	8	18	22		23		29	17	17	20	23	23	20	29	26	10	19		34	28
4	RSC (-)	0.4	0.1	0.2		0.3		0.0	0.1	0.1	0.1	0.0	0.0	0.4	0.4	0.2	0.5	0.3	0.3	0.1	0.0
5	SAR (-)	0.1	0.4	0.7		0.6		0.8	0.4	0.4	0.5	0.7	0.6	0.5	0.9	0.7	0.2	0.5		1.1	0.8
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

River Water

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla

S.No	Parameters	Winter Nov - Feb										Summer Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	4.552	4.504	2.498	5.760	8.622	2.679	3.692	13.44	3.524	1.507	0.300	0.772	3.316	1.503	1.027	1.491	2.186	1.518	2.870	
2	EC_FLD (µmho/cm)		322	370							292	293	360	310	343		342	380			
3	EC_GEN (µmho/cm)		291	323	352	292	307	366	260	307	280	293	360	310	343		342	339	331	358	409
4	pH_FLD (pH units)		7.7	7.8		7.6	7.7	8.1	7.7	7.3	7.7	7.8	8.2	8.2	7.8		8.0	8.3			7.7
5	pH_GEN (pH units)		8.1	8.1	7.9	7.9	8.0	7.9	8.3	8.4	8.3	7.8	8.2	8.2	7.9		8.0	8.2	7.9	8.1	7.3
6	Temp (deg C)		21.5	21.3	18.2	22.8	22.7	22.5	22.5	20.4	24.1	25.3	27.2		30.5		29.0	27.0	23.0	24.0	27.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		0.0	2.3	0.0	0.0	0.0	3.0	0.0	0.0	1.5	0.0	2.1	0.0	0.0			0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		246	227	246	211	212	275	341	337	289	163	223	363	236			257	244	233	280
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00	0.00										0.02	0.00	0.00	0.00
4	Ca (mg/L)		23	23	26	22	22	30	43	38	33	15	26	27	24			25	24	28	32
5	Cl (mg/L)		29.7	24.3	15.5	25.9	27.0	18.0	20.5	22.5	18.3	18.7	5.0	18.0	9.7			40.5	13.6	20.3	37.9
6	CO3 (mg/L)		0.0	2.8	0.0	0.0	0.0	3.6	0.0	0.0	1.8	0.0	2.5	0.0	0.0			0.0	0.0	0.0	0.0
7	F (mg/L)		0.16	0.21	0.15	0.15	0.20	0.24							0.34			0.14	0.25	0.26	0.12
8	Fe (mg/L)		0.0	0.0	0.0	0.1	0.0	0.1		0.1							0.0	0.1	0.1	0.1	0.1
9	HCO3 (mg/L)		150	136	150	129	129	164	208	206	174	99	133	221	144			157	149	142	171
10	K (mg/L)		1.8	1.4	1.3	2.3	1.6	1.2	8.6	3.2	6.4	2.0	5.0		7.3			1.3	1.7	2.9	2.5
11	Mg (mg/L)		13.6	13.3	14.9	13.0	13.6	11.9	6.8	12.9	9.7	4.7	8.6	7.3	10.7			12.9	15.1	16.3	18.6
12	Na (mg/L)		18.1	22.6	15.6	25.1	23.2	25.0	34.0	21.7	27.2	4.9	39.0		15.2			27.1	16.8	28.2	34.1
13	NO2+NO3 (mg N/L)		0.08	0.40						0.14		0.10						0.12	0.40	1.04	
14	NO2-N (mgN/L)		0.02	0.02	0.02	0.02	0.04	0.04		0.04								0.06	0.02	0.02	0.04
15	NO3-N (mgN/L)		0.06	0.38						0.10								0.06	0.38	1.02	
16	P-Tot (mgP/L)		0.025	0.045	0.047	0.052	0.065	0.070		0.040								0.030	0.045	0.047	0.087
17	SiO2 (mg/L)		18.8	24.7	6.3	13.0	12.3	13.3		10.2								13.8	26.5	21.4	23.0
18	SO4 (mg/L)		14.2	26.1	18.3	25.6	26.0	23.3		24.4		2.5		4.0	15.5			10.7	29.3	29.7	54.2
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)		2.6	0.6	0.7	0.5	0.8	0.9	0.9	1.1	0.8	0.6	1.4	1.1	1.2			0.8	1.0	1.1	0.7
2	COD (mg/L)		23.0	22.0	29.3	23.0	22.0	24.0										20.0	28.0	25.3	25.3
3	DO (mg/L)		9.1	7.4	7.8	7.9	7.5	8.5	8.7	8.5	7.8	8.6	8.4	7.4	6.6		5.2	7.9	5.3	6.9	5.9
4	DO_SAT% (%)		102	83	82	92	87	97	100	95	92	104	104		84		68	94	61	79	74
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		59	58	65	55	55	76	107	94	83	38	64	67	59			62	59	70	81
2	HAR_Total (mgCaCO3/L)		115	113	127	109	112	125	136	148	123	57	100	97	103			116	122	138	158
3	Na% (%)		25	30	21	34	30	28	33	24	31	14			23			33	23	29	31
4	RSC (-)		0.2	0.1	0.0	0.0	0.1	0.3	0.7	0.5	0.7	0.5	0.3	1.7	0.4			0.4	0.1	0.0	0.0
5	SAR (-)		0.7	0.9	0.6	1.1	1.0	1.0	1.3	0.8	1.1	0.3			0.7			1.1	0.7	1.0	1.2
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SALEBHATA (EMG00E5)

Local River : Ong

River Water

Division : MD<CWC,Burla

Sub-Division : MMSD II,CWCBurla

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	2.145	2.210	3.119	2.104	1.761
2	EC_FLD (µmho/cm)					285
3	EC_GEN (µmho/cm)	358	369	371	338	379
4	pH_FLD (pH units)	7.7	8.1	8.4	7.5	7.9
5	pH_GEN (pH units)	7.7	8.5	8.0	8.3	8.1
6	Temp (deg C)	27.6	28.9	28.8	27.2	27.4
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	6.6	0.3	23.2	0.0
2	ALK-TOT (mgCaCO3/L)	245	327	325	324	238
3	B (mg/L)	0.00	0.00			
4	Ca (mg/L)	30	29	50	42	34
5	Cl (mg/L)	33.5	36.0	25.7	20.0	19.5
6	CO3 (mg/L)	0.0	8.0	0.4	28.0	0.0
7	F (mg/L)	0.19	0.22			
8	Fe (mg/L)	0.1	0.1		0.1	
9	HCO3 (mg/L)	149	191	198	169	145
10	K (mg/L)	1.3	5.8	3.3	3.5	9.1
11	Mg (mg/L)	17.3	6.8	12.3	12.6	20.4
12	Na (mg/L)	24.0	50.0	26.3	31.2	40.8
13	NO2+NO3 (mg N/L)				0.25	
14	NO2-N (mgN/L)	0.14	0.08		0.06	
15	NO3-N (mgN/L)				0.19	
16	P-Tot (mgP/L)	0.083	0.073		0.047	
17	SiO2 (mg/L)	18.7	18.3		15.3	
18	SO4 (mg/L)	22.2	23.7		24.7	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.9	0.6	1.2	1.3	0.5
2	COD (mg/L)	20.0	21.3			
3	DO (mg/L)	6.4	6.1	7.4	6.7	6.3
4	DO_SAT% (%)	80	77	94	84	78
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	76	74	124	104	86
2	HAR_Total (mgCaCO3/L)	148	102	176	157	171
3	Na% (%)	26	50	24	29	33
4	RSC (-)	0.0	1.4	0.1	0.6	0.3
5	SAR (-)	0.9	2.2	0.8	1.1	1.4
	PESTICIDES					

TEL SUB-BASIN

SITE KESINGA

HISTORY SHEET

Water Year : 2015-2016

Site : KESINGA

Code : EMF00K6

State : Orissa

District : Kalahandi

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Tel

Sub Tributary :

Sub-Sub Tributary :

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Drainage Area : 11960 Sq. Km.

Bank :

Latitude : 20°11'51"

Longitude : 83°13'30"

Zero of Gauge (m) : 166 (m.s.l)

11/10/1977 - 11/10/2025

Opening Date

Closing Date

Gauge : 11/10/1977

Discharge : 11/7/1978

Sediment : 9/22/2006

Water Quality : 6/1/2001

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1980-1981	11157	175.960	9/19/1980	0.100	168.240	6/3/1980
1981-1982	9480	174.175	8/16/1981	0.200	168.115	5/28/1982
1982-1983	4822	173.850	8/30/1982	0.100	168.030	3/30/1983
1983-1984	1655	171.500	6/27/1983	0.020	168.230	4/6/1984
1984-1985	4143	173.175	8/2/1984	0.050	168.210	3/28/1985
1985-1986	7001	174.340	8/8/1985	0.100	168.215	6/2/1985
1986-1987	3707	172.950	7/23/1986	0.020	168.225	4/16/1987
1987-1988	2484	172.365	9/5/1987	0.020	168.300	4/2/1988
1988-1989	1029	170.860	9/24/1988	0.030	168.270	6/18/1988
1989-1990	1463	171.820	8/12/1989	0.150	168.300	4/28/1990
1990-1991	15000	176.090	10/5/1990	0.613	168.185	5/10/1991
1991-1992	9969	176.000	7/30/1991	0.556	168.250	5/26/1992
1992-1993	17568	177.630	7/28/1992	0.183	168.050	5/20/1993
1993-1994	2858	172.740	8/2/1993	0.070	168.300	4/24/1994
1994-1995	9734	175.410	8/30/1994	0.677	168.415	6/6/1994
1995-1996	6608	174.890	7/24/1995	0.066	167.880	5/31/1996
1996-1997	2926	172.830	8/2/1996	0.075	168.075	5/31/1997
1997-1998	8143	176.000	8/22/1997	0.833	168.225	4/16/1998
1998-1999	600.0	171.120	7/12/1998	0.242	168.280	4/1/1999
1999-2000	1368	171.480	8/30/1999	7.000	168.500	6/10/1999
2000-2001	2452	172.430	7/19/2000	30.00	169.000	5/6/2001
2001-2002	12822	176.620	7/9/2001	13.00	168.755	4/28/2002

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
2002-2003	1991	171.480	8/24/2002	5.329	168.610	1/9/2003
2003-2004	8908	175.960	8/29/2003	35.10	168.773	6/13/2003
2004-2005	4917	175.685	6/15/2004	25.00	168.565	1/14/2005
2005-2006	8121	175.750	9/14/2005	12.00	168.450	1/15/2006
2006-2007	21192	178.500	7/4/2006	26.86	168.410	3/20/2007
2007-2008	10942	176.635	8/7/2007	10.00	168.400	5/29/2008
2008-2009	20124	177.525	9/18/2008	18.16	167.730	5/22/2009
2009-2010	4607	173.430	7/20/2009	6.175	167.900	1/10/2010
2010-2011	8765	175.495	8/6/2010	20.34	168.205	1/4/2011
2011-2012	2900	172.552	8/31/2011	7.000	168.160	3/18/2012
2012-2013	2688	172.340	8/6/2012	13.12	168.510	1/14/2013
2013-2014	4554	174.500	6/25/2013	19.78	168.690	1/4/2014
2014-2015	7402	175.450	8/5/2014	23.59	168.710	1/15/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : KESINGA (EMF00K6)

Division : MD,CWC,Burla

Local River : Tel

Sub-Division : MMSD II,CWC,Burla

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	169.380	154.6	169.925	328.7	169.480	245.0	170.200	798.6	169.330	229.1	169.100	165.0 *
2	168.995	57.73	169.580	264.3	169.480	240.0 *	169.945	468.3	169.320	220.0 *	169.180	165.1
3	169.355	140.9	169.720	318.8	169.100	129.9	170.040	778.9	169.290	211.9	169.080	156.9
4	169.335	139.2	169.985	514.4	169.050	121.3	170.000	570.8	169.270	210.0 *	169.050	150.3
5	169.585	228.9	169.690	322.0 *	169.230	152.3	169.775	335.5	169.240	199.8	169.030	137.2
6	169.510	210.9	169.505	207.7	169.290	167.2	169.510	300.0 *	169.250	207.5	169.020	127.6
7	169.330	139.0 *	169.340	152.3	169.300	172.3	169.450	265.9	169.280	208.3	169.020	124.6
8	169.355	169.9	169.250	128.3	169.250	157.9	169.345	251.4	169.150	168.6	169.030	125.0 *
9	169.080	73.14	169.420	154.9	169.370	180.0 *	169.230	191.9	169.120	160.0	169.030	136.1
10	169.240	104.5	169.470	172.4	169.530	256.4	169.155	173.7	169.135	167.9	169.020	128.1
11	169.495	203.9	169.665	276.3	169.185	143.0	169.290	206.1	169.140	170.0 *	169.020	128.0 *
12	169.500	208.9	170.070	584.5 *	169.725	243.7	169.250	197.9	169.100	151.0	169.120	168.7
13	169.350	145.2	169.870	299.5	169.810	265.4	169.480	277.0 *	169.050	135.4	169.000	115.2
14	169.680	260.0 *	169.900	339.4	170.540	666.6	169.450	270.4	169.035	131.7	168.900	107.4
15	169.450	195.5	169.690	322.1	170.050	490.0 *	169.445	267.1	169.000	126.2	168.900	107.0 *
16	169.830	289.7	169.880	290.1	169.620	230.0 *	172.730	3264	169.000	121.2	168.880	56.39
17	169.760	268.3	170.230	808.5	169.720	224.0	176.070	5400 *	169.070	130.2	168.870	53.97
18	169.730	264.7	170.140	584.7 *	170.065	812.7	173.250	3368	169.050	134.0 *	168.850	50.94
19	169.560	224.4	170.130	584.6 *	169.810	277.4	171.375	1583	169.080	135.1	168.840	50.09
20	169.570	224.1	169.945	515.7	169.945	235.6	170.580	680.0 *	169.020	127.4	168.840	44.49
21	169.330	224.0 *	169.775	329.5	169.615	229.8	172.120	2318	169.050	135.0 *	168.830	43.03
22	171.350	1161	169.690	255.8	169.600	225.8	171.865	1699	169.040	134.0 *	168.840	49.00 *
23	170.265	841.2	169.650	233.0	169.710	240.0 *	170.580	629.7	169.020	123.2	168.870	55.68
24	170.070	549.4	170.000	584.5	169.650	246.5	170.255	528.1	169.050	135.0 *	168.850	52.37
25	169.675	350.4	169.805	262.6	169.650	246.5	170.040	500.0 *	169.040	134.0 *	168.750	40.00 *
26	169.515	203.5	169.680	255.8 *	169.450	171.2	169.815	271.3	169.020	117.8	168.760	41.67
27	169.510	210.2	169.500	260.7	169.950	502.0	169.660	480.0 *	169.010	114.3	168.750	40.65
28	169.550	210.0 *	169.695	258.1	170.165	545.6	169.480	267.0	169.000	111.3	168.740	37.62
29	169.415	224.9	169.455	234.9	170.180	558.9	169.415	262.6	169.000	112.9	168.740	40.00 *
30	169.540	274.1	169.340	137.9	170.570	670.0 *	169.340	234.8	169.000	115.5	168.780	44.96
31			169.100	129.1	170.210	816.0			169.000	111.3		
Ten-Daily Mean												
I Ten-Daily	169.316	141.9	169.589	256.4	169.308	182.2	169.665	413.5	169.238	198.3	169.056	141.6
II Ten-Daily	169.592	228.5	169.952	460.5	169.847	358.8	171.092	1551	169.055	136.2	168.922	88.22
III Ten-Daily	169.822	424.9	169.608	267.4	169.886	404.8	170.257	719.1	169.021	122.2	168.791	44.50
Monthly												
Min.	168.995	57.73	169.100	128.3	169.050	121.3	169.155	173.7	169.000	111.3	168.740	37.62
Max.	171.350	1161	170.230	808.5	170.570	816.0	176.070	5400	169.330	229.1	169.180	168.7
Mean	169.577	265.1	169.713	326.2	169.687	318.2	170.338	894.7	169.102	151.3	168.923	91.44

Annual Runoff in MCM = 5766 Annual Runoff in mm = 482

Peak Observed Discharge = 3368 cumecs on 18/09/2015 Corres. Water Level :173.25 m

Lowest Observed Discharge = 7.349 cumecs on 11/01/2016 Corres. Water Level :168.57 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : KESINGA (EMF00K6)

Division : MD,CWC,Burla

Local River : Tel

Sub-Division : MMSD II,CWC,Burla

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	168.750	40.69	168.680	28.28	168.660	14.18	168.790	32.45	168.650	15.75	168.750	25.00 *
2	168.750	40.65	168.630	21.04	168.660	14.36	168.770	29.38	168.650	15.19	168.750	25.48
3	168.930	77.65	168.600	12.00 *	168.650	13.74	168.720	24.24	168.760	23.00 *	168.740	23.82
4	168.900	74.32	168.570	11.38	168.640	13.78	168.690	21.40	168.760	25.17	168.740	22.92
5	168.870	67.05	168.550	10.41	168.630	11.73	168.680	16.26	168.740	22.58	168.750	25.19
6	168.800	43.00 *	168.580	12.41	168.630	11.08	168.660	15.00 *	168.700	18.67	168.730	21.96
7	168.720	37.15	168.700	31.92	168.630	11.00 *	168.690	21.00 *	168.750	23.51	168.800	32.06
8	168.720	36.89	168.640	22.25	168.650	16.62	168.710	18.71	168.740	22.26	168.780	27.00 *
9	168.700	32.15	168.600	9.585	168.660	17.82	168.680	16.01	168.780	31.25	168.740	23.24
10	168.780	41.25	168.560	7.000 *	168.660	17.19	168.690	18.33	168.780	25.00 *	168.750	24.98
11	168.740	36.39	168.570	7.349	168.660	16.82	168.690	18.05	168.740	20.60	168.870	42.60
12	168.700	32.42	168.660	16.38	168.680	19.52	168.710	18.95	168.740	20.22	168.820	32.99
13	168.700	32.00 *	168.570	10.92	168.670	18.45	168.710	19.00 *	168.700	18.07	168.920	50.83
14	168.700	31.65	168.600	15.67	168.650	16.00 *	168.710	19.83	168.700	17.00 *	168.800	30.06
15	168.690	26.10	168.600	15.33	168.680	19.23	168.730	21.97	168.690	16.24	168.750	24.97 *
16	168.680	24.58	168.600	14.33	168.670	18.33	168.750	25.31	168.690	15.76	168.750	22.77
17	168.700	28.61	168.600	13.00 *	168.660	17.98	168.750	25.09	168.690	16.50 *	168.890	47.24
18	168.720	36.13	168.600	11.68	168.660	17.38	168.740	23.48	168.710	19.19	168.950	53.08
19	168.680	29.01	168.570	10.55	168.650	16.69	168.750	25.05	168.700	18.28	169.050	72.24
20	168.680	29.00 *	168.570	9.895	168.690	18.16	168.750	25.00 *	168.690	16.25 *	168.930	50.66
21	168.680	27.40	168.600	11.36	168.680	19.00 *	168.700	20.30	168.670	15.36	168.830	31.00 *
22	168.670	25.35	168.600	10.67	168.670	16.79	168.670	18.46	168.650	13.91	168.820	29.00 *
23	168.690	28.86	168.590	9.724	168.680	17.46	168.650	16.64	168.630	12.87	168.810	27.94
24	168.670	28.00 *	168.600	13.00 *	168.700	19.36	168.680	18.00 *	168.620	12.00 *	168.820	29.81
25	168.650	22.00 *	168.690	16.89	168.750	24.72	168.680	18.50 *	168.690	14.42	168.840	32.56
26	168.650	22.61	168.600	12.00 *	168.900	67.58	168.600	10.32	168.710	15.94	168.830	29.97
27	168.640	20.00 *	168.600	10.42	168.800	58.66	168.600	10.00 *	168.740	20.69	168.850	32.42
28	168.630	18.59	168.610	11.47	168.800	58.00 *	168.600	10.86	168.760	22.16	168.800	28.12
29	168.630	17.60	168.630	13.01	168.770	30.43	168.610	11.61	169.020	61.92	168.840	33.00 *
30	168.630	17.16	168.660	16.53			168.680	18.08	168.880	44.50	169.040	70.27
31	168.630	16.48	168.640	14.00 *			168.660	17.14			169.100	166.5
Ten-Daily Mean												
I Ten-Daily	168.792	49.08	168.611	16.63	168.647	14.15	168.708	21.28	168.731	22.24	168.753	25.17
II Ten-Daily	168.699	30.59	168.594	12.51	168.667	17.86	168.729	22.17	168.705	17.81	168.873	42.74
III Ten-Daily	168.652	22.19	168.620	12.64	168.750	34.67	168.648	15.45	168.737	23.38	168.871	46.42
Monthly												
Min.	168.630	16.48	168.550	7.000	168.630	11.00	168.600	10.00	168.620	12.00	168.730	21.96
Max.	168.930	77.65	168.700	31.92	168.900	67.58	168.790	32.45	169.020	61.92	169.100	166.5
Mean	168.712	33.57	168.609	13.89	168.686	21.79	168.694	19.5	168.724	21.14	168.834	38.38

Peak Computed Discharge = 5400 cumecs on 17/09/2015

Corres. Water Level :176.07 m

Lowest Computed Discharge = 7.000 cumecs on 10/01/2016

Corres. Water Level :168.56 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

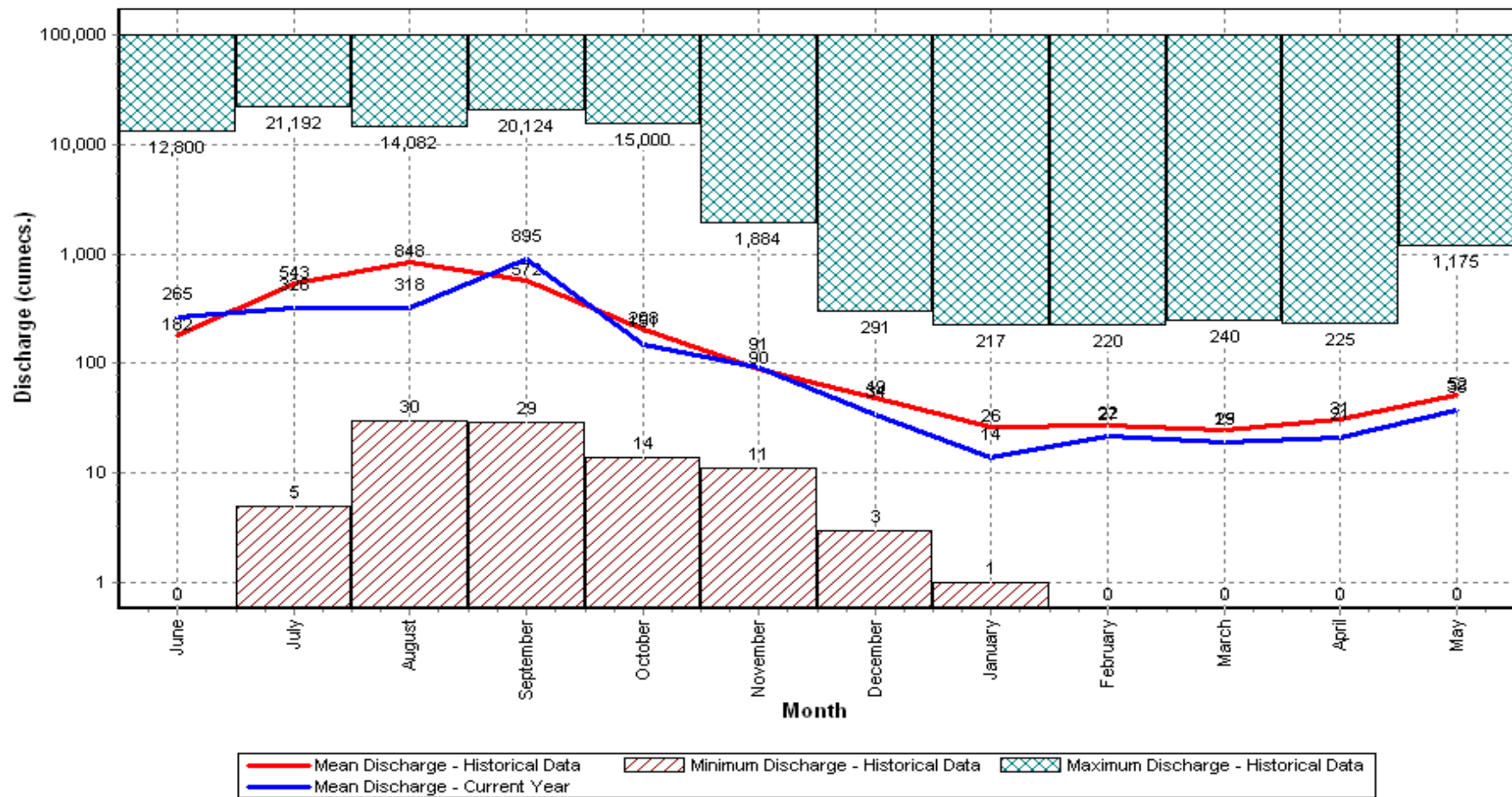
Station Name : KESINGA (EMF00K6)

Data considered : 1980-2016

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



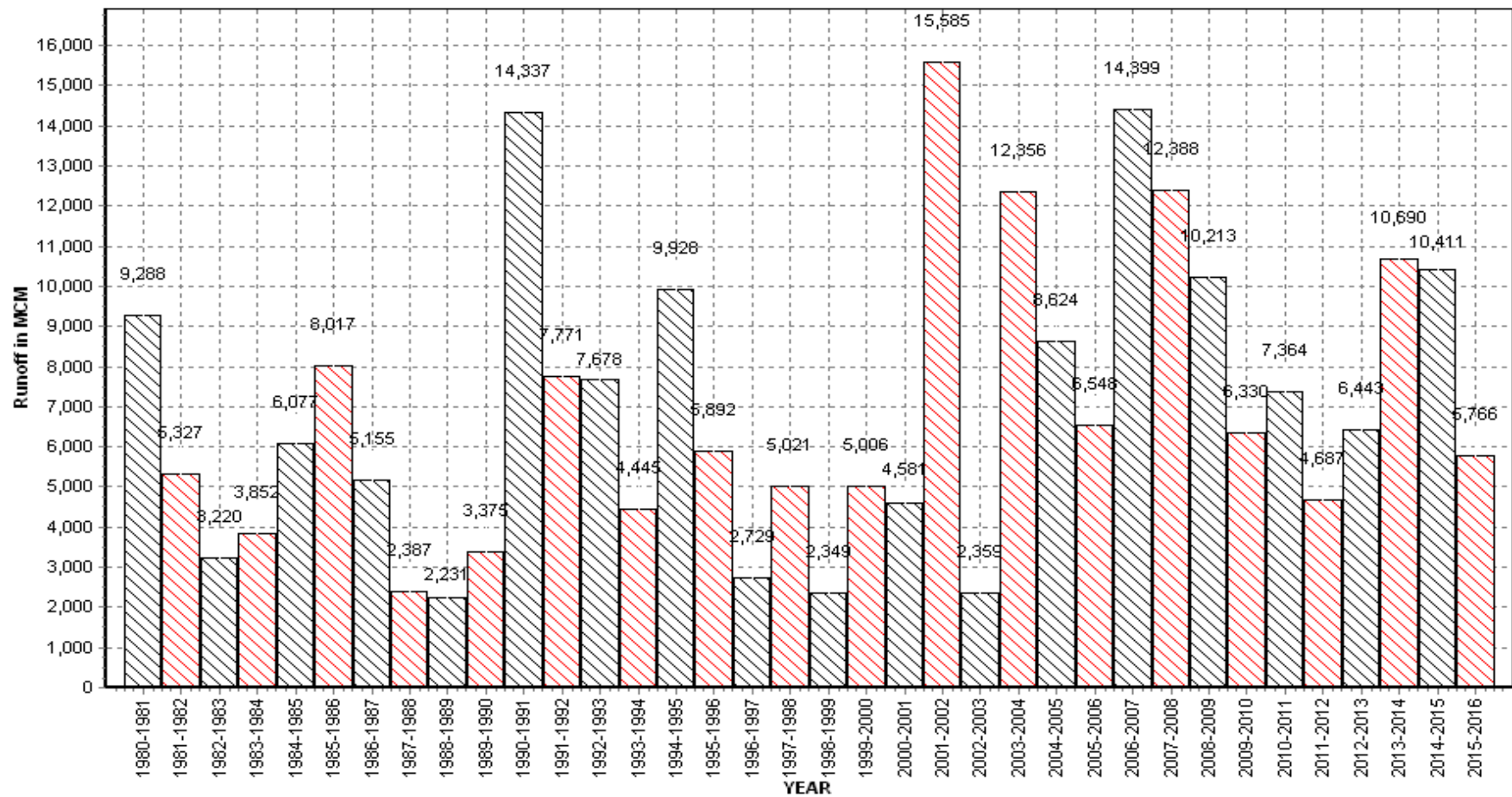
Annual Runoff Values for the period: 1980 - 2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



Note: Missing values have not been considered while arriving at Annual Runoff

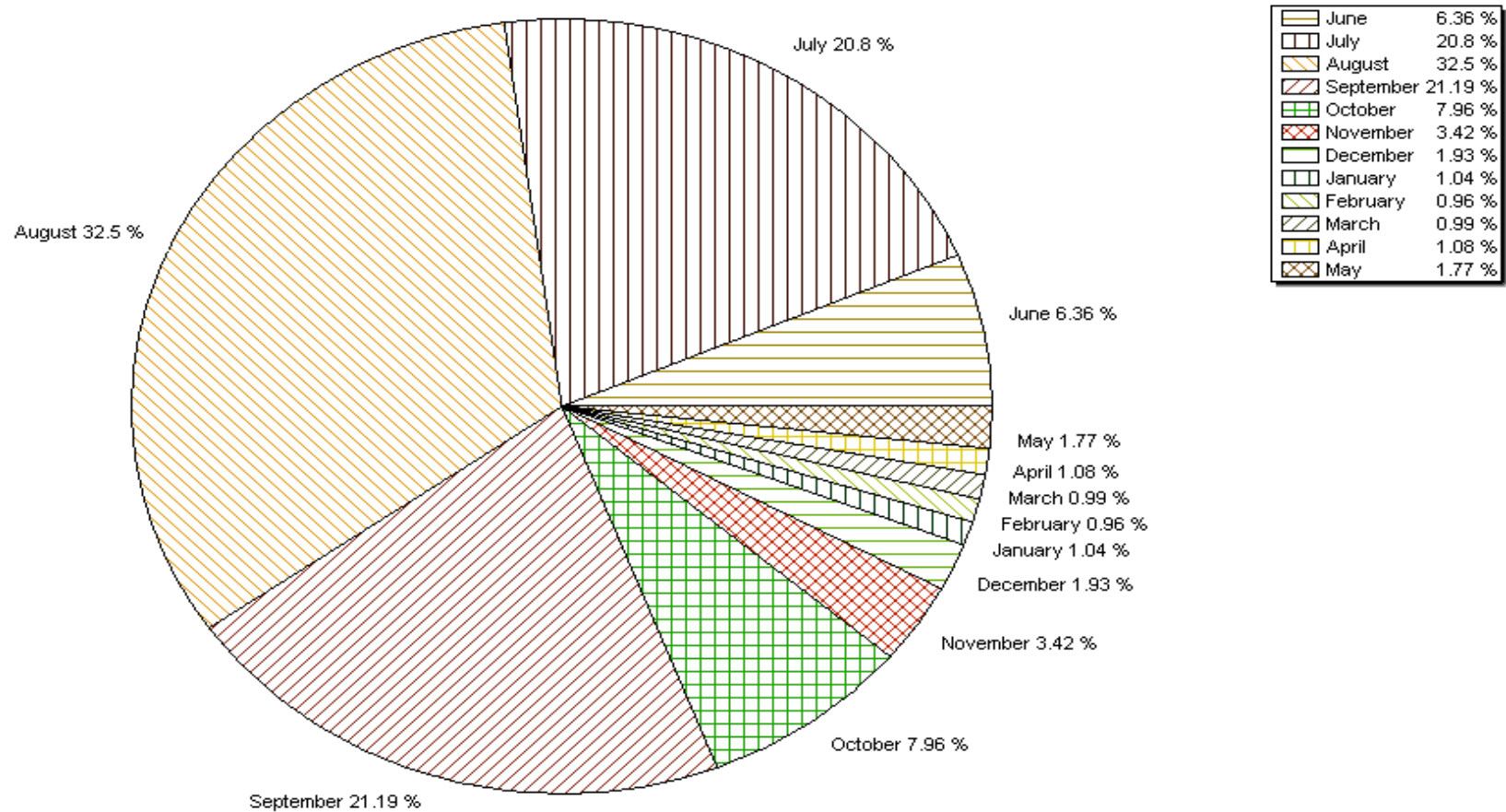
Monthly Average Runoff based on period : 1980-2015

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

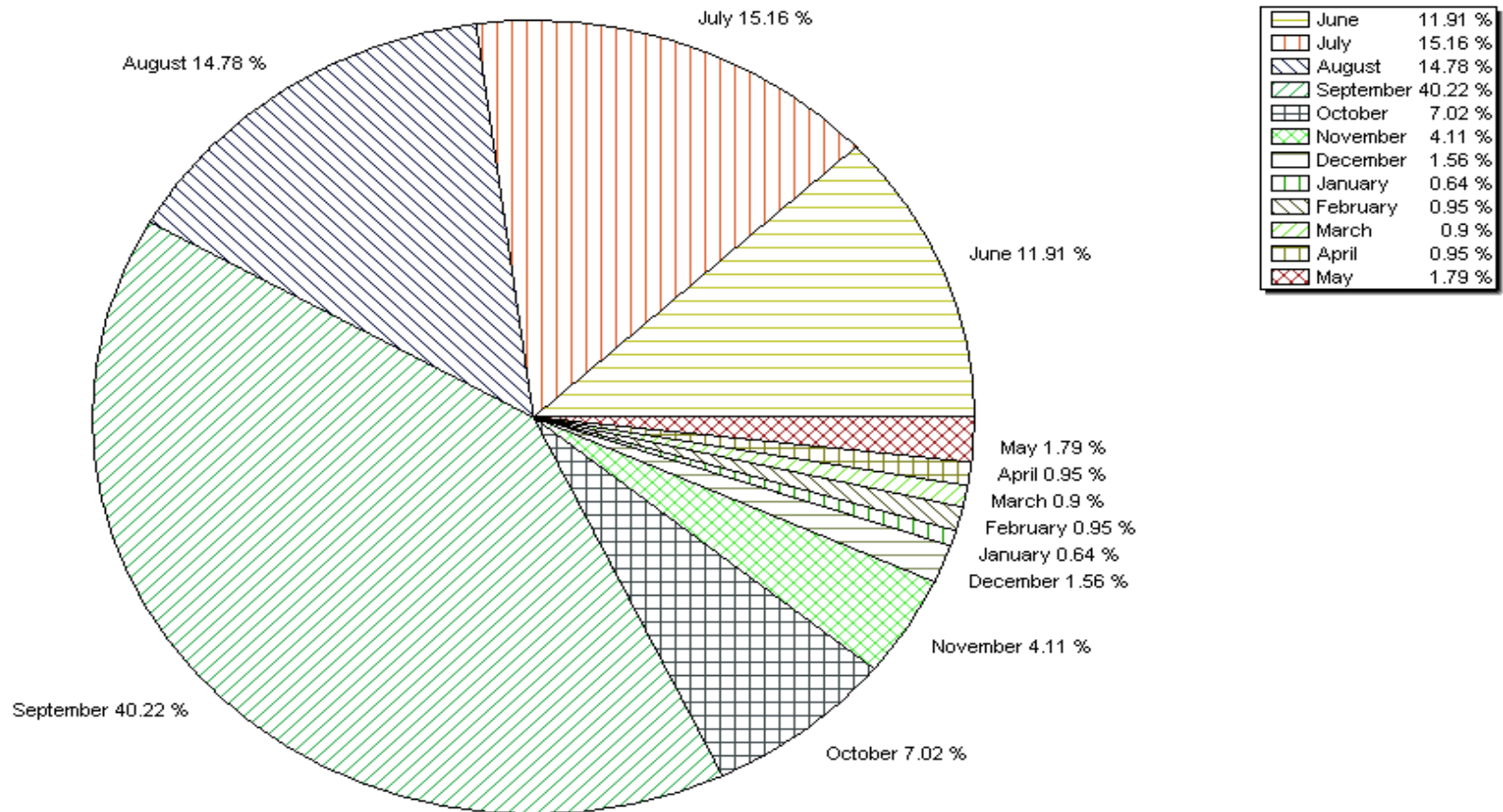
Sub-Division : MMSD II,CWC,Burla



Monthly Runoff for the Year : 2015-2016

Station Name : KESINGA (EMF00K6)
Local River : Tel

Division : MD,CWC,Burla
Sub-Division : MMSD II,CWC,Burla



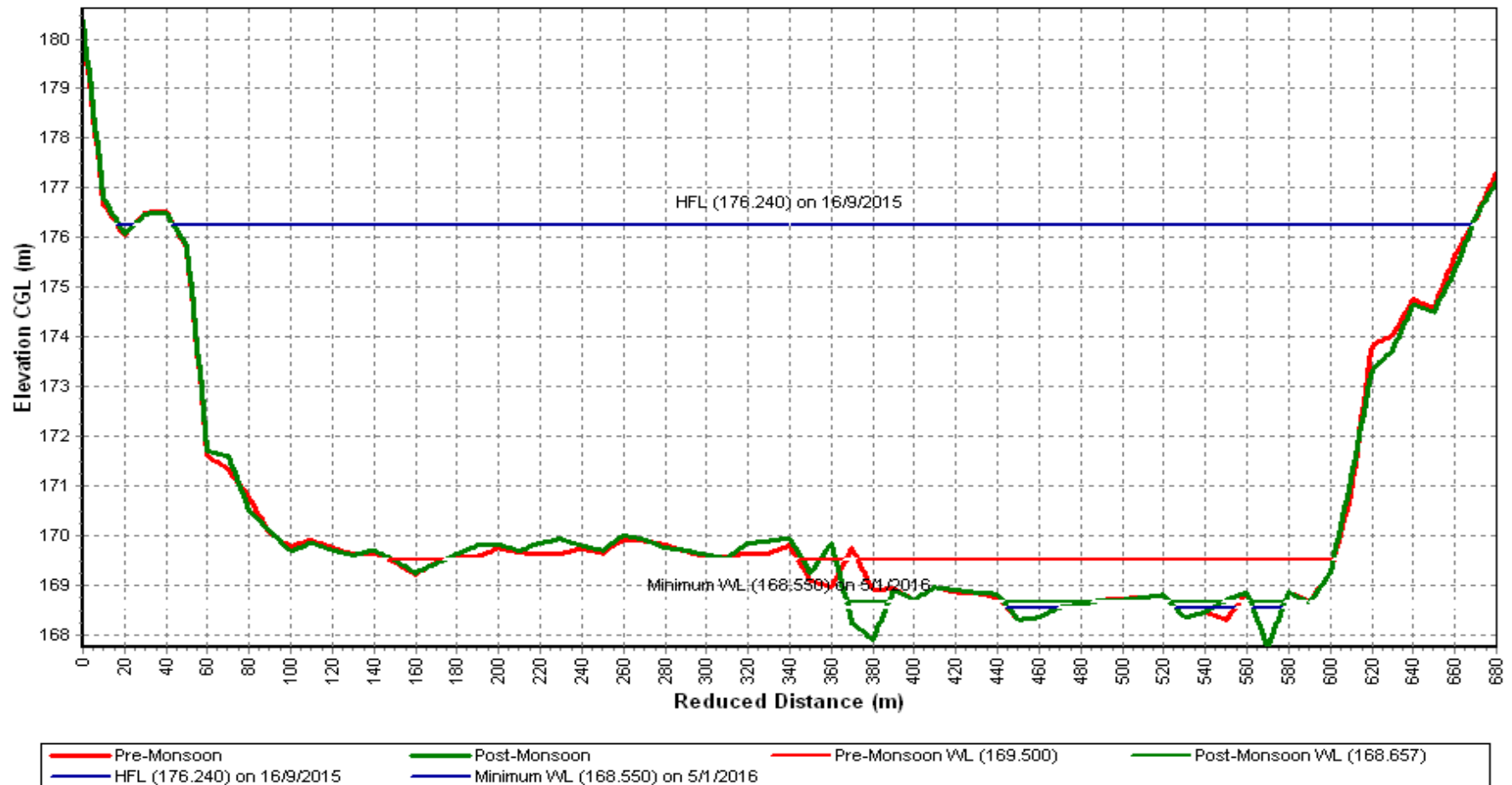
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



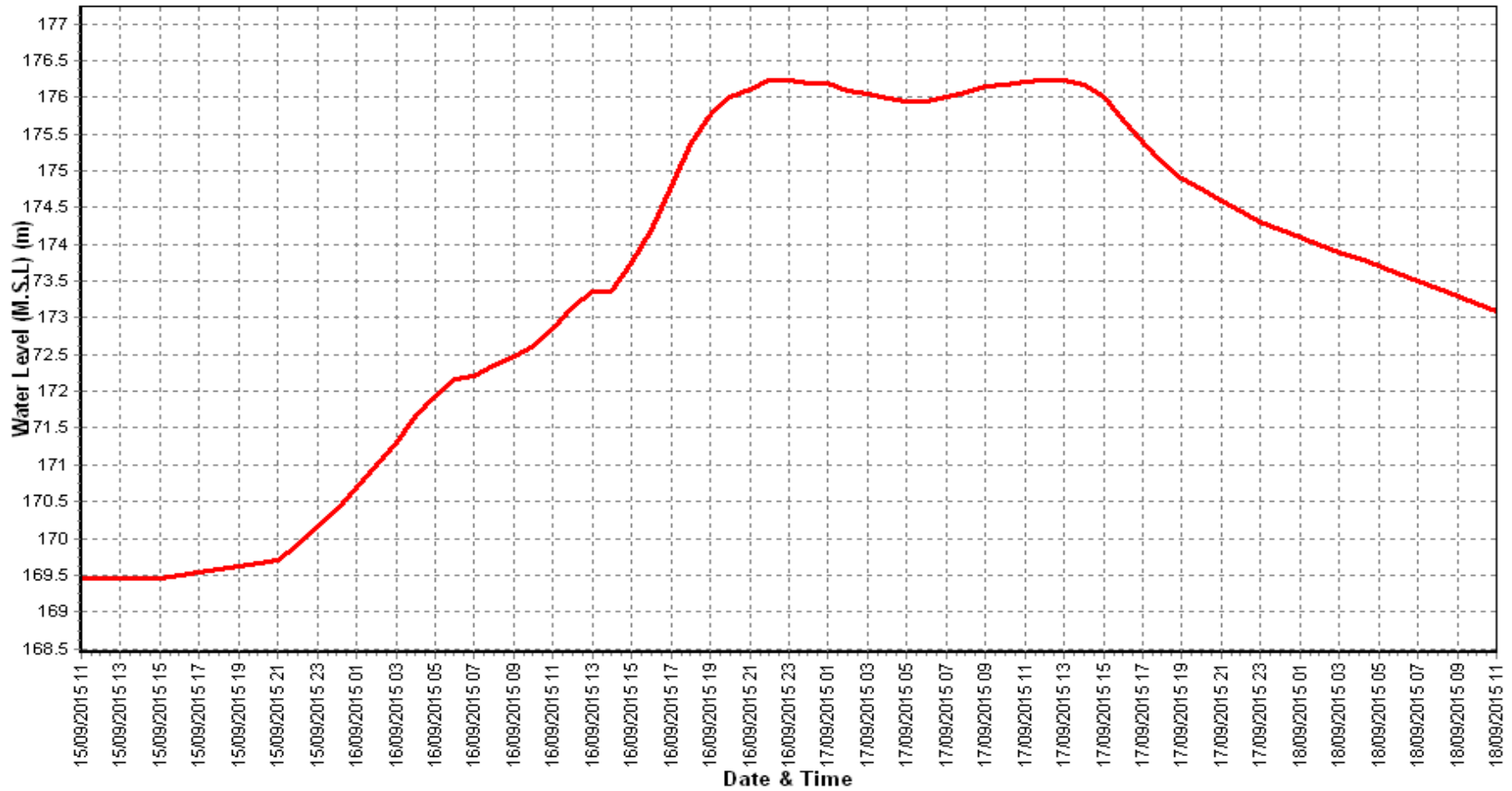
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



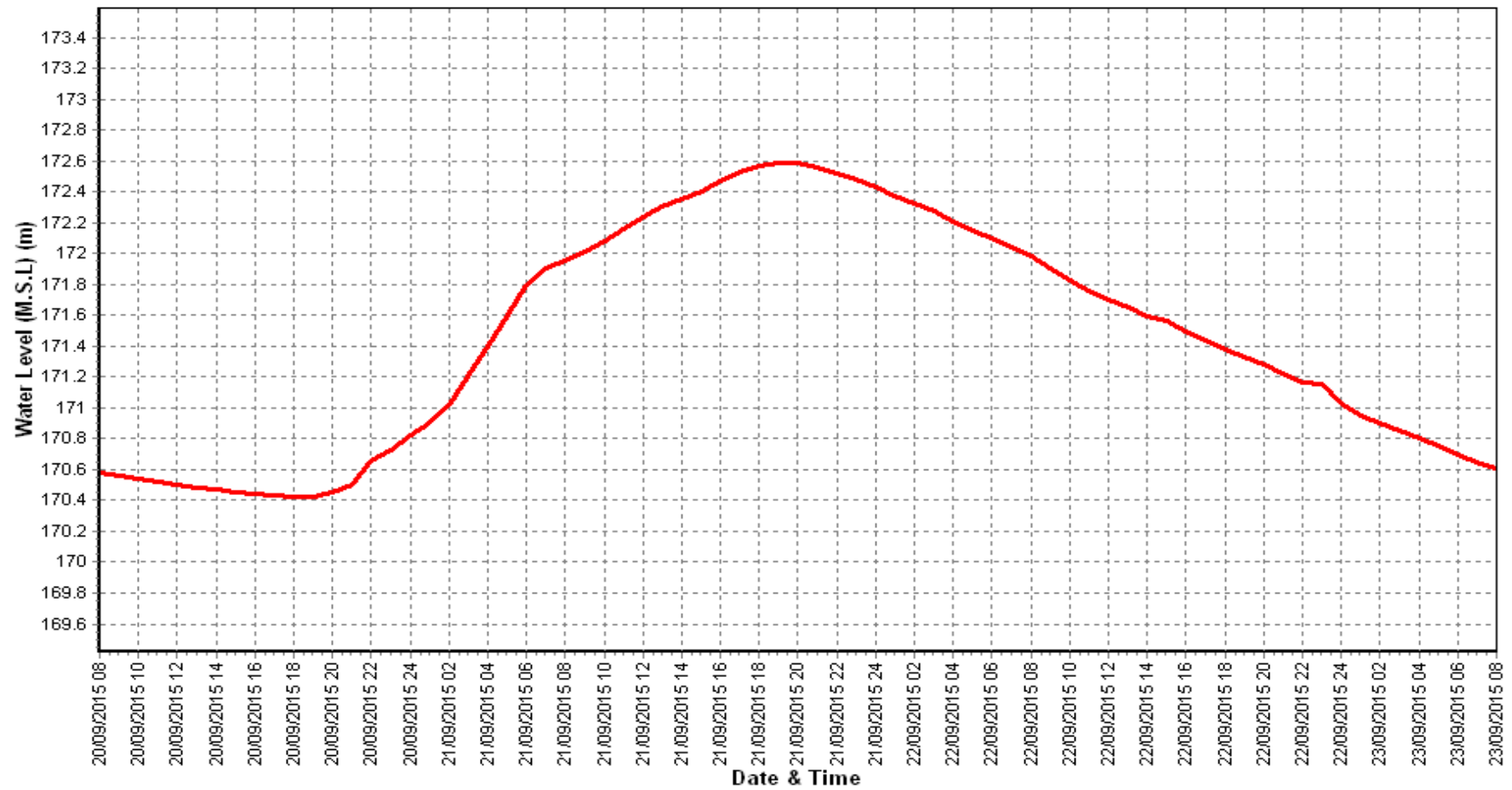
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



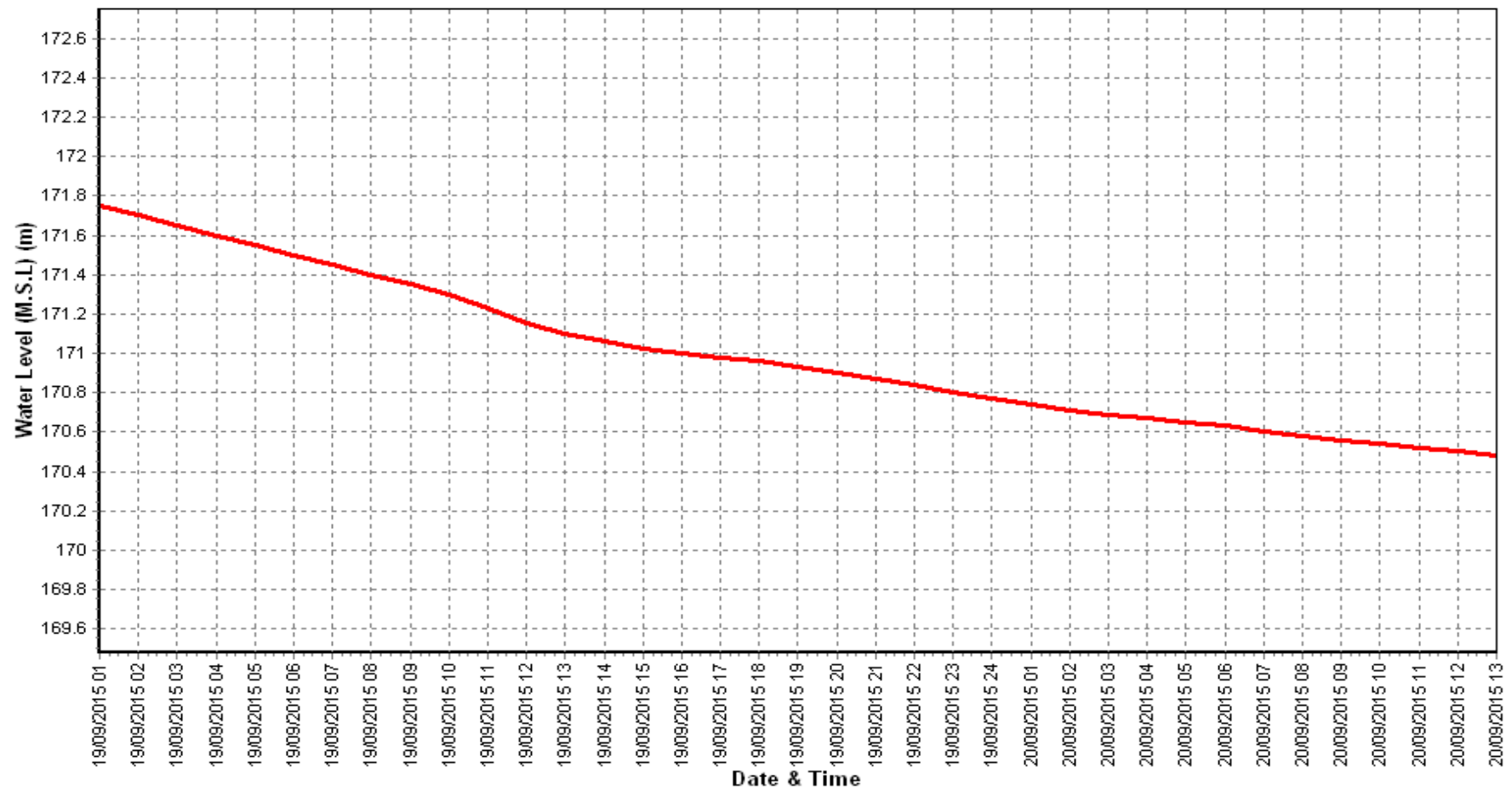
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	154.6	0.000	0.000	0.530	0.530	7079	328.7	0.000	0.000	0.093	0.093	2641	245.0	0.000	0.000	0.950	0.950	20106
2	57.73	0.000	0.000	0.300	0.300	1496	264.3	0.000	0.000	0.084	0.084	1918	240.0	0.000	0.000	0.000	0.000	0
3	140.9	0.000	0.000	1.020	1.020	12417	318.8	0.000	0.000	1.260	1.260	34704	129.9	0.000	0.000	0.800	0.800	8979
4	139.2	0.000	0.000	1.700	1.700	20443	514.4	0.000	0.000	1.230	1.230	54661	121.3	0.000	0.000	0.760	0.760	7967
5	228.9	0.000	0.000	1.820	1.820	35986	322.0	0.000	0.000	0.000	0.000	0	152.3	0.000	0.000	0.790	0.790	10392
6	210.9	0.000	0.000	1.600	1.600	29157	207.7	0.000	0.000	0.080	0.080	1436	167.2	0.000	0.000	0.780	0.780	11271
7	139.0	0.000	0.000	0.000	0.000	0	152.3	0.000	0.000	0.075	0.075	987	172.3	0.000	0.000	0.620	0.620	9231
8	169.9	0.000	0.000	1.550	1.550	22756	128.3	0.000	0.000	0.093	0.093	1031	157.9	0.000	0.000	0.700	0.700	9550
9	73.14	0.000	0.000	0.900	0.900	5688	154.9	0.000	0.000	0.090	0.090	1204	180.0	0.000	0.000	0.000	0.000	0
10	104.5	0.000	0.000	1.040	1.040	9391	172.4	0.000	0.000	0.070	0.070	1043	256.4	0.000	0.000	1.060	1.060	23484
11	203.9	0.000	0.000	1.400	1.400	24669	276.3	0.000	0.000	0.086	0.086	2053	143.0	0.000	0.000	0.980	0.980	12105
12	208.9	0.000	0.000	1.410	1.410	25453	584.5	0.000	0.000	0.000	0.000	0	243.7	0.000	0.000	1.330	1.330	28002
13	145.2	0.000	0.000	1.140	1.140	14304	299.5	0.000	0.000	0.091	0.091	2355	265.4	0.000	0.000	1.250	1.250	28668
14	260.0	0.000	0.000	0.000	0.000	0	339.4	0.000	0.000	1.250	1.250	36653	666.6	0.000	0.000	1.240	1.240	71415
15	195.5	0.000	0.000	1.160	1.160	19597	322.1	0.000	0.000	1.200	1.200	33399	490.0	0.000	0.000	0.000	0.000	0
16	289.7	0.000	0.000	1.130	1.130	28287	290.1	0.000	0.000	1.110	1.110	27821	230.0	0.000	0.000	0.000	0.000	0
17	268.3	0.000	0.000	0.910	0.910	21094	808.5	0.000	0.000	1.880	1.880	131322	224.0	0.000	0.000	1.210	1.210	23417
18	264.7	0.000	0.000	0.890	0.890	20353	584.7	0.000	0.000	0.000	0.000	0	812.7	0.000	0.000	1.510	1.510	106027
19	224.4	0.000	0.000	0.900	0.900	17449	584.6	0.000	0.000	0.000	0.000	0	277.4	0.000	0.000	1.040	1.040	24929
20	224.1	0.000	0.000	0.850	0.850	16455	515.7	0.000	0.000	1.240	1.240	55250	235.6	0.000	0.000	1.300	1.300	26468
21	224.0	0.000	0.000	0.000	0.000	0	329.5	0.000	0.000	1.110	1.110	31602	229.8	0.000	0.000	1.050	1.050	20851
22	1161	0.000	0.000	1.620	1.620	162514	255.8	0.000	0.000	0.900	0.900	19891	225.8	0.000	0.000	0.900	0.900	17556
23	841.2	0.000	0.000	1.560	1.560	113377	233.0	0.000	0.000	0.860	0.860	17309	240.0	0.000	0.000	0.000	0.000	0
24	549.4	0.000	0.000	1.530	1.530	72620	584.5	0.000	0.000	1.270	1.270	64131	246.5	0.000	0.000	1.060	1.060	22579
25	350.4	0.000	0.000	1.040	1.040	31484	262.6	0.000	0.000	0.880	0.880	19967	246.5	0.000	0.000	1.080	1.080	23005
26	203.5	0.000	0.000	1.020	1.020	17930	255.8	0.000	0.000	0.000	0.000	0	171.2	0.000	0.000	0.900	0.900	13316
27	210.2	0.000	0.000	0.850	0.850	15437	260.7	0.000	0.000	0.840	0.840	18917	502.0	0.000	0.000	0.960	0.960	41638
28	210.0	0.000	0.000	0.000	0.000	0	258.1	0.000	0.000	0.860	0.860	19176	545.6	0.000	0.000	1.320	1.320	62230
29	224.9	0.000	0.000	0.780	0.780	15156	234.9	0.000	0.000	0.880	0.880	17859	558.9	0.000	0.000	2.000	2.000	96578
30	274.1	0.000	0.000	1.020	1.020	24157	137.9	0.000	0.000	0.660	0.660	7865	670.0	0.000	0.000	0.000	0.000	0
31							129.1	0.000	0.000	0.600	0.600	6695	816.0	0.000	0.000	1.320	1.320	93067
<u>Ten Daily Mean</u>																		
Ten Daily I	141.9	0.000	0.000	1.046	1.046	14441	256.4	0.000	0.000	0.308	0.308	9963	182.2	0.000	0.000	0.646	0.646	10098
Ten Daily II	228.5	0.000	0.000	0.979	0.979	18766	460.5	0.000	0.000	0.686	0.686	28885	358.8	0.000	0.000	0.986	0.986	32103
Ten Daily III	424.9	0.000	0.000	0.942	0.942	45268	267.4	0.000	0.000	0.805	0.805	20310	404.8	0.000	0.000	0.963	0.963	35529
<u>Monthly</u>																		
Total						784749						611892						812830

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	798.6	0.000	0.000	0.640	0.640	44158	229.1	0.000	0.000	0.540	0.540	10691	165.0	0.000	0.000	0.000	0.000	0
2	468.3	0.000	0.000	0.500	0.500	20231	220.0	0.000	0.000	0.000	0.000	0	165.1	0.000	0.000	0.070	0.070	998
3	778.9	0.000	0.000	0.650	0.650	43741	211.9	0.000	0.000	0.520	0.520	9521	156.9	0.000	0.000	0.000	0.000	0
4	570.8	0.000	0.000	0.530	0.530	26139	210.0	0.000	0.000	0.000	0.000	0	150.3	0.000	0.000	0.000	0.000	0
5	335.5	0.000	0.000	0.550	0.550	15943	199.8	0.000	0.000	0.440	0.440	7595	137.2	0.000	0.000	0.000	0.000	0
6	300.0	0.000	0.000	0.000	0.000	0	207.5	0.000	0.000	0.400	0.400	7171	127.6	0.000	0.000	0.000	0.000	0
7	265.9	0.000	0.000	0.640	0.640	14704	208.3	0.000	0.000	0.450	0.450	8099	124.6	0.000	0.000	0.000	0.000	0
8	251.4	0.000	0.000	0.650	0.650	14117	168.6	0.000	0.000	0.360	0.360	5245	125.0	0.000	0.000	0.000	0.000	0
9	191.9	0.000	0.000	0.770	0.770	12768	160.0	0.000	0.000	0.220	0.220	3041	136.1	0.000	0.000	0.060	0.060	706
10	173.7	0.000	0.000	0.630	0.630	9455	167.9	0.000	0.000	0.240	0.240	3482	128.1	0.000	0.000	0.000	0.000	0
11	206.1	0.000	0.000	0.620	0.620	11041	170.0	0.000	0.000	0.000	0.000	0	128.0	0.000	0.000	0.000	0.000	0
12	197.9	0.000	0.000	0.500	0.500	8551	151.0	0.000	0.000	0.230	0.230	3001	168.7	0.000	0.000	0.000	0.000	0
13	277.0	0.000	0.000	0.000	0.000	0	135.4	0.000	0.000	0.210	0.210	2456	115.2	0.000	0.000	0.000	0.000	0
14	270.4	0.000	0.000	0.920	0.920	21493	131.7	0.000	0.000	0.200	0.200	2275	107.4	0.000	0.000	0.000	0.000	0
15	267.1	0.000	0.000	0.980	0.980	22619	126.2	0.000	0.000	0.180	0.180	1963	107.0	0.000	0.000	0.000	0.000	0
16	3264	0.000	0.960	1.000	1.960	552740	121.2	0.000	0.000	0.100	0.100	1047	56.39	0.000	0.000	0.040	0.040	195
17	5400	0.000	0.000	0.000	0.000	0	130.2	0.000	0.000	0.090	0.090	1012	53.97	0.000	0.000	0.000	0.000	0
18	3368	0.000	0.880	1.000	1.880	547144	134.0	0.000	0.000	0.000	0.000	0	50.94	0.000	0.000	0.000	0.000	0
19	1583	0.000	0.140	1.500	1.640	224331	135.1	0.000	0.000	0.080	0.080	934	50.09	0.000	0.000	0.000	0.000	0
20	680.0	0.000	0.000	0.000	0.000	0	127.4	0.000	0.000	0.060	0.060	661	44.49	0.000	0.000	0.000	0.000	0
21	2318	0.000	0.600	1.040	1.640	328465	135.0	0.000	0.000	0.000	0.000	0	43.03	0.000	0.000	0.000	0.000	0
22	1699	0.000	0.440	1.000	1.440	211426	134.0	0.000	0.000	0.000	0.000	0	49.00	0.000	0.000	0.000	0.000	0
23	629.7	0.000	0.000	0.860	0.860	46788	123.2	0.000	0.000	0.040	0.040	426	55.68	0.000	0.000	0.040	0.040	192
24	528.1	0.000	0.000	0.760	0.760	34675	135.0	0.000	0.000	0.000	0.000	0	52.37	0.000	0.000	0.000	0.000	0
25	500.0	0.000	0.000	0.000	0.000	0	134.0	0.000	0.000	0.000	0.000	0	40.00	0.000	0.000	0.000	0.000	0
26	271.3	0.000	0.000	0.660	0.660	15473	117.8	0.000	0.000	0.020	0.020	204	41.67	0.000	0.000	0.000	0.000	0
27	480.0	0.000	0.000	0.000	0.000	0	114.3	0.000	0.000	0.030	0.030	296	40.65	0.000	0.000	0.000	0.000	0
28	267.0	0.000	0.000	0.650	0.650	14997	111.3	0.000	0.000	0.040	0.040	384	37.62	0.000	0.000	0.000	0.000	0
29	262.6	0.000	0.000	0.630	0.630	14293	112.9	0.000	0.000	0.030	0.030	293	40.00	0.000	0.000	0.000	0.000	0
30	234.8	0.000	0.000	0.610	0.610	12373	115.5	0.000	0.000	0.030	0.030	299	44.96	0.000	0.000	0.030	0.030	117
31							111.3	0.000	0.000	0.020	0.020	192						
<u>Ten Daily Mean</u>																		
Ten Daily I	413.5	0.000	0.000	0.556	0.556	20125	198.3	0.000	0.000	0.317	0.317	5485	141.6	0.000	0.000	0.013	0.013	170
Ten Daily II	1551	0.000	0.198	0.652	0.850	138792	136.2	0.000	0.000	0.115	0.115	1335	88.22	0.000	0.000	0.004	0.004	19
Ten Daily III	719.1	0.000	0.104	0.621	0.725	67849	122.2	0.000	0.000	0.019	0.019	190	44.50	0.000	0.000	0.007	0.007	31
<u>Monthly</u>																		
Total						2267663						70288						2208

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	40.69	0.000	0.000	0.000	0.000	0	28.28	0.000	0.000	0.000	0.000	0	14.18	0.000	0.000	0.076	0.076	93
2	40.65	0.000	0.000	0.000	0.000	0	21.04	0.000	0.000	0.000	0.000	0	14.36	0.000	0.000	0.000	0.000	0
3	77.65	0.000	0.000	0.000	0.000	0	12.00	0.000	0.000	0.000	0.000	0	13.74	0.000	0.000	0.000	0.000	0
4	74.32	0.000	0.000	0.000	0.000	0	11.38	0.000	0.000	0.022	0.022	22	13.78	0.000	0.000	0.000	0.000	0
5	67.05	0.000	0.000	0.000	0.000	0	10.41	0.000	0.000	0.000	0.000	0	11.73	0.000	0.000	0.000	0.000	0
6	43.00	0.000	0.000	0.000	0.000	0	12.41	0.000	0.000	0.000	0.000	0	11.08	0.000	0.000	0.000	0.000	0
7	37.15	0.000	0.000	0.030	0.030	96	31.92	0.000	0.000	0.000	0.000	0	11.00	0.000	0.000	0.000	0.000	0
8	36.89	0.000	0.000	0.000	0.000	0	22.25	0.000	0.000	0.000	0.000	0	16.62	0.000	0.000	0.080	0.080	115
9	32.15	0.000	0.000	0.000	0.000	0	9.585	0.000	0.000	0.000	0.000	0	17.82	0.000	0.000	0.000	0.000	0
10	41.25	0.000	0.000	0.000	0.000	0	7.000	0.000	0.000	0.000	0.000	0	17.19	0.000	0.000	0.000	0.000	0
11	36.39	0.000	0.000	0.000	0.000	0	7.349	0.000	0.000	0.020	0.020	13	16.82	0.000	0.000	0.000	0.000	0
12	32.42	0.000	0.000	0.000	0.000	0	16.38	0.000	0.000	0.000	0.000	0	19.52	0.000	0.000	0.000	0.000	0
13	32.00	0.000	0.000	0.000	0.000	0	10.92	0.000	0.000	0.000	0.000	0	18.45	0.000	0.000	0.000	0.000	0
14	31.65	0.000	0.000	0.026	0.026	71	15.67	0.000	0.000	0.000	0.000	0	16.00	0.000	0.000	0.000	0.000	0
15	26.10	0.000	0.000	0.000	0.000	0	15.33	0.000	0.000	0.000	0.000	0	19.23	0.000	0.000	0.060	0.060	100
16	24.58	0.000	0.000	0.000	0.000	0	14.33	0.000	0.000	0.000	0.000	0	18.33	0.000	0.000	0.000	0.000	0
17	28.61	0.000	0.000	0.000	0.000	0	13.00	0.000	0.000	0.000	0.000	0	17.98	0.000	0.000	0.000	0.000	0
18	36.13	0.000	0.000	0.000	0.000	0	11.68	0.000	0.000	0.018	0.018	18	17.38	0.000	0.000	0.000	0.000	0
19	29.01	0.000	0.000	0.000	0.000	0	10.55	0.000	0.000	0.000	0.000	0	16.69	0.000	0.000	0.000	0.000	0
20	29.00	0.000	0.000	0.000	0.000	0	9.895	0.000	0.000	0.000	0.000	0	18.16	0.000	0.000	0.000	0.000	0
21	27.40	0.000	0.000	0.025	0.025	59	11.36	0.000	0.000	0.000	0.000	0	19.00	0.000	0.000	0.000	0.000	0
22	25.35	0.000	0.000	0.000	0.000	0	10.67	0.000	0.000	0.000	0.000	0	16.79	0.000	0.000	0.080	0.080	116
23	28.86	0.000	0.000	0.000	0.000	0	9.724	0.000	0.000	0.000	0.000	0	17.46	0.000	0.000	0.000	0.000	0
24	28.00	0.000	0.000	0.000	0.000	0	13.00	0.000	0.000	0.000	0.000	0	19.36	0.000	0.000	0.000	0.000	0
25	22.00	0.000	0.000	0.000	0.000	0	16.89	0.000	0.000	0.016	0.016	23	24.72	0.000	0.000	0.000	0.000	0
26	22.61	0.000	0.000	0.000	0.000	0	12.00	0.000	0.000	0.000	0.000	0	67.58	0.000	0.000	0.000	0.000	0
27	20.00	0.000	0.000	0.000	0.000	0	10.42	0.000	0.000	0.000	0.000	0	58.66	0.000	0.000	0.000	0.000	0
28	18.59	0.000	0.000	0.023	0.023	37	11.47	0.000	0.000	0.000	0.000	0	58.00	0.000	0.000	0.000	0.000	0
29	17.60	0.000	0.000	0.000	0.000	0	13.01	0.000	0.000	0.000	0.000	0	30.43	0.000	0.000	0.080	0.080	210
30	17.16	0.000	0.000	0.000	0.000	0	16.53	0.000	0.000	0.000	0.000	0						
31	16.48	0.000	0.000	0.000	0.000	0	14.00	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	49.08	0.000	0.000	0.003	0.003	10	16.63	0.000	0.000	0.002	0.002	2	14.15	0.000	0.000	0.016	0.016	21
Ten Daily II	30.59	0.000	0.000	0.003	0.003	7	12.51	0.000	0.000	0.004	0.004	3	17.86	0.000	0.000	0.006	0.006	10
Ten Daily III	22.19	0.000	0.000	0.004	0.004	9	12.64	0.000	0.000	0.001	0.001	2	34.67	0.000	0.000	0.018	0.018	36
Monthly																		
Total						264						76						634

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	32.45	0.000	0.000	0.000	0.000	0	15.75	0.000	0.000	0.000	0.000	0	25.00	0.000	0.000	0.000	0.000	0
2	29.38	0.000	0.000	0.000	0.000	0	15.19	0.000	0.000	0.000	0.000	0	25.48	0.000	0.000	0.080	0.080	176
3	24.24	0.000	0.000	0.000	0.000	0	23.00	0.000	0.000	0.000	0.000	0	23.82	0.000	0.000	0.000	0.000	0
4	21.40	0.000	0.000	0.000	0.000	0	25.17	0.000	0.000	0.080	0.080	174	22.92	0.000	0.000	0.000	0.000	0
5	16.26	0.000	0.000	0.000	0.000	0	22.58	0.000	0.000	0.000	0.000	0	25.19	0.000	0.000	0.000	0.000	0
6	15.00	0.000	0.000	0.000	0.000	0	18.67	0.000	0.000	0.000	0.000	0	21.96	0.000	0.000	0.000	0.000	0
7	21.00	0.000	0.000	0.000	0.000	0	23.51	0.000	0.000	0.000	0.000	0	32.06	0.000	0.000	0.000	0.000	0
8	18.71	0.000	0.000	0.000	0.000	0	22.26	0.000	0.000	0.000	0.000	0	27.00	0.000	0.000	0.000	0.000	0
9	16.01	0.000	0.000	0.000	0.000	0	31.25	0.000	0.000	0.000	0.000	0	23.24	0.000	0.000	0.060	0.060	120
10	18.33	0.000	0.000	0.000	0.000	0	25.00	0.000	0.000	0.000	0.000	0	24.98	0.000	0.000	0.000	0.000	0
11	18.05	0.000	0.000	0.000	0.000	0	20.60	0.000	0.000	0.060	0.060	107	42.60	0.000	0.000	0.000	0.000	0
12	18.95	0.000	0.000	0.000	0.000	0	20.22	0.000	0.000	0.000	0.000	0	32.99	0.000	0.000	0.000	0.000	0
13	19.00	0.000	0.000	0.000	0.000	0	18.07	0.000	0.000	0.000	0.000	0	50.83	0.000	0.000	0.000	0.000	0
14	19.83	0.000	0.000	0.060	0.060	103	17.00	0.000	0.000	0.000	0.000	0	30.06	0.000	0.000	0.000	0.000	0
15	21.97	0.000	0.000	0.000	0.000	0	16.24	0.000	0.000	0.000	0.000	0	24.97	0.000	0.000	0.000	0.000	0
16	25.31	0.000	0.000	0.000	0.000	0	15.76	0.000	0.000	0.000	0.000	0	22.77	0.000	0.000	0.060	0.060	118
17	25.09	0.000	0.000	0.000	0.000	0	16.50	0.000	0.000	0.000	0.000	0	47.24	0.000	0.000	0.000	0.000	0
18	23.48	0.000	0.000	0.000	0.000	0	19.19	0.000	0.000	0.070	0.070	116	53.08	0.000	0.000	0.000	0.000	0
19	25.05	0.000	0.000	0.000	0.000	0	18.28	0.000	0.000	0.000	0.000	0	72.24	0.000	0.000	0.000	0.000	0
20	25.00	0.000	0.000	0.000	0.000	0	16.25	0.000	0.000	0.000	0.000	0	50.66	0.000	0.000	0.000	0.000	0
21	20.30	0.000	0.000	0.090	0.090	158	15.36	0.000	0.000	0.000	0.000	0	31.00	0.000	0.000	0.000	0.000	0
22	18.46	0.000	0.000	0.000	0.000	0	13.91	0.000	0.000	0.000	0.000	0	29.00	0.000	0.000	0.000	0.000	0
23	16.64	0.000	0.000	0.000	0.000	0	12.87	0.000	0.000	0.000	0.000	0	27.94	0.000	0.000	0.080	0.080	193
24	18.00	0.000	0.000	0.000	0.000	0	12.00	0.000	0.000	0.000	0.000	0	29.81	0.000	0.000	0.000	0.000	0
25	18.50	0.000	0.000	0.000	0.000	0	14.42	0.000	0.000	0.050	0.050	62	32.56	0.000	0.000	0.000	0.000	0
26	10.32	0.000	0.000	0.000	0.000	0	15.94	0.000	0.000	0.000	0.000	0	29.97	0.000	0.000	0.000	0.000	0
27	10.00	0.000	0.000	0.000	0.000	0	20.69	0.000	0.000	0.000	0.000	0	32.42	0.000	0.000	0.000	0.000	0
28	10.86	0.000	0.000	0.080	0.080	75	22.16	0.000	0.000	0.000	0.000	0	28.12	0.000	0.000	0.000	0.000	0
29	11.61	0.000	0.000	0.000	0.000	0	61.92	0.000	0.000	0.000	0.000	0	33.00	0.000	0.000	0.000	0.000	0
30	18.08	0.000	0.000	0.000	0.000	0	44.50	0.000	0.000	0.000	0.000	0	70.27	0.000	0.000	0.000	0.000	0
31	17.14	0.000	0.000	0.000	0.000	0							166.5	0.000	0.000	0.100	0.100	1439
Ten Daily Mean																		
Ten Daily I	21.28	0.000	0.000	0.000	0.000	0	22.24	0.000	0.000	0.008	0.008	17	25.17	0.000	0.000	0.014	0.014	30
Ten Daily II	22.17	0.000	0.000	0.006	0.006	10	17.81	0.000	0.000	0.013	0.013	22	42.74	0.000	0.000	0.006	0.006	12
Ten Daily III	15.45	0.000	0.000	0.015	0.015	21	23.38	0.000	0.000	0.005	0.005	6	46.42	0.000	0.000	0.016	0.016	148
Monthly																		
Total						336						459						2047

Annual Sediment Load for period : 2007-2016

Station Name : KESINGA (EMF00K6)

Division : MD,CWC,Burla

Local River : Tel

Sub-Division : MMSD II,CWC,Burla

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
2007-2008	9149768	62436	9212204	12388
2008-2009	3435170	3833	3439003	10213
2009-2010	14769963	0	14769963	6330
2010-2011	1740879	18185	1759065	7364
2011-2012	814286	1885	816171	4687
2012-2013	1089262	12615	1101877	6443
2013-2014	1785660	79203	1864862	10690
2014-2015	18343818	8036	18351854	10411
2015-2016	4549630	3815	4553445	5766

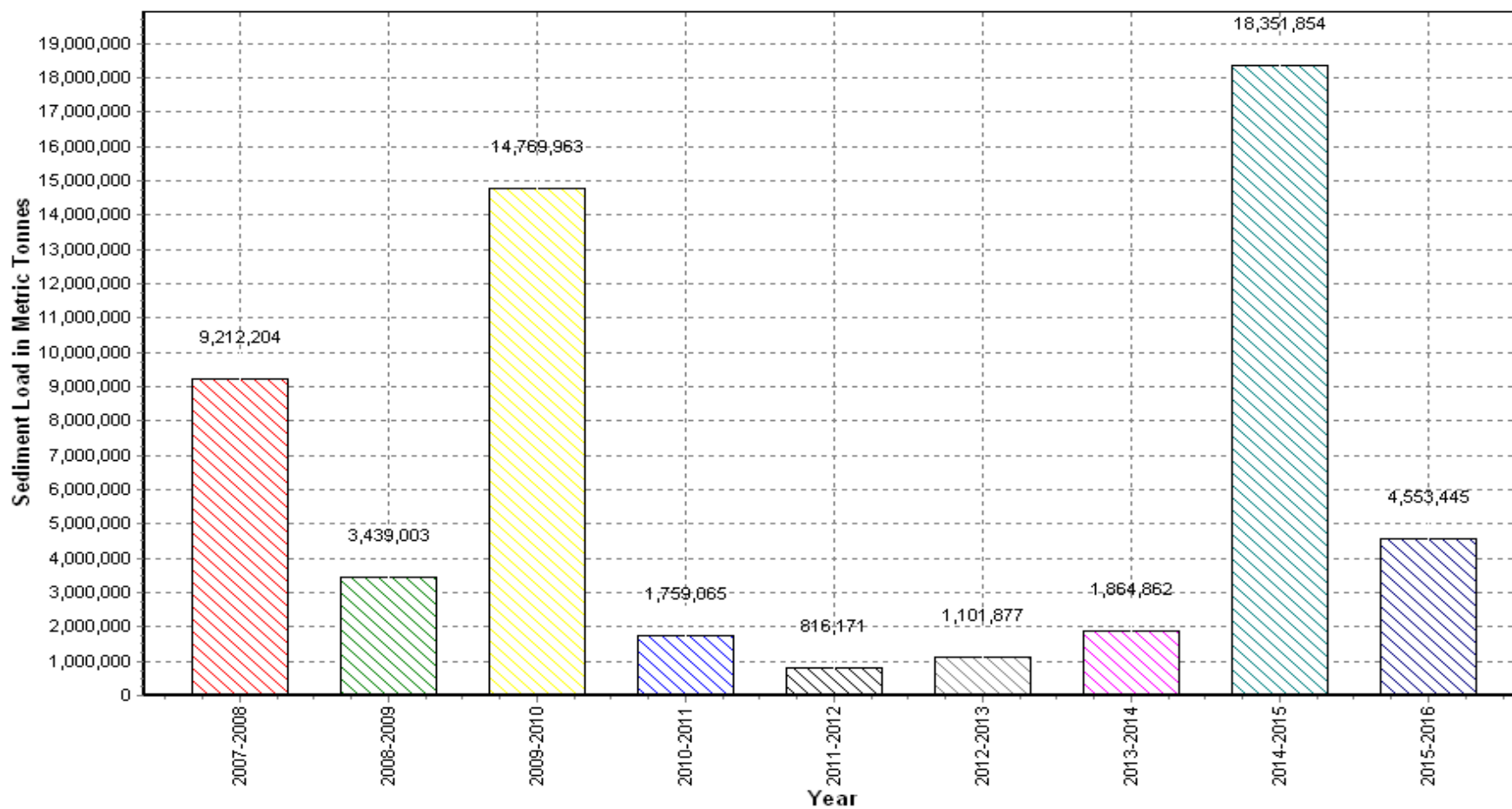
Annual Sediment Load for the period: 2007-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

Division : MD,CWC,Burla

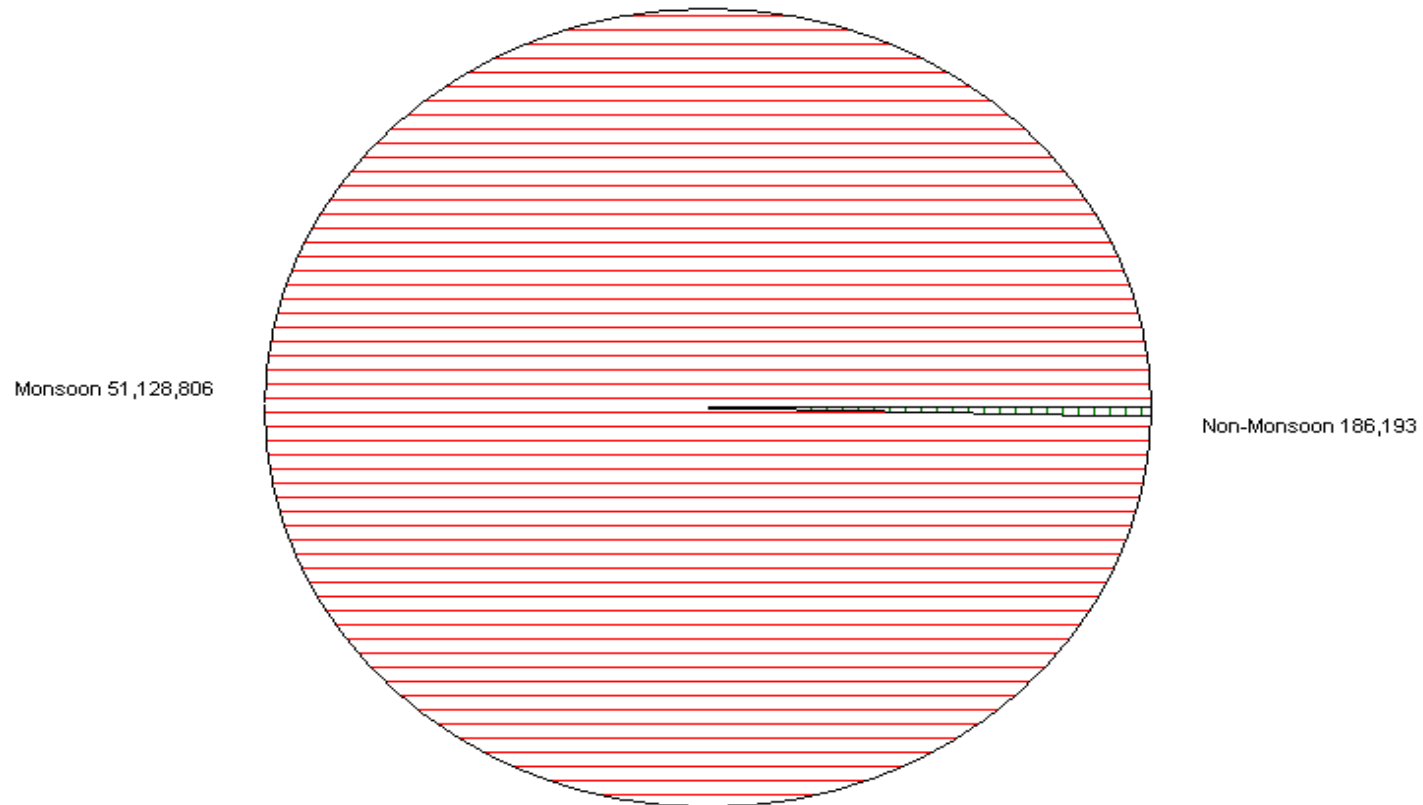
Sub-Division : MMSD II,CWC,Burla



Seasonal Sediment Load for the period : 2007-2015

Station Name : KESINGA (EMF00K6)
Local River : Tel

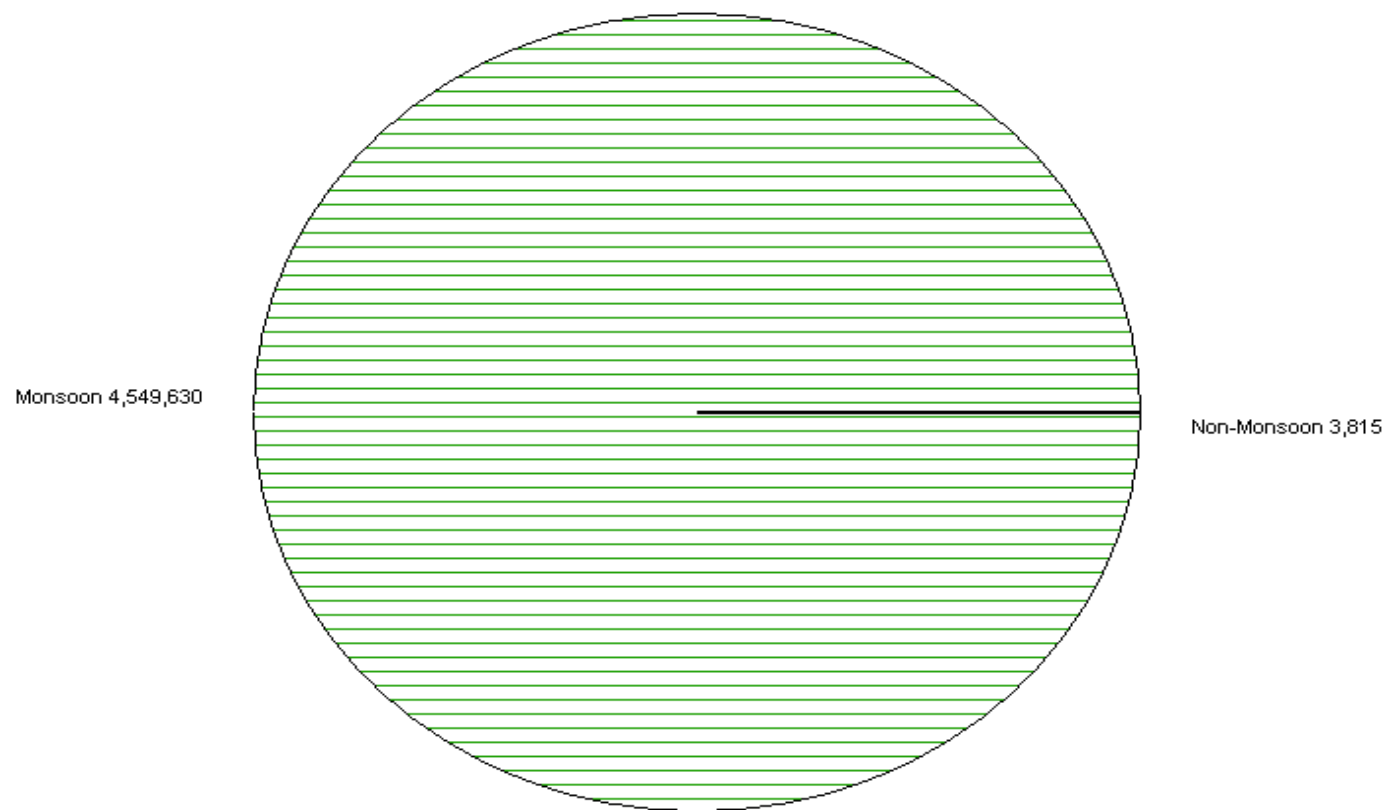
Division : MD,CWC,Burla
Sub-Division : MMSD II,CWC,Burla



Seasonal Sediment Load for the Year: 2015-2016

Station Name : KESINGA (EMF00K6)
Local River : Tel

Division : MD,CWC,Burla
Sub-Division : MMSD II,CWC,Burla



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	154.6	328.7	245.0	798.6	229.1	165.1	40.69	28.28	14.18	32.45	15.75	25.48
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)						160						
4	EC_GEN (μmho/cm)	82	119	178	177	223	222	178	159	162	173	209	147
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)			7.9	8.2		7.2	9.2	8.9	8.9	7.1	8.1	8.7
7	pH_GEN (pH units)	8.7	8.1	8.1	7.9	8.3	8.5	8.5	8.3	8.4	8.3	8.4	8.2
8	Temp (deg C)	27.0	28.0	31.7	28.0	31.5	26.5	28.2	21.0	22.5	27.4	25.5	29.5
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	17.9	13.9	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	120	148	200	228	208	133	228	180	204	224	192	176
3	Ca (mg/L)	14	14	24	19	32	30	22	22	18	29	24	35
4	Cl (mg/L)	17.0	14.0	17.0	12.0	15.0	10.0	14.0	14.0	15.0	12.0	22.0	27.0
5	CO3 (mg/L)	0.0	0.0	0.0	0.0	21.6	16.8	0.0	0.0	0.0	0.0	0.0	0.0
6	HCO3 (mg/L)	73	90	122	139	105	64	139	110	125	137	117	107
7	K (mg/L)	6.4	3.8	5.4	2.9	7.4	3.3	4.4	7.7	6.9	4.4	13.0	25.9
8	Mg (mg/L)	8.8	6.8	14.6	12.6	14.6	11.7	14.6	8.8	8.8	6.8	25.3	5.8
9	Na (mg/L)	12.4	9.5	13.9	13.3	24.3	16.5	13.2	21.8	17.0	18.1	27.4	58.5
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.0	0.5	0.5	0.3	0.1	1.7	1.2	0.6	1.6	4.9	1.2	2.7
2	DO (mg/L)	7.9	7.2	6.7	6.6	6.1	8.1	8.3	8.9	9.1	7.2	6.9	5.7
3	DO_SAT% (%)	99	92	90	84	82	100	106	100	104	90	84	74
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	36	36	60	48	80	76	56	56	44	72	60	88
2	HAR_Total (mgCaCO3/L)	73	64	121	101	141	125	117	93	81	100	165	112
3	Na% (%)	25	23	19	22	26	22	19	32	29	27	25	47
4	RSC (-)	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0
5	SAR (-)	0.6	0.5	0.6	0.6	0.9	0.6	0.5	1.0	0.8	0.8	0.9	2.4
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : KESINGA (EMF00K6)

Division : MD,CWC,Burla

Local River : Tel

Sub-Division : MMSD II,CWC,Burla

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	5400	7.000	182.3
2	EC_FLD (μmho/cm)	1	160	160	160
3	EC_GEN (μmho/cm)	12	223	82	169
4	pH_FLD (pH units)	9	9.2	7.1	8.2
5	pH_GEN (pH units)	12	8.7	7.9	8.3
6	Temp (deg C)	12	31.7	21.0	27.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	17.9	0.0	2.7
2	ALK-TOT (mgCaCO3/L)	12	228	120	187
3	Ca (mg/L)	12	35	14	24
4	Cl (mg/L)	12	27.0	10.0	15.8
5	CO3 (mg/L)	12	21.6	0.0	3.2
6	HCO3 (mg/L)	12	139	64	111
7	K (mg/L)	12	25.9	2.9	7.6
8	Mg (mg/L)	12	25.3	5.8	11.6
9	Na (mg/L)	12	58.5	9.5	20.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	4.9	0.1	1.4
2	DO (mg/L)	12	9.1	5.7	7.4
3	DO_SAT% (%)	12	106	74	92
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	88	36	59
2	HAR_Total (mgCaCO3/L)	12	165	64	108
3	Na% (%)	12	47	19	26
4	RSC (-)	12	0.4	0.0	0.1
5	SAR (-)	12	2.4	0.5	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	501.5	176.5	584.9	192.2			811.9	522.0	250.1	197.8	406.7	264.0	975.1	577.4	351.2	135.8	25.27	151.0	129.6	
2	EC_FLD (µmho/cm)	167	191	174	172			153	188	300							146	179	184		
3	EC_GEN (µmho/cm)	167	191	174	172			143	265	192	202	161	156	168	155	156	146	179	184		
4	pH_FLD (pH units)	7.5	8.0	7.9				7.7	7.6							8.0	8.0	8.1	8.2		
5	pH_GEN (pH units)	7.5	8.0	7.9				7.9	7.8	8.1	7.6	7.7	8.0	8.4	8.1	8.2	8.1	8.1	8.2		
6	Temp (deg C)	28.0	27.8	28.0	30.0			30.3	30.1	27.2	29.7	29.3	28.3	27.0	28.1	29.2	24.8	26.3			
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	0.6	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	3.6	0.0	1.0	0.0		
2	ALK-TOT (mgCaCO3/L)	118	116	166	180			103	178	138	132	109	98	182	192	181	111	139	174		
3	B (mg/L)							0.01	0.00	0.00	0.00	0.00	0.00								
4	Ca (mg/L)	12	15	21	24			9	18	15	16	14	13	20	20	21	12	19	25		
5	Cl (mg/L)	7.4	6.6	22.3	10.0			9.0	10.6	7.0	5.3	7.7	10.3	16.4	11.0	15.0	7.1	4.0	12.3		
6	CO3 (mg/L)	0.0	0.9	0.0				0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	4.3	0.0	1.2	0.0		
7	F (mg/L)			0.26				0.10	0.12	0.19	0.13	0.16	0.11						1.50		
8	Fe (mg/L)							0.1	0.0	0.0	0.0	0.0	0.0								
9	HCO3 (mg/L)	72	73	101				63	109	84	81	67	60	111	116	106	68	84	142		
10	K (mg/L)	2.0	7.2	1.1				1.1	1.2	1.2	1.4	1.9	0.8	2.9	2.6	5.2	1.5	2.9			
11	Mg (mg/L)	3.1	4.9	6.3	11.2			6.3	10.7	8.4	7.9	6.7	7.9	5.0	8.4	11.5	2.1	9.2	5.8		
12	Na (mg/L)	2.4	7.6	1.5				14.2	7.7	6.3	8.2	8.3	6.2	11.1	12.2	14.7	2.2	5.0			
13	NO2+NO3 (mg N/L)	0.55						0.06	0.44												
14	NO2-N (mgN/L)							0.01	0.04	0.02	0.02	0.03	0.05								
15	NO3-N (mgN/L)							0.05	0.40												
16	o-PO4-P (mg P/L)								0.014												
17	P-Tot (mgP/L)			0.035				0.010	0.021	0.013	0.037	0.015	0.057								
18	SiO2 (mg/L)							9.1	24.2	21.3	10.8	15.4	14.5								
19	SO4 (mg/L)	7.0	4.9	7.7				8.7	11.4	12.7	15.6	16.5	14.9					9.2	7.9		
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	1.0	0.9	0.4	0.6			0.8	0.9	0.8	0.7	0.9	0.8	0.6	0.5	0.5	1.5	1.0	0.9		
2	COD (mg/L)							11.7	21.3	22.7	18.7	17.0	18.7								
3	DO (mg/L)	8.6	8.0	6.3	5.1			7.5	6.2	6.7	6.2	6.9	8.0	7.1	7.5	6.9	8.7	8.9	5.7		
4	DO_SAT% (%)	108	102	81	68			100	82	84	81	89	103	89	95	90	105	109			
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	31	38	53	61			24	46	38	40	34	31	50	49	52	30	49	63		
2	HAR_Total (mgCaCO3/L)	44	86	79	107			50	90	73	73	62	64	71	84	100	38	87	87		
3	Na% (%)	11	18	4				41	22	16	19	23	18	24	24	23	11	5			
4	RSC (-)	0.3	0.1	0.3				0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.1	0.4	0.2	0.2		
5	SAR (-)	0.2	0.5	0.1				1.0	0.4	0.3	0.4	0.5	0.4	0.6	0.6	0.6	0.2	0.1			
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)		154.1	91.23	29.43	102.9	28.27	43.54	164.4	82.47	62.05	112.1	25.44	66.86	59.31			43.70	54.89	51.54	58.82
2	EC_FLD (µmho/cm)		198	187							160	124	152	198				225			
3	EC_GEN (µmho/cm)		172	161	227	220	189	255	227	172	180	124	152	198				158	192	166	467
4	pH_FLD (pH units)		8.5	7.6							8.5	7.6	8.1	8.2					8.2		
5	pH_GEN (pH units)		8.4	8.0	8.3	7.8	8.1	7.8	8.4	8.4	8.4	7.6	8.1	8.2				8.7	8.2	7.9	7.1
6	Temp (deg C)		20.0	23.0	22.0	24.0	21.1	19.8	21.8	21.0	24.6	25.5	30.2						29.4	29.0	28.0
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)		3.7	0.0	9.2	0.0	0.0	0.0	0.5	0.0	3.5	0.0	0.0	0.0				16.6	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		107	111	155	149	130	158	228	198	186	87	103	191				89	115	102	389
3	B (mg/L)		0.01	0.00	0.00	0.00	0.00	0.00										0.01	0.00	0.00	0.00
4	Ca (mg/L)		13	13	20	16	14	20	28	25	23	7	11	14				14	6	12	40
5	Cl (mg/L)		12.8	12.6	8.0	17.2	13.9	20.0	16.8	15.8	13.3	4.1	8.1	13.0				15.7	8.2	3.2	16.3
6	CO3 (mg/L)		4.4	0.0	11.1	0.0	0.0	0.0	0.6	0.0	4.2	0.0	0.0	0.0				20.0	0.0	0.0	0.0
7	F (mg/L)		0.06	0.34	0.14	0.38	0.13	0.15										0.09	0.16	0.12	0.10
8	Fe (mg/L)		0.0	0.0	0.0	0.0	0.1	0.0		0.1									0.0	0.0	0.1
9	HCO3 (mg/L)		61	68	83	91	79	96	138	121	109	55	63	117				34	70	62	237
10	K (mg/L)		1.3	1.5	1.5	1.5	1.4	1.0	8.0	2.9	5.6	1.1	5.1					2.2	2.2	1.4	1.2
11	Mg (mg/L)		5.8	5.8	10.7	8.8	8.3	9.3	12.9	16.8	10.9	1.7	2.6	4.3				6.8	3.9	7.8	28.7
12	Na (mg/L)		18.5	7.3	7.7	15.4	7.7	13.1	19.9	18.0	17.1	2.2	4.5					13.0	6.3	7.8	12.7
13	NO2+NO3 (mg N/L)		0.11	1.03						0.16									1.61		
14	NO2-N (mgN/L)		0.01	0.01	0.02	0.07	0.02	0.04		0.04									0.01	0.01	0.60
15	NO3-N (mgN/L)		0.10	1.02						0.12									1.60		
16	o-PO4-P (mg P/L)																				
17	P-Tot (mgP/L)		0.020	0.015	0.035	0.040	0.035	0.045		0.040								0.020	0.010	0.020	0.120
18	SiO2 (mg/L)		12.0	8.8	15.1	16.7	10.0	11.0		11.5								13.2	15.4	9.0	56.0
19	SO4 (mg/L)		7.6	11.8	15.5	24.9	19.0	12.5		13.5		3.7		5.6				18.0	18.4	12.0	56.0
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)		0.7	0.8	0.6	0.9	1.2	0.8	0.7	1.0	1.3	0.8		0.7				0.6	0.4	0.8	1.8
2	COD (mg/L)		24.0	20.0	16.0	16.0	18.0	20.0										16.0	20.0	20.0	24.0
3	DO (mg/L)		9.7	6.9	8.6	7.5	8.4	8.1	8.5	8.7	8.6	8.5	7.5	6.3				9.6	6.8	6.8	6.8
4	DO_SAT% (%)		102	81	98	90	94	88	96	97	103	102	97						88	88	87
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		33	32	49	39	36	50	70	63	58	17	28	35				34	16	30	100
2	HAR_Total (mgCaCO3/L)		57	56	94	75	71	89	124	133	104	24	38	52				62	32	63	220
3	Na% (%)		41	21	15	28	19	21	24	21	26	18						30	28	21	11
4	RSC (-)		0.0	0.1	0.0	0.0	0.0	0.2	0.2	0.0	0.1	0.4	0.3	0.9				0.0	0.5	0.0	0.0
5	SAR (-)		1.1	0.4	0.3	0.8	0.4	0.6	0.8	0.7	0.7	0.2						0.7	0.5	0.4	0.4
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KESINGA (EMF00K6)

Local River : Tel

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	17.13	70.80	134.5	38.86	24.56
2	EC_FLD (µmho/cm)					
3	EC_GEN (µmho/cm)	196	153	148	177	176
4	pH_FLD (pH units)					8.0
5	pH_GEN (pH units)	7.7	8.6	8.2	8.6	8.3
6	Temp (deg C)	24.0	29.3	26.7	27.0	27.5
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	3.0	0.0	8.6	0.0
2	ALK-TOT (mgCaCO3/L)	135	180	180	225	197
3	B (mg/L)	0.00	0.00			
4	Ca (mg/L)	15	18	24	27	29
5	Cl (mg/L)	6.6	11.5	11.7	13.7	20.3
6	CO3 (mg/L)	0.0	3.6	0.0	10.4	0.0
7	F (mg/L)	0.14	0.11			
8	Fe (mg/L)	0.1	0.1		0.1	
9	HCO3 (mg/L)	83	106	110	127	120
10	K (mg/L)	1.0	5.1	2.0	4.4	14.4
11	Mg (mg/L)	10.7	6.8	15.9	12.0	12.6
12	Na (mg/L)	7.1	26.2	11.5	17.1	34.7
13	NO2+NO3 (mg N/L)				0.18	
14	NO2-N (mgN/L)	0.10	0.05		0.07	
15	NO3-N (mgN/L)				0.12	
16	o-PO4-P (mg P/L)					
17	P-Tot (mgP/L)	0.070	0.075		0.053	
18	SiO2 (mg/L)	11.2	11.5		11.0	
19	SO4 (mg/L)	12.8	11.0		11.7	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.0	0.5	0.3	0.4	2.9
2	COD (mg/L)	16.0	14.0			
3	DO (mg/L)	7.8	6.7	7.0	7.0	6.6
4	DO_SAT% (%)	93	87	86	87	83
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	38	46	59	68	73
2	HAR_Total (mgCaCO3/L)	83	74	125	118	126
3	Na% (%)	16	35	18	22	33
4	RSC (-)	0.0	0.4	0.0	0.1	0.1
5	SAR (-)	0.3	1.3	0.5	0.7	1.4
	PESTICIDES					

SITE KANTAMAL

HISTORY SHEET

Water Year : 2015-2016

Site : KANTAMAL

Code : EMF00C3

State : Orissa

District : Boudh

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Tel

Sub Tributary :

Sub-Sub Tributary :

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Drainage Area : 19600 Sq. Km.

Bank :

Latitude : 20°39'00"

Longitude : 83°43'55"

Zero of Gauge (m) : 118 (m.s.l)

8/8/1971 - 8/8/2025

Opening Date

Closing Date

Gauge : 8/8/1971

Discharge : 8/26/1971

Sediment : 7/22/1976

Water Quality : 1/1/1972

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1972-1973	7117	108.120	7/6/1972	0.100	101.820	5/15/1973
1973-1974	12862	109.088	7/9/1973	0.100	102.020	5/11/1974
1974-1975	2700	107.230	8/18/1974	0.050	119.575	5/8/1975
1975-1976	4700	126.030	8/14/1975	0.046	119.435	5/14/1976
1976-1977	11380	129.135	8/3/1976	0.098	119.295	4/16/1977
1977-1978	15374	130.505	9/14/1977	0.470	118.910	5/31/1978
1978-1979	12000	129.090	8/14/1978	0.060	119.310	5/30/1979
1979-1980	4210	126.360	7/9/1979	0.012	119.290	6/12/1979
1980-1981	12960	129.400	9/19/1980	0.852	119.370	5/30/1981
1981-1982	8852	128.365	8/9/1981	0.840	119.345	6/1/1981
1982-1983	7900	131.415	8/30/1982	0.100	118.945	4/15/1983
1983-1984	2131	123.700	8/8/1983	0.300	119.330	4/5/1984
1984-1985	3400	127.050	8/2/1984	0.010	119.615	4/26/1985
1985-1986	9611	128.465	8/8/1985	0.200	119.090	4/20/1986
1986-1987	5099	126.105	6/26/1986	0.010	119.755	4/20/1987
1987-1988	3231	124.880	9/5/1987	0.028	119.740	4/23/1988
1988-1989	1180	123.450	9/24/1988	0.210	119.555	2/15/1989
1989-1990	2257	124.280	8/28/1989	0.473	119.710	4/28/1990
1990-1991	13633	130.480	8/23/1990	3.091	119.500	5/29/1991
1991-1992	10560	129.145	7/30/1991	1.457	119.665	5/21/1992
1992-1993	16263	130.280	7/28/1992	0.192	119.160	5/25/1993
1993-1994	5400	126.630	8/15/1993	0.286	119.620	5/30/1994

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1994-1995	11659	129.470	9/5/1994	0.274	119.620	6/4/1994
1995-1996	8692	128.260	9/2/1995	0.900	119.560	5/23/1996
1996-1997	1891	123.773	8/3/1996	0.286	119.100	4/2/1997
1997-1998	11982	129.760	8/22/1997	0.100	119.040	6/8/1997
1998-1999	891.5	122.860	7/3/1998	0.253	119.055	3/23/1999
1999-2000	1974	123.680	9/2/1999	2.180	119.190	6/10/1999
2000-2001	3425	125.140	7/19/2000	39.78	120.150	5/8/2001
2001-2002	12770	129.860	7/8/2001	13.31	120.225	5/21/2002
2002-2003	2900	123.950	8/25/2002	7.505	120.020	1/28/2003
2003-2004	12915	130.110	8/29/2003	39.90	120.300	6/10/2003
2004-2005	9008	129.400	6/16/2004	25.13	120.040	3/31/2005
2005-2006	11030	130.010	9/14/2005	33.64	120.245	6/10/2005
2006-2007	17500	131.730	7/5/2006	29.60	119.775	2/1/2007
2007-2008	12857	130.300	8/8/2007	20.70	119.820	5/28/2008
2008-2009	20000	132.700	9/19/2008	15.00	119.060	5/31/2009
2009-2010	11798	129.035	7/20/2009	15.28	119.190	6/20/2009
2010-2011	10944	128.790	8/7/2010	24.18	119.770	3/23/2011
2011-2012	3268	125.130	9/7/2011	3.523	119.500	4/21/2012
2012-2013	3466	125.325	8/3/2012	14.75	119.735	6/16/2012
2013-2014	7260	127.160	8/1/2013	33.00	119.960	1/26/2014
2014-2015	7778	128.060	8/5/2014	32.08	119.980	4/4/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : KANTAMAL (EMF00C3)

Division : MD,CWC,Burla

Local River : Tel

Sub-Division : MMSD II,CWC,Burla

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	120.700	195.0	121.035	216.5	120.570	156.3	122.805	1176	120.870	263.5	120.180	92.00 *
2	120.620	171.8	121.385	570.8	120.820	183.1 *	122.140	615.2	120.800	243.3 *	120.300	122.0
3	120.240	75.00	120.990	210.8	120.935	195.4	121.935	523.0	120.750	234.7	120.310	123.2
4	120.230	74.38	121.205	269.8	120.775	196.2	122.070	574.9	120.730	233.4 *	120.300	123.3
5	120.460	138.4	121.420	295.0 *	120.630	172.8	121.860	479.8	120.690	228.4	120.270	113.5
6	120.620	174.5	121.090	256.3	120.665	183.1	121.380	302.1 *	120.650	209.7	120.250	114.6
7	120.740	219.7 *	120.930	213.7	120.805	194.8	121.215	234.7	120.630	202.5	120.230	108.8
8	120.590	163.3	120.670	159.3	120.695	147.1	120.970	197.6	120.600	194.4	120.230	104.3 *
9	120.440	135.7	120.590	138.7	120.590	139.4 *	120.940	188.5	120.500	157.9	120.230	99.75
10	120.390	120.8	120.865	187.1	120.640	141.8	120.850	166.3	120.470	151.8	120.260	108.6
11	120.460	146.6	121.315	293.2	120.960	231.2	120.825	146.2	120.440	149.5 *	120.240	105.5 *
12	120.785	227.9	121.520	438.5 *	120.600	129.5	120.870	170.6	120.410	142.7	120.210	100.8
13	120.880	246.2	121.965	851.1	121.200	232.2	120.880	171.8 *	120.380	136.0	120.320	122.5
14	120.770	228.5 *	121.490	541.0	121.310	352.0	120.950	174.9	120.315	129.8	120.200	97.51
15	121.040	271.9	121.480	521.4	122.350	930.7 *	121.040	201.4	120.260	121.6	120.070	73.60 *
16	120.835	216.0	121.460	515.3	121.580	502.2 *	121.900	502.7	120.230	119.8	120.100	77.46
17	121.090	286.0	121.810	776.3	121.030	196.1	128.120	6594 *	120.230	118.1	120.030	69.12
18	121.130	303.0	121.930	801.4 *	121.325	339.4	127.855	6334	120.220	115.9 *	120.010	65.45
19	121.105	288.0	121.860	736.5 *	121.695	408.9	124.990	3450	120.210	114.0	120.010	63.32
20	120.910	253.3	121.745	707.8	121.510	354.0	122.860	1200 *	120.210	113.1	120.010	62.52
21	120.930	260.0 *	121.575	391.1	121.235	288.6	124.740	2646	120.200	111.8 *	120.000	59.84
22	120.895	206.4	121.345	302.0	121.420	351.9	124.950	3224	120.200	111.8 *	119.970	55.25 *
23	120.895	207.6	121.280	279.4	121.180	161.6 *	123.530	1823	120.190	111.3	119.970	54.08
24	121.815	839.0	121.495	353.9	121.335	279.7	123.070	1503	120.190	109.0 *	120.010	59.94
25	121.470	625.2	121.690	491.1	121.300	277.6	122.150	758.5 *	120.190	109.0 *	120.000	57.83 *
26	121.030	222.2	121.500	350.1 *	121.550	354.7	121.790	467.5	120.180	107.6	119.930	48.31
27	120.920	192.6	121.250	235.7	123.000	1474	121.540	404.6 *	120.180	107.6	119.950	50.47
28	120.810	175.0 *	121.160	228.3	122.525	1134	121.300	344.3	120.180	106.9	119.950	49.95
29	120.880	163.5	121.290	345.2	123.050	1570	121.100	295.2	120.180	106.1	119.940	48.33 *
30	120.785	143.6	120.975	234.2	122.480	1034 *	120.995	283.0	120.180	103.6	119.930	46.69
31			120.745	190.0	122.445	996.4			120.180	102.1		
Ten-Daily Mean												
I Ten-Daily	120.503	146.9	121.018	251.8	120.713	171.0	121.616	445.8	120.669	212.0	120.256	111.0
II Ten-Daily	120.900	246.7	121.657	618.2	121.356	367.6	123.029	1894	120.290	126.1	120.120	83.78
III Ten-Daily	121.043	303.5	121.300	309.2	121.956	720.2	122.516	1175	120.186	107.9	119.965	53.07
Monthly												
Min.	120.230	74.38	120.590	138.7	120.570	129.5	120.825	146.2	120.180	102.1	119.930	46.69
Max.	121.815	839.0	121.965	851.1	123.050	1570	128.120	6594	120.870	263.5	120.320	123.3
Mean	120.815	232.4	121.325	390.4	121.361	429.3	122.387	1172	120.376	147.3	120.114	82.62

Annual Runoff in MCM = 6851 Annual Runoff in mm = 350

Peak Observed Discharge = 6334 cumecs on 18/09/2015 Corres. Water Level :127.855 m

Lowest Observed Discharge = 8.581 cumecs on 21/01/2016 Corres. Water Level :119.64 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

Stage-Discharge Data for the period 2015 - 2016

Station Name : KANTAMAL (EMF00C3)

Division : MD,CWC,Burla

Local River : Tel

Sub-Division : MMSD II,CWC,Burla

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	119.990	54.30	119.750	23.61	119.690	15.40	119.850	29.88	119.670	11.37	119.780	27.00 *
2	119.990	53.49	119.780	26.67	119.670	12.81	119.850	31.26	119.670	11.27	119.840	29.25
3	119.970	50.38	119.760	24.27 *	119.670	12.32	119.870	35.84	119.660	10.50 *	119.780	23.29
4	120.110	68.40	119.740	21.85	119.690	18.49	119.870	36.18	119.690	15.47	119.790	25.01
5	120.080	66.66	119.720	20.22	119.690	18.04	119.790	26.39	119.740	20.63	119.790	25.20
6	120.070	65.00 *	119.700	19.07	119.680	16.57	119.780	24.00 *	119.740	20.31	119.810	29.61
7	120.010	56.68	119.690	16.68	119.670	10.77	119.780	24.00 *	119.750	23.55	119.790	28.10
8	119.960	50.56	119.690	15.20	119.670	10.77	119.750	18.90	119.750	22.79	119.780	27.27 *
9	119.960	51.11	119.690	16.36	119.670	10.46	119.750	19.92	119.750	22.32	119.840	30.83
10	119.920	43.50	119.670	13.54 *	119.690	13.36	119.730	17.35	119.750	22.00 *	119.800	27.85
11	119.900	40.79	119.700	15.22	119.700	14.82	119.730	21.17	119.780	23.43	119.770	22.71
12	119.940	46.24	119.680	12.63	119.700	14.70	119.730	21.17	119.780	24.67	119.810	30.98
13	119.900	40.50 *	119.670	12.23	119.700	14.34	119.730	21.00 *	119.740	20.45	119.940	46.62
14	119.870	38.92	119.670	11.14	119.700	14.33	119.750	22.35	119.720	18.22	119.970	52.75
15	119.900	43.52	119.670	10.98	119.720	15.39	119.750	21.72	119.700	16.31	119.980	53.00 *
16	119.920	45.60	119.670	11.08	119.720	15.30	119.780	25.25	119.700	15.14	119.830	34.59
17	119.950	51.63	119.690	12.00 *	119.720	15.26	119.780	24.00	119.710	16.00 *	119.830	34.86
18	119.900	44.30	119.690	12.26	119.720	14.71	119.780	23.65	119.690	14.33	119.870	38.98
19	119.880	41.45	119.700	12.99	119.710	14.20	119.820	28.90	119.700	16.45	119.960	56.72
20	119.870	40.00 *	119.670	11.81	119.710	14.12	119.820	28.00 *	119.700	16.00 *	120.000	65.49
21	119.850	38.51	119.640	8.581	119.710	14.12	119.790	26.35	119.700	16.42	119.980	60.00 *
22	119.870	41.52	119.650	9.076	119.720	13.38	119.770	18.23	119.720	19.20	119.960	55.00 *
23	119.920	48.68	119.640	9.061	119.720	13.12	119.770	17.47	119.710	18.54	119.840	32.81
24	119.900	45.56	119.640	9.990 *	119.720	13.03	119.740	16.15 *	119.700	16.00 *	119.780	24.63
25	119.880	43.33 *	119.640	11.66	119.740	16.69	119.720	15.11 *	119.640	9.926	119.810	29.00
26	119.830	38.08	119.640	11.00 *	119.770	19.57	119.670	13.11	119.640	10.60	119.800	27.44
27	119.820	35.33 *	119.660	12.60	119.820	25.83	119.670	12.00 *	119.680	15.31	119.920	43.86
28	119.850	45.83	119.650	10.00	119.870	32.00	119.660	11.92	119.710	19.40	119.920	43.88
29	119.820	40.31	119.650	9.842	119.850	30.67	119.660	11.59	119.740	22.79	119.900	40.00 *
30	119.800	37.33	119.650	9.356			119.670	11.14	119.780	27.67	120.000	57.86
31	119.760	24.42	119.650	9.000 *			119.660	11.40			120.000	57.75
Ten-Daily Mean												
I Ten-Daily	120.006	56.01	119.719	19.75	119.679	13.90	119.802	26.37	119.717	18.02	119.800	27.34
II Ten-Daily	119.903	43.29	119.681	12.23	119.710	14.72	119.767	23.72	119.722	18.10	119.896	43.67
III Ten-Daily	119.845	39.90	119.646	10.02	119.769	19.82	119.707	14.95	119.702	17.59	119.901	42.93
Monthly												
Min.	119.760	24.42	119.640	8.581	119.670	10.46	119.660	11.14	119.640	9.926	119.770	22.71
Max.	120.110	68.40	119.780	26.67	119.870	32.00	119.870	36.18	119.780	27.67	120.000	65.49
Mean	119.916	46.19	119.681	13.87	119.718	16.02	119.757	21.46	119.714	17.9	119.867	38.14

Peak Computed Discharge = 6594 cumecs on 17/09/2015

Corres. Water Level :128.12 m

Lowest Computed Discharge = 9.000 cumecs on 31/01/2016

Corres. Water Level :119.65 m

Q: Observed/Computed Discharge in cumecs WL:Corresponding Mean Water Level(m.s.l) in m *:Computed Discharge

Note:Missing values ignored while arriving at Annual Runoff

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

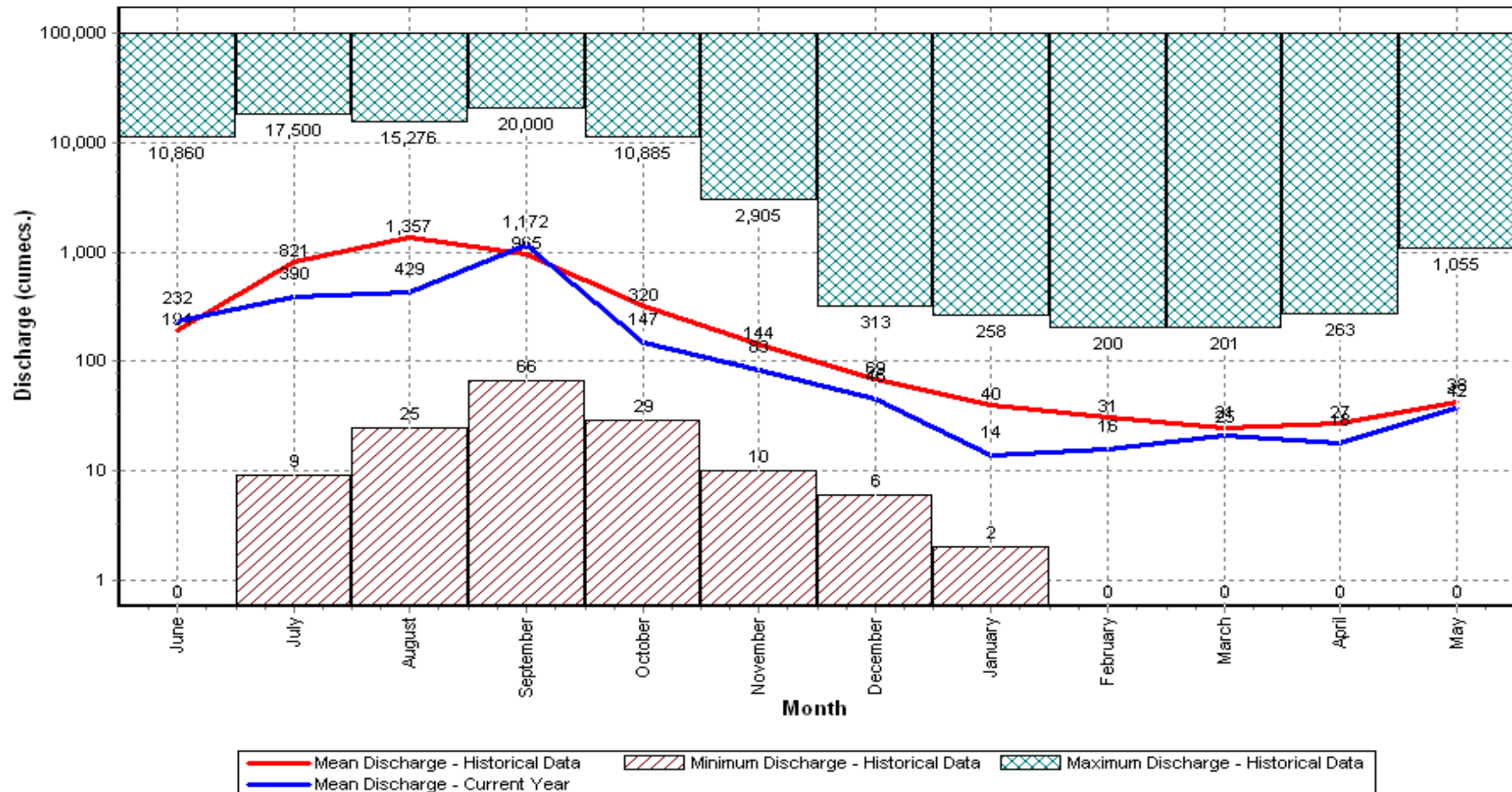
Station Name : KANTAMAL (EMF00C3)

Data considered : 1972-2016

Division : MD,CWC,Burla

Local River : Tel

Sub-Division : MMSD II,CWC,Burla



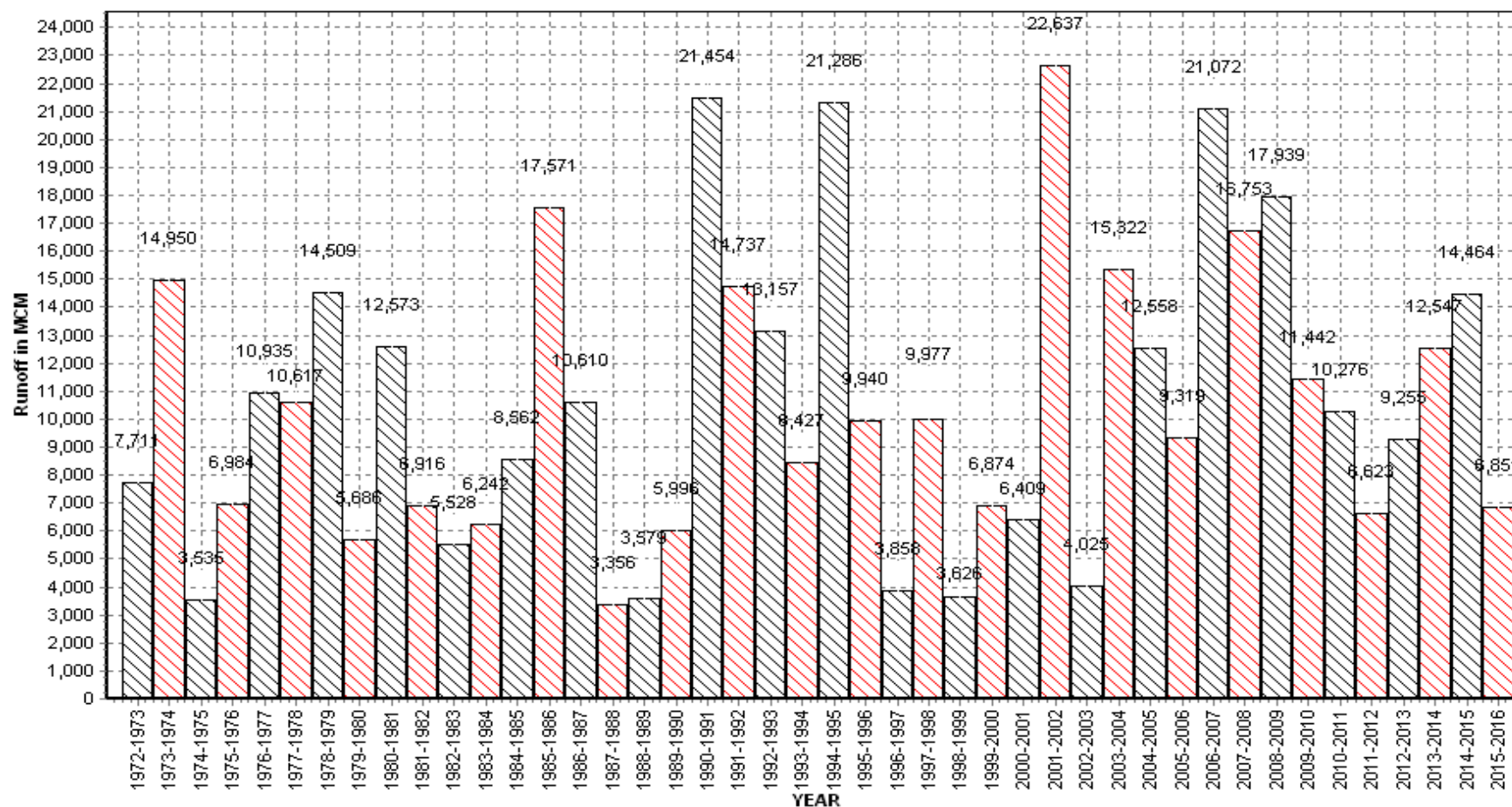
Annual Runoff Values for the period: 1972 - 2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



Note: Missing values have not been considered while arriving at Annual Runoff

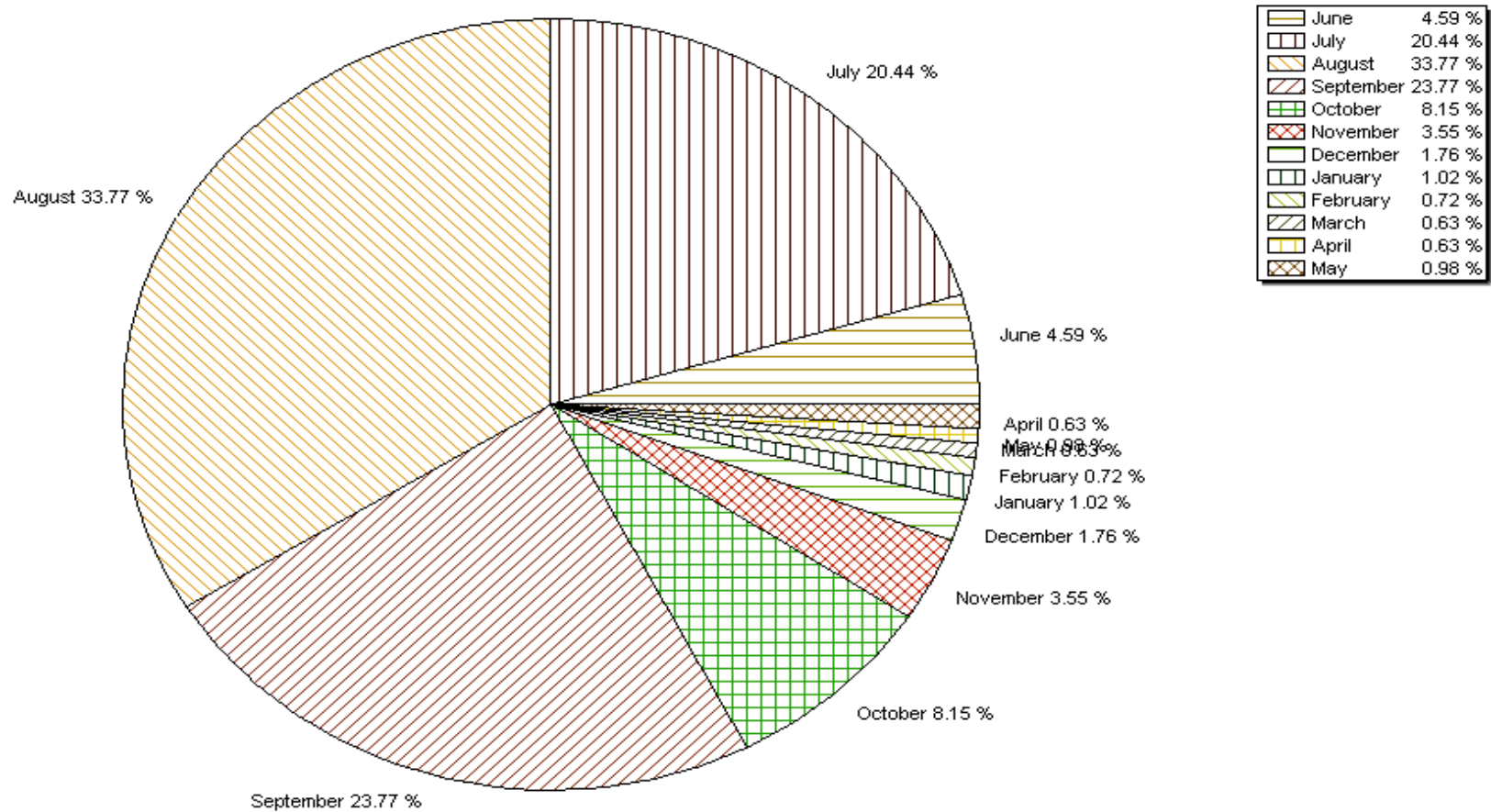
Monthly Average Runoff based on period : 1972-2015

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



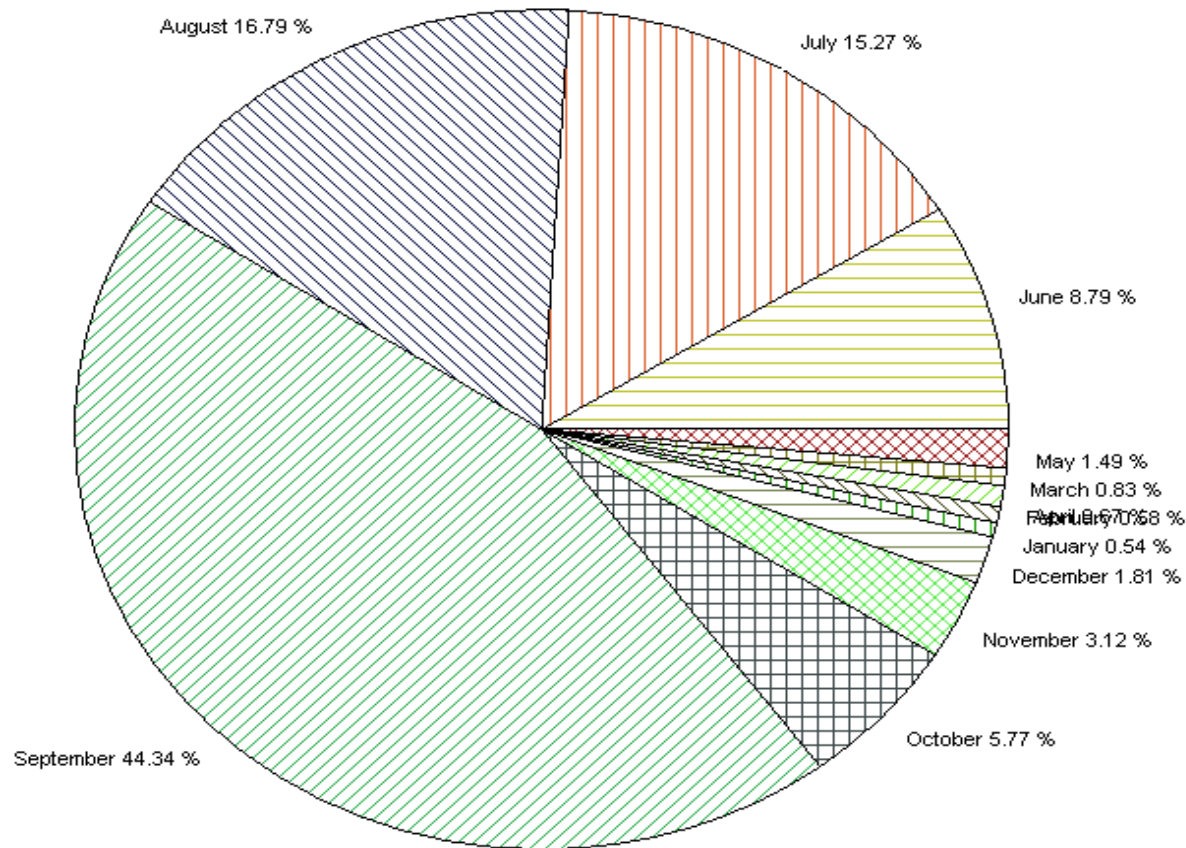
Monthly Runoff for the Year : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



June	8.79 %
July	15.27 %
August	16.79 %
September	44.34 %
October	5.77 %
November	3.12 %
December	1.81 %
January	0.54 %
February	0.58 %
March	0.83 %
April	0.67 %
May	1.49 %

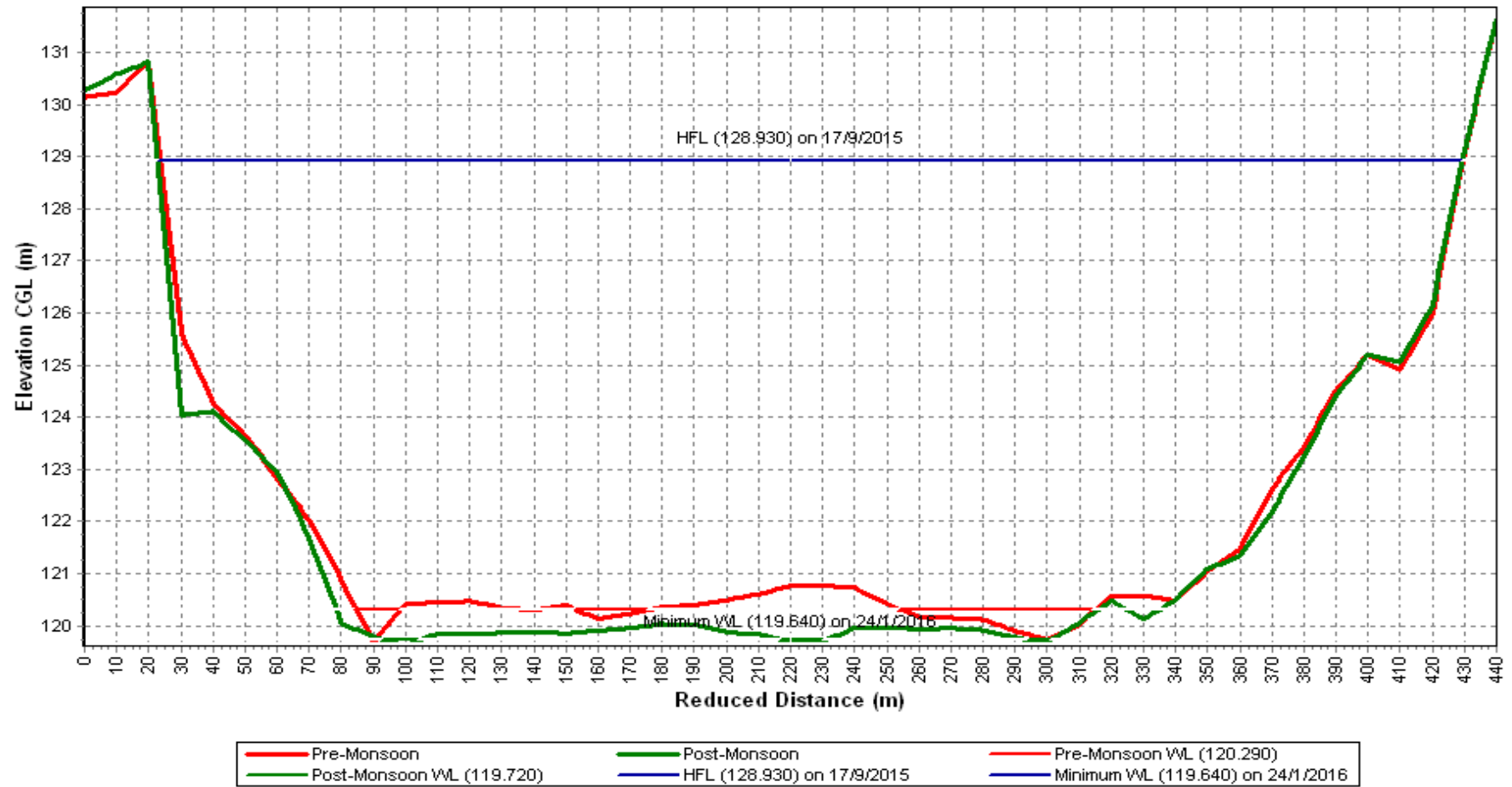
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



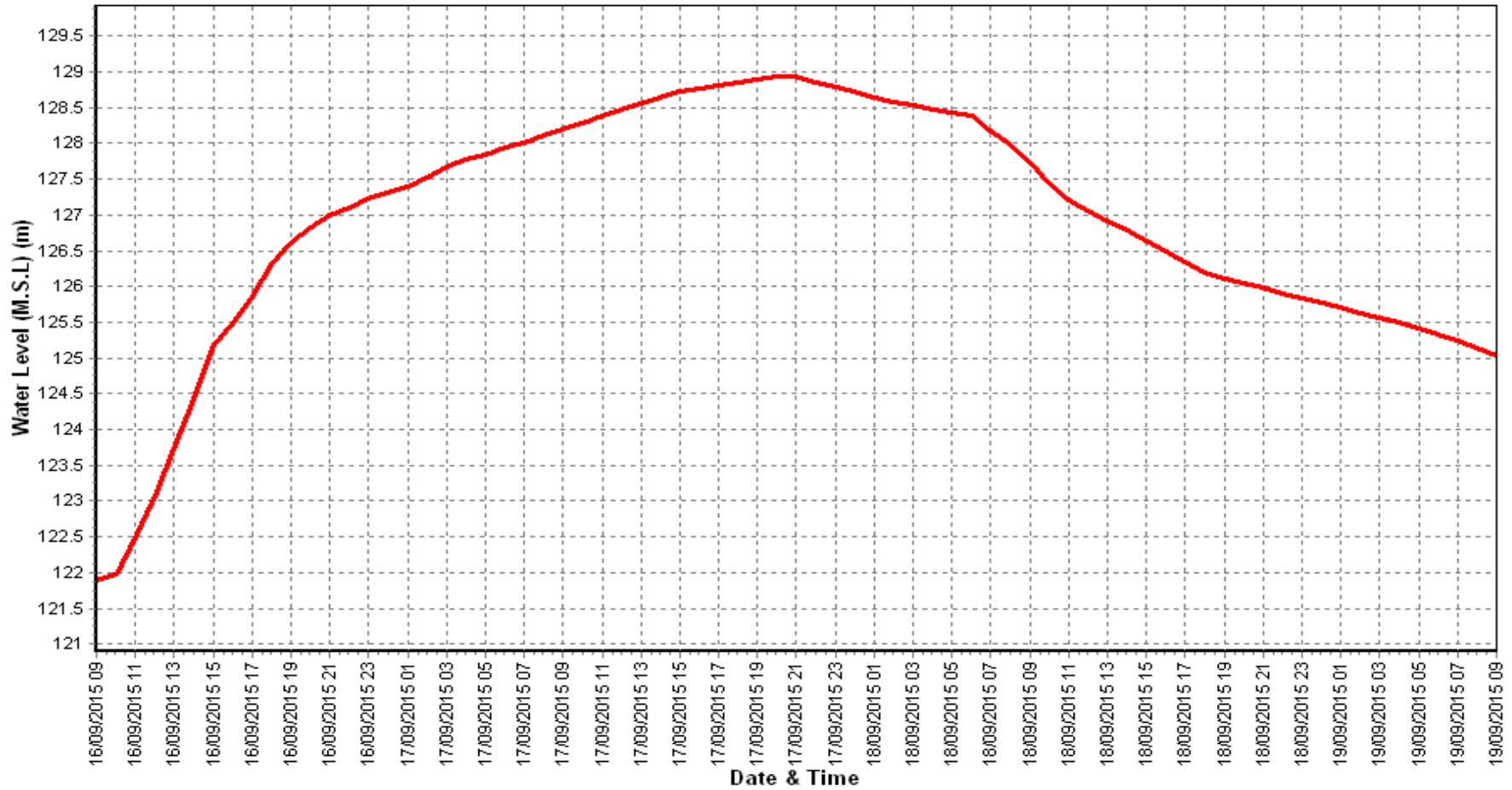
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



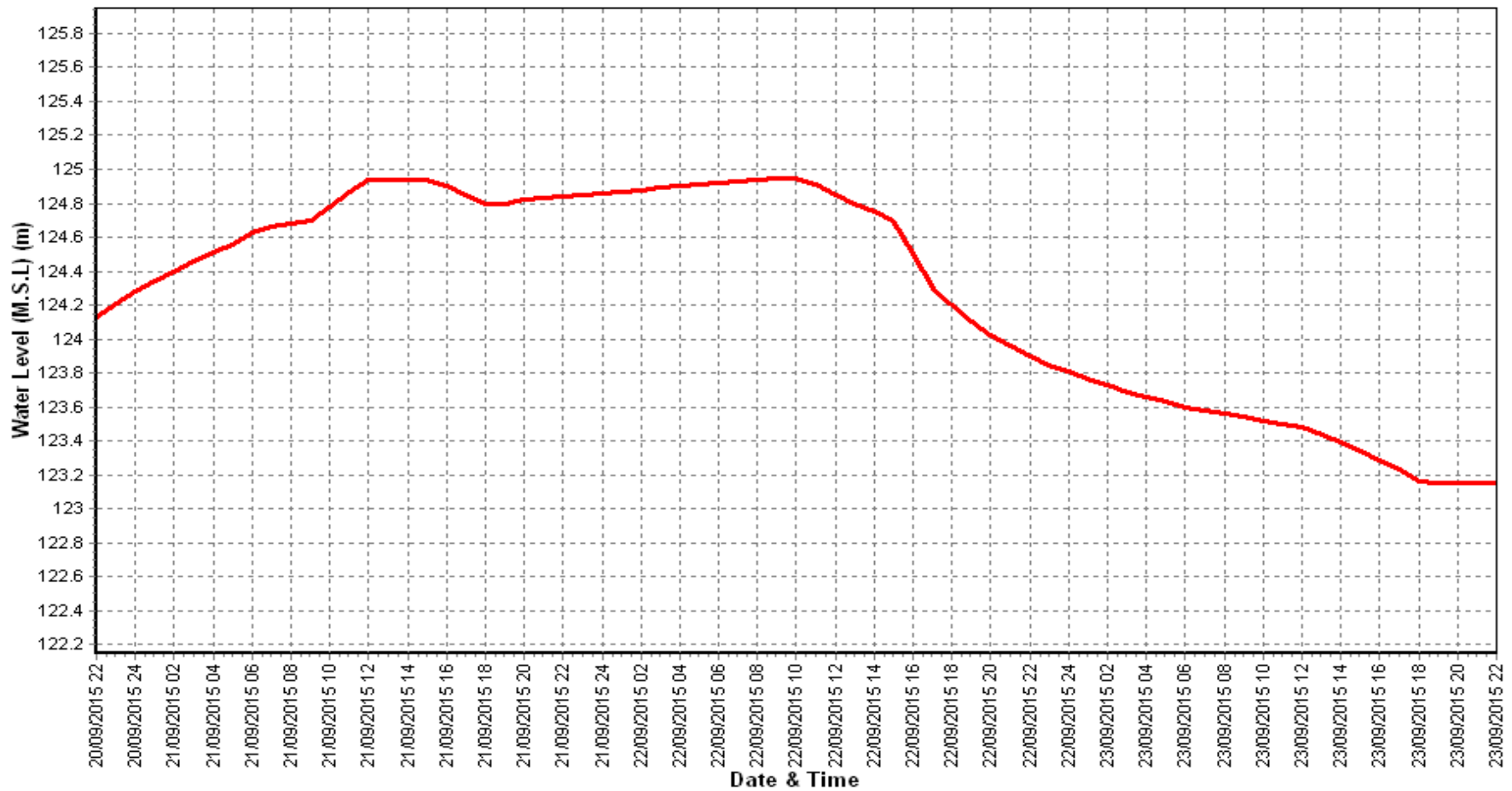
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



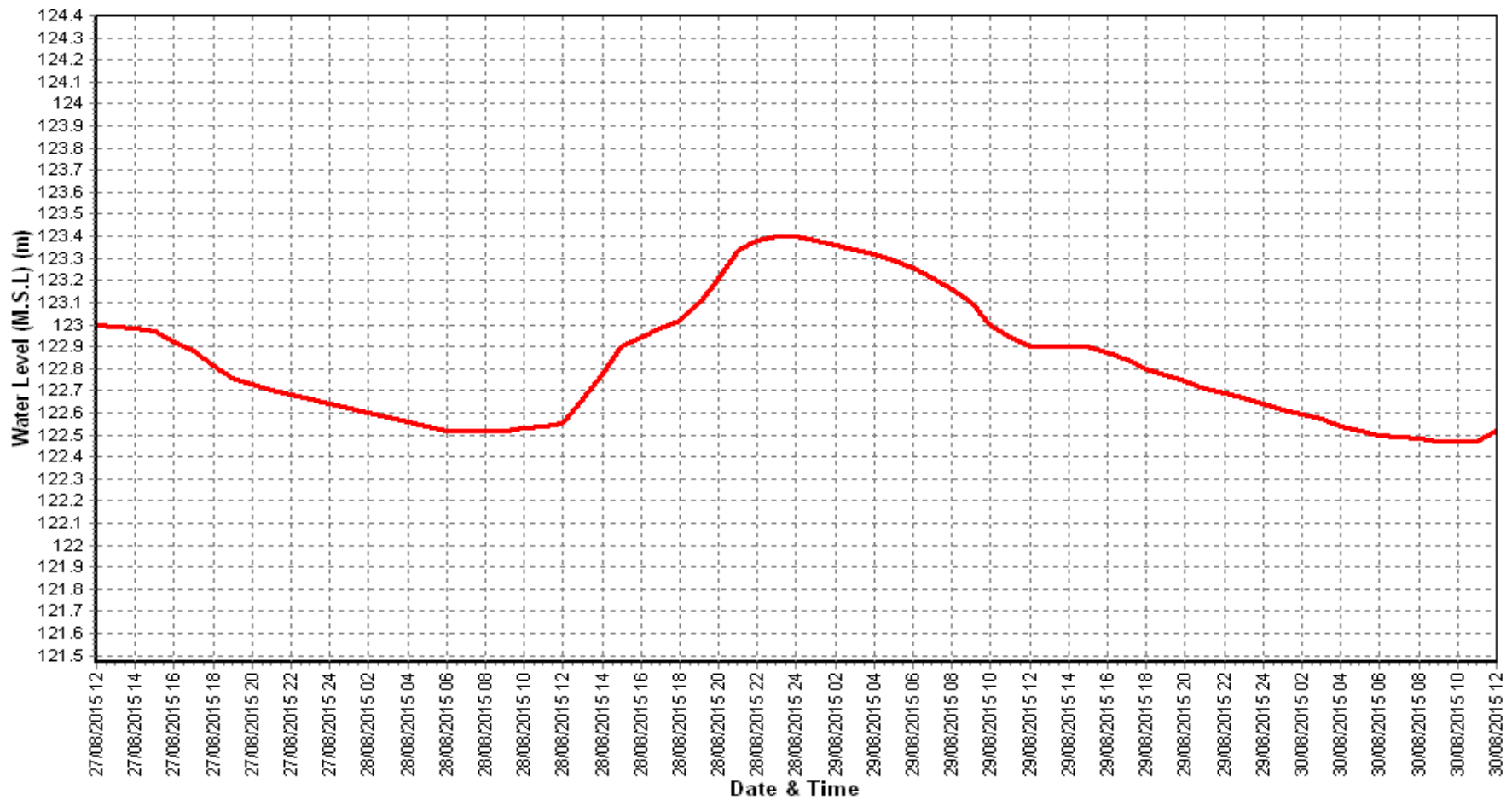
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

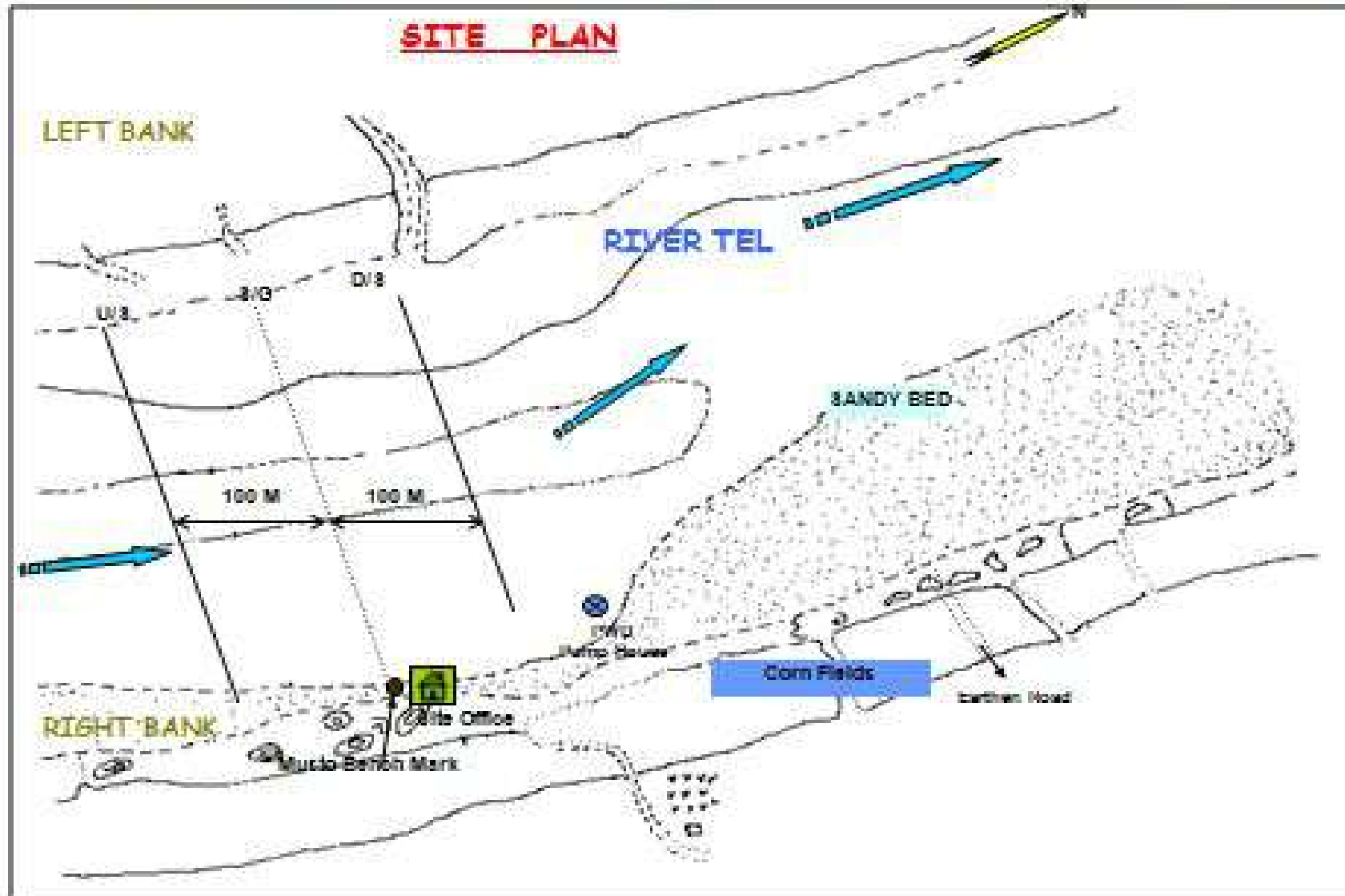
Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	195.0	0.000	0.000	0.025	0.025	426	216.5	0.000	0.000	0.089	0.089	1655	156.3	0.000	0.000	0.077	0.077	1035
2	171.8	0.000	0.000	0.029	0.029	430	570.8	0.000	0.000	0.305	0.305	15041	183.1	0.000	0.000	0.000	0.000	0
3	75.00	0.000	0.000	0.026	0.026	171	210.8	0.000	0.000	0.103	0.103	1870	195.4	0.000	0.000	0.061	0.061	1035
4	74.38	0.000	0.000	0.031	0.031	199	269.8	0.000	0.000	0.157	0.157	3667	196.2	0.000	0.000	0.088	0.088	1485
5	138.4	0.000	0.000	0.035	0.035	415	295.0	0.000	0.000	0.000	0.000	0	172.8	0.000	0.000	0.087	0.087	1299
6	174.5	0.000	0.000	0.066	0.066	1000	256.3	0.000	0.000	0.108	0.108	2392	183.1	0.000	0.000	0.110	0.110	1732
7	219.7	0.000	0.000	0.000	0.000	0	213.7	0.000	0.000	0.105	0.105	1930	194.8	0.000	0.000	0.097	0.097	1639
8	163.3	0.000	0.000	0.028	0.028	392	159.3	0.000	0.000	0.109	0.109	1503	147.1	0.000	0.000	0.097	0.097	1237
9	135.7	0.000	0.000	0.028	0.028	333	138.7	0.000	0.000	0.131	0.131	1571	139.4	0.000	0.000	0.000	0.000	0
10	120.8	0.000	0.000	0.059	0.059	613	187.1	0.000	0.000	0.145	0.145	2351	141.8	0.000	0.000	0.079	0.079	971
11	146.6	0.000	0.000	0.068	0.068	862	293.2	0.000	0.000	0.125	0.125	3159	231.2	0.000	0.000	0.083	0.083	1658
12	227.9	0.000	0.000	0.108	0.108	2130	438.5	0.000	0.000	0.000	0.000	0	129.5	0.000	0.000	0.080	0.080	892
13	246.2	0.000	0.000	0.106	0.106	2249	851.1	0.000	0.000	0.309	0.309	22744	232.2	0.000	0.000	0.240	0.240	4810
14	228.5	0.000	0.000	0.000	0.000	0	541.0	0.000	0.000	0.125	0.125	5842	352.0	0.000	0.000	0.448	0.448	13624
15	271.9	0.000	0.000	0.103	0.103	2417	521.4	0.000	0.000	0.195	0.195	8784	930.7	0.000	0.000	0.000	0.000	0
16	216.0	0.000	0.000	0.108	0.108	2010	515.3	0.000	0.000	0.185	0.185	8214	502.2	0.000	0.000	0.000	0.000	0
17	286.0	0.000	0.000	0.099	0.099	2451	776.3	0.000	0.000	0.159	0.159	10651	196.1	0.000	0.000	0.148	0.148	2508
18	303.0	0.000	0.000	0.092	0.092	2398	801.4	0.000	0.000	0.000	0.000	0	339.4	0.000	0.000	0.338	0.338	9910
19	288.0	0.000	0.000	0.055	0.055	1379	736.5	0.000	0.000	0.000	0.000	0	408.9	0.000	0.000	0.165	0.165	5836
20	253.3	0.000	0.000	0.054	0.054	1173	707.8	0.000	0.000	0.151	0.151	9223	354.0	0.000	0.000	0.162	0.162	4955
21	260.0	0.000	0.000	0.000	0.000	0	391.1	0.000	0.000	0.104	0.104	3497	288.6	0.000	0.000	0.133	0.133	3306
22	206.4	0.000	0.000	0.419	0.419	7476	302.0	0.000	0.000	0.077	0.077	1996	351.9	0.000	0.000	0.120	0.120	3636
23	207.6	0.000	0.000	0.469	0.469	8410	279.4	0.000	0.000	0.051	0.051	1236	161.6	0.000	0.000	0.000	0.000	0
24	839.0	0.000	0.000	0.888	0.888	64335	353.9	0.000	0.000	0.080	0.080	2455	279.7	0.000	0.000	0.098	0.098	2361
25	625.2	0.000	0.000	0.408	0.408	22048	491.1	0.000	0.000	0.180	0.180	7638	277.6	0.000	0.000	0.086	0.086	2056
26	222.2	0.000	0.000	0.131	0.131	2509	350.1	0.000	0.000	0.000	0.000	0	354.7	0.000	0.000	0.109	0.109	3340
27	192.6	0.000	0.000	0.142	0.142	2360	235.7	0.000	0.000	0.085	0.085	1723	1474	0.000	0.000	0.111	0.111	14071
28	175.0	0.000	0.000	0.000	0.000	0	228.3	0.000	0.000	0.067	0.067	1325	1134	0.000	0.000	0.104	0.104	10147
29	163.5	0.000	0.000	0.123	0.123	1734	345.2	0.000	0.000	0.108	0.108	3206	1570	0.000	0.000	0.110	0.110	14926
30	143.6	0.000	0.000	0.094	0.094	1172	234.2	0.000	0.000	0.098	0.098	1973	1034	0.000	0.000	0.000	0.000	0
31							190.0	0.000	0.000	0.072	0.072	1189	996.4	0.000	0.000	0.104	0.104	8936
<u>Ten Daily Mean</u>																		
Ten Daily I	146.9	0.000	0.000	0.033	0.033	398	251.8	0.000	0.000	0.125	0.125	3198	171.0	0.000	0.000	0.070	0.070	1043
Ten Daily II	246.7	0.000	0.000	0.079	0.079	1707	618.2	0.000	0.000	0.125	0.125	6862	367.6	0.000	0.000	0.166	0.166	4419
Ten Daily III	303.5	0.000	0.000	0.267	0.267	11004	309.2	0.000	0.000	0.084	0.084	2385	720.2	0.000	0.000	0.088	0.088	5707
<u>Monthly</u>																		
Total						131091						126835						117407

Annual Sediment Load (Metric Tonnes) : 1107827

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	1176	0.000	0.000	0.101	0.101	10211	263.5	0.000	0.000	0.073	0.073	1651	92.00	0.000	0.000	0.000	0.000	0
2	615.2	0.000	0.000	0.072	0.072	3843	243.3	0.000	0.000	0.000	0.000	0	122.0	0.000	0.000	0.015	0.015	156
3	523.0	0.000	0.000	0.073	0.073	3317	234.7	0.000	0.000	0.040	0.040	813	123.2	0.000	0.000	0.015	0.015	162
4	574.9	0.000	0.000	0.072	0.072	3591	233.4	0.000	0.000	0.000	0.000	0	123.3	0.000	0.000	0.015	0.015	161
5	479.8	0.000	0.000	0.076	0.076	3167	228.4	0.000	0.000	0.041	0.041	805	113.5	0.000	0.000	0.015	0.015	144
6	302.1	0.000	0.000	0.000	0.000	0	209.7	0.000	0.000	0.041	0.041	735	114.6	0.000	0.000	0.014	0.014	143
7	234.7	0.000	0.000	0.080	0.080	1620	202.5	0.000	0.000	0.041	0.041	723	108.8	0.000	0.000	0.014	0.014	133
8	197.6	0.000	0.000	0.078	0.078	1335	194.4	0.000	0.000	0.041	0.041	692	104.3	0.000	0.000	0.000	0.000	0
9	188.5	0.000	0.000	0.081	0.081	1321	157.9	0.000	0.000	0.042	0.042	570	99.75	0.000	0.000	0.038	0.038	323
10	166.3	0.000	0.000	0.081	0.081	1167	151.8	0.000	0.000	0.046	0.046	601	108.6	0.000	0.000	0.038	0.038	358
11	146.2	0.000	0.000	0.081	0.081	1023	149.5	0.000	0.000	0.000	0.000	0	105.5	0.000	0.000	0.000	0.000	0
12	170.6	0.000	0.000	0.080	0.080	1178	142.7	0.000	0.000	0.035	0.035	427	100.8	0.000	0.000	0.038	0.038	331
13	171.8	0.000	0.000	0.000	0.000	0	136.0	0.000	0.000	0.032	0.032	380	122.5	0.000	0.000	0.039	0.039	411
14	174.9	0.000	0.000	0.081	0.081	1224	129.8	0.000	0.000	0.030	0.030	334	97.51	0.000	0.000	0.029	0.029	243
15	201.4	0.000	0.000	0.083	0.083	1442	121.6	0.000	0.000	0.026	0.026	277	73.60	0.000	0.000	0.000	0.000	0
16	502.7	0.000	0.000	0.082	0.082	3566	119.8	0.000	0.000	0.032	0.032	334	77.46	0.000	0.000	0.044	0.044	293
17	6594	0.000	0.000	0.000	0.000	0	118.1	0.000	0.000	0.036	0.036	362	69.12	0.000	0.000	0.033	0.033	199
18	6334	0.065	0.005	0.485	0.555	303764	115.9	0.000	0.000	0.000	0.000	0	65.45	0.000	0.000	0.023	0.023	131
19	3450	0.000	0.000	0.395	0.395	117726	114.0	0.000	0.000	0.048	0.048	474	63.32	0.000	0.000	0.023	0.023	125
20	1200	0.000	0.000	0.000	0.000	0	113.1	0.000	0.000	0.046	0.046	446	62.52	0.000	0.000	0.023	0.023	122
21	2646	0.000	0.000	0.389	0.389	88874	111.8	0.000	0.000	0.000	0.000	0	59.84	0.000	0.000	0.022	0.022	115
22	3224	0.000	0.000	0.375	0.375	104445	111.8	0.000	0.000	0.000	0.000	0	55.25	0.000	0.000	0.000	0.000	0
23	1823	0.000	0.000	0.156	0.156	24613	111.3	0.000	0.000	0.035	0.035	333	54.08	0.000	0.000	0.039	0.039	181
24	1503	0.000	0.000	0.153	0.153	19814	109.0	0.000	0.000	0.000	0.000	0	59.94	0.000	0.000	0.039	0.039	201
25	758.5	0.000	0.000	0.000	0.000	0	109.0	0.000	0.000	0.000	0.000	0	57.83	0.000	0.000	0.000	0.000	0
26	467.5	0.000	0.000	0.089	0.089	3607	107.6	0.000	0.000	0.035	0.035	329	48.31	0.000	0.000	0.038	0.038	159
27	404.6	0.000	0.000	0.000	0.000	0	107.6	0.000	0.000	0.035	0.035	328	50.47	0.000	0.000	0.037	0.037	162
28	344.3	0.000	0.000	0.086	0.086	2558	106.9	0.000	0.000	0.035	0.035	319	49.95	0.000	0.000	0.037	0.037	160
29	295.2	0.000	0.000	0.076	0.076	1933	106.1	0.000	0.000	0.032	0.032	296	48.33	0.000	0.000	0.000	0.000	0
30	283.0	0.000	0.000	0.069	0.069	1687	103.6	0.000	0.000	0.030	0.030	267	46.69	0.000	0.000	0.032	0.032	130
31							102.1	0.000	0.000	0.029	0.029	256						
<u>Ten Daily Mean</u>																		
Ten Daily I	445.8	0.000	0.000	0.072	0.072	2957	212.0	0.000	0.000	0.036	0.036	659	111.0	0.000	0.000	0.016	0.016	158
Ten Daily II	1894	0.007	0.001	0.129	0.136	42992	126.1	0.000	0.000	0.028	0.028	304	83.78	0.000	0.000	0.025	0.025	186
Ten Daily III	1175	0.000	0.000	0.139	0.139	24753	107.9	0.000	0.000	0.021	0.021	193	53.07	0.000	0.000	0.024	0.024	111
<u>Monthly</u>																		
Total						707026						11752						4544

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	54.30	0.000	0.000	0.032	0.032	150	23.61	0.000	0.000	0.024	0.024	48	15.40	0.000	0.000	0.023	0.023	31
2	53.49	0.000	0.000	0.031	0.031	144	26.67	0.000	0.000	0.024	0.024	56	12.81	0.000	0.000	0.023	0.023	25
3	50.38	0.000	0.000	0.031	0.031	134	24.27	0.000	0.000	0.000	0.000	0	12.32	0.000	0.000	0.023	0.023	24
4	68.40	0.000	0.000	0.031	0.031	186	21.85	0.000	0.000	0.023	0.023	44	18.49	0.000	0.000	0.023	0.023	37
5	66.66	0.000	0.000	0.031	0.031	179	20.22	0.000	0.000	0.023	0.023	41	18.04	0.000	0.000	0.023	0.023	36
6	65.00	0.000	0.000	0.000	0.000	0	19.07	0.000	0.000	0.024	0.024	39	16.57	0.000	0.000	0.023	0.023	33
7	56.68	0.000	0.000	0.027	0.027	132	16.68	0.000	0.000	0.023	0.023	34	10.77	0.000	0.000	0.000	0.000	0
8	50.56	0.000	0.000	0.026	0.026	114	15.20	0.000	0.000	0.024	0.024	31	10.77	0.000	0.000	0.023	0.023	21
9	51.11	0.000	0.000	0.026	0.026	115	16.36	0.000	0.000	0.024	0.024	34	10.46	0.000	0.000	0.023	0.023	21
10	43.50	0.000	0.000	0.025	0.025	92	13.54	0.000	0.000	0.000	0.000	0	13.36	0.000	0.000	0.023	0.023	27
11	40.79	0.000	0.000	0.025	0.025	87	15.22	0.000	0.000	0.023	0.023	31	14.82	0.000	0.000	0.023	0.023	30
12	46.24	0.000	0.000	0.026	0.026	102	12.63	0.000	0.000	0.023	0.023	25	14.70	0.000	0.000	0.023	0.023	29
13	40.50	0.000	0.000	0.000	0.000	0	12.23	0.000	0.000	0.023	0.023	24	14.34	0.000	0.000	0.023	0.023	28
14	38.92	0.000	0.000	0.029	0.029	96	11.14	0.000	0.000	0.023	0.023	22	14.33	0.000	0.000	0.000	0.000	0
15	43.52	0.000	0.000	0.028	0.028	105	10.98	0.000	0.000	0.023	0.023	22	15.39	0.000	0.000	0.023	0.023	30
16	45.60	0.000	0.000	0.027	0.027	108	11.08	0.000	0.000	0.022	0.022	21	15.30	0.000	0.000	0.022	0.022	30
17	51.63	0.000	0.000	0.028	0.028	124	12.00	0.000	0.000	0.000	0.000	0	15.26	0.000	0.000	0.022	0.022	29
18	44.30	0.000	0.000	0.026	0.026	101	12.26	0.000	0.000	0.023	0.023	24	14.71	0.000	0.000	0.022	0.022	28
19	41.45	0.000	0.000	0.026	0.026	94	12.99	0.000	0.000	0.023	0.023	26	14.20	0.000	0.000	0.022	0.022	27
20	40.00	0.000	0.000	0.000	0.000	0	11.81	0.000	0.000	0.023	0.023	23	14.12	0.000	0.000	0.022	0.022	27
21	38.51	0.000	0.000	0.031	0.031	102	8.581	0.000	0.000	0.023	0.023	17	14.12	0.000	0.000	0.000	0.000	0
22	41.52	0.000	0.000	0.032	0.032	113	9.076	0.000	0.000	0.022	0.022	18	13.38	0.000	0.000	0.021	0.021	25
23	48.68	0.000	0.000	0.032	0.032	136	9.061	0.000	0.000	0.022	0.022	17	13.12	0.000	0.000	0.021	0.021	24
24	45.56	0.000	0.000	0.032	0.032	125	9.990	0.000	0.000	0.000	0.000	0	13.03	0.000	0.000	0.021	0.021	24
25	43.33	0.000	0.000	0.000	0.000	0	11.66	0.000	0.000	0.023	0.023	23	16.69	0.000	0.000	0.021	0.021	31
26	38.08	0.000	0.000	0.029	0.029	97	11.00	0.000	0.000	0.000	0.000	0	19.57	0.000	0.000	0.022	0.022	37
27	35.33	0.000	0.000	0.000	0.000	0	12.60	0.000	0.000	0.023	0.023	25	25.83	0.000	0.000	0.023	0.023	51
28	45.83	0.000	0.000	0.028	0.028	112	10.00	0.000	0.000	0.023	0.023	20	32.00	0.000	0.000	0.000	0.000	0
29	40.31	0.000	0.000	0.028	0.028	96	9.842	0.000	0.000	0.022	0.022	19	30.67	0.000	0.000	0.023	0.023	61
30	37.33	0.000	0.000	0.026	0.026	85	9.356	0.000	0.000	0.022	0.022	17						
31	24.42	0.000	0.000	0.025	0.025	52	9.000	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	56.01	0.000	0.000	0.026	0.026	125	19.75	0.000	0.000	0.019	0.019	33	13.90	0.000	0.000	0.021	0.021	26
Ten Daily II	43.29	0.000	0.000	0.021	0.021	82	12.23	0.000	0.000	0.021	0.021	22	14.72	0.000	0.000	0.020	0.020	26
Ten Daily III	39.90	0.000	0.000	0.024	0.024	83	10.02	0.000	0.000	0.016	0.016	14	19.82	0.000	0.000	0.017	0.017	28
Monthly																		
Total						2980						700						765

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	29.88	0.000	0.000	0.023	0.023	60	11.37	0.000	0.000	0.012	0.012	12	27.00	0.000	0.000	0.000	0.000	0
2	31.26	0.000	0.000	0.023	0.023	62	11.27	0.000	0.000	0.012	0.012	12	29.25	0.000	0.000	0.020	0.020	50
3	35.84	0.000	0.000	0.023	0.023	72	10.50	0.000	0.000	0.000	0.000	0	23.29	0.000	0.000	0.018	0.018	37
4	36.18	0.000	0.000	0.024	0.024	73	15.47	0.000	0.000	0.017	0.017	23	25.01	0.000	0.000	0.018	0.018	40
5	26.39	0.000	0.000	0.023	0.023	52	20.63	0.000	0.000	0.017	0.017	31	25.20	0.000	0.000	0.019	0.019	41
6	24.00	0.000	0.000	0.000	0.000	0	20.31	0.000	0.000	0.018	0.018	31	29.61	0.000	0.000	0.019	0.019	48
7	24.00	0.000	0.000	0.000	0.000	0	23.55	0.000	0.000	0.018	0.018	36	28.10	0.000	0.000	0.018	0.018	45
8	18.90	0.000	0.000	0.023	0.023	38	22.79	0.000	0.000	0.018	0.018	35	27.27	0.000	0.000	0.000	0.000	0
9	19.92	0.000	0.000	0.023	0.023	40	22.32	0.000	0.000	0.017	0.017	34	30.83	0.000	0.000	0.019	0.019	51
10	17.35	0.000	0.000	0.023	0.023	34	22.00	0.000	0.000	0.000	0.000	0	27.85	0.000	0.000	0.019	0.019	45
11	21.17	0.000	0.000	0.023	0.023	42	23.43	0.000	0.000	0.017	0.017	35	22.71	0.000	0.000	0.019	0.019	38
12	21.17	0.000	0.000	0.023	0.023	42	24.67	0.000	0.000	0.018	0.018	37	30.98	0.000	0.000	0.020	0.020	52
13	21.00	0.000	0.000	0.000	0.000	0	20.45	0.000	0.000	0.017	0.017	31	46.62	0.000	0.000	0.020	0.020	81
14	22.35	0.000	0.000	0.023	0.023	44	18.22	0.000	0.000	0.017	0.017	27	52.75	0.000	0.000	0.020	0.020	93
15	21.72	0.000	0.000	0.023	0.023	42	16.31	0.000	0.000	0.017	0.017	24	53.00	0.000	0.000	0.000	0.000	0
16	25.25	0.000	0.000	0.022	0.022	49	15.14	0.000	0.000	0.017	0.017	22	34.59	0.000	0.000	0.020	0.020	60
17	24.00	0.000	0.000	0.022	0.022	46	16.00	0.000	0.000	0.000	0.000	0	34.86	0.000	0.000	0.020	0.020	61
18	23.65	0.000	0.000	0.022	0.022	45	14.33	0.000	0.000	0.017	0.017	21	38.98	0.000	0.000	0.020	0.020	69
19	28.90	0.000	0.000	0.022	0.022	56	16.45	0.000	0.000	0.017	0.017	24	56.72	0.000	0.000	0.022	0.022	109
20	28.00	0.000	0.000	0.000	0.000	0	16.00	0.000	0.000	0.000	0.000	0	65.49	0.000	0.000	0.024	0.024	135
21	26.35	0.000	0.000	0.017	0.017	38	16.42	0.000	0.000	0.017	0.017	24	60.00	0.000	0.000	0.000	0.000	0
22	18.23	0.000	0.000	0.016	0.016	25	19.20	0.000	0.000	0.017	0.017	28	55.00	0.000	0.000	0.000	0.000	0
23	17.47	0.000	0.000	0.015	0.015	23	18.54	0.000	0.000	0.017	0.017	27	32.81	0.000	0.000	0.020	0.020	56
24	16.15	0.000	0.000	0.000	0.000	0	16.00	0.000	0.000	0.000	0.000	0	24.63	0.000	0.000	0.019	0.019	41
25	15.11	0.000	0.000	0.000	0.000	0	9.926	0.000	0.000	0.017	0.017	15	29.00	0.000	0.000	0.019	0.019	49
26	13.11	0.000	0.000	0.017	0.017	19	10.60	0.000	0.000	0.016	0.016	15	27.44	0.000	0.000	0.020	0.020	47
27	12.00	0.000	0.000	0.000	0.000	0	15.31	0.000	0.000	0.017	0.017	22	43.86	0.000	0.000	0.020	0.020	74
28	11.92	0.000	0.000	0.017	0.017	17	19.40	0.000	0.000	0.017	0.017	28	43.88	0.000	0.000	0.020	0.020	75
29	11.59	0.000	0.000	0.016	0.016	16	22.79	0.000	0.000	0.017	0.017	34	40.00	0.000	0.000	0.000	0.000	0
30	11.14	0.000	0.000	0.016	0.016	16	27.67	0.000	0.000	0.018	0.018	43	57.86	0.000	0.000	0.177	0.177	885
31	11.40	0.000	0.000	0.016	0.016	16							57.75	0.000	0.000	0.162	0.162	810
Ten Daily Mean																		
Ten Daily I	26.37	0.000	0.000	0.019	0.019	43	18.02	0.000	0.000	0.013	0.013	21	27.34	0.000	0.000	0.015	0.015	35
Ten Daily II	23.72	0.000	0.000	0.018	0.018	37	18.10	0.000	0.000	0.014	0.014	22	43.67	0.000	0.000	0.019	0.019	70
Ten Daily III	14.95	0.000	0.000	0.012	0.012	15	17.59	0.000	0.000	0.015	0.015	24	42.93	0.000	0.000	0.042	0.042	185
Monthly																		
Total						968						670						3089

Annual Sediment Load for period : 1977-2016

Station Name : KANTAMAL (EMF00C3)

Division : MD,CWC,Burla

Local River : Tel

Sub-Division : MMSD II,CWC,Burla

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1977-1978	7688659	2616	7691274	10617
1978-1979	10680564	552	10681116	14509
1979-1980	3646665	16	3646681	5686
1980-1981	9359525	3334	9362859	12573
1981-1982	6317537	2345	6319882	6916
1982-1983	5535619	5322	5540942	5528
1983-1984	4809949	3039	4812988	6242
1984-1985	7112051	2355	7114406	8562
1985-1986	15726715	7359	15734074	17571
1986-1987	7400785	3827	7404613	10610
1987-1988	2287331	2659	2289990	3356
1988-1989	2316294	0	2316294	3579
1989-1990	4209577	15711	4225288	5996
1990-1991	16675696	1535	16677230	21454
1991-1992	9831491	226	9831717	14737
1992-1993	14327597	504	14328101	13157
1993-1994	8856944	568	8857512	8427
1994-1995	19045780	6625	19052405	21286
1995-1996	7973723	614	7974338	9940
1996-1997	2139275	1858	2141132	3858
1997-1998	7806928	9872	7816800	9977
1998-1999	1032385	2160	1034545	3626
1999-2000	3214193	4711	3218905	6874
2000-2001	2364610	96656	2461266	6409
2001-2002	18660295	18065	18678360	22637
2002-2003	1972036	3511	1975546	4025
2003-2004	7471829	9552	7481382	15322
2004-2005	9015856	51526	9067382	12558
2005-2006	5515776	59459	5575235	9319
2006-2007	14585765	4860	14590625	21072
2007-2008	6186226	20937	6207163	16753
2008-2009	9083310	0	9083310	17939
2009-2010	0	0	0	11442
2010-2011	1615614	6985	1622599	10276
2011-2012	5577823	115	5577938	6623
2012-2013	9593904	16489	9610393	9255
2013-2014	22634481	7393	22641874	12547
2014-2015	9013038	22035	9035074	14464
2015-2016	1098654	9172	1107827	6851

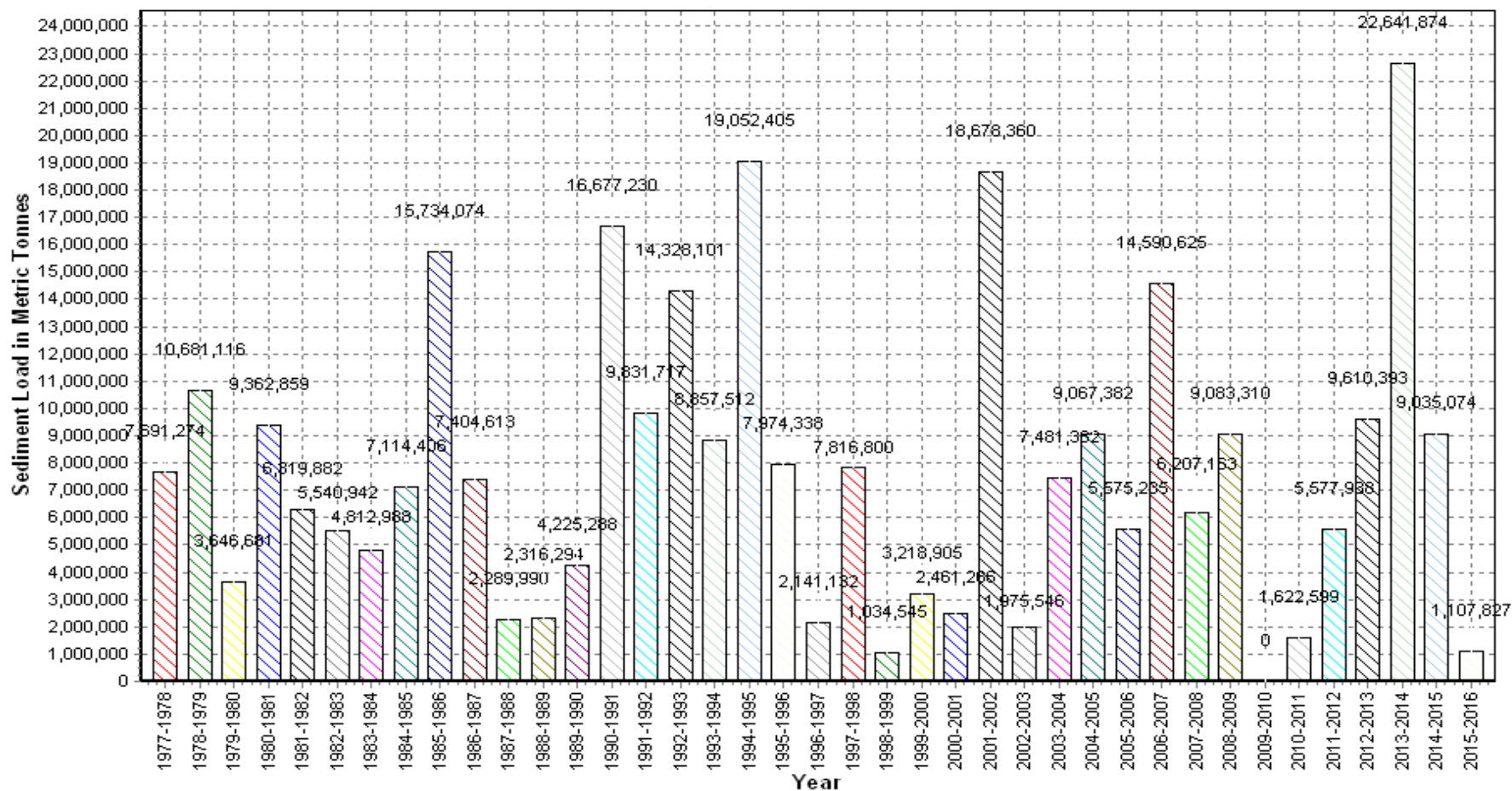
Annual Sediment Load for the period: 1977-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



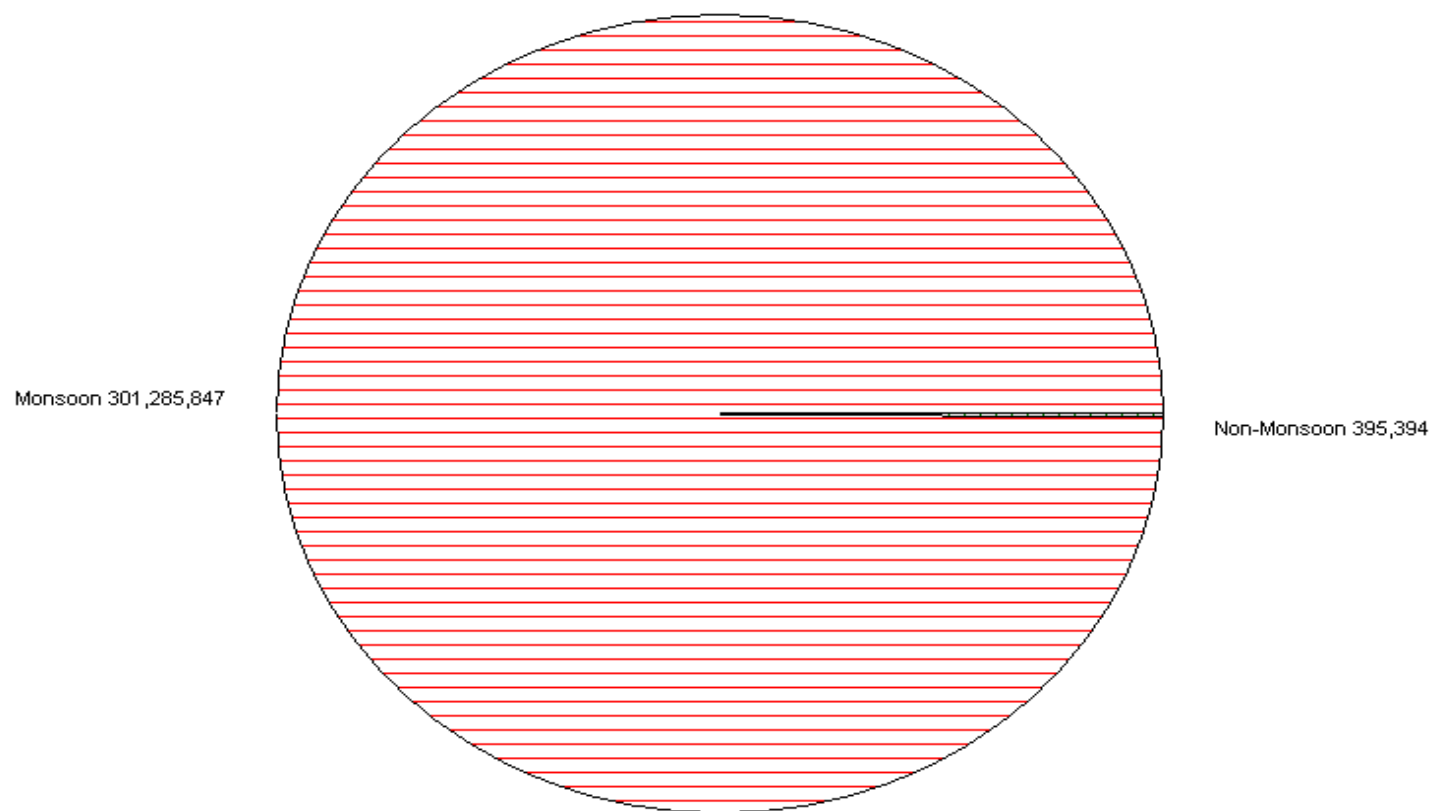
Seasonal Sediment Load for the period : 1977-2015

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



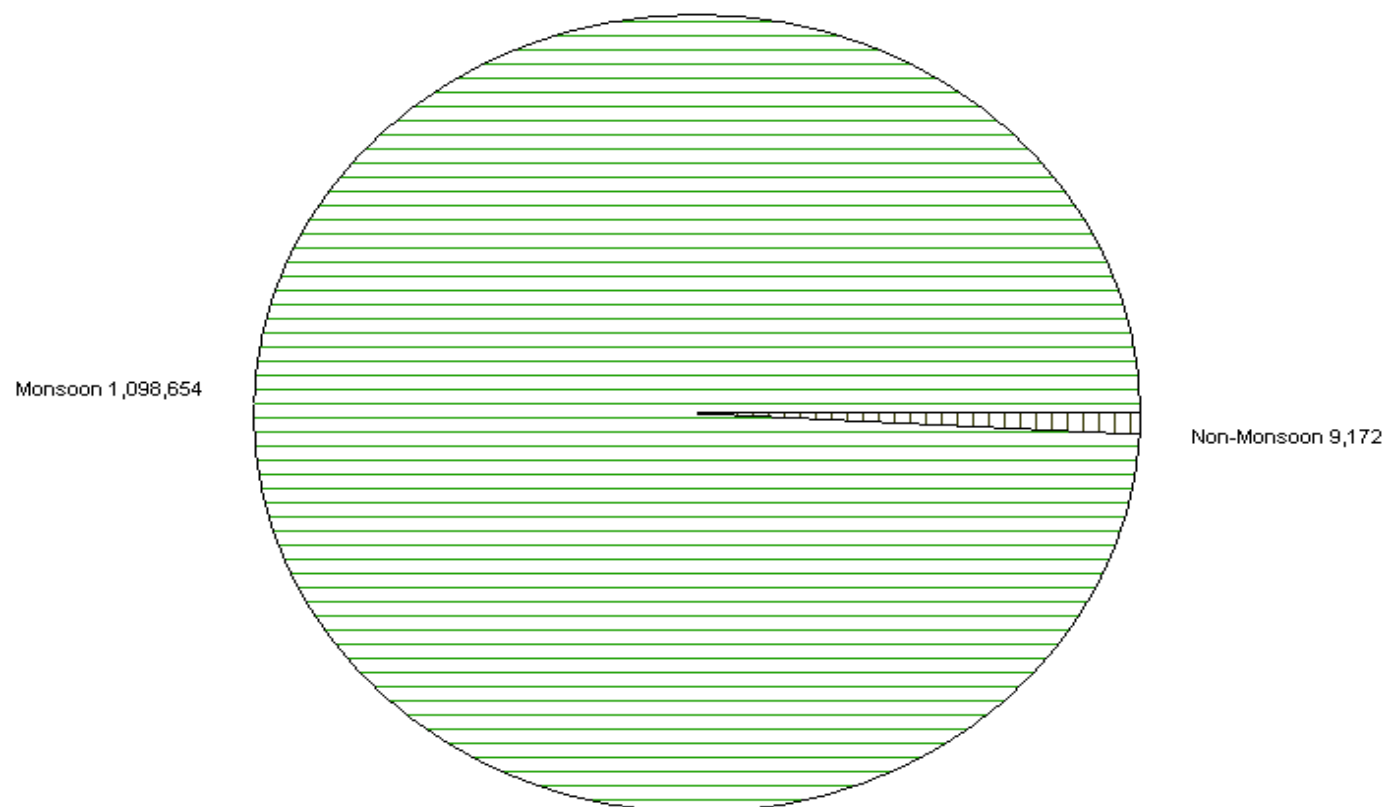
Seasonal Sediment Load for the Year: 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
	A	A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	195.0	216.5	156.3	1176	263.5	122.0	54.30	23.61	15.40	29.88	11.37	29.25
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	82	160	189	136	159	167	163	154	167	168	229	145
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_FLD (pH units)	7.5	7.1	7.2	7.1	7.3	7.3	8.6	8.8	8.6	8.8	9.0	
6	pH_GEN (pH units)	8.7	8.1	8.2	7.7	8.3	8.3	8.5	8.3	8.5	8.5	8.6	8.2
7	Temp (deg C)	33.0	27.5	28.5	27.0	30.0	26.5	24.5	18.0	23.5	27.0	28.0	29.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	6.0	0.0	17.9	6.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	104	152	200	161	172	92	200	180	204	212	208	296
3	Ca (mg/L)	11	21	24	18	24	35	22	24	26	27	28	19
4	Cl (mg/L)	16.0	12.0	16.0	12.0	14.0	9.0	13.0	10.0	14.0	11.0	20.0	25.0
5	CO3 (mg/L)	0.0	0.0	7.2	0.0	21.6	7.2	0.0	0.0	0.0	0.0	0.0	0.0
6	HCO3 (mg/L)	63	93	115	98	83	49	122	110	124	129	127	181
7	K (mg/L)	4.7	4.3	3.1	2.7	9.6	3.7	5.1	7.2	5.3	3.1	10.7	23.1
8	Mg (mg/L)	6.8	3.9	14.6	13.6	6.8	12.6	15.7	6.8	6.8	8.3	4.9	18.4
9	Na (mg/L)	14.2	12.8	11.6	19.3	20.5	21.9	17.6	18.6	16.6	17.5	31.8	57.4
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.1	0.1	0.3	0.6	0.9	0.1	1.0	0.1	0.3	1.5	0.6	0.5
2	DO (mg/L)	6.8	6.8	6.5	6.5	6.4	7.0	8.6	8.1	7.4	8.2	6.1	5.7
3	DO_SAT% (%)	95	85	83	82	85	86	102	86	86	103	78	74
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	28	52	60	44	60	88	56	60	64	68	71	48
2	HAR_Total (mgCaCO3/L)	56	68	121	101	88	141	121	88	92	103	91	125
3	Na% (%)	33	27	17	29	31	25	23	29	27	26	40	45
4	RSC (-)	0.0	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.2	0.1	0.3	0.5
5	SAR (-)	0.8	0.7	0.5	0.8	0.9	0.8	0.7	0.9	0.8	0.8	1.5	2.2
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : KANTAMAL (EMF00C3)

Division : MD,CWC,Burla

Local River : Tel

Sub-Division : MMSD II,CWC,Burla

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	6594	8.581	216.6
2	EC_GEN (µmho/cm)	12	229	82	160
3	pH_FLD (pH units)	11	9.0	7.1	7.9
4	pH_GEN (pH units)	12	8.7	7.7	8.3
5	Temp (deg C)	12	33.0	18.0	26.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	17.9	0.0	2.5
2	ALK-TOT (mgCaCO3/L)	12	296	92	182
3	Ca (mg/L)	12	35	11	23
4	Cl (mg/L)	12	25.0	9.0	14.3
5	CO3 (mg/L)	12	21.6	0.0	3
6	HCO3 (mg/L)	12	181	49	108
7	K (mg/L)	12	23.1	2.7	6.9
8	Mg (mg/L)	12	18.4	3.9	9.9
9	Na (mg/L)	12	57.4	11.6	21.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.5	0.1	0.6
2	DO (mg/L)	12	8.6	5.7	7
3	DO_SAT% (%)	12	103	74	87
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	88	28	58
2	HAR_Total (mgCaCO3/L)	12	141	56	100
3	Na% (%)	12	45	17	29
4	RSC (-)	12	0.5	0.0	0.1
5	SAR (-)	12	2.2	0.5	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	Flood Jun - Oct																			
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006
	PHYSICAL																				
1	Q (cumec)	858.8	388.1	942.7	333.6	462.5	2348	1536	838.4	427.6	228.0	645.2	377.0	1814	820.3	401.4	144.5	36.35	240.9	198.6	122.7
2	EC_FLD (µmho/cm)	148	185	161	145	159	144	122							70		125	188	147		152
3	EC_GEN (µmho/cm)	148	185	161	145	159	144	147	201	159	145	129	135	134	124	145	125	188	147		152
4	pH_FLD (pH units)	7.4	8.0	7.9		7.7	7.5	8.0	8.3	7.7	7.2	7.9	8.1	7.6	7.4	7.2	7.7	8.2	8.1		7.7
5	pH_GEN (pH units)	7.4	8.0	7.9		7.8	7.5	7.9	7.8	8.0	7.7	7.6	7.8	8.1	8.0	8.2	7.7	8.2	8.1		7.7
6	Temp (deg C)	26.6	27.9	28.0	30.0	29.4	26.5	30.0	28.6	29.2	30.4	30.0	29.4	28.9	28.3	29.2	21.8	23.5			24.7
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	4.8	0.0	1.9	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	98	123	156	151	92		86	66	115	100	92	100	146	145	158	77	112	134		104
3	B (mg/L)					0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00								0.03
4	Ca (mg/L)	11	16	17	14	11		10	17	13	11	11	13	16	17	20	7	20	20		14
5	Cl (mg/L)	3.9	6.7	49.5		23.4		5.1	6.7	5.4	3.2	5.2	11.3	15.8	11.4	14.0	3.8	5.1	64.3		23.5
6	CO3 (mg/L)	0.0	0.5	0.0		0.0	0.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	5.8	0.0	2.3	0.0		0.0
7	F (mg/L)			0.22		0.20		0.08	0.10	0.10	0.35	0.16	0.14						0.54		0.14
8	Fe (mg/L)					0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0								0.0
9	HCO3 (mg/L)	60	74	95		56		52	40	68	61	56	61	89	88	90	47	66	104		63
10	K (mg/L)	2.4	4.8			3.6		1.1	0.9	1.4	1.5	1.7	1.3	3.5	2.8	4.9	1.4	2.6			4.8
11	Mg (mg/L)	2.3	6.2	4.5	9.1	3.2		5.9	7.5	6.9	5.7	6.6	7.3	5.8	5.6	9.1	1.9	3.8	10.5		6.1
12	Na (mg/L)	3.1	11.8			13.0		12.9	4.3	4.6	7.1	5.7	6.1	10.0	17.0	15.7	2.1	4.6			12.2
13	NO2+NO3 (mg N/L)	1.02				0.06	0.05	0.07	0.31								0.20				0.05
14	NO2-N (mgN/L)					0.01	0.00	0.01	0.04	0.02	0.01	0.02	0.04								0.00
15	NO3-N (mgN/L)					0.05	0.04	0.06	0.27												0.05
16	o-PO4-P (mg P/L)								0.024												
17	P-Tot (mgP/L)					0.003	0.027	0.010	0.019	0.016	0.010	0.032	0.056								0.054
18	SiO2 (mg/L)					5.7		8.6	17.9	14.6	11.0	16.6	15.4								22.7
19	SO4 (mg/L)	4.6	4.9	9.5		13.8		8.7	9.1	16.0	13.4	16.6	15.8				6.4		12.9		9.6
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.6	0.8	1.2	0.7	0.6	0.5	0.6	0.6	0.9	0.9	1.2	0.9	0.6	0.2	0.6	1.2	0.8	0.5		0.6
2	COD (mg/L)						25.8	11.2	14.4	16.0	16.8	16.8	16.0								
3	DO (mg/L)	8.7	8.2	3.5	4.4	6.2	6.0	6.8	6.6	6.6	6.1	6.1	7.0	6.7	6.1	6.6	9.7	8.1	5.7		8.1
4	DO_SAT% (%)	107	105	72	58	81	75	90	85	86	81	80	90	86	78	86	109	94			97
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	27	41	44	35	27		25	43	32	28	27	32	40	43	49	18	51	51		34
2	HAR_Total (mgCaCO3/L)	36	75	62	73	40		49	74	60	51	54	63	64	66	87	26	67	94		60
3	Na% (%)	18	24			38		36	14	14	22	18	17	23	35	27	18	9			29
4	RSC (-)	0.3	0.4	0.3		0.1		0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.2	0.2		0.0
5	SAR (-)	0.3	0.6			1.0		0.8	0.2	0.3	0.4	0.3	0.3	0.6	0.9	0.7	0.2	0.1			0.7
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters	Winter										Summer									
		Nov - Feb										Mar - May									
		2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
	PHYSICAL																				
1	Q (cumec)	135.4	162.5	103.1	69.25	133.3	46.84	80.26	236.1	138.9	53.83	110.7	34.08	87.72	61.29	83.89	48.93	45.98	56.75	75.24	75.98
2	EC_FLD (µmho/cm)	157							57			183	198	201	175	148	199				
3	EC_GEN (µmho/cm)	157	214	150	204	240	181	213	193	151	163	183	198	201	175	148	199	156	156	183	320
4	pH_FLD (pH units)	8.0		8.2	8.0	7.8	8.0	8.4	7.7	7.4	8.3	7.7	8.0	7.7	8.1	8.0	8.4	8.3	8.2	7.8	7.6
5	pH_GEN (pH units)	8.0	8.1	8.3	8.1	7.8	8.2	8.0	8.4	8.5	8.4	7.7	8.0	7.8	8.1	8.0	8.4	8.2	8.2	8.3	7.6
6	Temp (deg C)	24.3	21.3	22.9	23.0	23.0	23.6	22.3	21.9	20.9	23.1	24.5	26.5		30.5	33.0	32.0	24.8	26.2	28.8	26.9
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	1.8	6.4	0.0	0.0	1.7	0.0	0.0	0.0	1.5	0.0	1.4	0.0	0.0	0.0	0.0	2.5	3.1	8.6	0.0
2	ALK-TOT (mgCaCO3/L)		82	107	151	167	125	192	341	230	169	77	63	188	120	111		120	110	135	310
3	B (mg/L)		0.01	0.00	0.00	0.01	0.00	0.00								0.02		0.01	0.00	0.00	0.00
4	Ca (mg/L)		13	11	16	17	13	23	30	25	27	6	6	13	15	11		13	11	14	27
5	Cl (mg/L)		18.7	16.9	6.0	13.9	10.5	15.2	15.3	16.5	11.5	4.2		9.0	52.0	11.5		12.5	6.3	11.1	16.6
6	CO3 (mg/L)	0.0	2.2	7.8	0.0	0.0	2.0	0.0	0.0	0.0	1.8	0.0	1.7	0.0	0.0	0.0	0.0	3.0	3.7	10.3	0.0
7	F (mg/L)		0.09	0.10	0.13	0.11	0.14	0.20							0.71	0.07		0.08	0.13	0.15	0.25
8	Fe (mg/L)	0.0	0.1	0.0	0.0	0.0	0.0	0.0		0.1						0.0	0.0	0.1	0.0	0.0	0.2
9	HCO3 (mg/L)		48	57	92	102	74	117	208	140	101	47	37	114	73	68		70	63	72	189
10	K (mg/L)		1.7	0.9	1.3	1.4	1.5	0.8	8.4	3.3	5.3	1.5			5.2	1.2		1.3	1.6	2.3	1.9
11	Mg (mg/L)		11.4	5.3	9.1	10.1	7.6	10.5	9.9	14.3	10.5	2.4	2.6	3.7	5.1	5.6		6.0	5.8	8.6	16.8
12	Na (mg/L)		16.2	7.2	6.0	8.4	10.3	20.1	19.1	11.8	18.7	1.9			9.2	8.2		13.7	4.7	15.6	12.1
13	NO2+NO3 (mg N/L)	0.02	0.10	0.29						0.14					0.07	0.03	0.08	0.30	1.09		
14	NO2-N (mgN/L)	0.00	0.01	0.01	0.01	0.02	0.02	0.03		0.03						0.00	0.00	0.02	0.02	0.01	0.42
15	NO3-N (mgN/L)	0.02	0.09	0.29						0.11						0.02	0.08	0.28	1.07		
16	o-PO4-P (mg P/L)																				
17	P-Tot (mgP/L)	0.338	0.022	0.015	0.017	0.027	0.042	0.052		0.060					0.015	0.021	0.030	0.017	0.013	0.023	0.080
18	SiO2 (mg/L)		19.3	12.4	13.0	12.3	13.8	18.4		16.5						11.0		13.4	26.9	9.8	21.3
19	SO4 (mg/L)		13.0	14.6	16.0	24.2	20.8	20.8		18.6		4.8		2.0	6.1	3.6		9.1	13.6	14.0	34.7
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.5	0.7	1.6	0.8	0.6	0.5	1.1	0.6	0.4	0.4	1.0	1.4	1.2	0.7	0.9	0.9	0.6	0.6	1.0	1.7
2	COD (mg/L)	22.3	17.5	16.0	19.0	19.0	20.0	20.0									21.2	17.3	21.3	20.0	20.0
3	DO (mg/L)	8.1	8.5	8.1	7.8	8.0	8.1	8.8	8.4	8.5	7.8	8.4	7.6	7.9	8.0	6.3	7.9	6.7	7.0	6.2	7.1
4	DO_SAT% (%)	96	95	94	91	94	95	100	96	95	90	98	93		102	88	108	80	86	80	89
	TRACE & TOXIC																				
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)		33	27	41	44	34	57	76	62	67	15	16	34	37	28		33	27	36	67
2	HAR_Total (mgCaCO3/L)		80	50	78	86	65	101	118	122	111	25	26	49	58	51		58	51	72	137
3	Na% (%)		34	24	14	17	25	27	24	17	26	18			24	26		34	16	27	19
4	RSC (-)		0.0	0.2	0.0	0.0	0.1	0.2	1.4	0.2	0.1	0.3	0.1	0.9	0.1	0.1		0.2	0.2	0.1	0.5
5	SAR (-)		0.9	0.5	0.3	0.4	0.6	0.9	0.8	0.5	0.8	0.2			0.5	0.5		0.8	0.3	0.8	0.5
	PESTICIDES																				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KANTAMAL (EMF00C3)

Local River : Tel

River Water

Division : MD,CWC,Burla

Sub-Division : MMSD II,CWC,Burla

S.No	Parameters					
		2012	2013	2014	2015	2016
	PHYSICAL					
1	Q (cumec)	15.31	60.49	94.19	54.08	23.50
2	EC_FLD (µmho/cm)			83		
3	EC_GEN (µmho/cm)	210	202	153	168	181
4	pH_FLD (pH units)	7.6	8.2	8.2	7.3	8.9
5	pH_GEN (pH units)	7.5	8.6	8.4	8.4	8.4
6	Temp (deg C)	28.9	28.4	29.8	26.5	28.0
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.7	0.0	4.0	0.0
2	ALK-TOT (mgCaCO3/L)	151	225	163	200	239
3	B (mg/L)	0.00	0.00			
4	Ca (mg/L)	17	28	23	26	25
5	Cl (mg/L)	14.6	38.3	15.7	17.3	18.7
6	CO3 (mg/L)	0.0	0.8	0.0	4.8	0.0
7	F (mg/L)	0.17	0.19			
8	Fe (mg/L)	0.1	0.1		0.1	
9	HCO3 (mg/L)	92	137	99	117	146
10	K (mg/L)	1.4	3.5	2.9	4.1	12.3
11	Mg (mg/L)	9.5	9.7	11.0	14.9	10.5
12	Na (mg/L)	8.5	35.7	25.8	17.2	35.6
13	NO2+NO3 (mg N/L)				0.17	
14	NO2-N (mgN/L)	0.10	0.07		0.05	
15	NO3-N (mgN/L)				0.12	
16	o-PO4-P (mg P/L)					
17	P-Tot (mgP/L)	0.060	0.050		0.060	
18	SiO2 (mg/L)	16.5	16.2		12.2	
19	SO4 (mg/L)	17.8	19.3		17.0	
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	0.7	0.4	0.5	0.5	0.9
2	COD (mg/L)	18.7	18.7			
3	DO (mg/L)	7.1	6.7	7.8	6.9	6.7
4	DO_SAT% (%)	92	86	101	85	85
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	41	69	57	65	62
2	HAR_Total (mgCaCO3/L)	81	110	103	127	106
3	Na% (%)	18	40	34	21	37
4	RSC (-)	0.0	0.3	0.0	0.0	0.3
5	SAR (-)	0.4	1.6	1.2	0.7	1.5
	PESTICIDES					

LOWER MAHANADI SUB-BASIN

SITE TIKARPARA

HISTORY SHEET

Water Year : 2015-2016

Site : TIKARAPARA

Code : EM000G5

State : Orissa

District : Angul

Basin : Mahanadi

Independent River : Mahanadi

Tributary : Mahanadi

Sub Tributary :

Sub-Sub Tributary :

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar

Drainage Area : 124450 Sq. Km.

Bank : Left

Latitude : 20°38'00"

Longitude : 84°37'08"

Zero of Gauge (m) : 50 (m.s.l)

2/19/1971 - 12/31/2020

Opening Date

Closing Date

Gauge : 2/19/1971

1/1/2100

Discharge : 5/28/1972

1/1/2100

Sediment : 6/1/1973

1/1/2100

Water Quality : 12/1/1972

1/1/2100

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1972-1973	16660	64.515	9/13/1972	107.7	53.360	5/24/1973
1973-1974	23949	69.150	9/27/1973	82.46	54.075	6/2/1973
1974-1975	17400	66.825	8/19/1974	51.81	53.905	5/21/1975
1975-1976	22735	68.118	8/23/1975	56.90	53.955	6/3/1975
1976-1977	26324	69.480	8/14/1976	65.00	54.060	12/8/1976
1977-1978	28693	69.480	9/14/1977	100.0	54.145	6/5/1977
1978-1979	30863	69.390	8/29/1978	173.9	54.420	5/30/1979
1979-1980	14257	65.643	8/9/1979	26.98	53.590	12/31/1979
1980-1981	33800	72.150	9/21/1980	24.42	53.560	6/11/1980
1981-1982	15100	65.550	8/10/1981	159.3	54.698	6/17/1981
1982-1983	31050	73.000	8/30/1982	77.65	54.910	12/28/1982
1983-1984	30042	69.030	9/8/1983	51.41	54.550	6/9/1983
1984-1985	24727	68.860	8/17/1984	80.46	54.350	5/22/1985
1985-1986	23921	69.250	8/7/1985	72.40	54.320	6/3/1985
1986-1987	27030	69.730	6/29/1986	179.0	54.745	6/13/1986
1987-1988	10241	63.800	7/23/1987	132.8	54.420	6/29/1987
1988-1989	9593	63.895	8/9/1988	22.74	53.610	12/22/1988
1989-1990	6536	62.015	8/18/1989	189.2	54.490	6/9/1989
1990-1991	20068	68.013	9/5/1990	236.5	54.500	6/1/1990
1991-1992	30500	71.830	8/14/1991	154.3	54.750	5/1/1992
1992-1993	31500	72.470	7/29/1992	177.5	55.060	6/6/1992
1993-1994	20435	68.095	8/20/1993	221.1	54.630	5/6/1994

Annual Maximum / Minimum discharge with corresponding Water Level (m.s.l)

Year	Maximum			Minimum		
	Q (cumecs)	WL (m)	Date	Q (cumecs)	WL (m)	Date
1994-1995	31500	72.170	7/13/1994	202.1	54.450	6/8/1994
1995-1996	23121	70.540	7/24/1995	144.0	54.640	5/31/1996
1996-1997	11930	64.540	8/22/1996	121.8	54.620	6/1/1996
1997-1998	23000	69.630	8/5/1997	225.0	54.620	6/8/1997
1998-1999	25000	68.200	9/13/1998	208.3	54.400	4/1/1999
1999-2000	13249	66.710	8/10/1999	230.9	54.750	6/17/1999
2000-2001	4775	60.260	9/1/2000	149.3	54.120	5/4/2001
2001-2002	26700	73.200	7/19/2001	198.6	54.300	6/2/2001
2002-2003	12306	65.500	9/13/2002	156.4	54.550	3/1/2003
2003-2004	25062	73.070	8/29/2003	128.6	54.180	6/15/2003
2004-2005	17744	67.560	8/12/2004	163.4	54.540	1/13/2005
2005-2006	19000	68.950	7/31/2005	142.8	54.620	6/28/2005
2006-2007	29000	72.900	8/31/2006	200.0	54.650	5/6/2007
2007-2008	15789	66.690	9/24/2007	291.1	55.000	6/9/2007
2008-2009	20565	69.765	9/18/2008	271.0	54.380	5/30/2009
2009-2010	17750	68.250	7/22/2009	146.7	54.150	1/16/2010
2010-2011	13575	65.660	9/20/2010	234.3	54.390	6/19/2010
2011-2012	30400	74.570	9/10/2011	198.6	54.440	3/13/2012
2012-2013	11766	65.640	8/7/2012	170.2	54.230	1/7/2013
2013-2014	18895	66.960	8/1/2013	122.4	54.060	1/30/2014
2014-2015	29800	71.820	8/6/2014	190.0	54.470	4/5/2015

Stage-Discharge Data for the period 2015 - 2016

Station Name : TIKARAPARA (EM000G5)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : LMSD,CWC,Bhubaneswar

Day	Jun		Jul		Aug		Sep		Oct		Nov	
	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q	W.L	Q
1	54.700	283.8	55.480	623.6	57.430	1850	58.620	3318	55.875	978.9	55.210	518.4 *
2	54.720	301.8	55.400	608.3	57.530	2000 *	59.775	4806	55.810	900.0 *	55.095	483.9
3	54.800	312.8	55.740	703.9	58.180	2904	59.400	4231	55.830	890.0	55.540	755.0
4	54.780	302.4	55.800	736.9	58.350	3021	59.060	3893	55.690	800.0 *	55.400	634.3
5	54.650	263.0	55.830	750.0 *	61.720	7885	59.180	3982	55.690	821.7	55.370	587.2
6	54.950	351.4	55.850	809.3	61.400	7037	58.910	3600 *	55.685	801.1	55.500	733.2
7	55.200	400.0 *	55.870	769.7	60.100	5430	58.690	3362	55.635	773.3	55.370	631.4
8	55.500	554.3	55.570	646.4	58.630	3341	57.710	2272	55.500	726.6	55.300	542.1 *
9	55.670	633.7	55.580	673.1	58.110	2600 *	56.900	1598	55.465	700.2	55.200	586.6
10	55.800	680.7	55.800	757.9	57.090	1594	56.130	1177	55.435	663.5	55.400	649.2
11	55.800	676.9	56.610	1054	56.160	1033	55.950	949.8	55.490	750.0 *	55.410	545.2 *
12	55.460	484.2	58.130	2000 *	56.070	974.3	55.865	893.7	55.335	619.7	55.280	563.1
13	55.070	379.0	57.840	2149	55.890	890.6	55.720	820.0 *	55.060	473.8	55.040	505.8
14	55.100	380.0 *	57.250	1497	55.860	931.4	55.605	744.7	54.980	455.1	54.790	380.9
15	55.380	488.1	58.560	3074	56.320	1300 *	55.780	890.3	55.015	487.7	54.685	282.9 *
16	55.380	507.9	59.470	4223	56.820	1500 *	56.250	1069	55.070	514.2	54.580	260.1
17	55.590	597.5	59.740	4608	56.660	1389	56.730	1400 *	55.105	514.2	54.560	237.7
18	55.450	526.2	60.020	4600 *	56.620	1369	63.720	12086	55.090	520.0 *	54.540	251.5
19	55.825	655.4	60.170	4700 *	57.110	1645	60.880	7114	55.060	480.6	54.510	238.0
20	55.260	483.7	59.180	3892	57.050	1562	58.860	3500 *	55.460	773.5	54.490	236.3
21	55.290	500.0 *	58.970	3382	56.800	1450	58.020	2642	55.490	790.0 *	54.460	219.0
22	55.590	617.5	58.100	2502	56.475	1247	60.600	6343	55.720	820.0 *	54.440	222.5 *
23	56.530	1060	57.955	2204	56.240	1000 *	63.395	10931	55.665	828.3	54.540	252.5
24	57.910	1985	57.520	1996	56.270	1099	61.090	7535	55.650	800.0 *	54.370	203.1
25	57.390	1614	57.620	2113	56.270	1105	59.640	4500 *	55.690	820.0 *	54.210	206.5 *
26	56.980	1350	58.010	3000 *	56.570	1329	58.515	3337	55.620	778.0	54.220	180.4
27	56.290	951.0	59.440	4421	57.010	1579	57.690	2250 *	55.665	777.8	54.240	183.1
28	55.800	750.0 *	59.610	4427	58.690	3479	57.080	1783	55.370	627.9	54.230	176.7
29	55.630	669.1	58.750	3218	58.480	2998	56.380	1174	55.565	727.9	54.210	174.8 *
30	55.460	615.6	58.520	2938	59.280	3500 *	56.090	1035	55.465	595.1	54.160	169.2
31			57.660	2119	58.910	3619			55.300	551.4		
Ten-Daily Mean												
I Ten-Daily	55.077	408.4	55.692	707.9	58.854	3766	58.438	3224	55.661	805.5	55.339	612.1
II Ten-Daily	55.431	517.9	58.697	3180	56.456	1259	57.536	2947	55.167	558.9	54.789	350.1
III Ten-Daily	56.287	1011	58.378	2938	57.363	2037	58.850	4153	55.564	737.9	54.308	198.8
Monthly												
Min.	54.650	263.0	55.400	608.3	55.860	890.6	55.605	744.7	54.980	455.1	54.160	169.2
Max.	57.910	1985	60.170	4700	61.720	7885	63.720	12086	55.875	978.9	55.540	755.0
Mean	55.599	645.8	57.614	2297	57.551	2344	58.275	3441	55.467	701.9	54.812	387

Annual Runoff in MCM = 28796 Annual Runoff in mm = 231

Peak Observed Discharge = 12086 cumecs on 18/09/2015 Corres. Water Level :63.72 m

Lowest Observed Discharge = 83.98 cumecs on 08/01/2016 Corres. Water Level :53.75 m

Stage-Discharge Data for the period 2015 - 2016

Station Name : TIKARAPARA (EM000G5)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : LMSD,CWC,Bhubaneswar

Day	Dec		Jan		Feb		Mar		Apr		May	
	W.L	Q	WL	Q	WL	Q	WL	Q	WL	Q	WL	Q
1	54.300	181.3	53.830	112.3	53.980	135.8	54.350	254.3	53.960	125.1	54.490	298.3 *
2	54.130	160.9	53.831	97.10	53.930	117.0	54.350	211.3	53.990	156.5	54.600	316.2
3	54.000	120.2	53.850	105.0 *	53.950	128.5	54.320	225.0	54.000	180.3 *	54.470	248.1
4	53.980	117.6	53.950	130.1	53.970	139.5	54.230	197.3	54.210	204.1	54.520	270.5
5	54.070	163.6	53.860	109.5	54.000	143.8	54.080	176.3	54.260	245.6	54.470	259.5
6	54.120	175.0 *	53.820	96.53	54.080	175.2	54.150	184.0 *	54.220	210.2	54.460	248.9
7	54.070	156.3	53.830	101.0	54.050	155.7 *	54.220	190.0 *	54.180	208.3	54.330	213.1
8	54.060	167.9	53.750	83.98	53.990	136.3	54.280	204.7	54.320	233.0	54.200	180.0 *
9	54.010	158.1	53.750	86.12	53.980	143.5	54.300	216.2	54.290	214.6	53.950	146.9
10	53.970	136.4	53.830	118.8 *	54.020	152.2	54.310	224.1	54.300	228.5 *	54.040	161.6
11	53.900	128.9	54.000	147.1	54.020	148.9	54.200	196.7	54.320	235.8	54.040	150.8
12	53.890	100.6	54.030	154.5	53.980	139.2	54.260	210.7	54.400	245.4	53.990	140.0
13	53.860	113.0 *	53.900	119.7	54.000	138.2	54.300	220.0 *	54.400	248.7	54.020	161.1
14	53.870	116.5	53.880	118.4	54.030	144.2 *	54.270	239.5	54.370	240.0 *	54.260	206.4
15	53.940	124.8	53.880	120.3	54.030	150.3	54.410	281.8	54.330	225.2	54.300	219.5 *
16	53.930	125.2	53.870	117.1	54.000	132.9	54.350	248.5	54.310	214.3	54.410	232.6
17	53.890	115.4	53.900	124.6 *	53.970	136.4	54.230	211.2	54.290	210.2 *	54.440	234.0
18	53.880	109.4	53.900	124.4	53.940	117.5	54.280	248.8	54.260	206.0	54.460	229.0
19	53.940	129.7	53.930	127.2	53.990	152.3	54.400	278.4	54.300	219.5	54.580	283.9
20	54.000	152.1 *	53.890	115.5	53.970	138.9	54.280	210.0 *	54.250	210.6 *	54.720	322.0
21	54.060	168.3	53.850	116.2	54.000	159.2 *	54.100	230.5	54.190	201.8	55.040	381.2 *
22	54.110	178.0	53.940	148.1	54.050	179.3	54.150	227.2	54.100	181.0	55.000	410.8 *
23	53.970	108.6	54.000	152.7	54.030	153.4	54.250	256.5	54.020	161.8	55.050	440.4
24	53.910	130.0 *	54.000	150.0 *	54.170	209.1	54.240	200.0 *	53.970	158.3 *	54.950	416.5
25	53.890	122.0 *	53.990	147.0	54.100	153.4	54.200	190.0 *	53.990	154.5	54.530	261.0
26	53.860	111.1	53.970	140.0 *	54.070	171.4	54.170	185.3	54.100	177.1	54.770	329.2
27	53.860	113.0 *	53.920	125.6	54.180	204.8	54.150	187.0 *	54.170	196.6	54.700	274.4
28	53.870	122.8	53.900	114.4	54.190	210.3 *	54.000	157.7	54.180	216.2	54.550	259.8
29	53.970	118.2	53.900	116.6	54.210	234.5	53.900	122.2	54.390	253.0	54.450	250.4 *
30	53.860	113.2	53.990	146.0			53.890	140.8	54.440	281.5	54.930	416.9
31	53.850	107.8	53.990	150.0 *			53.960	141.7			54.700	314.8
Ten-Daily Mean												
I Ten-Daily	54.071	153.7	53.830	104.1	53.995	142.7	54.259	208.3	54.173	200.6	54.353	234.3
II Ten-Daily	53.910	121.6	53.918	126.9	53.993	139.9	54.298	234.6	54.323	225.6	54.322	217.9
III Ten-Daily	53.928	126.6	53.950	137.0	54.111	186.1	54.092	185.4	54.155	198.2	54.788	341.4
Monthly												
Min.	53.850	100.6	53.750	83.98	53.930	117.0	53.890	122.2	53.960	125.1	53.950	140.0
Max.	54.300	181.3	54.030	154.5	54.210	234.5	54.410	281.8	54.440	281.5	55.050	440.4
Mean	53.968	133.7	53.901	123.1	54.030	155.2	54.212	208.6	54.217	208.1	54.497	267

Peak Computed Discharge = 4700 cumecs on 19/07/2015

Corres. Water Level :60.17 m

Lowest Computed Discharge = 105.0 cumecs on 03/01/2016

Corres. Water Level :53.85 m

HISTOGRAM - HYDROGRAPH for Water Year : 2015-2016

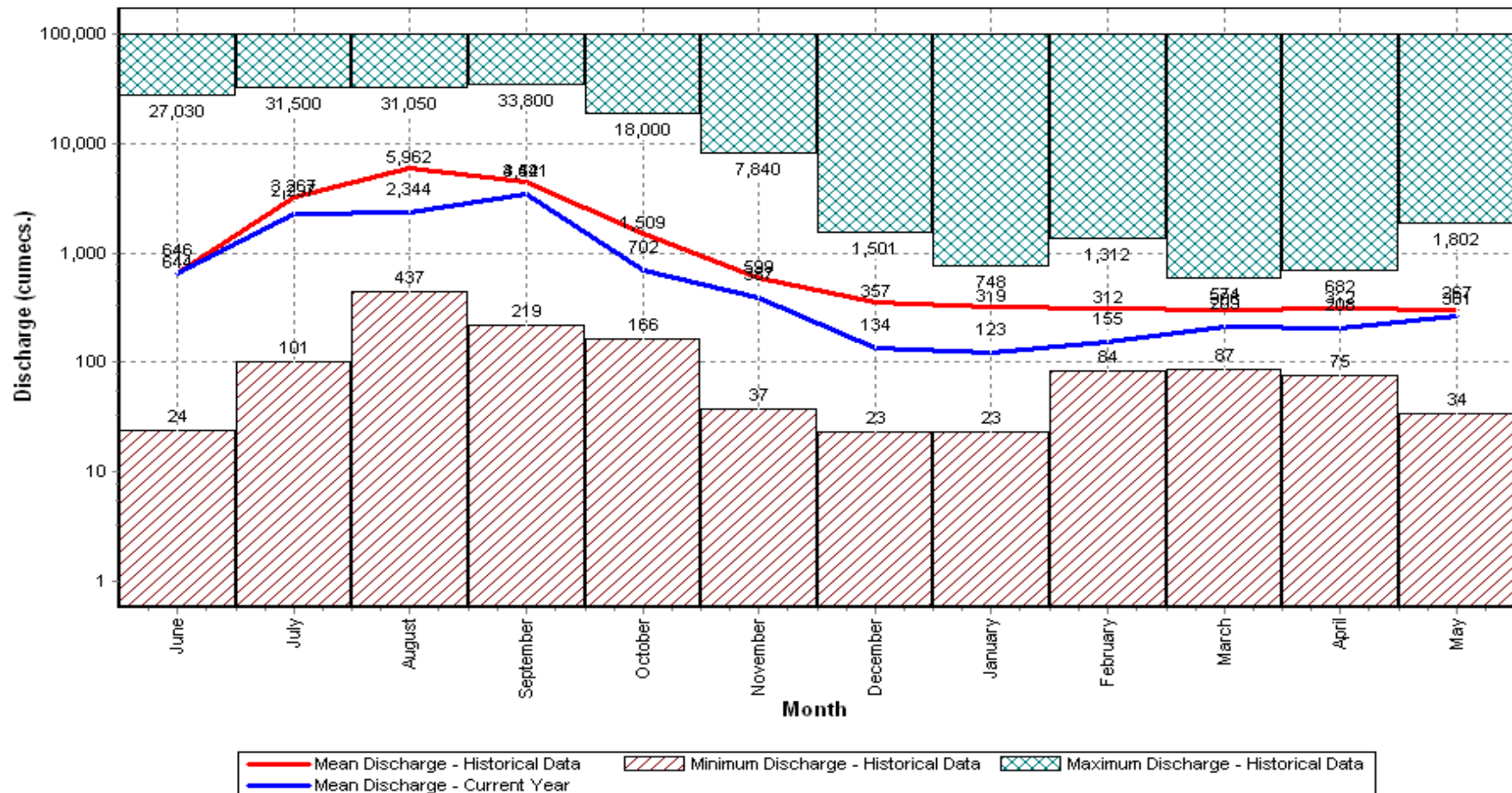
Station Name : TIKARAPARA (EM000G5)

Data considered : 1972-2016

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : LMSD,CWC,Bhubaneswar



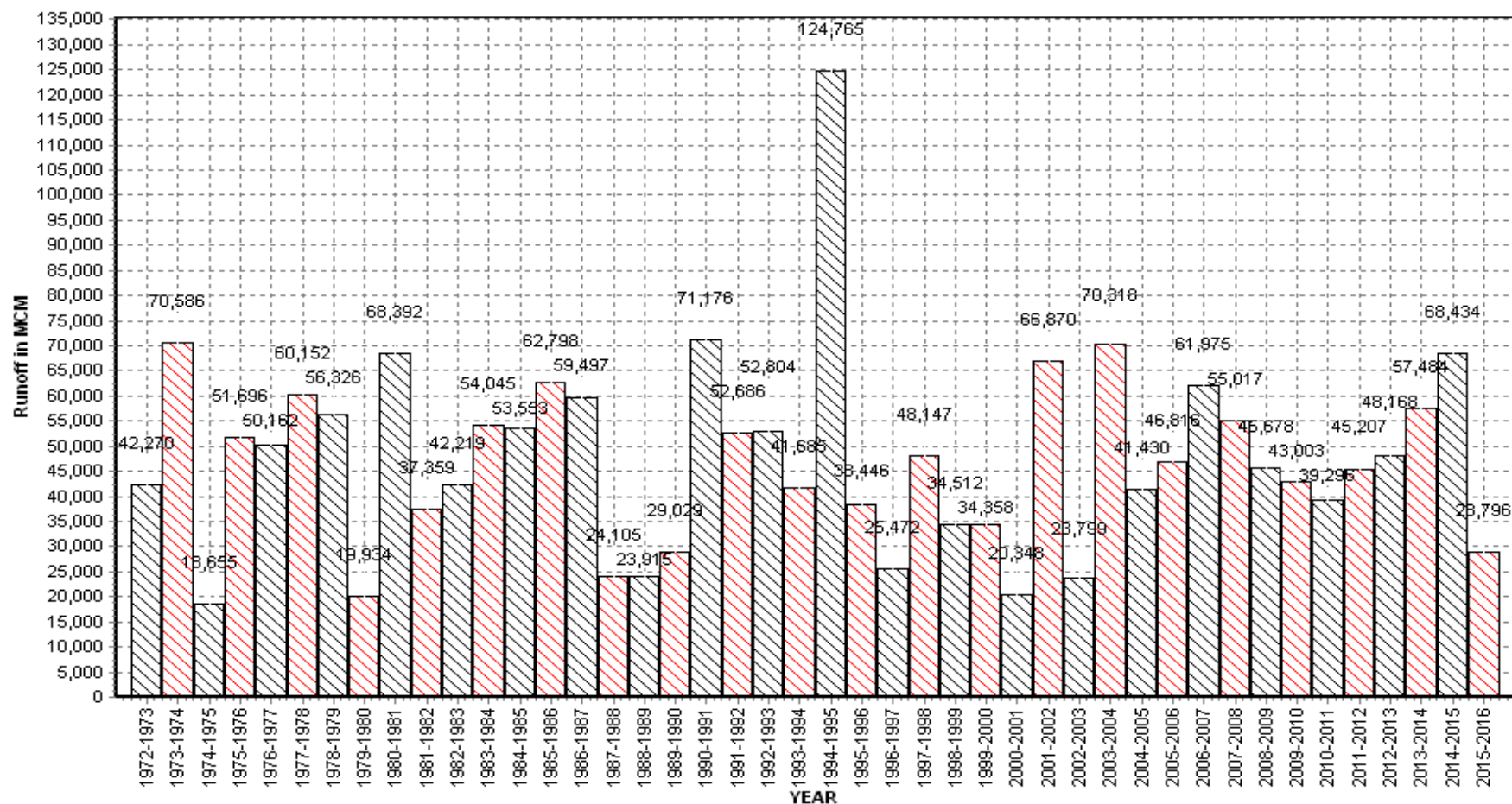
Annual Runoff Values for the period: 1972 - 2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar



Note: Missing values have not been considered while arriving at Annual Runoff

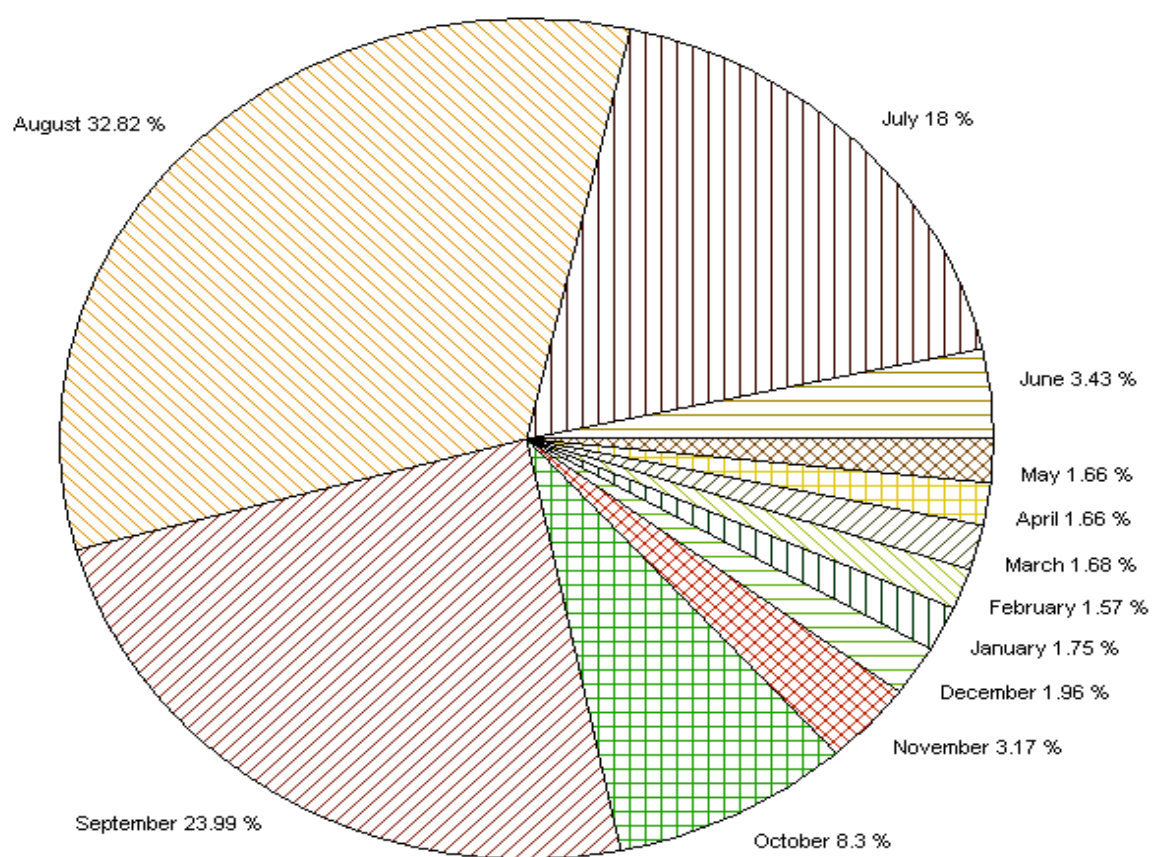
Monthly Average Runoff based on period : 1972-2015

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar



June	3.43 %
July	18 %
August	32.82 %
September	23.99 %
October	8.3 %
November	3.17 %
December	1.96 %
January	1.75 %
February	1.57 %
March	1.68 %
April	1.66 %
May	1.66 %

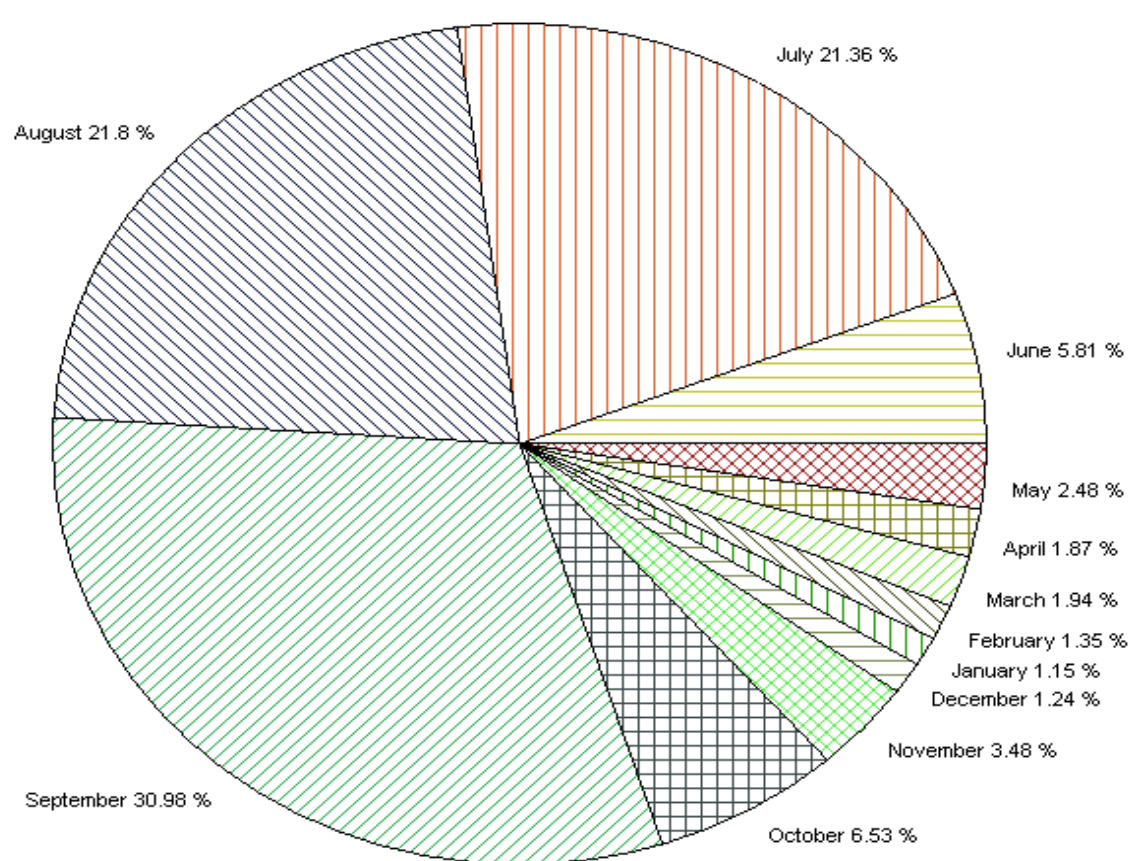
Monthly Runoff for the Year : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar



June	5.81 %
July	21.36 %
August	21.8 %
September	30.98 %
October	6.53 %
November	3.48 %
December	1.24 %
January	1.15 %
February	1.35 %
March	1.94 %
April	1.87 %
May	2.48 %

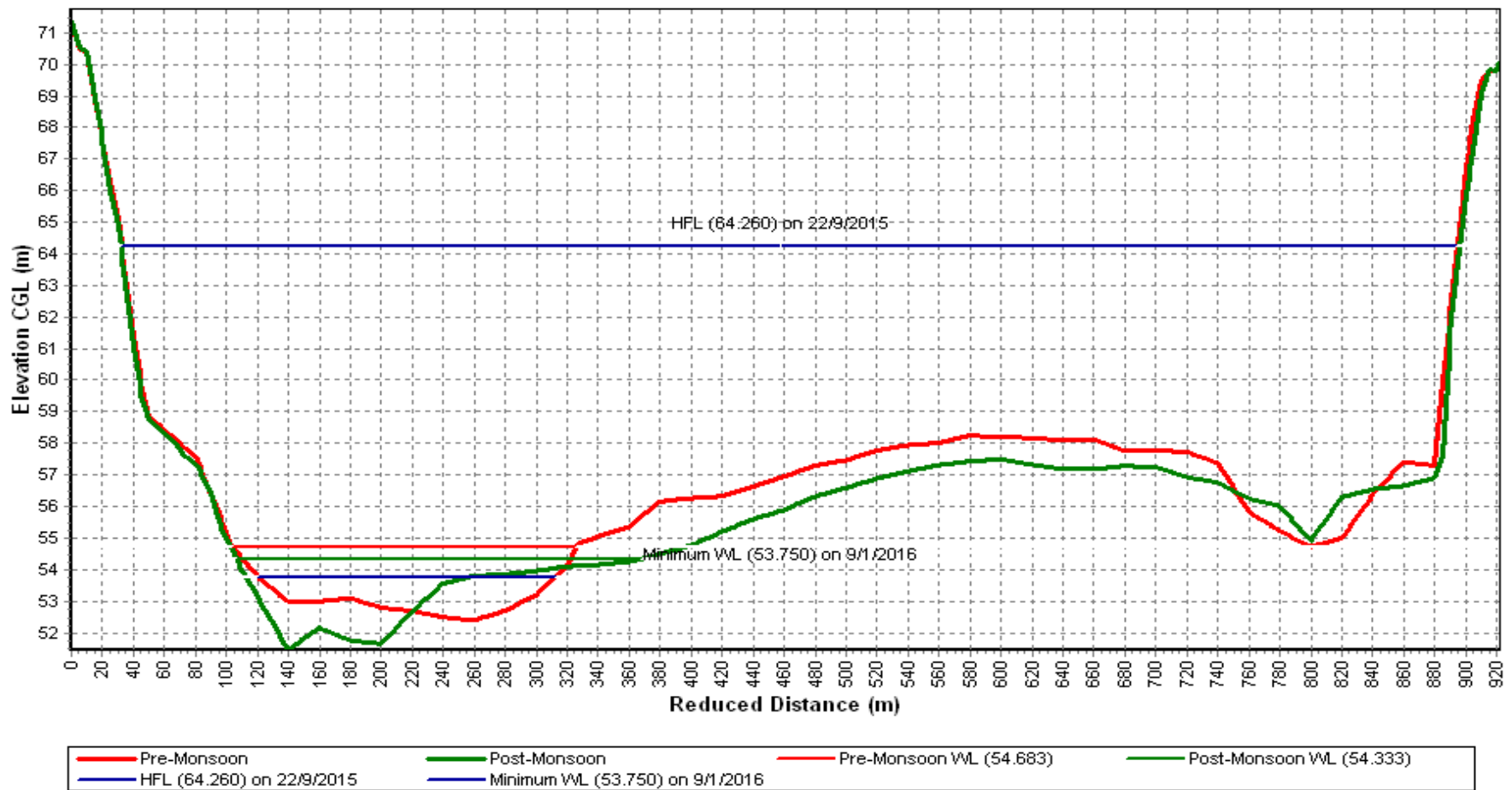
Pre-Monsoon & Post-Monsoon X-Section for Water Year : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar



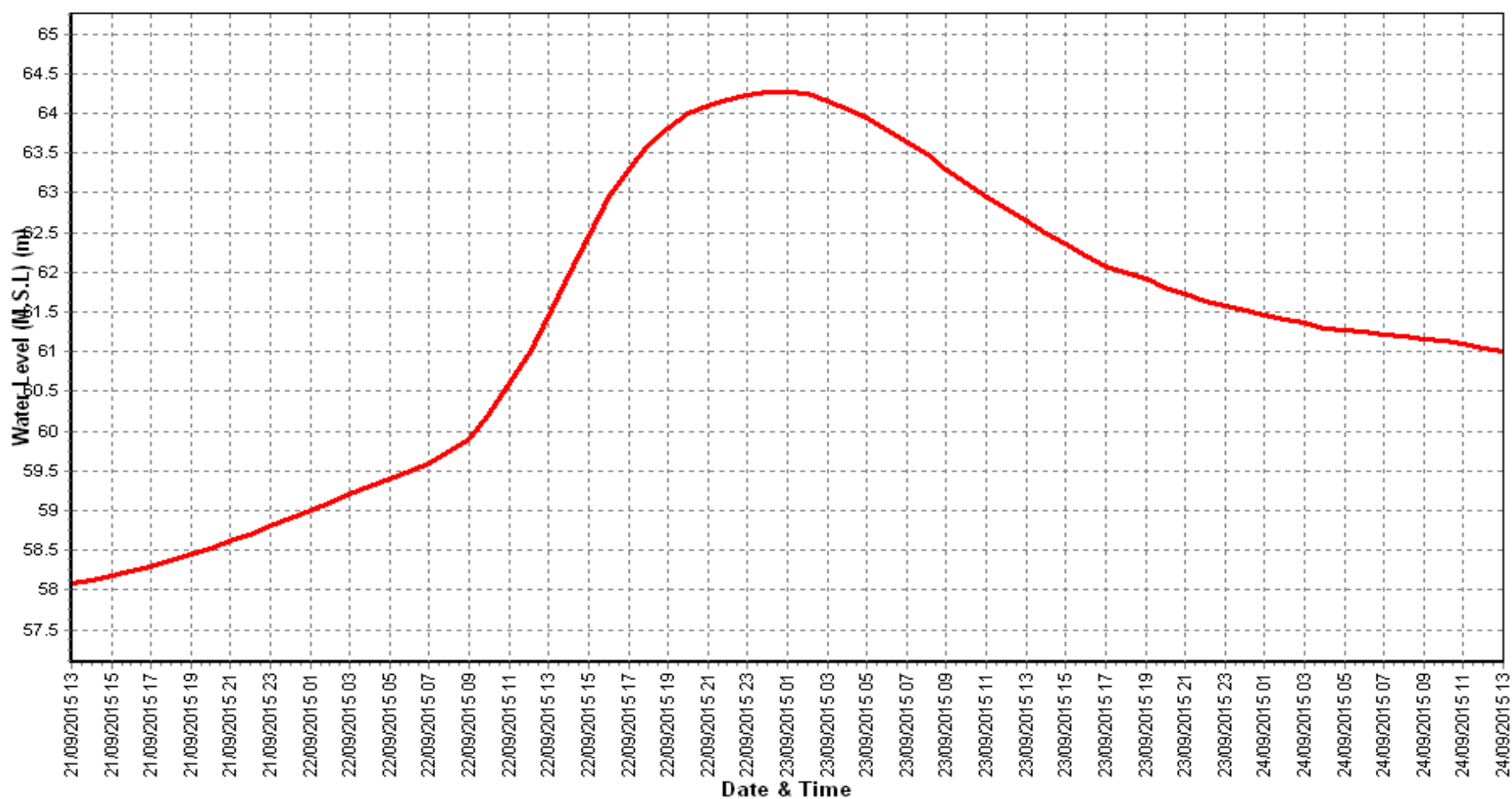
Water Level vs. Time - Graph of Highest Flood Peak during the Year : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar



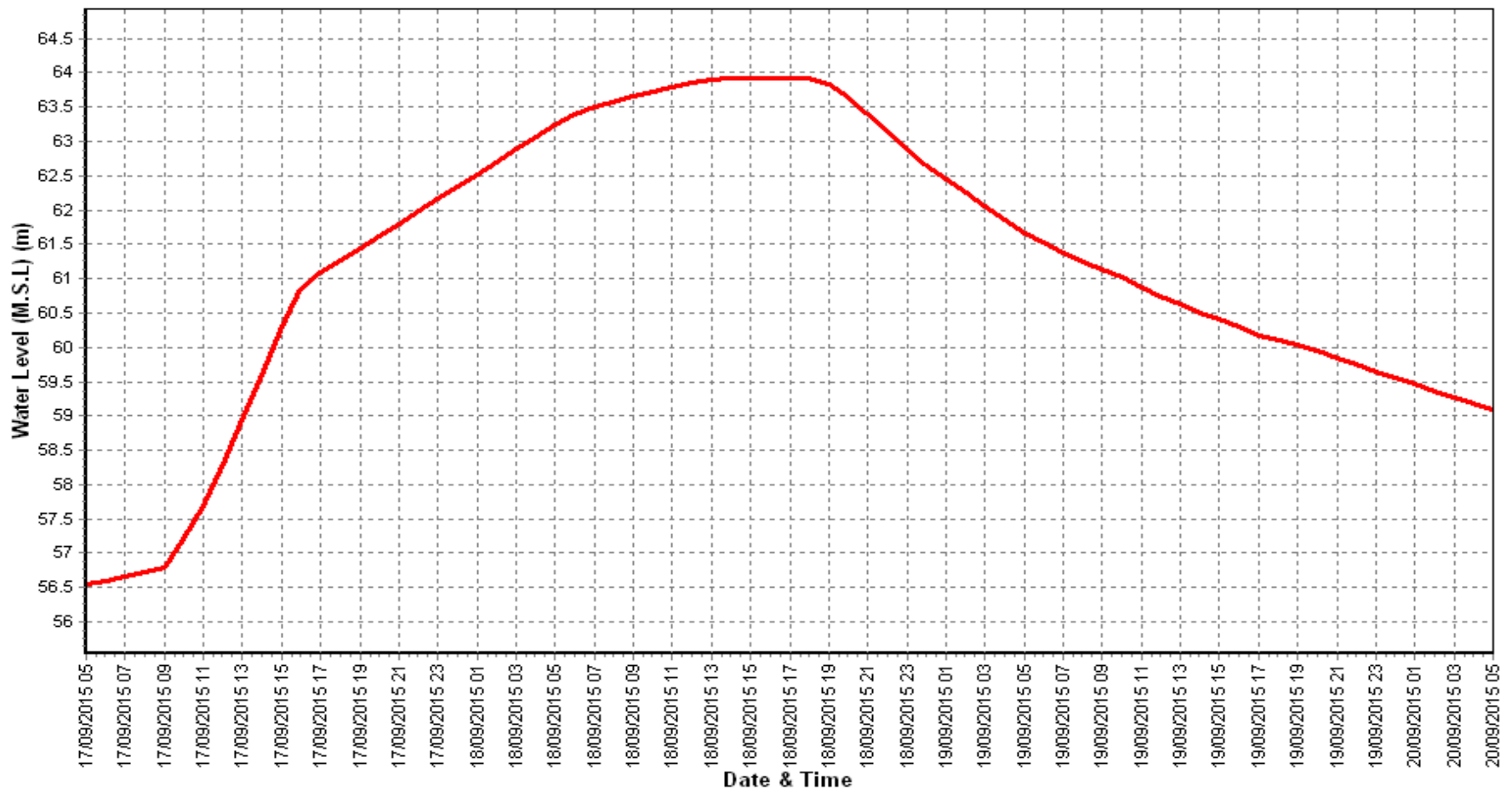
Water Level vs. Time - Graph of 2nd Highest Flood Peak during the Year : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar



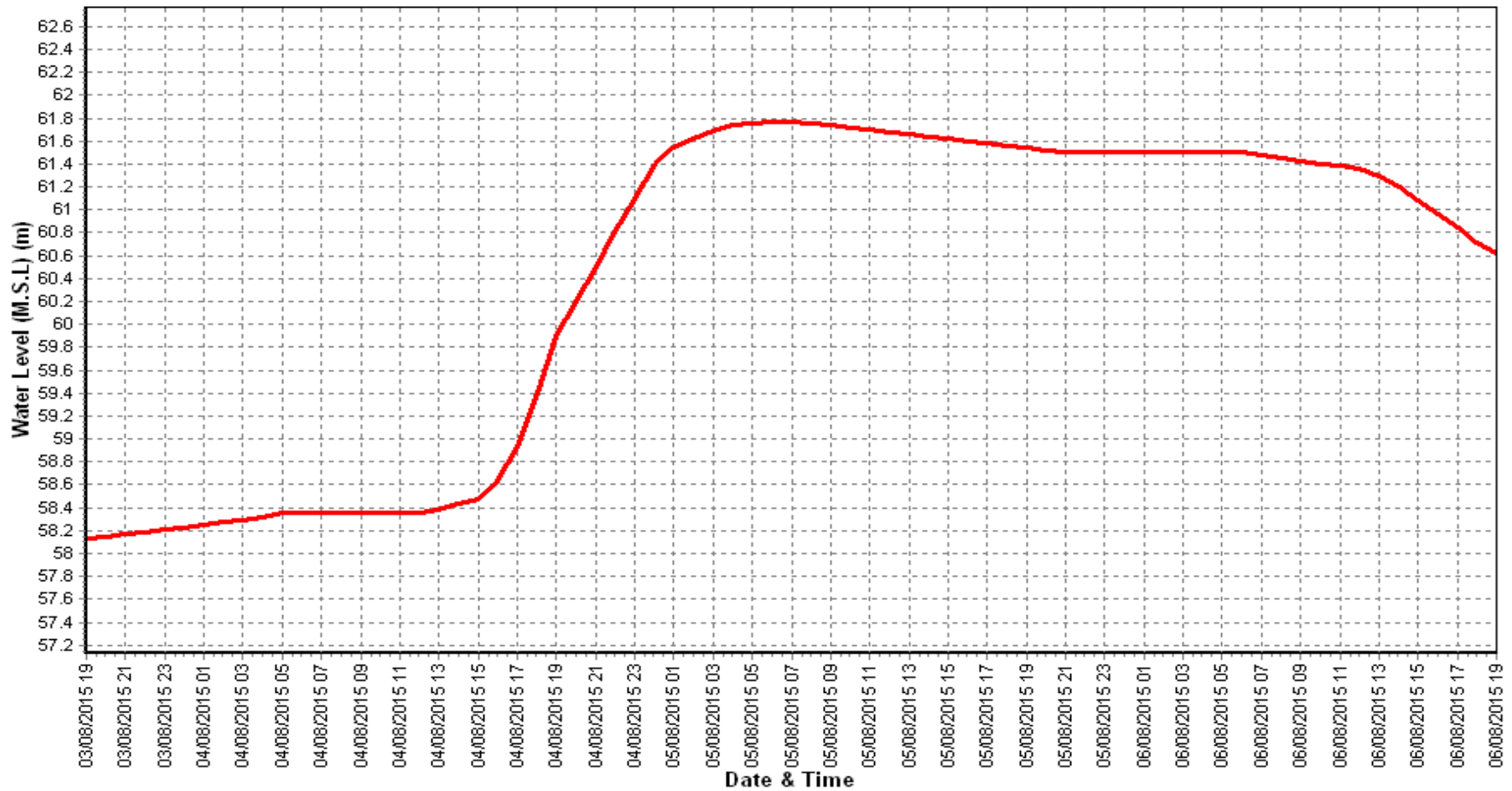
Water Level vs. Time - Graph of 3rd Highest Flood Peak during the Year : 2015-2016

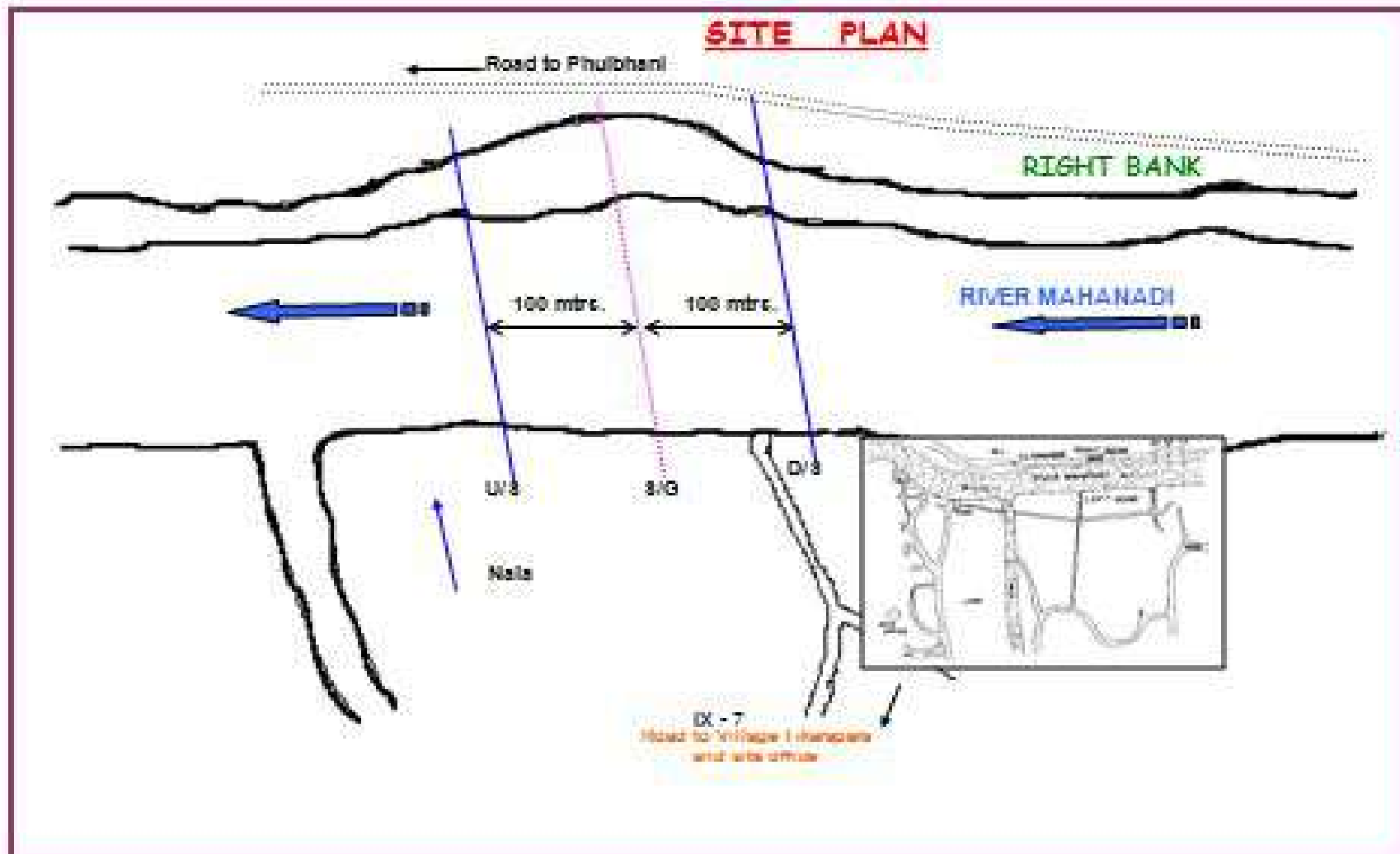
Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar





SECTION - II

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : LMSD,CWC,Bhubaneswar

Day	Jun						Jul						Aug					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	283.8	0.000	0.000	0.010	0.010	245	623.6	0.000	0.000	0.069	0.069	3718	1850	0.000	0.000	0.096	0.096	15348
2	301.8	0.000	0.000	0.019	0.019	495	608.3	0.000	0.000	0.074	0.074	3889	2000	0.000	0.000	0.126	0.126	21773
3	312.8	0.000	0.000	0.033	0.033	892	703.9	0.000	0.000	0.092	0.092	5595	2904	0.000	0.000	0.126	0.126	31609
4	302.4	0.000	0.000	0.031	0.031	810	736.9	0.000	0.000	0.085	0.085	5411	3021	0.000	0.000	0.113	0.113	29498
5	263.0	0.000	0.000	0.022	0.022	500	750.0	0.000	0.000	0.089	0.089	5767	7885	0.000	0.000	0.105	0.105	71529
6	351.4	0.000	0.000	0.017	0.017	516	809.3	0.000	0.000	0.092	0.092	6433	7037	0.000	0.000	0.107	0.107	65056
7	400.0	0.000	0.000	0.026	0.026	899	769.7	0.000	0.000	0.104	0.104	6916	5430	0.000	0.000	0.102	0.102	47853
8	554.3	0.000	0.000	0.035	0.035	1676	646.4	0.000	0.000	0.066	0.066	3686	3341	0.000	0.000	0.108	0.108	31177
9	633.7	0.000	0.000	0.040	0.040	2190	673.1	0.000	0.000	0.082	0.082	4769	2600	0.000	0.000	0.102	0.102	22913
10	680.7	0.000	0.000	0.024	0.024	1411	757.9	0.000	0.000	0.086	0.086	5632	1594	0.000	0.000	0.960	0.960	132196
11	676.9	0.000	0.000	0.028	0.028	1638	1054	0.000	0.000	0.100	0.100	9110	1033	0.000	0.000	0.085	0.085	7586
12	484.2	0.000	0.000	0.029	0.029	1213	2000	0.000	0.000	0.100	0.100	17280	974.3	0.000	0.000	0.089	0.089	7492
13	379.0	0.000	0.000	0.018	0.018	589	2149	0.000	0.000	0.100	0.100	18566	890.6	0.000	0.000	0.091	0.091	7002
14	380.0	0.000	0.000	0.100	0.100	3283	1497	0.000	0.000	0.116	0.116	15001	931.4	0.000	0.000	0.088	0.088	7082
15	488.1	0.000	0.000	0.119	0.119	5019	3074	0.000	0.000	0.106	0.106	28156	1300	0.000	0.000	0.089	0.089	9996
16	507.9	0.000	0.000	0.119	0.119	5222	4223	0.000	0.000	0.107	0.107	39044	1500	0.000	0.000	0.085	0.085	11016
17	597.5	0.000	0.000	0.109	0.109	5627	4608	0.000	0.000	0.093	0.093	37024	1389	0.000	0.000	0.083	0.083	9959
18	526.2	0.000	0.000	0.115	0.115	5228	4600	0.000	0.000	0.100	0.100	39744	1369	0.000	0.000	0.092	0.092	10882
19	655.4	0.000	0.000	0.116	0.116	6568	4700	0.000	0.000	0.101	0.101	41014	1645	0.000	0.000	0.120	0.120	17056
20	483.7	0.000	0.000	0.112	0.112	4681	3892	0.000	0.000	0.103	0.103	34638	1562	0.000	0.000	0.104	0.104	14036
21	500.0	0.000	0.000	0.134	0.134	5789	3382	0.000	0.000	0.110	0.110	32144	1450	0.000	0.000	0.125	0.125	15656
22	617.5	0.000	0.000	0.156	0.156	8323	2502	0.000	0.000	0.095	0.095	20538	1247	0.000	0.000	0.089	0.089	9589
23	1060	0.000	0.000	0.148	0.148	13549	2204	0.000	0.000	0.108	0.108	20563	1000	0.000	0.000	0.092	0.092	7949
24	1985	0.000	0.000	0.149	0.149	25560	1996	0.000	0.000	0.118	0.118	20350	1099	0.000	0.000	0.094	0.094	8923
25	1614	0.000	0.000	0.201	0.201	28025	2113	0.000	0.000	0.110	0.110	20078	1105	0.000	0.000	0.094	0.094	8975
26	1350	0.000	0.000	0.141	0.141	16444	3000	0.000	0.000	0.110	0.110	28512	1329	0.000	0.000	0.089	0.089	10216
27	951.0	0.000	0.000	0.110	0.110	9039	4421	0.000	0.000	0.110	0.110	42016	1579	0.000	0.000	0.102	0.102	13917
28	750.0	0.000	0.000	0.114	0.114	7387	4427	0.000	0.000	0.110	0.110	42079	3479	0.000	0.000	0.110	0.110	33060
29	669.1	0.000	0.000	0.118	0.118	6822	3218	0.000	0.000	0.101	0.101	28084	2998	0.000	0.000	0.111	0.111	28751
30	615.6	0.000	0.000	0.098	0.098	5212	2938	0.000	0.000	0.115	0.115	29191	3500	0.000	0.000	0.114	0.114	34474
31							2119	0.000	0.000	0.110	0.110	20142	3619	0.000	0.000	0.118	0.118	36899
<u>Ten Daily Mean</u>																		
Ten Daily I	408.4	0.000	0.000	0.026	0.026	963	707.9	0.000	0.000	0.084	0.084	5182	3766	0.000	0.000	0.195	0.195	46895
Ten Daily II	517.9	0.000	0.000	0.087	0.087	3907	3180	0.000	0.000	0.103	0.103	27958	1259	0.000	0.000	0.093	0.093	10211
Ten Daily III	1011	0.000	0.000	0.137	0.137	12615	2938	0.000	0.000	0.109	0.109	27609	2037	0.000	0.000	0.103	0.103	18946
<u>Monthly</u>																		
Total						174853						635091						779468

Annual Sediment Load (Metric Tonnes) : 2972216

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : LMSD,CWC,Bhubaneswar

Day	Sep						Oct						Nov					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	3318	0.000	0.000	0.171	0.171	49026	978.9	0.000	0.000	0.039	0.039	3299	518.4	0.000	0.000	0.000	0.000	0
2	4806	0.000	0.000	0.173	0.173	71843	900.0	0.000	0.000	0.038	0.038	2916	483.9	0.000	0.000	0.049	0.049	2049
3	4231	0.000	0.000	0.174	0.174	63601	890.0	0.000	0.000	0.036	0.036	2768	755.0	0.000	0.000	0.000	0.000	0
4	3893	0.000	0.000	0.154	0.154	51795	800.0	0.000	0.000	0.040	0.040	2730	634.3	0.000	0.000	0.000	0.000	0
5	3982	0.000	0.000	0.135	0.135	46449	821.7	0.000	0.000	0.043	0.043	3053	587.2	0.000	0.000	0.000	0.000	0
6	3600	0.000	0.000	0.000	0.000	0	801.1	0.000	0.000	0.045	0.045	3115	733.2	0.000	0.000	0.000	0.000	0
7	3362	0.000	0.000	0.134	0.134	38919	773.3	0.000	0.000	0.044	0.044	2940	631.4	0.000	0.000	0.000	0.000	0
8	2272	0.000	0.000	0.101	0.101	19824	726.6	0.000	0.000	0.041	0.041	2574	542.1	0.000	0.000	0.000	0.000	0
9	1598	0.000	0.000	0.110	0.110	15188	700.2	0.000	0.000	0.041	0.041	2481	586.6	0.000	0.000	0.093	0.093	4714
10	1177	0.000	0.000	0.100	0.100	10171	663.5	0.000	0.000	0.040	0.040	2293	649.2	0.000	0.000	0.000	0.000	0
11	949.8	0.000	0.000	0.126	0.126	10340	750.0	0.000	0.000	0.040	0.040	2592	545.2	0.000	0.000	0.000	0.000	0
12	893.7	0.000	0.000	0.127	0.127	9806	619.7	0.000	0.000	0.041	0.041	2195	563.1	0.000	0.000	0.000	0.000	0
13	820.0	0.000	0.000	0.000	0.000	0	473.8	0.000	0.000	0.050	0.050	2047	505.8	0.000	0.000	0.000	0.000	0
14	744.7	0.000	0.000	0.093	0.093	5984	455.1	0.000	0.000	0.053	0.053	2084	380.9	0.000	0.000	0.000	0.000	0
15	890.3	0.000	0.000	0.069	0.069	5308	487.7	0.000	0.000	0.047	0.047	1980	282.9	0.000	0.000	0.000	0.000	0
16	1069	0.000	0.000	0.088	0.088	8129	514.2	0.000	0.000	0.048	0.048	2133	260.1	0.000	0.000	0.082	0.082	1842
17	1400	0.000	0.000	0.000	0.000	0	514.2	0.000	0.000	0.045	0.045	1999	237.7	0.000	0.000	0.000	0.000	0
18	12086	0.000	0.000	0.110	0.110	114866	520.0	0.000	0.000	0.046	0.046	2067	251.5	0.000	0.000	0.000	0.000	0
19	7114	0.000	0.000	0.257	0.257	157968	480.6	0.000	0.000	0.047	0.047	1952	238.0	0.000	0.000	0.000	0.000	0
20	3500	0.000	0.000	0.000	0.000	0	773.5	0.000	0.000	0.040	0.040	2673	236.3	0.000	0.000	0.000	0.000	0
21	2642	0.000	0.000	0.243	0.243	55467	790.0	0.000	0.000	0.040	0.040	2730	219.0	0.000	0.000	0.000	0.000	0
22	6343	0.000	0.000	0.191	0.191	104678	820.0	0.000	0.000	0.040	0.040	2834	222.5	0.000	0.000	0.000	0.000	0
23	10931	0.000	0.000	0.215	0.215	203059	828.3	0.000	0.000	0.037	0.037	2648	252.5	0.000	0.000	0.068	0.068	1484
24	7535	0.000	0.000	0.236	0.236	153637	800.0	0.000	0.000	0.038	0.038	2627	203.1	0.000	0.000	0.000	0.000	0
25	4500	0.000	0.000	0.000	0.000	0	820.0	0.000	0.000	0.390	0.390	27631	206.5	0.000	0.000	0.000	0.000	0
26	3337	0.000	0.000	0.065	0.065	18739	778.0	0.000	0.000	0.390	0.390	26215	180.4	0.000	0.000	0.000	0.000	0
27	2250	0.000	0.000	0.000	0.000	0	777.8	0.000	0.000	0.039	0.039	2621	183.1	0.000	0.000	0.000	0.000	0
28	1783	0.000	0.000	0.041	0.041	6317	627.9	0.000	0.000	0.037	0.037	2007	176.7	0.000	0.000	0.000	0.000	0
29	1174	0.000	0.000	0.056	0.056	5679	727.9	0.000	0.000	0.037	0.037	2327	174.8	0.000	0.000	0.000	0.000	0
30	1035	0.000	0.000	0.048	0.048	4291	595.1	0.000	0.000	0.038	0.038	1954	169.2	0.000	0.000	0.066	0.066	965
31							551.4	0.000	0.000	0.044	0.044	2096						
<u>Ten Daily Mean</u>																		
Ten Daily I	3224	0.000	0.000	0.125	0.125	36682	805.5	0.000	0.000	0.041	0.041	2817	612.1	0.000	0.000	0.014	0.014	676
Ten Daily II	2947	0.000	0.000	0.087	0.087	31240	558.9	0.000	0.000	0.046	0.046	2172	350.1	0.000	0.000	0.008	0.008	184
Ten Daily III	4153	0.000	0.000	0.110	0.110	55187	737.9	0.000	0.000	0.103	0.103	6881	198.8	0.000	0.000	0.013	0.013	245
<u>Monthly</u>																		
Total						1231083						125579						11053

Annual Sediment Load (Metric Tonnes) : 2972216

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar

Day	Dec						Jan						Feb					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	181.3	0.000	0.000	0.000	0.000	0	112.3	0.000	0.000	0.000	0.000	0	135.8	0.000	0.000	0.038	0.038	446
2	160.9	0.000	0.000	0.000	0.000	0	97.10	0.000	0.000	0.000	0.000	0	117.0	0.000	0.000	0.000	0.000	0
3	120.2	0.000	0.000	0.000	0.000	0	105.0	0.000	0.000	0.000	0.000	0	128.5	0.000	0.000	0.000	0.000	0
4	117.6	0.000	0.000	0.000	0.000	0	130.1	0.000	0.000	0.034	0.034	382	139.5	0.000	0.000	0.000	0.000	0
5	163.6	0.000	0.000	0.000	0.000	0	109.5	0.000	0.000	0.000	0.000	0	143.8	0.000	0.000	0.000	0.000	0
6	175.0	0.000	0.000	0.000	0.000	0	96.53	0.000	0.000	0.000	0.000	0	175.2	0.000	0.000	0.000	0.000	0
7	156.3	0.000	0.000	0.052	0.052	702	101.0	0.000	0.000	0.000	0.000	0	155.7	0.000	0.000	0.000	0.000	0
8	167.9	0.000	0.000	0.000	0.000	0	83.98	0.000	0.000	0.000	0.000	0	136.3	0.000	0.000	0.037	0.037	436
9	158.1	0.000	0.000	0.000	0.000	0	86.12	0.000	0.000	0.000	0.000	0	143.5	0.000	0.000	0.000	0.000	0
10	136.4	0.000	0.000	0.000	0.000	0	118.8	0.000	0.000	0.000	0.000	0	152.2	0.000	0.000	0.000	0.000	0
11	128.9	0.000	0.000	0.000	0.000	0	147.1	0.000	0.000	0.034	0.034	432	148.9	0.000	0.000	0.000	0.000	0
12	100.6	0.000	0.000	0.000	0.000	0	154.5	0.000	0.000	0.000	0.000	0	139.2	0.000	0.000	0.000	0.000	0
13	113.0	0.000	0.000	0.000	0.000	0	119.7	0.000	0.000	0.000	0.000	0	138.2	0.000	0.000	0.000	0.000	0
14	116.5	0.000	0.000	0.052	0.052	524	118.4	0.000	0.000	0.000	0.000	0	144.2	0.000	0.000	0.000	0.000	0
15	124.8	0.000	0.000	0.000	0.000	0	120.3	0.000	0.000	0.000	0.000	0	150.3	0.000	0.000	0.031	0.031	402
16	125.2	0.000	0.000	0.000	0.000	0	117.1	0.000	0.000	0.000	0.000	0	132.9	0.000	0.000	0.000	0.000	0
17	115.4	0.000	0.000	0.000	0.000	0	124.6	0.000	0.000	0.000	0.000	0	136.4	0.000	0.000	0.000	0.000	0
18	109.4	0.000	0.000	0.000	0.000	0	124.4	0.000	0.000	0.046	0.046	495	117.5	0.000	0.000	0.000	0.000	0
19	129.7	0.000	0.000	0.000	0.000	0	127.2	0.000	0.000	0.000	0.000	0	152.3	0.000	0.000	0.000	0.000	0
20	152.1	0.000	0.000	0.000	0.000	0	115.5	0.000	0.000	0.000	0.000	0	138.9	0.000	0.000	0.000	0.000	0
21	168.3	0.000	0.000	0.047	0.047	683	116.2	0.000	0.000	0.000	0.000	0	159.2	0.000	0.000	0.000	0.000	0
22	178.0	0.000	0.000	0.000	0.000	0	148.1	0.000	0.000	0.000	0.000	0	179.3	0.000	0.000	0.035	0.035	542
23	108.6	0.000	0.000	0.000	0.000	0	152.7	0.000	0.000	0.000	0.000	0	153.4	0.000	0.000	0.000	0.000	0
24	130.0	0.000	0.000	0.000	0.000	0	150.0	0.000	0.000	0.000	0.000	0	209.1	0.000	0.000	0.000	0.000	0
25	122.0	0.000	0.000	0.000	0.000	0	147.0	0.000	0.000	0.035	0.035	444	153.4	0.000	0.000	0.000	0.000	0
26	111.1	0.000	0.000	0.000	0.000	0	140.0	0.000	0.000	0.000	0.000	0	171.4	0.000	0.000	0.000	0.000	0
27	113.0	0.000	0.000	0.000	0.000	0	125.6	0.000	0.000	0.000	0.000	0	204.8	0.000	0.000	0.000	0.000	0
28	122.8	0.000	0.000	0.047	0.047	499	114.4	0.000	0.000	0.000	0.000	0	210.3	0.000	0.000	0.000	0.000	0
29	118.2	0.000	0.000	0.000	0.000	0	116.6	0.000	0.000	0.000	0.000	0	234.5	0.000	0.000	0.032	0.032	648
30	113.2	0.000	0.000	0.000	0.000	0	146.0	0.000	0.000	0.000	0.000	0						
31	107.8	0.000	0.000	0.000	0.000	0	150.0	0.000	0.000	0.000	0.000	0						
Ten Daily Mean																		
Ten Daily I	153.7	0.000	0.000	0.005	0.005	70	104.1	0.000	0.000	0.003	0.003	38	142.7	0.000	0.000	0.008	0.008	88
Ten Daily II	121.6	0.000	0.000	0.005	0.005	52	126.9	0.000	0.000	0.008	0.008	93	139.9	0.000	0.000	0.003	0.003	40
Ten Daily III	126.6	0.000	0.000	0.009	0.009	107	137.0	0.000	0.000	0.003	0.003	40	186.1	0.000	0.000	0.007	0.007	132
Monthly																		
Total						2408						1753						2475

Daily Observed Sediment Datasheet for period : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : LMSD,CWC,Bhubaneswar

Day	Mar						Apr						May					
	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day	Q cumecs.	Coarse g/l	Medium g/l	Fine g/l	Total g/l	Total M.T./day
1	254.3	0.000	0.000	0.000	0.000	0	125.1	0.000	0.000	0.000	0.000	0	298.3	0.000	0.000	0.000	0.000	0
2	211.3	0.000	0.000	0.000	0.000	0	156.5	0.000	0.000	0.000	0.000	0	316.2	0.000	0.000	0.034	0.034	929
3	225.0	0.000	0.000	0.000	0.000	0	180.3	0.000	0.000	0.000	0.000	0	248.1	0.000	0.000	0.000	0.000	0
4	197.3	0.000	0.000	0.000	0.000	0	204.1	0.000	0.000	0.032	0.032	564	270.5	0.000	0.000	0.000	0.000	0
5	176.3	0.000	0.000	0.000	0.000	0	245.6	0.000	0.000	0.000	0.000	0	259.5	0.000	0.000	0.000	0.000	0
6	184.0	0.000	0.000	0.000	0.000	0	210.2	0.000	0.000	0.000	0.000	0	248.9	0.000	0.000	0.000	0.000	0
7	190.0	0.000	0.000	0.000	0.000	0	208.3	0.000	0.000	0.000	0.000	0	213.1	0.000	0.000	0.000	0.000	0
8	204.7	0.000	0.000	0.000	0.000	0	233.0	0.000	0.000	0.000	0.000	0	180.0	0.000	0.000	0.000	0.000	0
9	216.2	0.000	0.000	0.000	0.000	0	214.6	0.000	0.000	0.000	0.000	0	146.9	0.000	0.000	0.012	0.012	152
10	224.1	0.000	0.000	0.000	0.000	0	228.5	0.000	0.000	0.000	0.000	0	161.6	0.000	0.000	0.000	0.000	0
11	196.7	0.000	0.000	0.000	0.000	0	235.8	0.000	0.000	0.030	0.030	611	150.8	0.000	0.000	0.000	0.000	0
12	210.7	0.000	0.000	0.000	0.000	0	245.4	0.000	0.000	0.000	0.000	0	140.0	0.000	0.000	0.000	0.000	0
13	220.0	0.000	0.000	0.000	0.000	0	248.7	0.000	0.000	0.000	0.000	0	161.1	0.000	0.000	0.000	0.000	0
14	239.5	0.000	0.000	0.062	0.062	1283	240.0	0.000	0.000	0.000	0.000	0	206.4	0.000	0.000	0.000	0.000	0
15	281.8	0.000	0.000	0.000	0.000	0	225.2	0.000	0.000	0.000	0.000	0	219.5	0.000	0.000	0.000	0.000	0
16	248.5	0.000	0.000	0.000	0.000	0	214.3	0.000	0.000	0.000	0.000	0	232.6	0.000	0.000	0.025	0.025	502
17	211.2	0.000	0.000	0.000	0.000	0	210.2	0.000	0.000	0.000	0.000	0	234.0	0.000	0.000	0.000	0.000	0
18	248.8	0.000	0.000	0.000	0.000	0	206.0	0.000	0.000	0.026	0.026	463	229.0	0.000	0.000	0.000	0.000	0
19	278.4	0.000	0.000	0.000	0.000	0	219.5	0.000	0.000	0.000	0.000	0	283.9	0.000	0.000	0.000	0.000	0
20	210.0	0.000	0.000	0.000	0.000	0	210.6	0.000	0.000	0.000	0.000	0	322.0	0.000	0.000	0.000	0.000	0
21	230.5	0.000	0.000	0.056	0.056	1115	201.8	0.000	0.000	0.000	0.000	0	381.2	0.000	0.000	0.000	0.000	0
22	227.2	0.000	0.000	0.000	0.000	0	181.0	0.000	0.000	0.000	0.000	0	410.8	0.000	0.000	0.000	0.000	0
23	256.5	0.000	0.000	0.000	0.000	0	161.8	0.000	0.000	0.000	0.000	0	440.4	0.000	0.000	0.033	0.033	1256
24	200.0	0.000	0.000	0.000	0.000	0	158.3	0.000	0.000	0.000	0.000	0	416.5	0.000	0.000	0.000	0.000	0
25	190.0	0.000	0.000	0.000	0.000	0	154.5	0.000	0.000	0.015	0.015	200	261.0	0.000	0.000	0.000	0.000	0
26	185.3	0.000	0.000	0.000	0.000	0	177.1	0.000	0.000	0.000	0.000	0	329.2	0.000	0.000	0.000	0.000	0
27	187.0	0.000	0.000	0.000	0.000	0	196.6	0.000	0.000	0.000	0.000	0	274.4	0.000	0.000	0.000	0.000	0
28	157.7	0.000	0.000	0.043	0.043	586	216.2	0.000	0.000	0.000	0.000	0	259.8	0.000	0.000	0.000	0.000	0
29	122.2	0.000	0.000	0.000	0.000	0	253.0	0.000	0.000	0.000	0.000	0	250.4	0.000	0.000	0.000	0.000	0
30	140.8	0.000	0.000	0.000	0.000	0	281.5	0.000	0.000	0.000	0.000	0	416.9	0.000	0.000	0.022	0.022	792
31	141.7	0.000	0.000	0.000	0.000	0							314.8	0.000	0.000	0.000	0.000	0
Ten Daily Mean																		
Ten Daily I	208.3	0.000	0.000	0.000	0.000	0	200.6	0.000	0.000	0.003	0.003	56	234.3	0.000	0.000	0.005	0.005	108
Ten Daily II	234.6	0.000	0.000	0.006	0.006	128	225.6	0.000	0.000	0.006	0.006	107	217.9	0.000	0.000	0.003	0.003	50
Ten Daily III	185.4	0.000	0.000	0.009	0.009	155	198.2	0.000	0.000	0.002	0.002	20	341.4	0.000	0.000	0.005	0.005	186
Monthly																		
Total						2984						1838						3632

Annual Sediment Load for period : 1973-2016

Station Name : TIKARAPARA (EM000G5)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : LMSD,CWC,Bhubaneswar

Year	Monsoon (M.T.)	Non-Monsoon (M.T.)	Annual Load (M.T.)	Annual Run Off (MCM)
1973-1974	24222873	84752	24307625	70586
1974-1975	10324047	17140	10341187	18655
1975-1976	39350017	38003	39388020	51696
1976-1977	21706303	95217	21801520	50150
1977-1978	30137685	55339	30193024	60152
1978-1979	44332450	108477	44440927	56326
1979-1980	14536343	110290	14646633	19934
1980-1981	44034457	52560	44087017	68392
1981-1982	18936230	67130	19003360	37359
1982-1983	42140504	51764	42192268	42219
1983-1984	22358581	71670	22430252	54045
1984-1985	13102320	51441	13153760	53553
1985-1986	22150587	40903	22191489	62798
1986-1987	23609194	9219	23618412	59497
1987-1988	5824883	37083	5861966	24105
1988-1989	7701291	123159	7824450	23915
1989-1990	6007311	51713	6059024	29029
1990-1991	17849485	100787	17950271	71176
1991-1992	20361794	59253	20421047	52686
1992-1993	18327294	146087	18473381	52804
1993-1994	10241883	469433	10711316	41685
1994-1995	49549782	715707	50265488	124765
1995-1996	12183397	702758	12886155	38446
1996-1997	5773141	511289	6284430	25472
1997-1998	10270975	734027	11005002	48147
1998-1999	6241357	576601	6817958	34512
1999-2000	3557297	559680	4116977	34358
2000-2001	2742903	47490	2790393	20348
2001-2002	15224146	191861	15416007	66870
2002-2003	2051185	119557	2170742	23799
2003-2004	17666184	294509	17960693	70318
2004-2005	7734910	184116	7919025	41430
2005-2006	11569825	96730	11666554	46816
2006-2007	15982868	127895	16110763	61944
2007-2008	9500059	240455	9740514	55017
2008-2009	8363999	364298	8728296	45678
2009-2010	22751	21201	43952	43003
2010-2011	5711187	60487	5771674	39296
2011-2012	5818319	52040	5870358	45207
2012-2013	7468865	12827	7481692	48136
2013-2014	7526057	49475	7575532	57449
2014-2015	8756678	21963	8778641	68434
2015-2016	2957126	15090	2972216	28796

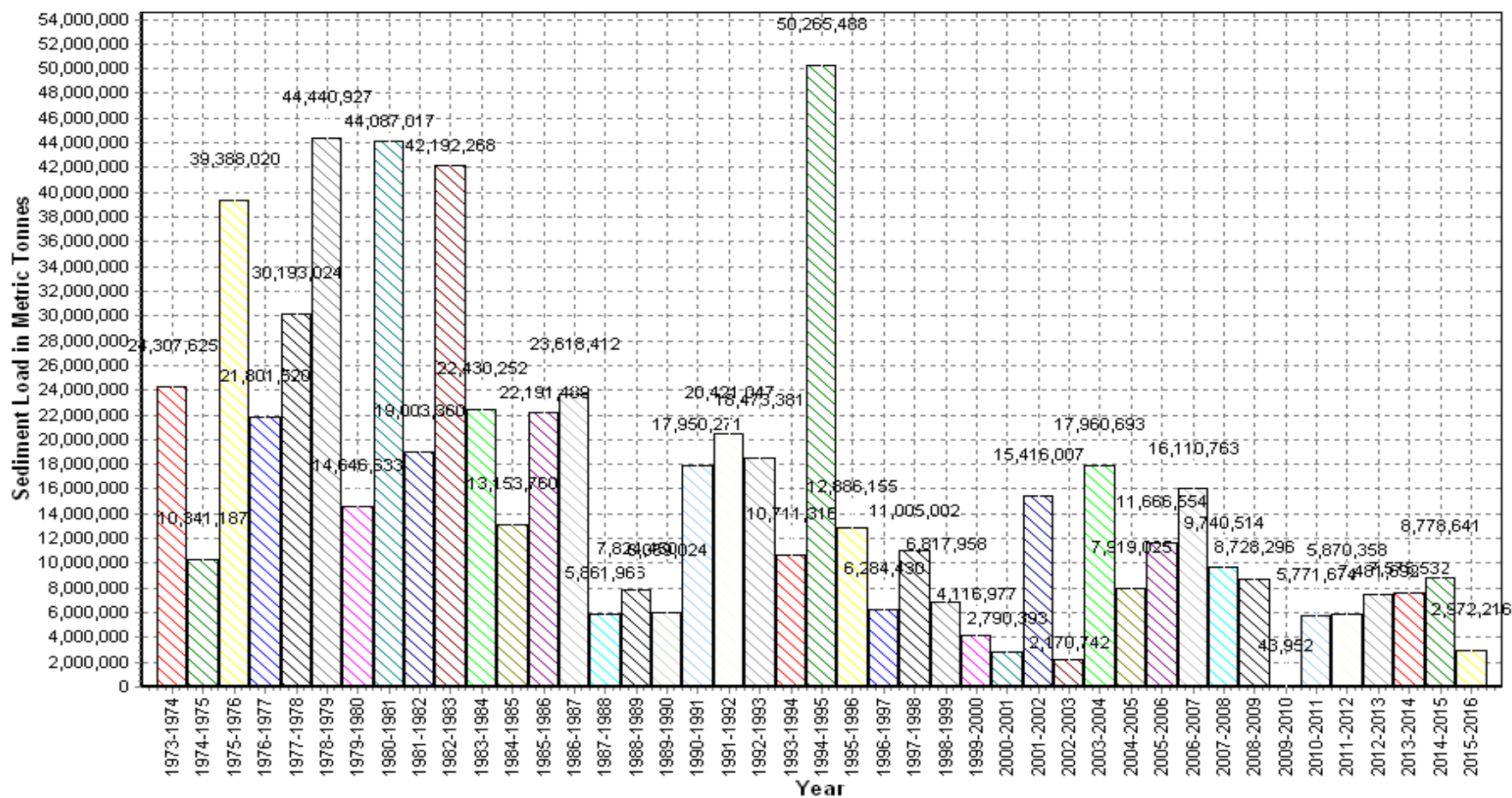
Annual Sediment Load for the period: 1973-2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

Division : MD,CWC,Burla

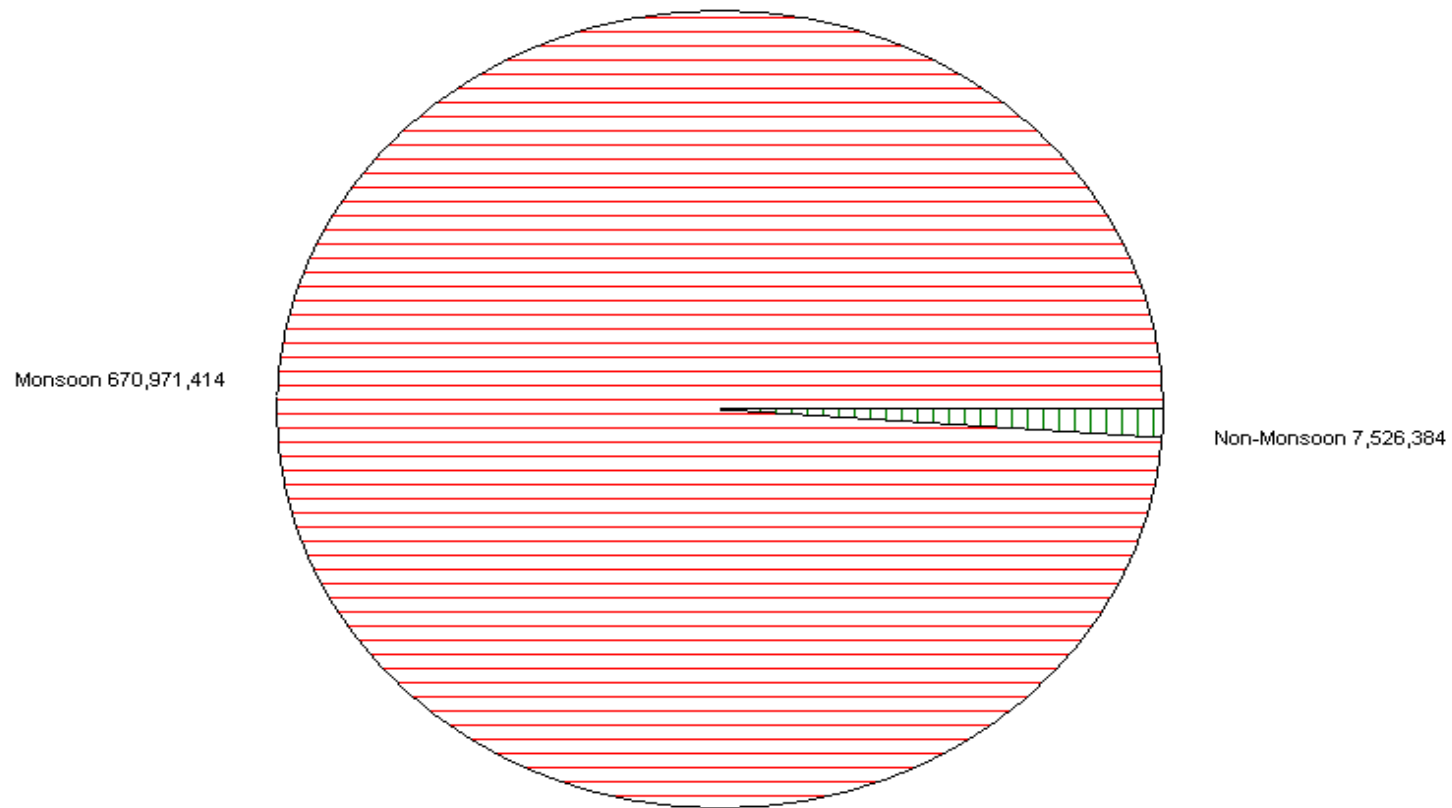
Sub-Division : LMSD,CWC,Bhubaneswar



Seasonal Sediment Load for the period : 1973-2015

Station Name : TIKARAPARA (EM000G5)
Local River : Mahanadi

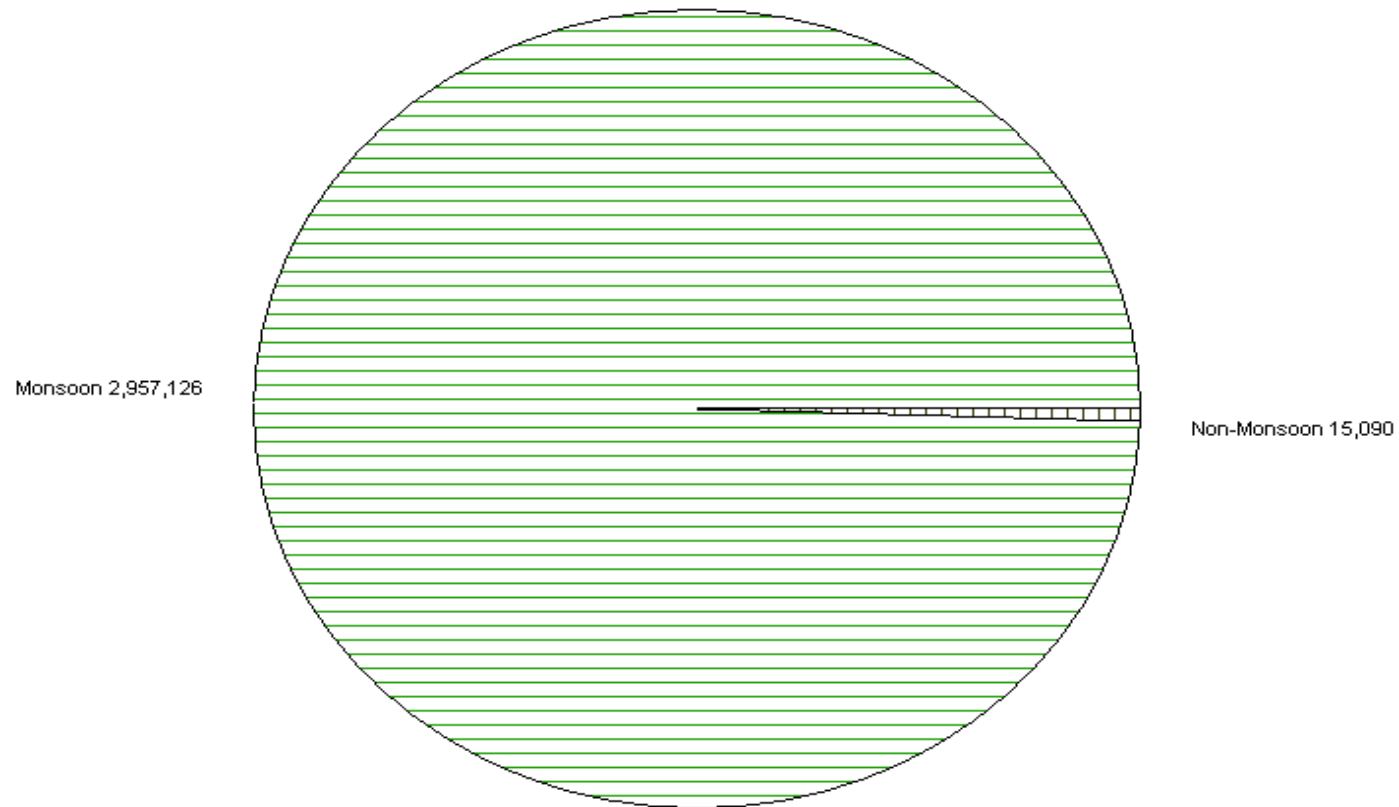
Division : MD,CWC,Burla
Sub-Division : LMSD,CWC,Bhubaneswar



Seasonal Sediment Load for the Year: 2015-2016

Station Name : TIKARAPARA (EM000G5)
Local River : Mahanadi

Division : MD,CWC,Burla
Sub-Division : LMSD,CWC,Bhubaneswar



SECTION - III

Water Quality Datasheet for the period : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

River Water Analysis

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar

S.No	Parameters	6/1/2015	7/1/2015	8/1/2015	9/1/2015	10/1/2015	11/2/2015	12/1/2015	1/1/2016	2/1/2016	3/1/2016	4/1/2016	5/2/2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	283.8	623.6	1850	3318	978.9	483.9	181.3	112.3	135.8	254.3	125.1	316.2
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Light Brown	Light Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	282	241	201	461	511	536	460	463	439	441	411	248
4	EC_GEN (µmho/cm)	260	237	193	465	509	524	466	467	442	448	415	244
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.1	7.5	7.1	7.9	7.0	6.8	7.8	7.2	8.2	7.9	8.1	8.1
7	pH_GEN (pH units)	7.7	7.6	7.2	7.5	7.8	7.6	7.7	7.6	8.2	8.1	8.2	8.2
8	Temp (deg C)	32.0	30.5	29.4	29.0	30.8	28.0	25.0	20.0	23.0	25.5	28.0	31.8
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.0	23.0	23.0	23.0
2	ALK-TOT (mgCaCO3/L)	83	60	46	88	74	74	79	88	180	92	134	134
3	B (mg/L)	0.01	0.01	0.02	0.05	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01
4	Ca (mg/L)	19	21	18	26	16	19	18	19	21	50	24	42
5	Cl (mg/L)	11.3	15.1	13.2	9.4	11.3	13.2	13.2	15.1	17.0	15.1	18.9	13.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.4	27.7	27.7	27.7
7	F (mg/L)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
8	Fe (mg/L)	0.3	0.4	0.3	0.4	0.7	0.4	0.5	0.5	0.2	0.3	0.5	0.4
9	HCO3 (mg/L)	101	73	56	107	90	90	96	107	107	56	107	107
10	K (mg/L)	1.8	1.3	6.1	3.2	2.6	2.8	1.4	1.3	2.6	2.8	0.2	0.5
11	Mg (mg/L)	12.6	12.6	11.7	11.7	10.7	12.6	11.7	10.7	13.6	16.5	12.6	16.5
12	Na (mg/L)	7.3	9.8	7.9	5.9	3.9	4.9	3.8	4.2	12.0	12.6	1.6	1.7
13	NO2+NO3 (mg N/L)	0.78	1.22	1.02	1.08	1.01	1.19	0.98	1.21	1.01	1.12	0.78	0.98
14	NO2-N (mgN/L)	0.00	0.00	0.07	0.03	0.03	0.00	0.01	0.00	0.00	0.00	0.00	0.00
15	NO3-N (mgN/L)	0.78	1.22	0.95	1.05	0.98	1.19	0.97	1.21	1.01	1.12	0.78	0.98
16	P-Tot (mgP/L)	0.010	0.010	0.001	0.001	0.001	0.010	0.010	0.010	0.010	0.010	0.010	0.010
17	SiO2 (mg/L)	8.0	8.0	8.0	8.0	6.0	5.0	6.0	5.0	6.0	5.0	6.0	5.0
18	SO4 (mg/L)	13.6	13.6	15.6	4.5	4.1	4.7	5.7	5.4	6.0	6.5	6.9	15.3
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.6	0.8	1.4	1.0	0.6	0.8	1.0	1.2	0.6	1.4	0.8	0.6
2	DO (mg/L)	5.2	5.6	6.8	6.4	6.6	7.4	7.4	9.3	8.3	6.6	7.0	6.6
3	DO_SAT% (%)	71	74	88	83	87	94	89	103	97	79	89	88
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	48	52	44	64	40	48	44	48	52	124	60	104
2	HAR_Total (mgCaCO3/L)	101	105	93	113	85	101	93	93	109	193	113	173
3	Na% (%)	13	17	15	10	9	9	8	9	19	12	3	2
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.4	0.0
5	SAR (-)	0.3	0.4	0.4	0.2	0.2	0.2	0.2	0.2	0.5	0.4	0.1	0.1
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : TIKARAPARA (EM000G5)

Division : MD,CWC,Burla

Local River : Mahanadi

Sub-Division : LMSD,CWC,Bhubaneswar

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	12086	83.98	910.6
2	EC_FLD (μmho/cm)	12	536	201	391
3	EC_GEN (μmho/cm)	12	524	193	389
4	pH_FLD (pH units)	12	8.2	6.8	7.5
5	pH_GEN (pH units)	12	8.2	7.2	7.8
6	Temp (deg C)	12	32.0	20.0	27.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	46.0	0.0	9.6
2	ALK-TOT (mgCaCO3/L)	12	180	46	94
3	B (mg/L)	12	0.05	0.01	0.01
4	Ca (mg/L)	12	50	16	24
5	Cl (mg/L)	12	18.9	9.4	13.8
6	CO3 (mg/L)	12	55.4	0.0	11.5
7	F (mg/L)	12	0.05	0.05	0.05
8	Fe (mg/L)	12	0.7	0.2	0.4
9	HCO3 (mg/L)	12	107	56	92
10	K (mg/L)	12	6.1	0.2	2.2
11	Mg (mg/L)	12	16.5	10.7	12.8
12	Na (mg/L)	12	12.6	1.6	6.3
13	NO2+NO3 (mg N/L)	12	1.22	0.78	1.03
14	NO2-N (mgN/L)	12	0.07	0.00	0.01
15	NO3-N (mgN/L)	12	1.22	0.78	1.02
16	P-Tot (mgP/L)	12	0.010	0.001	0.008
17	SiO2 (mg/L)	12	8.0	5.0	6.3
18	SO4 (mg/L)	12	15.6	4.1	8.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.4	0.6	0.9
2	DO (mg/L)	12	9.3	5.2	6.9
3	DO_SAT% (%)	12	103	71	87
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	124	40	61
2	HAR_Total (mgCaCO3/L)	12	193	85	114
3	Na% (%)	12	19	2	11
4	RSC (-)	12	1.4	0.0	0.2
5	SAR (-)	12	0.5	0.1	0.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

River Water

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar

S.No	Parameters	Flood Jun - Oct																				
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007
	PHYSICAL																					
1	Q (cumec)	2661	1200	5240	1866	2942	6134	4002	3592	1782	2436	2181	1945	6289	4306	1411	658.2	394.1	751.5	491.6	559.6	571.0
2	EC_FLD (µmho/cm)	146	175	153	152	164	162	155	171	173	198	188	182	162	183	339	167	161	173	165	196	240
3	EC_GEN (µmho/cm)	146	175	153	152	165	157	154	171	173	198	188	182	162	183	333	167	161	173	165	191	236
4	pH_FLD (pH units)	7.8	8.1	7.4	7.9	7.8	7.9	7.9	7.7	7.9	7.9	8.3	7.8	7.7	7.8	7.3	7.8	7.8	7.6	7.9	8.1	8.1
5	pH_GEN (pH units)	7.8	8.1	7.4	7.9	7.8	7.9	7.9	7.7	7.9	7.9	8.3	7.8	7.7	7.8	7.5	7.8	7.8	7.6	7.9	8.1	8.1
6	TDS (mg/L)									117	127											
7	Temp (deg C)	28.9	28.3	29.3	29.3	28.7	28.2	29.0	29.5	28.6	29.7	29.4	28.7	25.0	28.3	30.3	24.5	23.1	23.6	22.0	21.8	22.5
	CHEMICAL																					
1	Alk-Phen (mgCaCO3/L)							0.0	0.0	2.4	6.4	13.5	0.0		0.0	0.0						
2	ALK-TOT (mgCaCO3/L)							45	59	51	66	90	93		72	70						
3	B (mg/L)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00
4	Ca (mg/L)	15	17	16	15	19	19	14	17	17	21	18	21	23	18	20	18	16	20	17	22	28
5	Cl (mg/L)	10.5	11.0	11.4	9.8	12.4	11.5	14.4	10.6	9.3	11.9	12.8	17.5	24.3	15.6	12.1	12.1	12.1	10.6	9.6	12.5	13.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	7.7	16.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.28	0.00	0.11
8	Fe (mg/L)	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.3	0.1	0.1	0.0	2.7	0.0	0.3	0.4	0.1	0.1	0.0	0.1	0.1	0.2
9	HCO3 (mg/L)	56	75	66	69	70	73	55	68	57	65	77	110	65	88	86	73	62	80	82	100	110
10	K (mg/L)	2.1	2.2	1.6	1.9	2.2	2.2	2.1	2.3	1.9	2.5	2.1	4.4	1.5	2.1	3.0	2.4	1.9	1.6	1.7	2.3	2.0
11	Mg (mg/L)	4.1	5.7	3.2	4.9	2.9	4.6	5.1	6.4	5.4	7.0	7.2	7.0	6.2	6.6	11.9	4.4	4.6	4.6	6.8	5.7	5.8
12	Na (mg/L)	7.0	7.7	8.1	6.6	8.3	7.3	9.8	7.0	5.9	7.2	7.4	10.0	12.4	7.4	7.0	8.1	7.7	8.1	6.6	8.8	9.9
13	NO2+NO3 (mg N/L)	0.77	1.01	0.21	0.88	0.34	0.74	1.73	0.37	1.00	0.52	0.39	1.07	0.95	1.03	1.02	0.94	0.92	0.81	0.40	0.48	0.58
14	NO2-N (mgN/L)	0.02	0.00	0.00	0.00	0.01	0.02	0.01	0.00	0.00	0.00	0.07	0.00	0.00	0.01	0.02	0.18	0.01	0.02	0.00	0.03	0.02
15	NO3-N (mgN/L)	0.75	1.01	0.21	0.88	0.32	0.72	1.73	0.37	1.00	0.52	0.32	1.07	0.95	1.02	1.00	0.76	0.90	0.78	0.40	0.45	0.56
16	o-PO4-P (mg P/L)				0.000	0.017	0.008	0.000		0.014											0.000	0.021
17	P-Tot (mgP/L)	0.021	0.029	0.001	0.001	0.001	0.009	0.001	0.002	0.002	0.001	0.010	0.001	0.001	0.001	0.005	0.003	0.021	0.001	0.001	0.001	0.007
18	SiO2 (mg/L)	9.3	10.0	10.0	15.3	18.6	11.7	9.5	10.1	8.6	8.0	15.6	21.2	10.2	9.4	7.6	10.4	9.8	7.9	16.1	23.4	12.7
19	SO4 (mg/L)	7.5	6.5	1.1	4.2	1.7	6.2	7.0	9.4	10.7	12.1	9.4	45.6	18.4	15.4	10.3	4.7	7.2	2.4	4.1	2.2	1.9
	BIOLOGICAL/BACTERIOLOGICAL																					
1	BOD3-27 (mg/L)	0.6	0.8	0.7	0.6	0.7	0.9	0.9	0.9	1.3	1.1	1.2	0.7	0.8	0.4	0.9	0.9	0.6	0.5	0.9	0.7	0.8
2	DO (mg/L)	7.0	7.3	6.2	7.0	6.6	6.9	7.1	6.4	7.1	7.1	6.4	6.3	6.3	6.3	6.1	7.7	7.7	8.0	7.7	8.4	7.3
3	DO_SAT% (%)	90	93	81	90	85	88	92	84	92	93	83	81	77	81	80	91	90	94	87	95	84
4	Fcol-MPN (MPN/100mL)							20	10	9	205		11									
5	Tcol-MPN (MPN/100mL)							29	12	17	230		21									
	TRACE & TOXIC																					
1	Al (mg/L)					2.70		0.00														
	CHEMICAL INDICES																					
1	HAR_Ca (mgCaCO3/L)	38	42	41	38	48	47	36	42	43	51	44	54	57	44	50	44	41	50	42	56	70
2	HAR_Total (mgCaCO3/L)	57	66	54	57	60	66	57	68	66	80	74	83	83	71	99	62	60	69	61	80	94
3	Na% (%)	21	20	24	19	24	19	28	18	16	16	17	19	24	18	13	22	22	21	17	19	19
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
5	SAR (-)	0.4	0.4	0.5	0.4	0.5	0.4	0.6	0.4	0.3	0.4	0.4	0.5	0.6	0.4	0.3	0.5	0.4	0.4	0.3	0.4	0.5
	PESTICIDES																					

Water Quality Seasonal Average for the period: 2001-2016

Station Name : TIKARAPARA (EM000G5)

Local River : Mahanadi

River Water

Division : MD,CWC,Burla

Sub-Division : LMSD,CWC,Bhubaneswar

S.No	Parameters	Winter									Summer											
		Nov - Feb									Mar - May											
		2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
	PHYSICAL																					
1	Q (cumec)	859.1	741.8	406.4	448.2	491.1	312.7	1063	421.7	228.3	405.4	198.1	436.4	313.1	313.7	220.9	498.7	405.1	268.6	381.5	261.8	399.4
2	EC_FLD (µmho/cm)	154	168	205	231	169	210	188	253	475	189	197	348	217	208	215	213	243	194	297	220	233
3	EC_GEN (µmho/cm)	153	168	205	231	169	210	188	253	475	189	197	348	209	205	215	213	243	194	297	220	233
4	pH_FLD (pH units)	8.0	7.9	7.8	7.9	7.8	7.2	8.2	7.9	7.5	7.8	7.9	7.3	8.0	8.2	8.1	8.1	8.1	8.0	8.4	8.0	7.9
5	pH_GEN (pH units)	8.0	8.0	7.8	7.9	7.8	7.2	8.2	7.9	7.8	7.8	7.9	7.3	8.1	8.3	8.1	8.2	8.1	8.0	7.9	8.0	7.8
6	TDS (mg/L)			133	151														130	195		
7	Temp (deg C)	21.8	23.0	22.3	24.8	23.1	23.0	23.4	24.4	24.0	29.5	27.7	26.0	26.2	27.5	29.5	26.2	29.0	27.7	26.7	27.7	27.7
	CHEMICAL																					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	4.6	0.0		0.0	11.5						0.0		0.0	0.0	14.6	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	55	48	69	82	79	71		69	105						162		76	66	106	86	76
3	B (mg/L)	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00
4	Ca (mg/L)	11	15	18	20	20	18	19	20	19	21	17	37	20	26	27	19	23	18	31	28	22
5	Cl (mg/L)	12.6	12.7	14.6	13.2	10.4	21.8	19.5	13.3	14.6	12.4	13.6	19.7	13.6	11.9	10.9	18.2	14.9	14.2	17.0	16.3	23.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	13.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	0.0	0.0
7	F (mg/L)	0.00	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.00	0.00	0.00	0.13	0.00	0.14	0.05	0.05	0.05	0.05	0.05	0.05
8	Fe (mg/L)	0.2	0.2	0.1	0.1	0.0	2.4	0.1	0.4	0.4	0.2	0.3	0.1	0.1	0.2	0.3	0.2	0.3	0.2	0.1	0.0	2.8
9	HCO3 (mg/L)	68	58	84	104	96	86	98	86	100	90	97	167	97	107	113	82	93	81	108	105	100
10	K (mg/L)	2.4	1.7	1.7	2.0	1.7	4.0	1.3	1.8	2.0	2.2	2.2	2.2	1.6	2.3	3.0	1.3	1.9	1.7	2.2	2.1	2.6
11	Mg (mg/L)	7.3	5.1	8.0	10.2	3.6	7.8	3.7	5.3	12.1	4.2	6.8	12.6	7.3	5.2	6.8	7.0	8.4	8.1	11.0	3.2	8.9
12	Na (mg/L)	7.5	8.1	10.0	8.8	7.0	10.8	10.2	6.7	6.2	8.5	10.0	14.5	9.0	8.9	8.0	12.5	10.1	8.2	9.6	8.6	9.5
13	NO2+NO3 (mg N/L)	0.27	0.31	0.34	0.92	0.41	0.99	0.81	1.22	1.10	1.23	0.71	0.53	0.57	0.77	0.54	0.83	1.06	0.68	1.17	0.41	0.90
14	NO2-N (mgN/L)	0.04	0.00	0.00	0.08	0.07	0.00	0.00	0.01	0.00	0.48	0.00	0.01	0.00	0.05	0.01	0.03	0.00	0.00	0.37	0.07	0.00
15	NO3-N (mgN/L)	0.23	0.31	0.34	0.84	0.34	0.99	0.81	1.21	1.09	0.75	0.71	0.51	0.57	0.73	0.53	0.80	1.06	0.68	0.80	0.35	0.90
16	o-PO4-P (mg P/L)	0.000		0.017										0.000	0.028	0.000			0.003			
17	P-Tot (mgP/L)	0.001	0.002	0.001	0.001	0.010	0.001	0.001	0.001	0.010	0.001	0.001	0.001	0.001	0.014	0.001	0.050	0.002	0.001	0.001	0.010	0.001
18	SiO2 (mg/L)	10.1	9.5	8.9	8.1	16.0	23.8	9.8	9.4	5.5	8.6	9.3	14.3	14.9	20.2	15.4	8.7	10.5	8.8	11.7	16.3	21.7
19	SO4 (mg/L)	5.7	8.1	11.3	8.2	4.4	15.6	19.7	13.1	5.5	2.9	3.9	3.9	2.1	2.0	4.3	10.4	11.2	6.5	4.1	5.3	20.2
	BIOLOGICAL/BACTERIOLOGICAL																					
1	BOD3-27 (mg/L)	0.8	1.3	1.3	1.0	1.5	0.3	0.5	0.2	0.9	0.7	1.0	0.7	0.6	0.8	0.8	0.8	1.2	1.1	1.3	1.5	1.1
2	DO (mg/L)	7.3	8.3	7.7	7.8	7.3	7.5	7.6	8.3	8.1	7.1	6.8	7.6	6.9	7.7	6.2	6.9	7.4	7.5	7.3	6.7	6.2
3	DO_SAT% (%)	82	96	88	93	84	87	90	100	96	92	87	93	84	96	80	85	96	95	91	84	79
4	FCol-MPN (MPN/100mL)	7	7	12	34		16									9	4	8	10	8		13
5	Tcol-MPN (MPN/100mL)	9	8	16	230		25									350	4	10	13	10		16
	TRACE & TOXIC																					
1	Al (mg/L)																					
	CHEMICAL INDICES																					
1	HAR_Ca (mgCaCO3/L)	29	38	45	49	51	46	49	51	48	52	43	93	49	64	68	48	57	45	76	69	55
2	HAR_Total (mgCaCO3/L)	59	59	78	92	66	78	64	73	99	70	71	146	78	86	96	77	93	79	122	83	92
3	Na% (%)	21	23	21	17	18	22	26	16	11	21	23	18	19	18	15	26	19	18	14	18	18
4	RSC (-)	0.0	0.0	0.1	0.0	0.3	0.0	0.3	0.0	0.4	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
5	SAR (-)	0.4	0.5	0.5	0.4	0.4	0.5	0.6	0.3	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.6	0.5	0.4	0.4	0.4	0.4
	PESTICIDES																					

Station Name : TIKARAPARA (EM000G5)
Local River : Mahanadi

Water Quality Seasonal Average for the period: 2001-2016

River Water

Division : MD,CWC,Burla
Sub-Division : LMSD,CWC,Bhubaneswar

S.No	Parameters			
		2014	2015	2016
	PHYSICAL			
1	Q (cumec)	364.8	268.5	231.9
2	EC_FLD (µmho/cm)	203	293	367
3	EC_GEN (µmho/cm)	203	293	369
4	pH_FLD (pH units)	7.9	7.9	8.0
5	pH_GEN (pH units)	7.9	7.9	8.2
6	TDS (mg/L)			
7	Temp (deg C)	28.1	28.2	28.4
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)		0.0	23.0
2	ALK-TOT (mgCaCO3/L)		83	120
3	B (mg/L)	0.00	0.00	0.01
4	Ca (mg/L)	18	24	38
5	Cl (mg/L)	17.5	13.9	15.7
6	CO3 (mg/L)	0.0	0.0	27.7
7	F (mg/L)	0.05	0.05	0.05
8	Fe (mg/L)	0.1	0.4	0.4
9	HCO3 (mg/L)	76	99	90
10	K (mg/L)	1.0	2.1	1.2
11	Mg (mg/L)	4.2	4.5	15.2
12	Na (mg/L)	9.9	11.1	5.3
13	NO2+NO3 (mg N/L)	0.69	0.97	0.96
14	NO2-N (mgN/L)	0.00	0.00	0.00
15	NO3-N (mgN/L)	0.69	0.97	0.96
16	o-PO4-P (mg P/L)			
17	P-Tot (mgP/L)	0.001	0.001	0.010
18	SiO2 (mg/L)	14.4	10.0	5.3
19	SO4 (mg/L)	16.7	13.7	9.6
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.3	0.8	0.9
2	DO (mg/L)	6.6	5.8	6.7
3	DO_SAT% (%)	84	75	85
4	FCol-MPN (MPN/100mL)			
5	Tcol-MPN (MPN/100mL)			
	TRACE & TOXIC			
1	Al (mg/L)			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	45	60	96
2	HAR_Total (mgCaCO3/L)	62	78	160
3	Na% (%)	25	24	6
4	RSC (-)	0.1	0.1	0.1
5	SAR (-)	0.5	0.6	0.2
	PESTICIDES			

LIST OF OFFICERS WHO HAVE CONTRIBUTED TO THIS PUBLICATION

Assistance render by the officers and staff of this division in the collection analysis and validation of data in bringing out the book in this form is thankfully acknowledged. Special appreciation is attributed to the field staff under all the Sub-Division of this Division and also Hydrological Observation Circle,C.W.C, Bhubaneswar for collection of data.

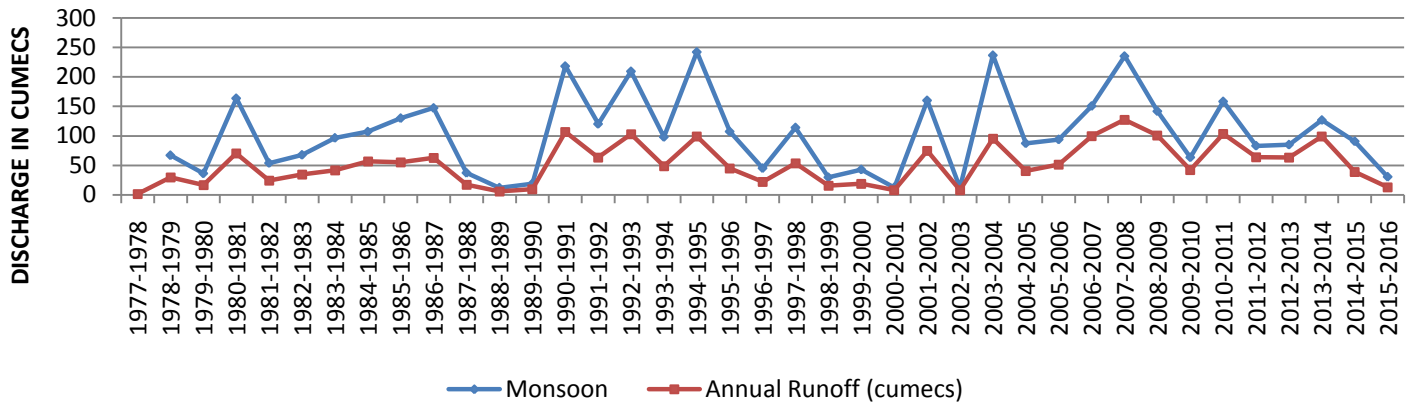
Sl.No.	Name of Officer	Designation	Working Place
1	Shri C. Mohanty	Executive Engineer	Mahanadi Division, CWC,Burla
2	Shri D.S.Prasad	Asst. Executive Engineer	Hydrological Observation Circle,CWC,Bhubaneswar
3	Shri B.D.Satpathy	Asst. Executive Engineer	MMSD-I,CWC, Raipur
4	Shri H.R.Sahu	Sub-Divisional Engineer	Assistant Director-II,CWC,Raipur
5	Shri M.A.Shukla	Sub-Divisional Engineer	UMSD, CWC, Raipur
6	Shri T. Prasad	Sub-Divisional Engineer	LMSD,CWC, Bhubaneswar
7	Shri Ch. Prasad	Sub-Divisional Engineer	MMSD-II,CWC, Burla
8	Shri K.P. Nanda	Junior Engineer (HQ)	Mahanadi Division,CWC,Burla
9	Shri T. Mahakur	S.W.A.	Mahanadi Division,CWC,Burla
10	Shri J. Kathar	S.W.A.	Mahanadi Division,CWC,Burla

PAIRI SUB BASIN

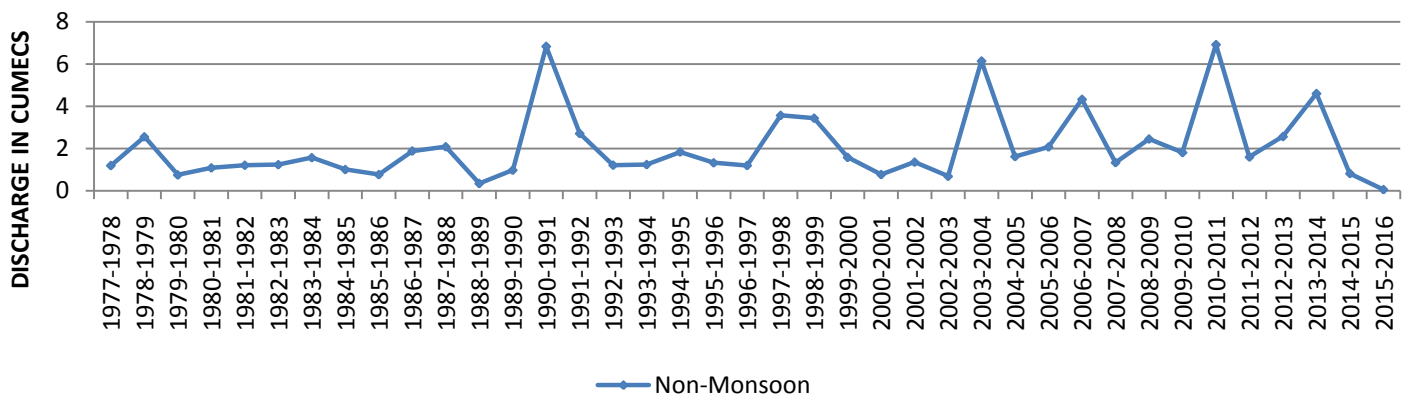
SITE BARONDA

YEAR WISE TREND OF SITE BARONDA

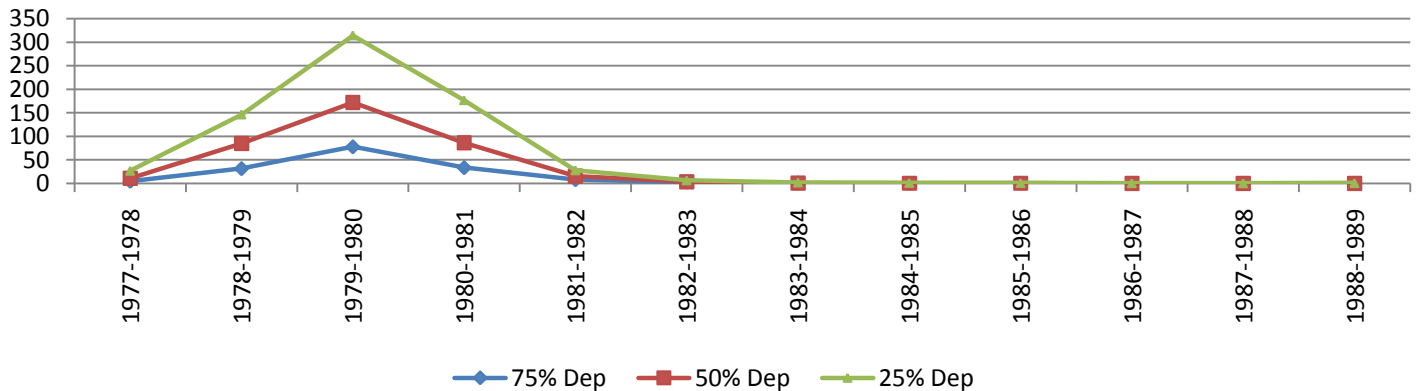
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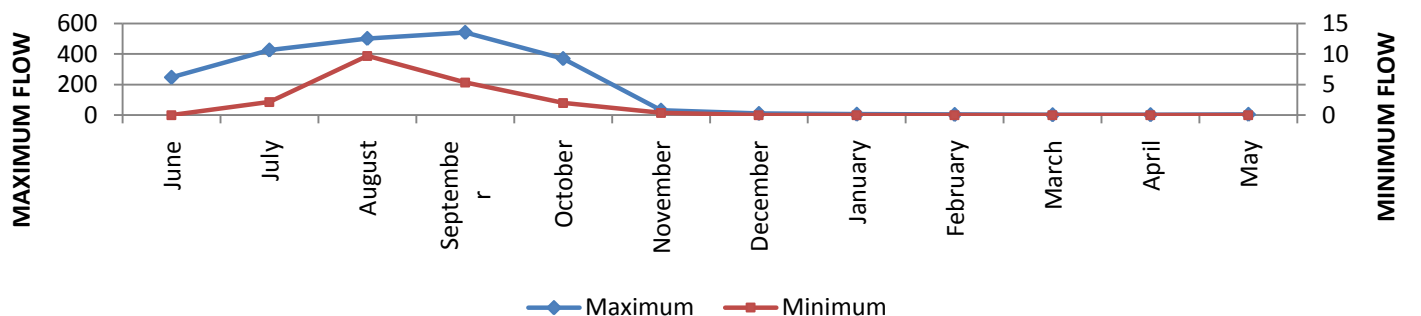
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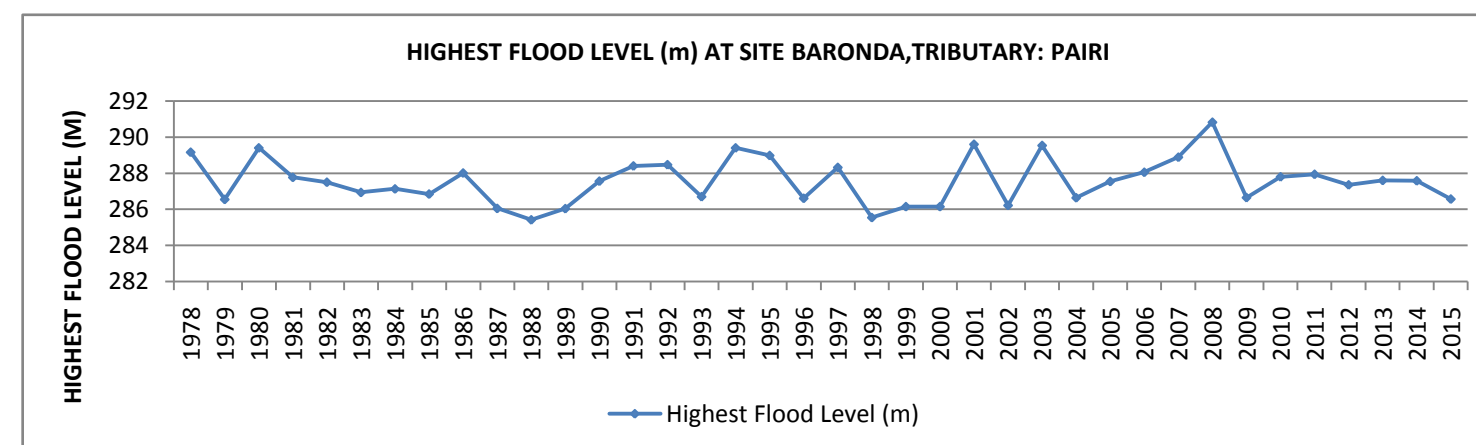
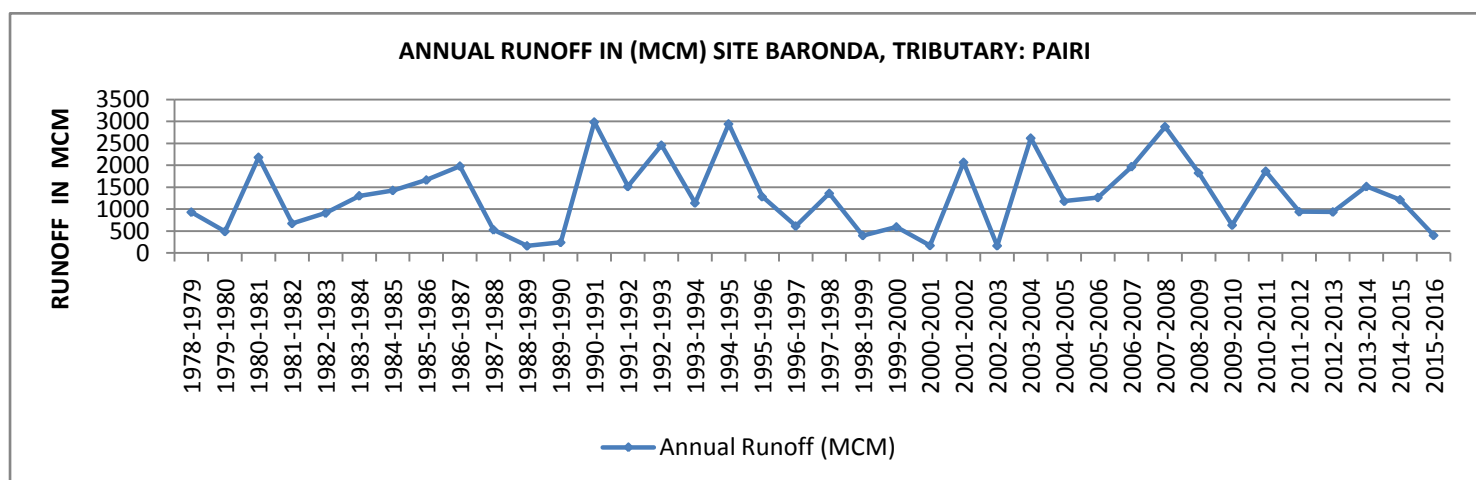
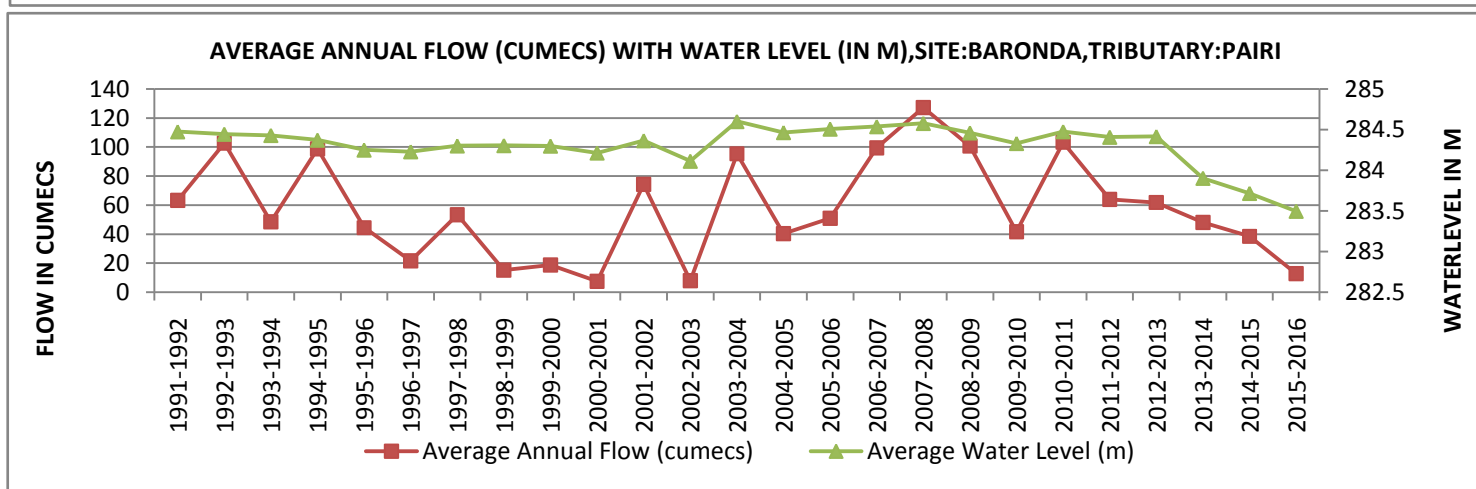
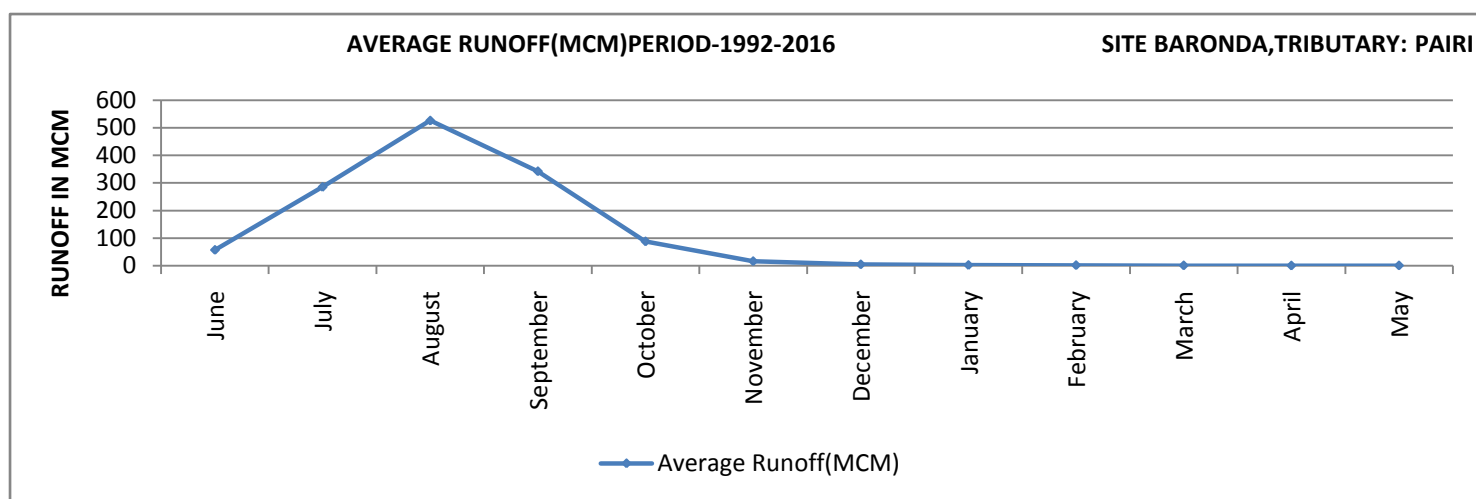


DEPENDIBILITY FLOW FROM JUNE TO MAY SITE BARONDA, TRIBUTARY: PAIRI

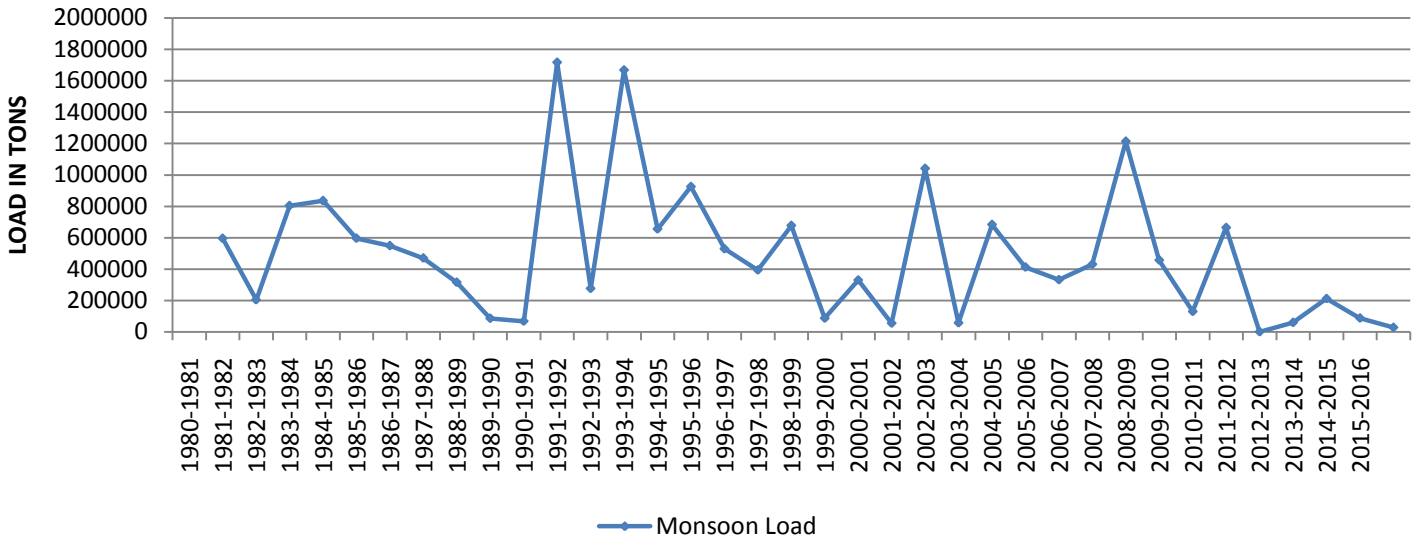


MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE BARONDA, TRIBUTARY: PAIRI

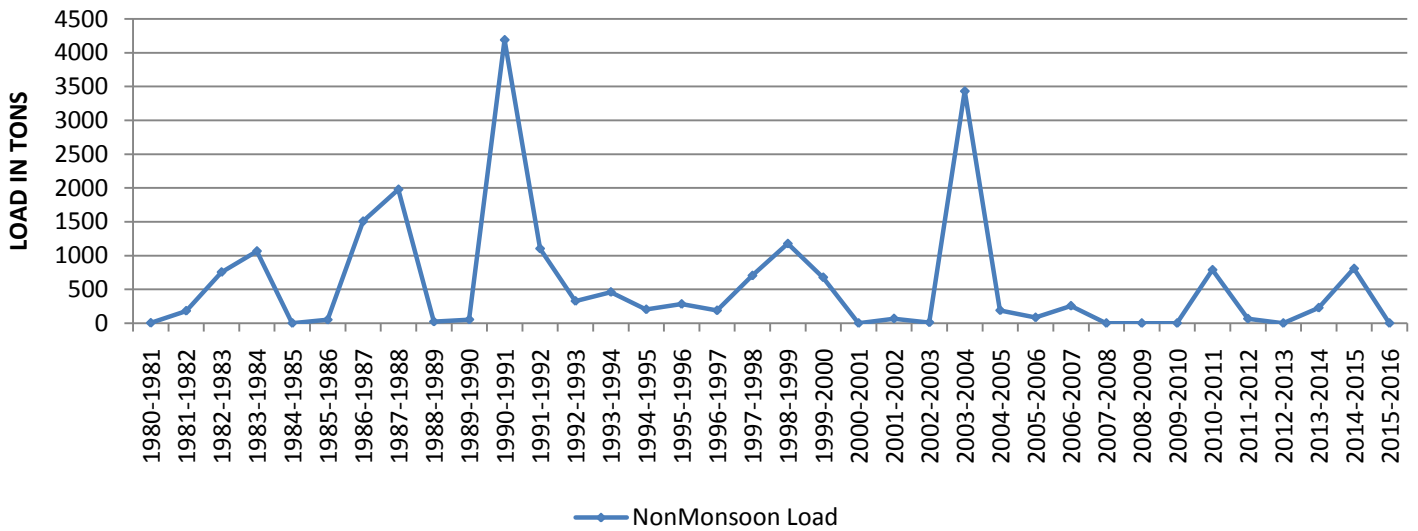




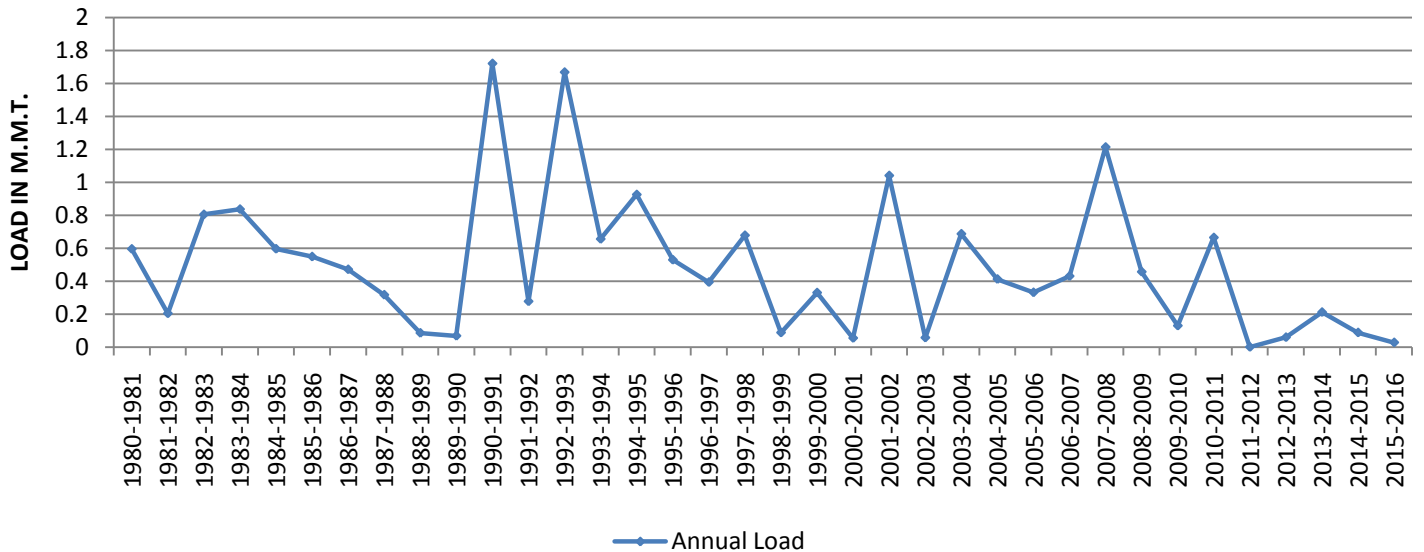
MONSOON LOAD AT SITE BARONDA, TRIBUTARY:PAIRI



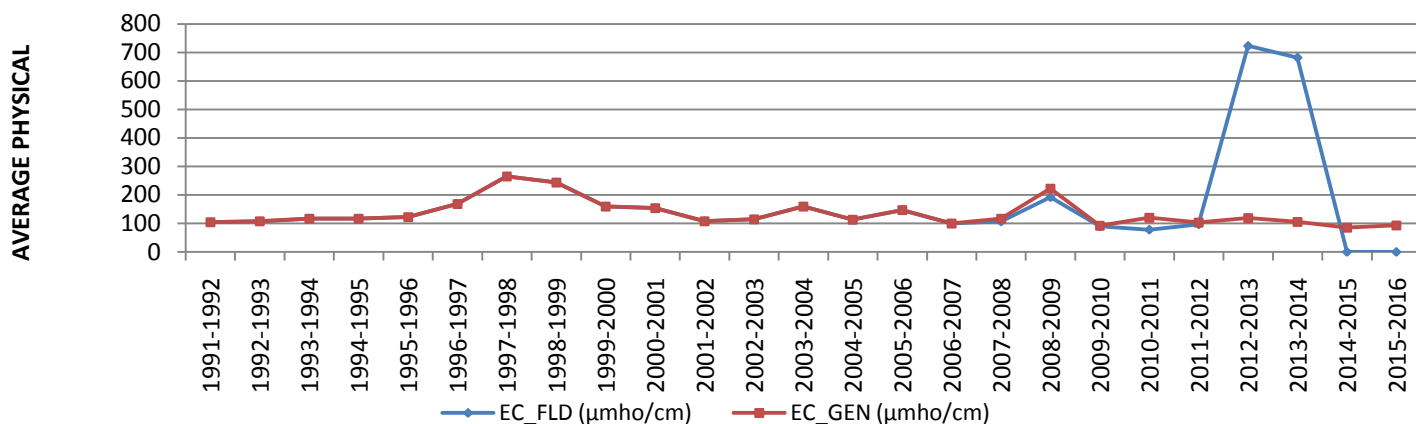
NON MONSOON LOAD AT SITE BARONDA, TRIBUTARY:PAIRI



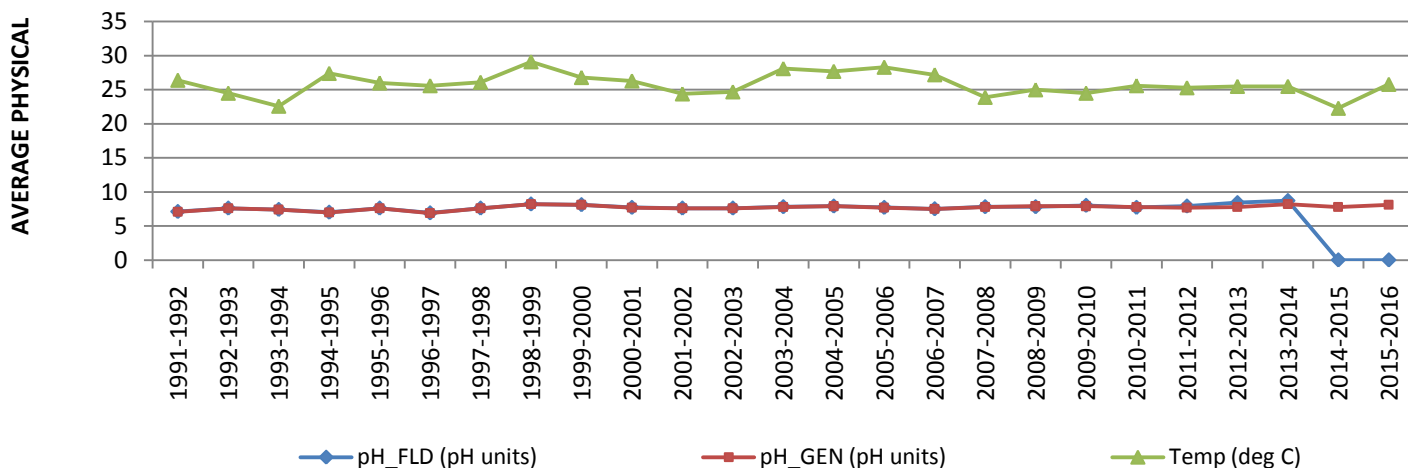
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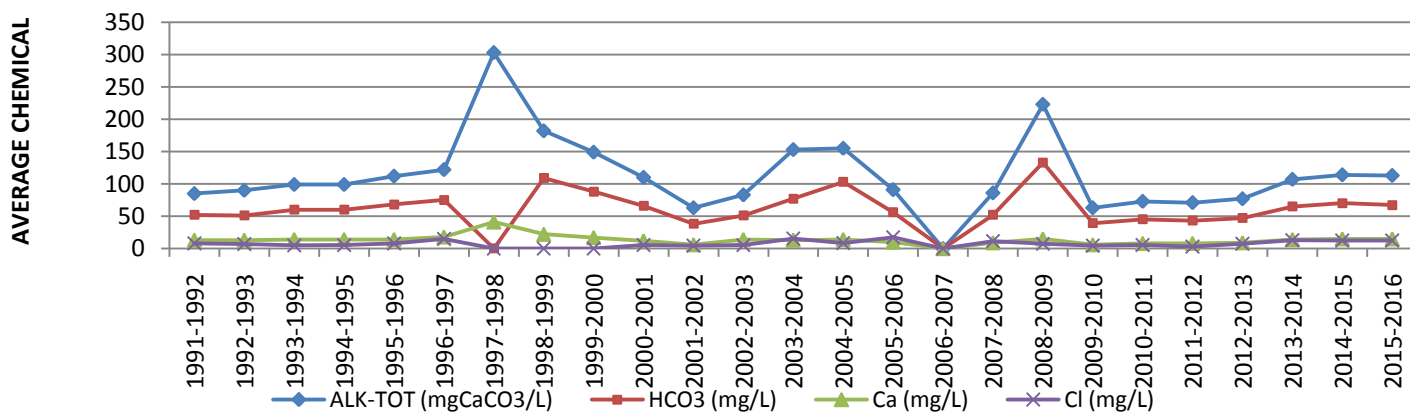
WATER QUALITY PROPERTIES AT SITE:BARONDA,TRIBUTARY:PAIRI



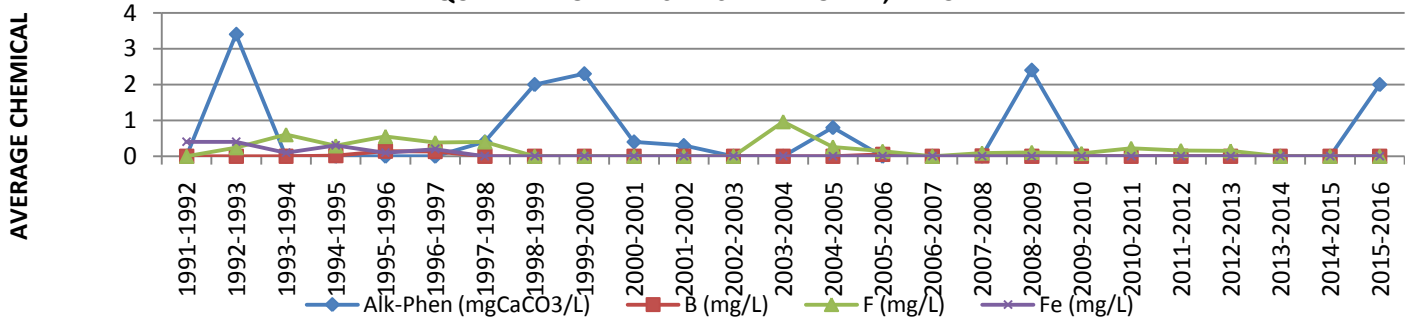
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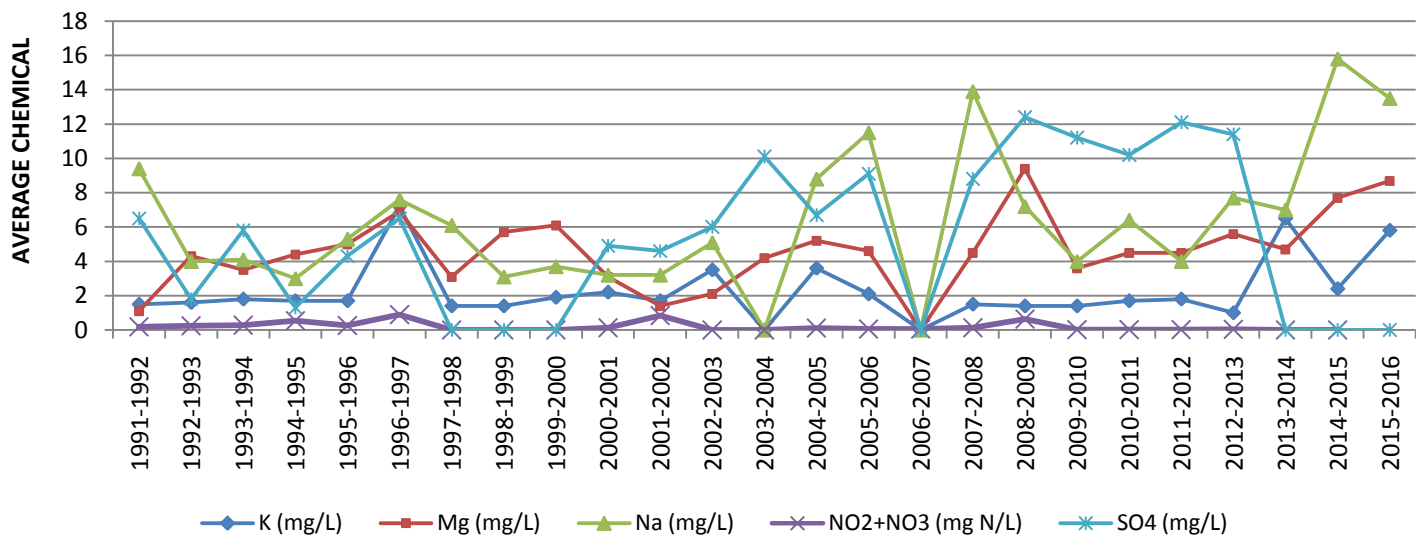
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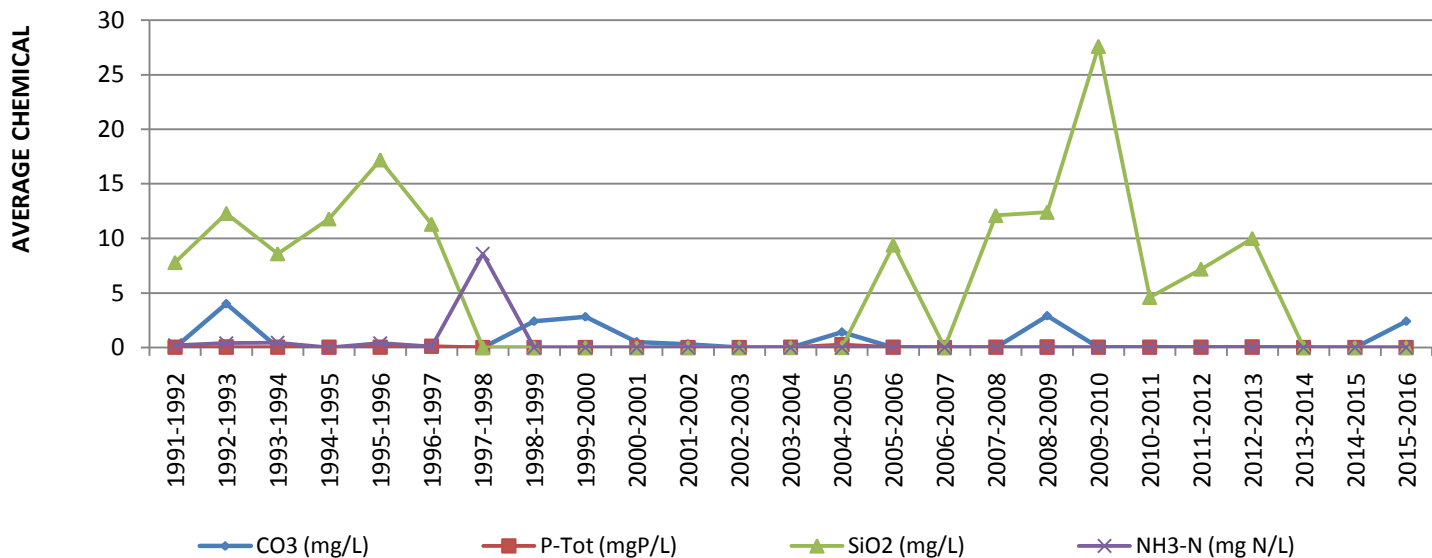
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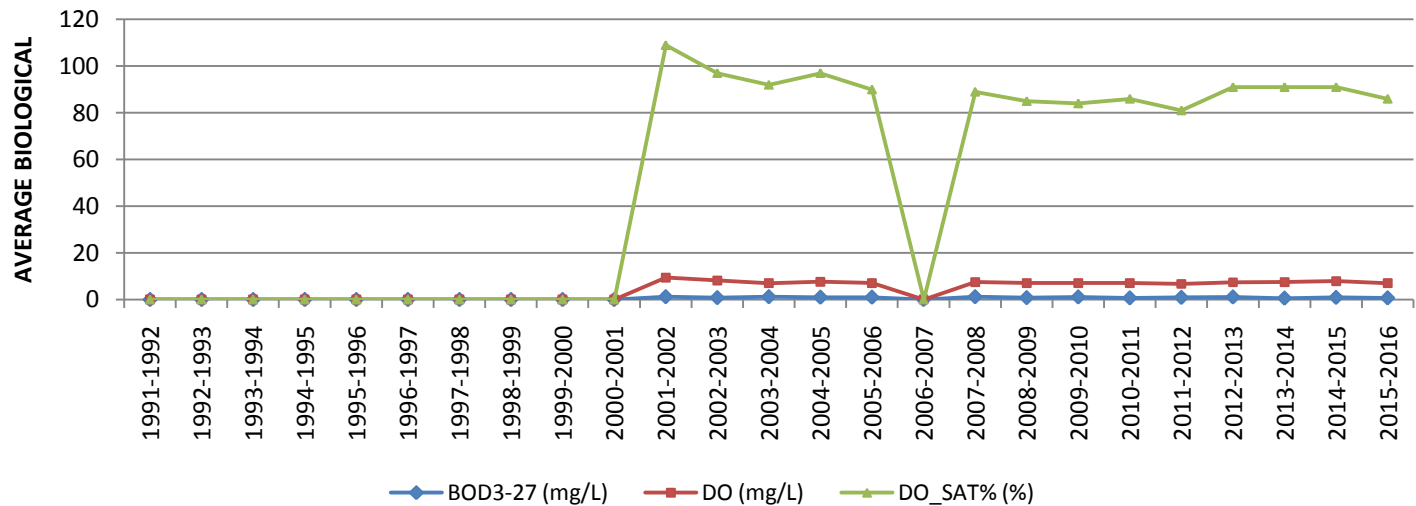
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WATER QUALITY PROPERTIES AT SITE:BARONDA,TRIBUTARY:PAIRI



WATER QUALITY PROPERTIES AT SITE BARONDA, TRIBUTARY PAIRI

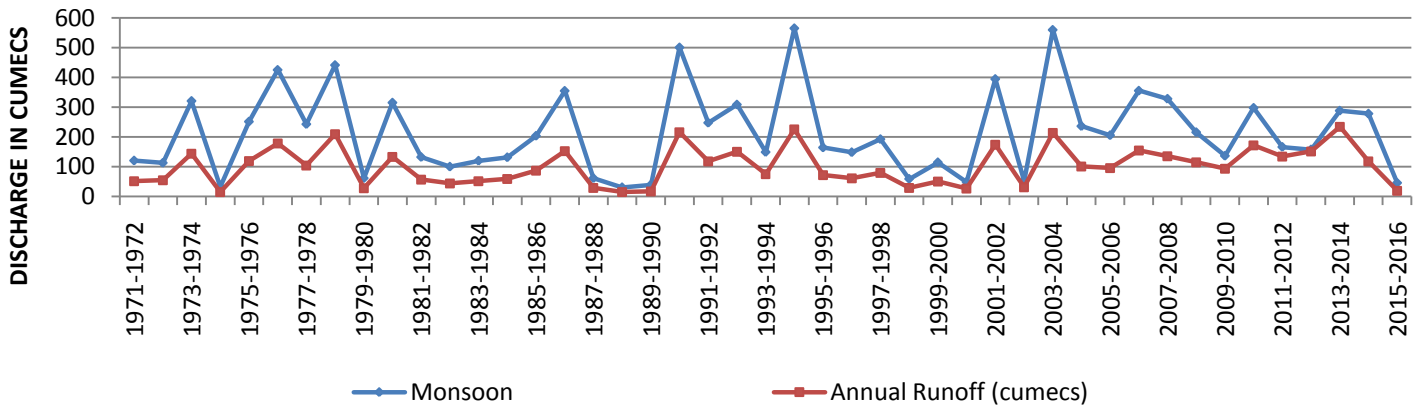


UPPER MAHANADI SUB-BASIN

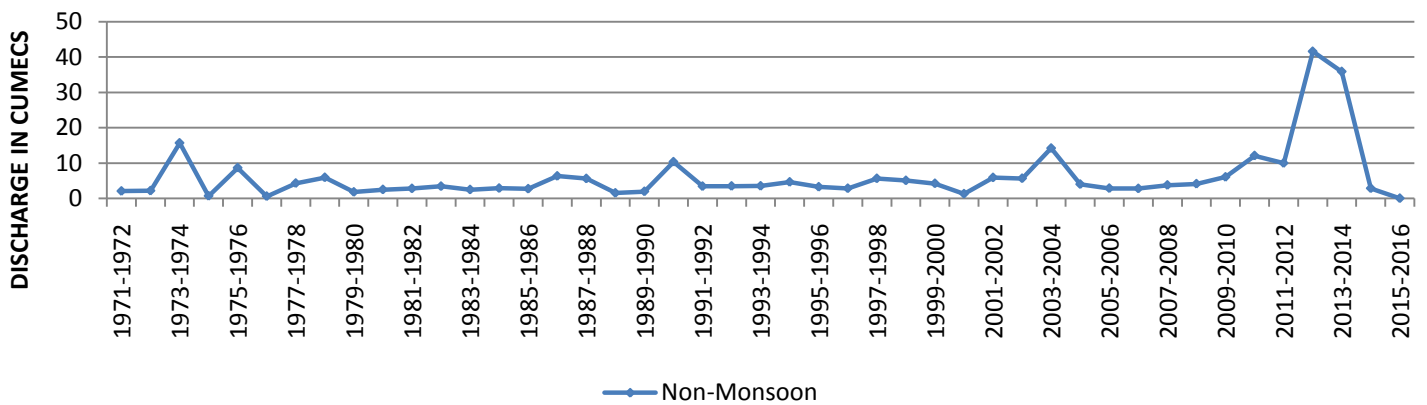
SITE RAJIM

YEAR WISE TREND OF SITE RAJIM

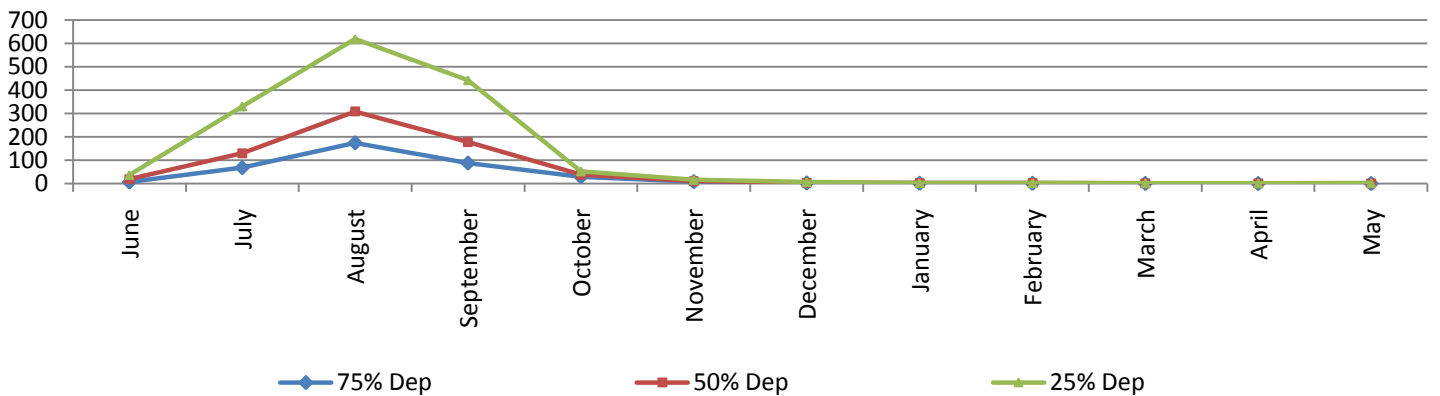
ANNUAL AVERAGE DISCHARGE SITE RAJIM, RIVER: MAHANADI



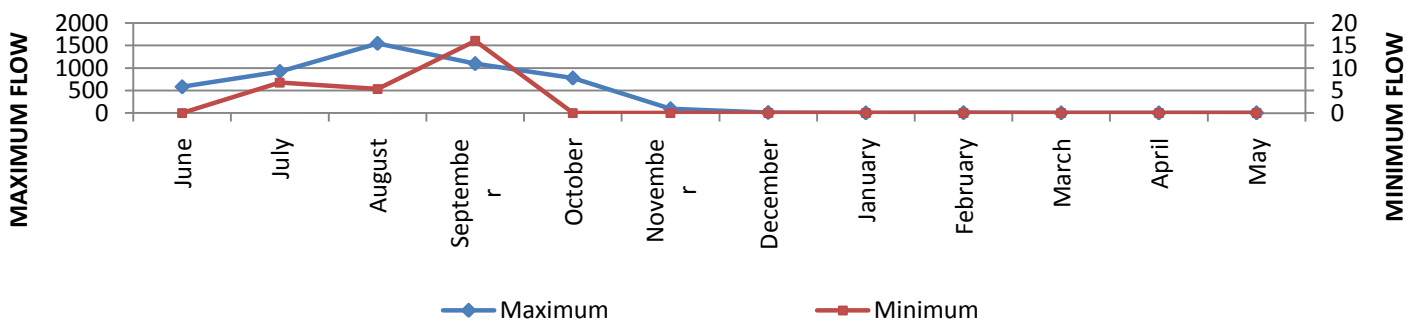
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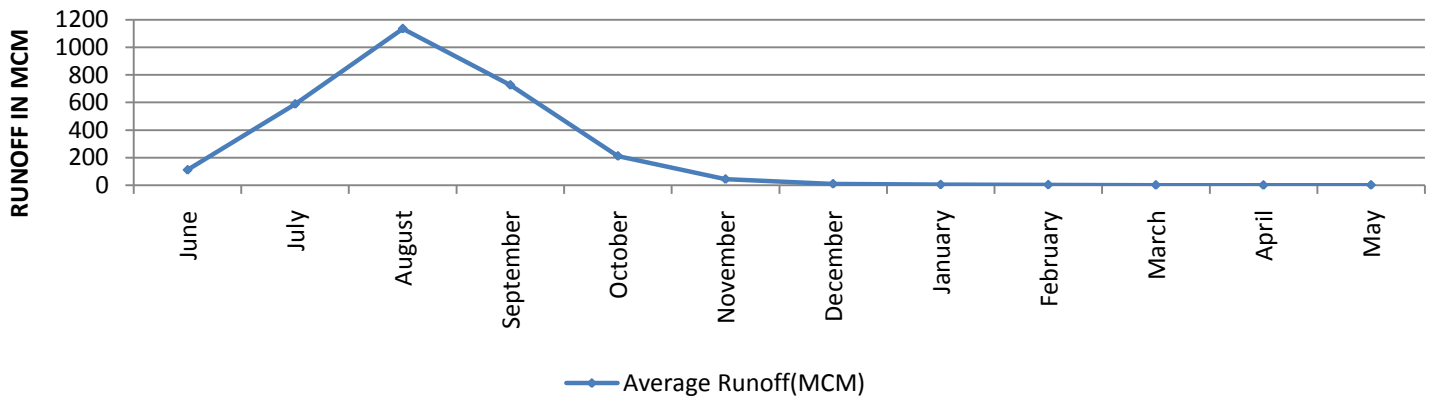
DEPENDABILITY FLOW FROM JUNE TO MAY SITE RAJIM, RIVER: MAHANADI



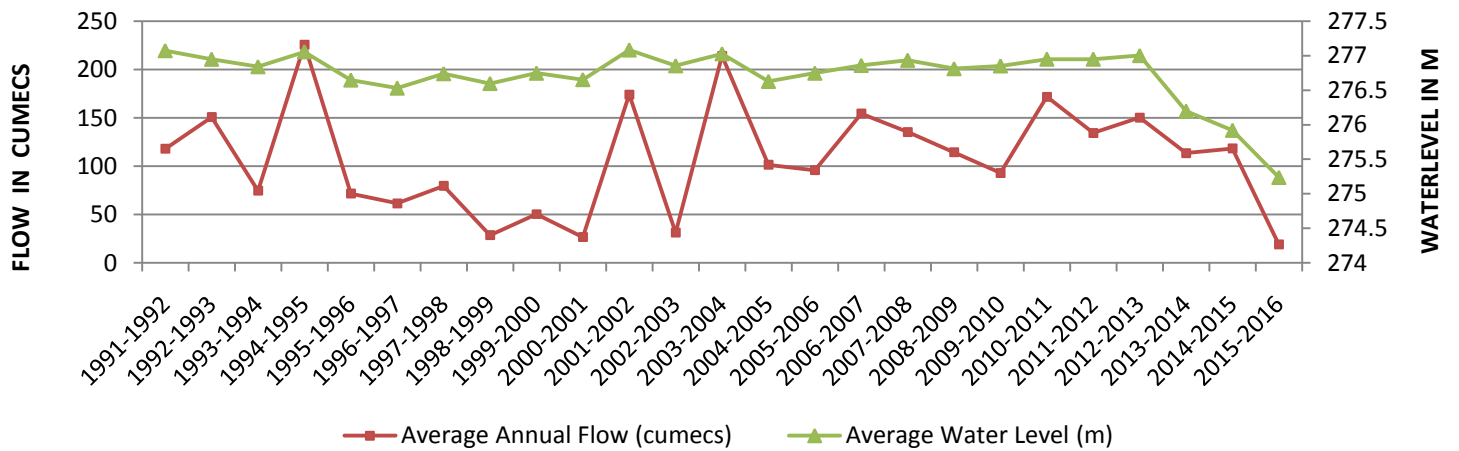
MAXIMUM MNIMUM FLOW FROM JUNE TO MAY SITE RAJIM, RIVER: MAHANADI



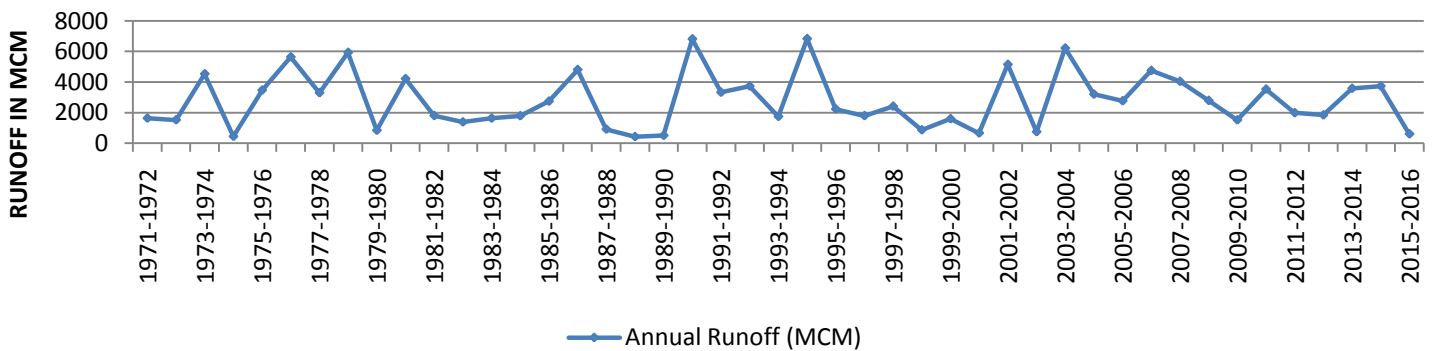
AVERAGE RUNOFF(MCM) PERIOD:1992-2016 SITE: RAJIM RIVER MAHANADI



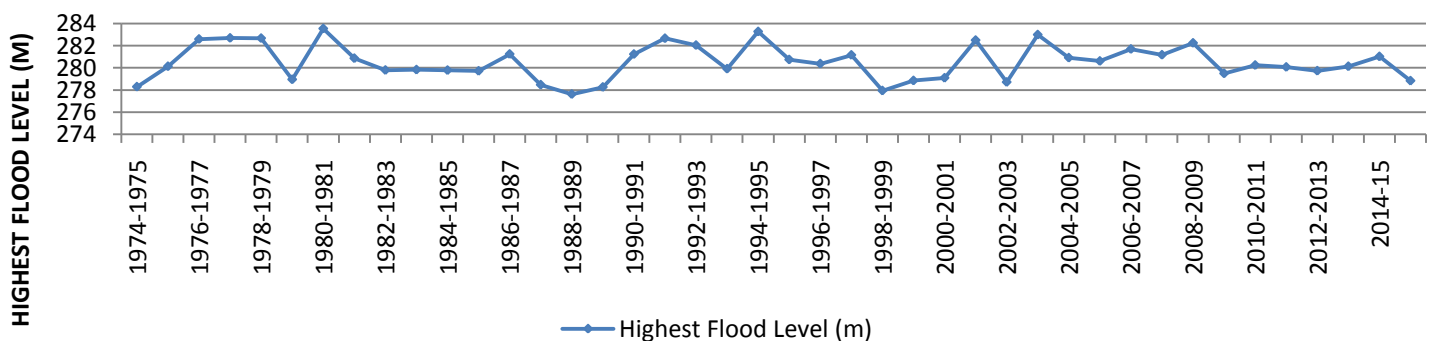
AVERAGE ANNUAL FLOW (CUMECs) WITH WATER LEVEL(IN M) SITE:RAJIM, RIVER:MAHANADI



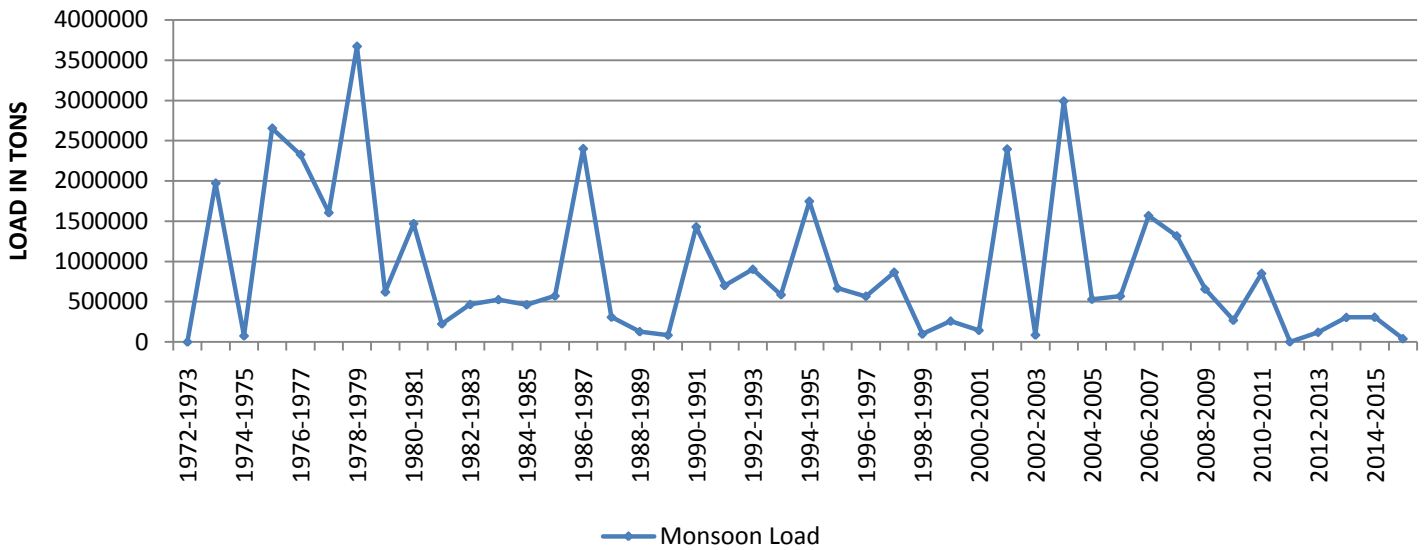
ANNUAL RUNOFF IN (MCM) SITE RAJIM, RIVER: MAHANADI



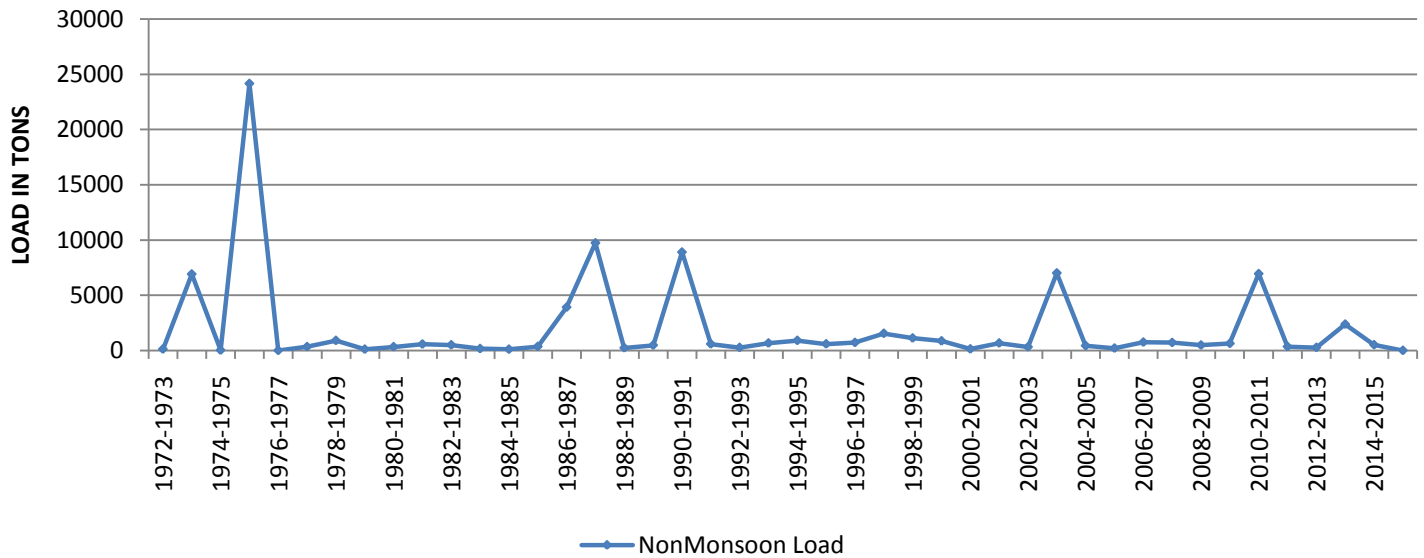
HIGHEST FLOOD LEVEL (m) AT SITE RAJIM,RIVER: MAHANADI



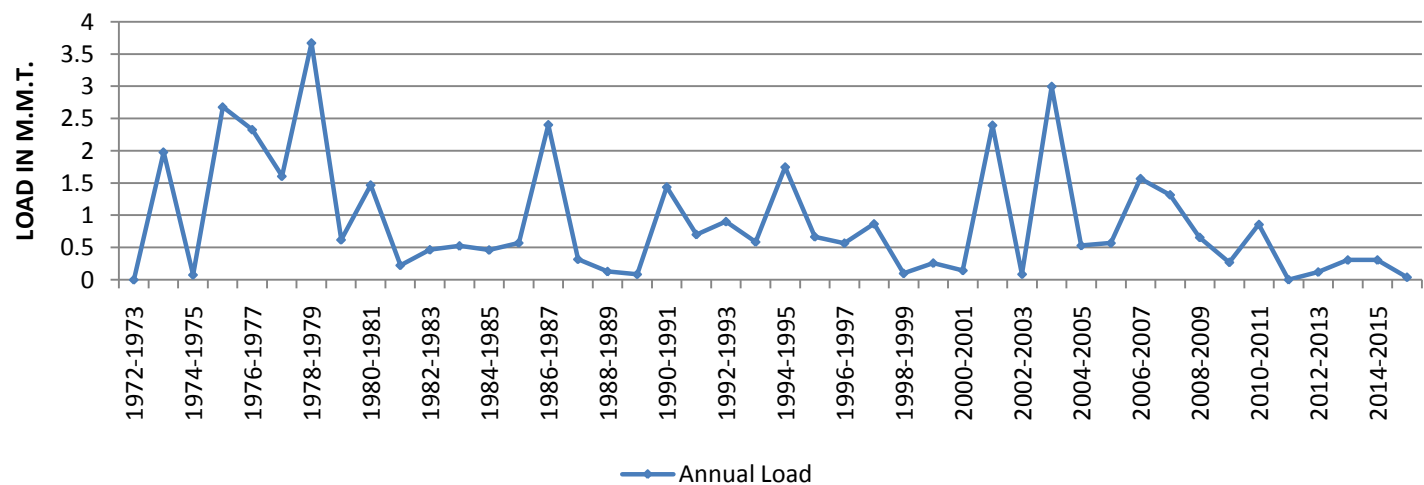
MONSOON LOAD AT SITE RAJIM, RIVER: MAHANADI



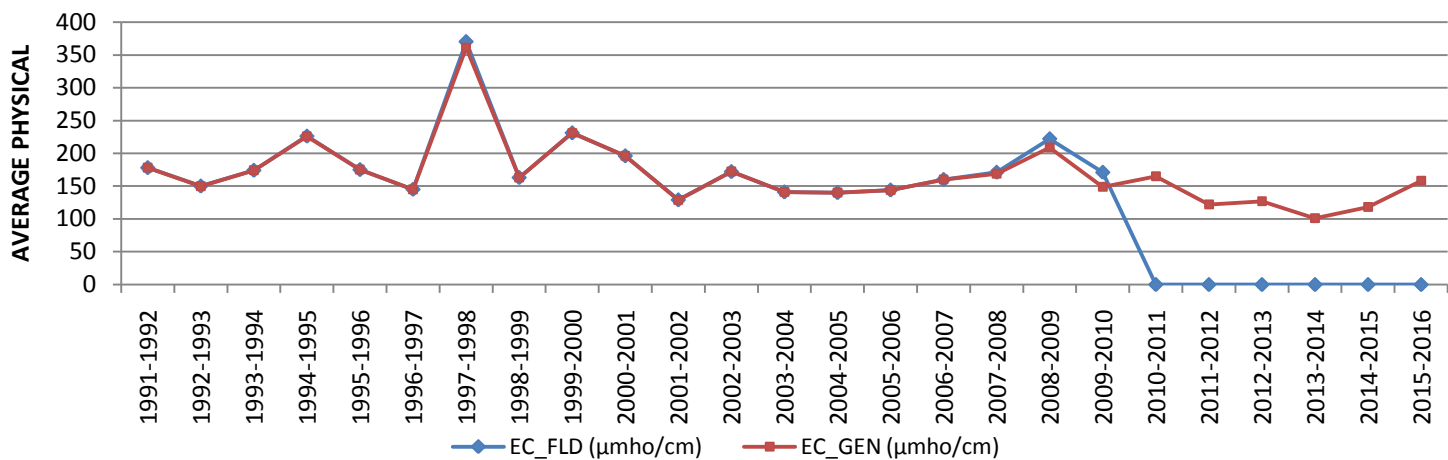
NON MONSOON LOAD AT SITE RAJIM, RIVER: RAJIM



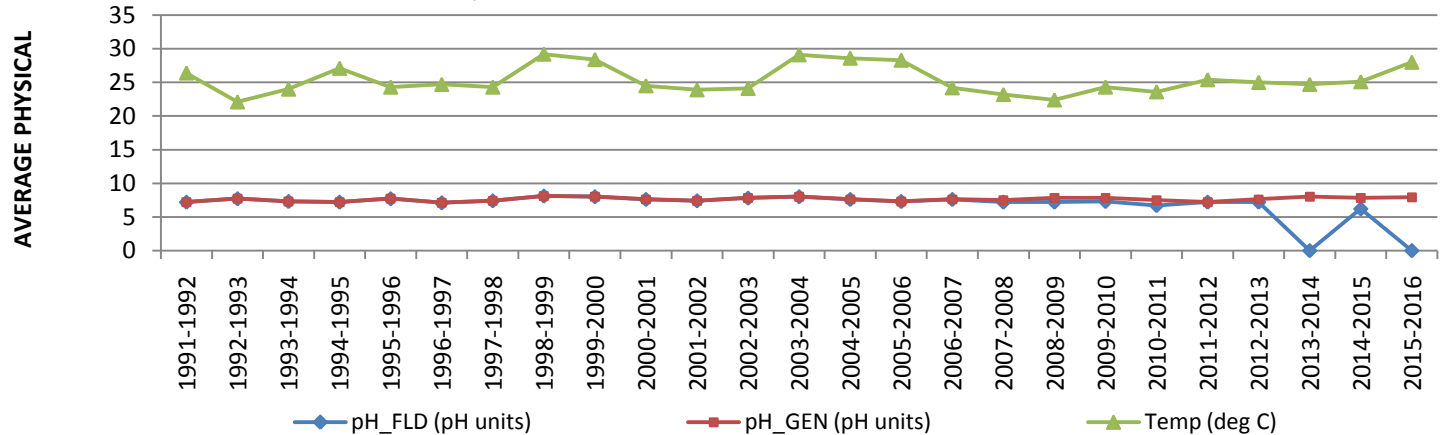
ANNUAL LOAD (MILLION M.T.) AT SITE RAJIM, RIVER: MAHANADI



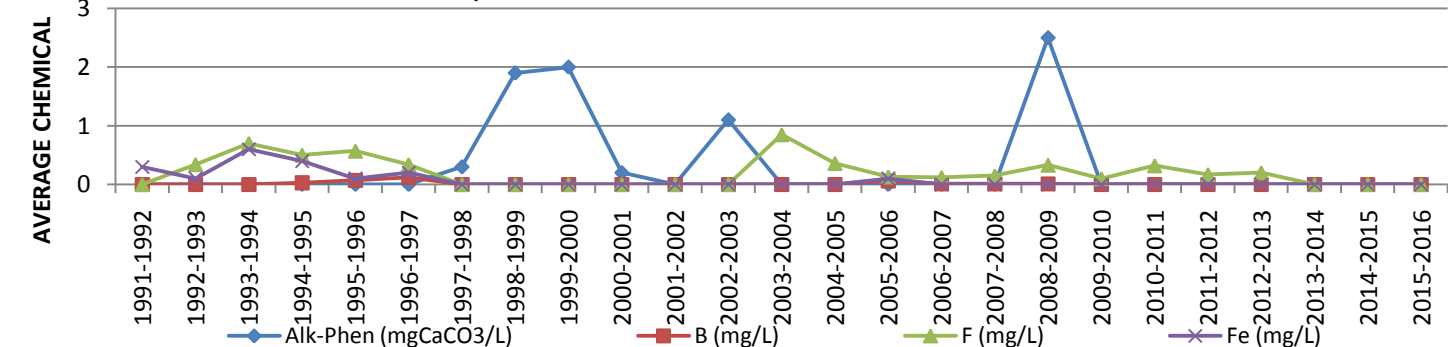
WATER QUALITY PROPERTIES AT SITE RAJIM: RIVER MAHANADI



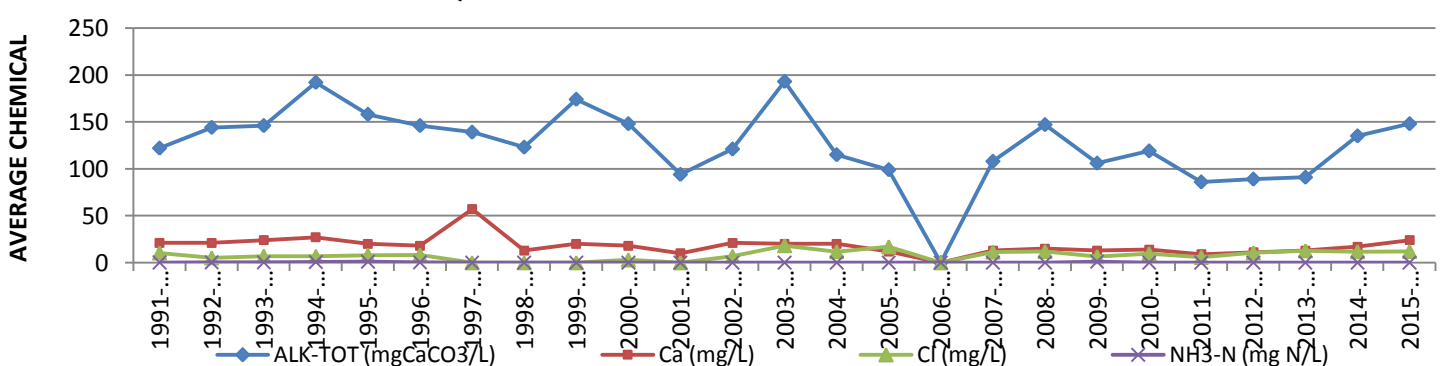
WATER QUALITY PROPERTIES AT SITE RAJIM: RIVER MAHANADI



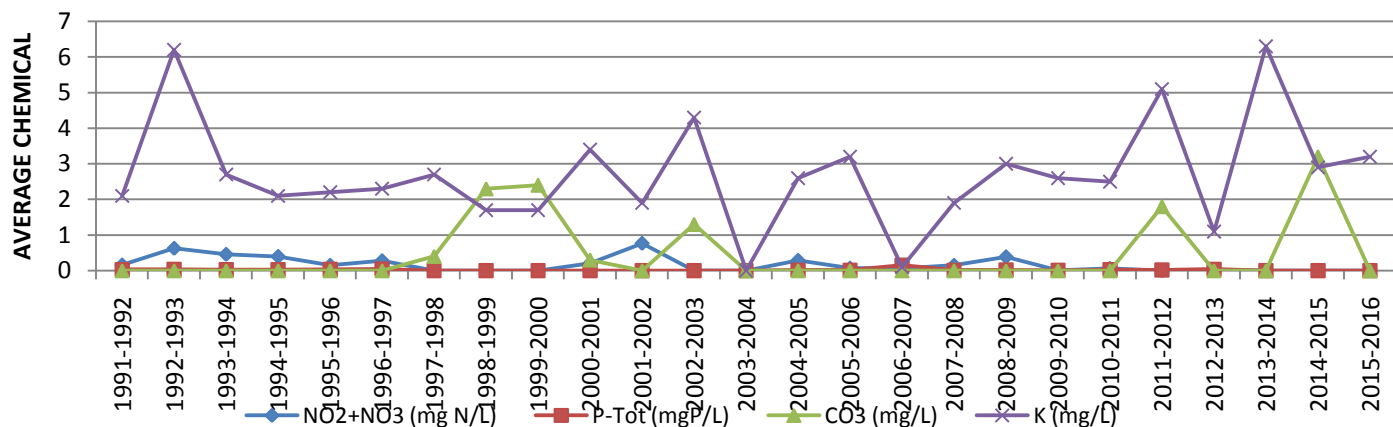
WATER QUALITY PROPERTIES AT SITE RAJIM: RIVER MAHANADI



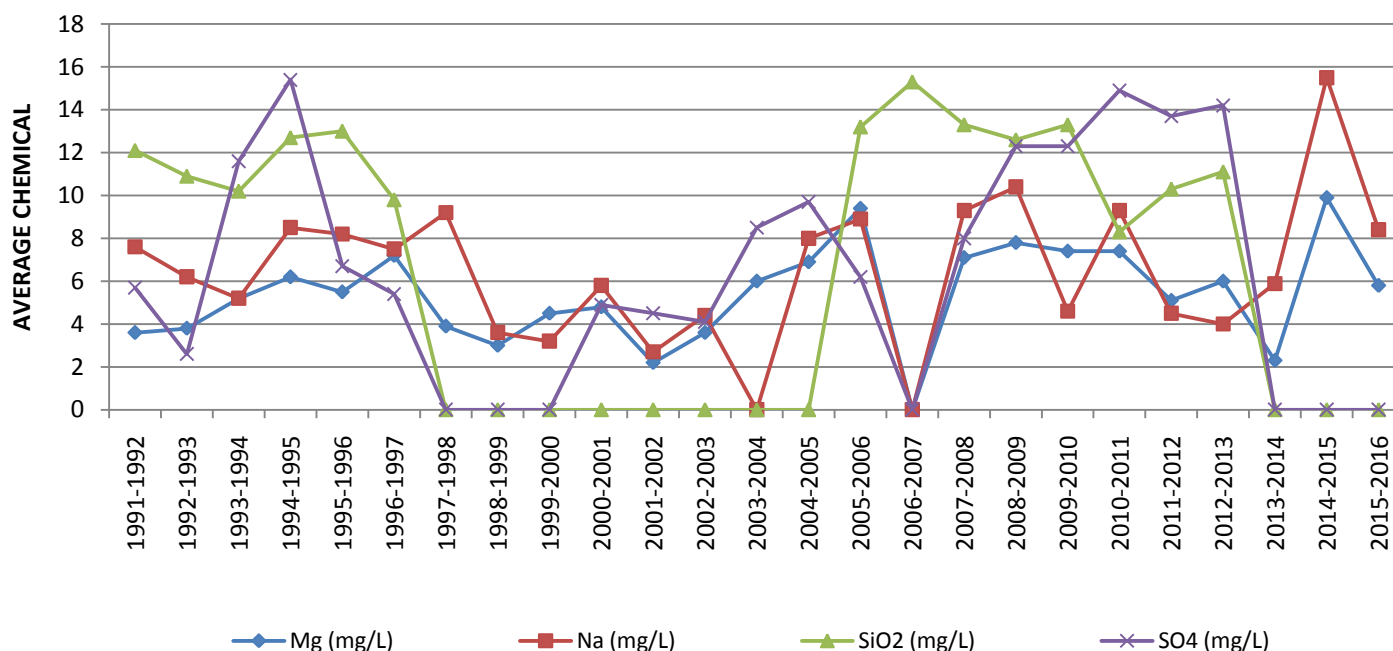
WATER QUALITY PROPERTIES AT SITE RAJIM: RIVER MAHANADI



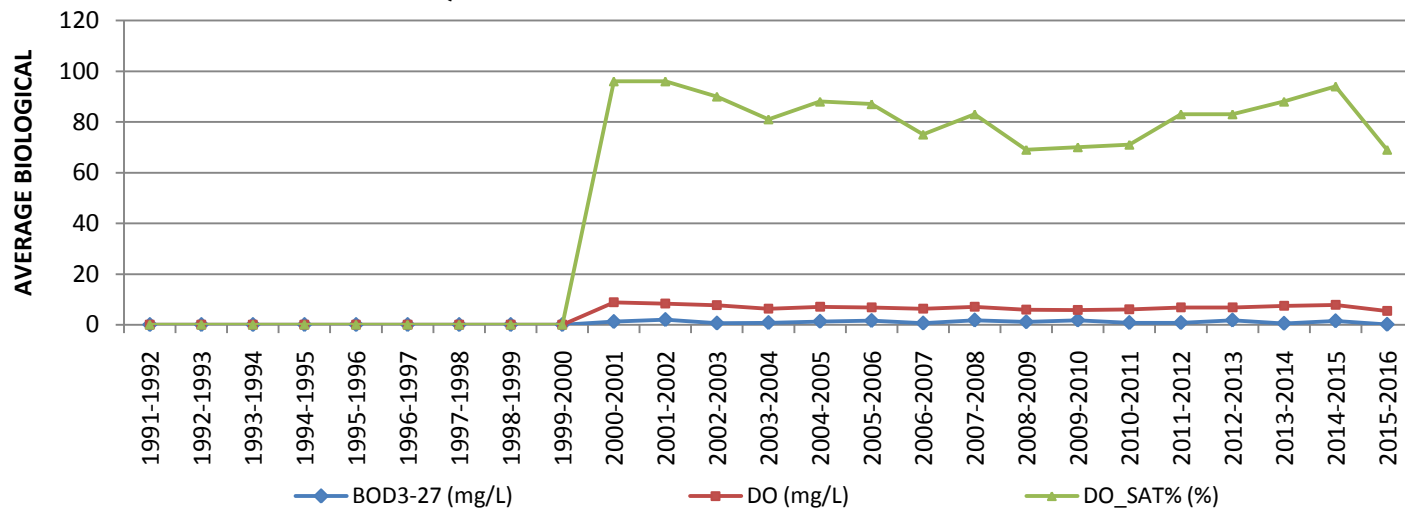
WATER QUALITY PROPERTIES AT SITE RAJIM: RIVER MAHANADI



WATER QUALITY PROPERTIES AT SITE RAJIM: RIVER MAHANADI



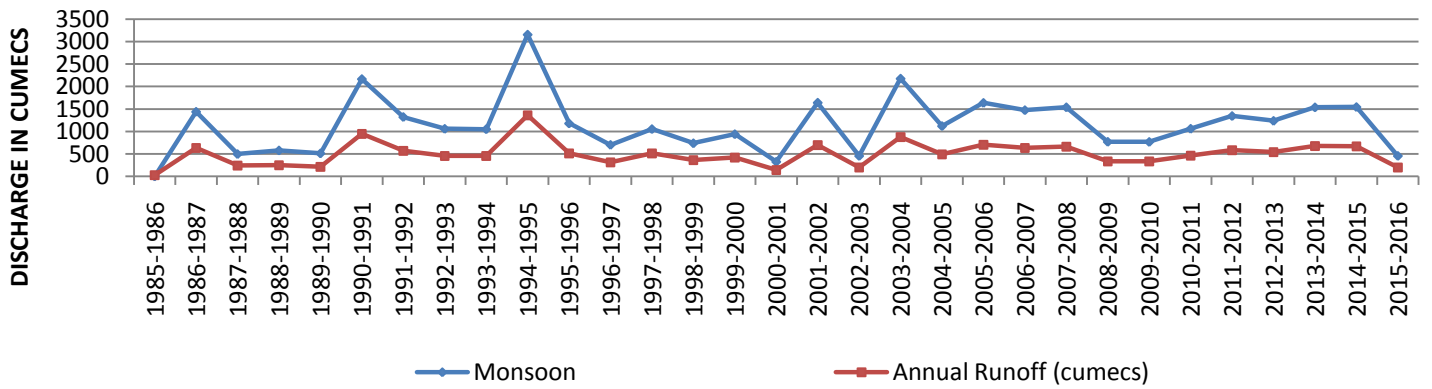
WATER QUALITY PROPERTIES AT SITE RAJIM: RIVER MAHANADI



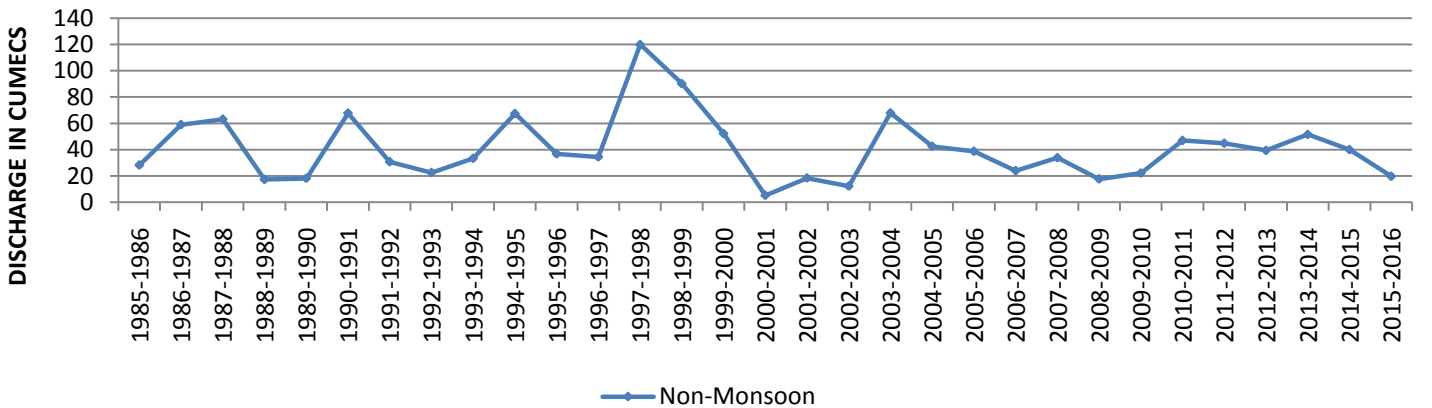
SITE SEORINARAYAN

YEAR WISE TREND OF SITE SEORINARAYAN

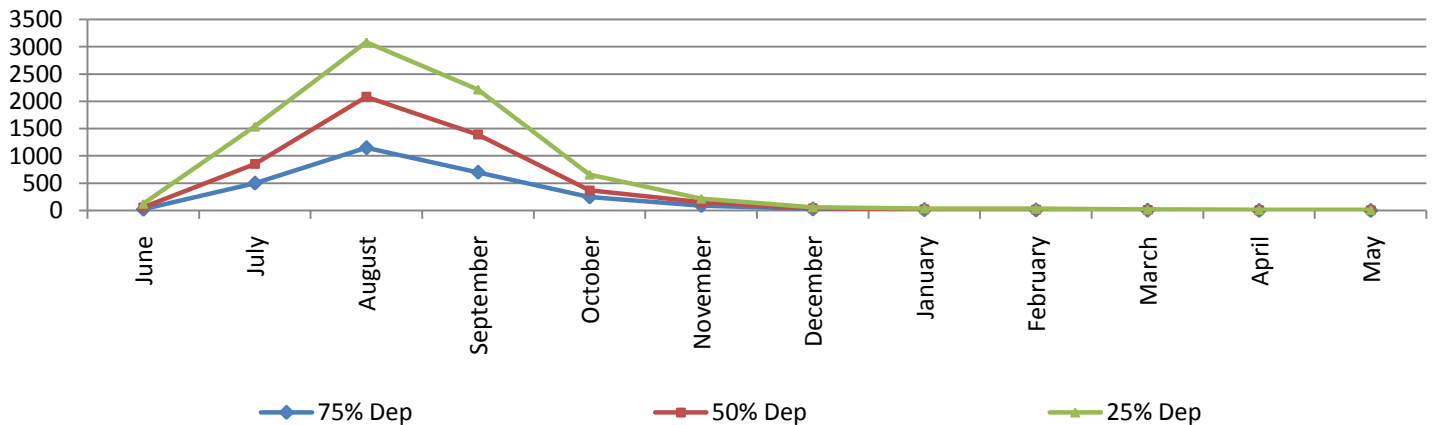
ANNUAL AVERAGE DISCHARGE SITE SEORINARAYAN, RIVER: MAHANADI



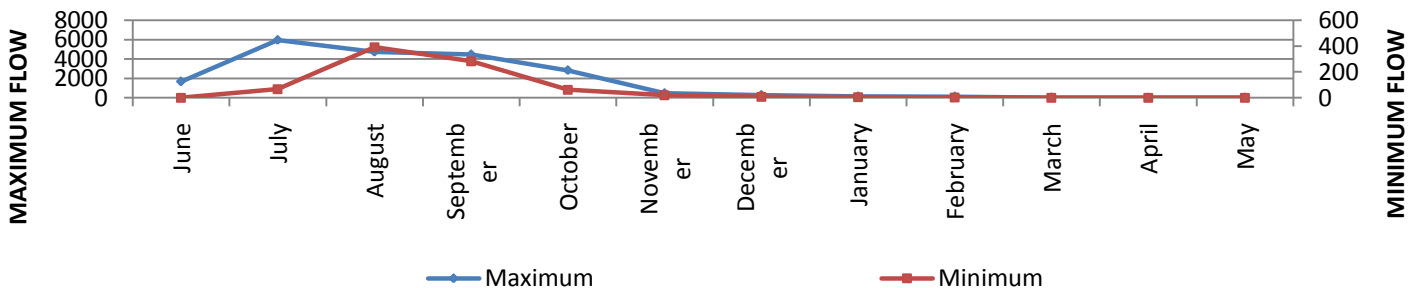
TOTAL ANNUAL DISCHARGE SITE SEORINARAYAN, RIVER: MAHANADI



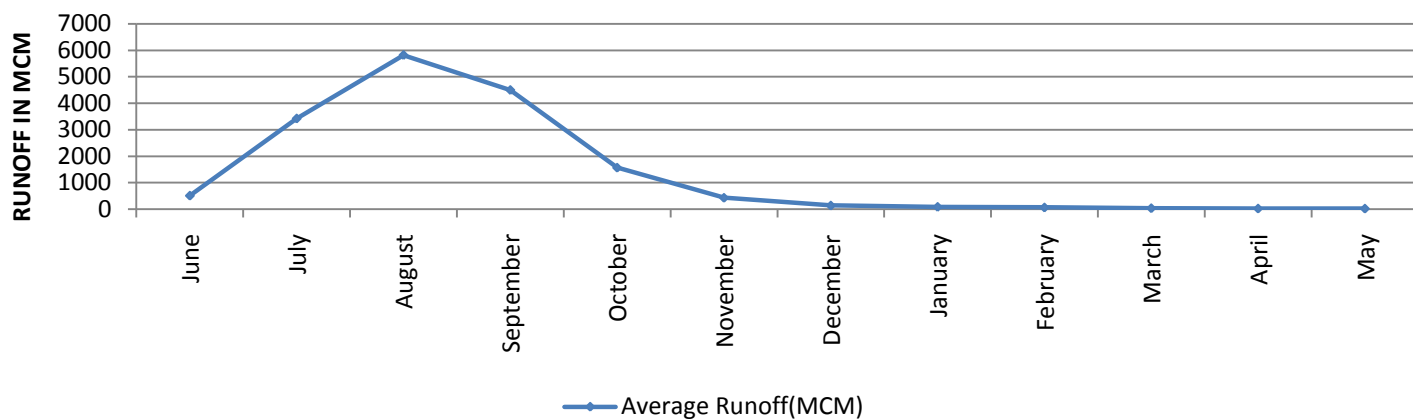
DEPENDABILITY FLOW FROM JUNE TO MAY SITE SEORINARAYAN, RIVER: MAHANADI



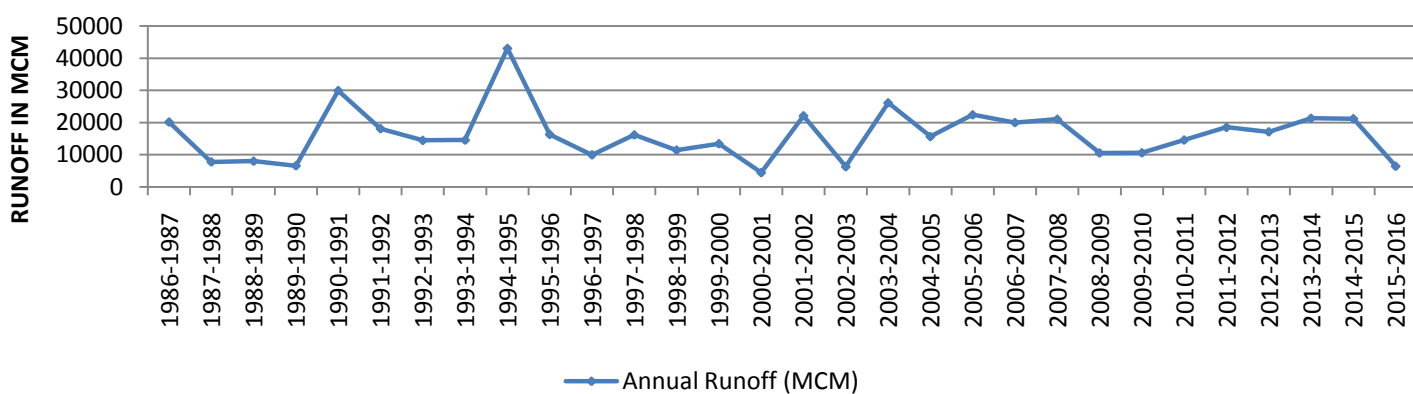
MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE SEORINARAYAN, RIVER: MAHANADI



AVERAGE RUNOFF(MCM) PERIOD:1992-2016 SITE:SEORINARAYAN RIVER MAHANADI

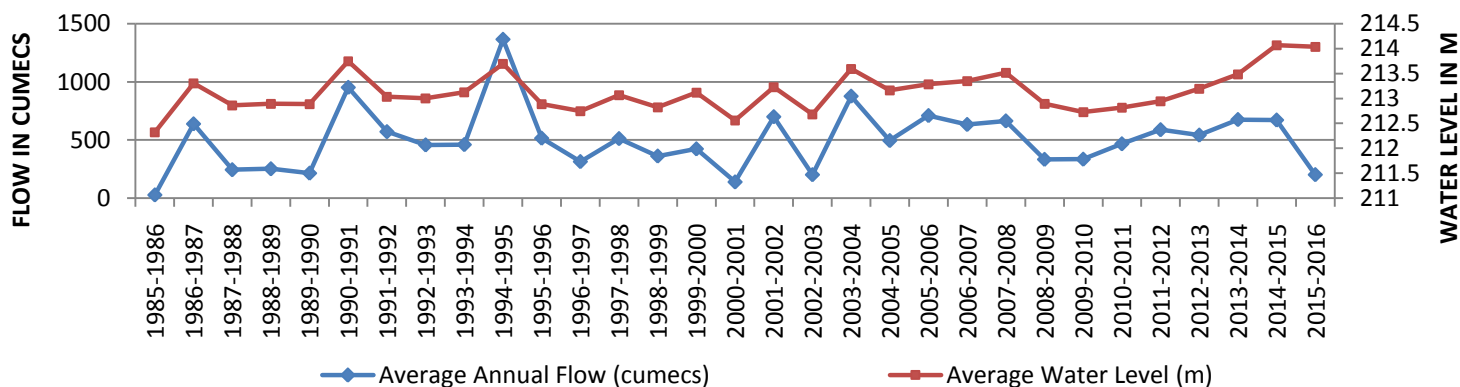


ANNUAL RUNOFF IN (MCM) SITE SEORINARAYAN, RIVER: MAHANADI

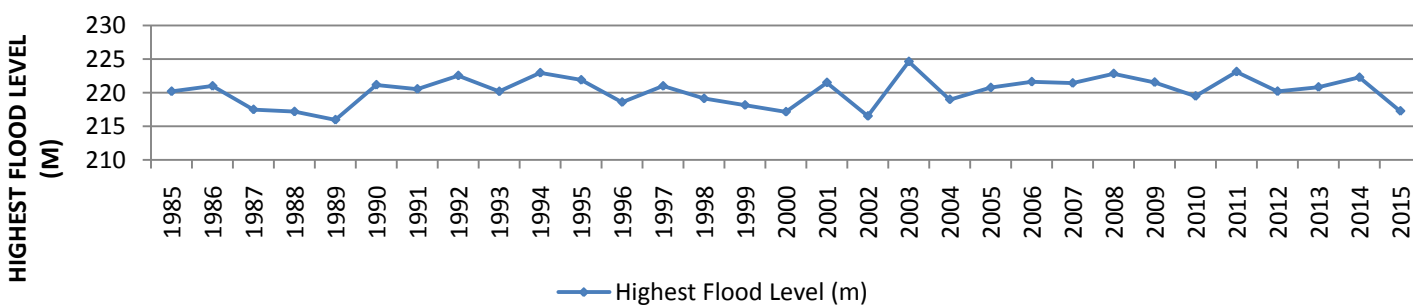


**AVERAGE ANNUAL FLOW (CUMECs) WITH WATER LEVEL (M)
SEORINARAYAN, RIVER: MAHANADI**

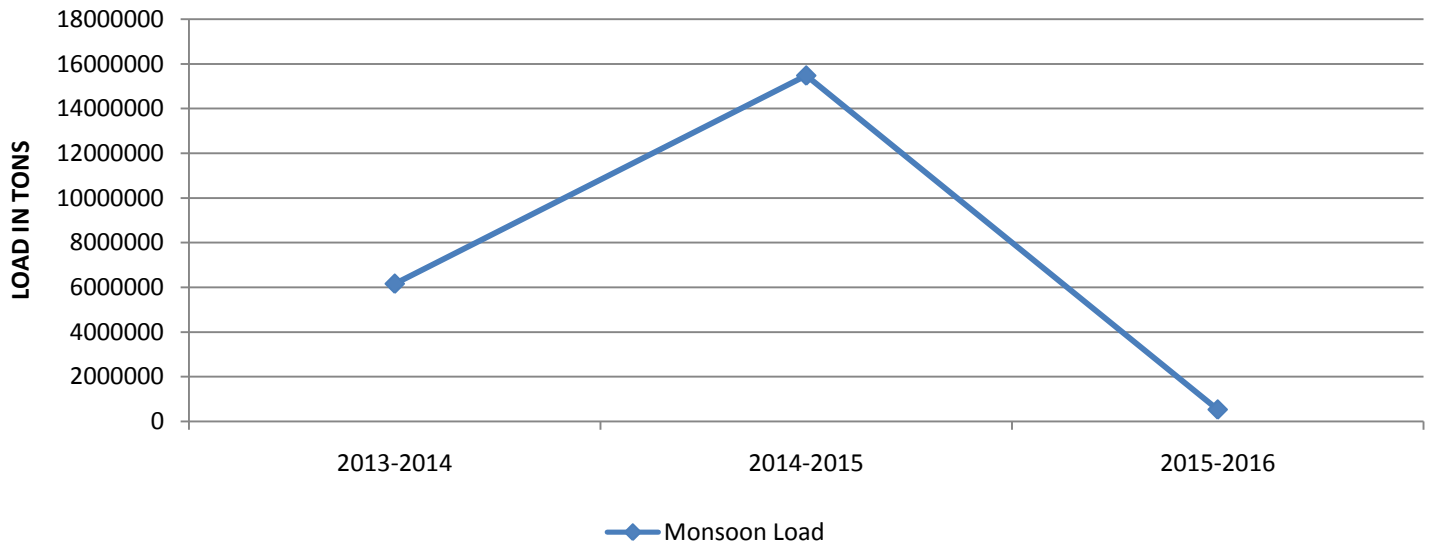
SITE



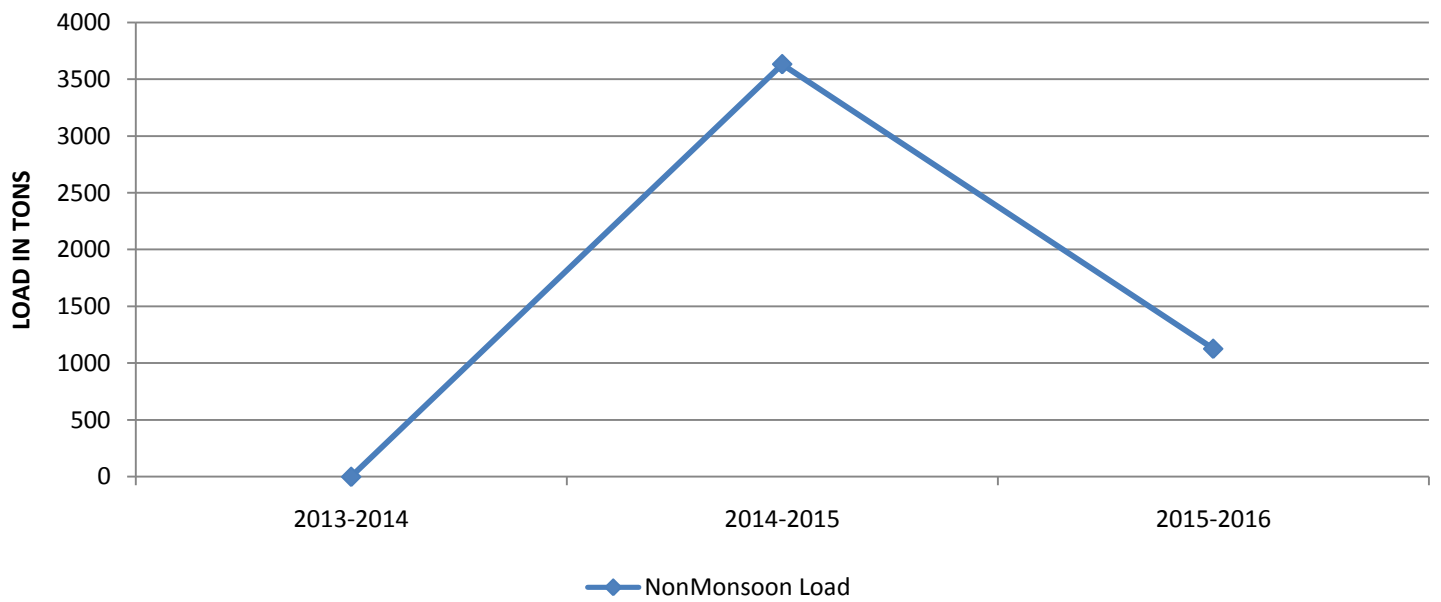
HIGHEST FLOOD LEVEL (m) AT SITE SEORINARAYAN,RIVER:MAHANADI



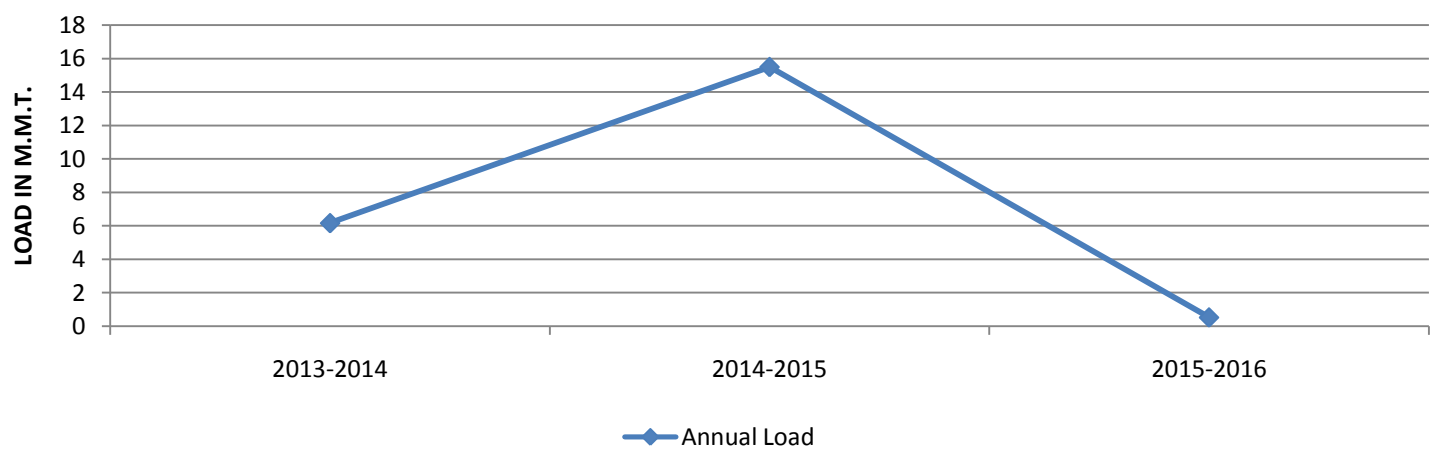
MONSOON LOAD AT SITE SEORINARAYAN, RIVER: MAHANADI



NON MONSOON LOAD AT SITE SEORINARAYAN, RIVER: MAHANADI



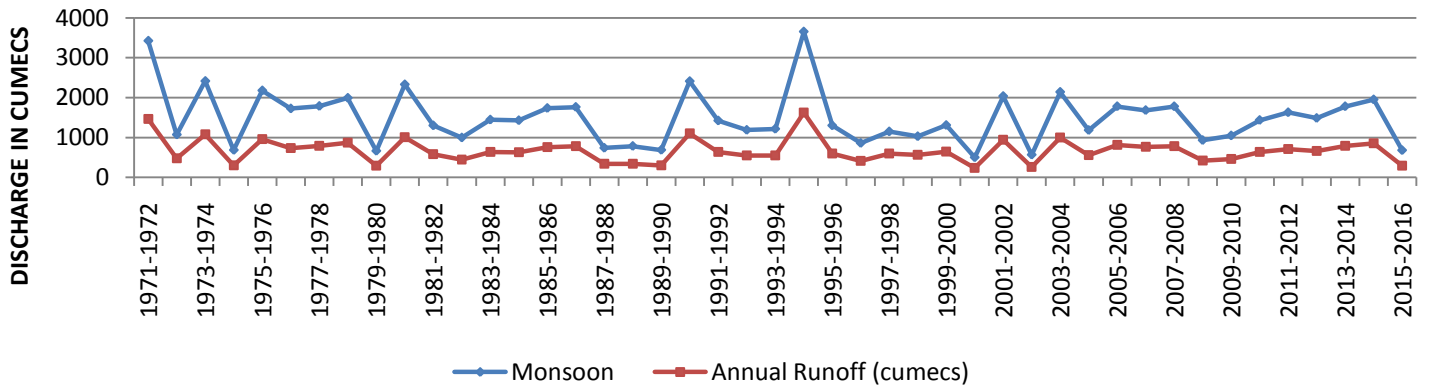
ANNUAL LOAD (MILLION M.T.) AT SITE SEORINARAYAN, RIVER: MAHANADI



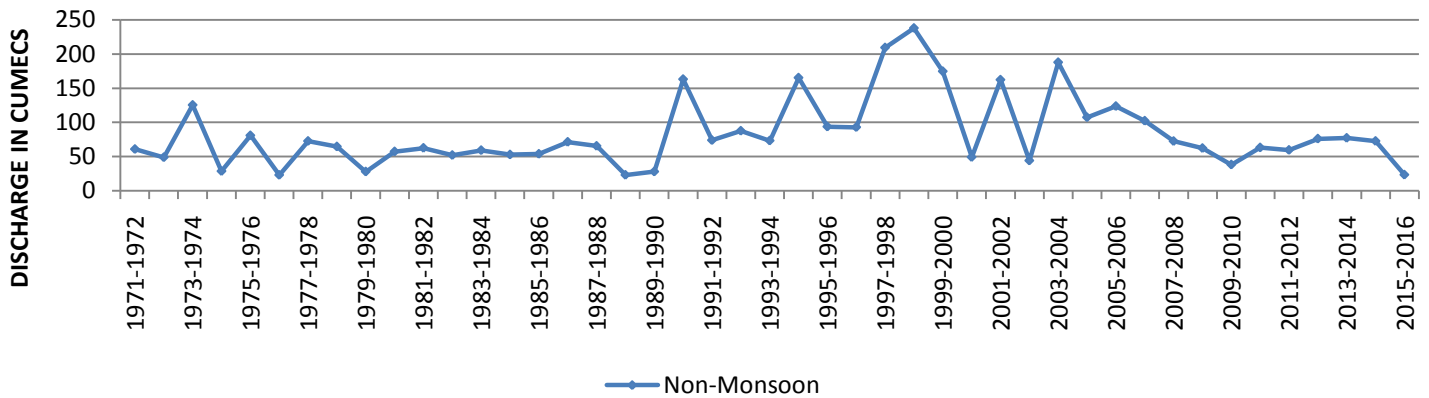
SITE BASANTPUR

YEAR WISE TREND OF SITE BASANTPUR

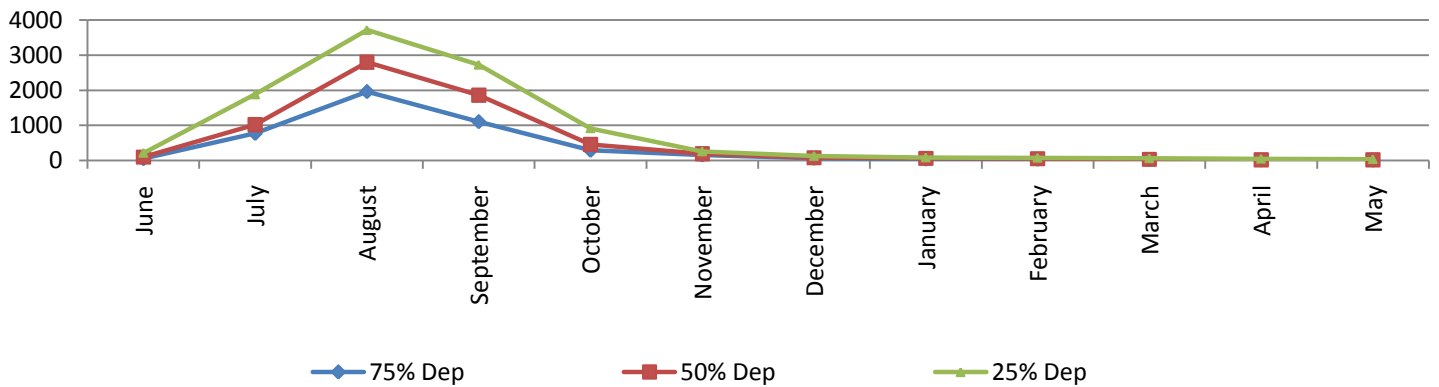
ANNUAL AVERAGE DISCHARGE SITE BASANTPUR, RIVER: MAHANADI



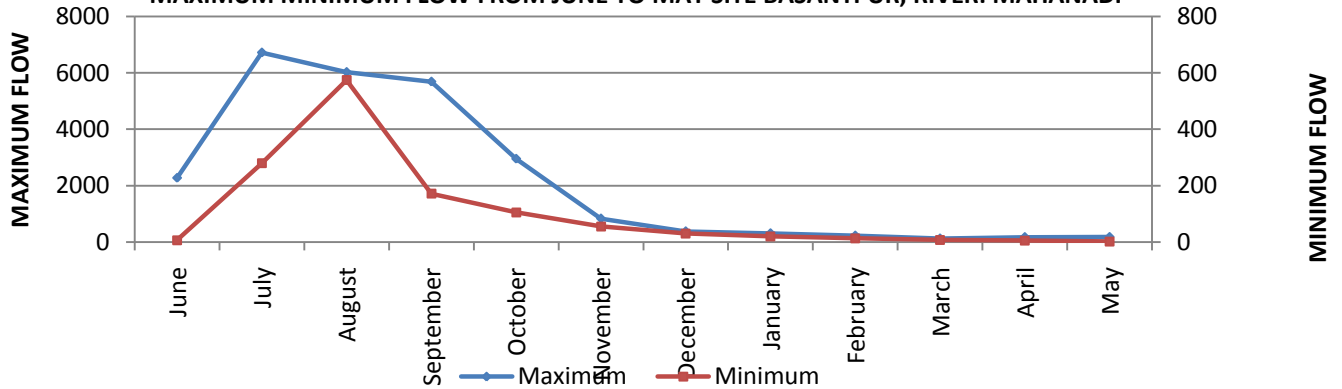
TOTAL ANNUAL DISCHARGE SITE BASANTPUR, RIVER: MAHANADI



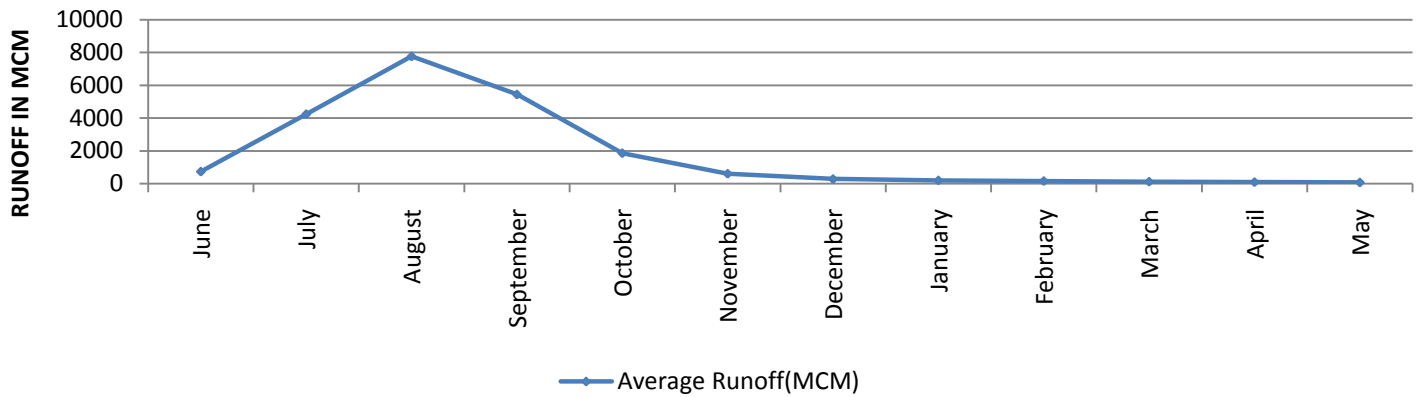
DEPENDABILITY FROM FROM JUNE TO MAY SITE BASANTPUR, RIVER: MAHANADI



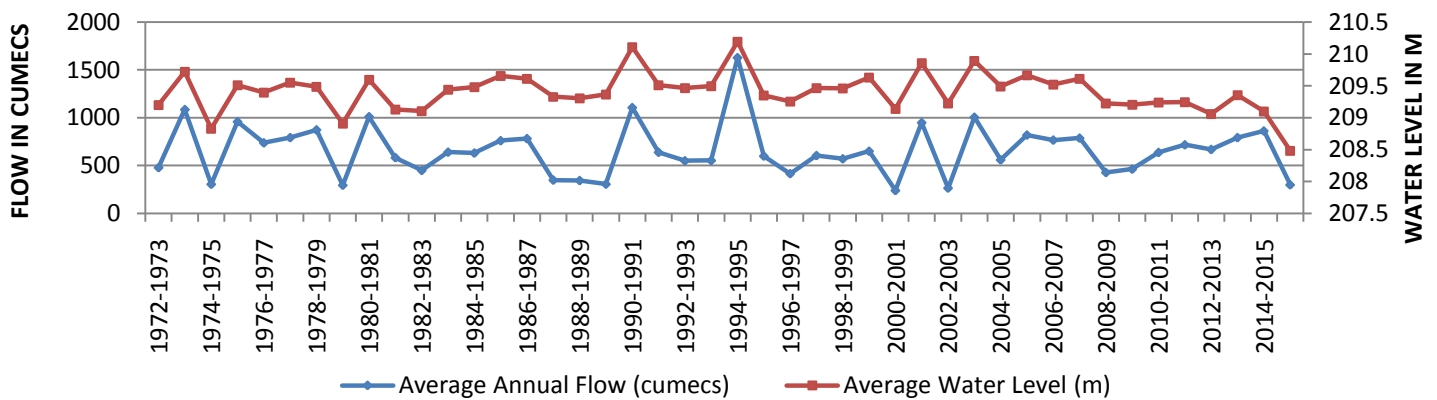
MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE BASANTPUR, RIVER: MAHANADI



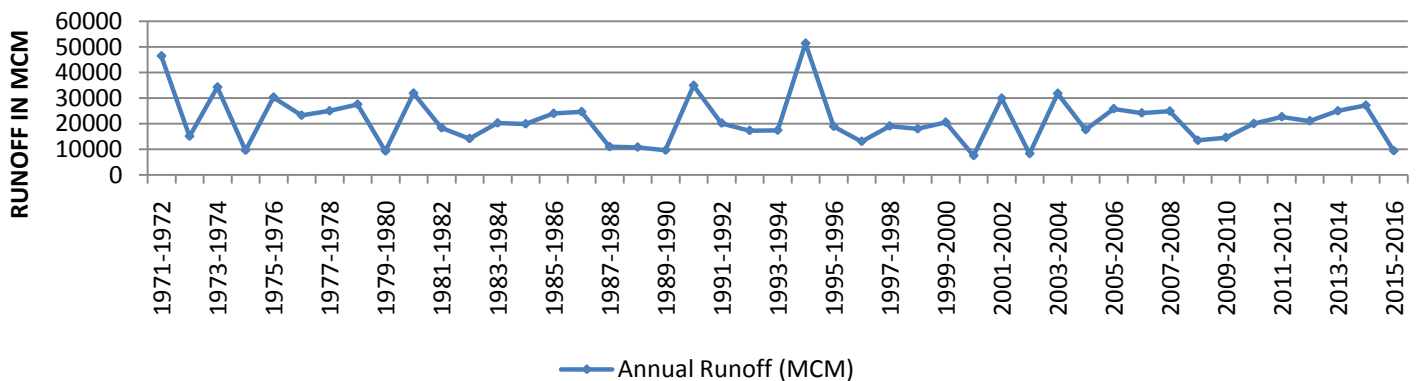
AVERAGE RUNOFF(MCM) PERIOD-1992-2016 SITE BASANTPUR RIVER MAHANADI



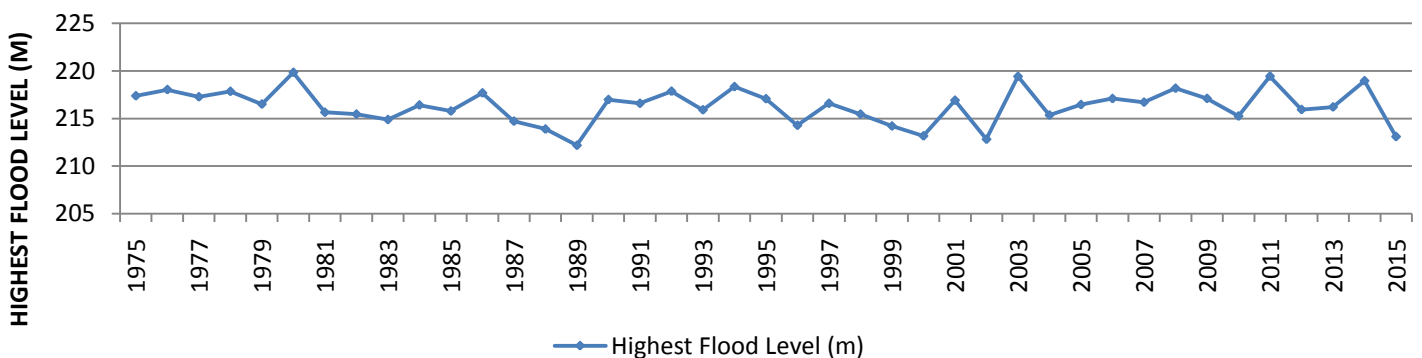
AVERAGE ANNUAL FLOW (CUMECs) WITH WATER LEVEL (M) SITE BASANTPUR, RIVER: MAHANADI

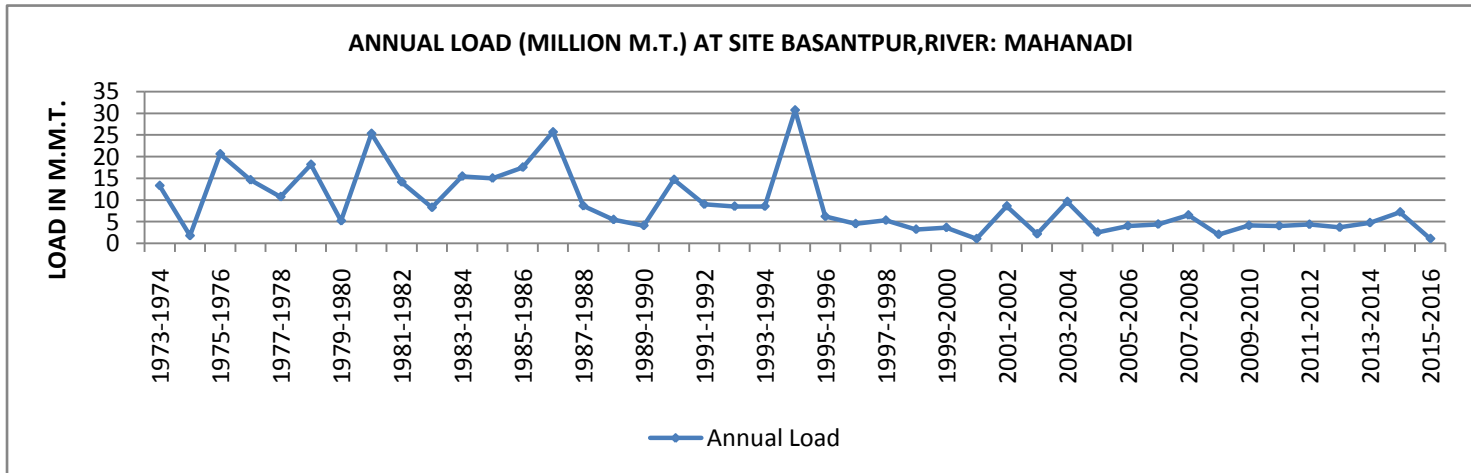
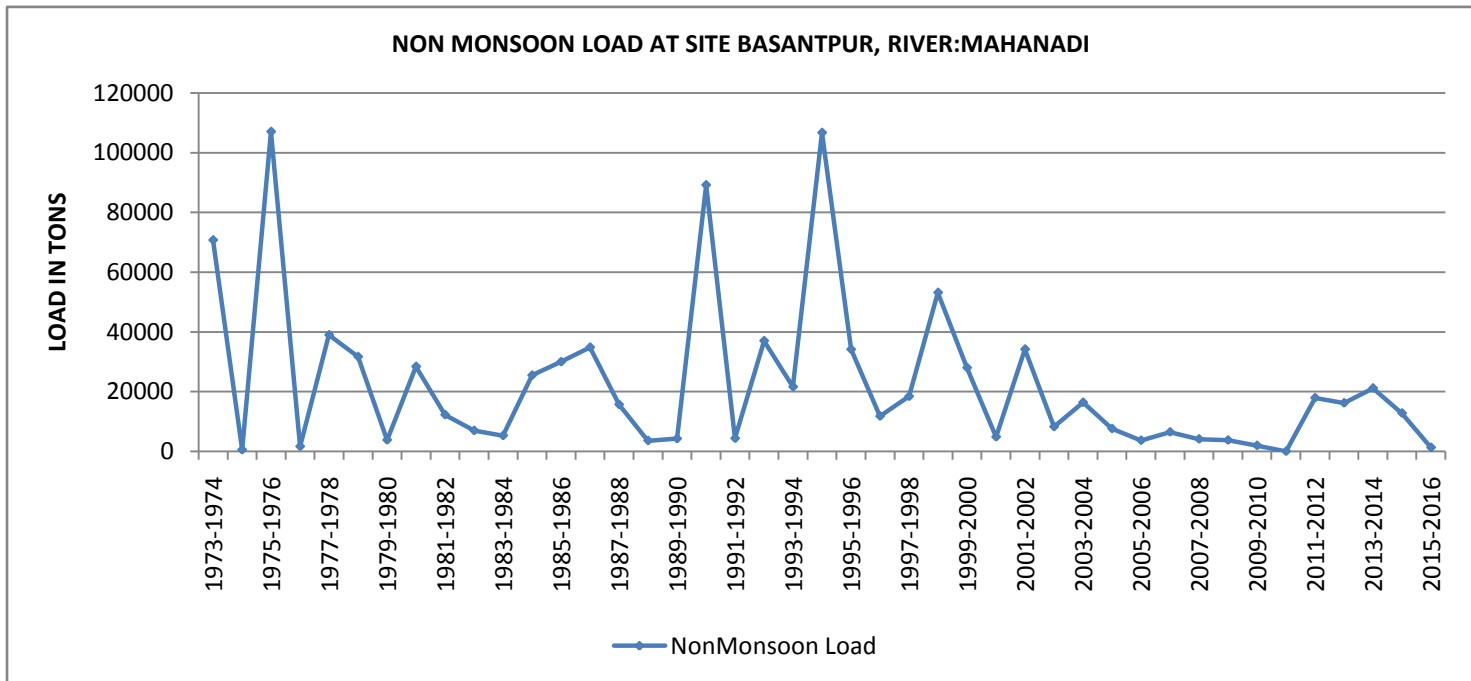
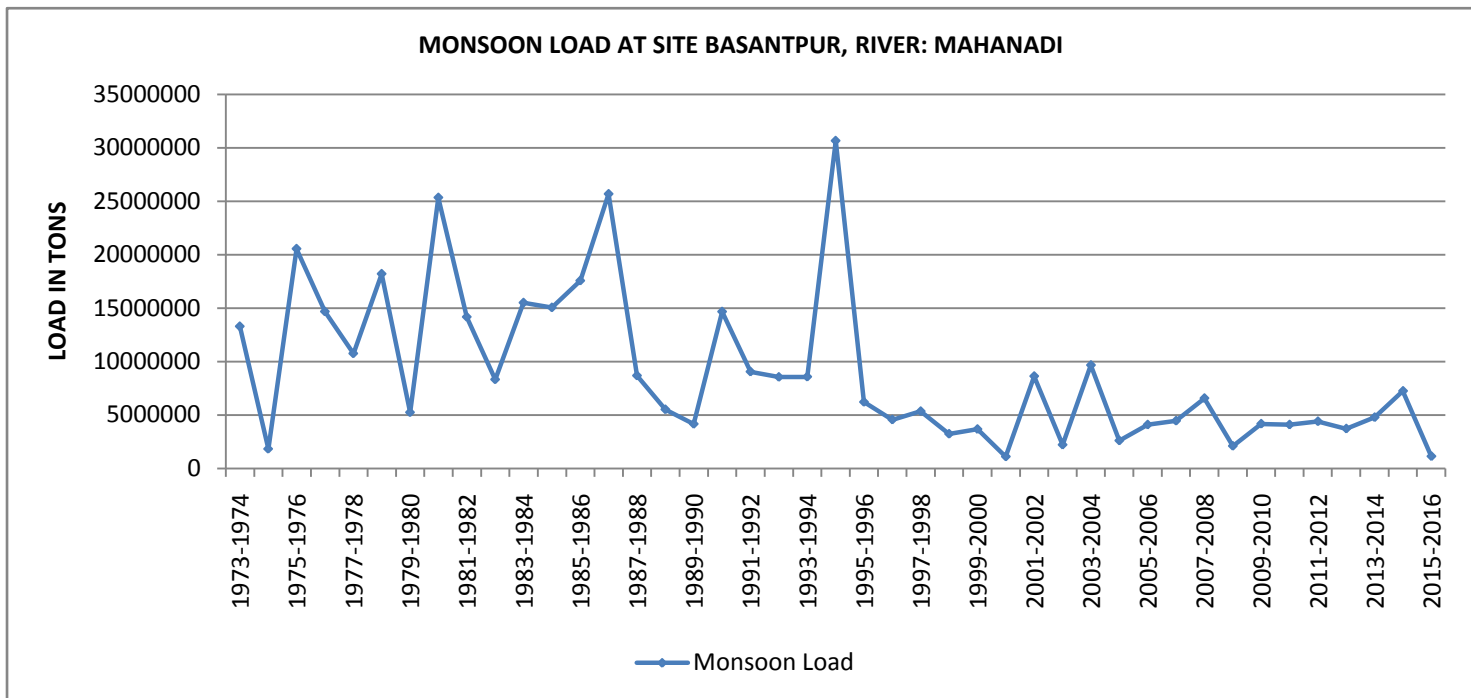


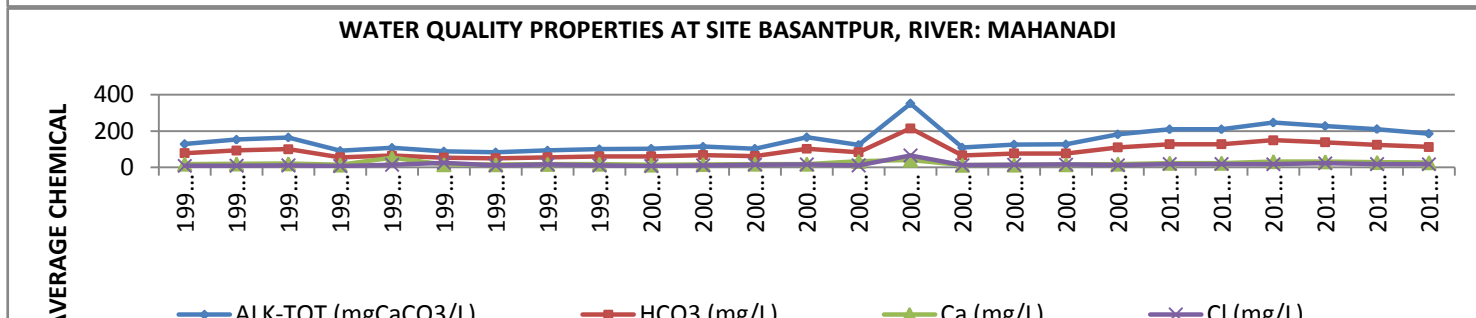
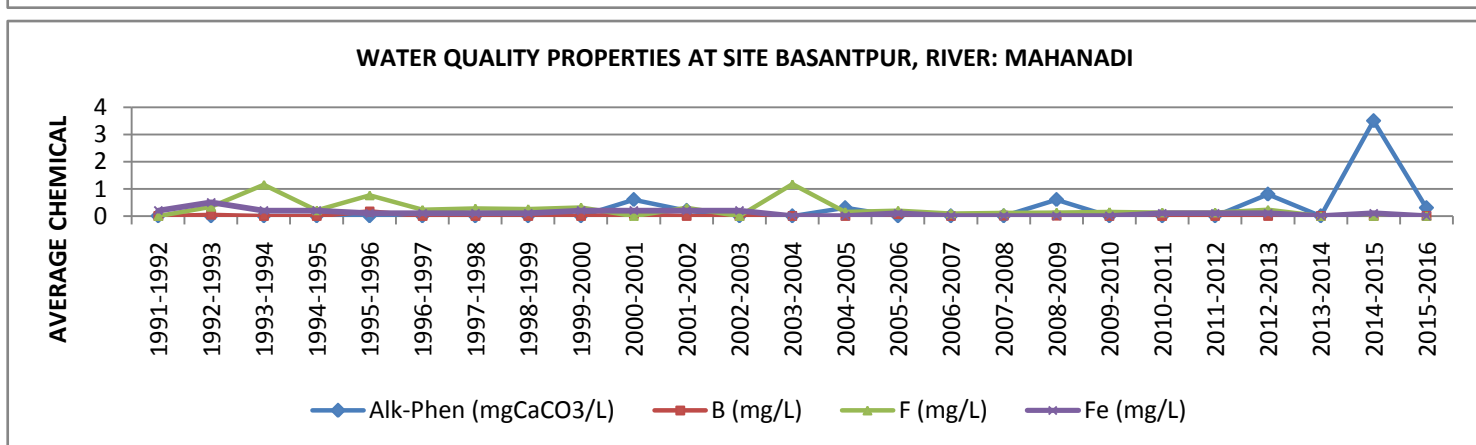
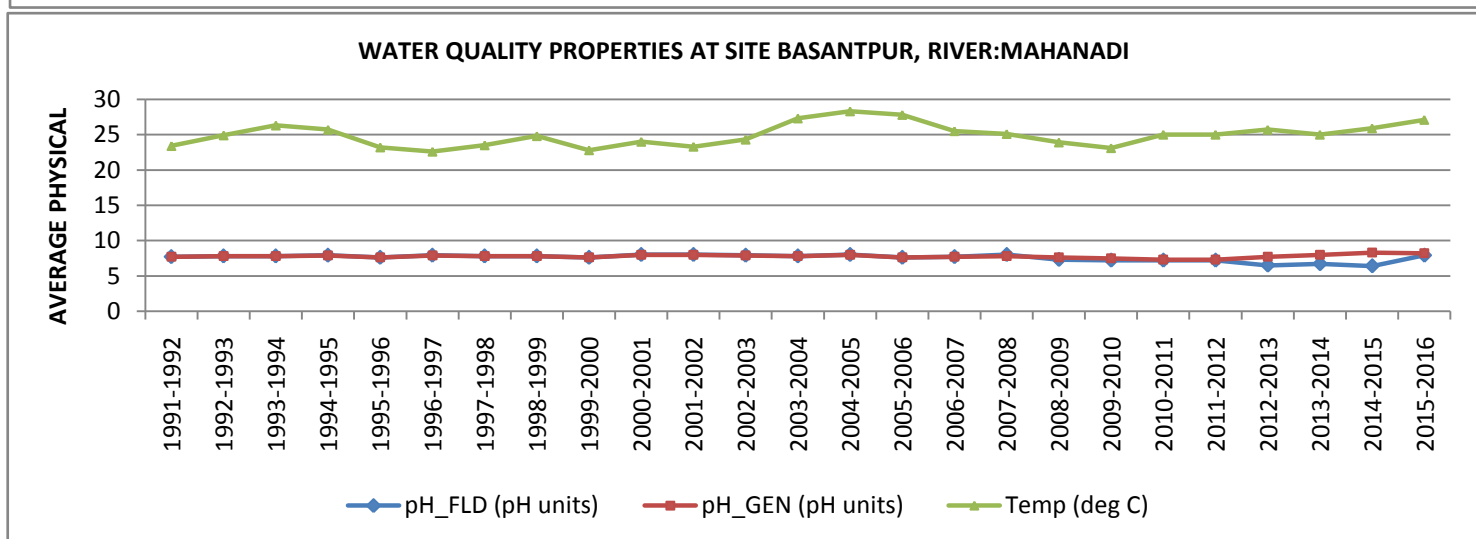
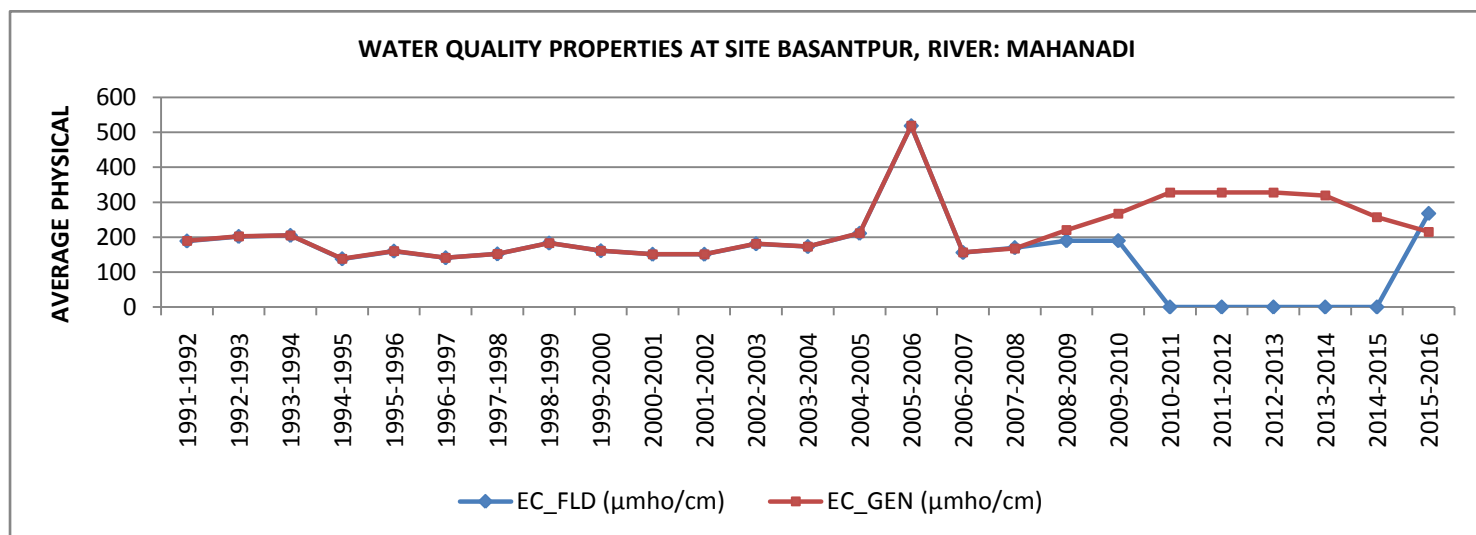
ANNUAL RUNOFF IN (MCM) SITE BASANTPUR, RIVER:MAHANADI



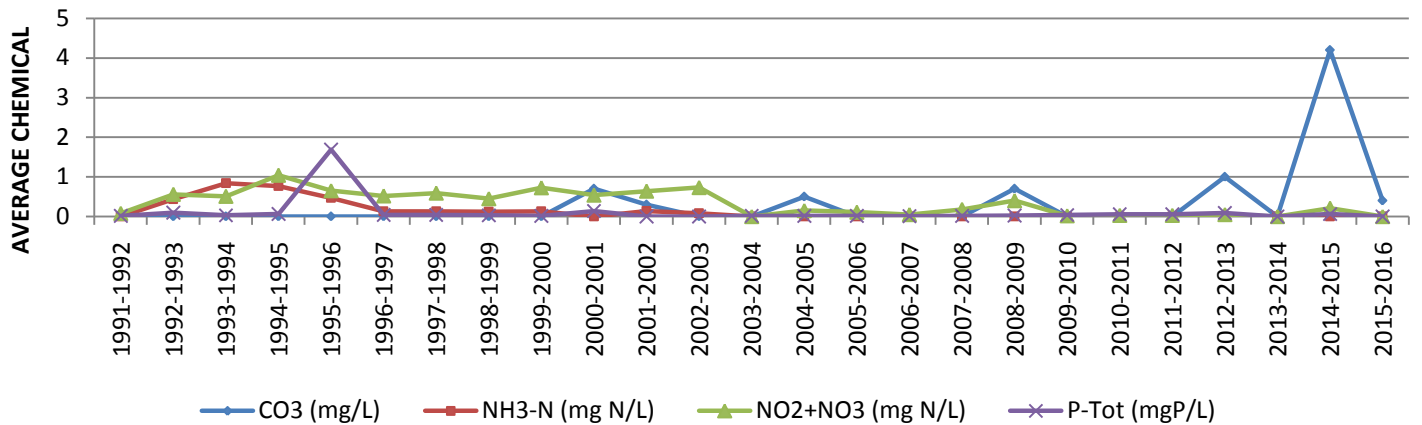
HIGHEST FLOOD LEVEL (m) AT SITE BASANTPUR, RIVER: MAHANADI



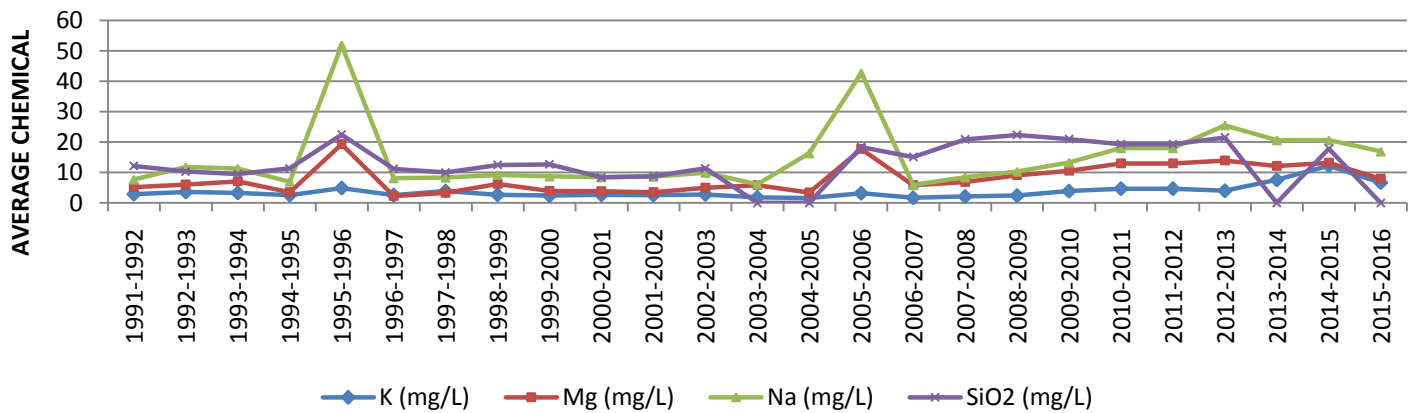




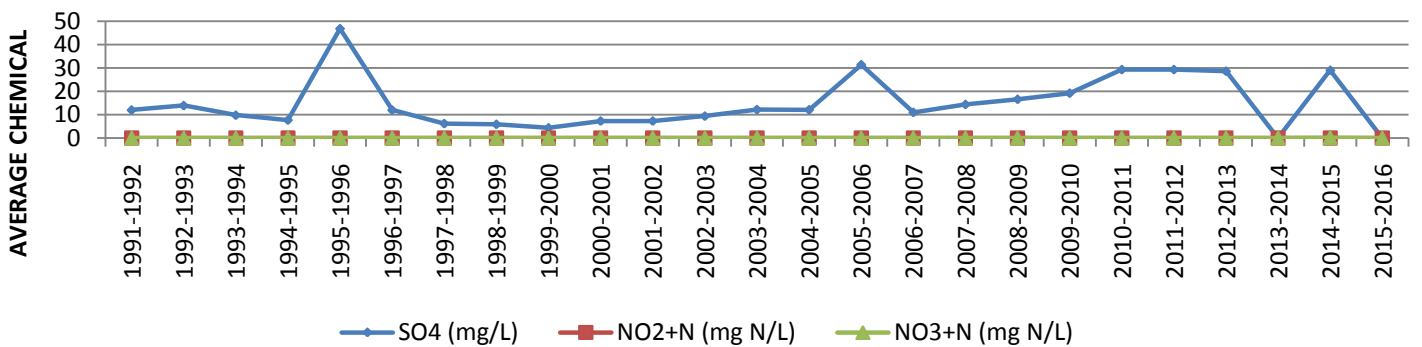
WATER QUALITY PROPERTIES AT SITE BASANTPUR, RIVER: MAHANADI



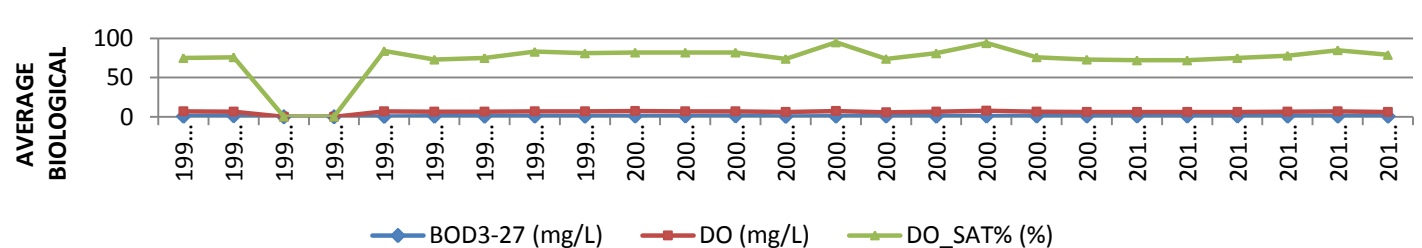
WATER QUALITY PROPERTIES AT SITE BASANTPUR, RIVER: MAHANADI



WATER QUALITY PROPERTIES AT SITE BASANTPUR, RIVER:MAHANADI



WATER QUALITY PROPERTIES AT SITE BASANTPUR, RIVER:MAHANADI

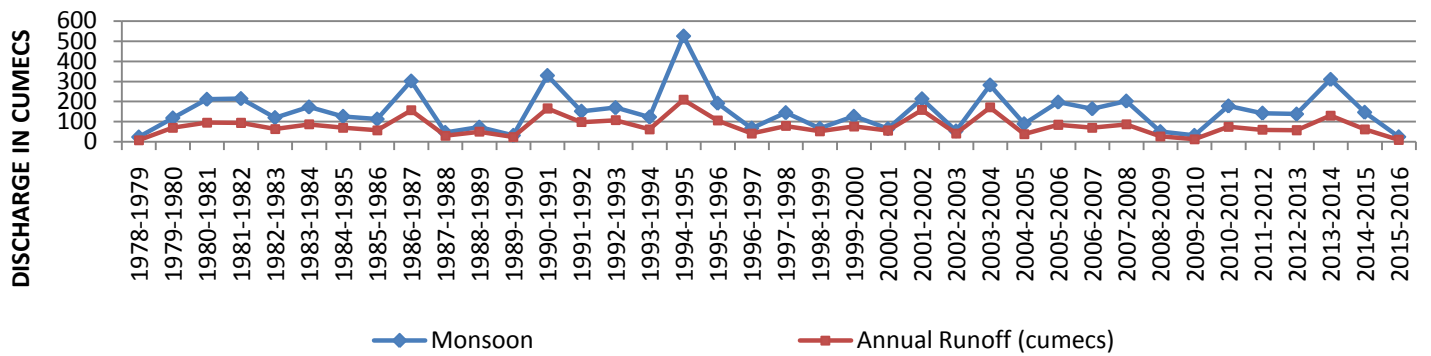


SEONATH SUB-BASIN

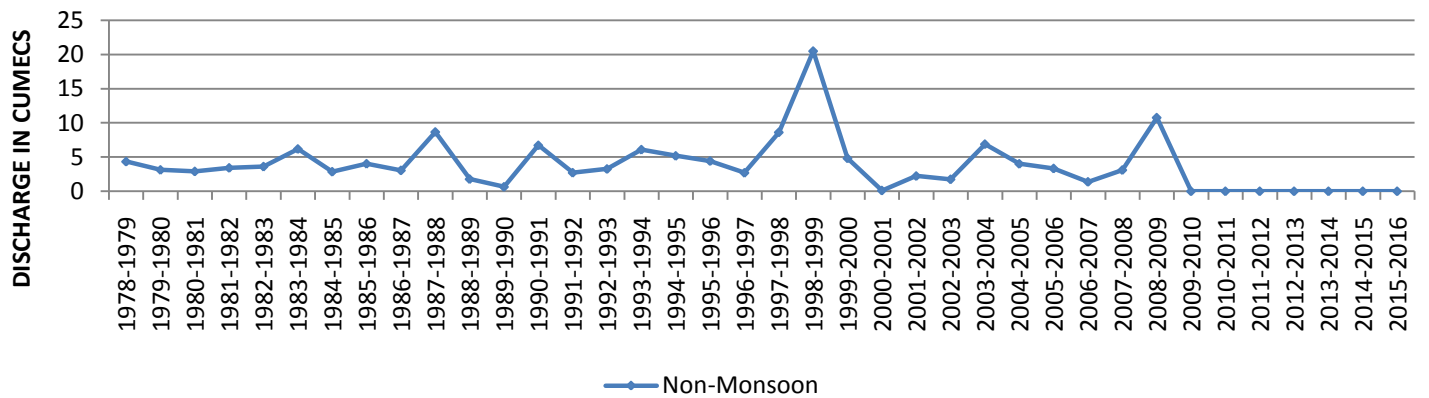
SITE KOTNI

YEAR WISE TREND OF SITE KOTNI

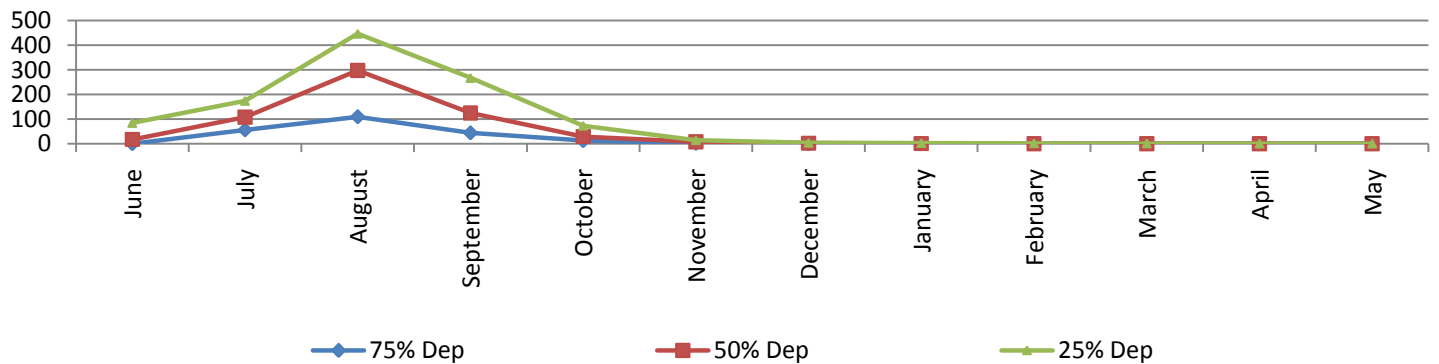
ANNUAL AVERAGE DISCHARGE SITE KOTNI, TRIBUTARY: SEONATH



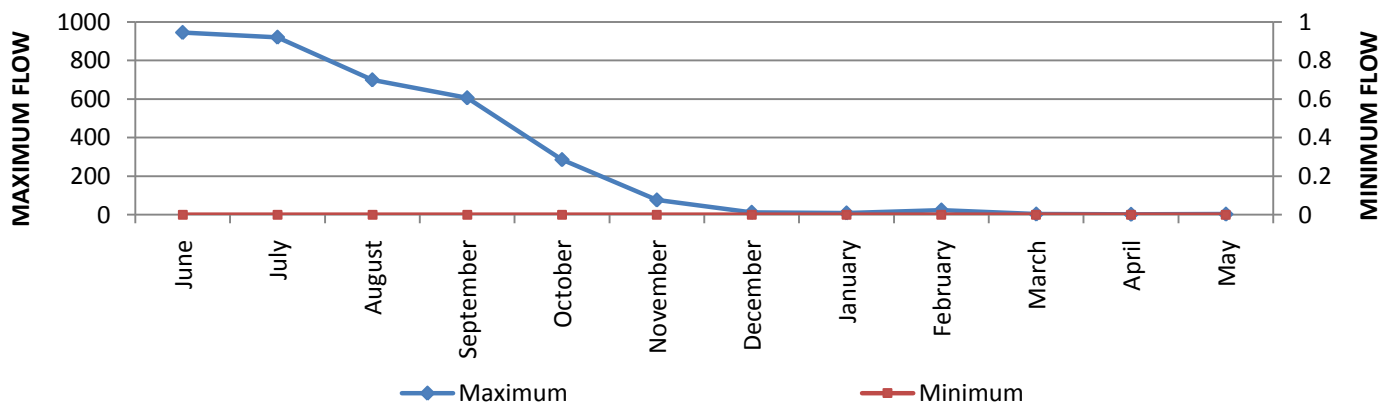
TOTAL ANNUAL DISCHARGE SITE KOTNI, TRIBUTARY: SEONATH

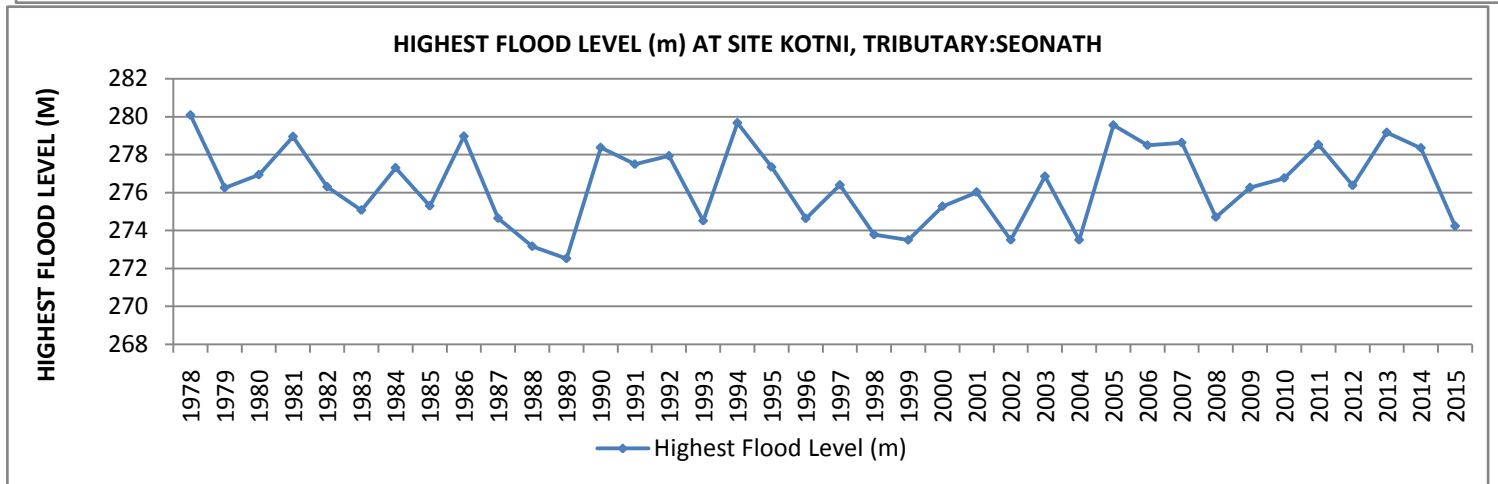
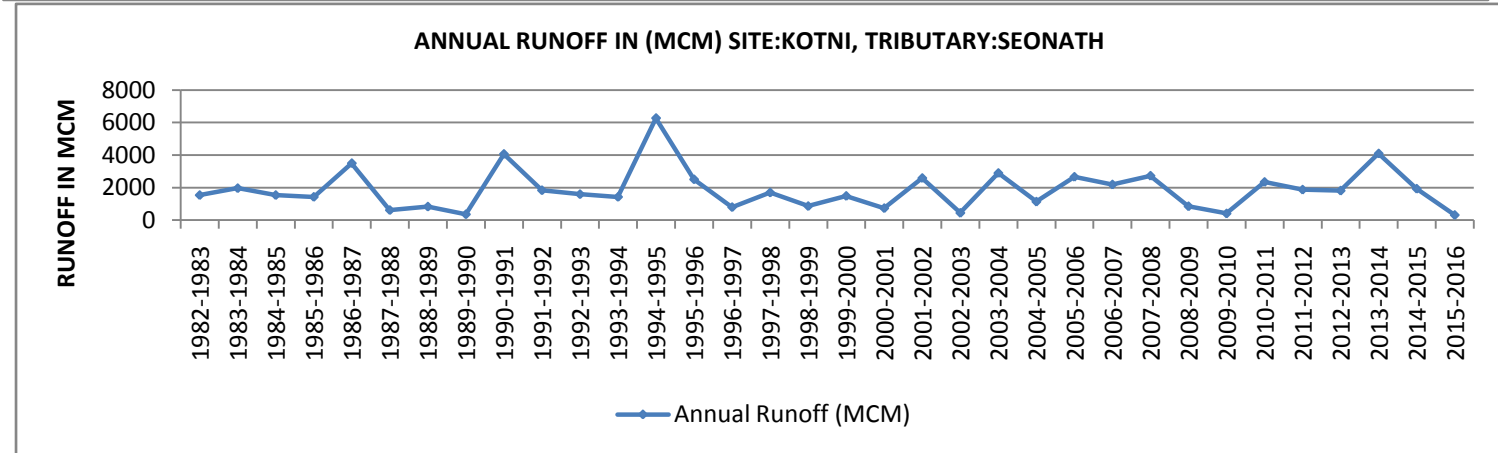
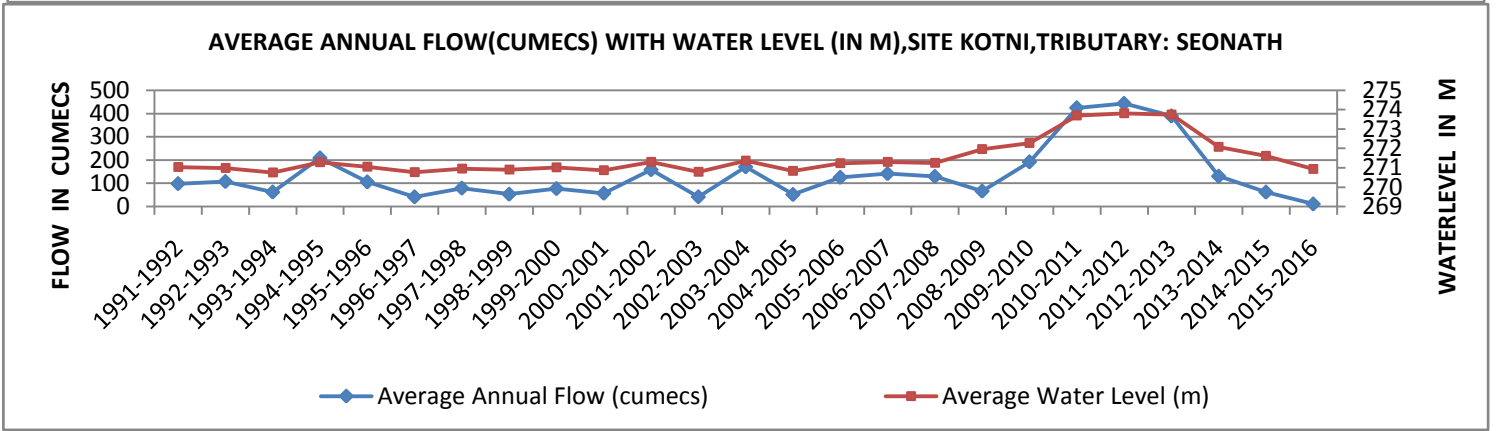
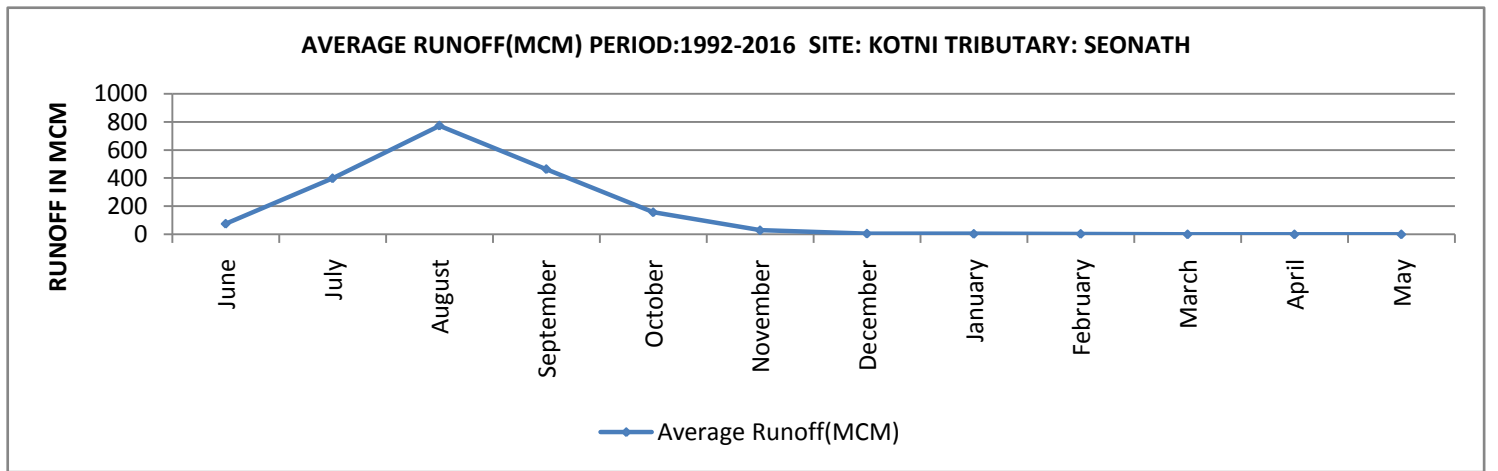


DEPENDABILITY FLOW FROM JUNE TO MAY SITE KOTNI, TRIBUTARY: SEONATH



MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE KOTNI, TRIBUTARY: SEONATH

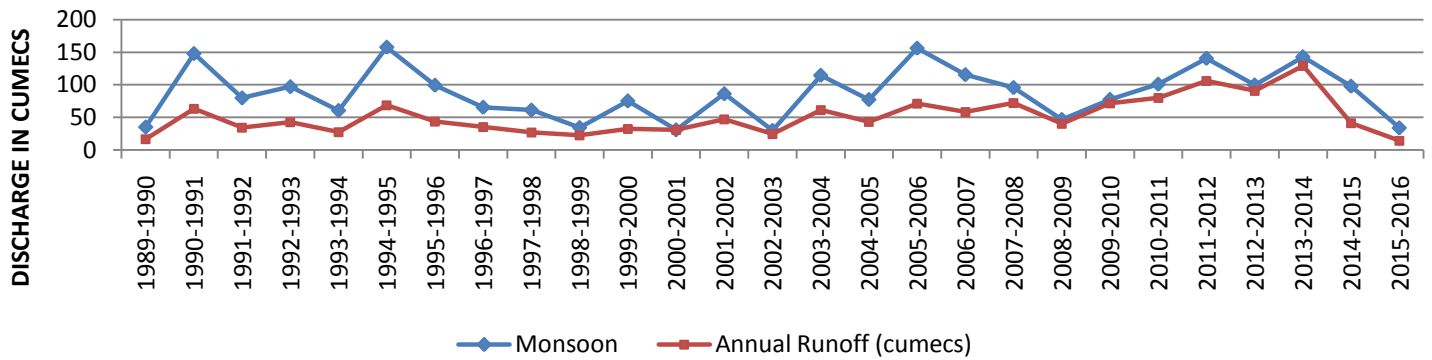




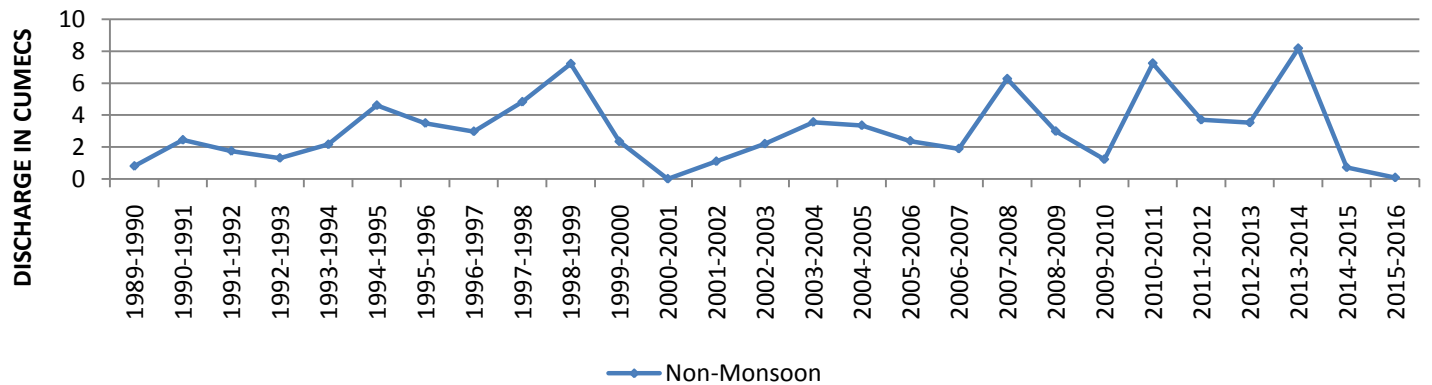
SITE PATHARDIH

YEAR WISE TREND OF SITE PATHARDIH

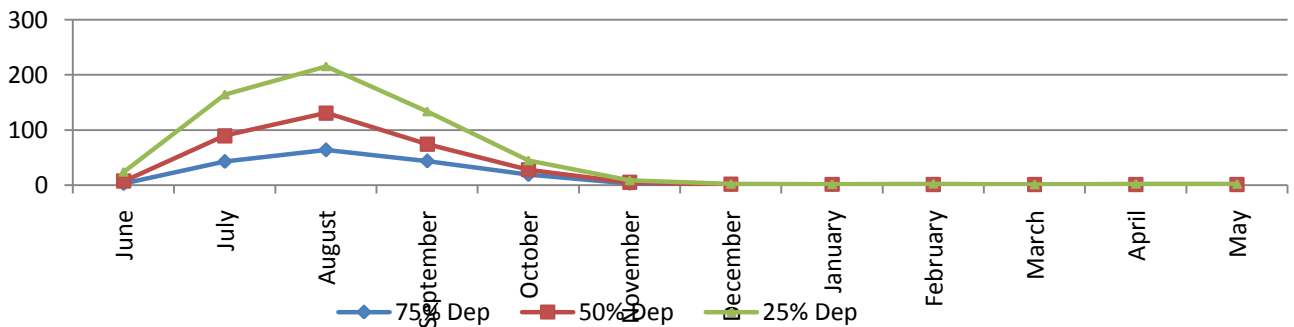
ANNUAL AVERAGE DISCHARGE SITE PATHARDIH,TRIBUTARY:SEONATH



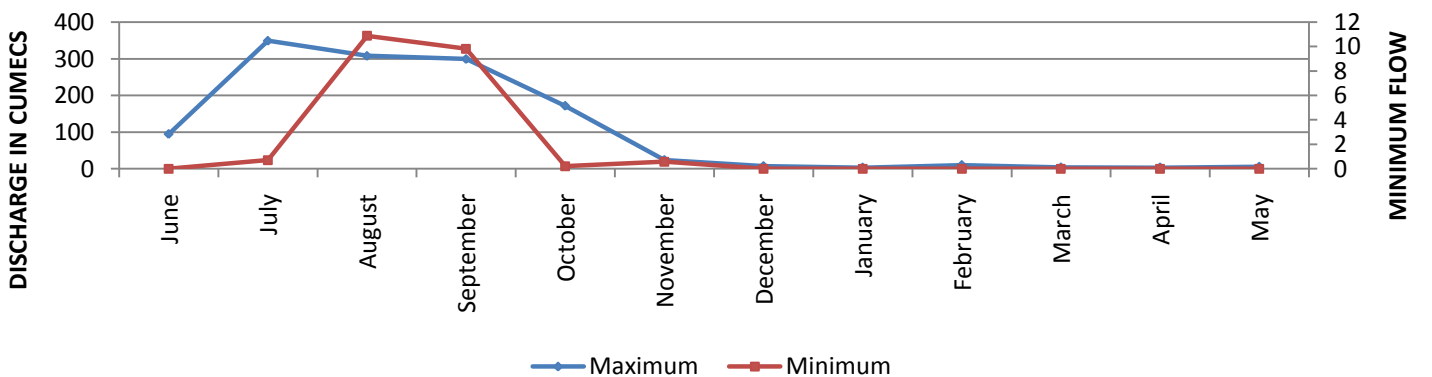
TOTAL ANNUAL DISCHARGE SITE PATHARDIH,TRIBUTARY:SEONATH

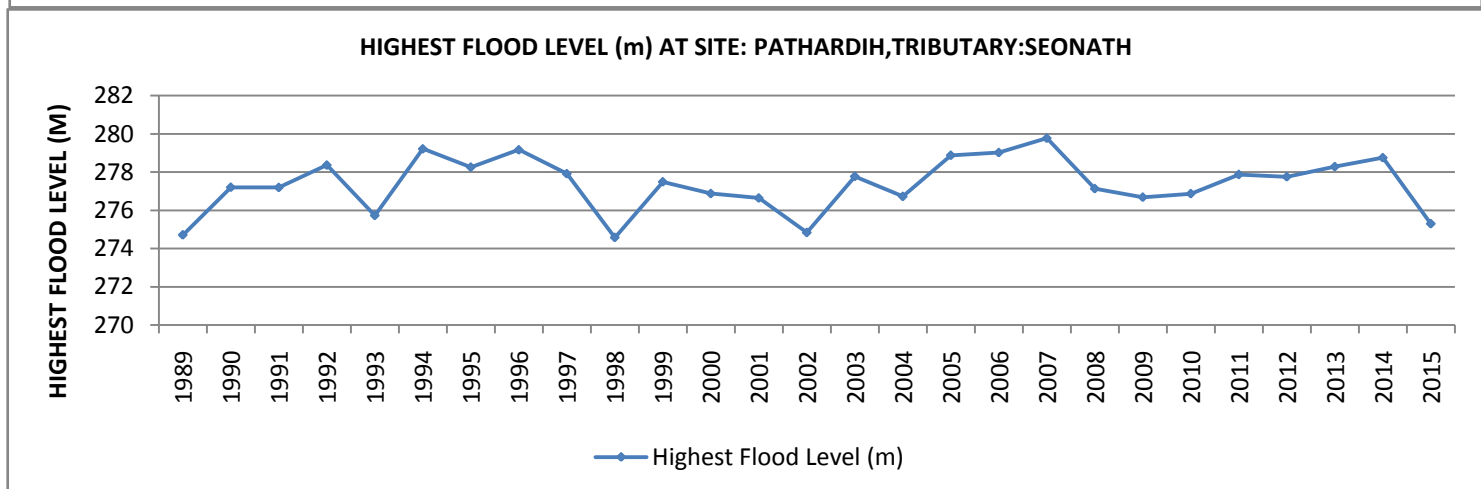
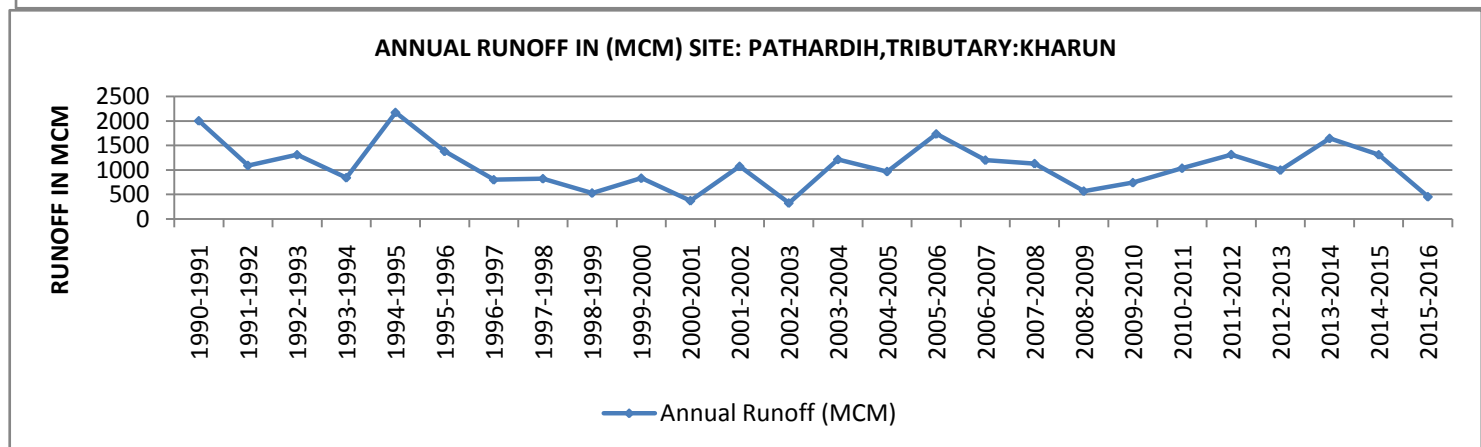
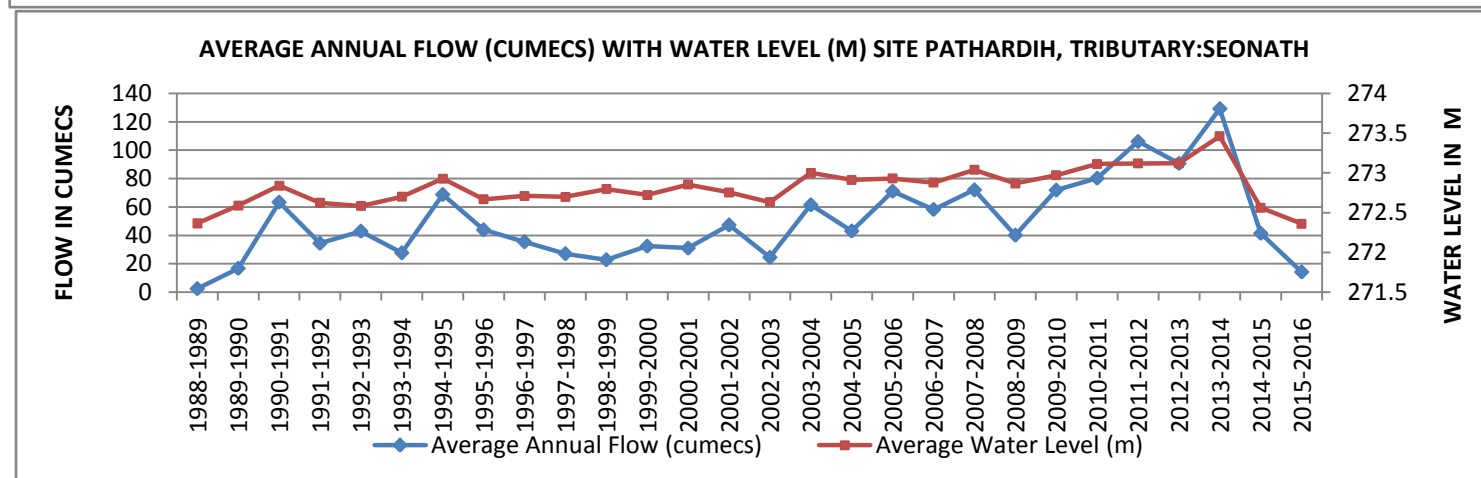
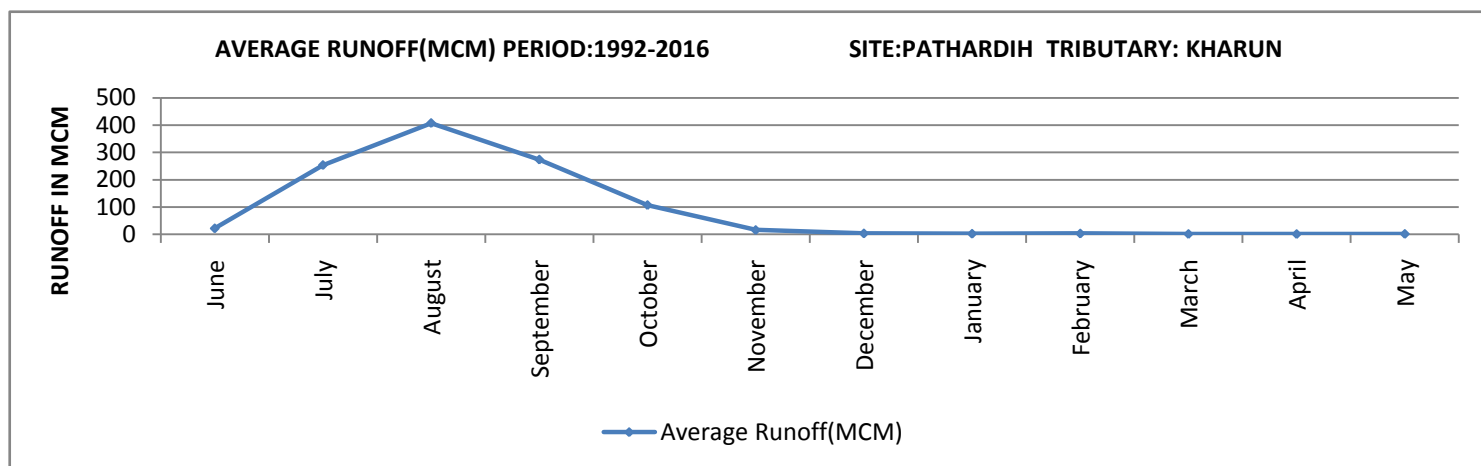


DEPENDEBILITY FLOW FROM JUNE TO MAY SITE PATHARDIH,TRIBUTARY:HASDEO

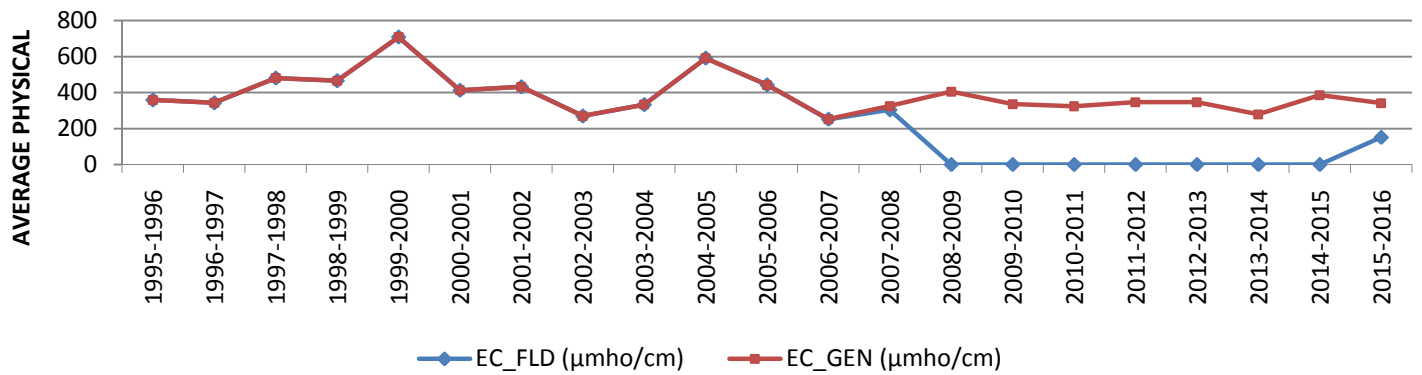


MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE PATHARDIH, TRIBUTARY: SEONATH

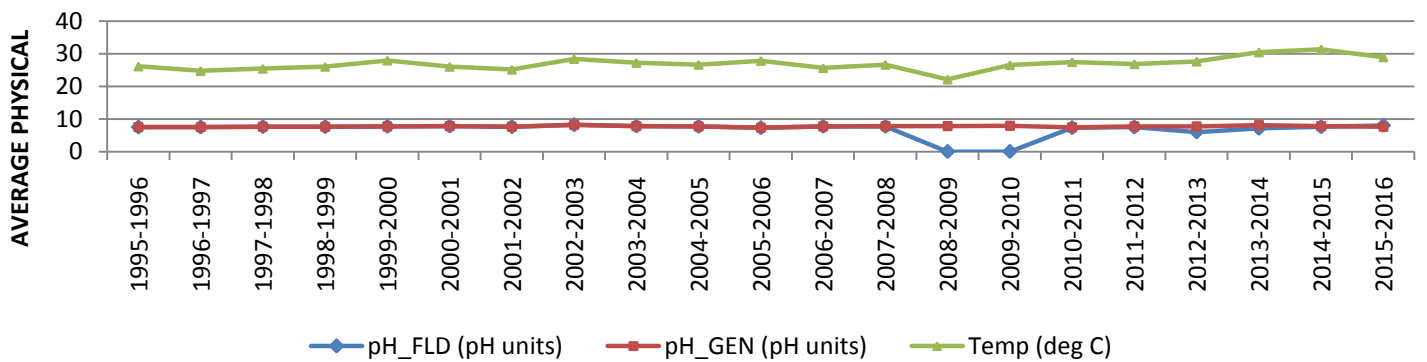




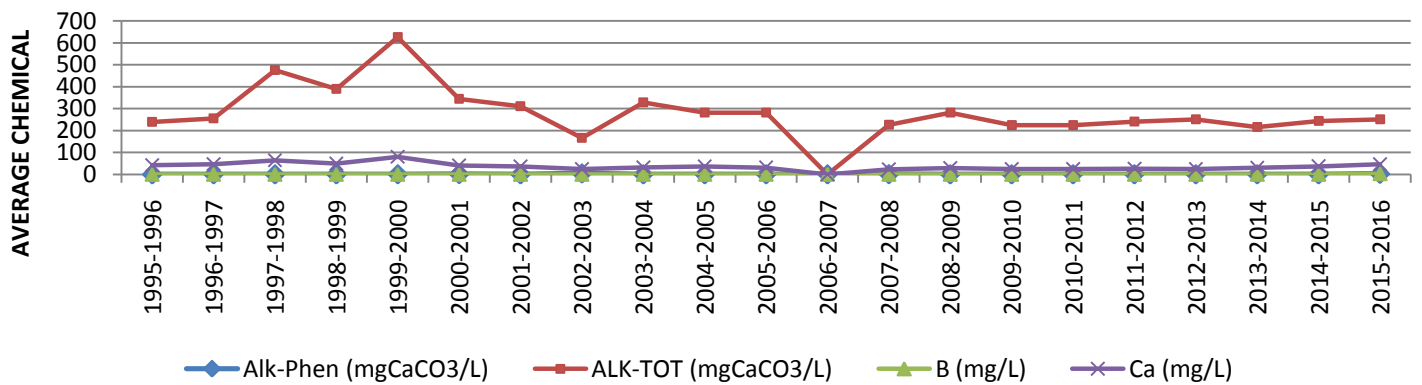
WATER QUALITY PROPERTIES AT SITE PATHARDIH,TRIBUTARY:SEONATH



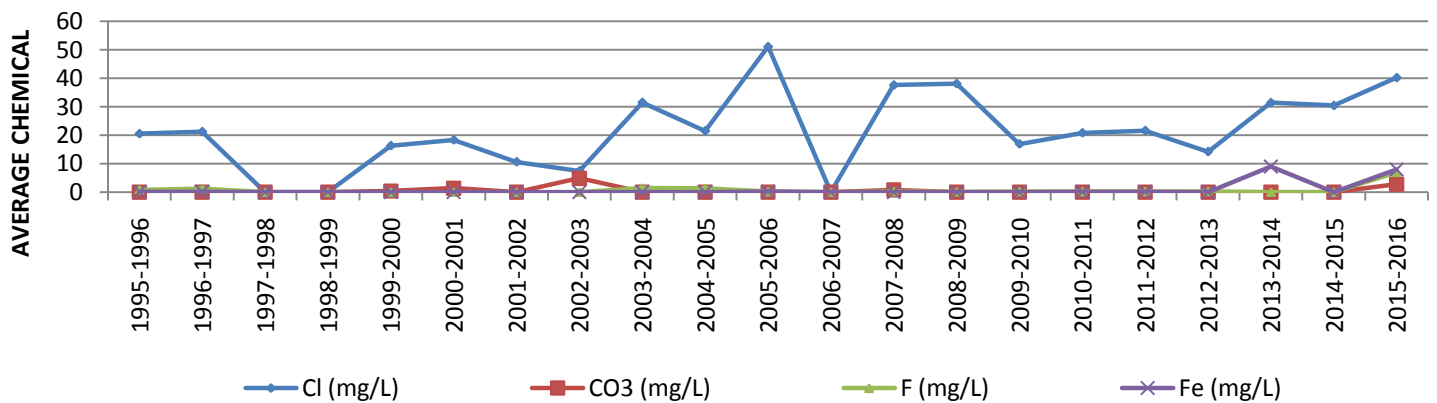
WATER QUALITY PROPERTIES AT SITE PATHARDIH,TRIBUTARY:SEONATH



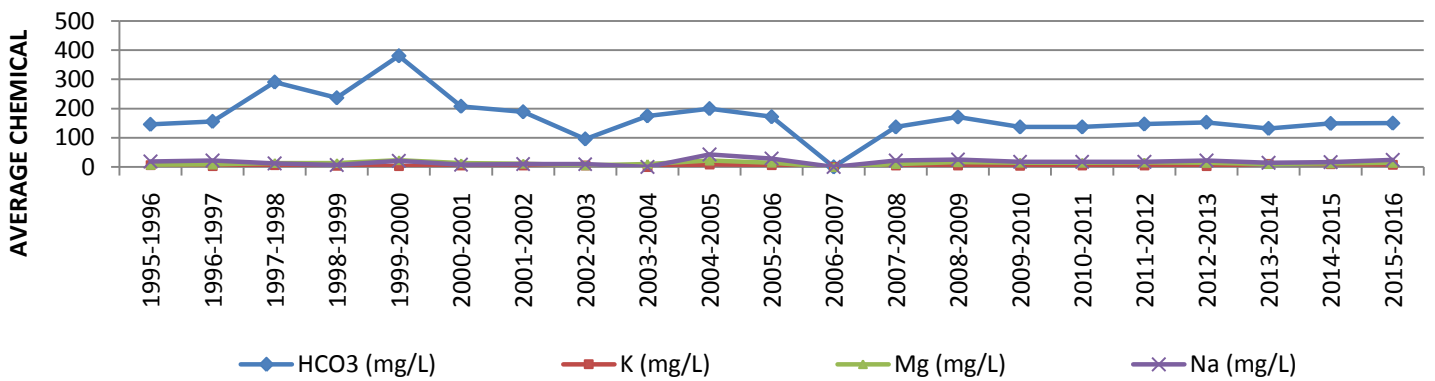
WATER QUALITY PROPERTIES AT SITE PATHARDIH,TRIBUTARY:SEONATH



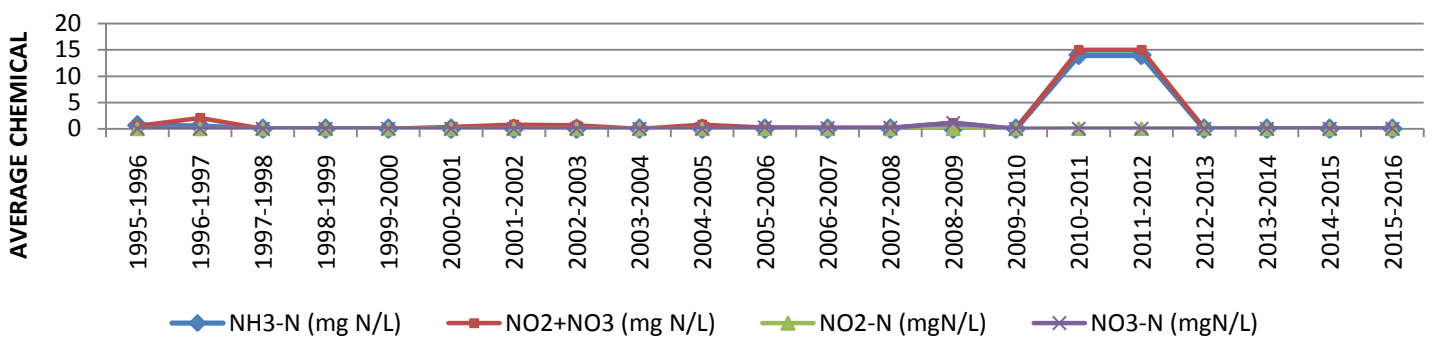
WATER QUALITY PROPERTIES AT SITE PATHARDIH,TRIBUTARY: SEONATH



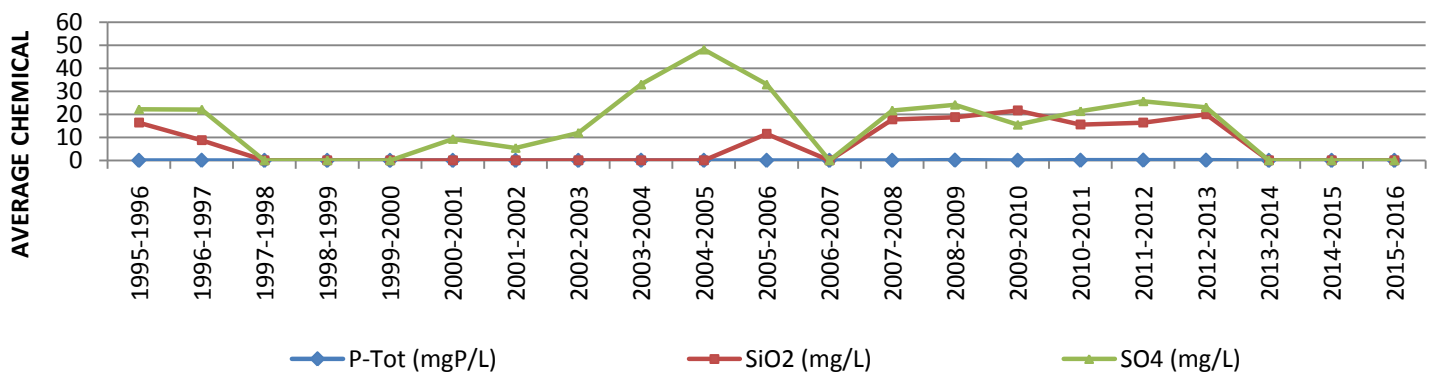
WATER QUALITY PROPERTIES AT SITE PATHARDIH, TRIBUTARY: SEONATH



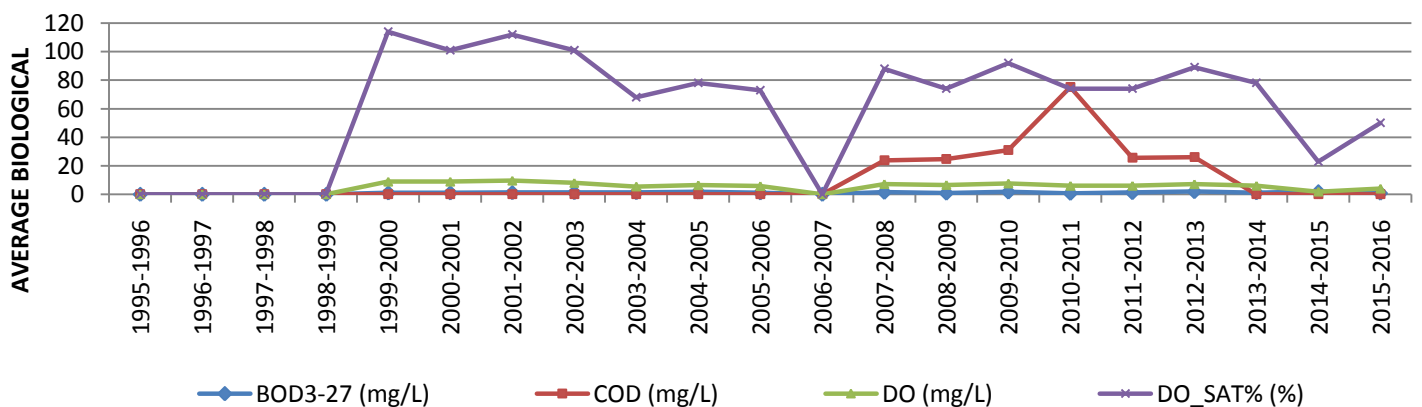
WATER QUALITY PROPERTIES AT SITE PATHARDIH,TRIBUTARY: SEONATH



WATER QUALITY PROPERTIES AT SITE PATHARDIH, TRIBUTARY:SEONATH



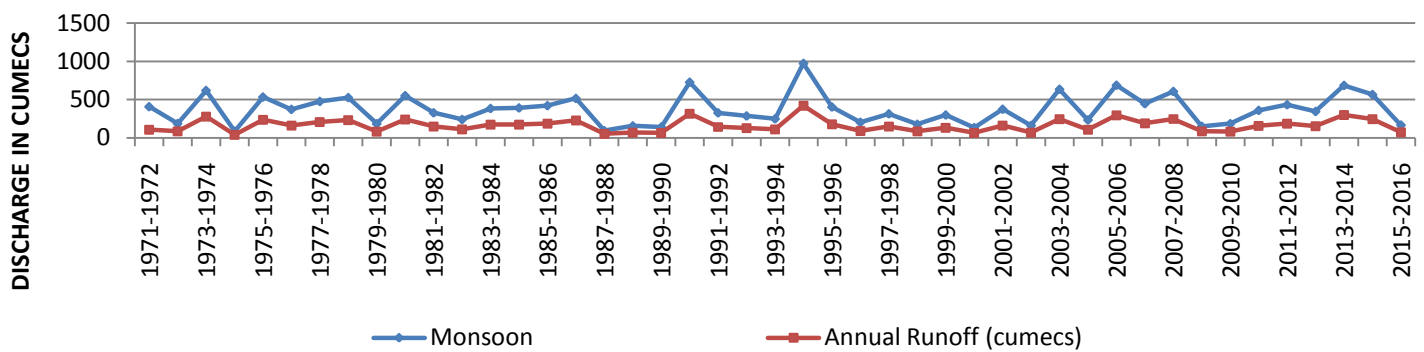
WATER QUALITY PROPERTIES AT SITE PATHARDIH, TRIBUTARY: SEONATH



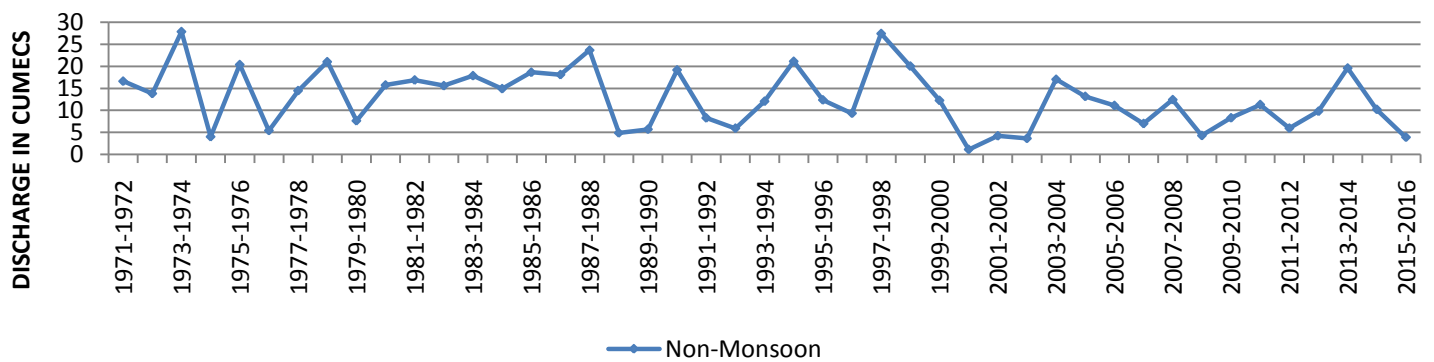
SITE SIMGA

YEAR WISE TREND OF SITE SIMGA

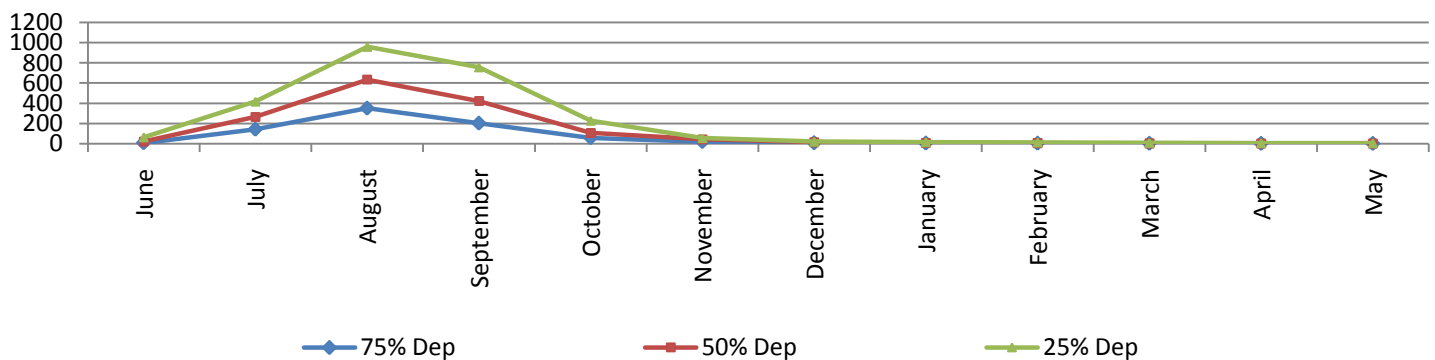
ANNUAL AVERAGE DISCHARGE SITE SIMGA, TRIBUTARY: SEONATH



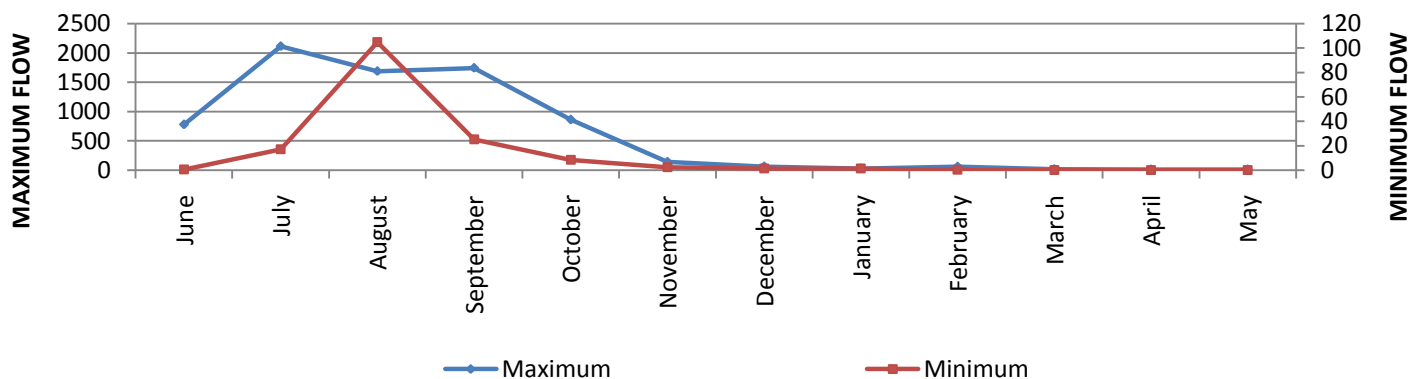
TOTAL ANNUAL DISCHARGE SITE SIMGA, TRIBUTARY: SEONATH

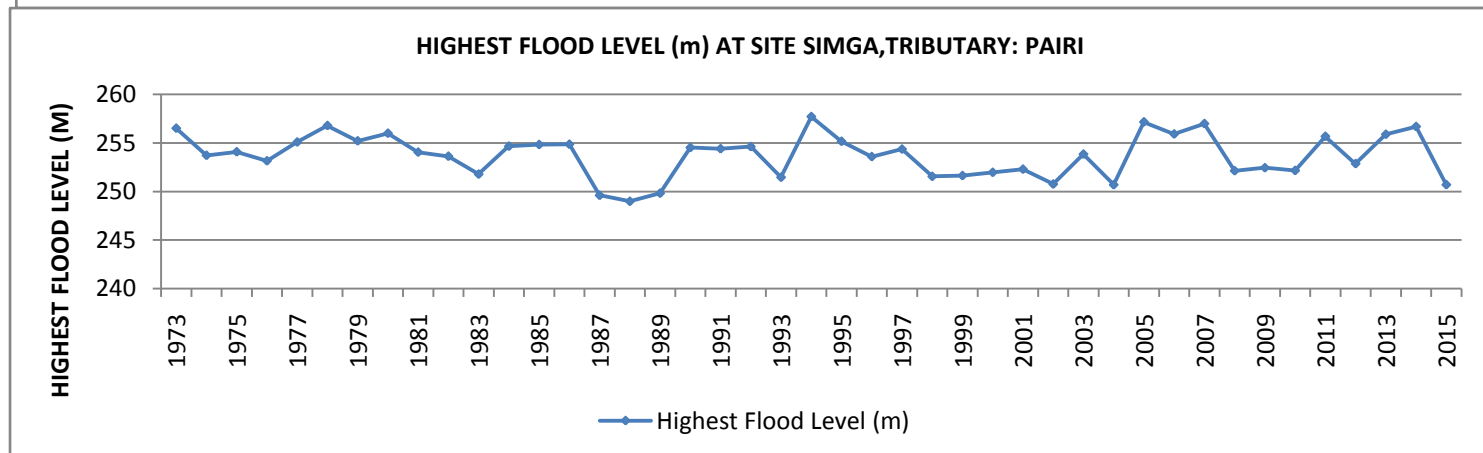
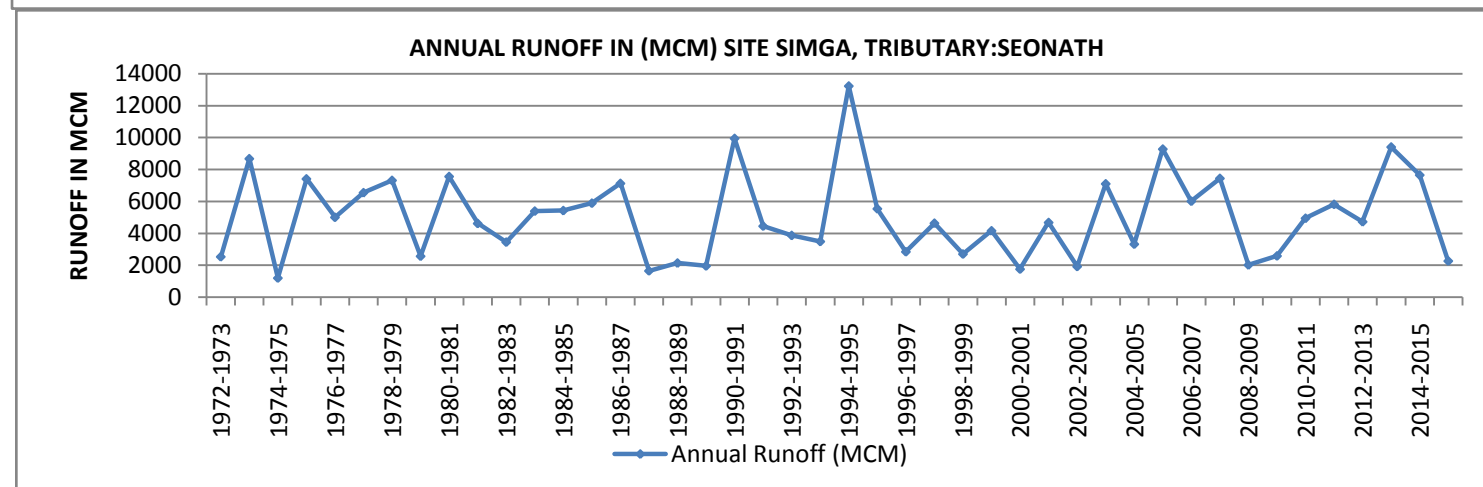
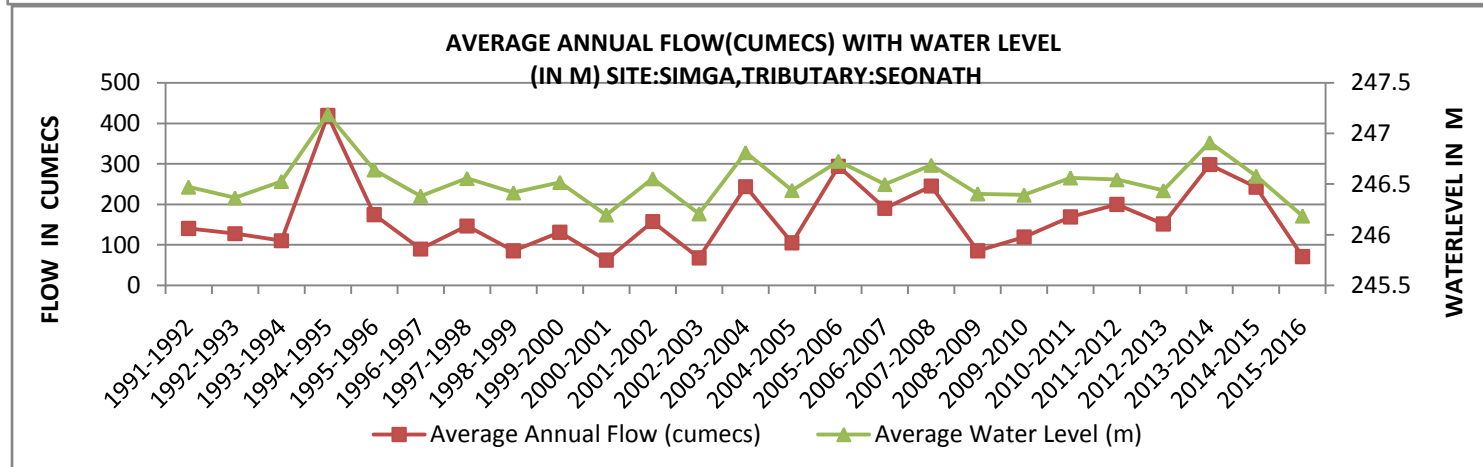
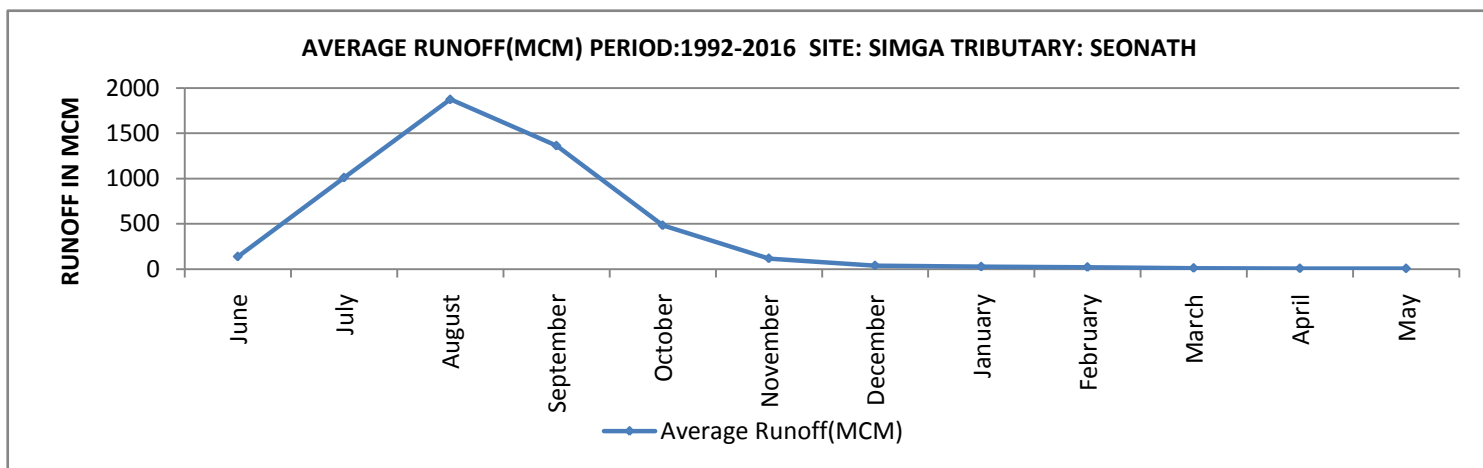


DEPENDABILITY FLOW FROM JUNE TO MAY SITE SIMGA, TRIBUTARY: SEONATH

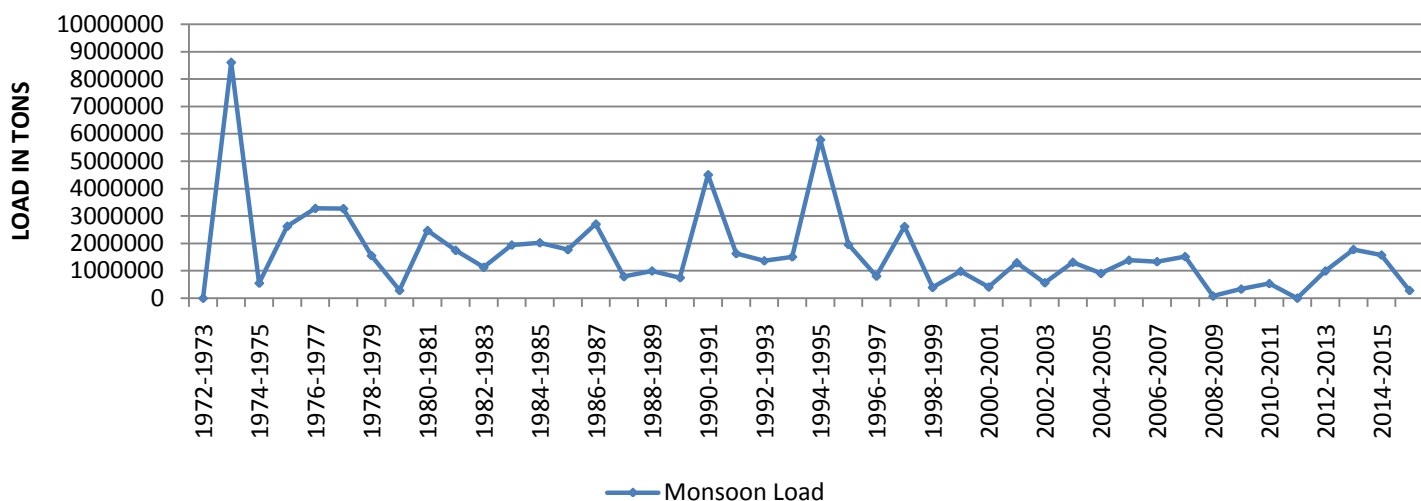


MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE SIMGA, TRIBUTARY: SEONATH

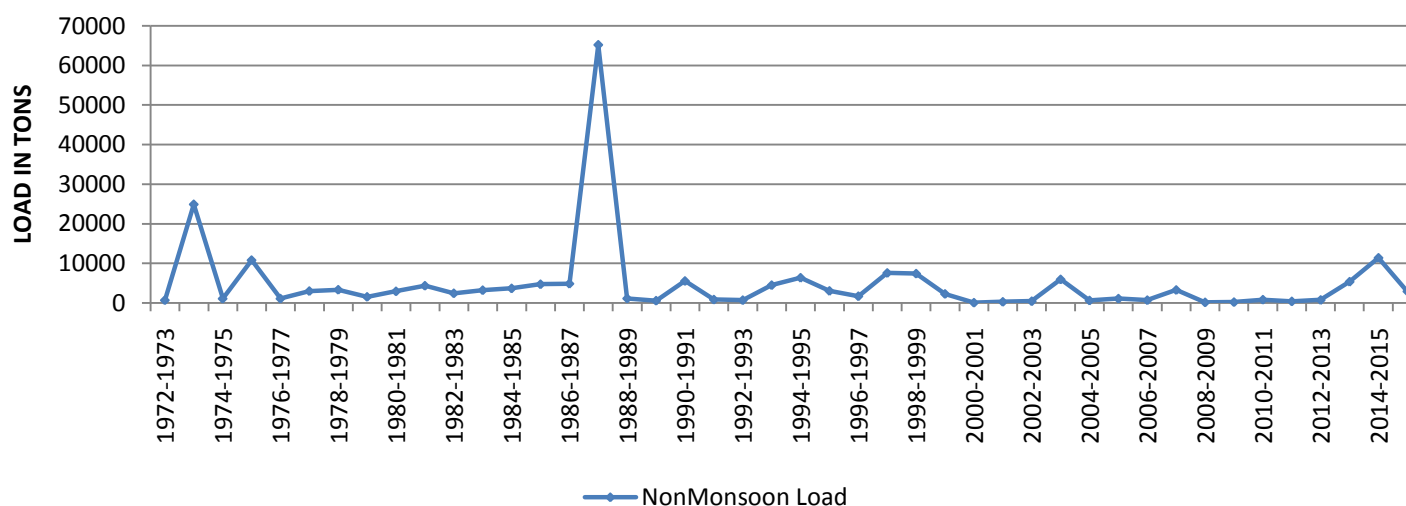




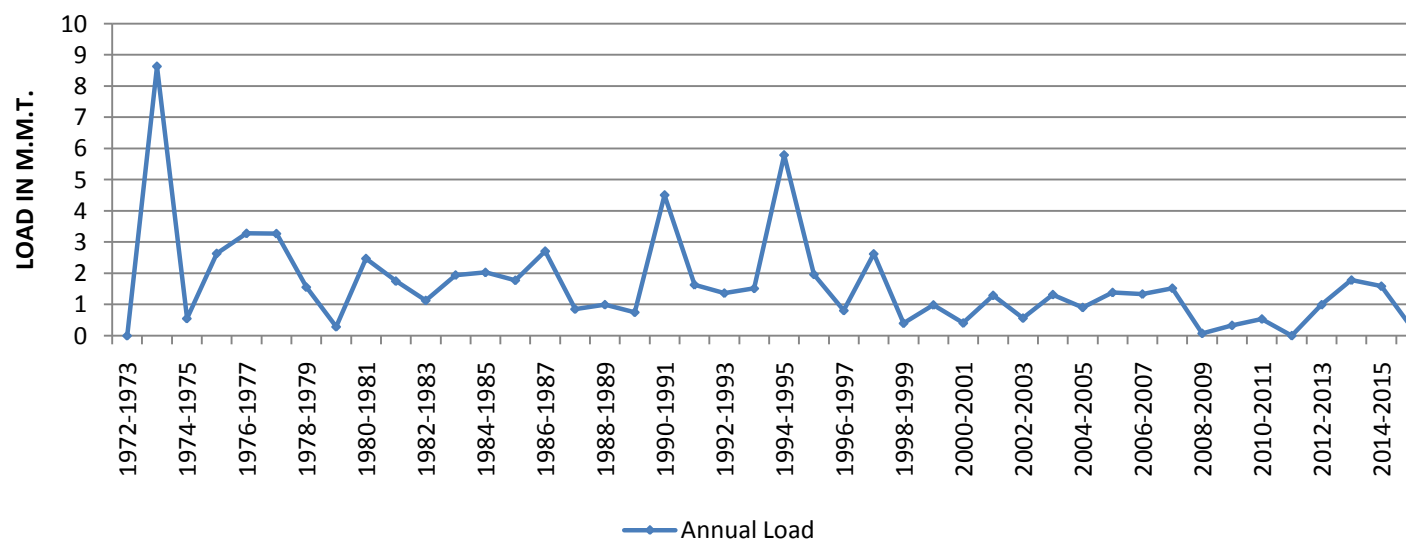
MONSOON LOAD AT SITE SIMGA, TRIBUTARY:SEONATH



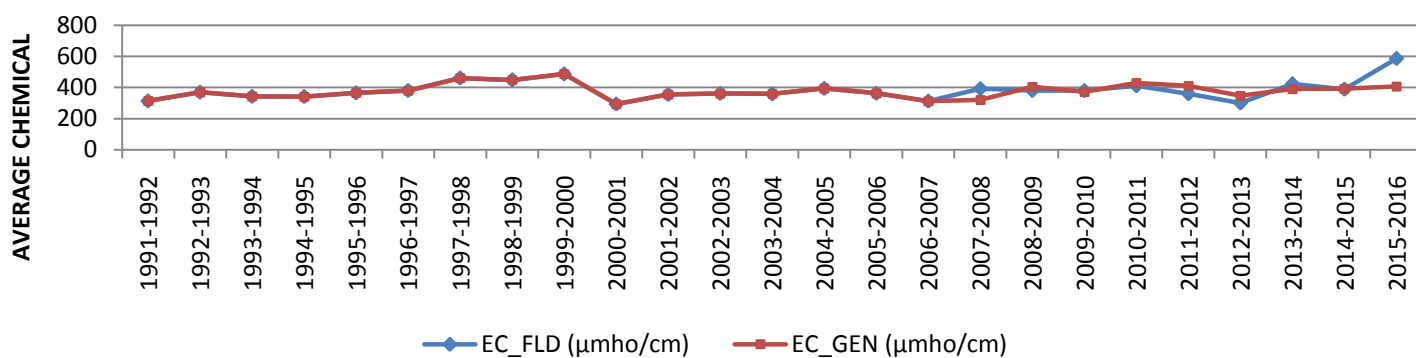
NON MONSOON LOAD AT SITE SIMGA, TRIBUTARY:SEONATH



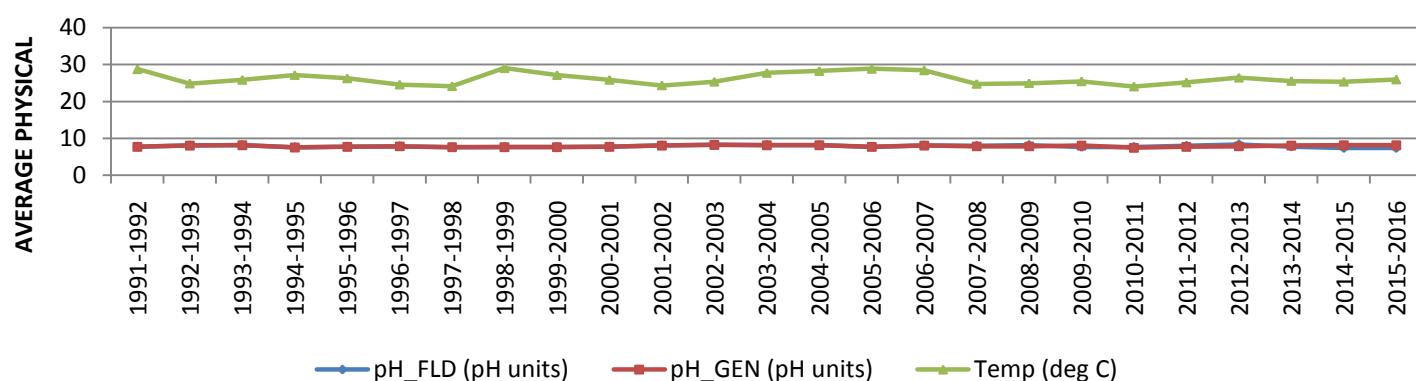
ANNUAL LOAD (MILLION M.T.) SITE SIMGA,TRIBUTARY:SEONATH



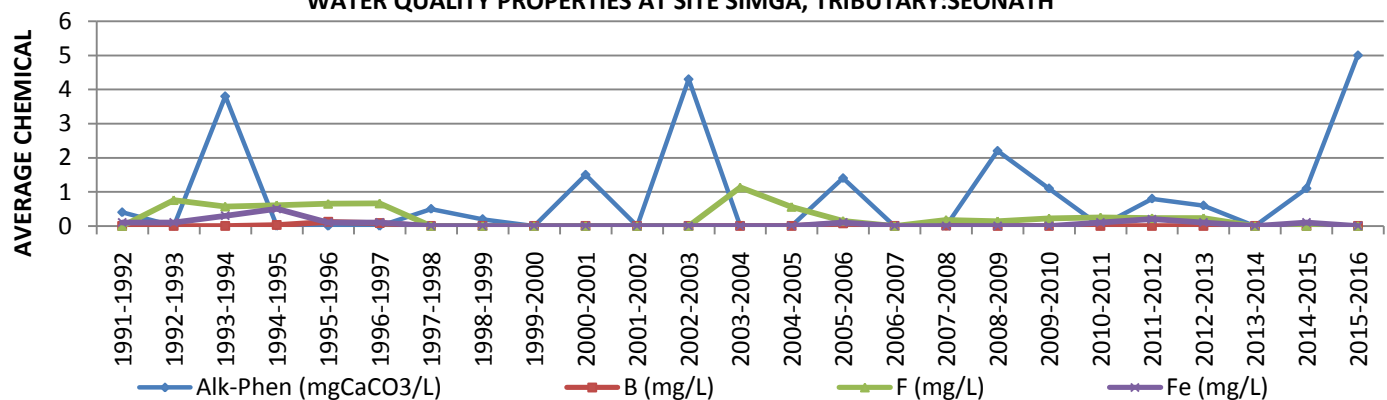
WATER QUALITY PROPERTIES AT SITE SIMGA, TRIBUTARY: SEONATH



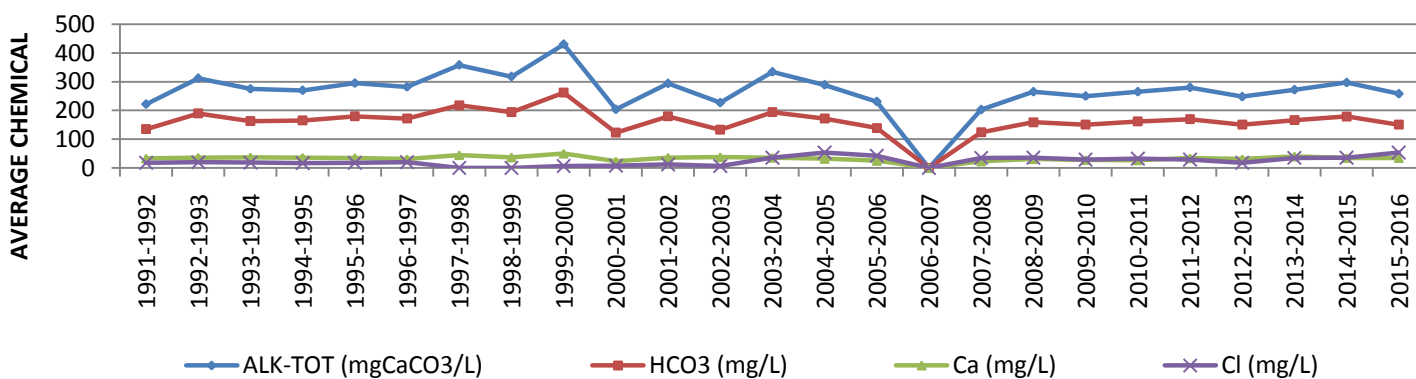
WATER QUALITY PROPERTIES AT SITE SIMGA, TRIBUTARY: SEONATH



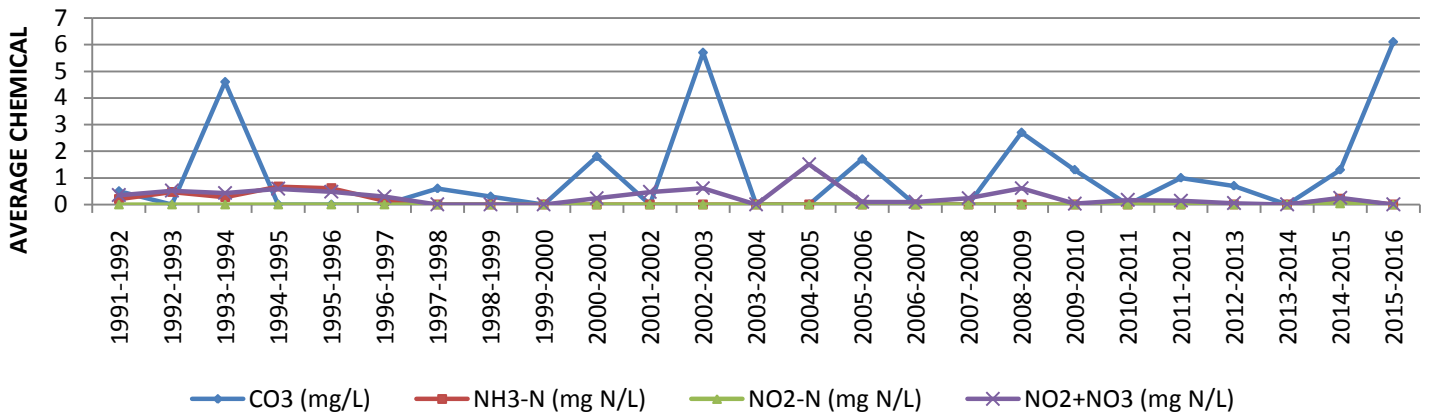
WATER QUALITY PROPERTIES AT SITE SIMGA, TRIBUTARY:SEONATH



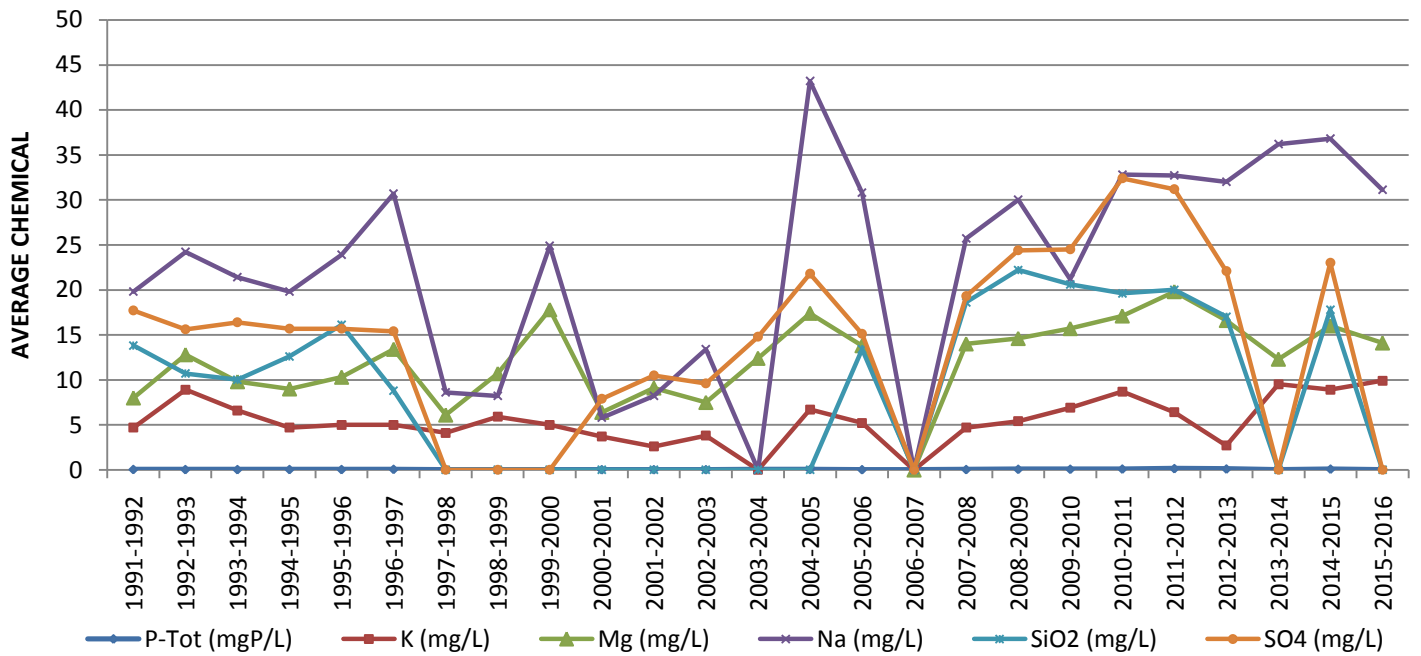
WATER QUALITY PROPERTIES AT SITE SIMGA, TRIBUTARY:SEONATH



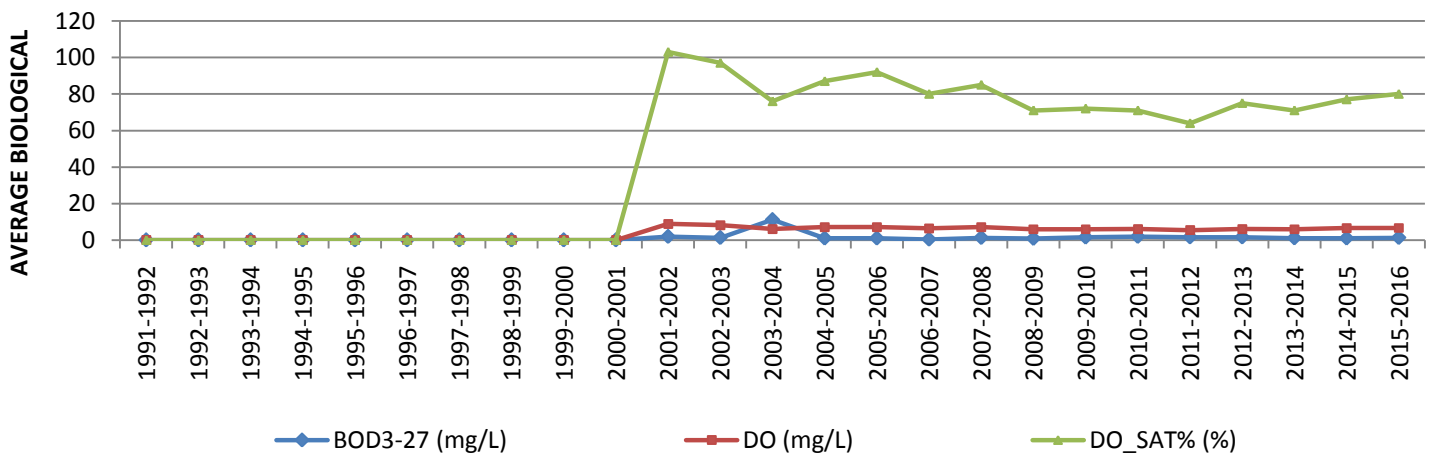
WATER QUALITY PROPERTIES AT SITE SIMGA, TRIBUTARY:



WATER QUALITY PROPERTIES AT SITE SIMGA, TRIBUTARY: SEONATH



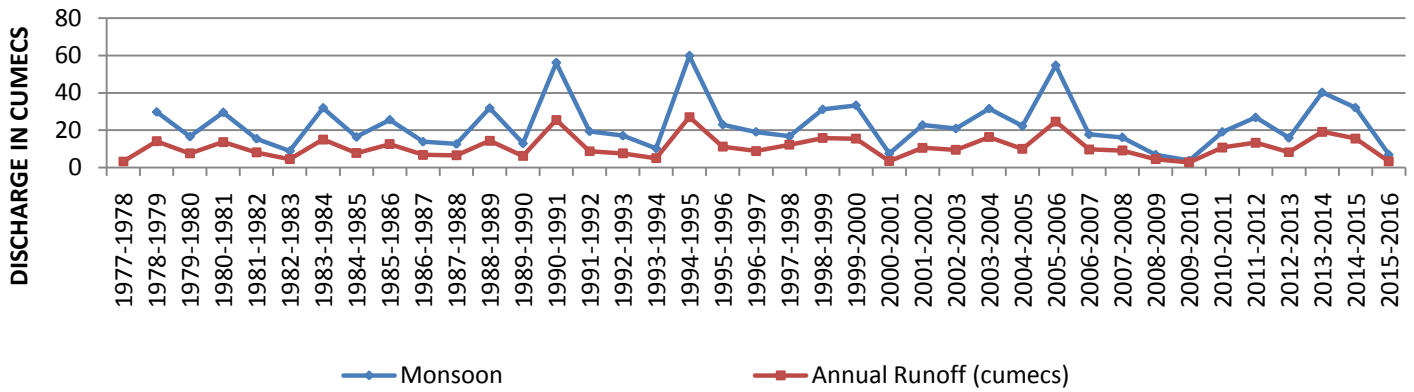
WATER QUALITY PROPERTIES AT SITE SIMGA,



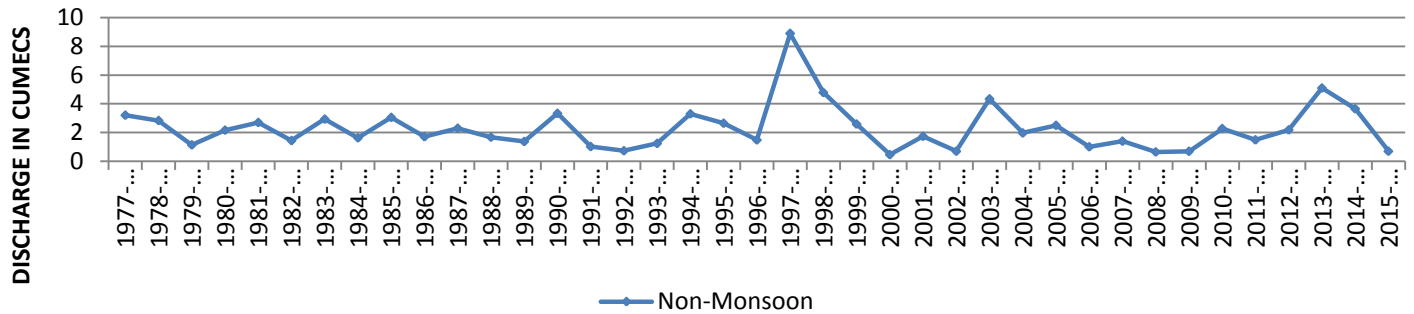
SITE ANDHIARKHORE

YEAR WISE TREND OF SITE ANDHIARKHORE

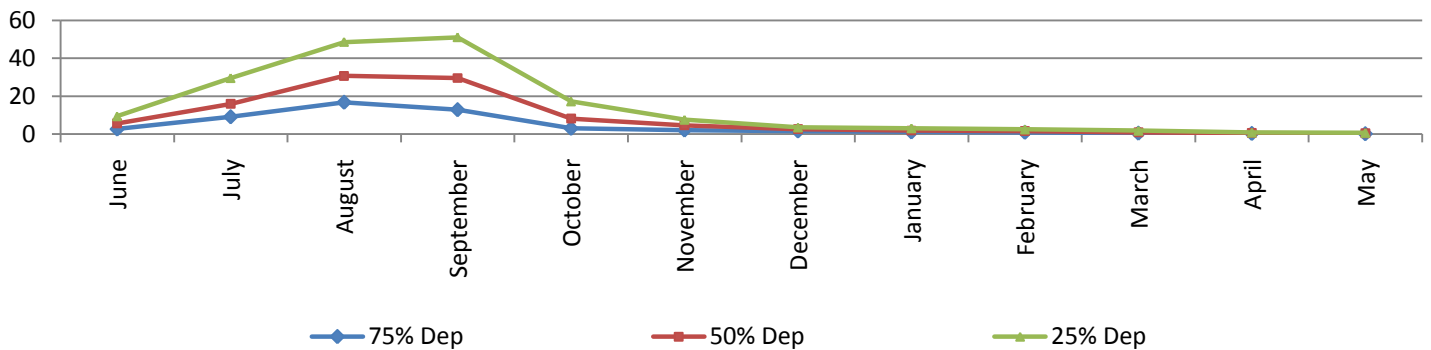
ANNUAL AVERAGE DISCHARGE SITE ANDHIARKHORE, TRIBUTARY:SEONATH



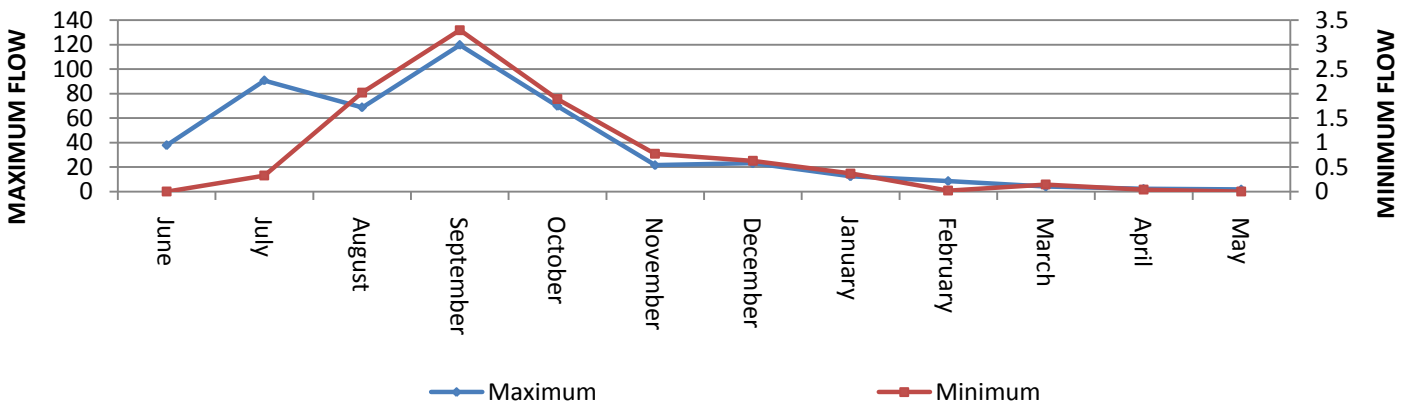
TOTAL ANNUAL DISCHARGE SITE ANDHIARKHORE, TRIBUTARY:SEONATH



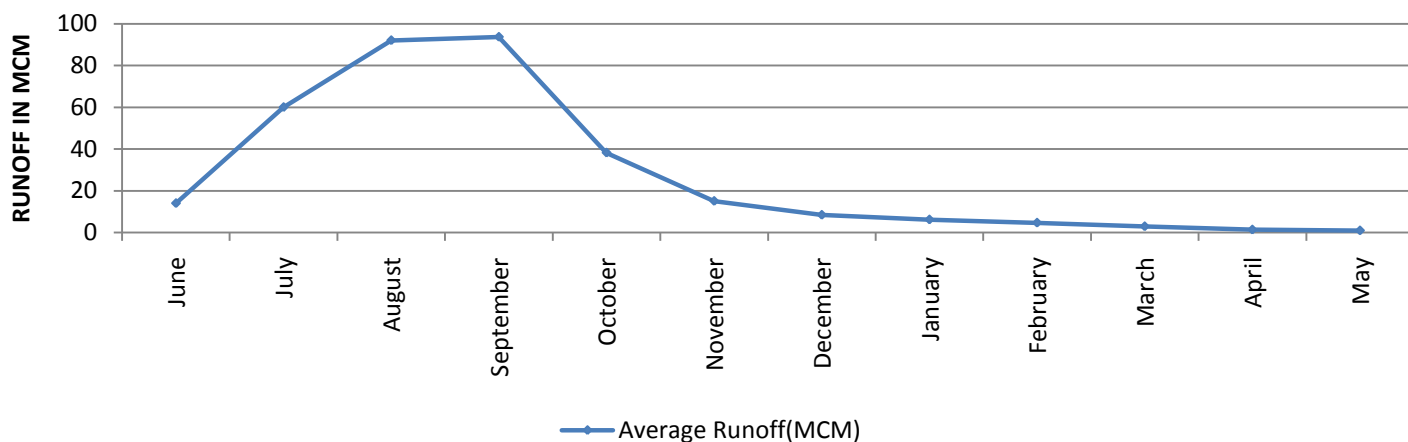
DEPENDABILITY FLOW FROM JUNE TO MAY SITE ANDHIARKHORE, TRIBUTARY:SEONATH



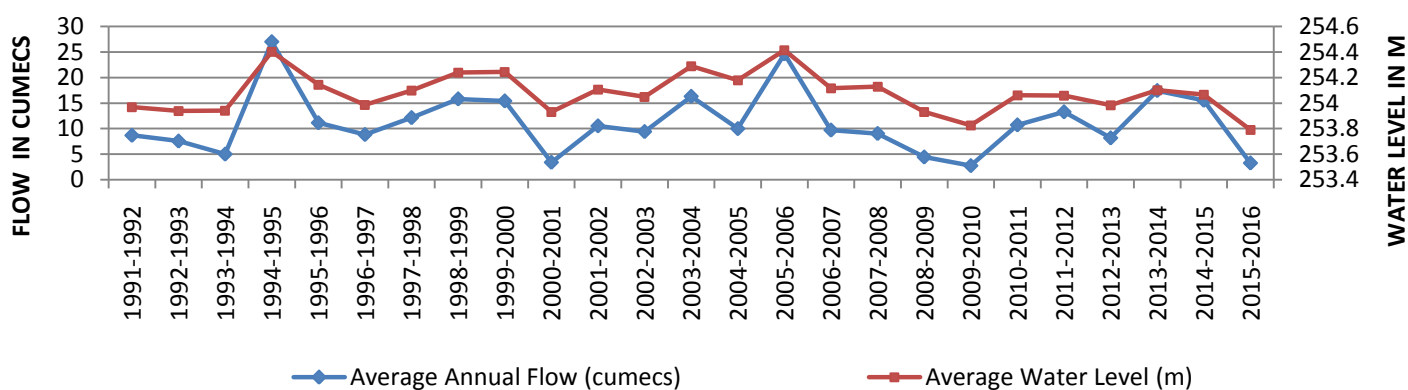
MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE ANDHIARKHORE, TRIBUTARY: SEONATH



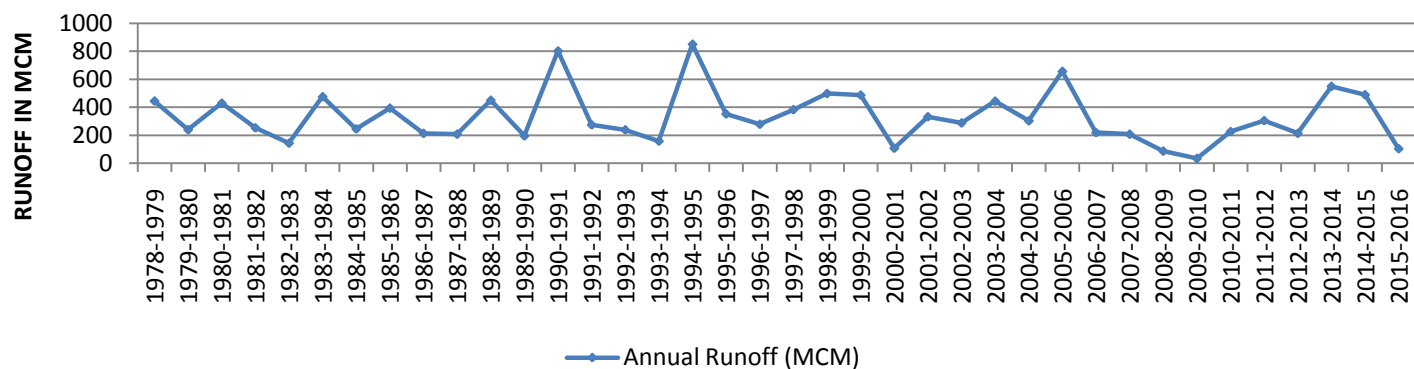
AVERAGE RUNOFFM (MCM) 1992-2016



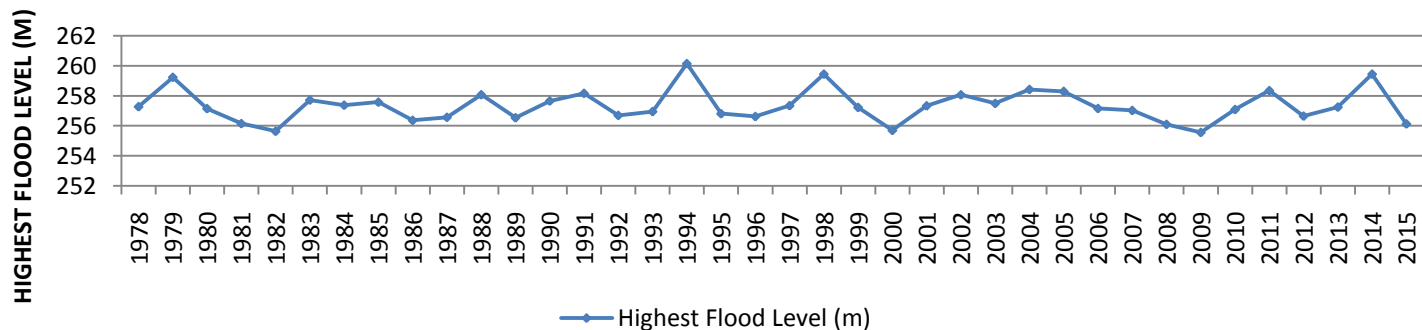
AVERAGE ANNUAL FLOW CUMECs) WITH WATER LEVEL (M) SITE ANDHIARKHORE, TRIBUTARY:SEONATH

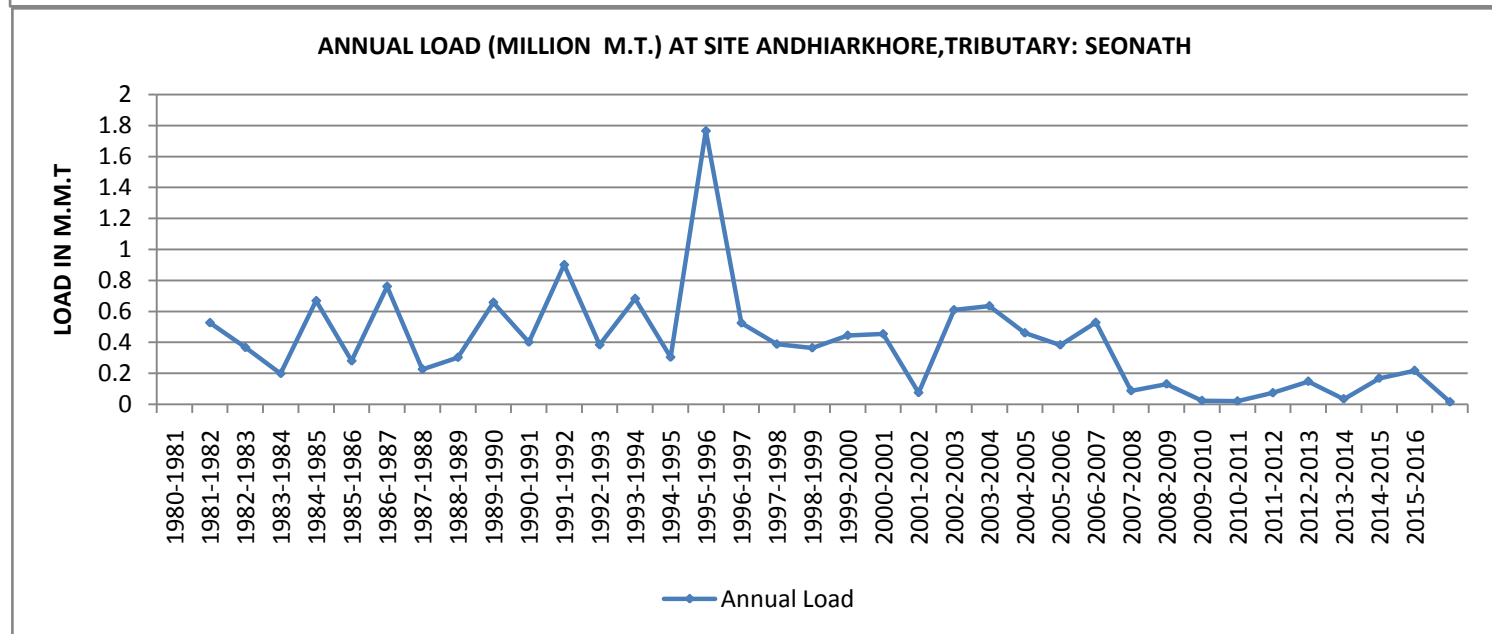
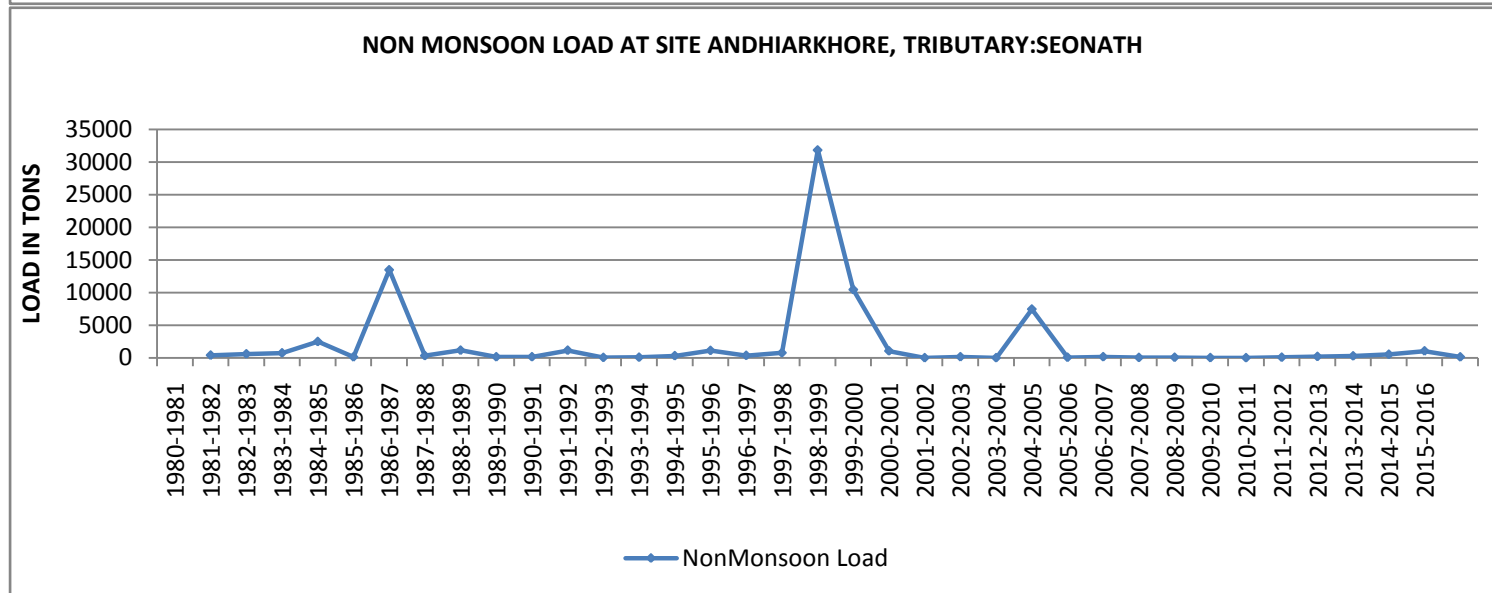
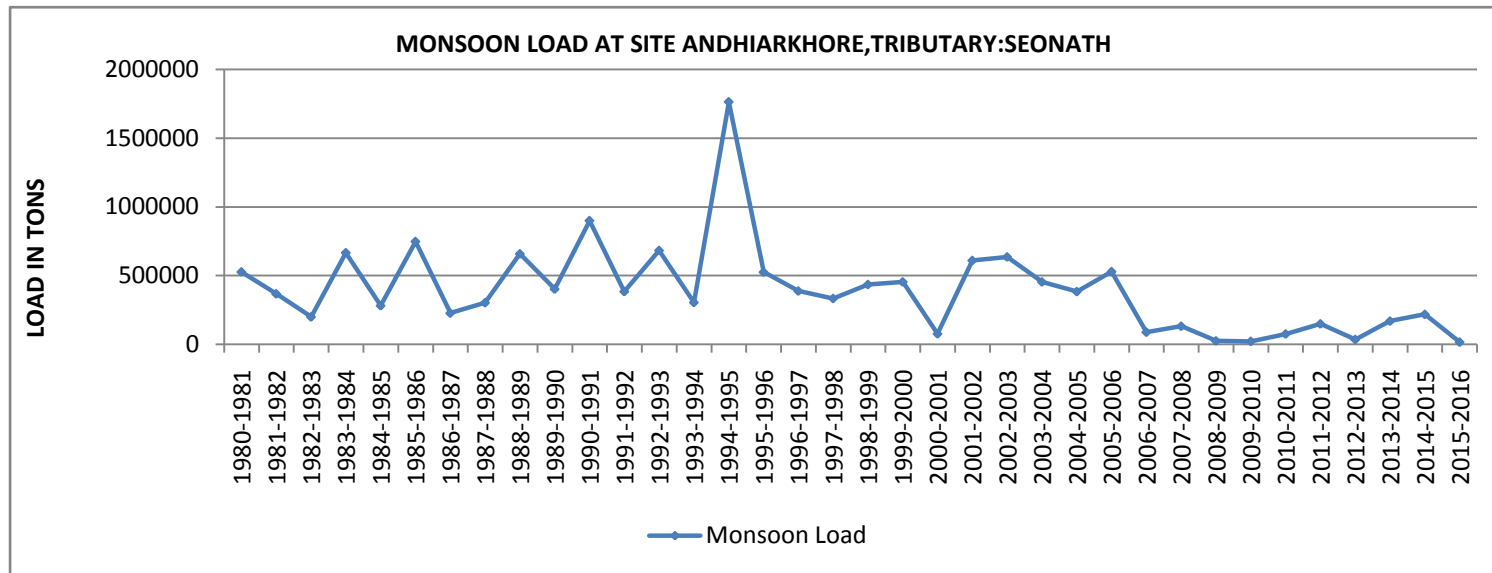


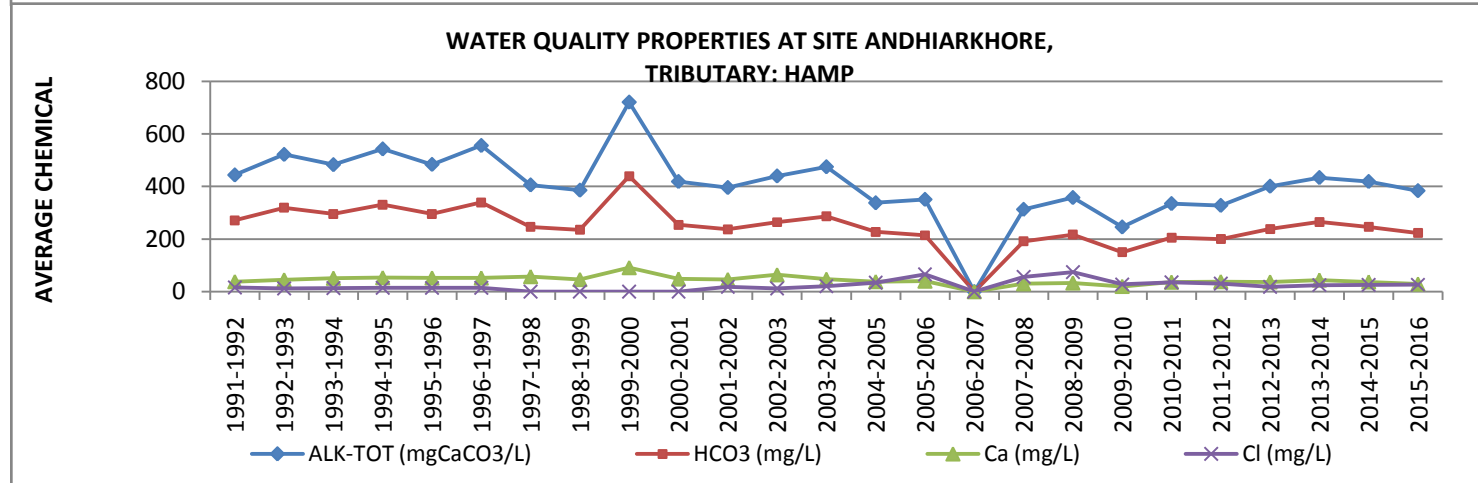
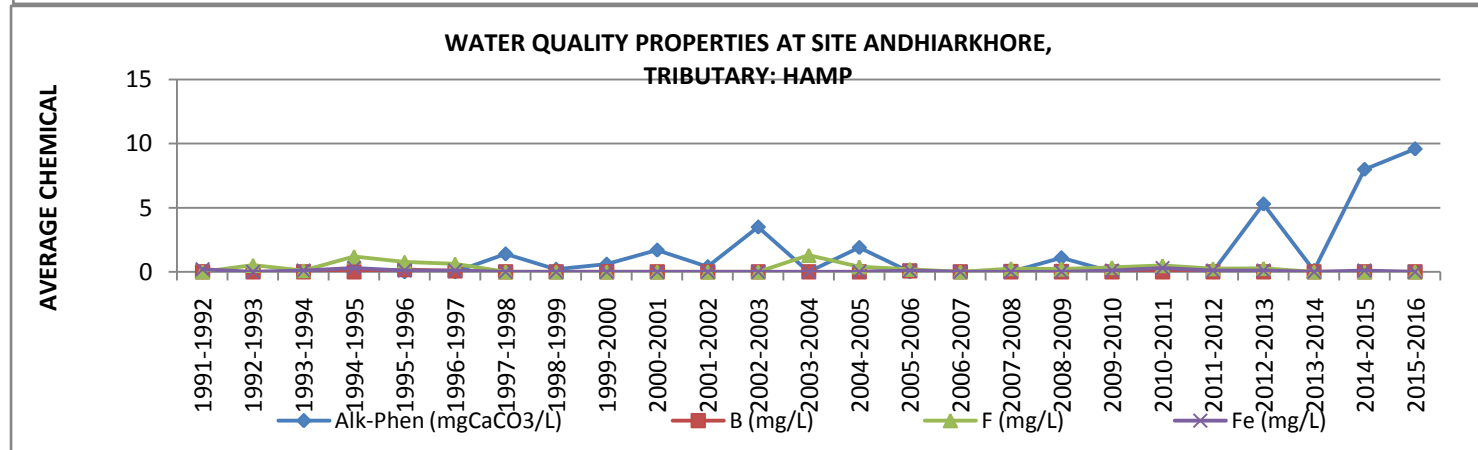
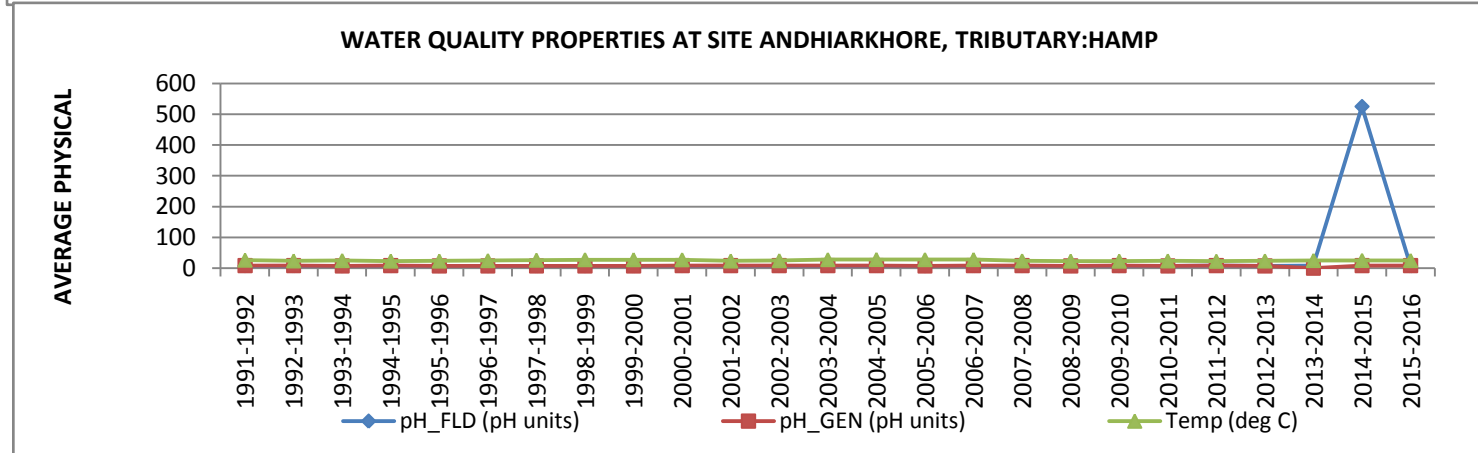
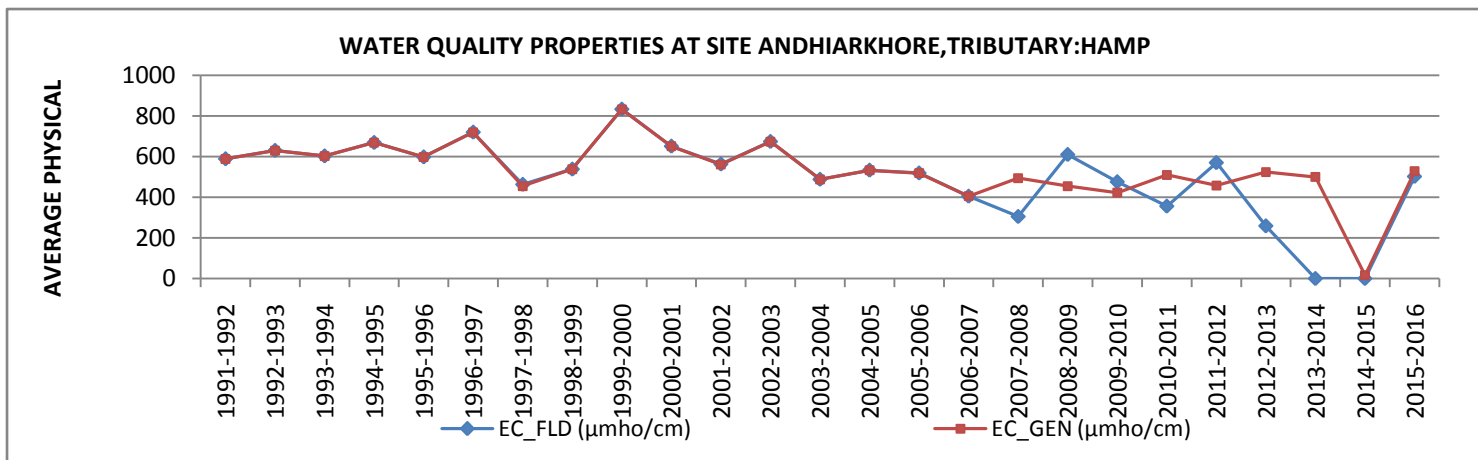
ANNUAL RUNOFF IN (MCM) SITE ANDHIARKHORE,TRIBUTARY:SEONATH

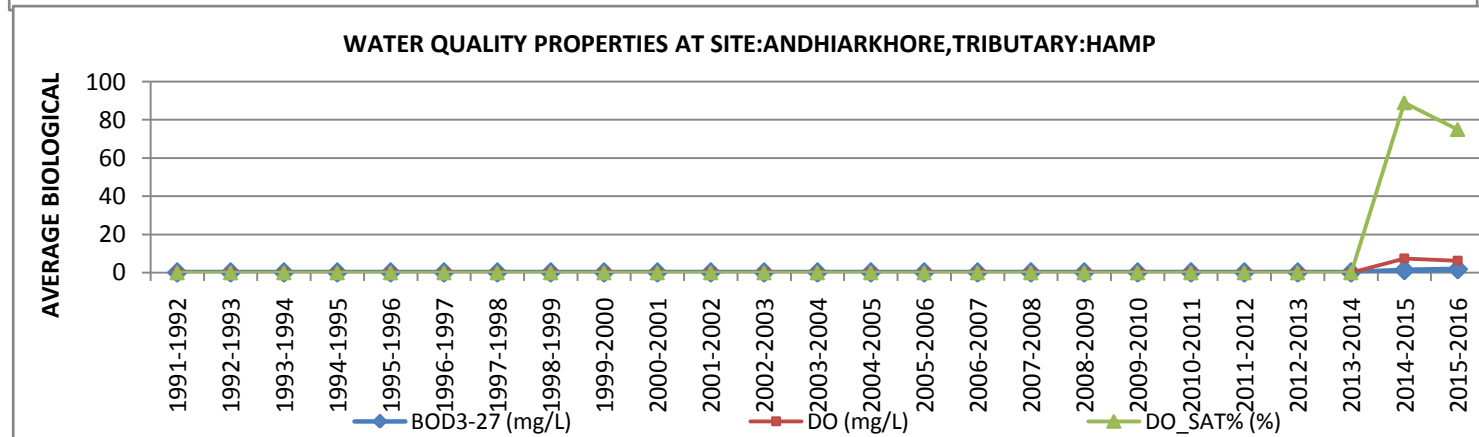
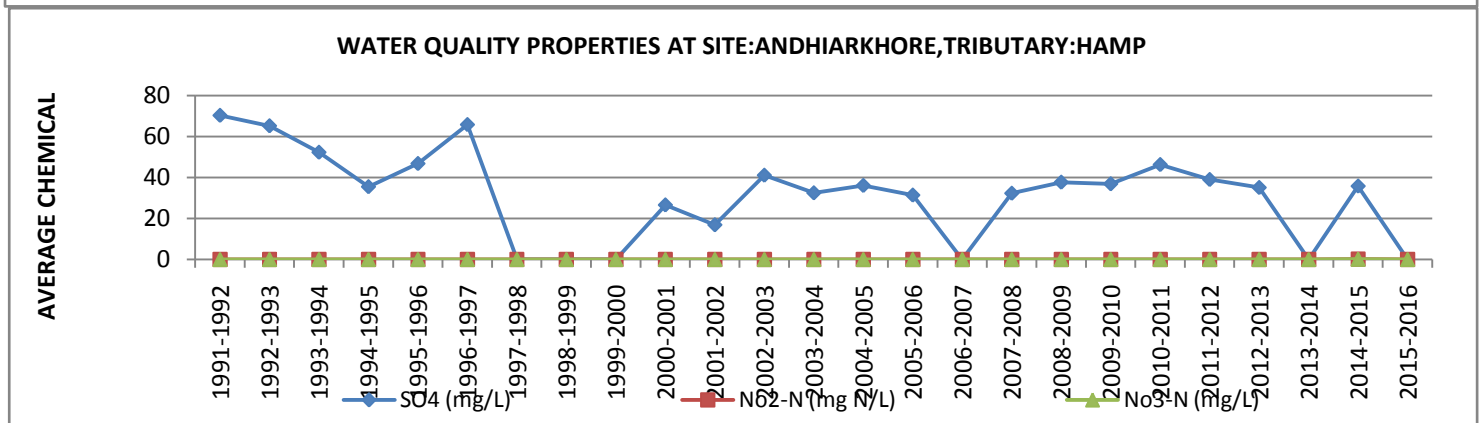
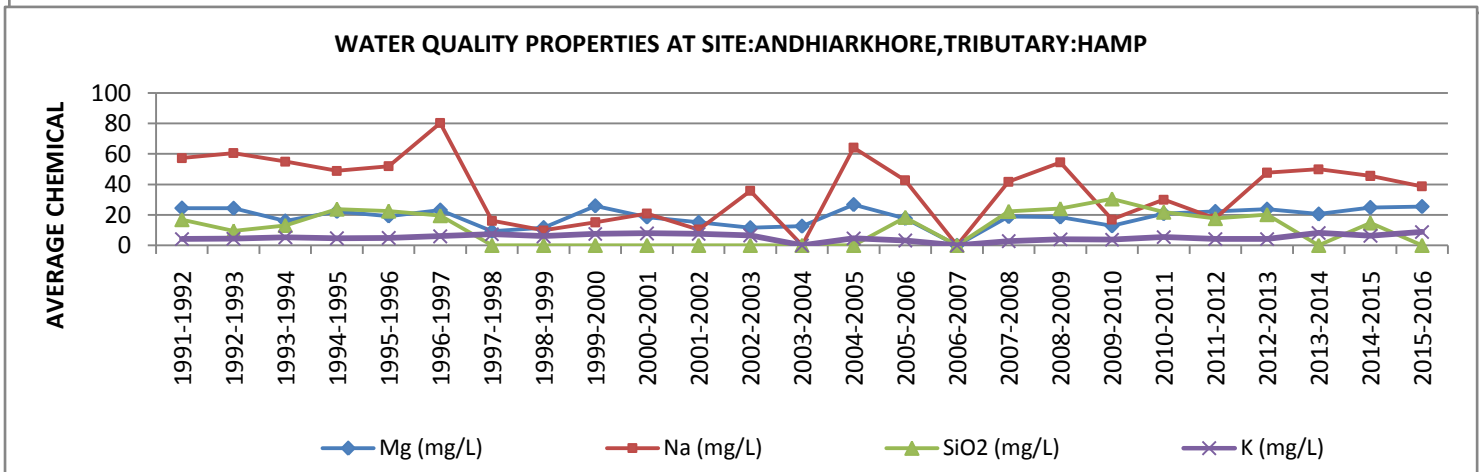
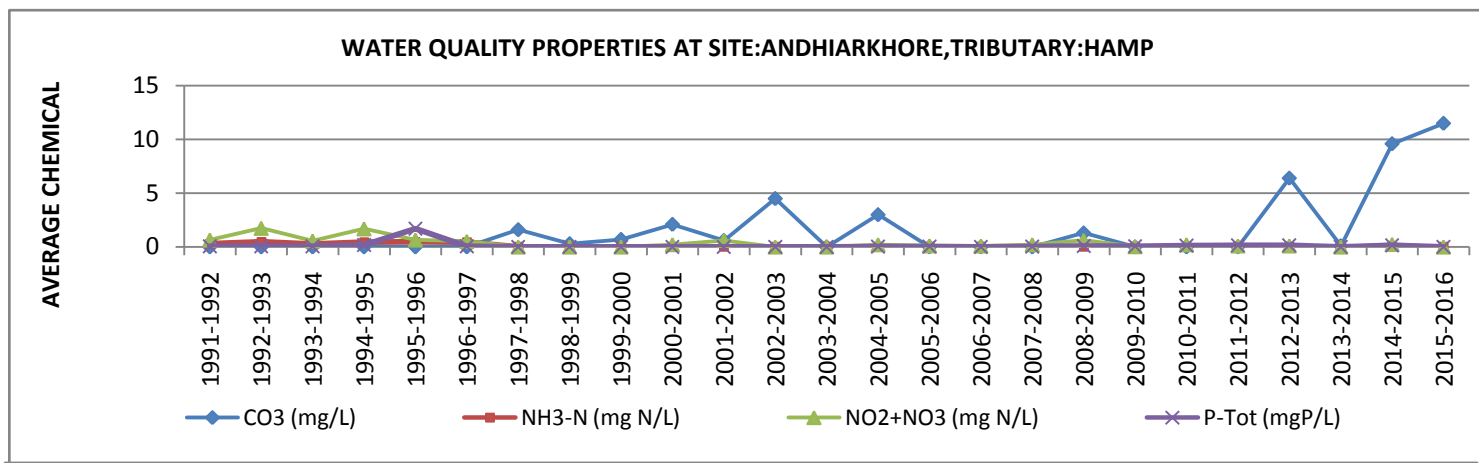


HIGHEST FLOOD LEVEL (m) AT SITE ANDHIARKHORE,TRIBUTARY: ANDHIARKHORE





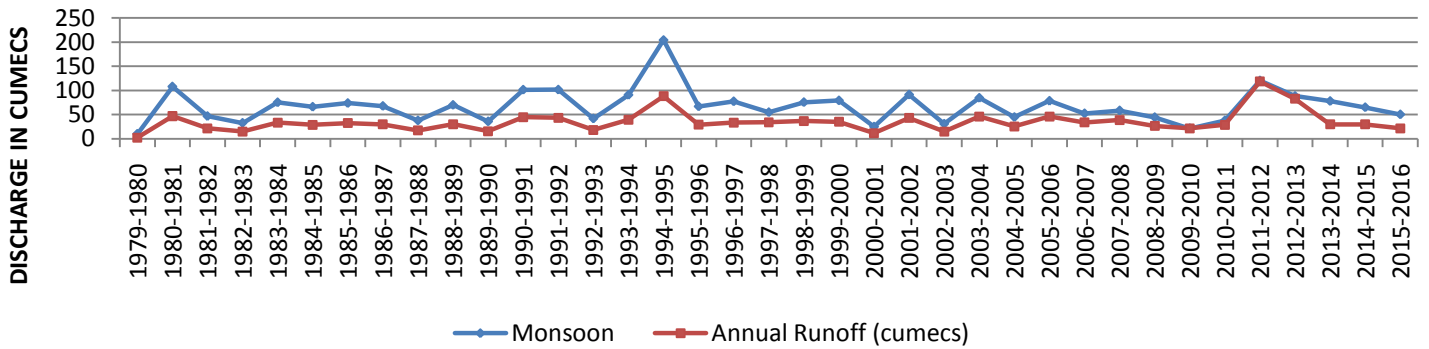




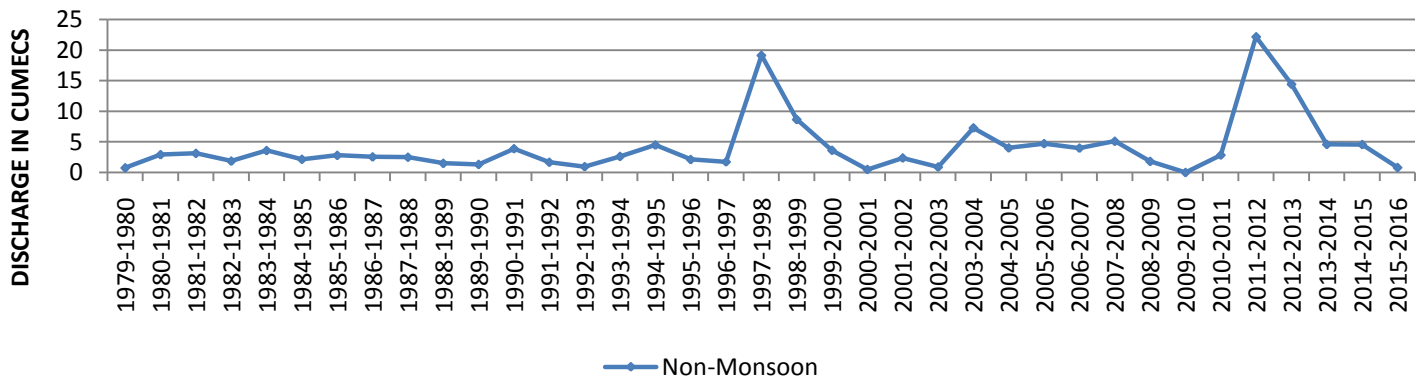
SITE GHATORA

YEAR WISE TREND OF SITE GHATORA

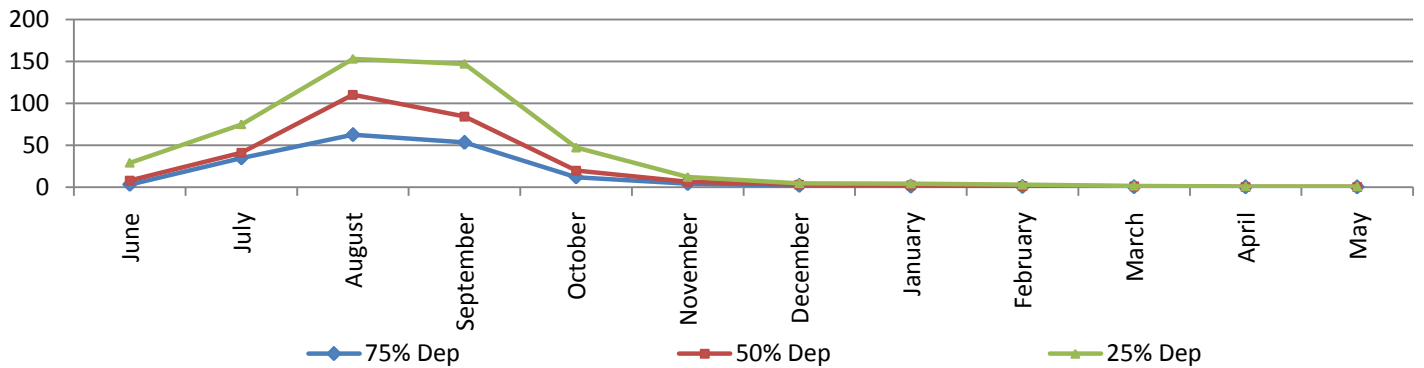
ANNUAL AVERAGE DISCHARGE SITE GHATORA,TRIBUTARY: SEONATH



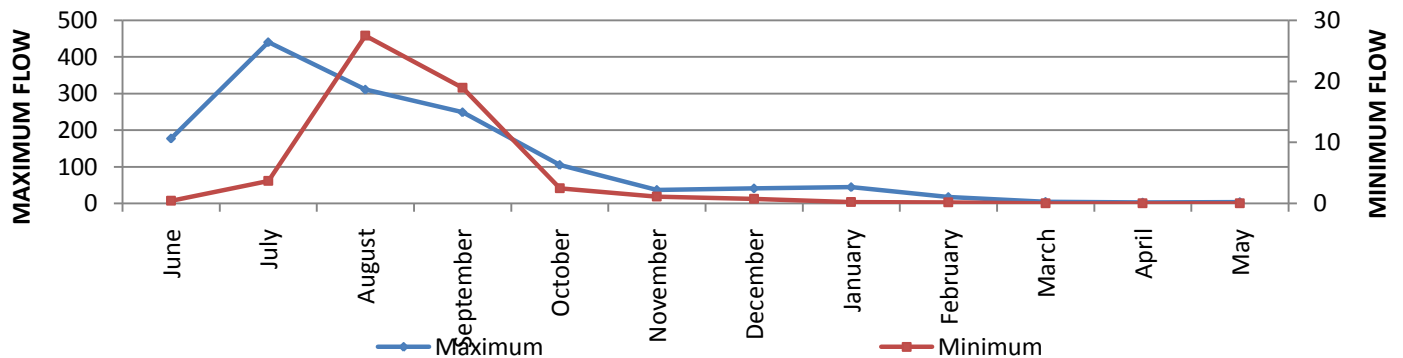
TOTAL ANNUAL DISCHARGE, SITE GHATORA, TRIBUTARY: SEONATH

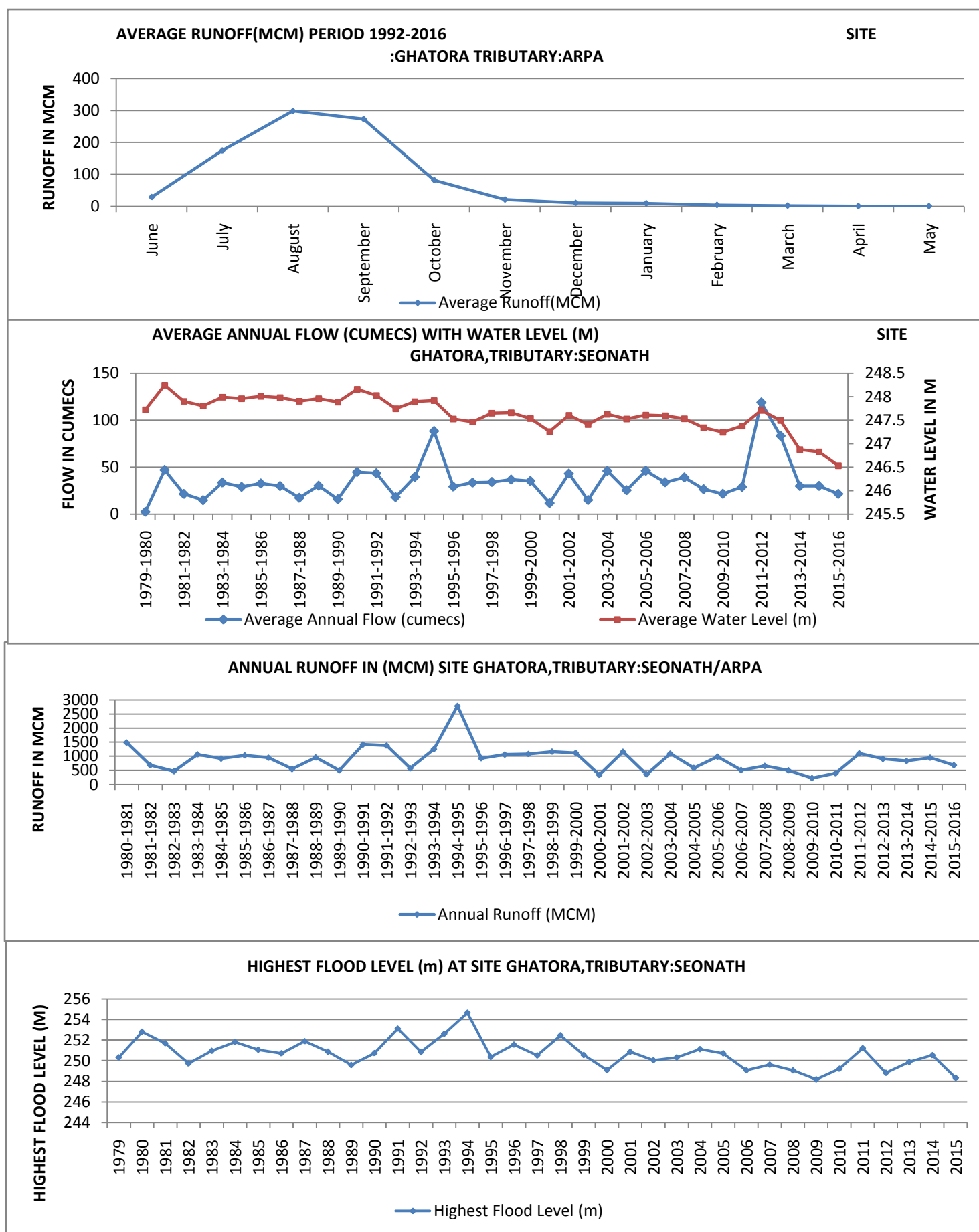


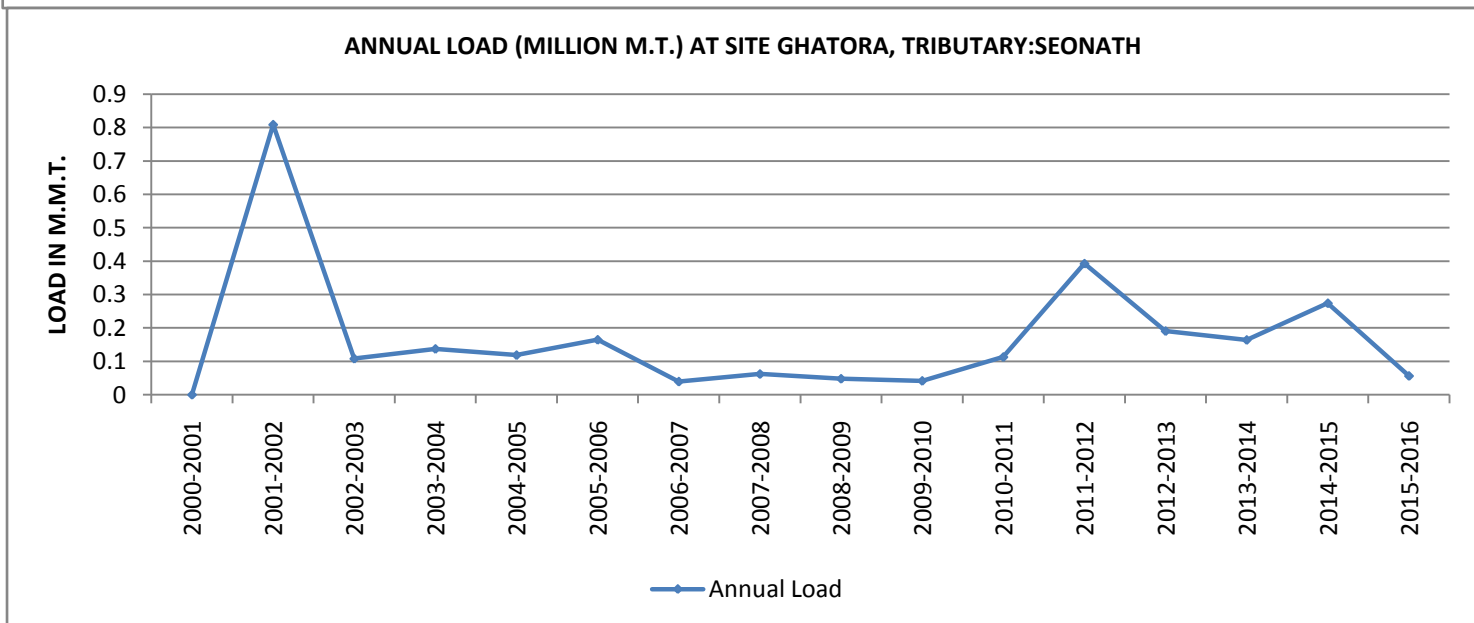
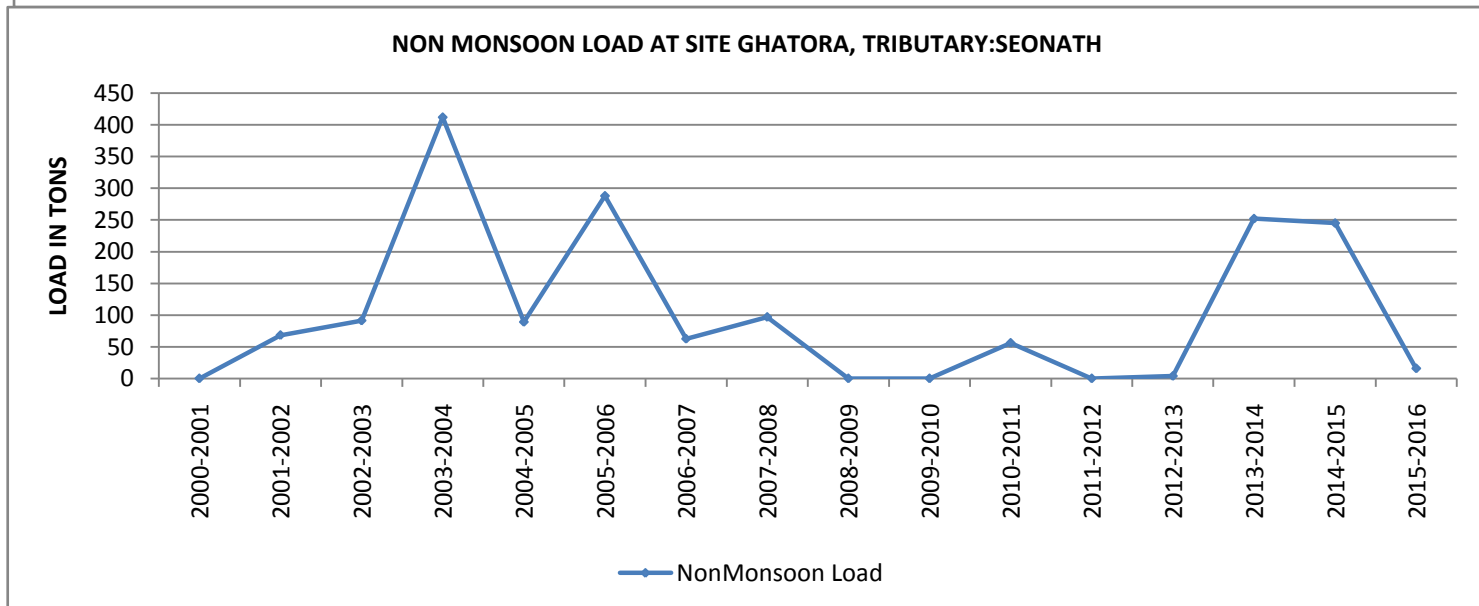
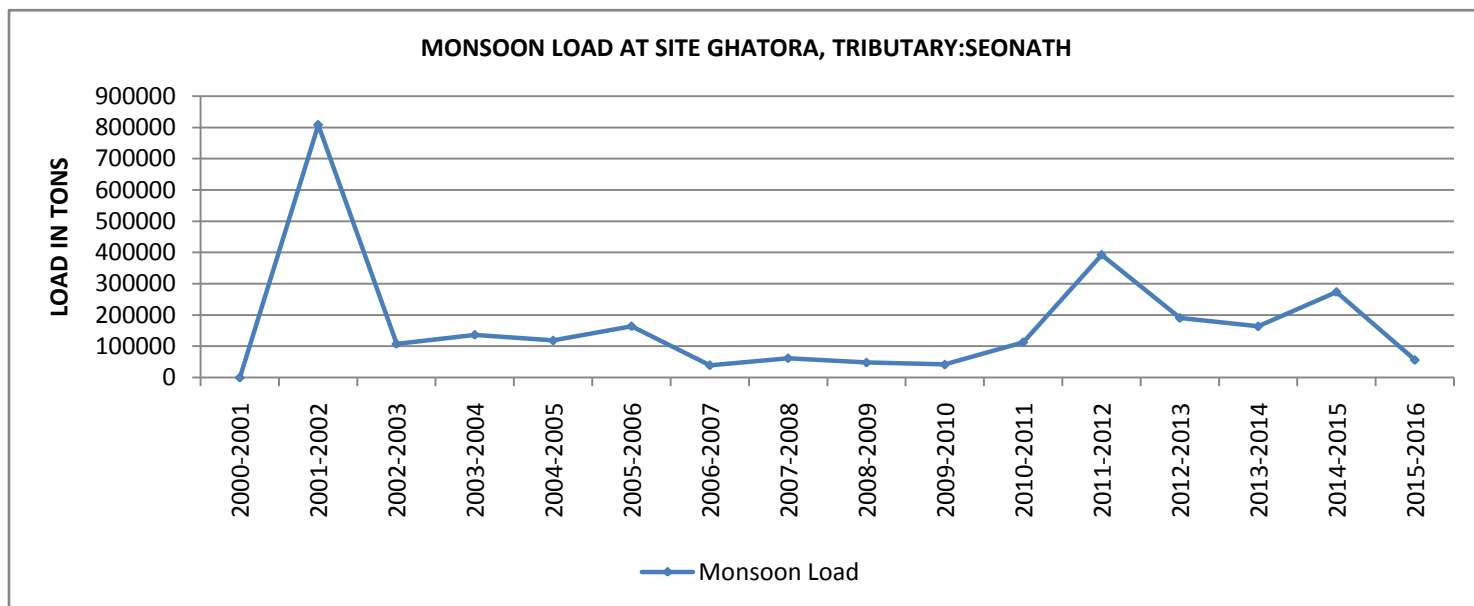
DEPENDIBILITY FLOW FROM JUNE TO MAY SITE GHATORA,TRIBUTARY:SEONATH

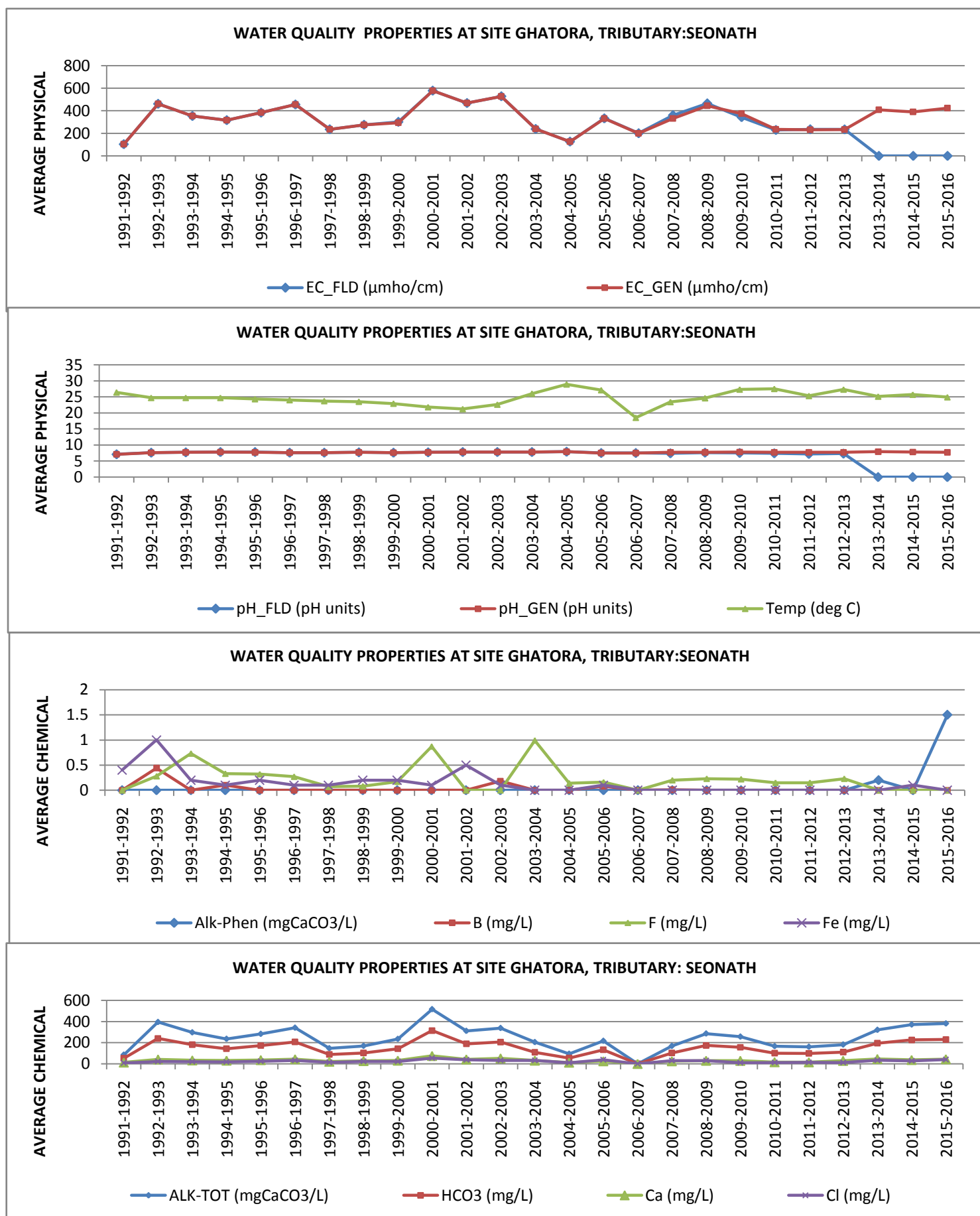


MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE GHATORA, TRIBUTARY:SEONATH

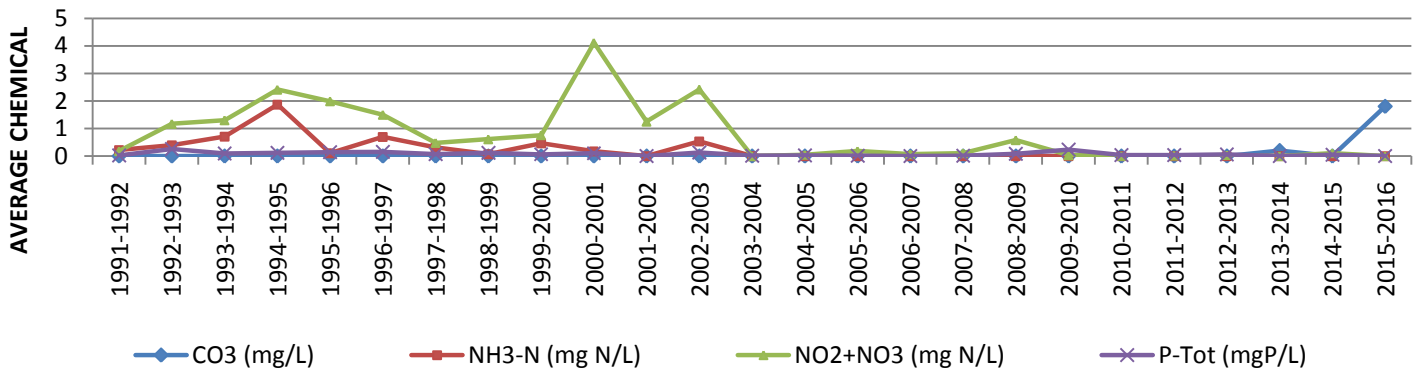




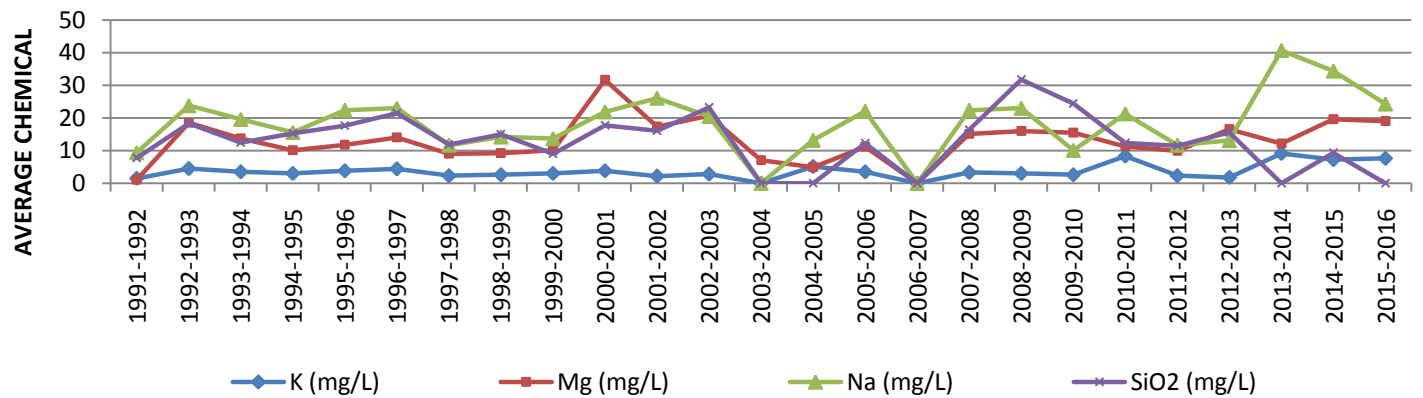




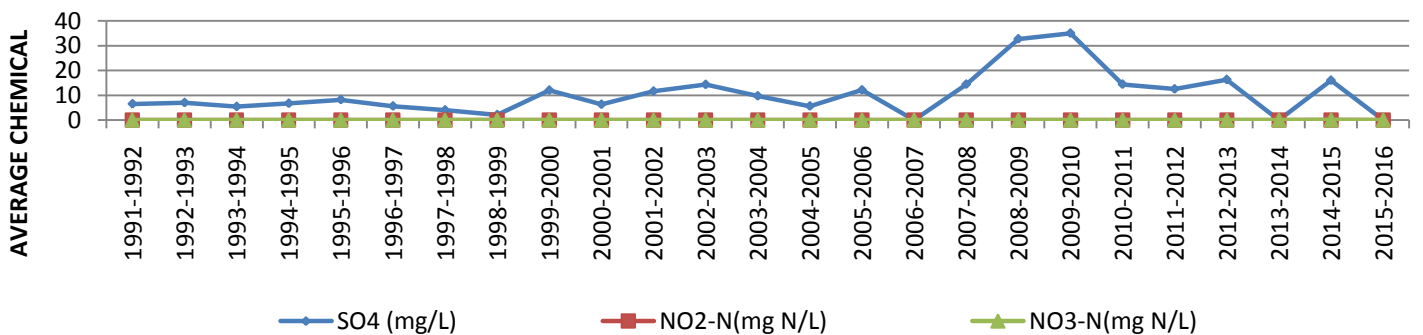
WATER QUALITY PROPERTIES AT SITE GHATORA, TRIBUTARY: SEONATH



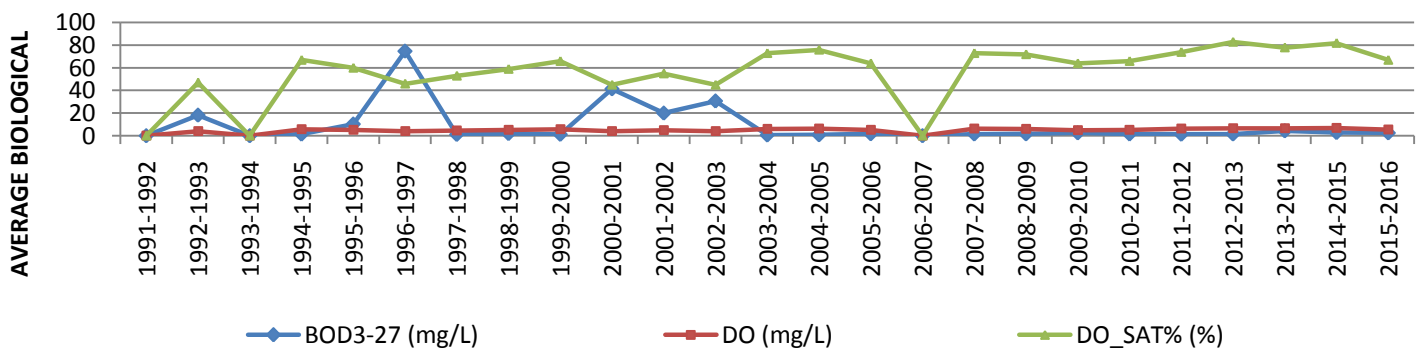
WATER QUALITY PROPERTIES AT SITE GHATORA, TRIBUTARY: SEONATH



WATER QUALITY PROPERTIES AT SITE GHATORA, TRIBUTARY: SEONATH



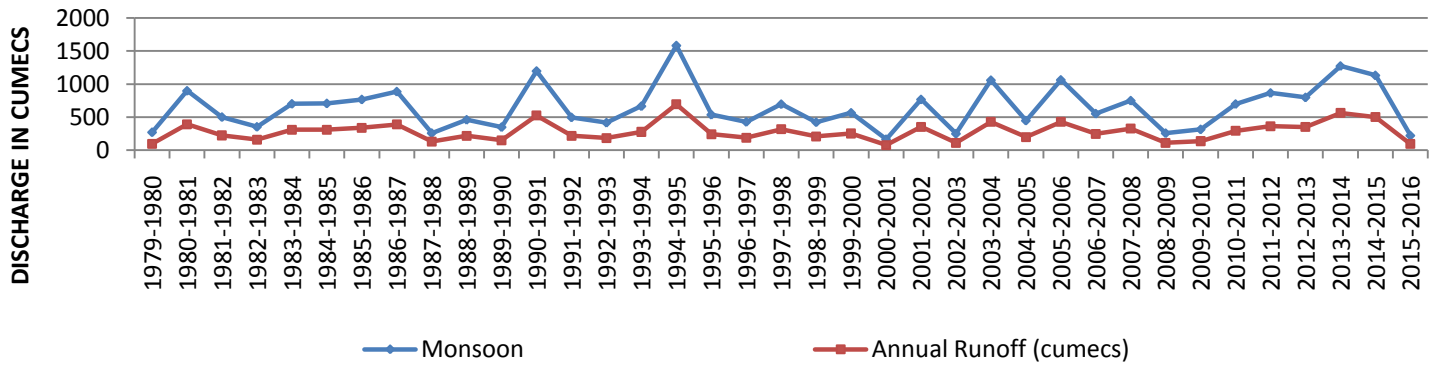
WATER QUALITY PROPERTIES AT SITE GHATORA, TRIBUTARY: SEONATH



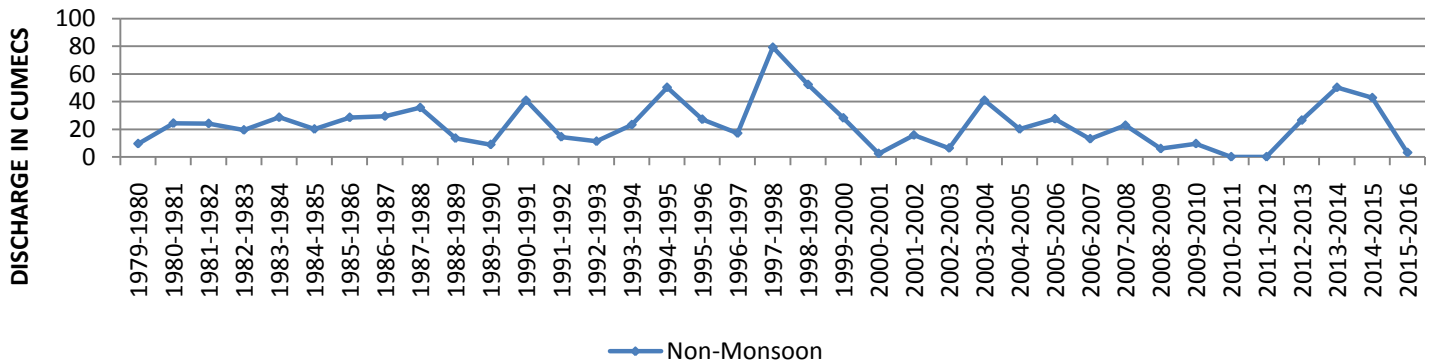
SITE JONDHRA

YEAR WISE TREND OF SITE JONDHRA

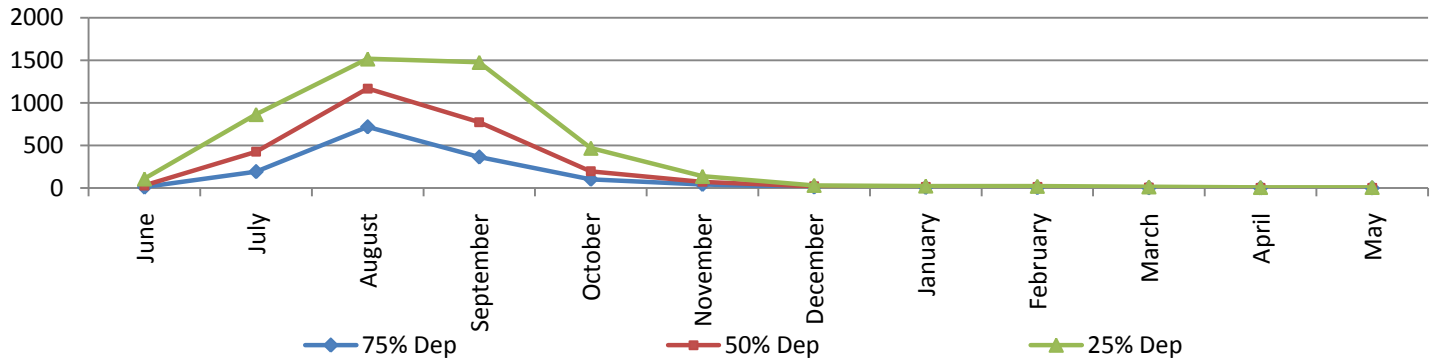
ANNUAL AVERAGE DISCHARGE SITE JONDHRA, TRIBUTARY:SEONATH



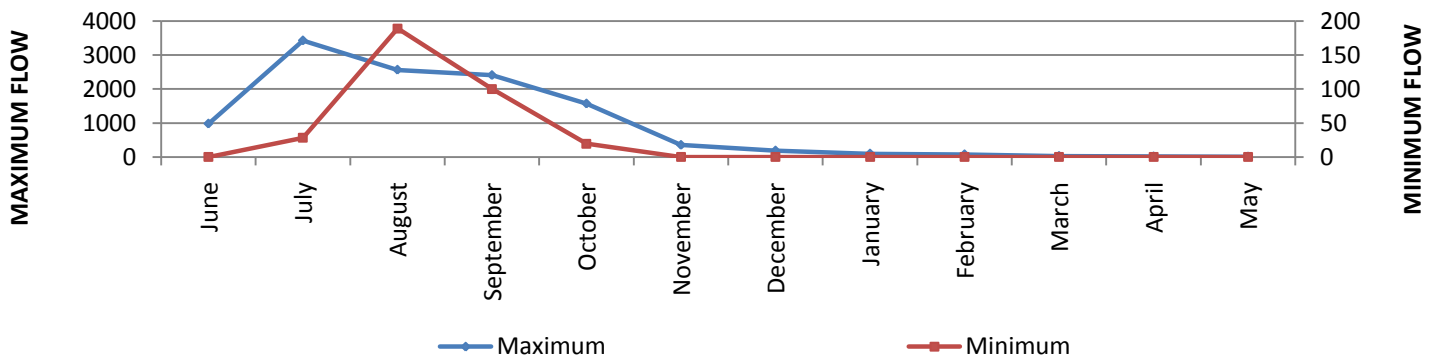
TOTAL ANNUAL DISCHARGE, SITE JONDHRA, TRIBUTARY: SEONATH

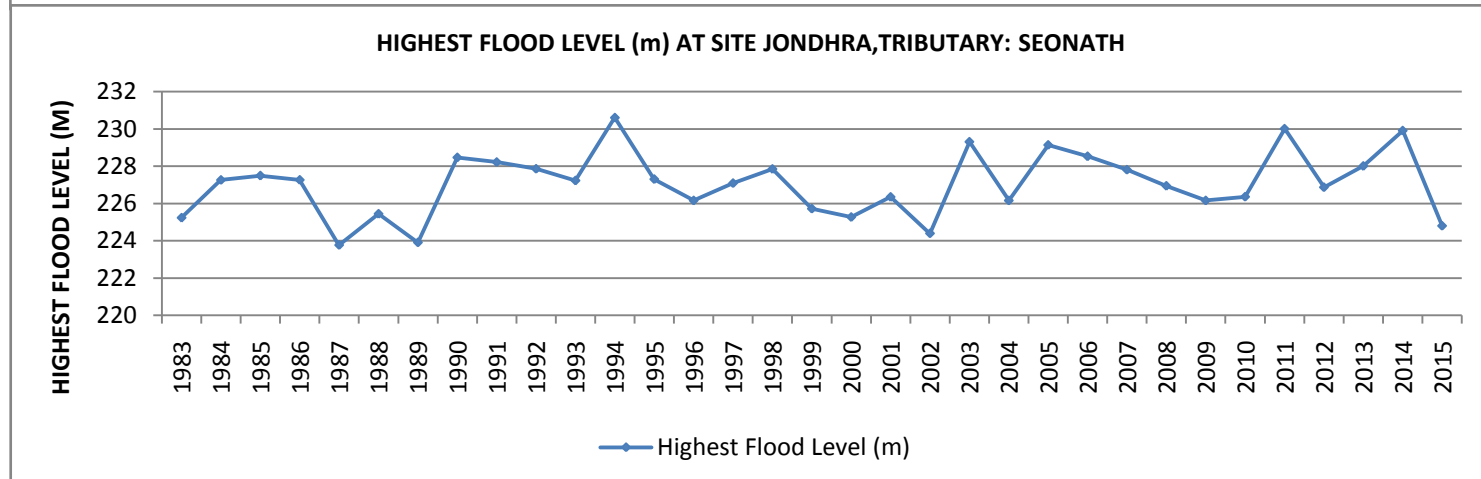
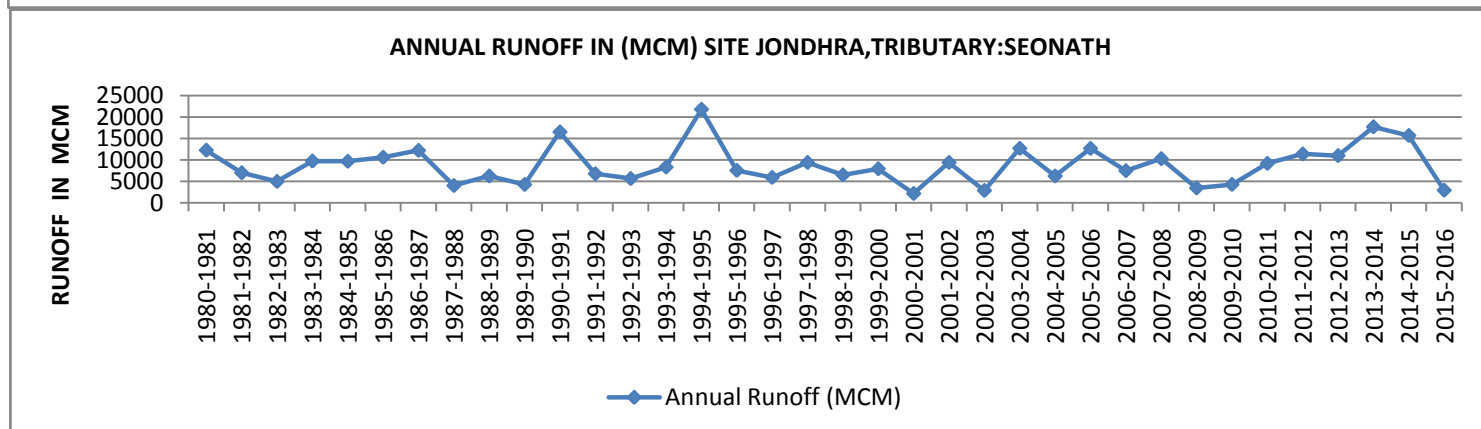
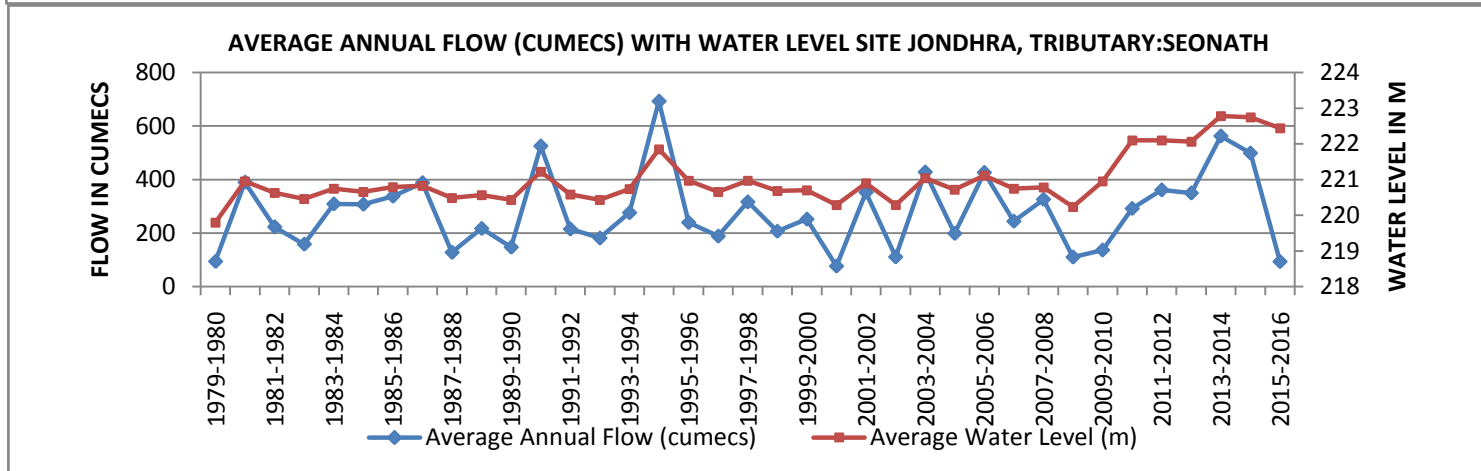
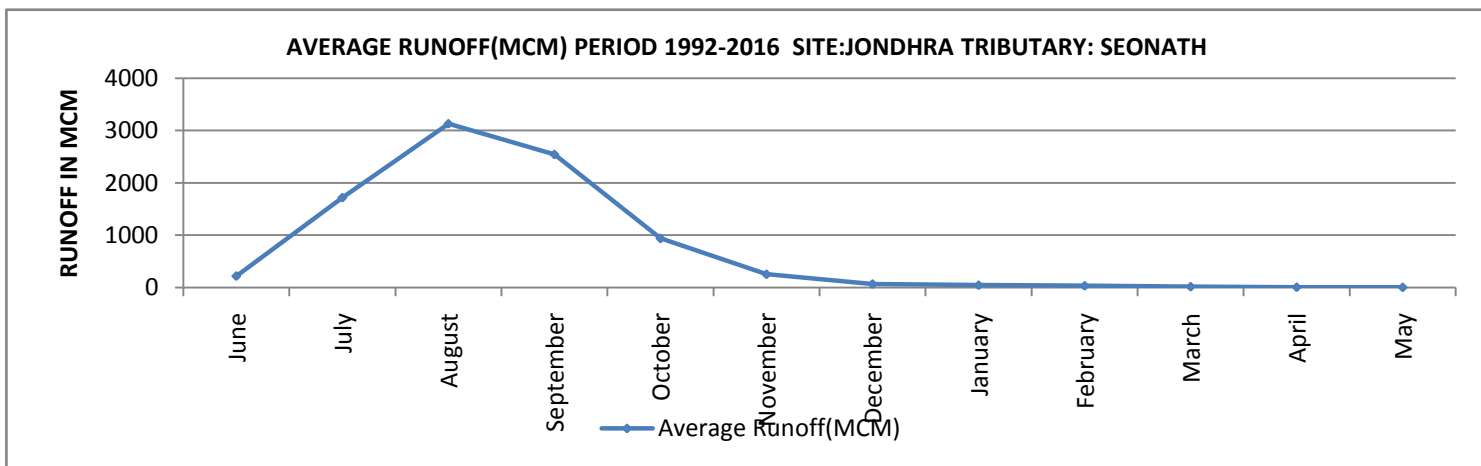


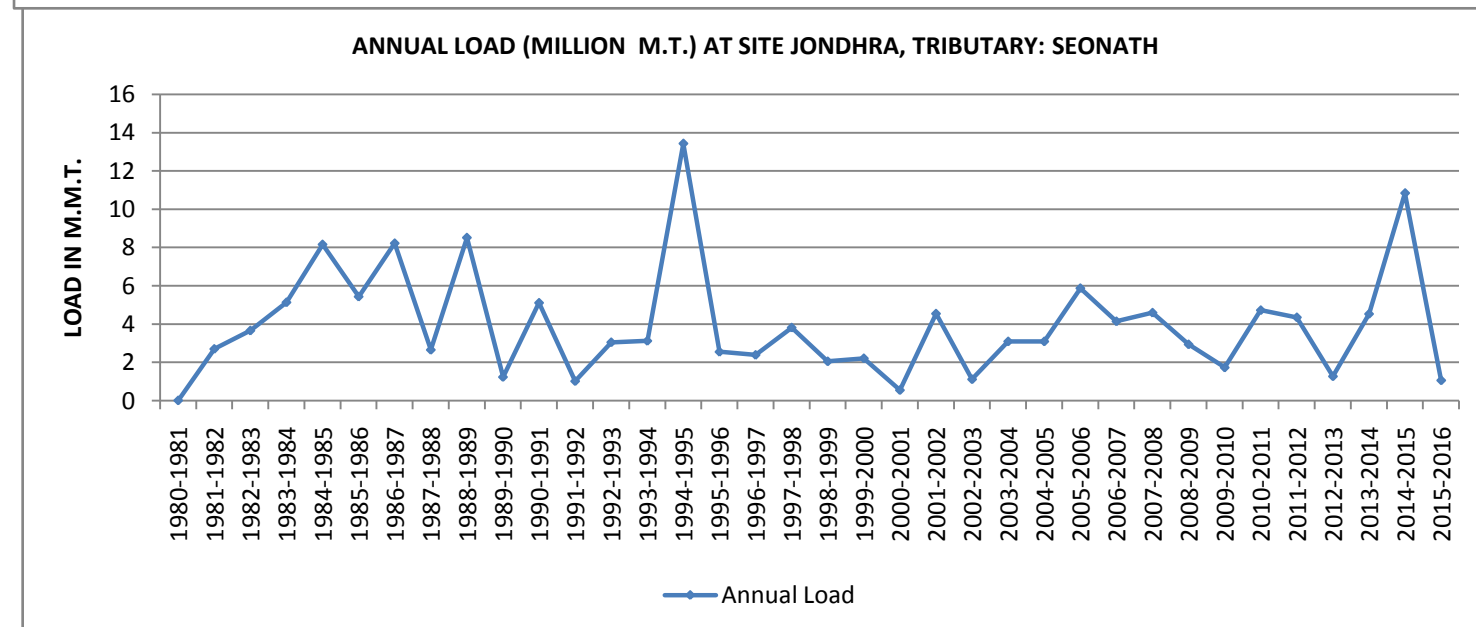
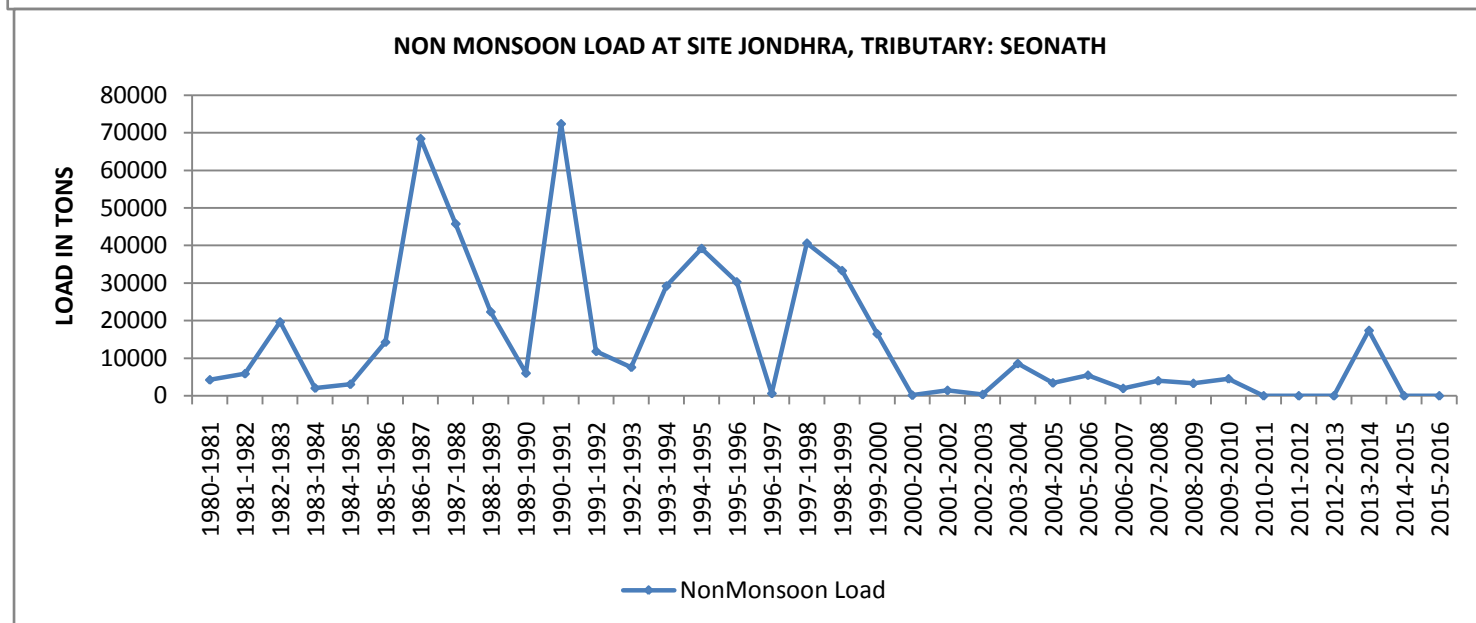
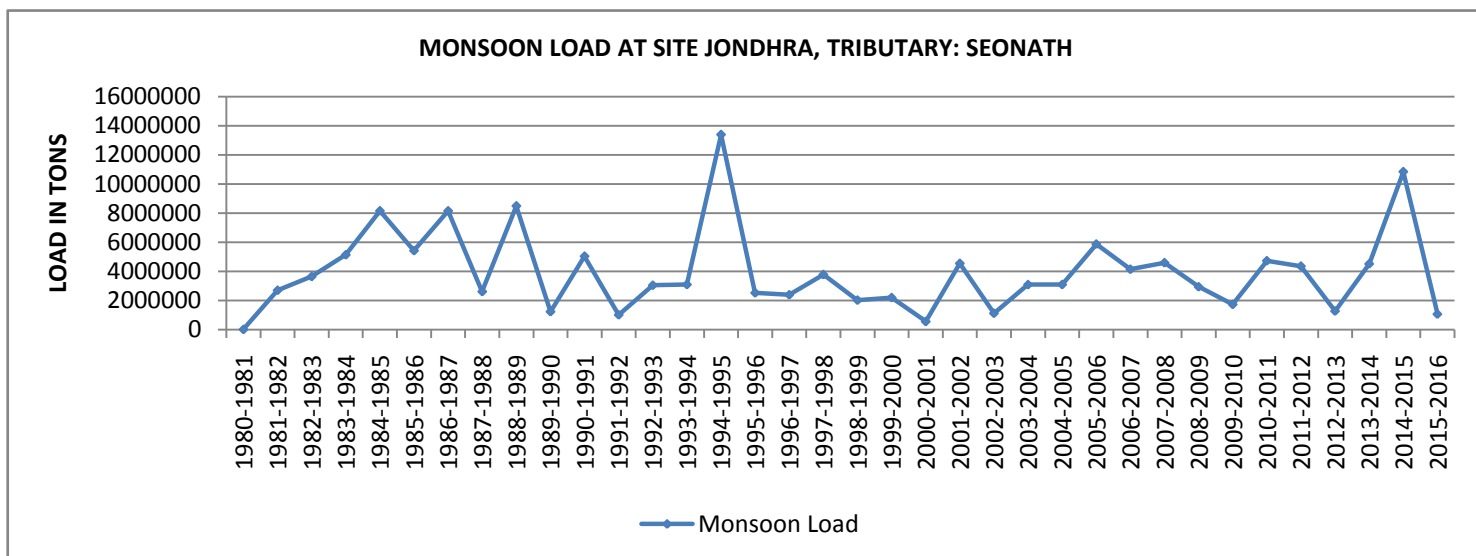
DEPENDIBILITY FLOW FROM JUNE TO MAY SITE JONDHRA, TRIBUTARY: SEONATH

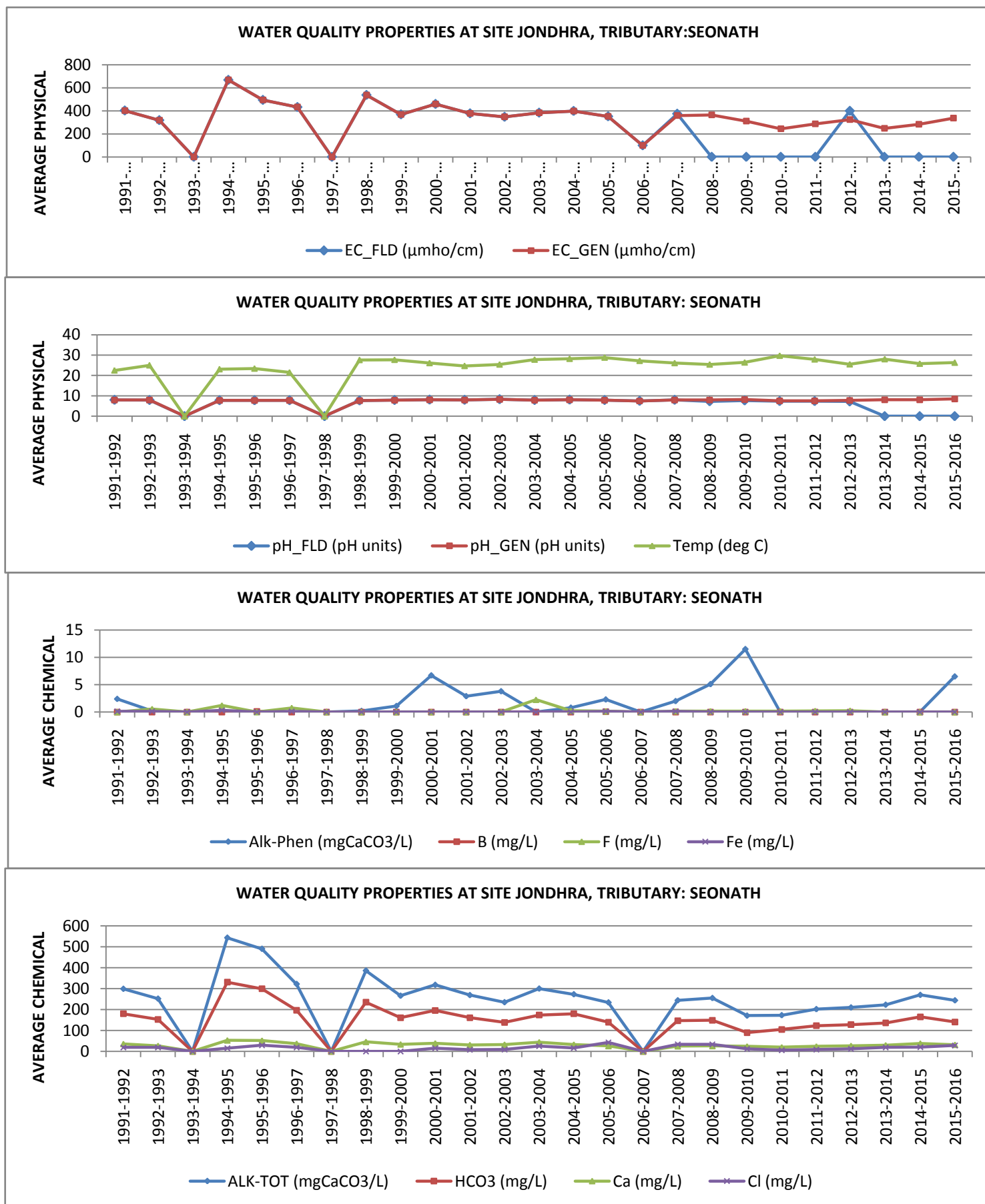


MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE JONDHRA, TRIBUTARY: SEONATH

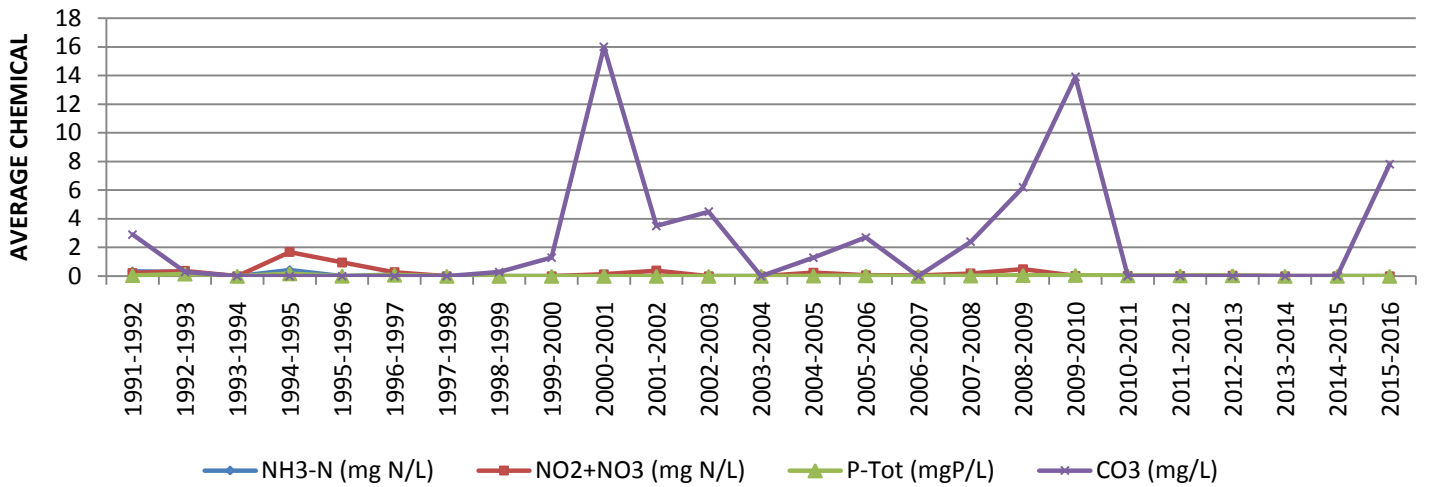




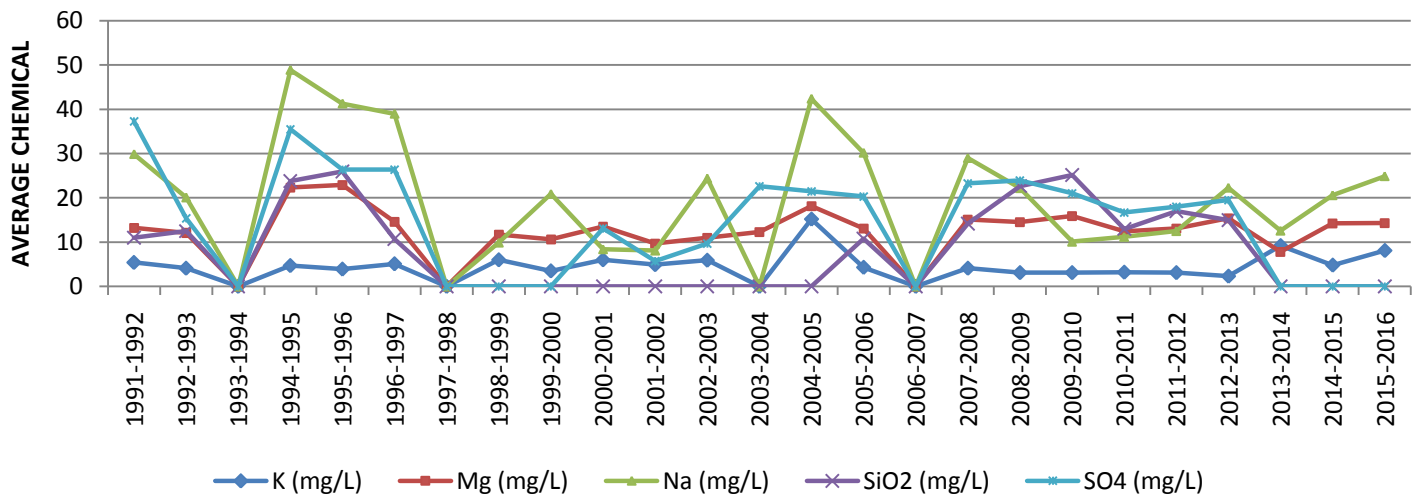




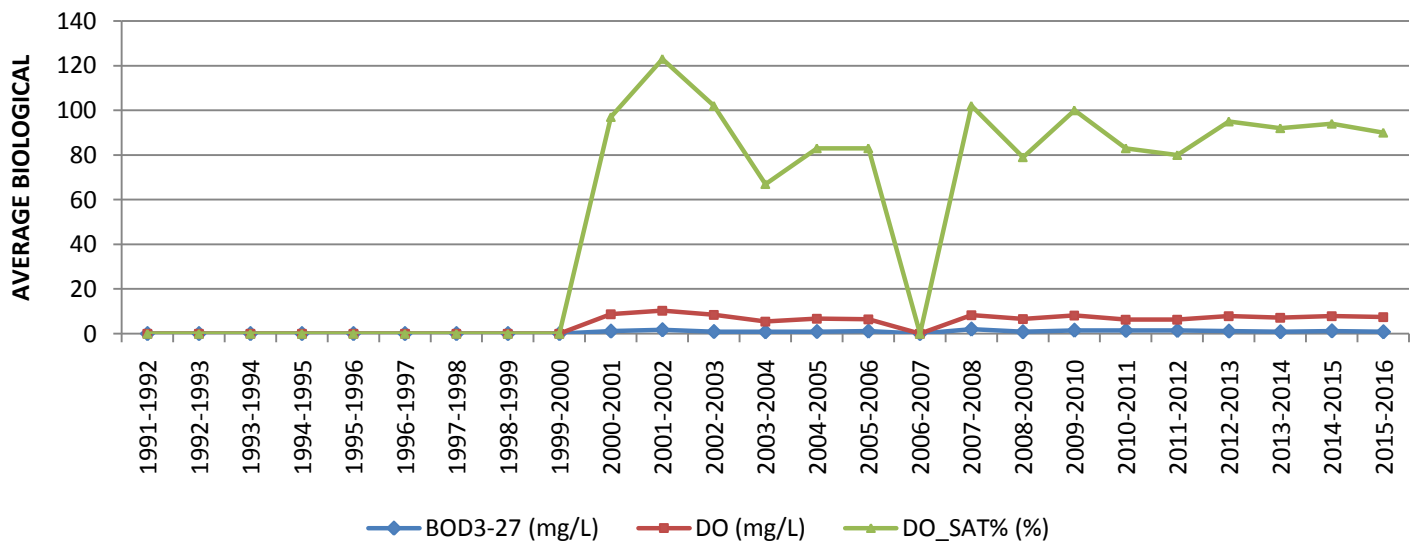
WATER QUALITY PROPERTIES AT SITE JONDHRA, TRIBUTARY: SEONATH



WATER QUALITY PROPERTIES AT SITE JONDHRA, TRIBUTARY: SEONATH



WATER QUALITY PROPERTIES AT SITE JONDHRA, TRIBUTARY:

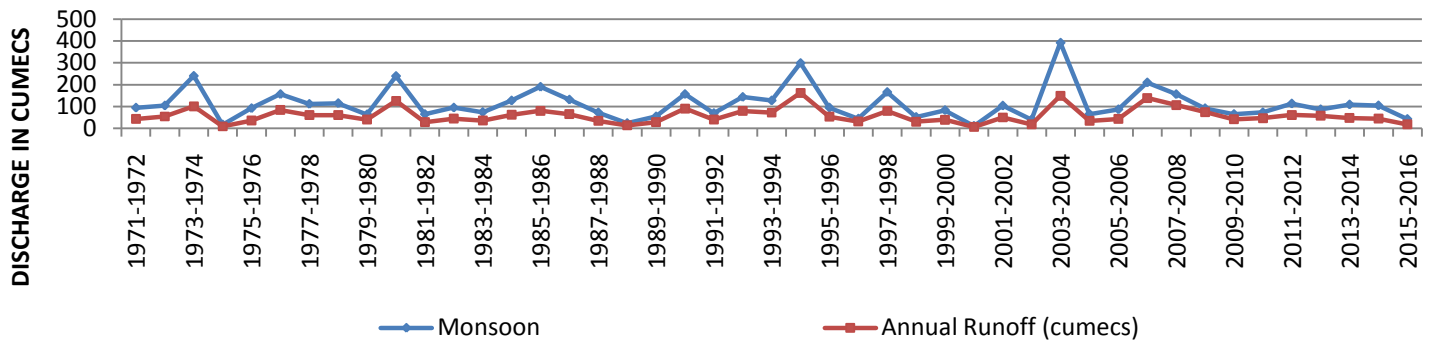


JONK SUB-BASIN

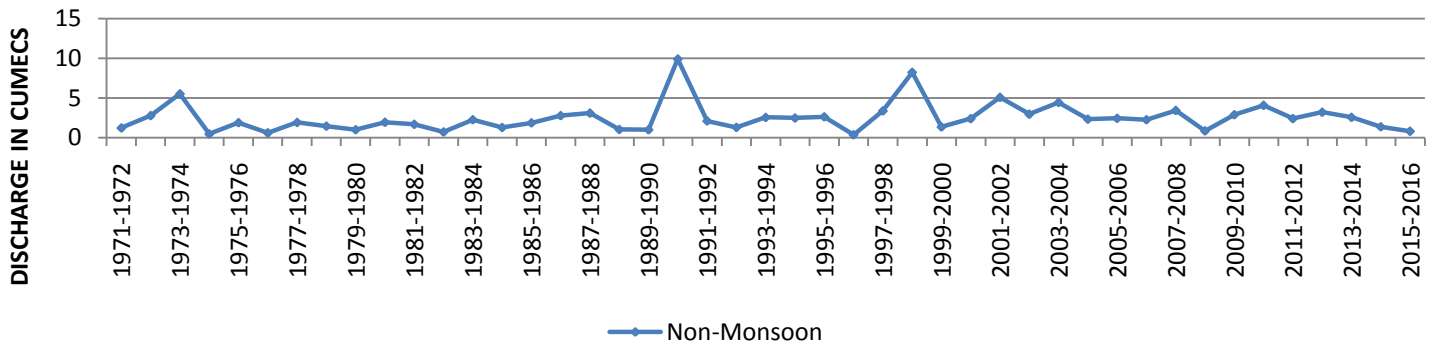
SITE RAMPUR

YEAR WISE TREND OF SITE RAMPUR

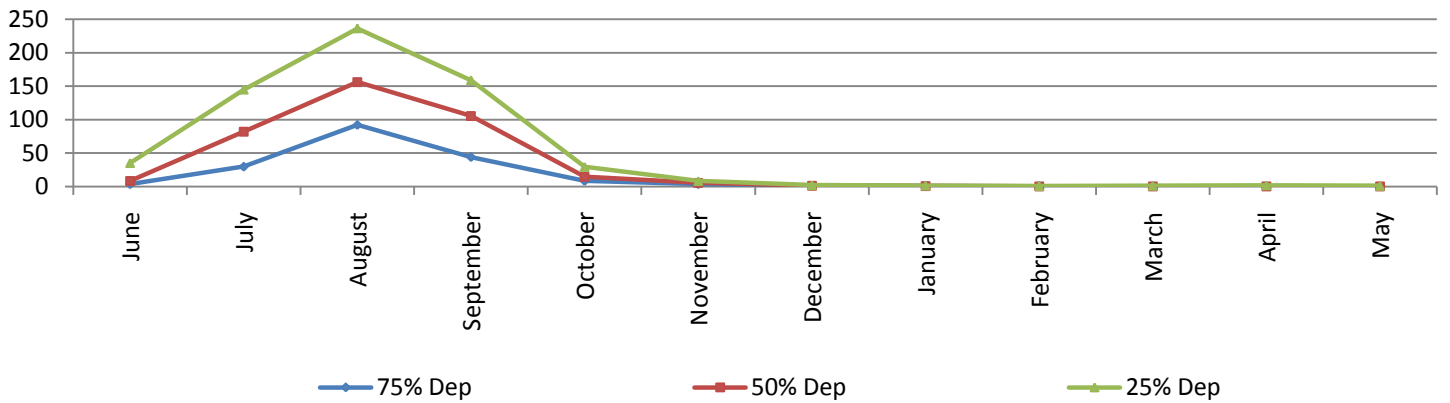
ANNUAL AVERAGE DISCHARGE SITE RAMPUR, TRIBUTARY:JONK



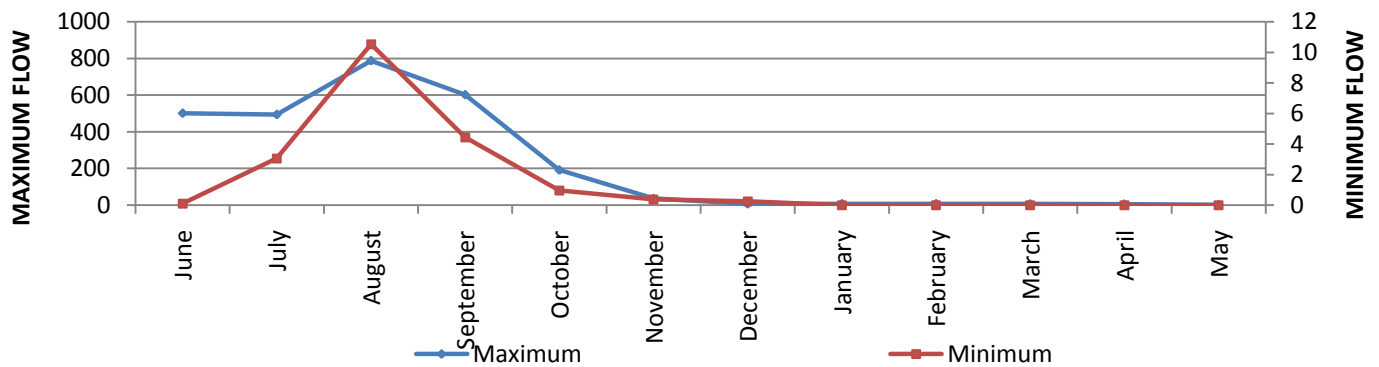
TOTAL ANNUAL DISCHARGE SITE RAMPUR, TRIBUTARY: JONK

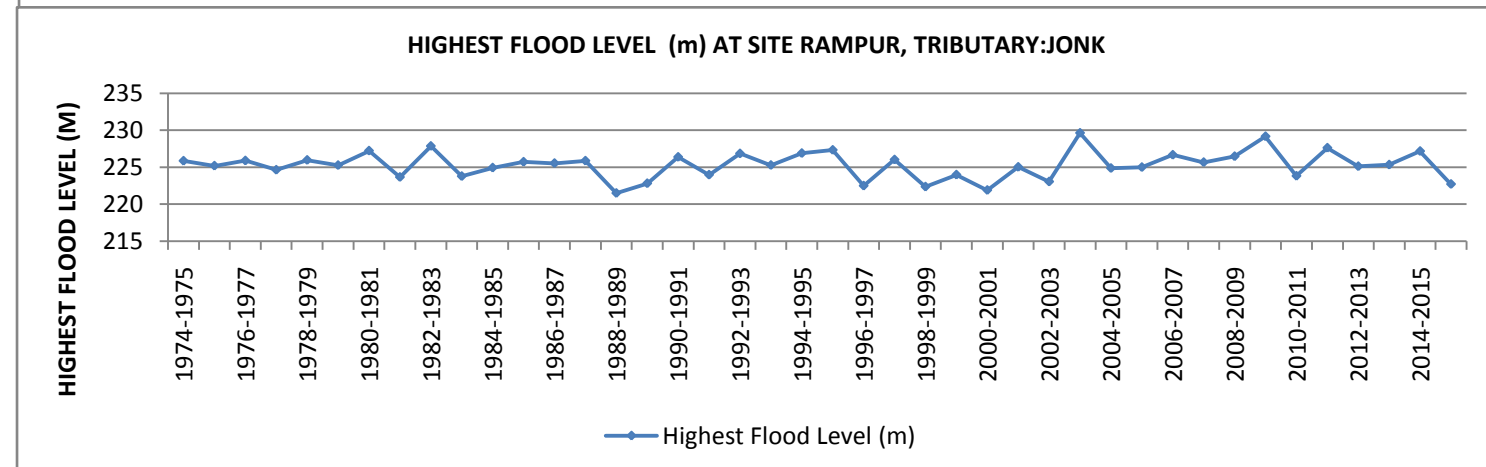
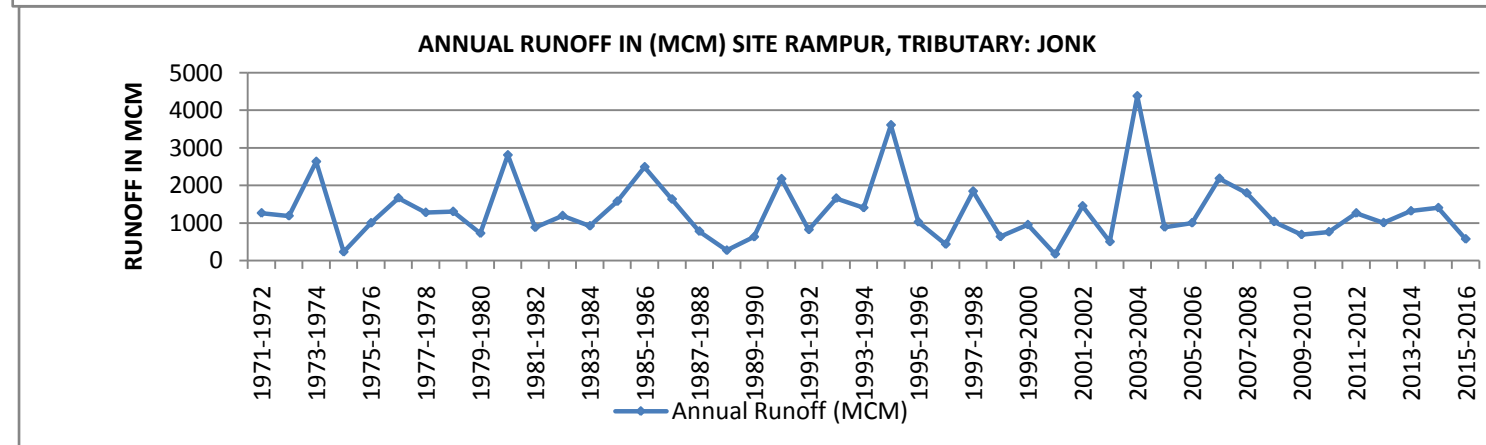
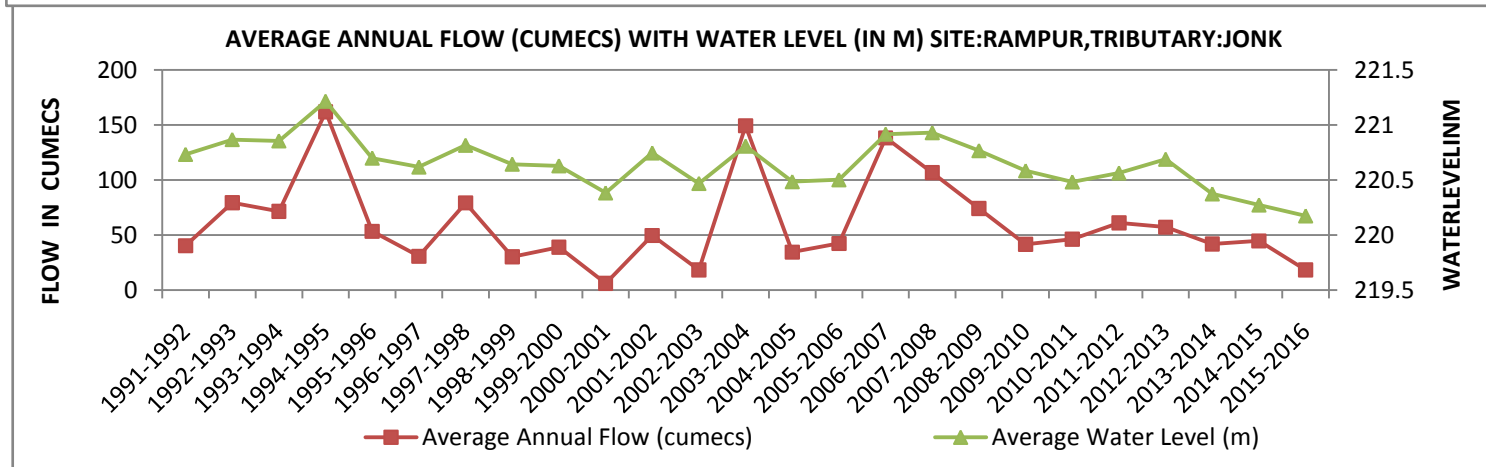
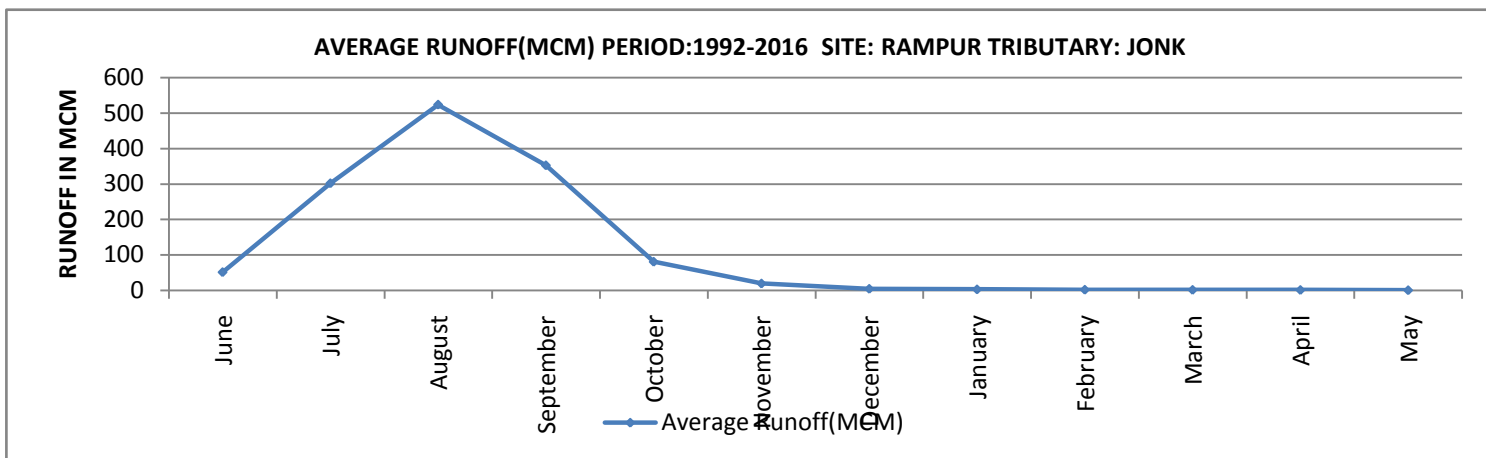


DEPENDABILITY FLOW FROM JUNE TO MAY SITE RAMPUR,TRIBUTARY: JONK

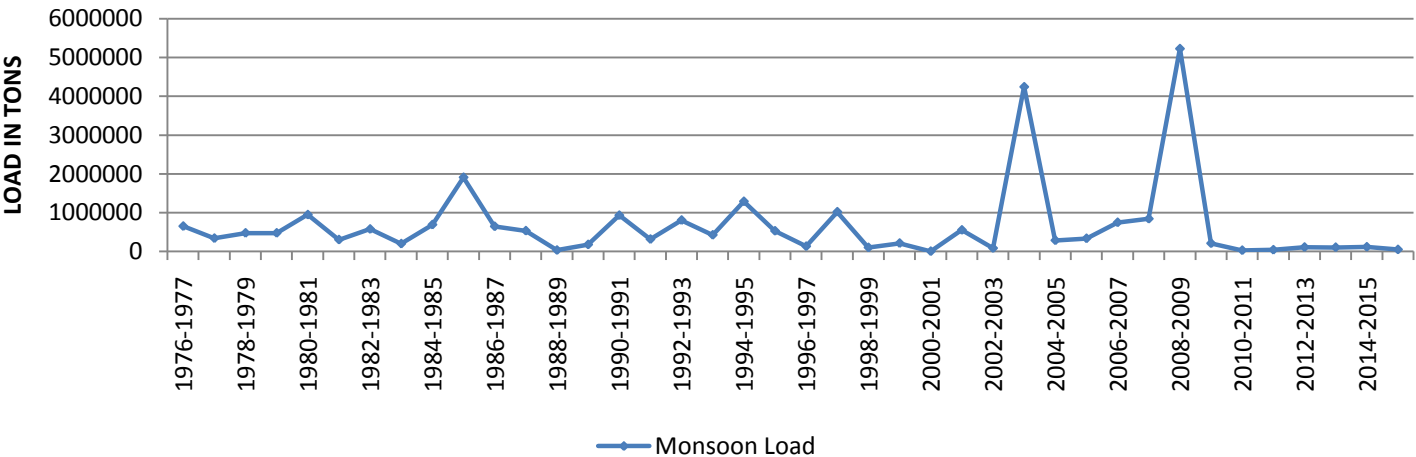


MAXIMUM FLOW FROM JUNE TO MAY SITE RAMPUR, TRIBUTARY:JONK

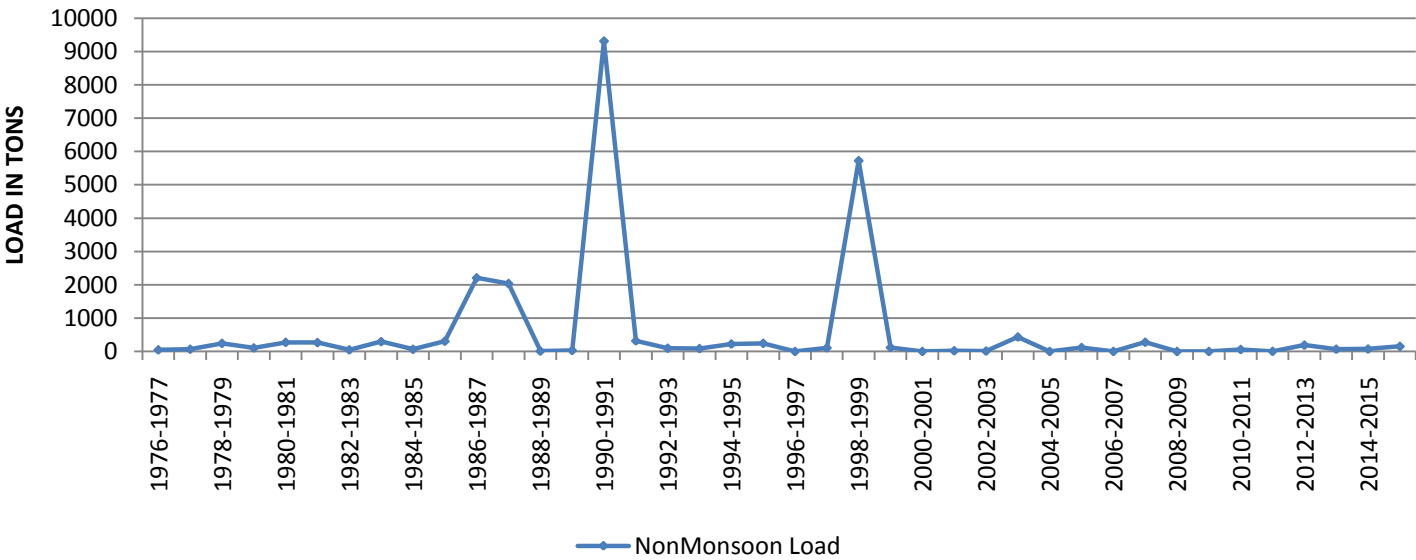




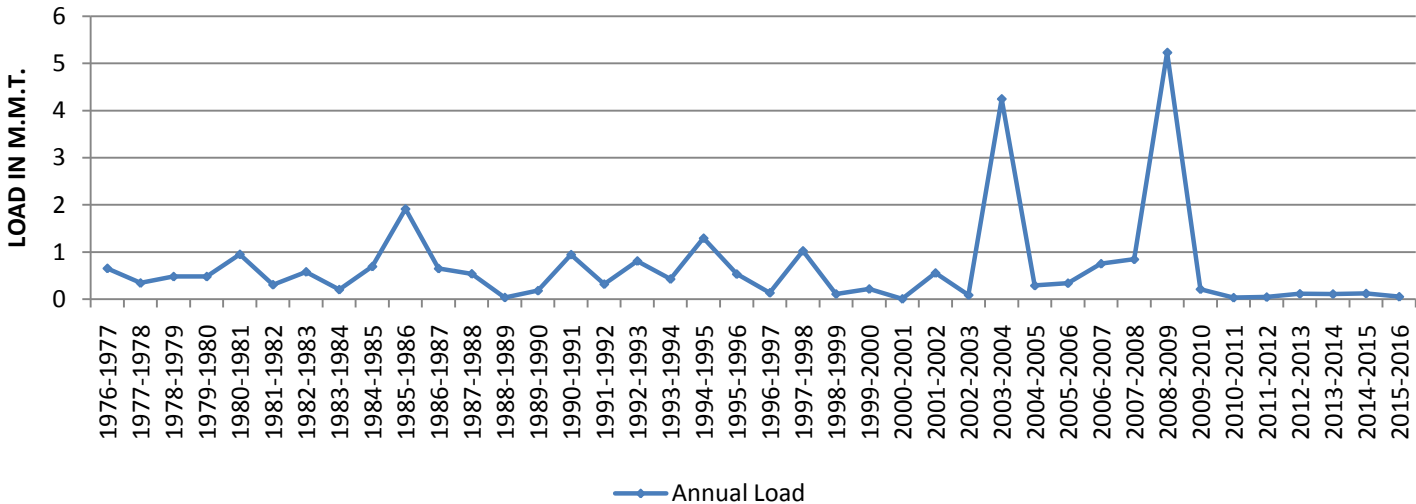
MONSOON LOAD AT SITE RAMPUR, TRIBUTARY: JONK



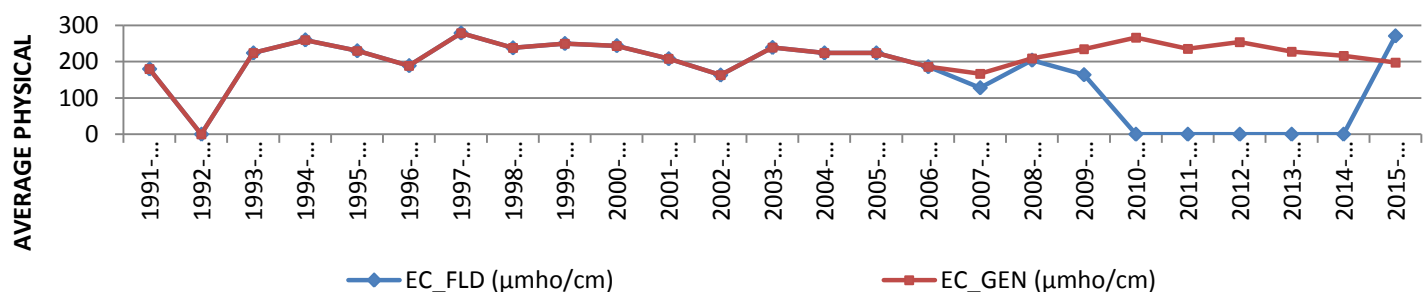
NON MONSOON LOAD AT SITE RAMPUR, TRIBUTARY: JONK



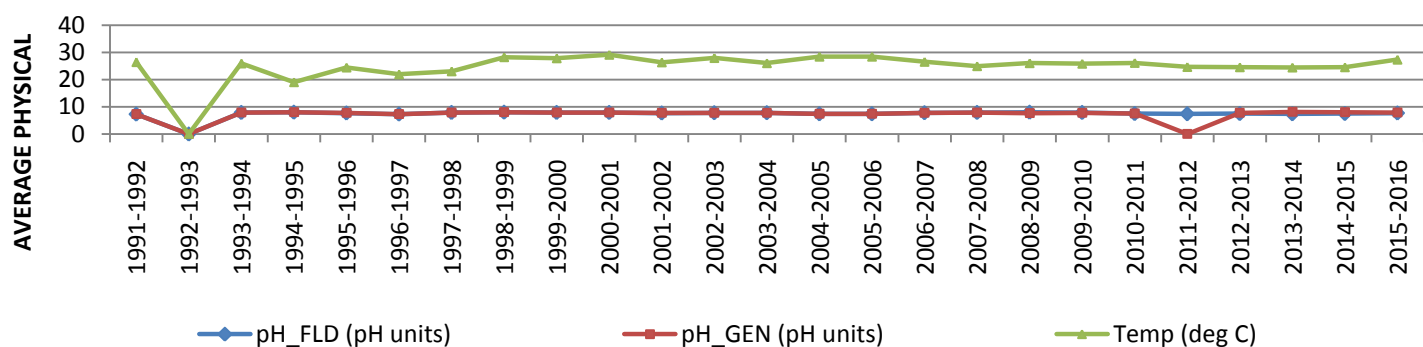
ANNUAL LOAD (MILLION M.T.) AT SITE RAMPUR, TRIBUTARY: JONK



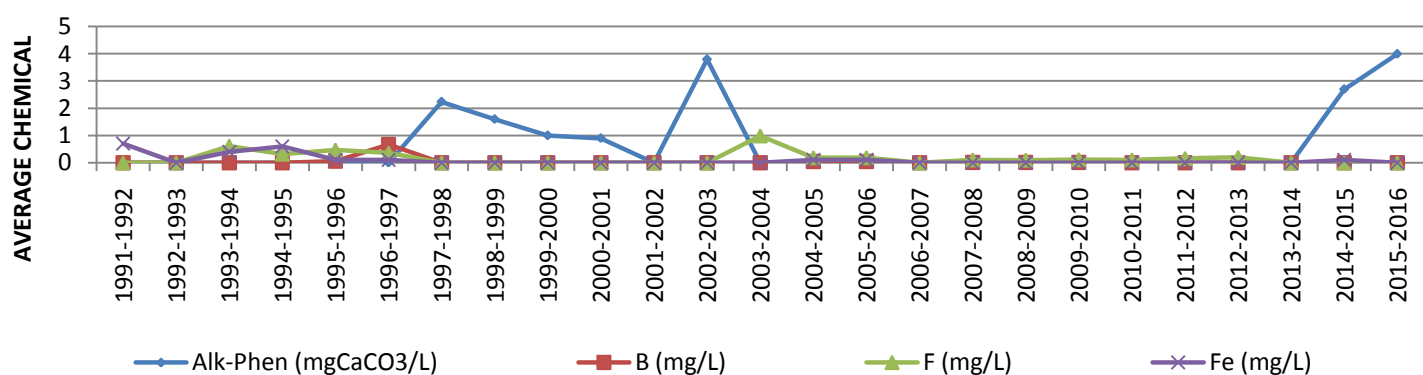
WATER QUALITY PROPERTIES AT SITE RAMPUR, TRIBUTARY: JONK



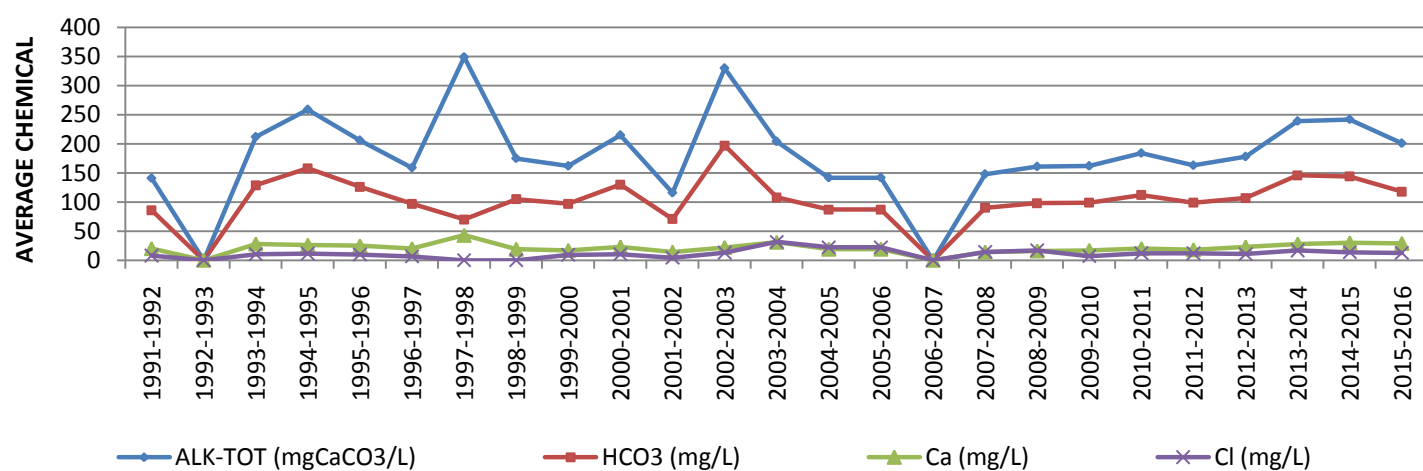
WATER QUALITY PROPERTIES AT SITE RAMPUR, TRIBUTARY: JONK



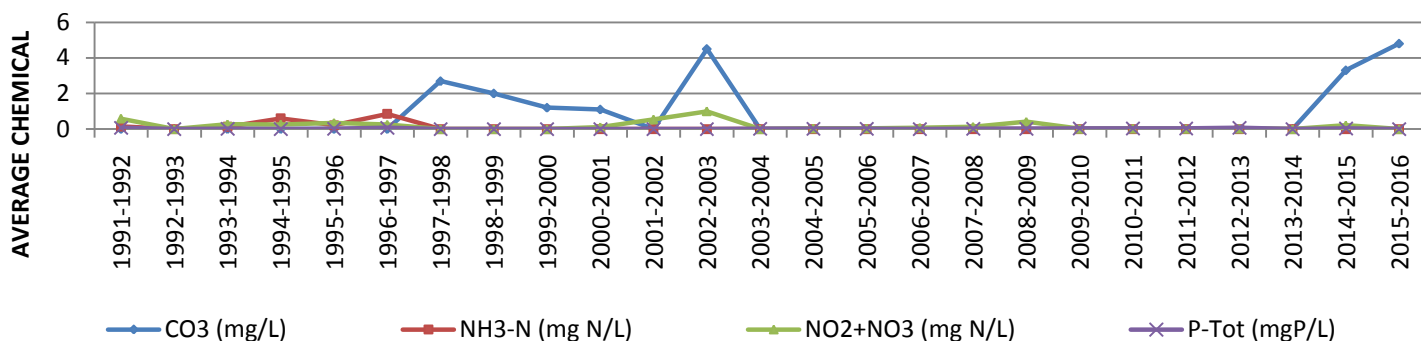
WATER QUALITY PROPERTIES AT SITE RAMPUR, TRIBUTARY: JONK



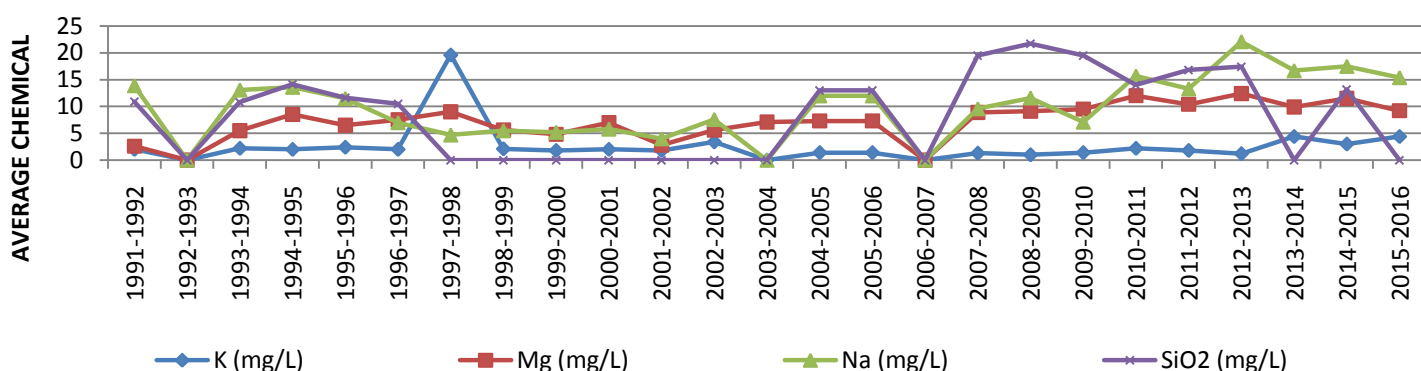
WATER QUALITY PROPERTIES AT SITE RAMPUR, TRIBUTARY: JONK



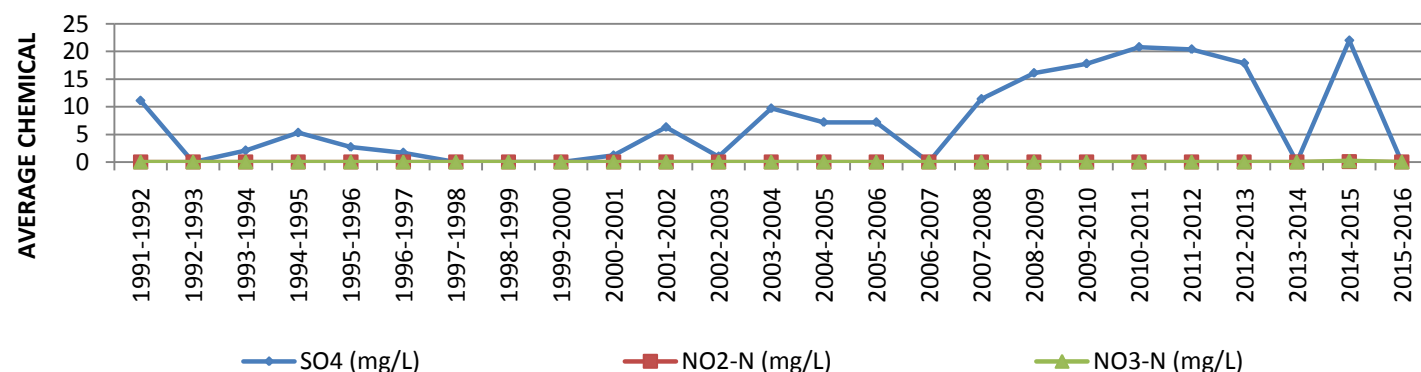
WATER QUALITY PROPERTIES AT SITE RAMPUR, TRIBUTARY: JONK



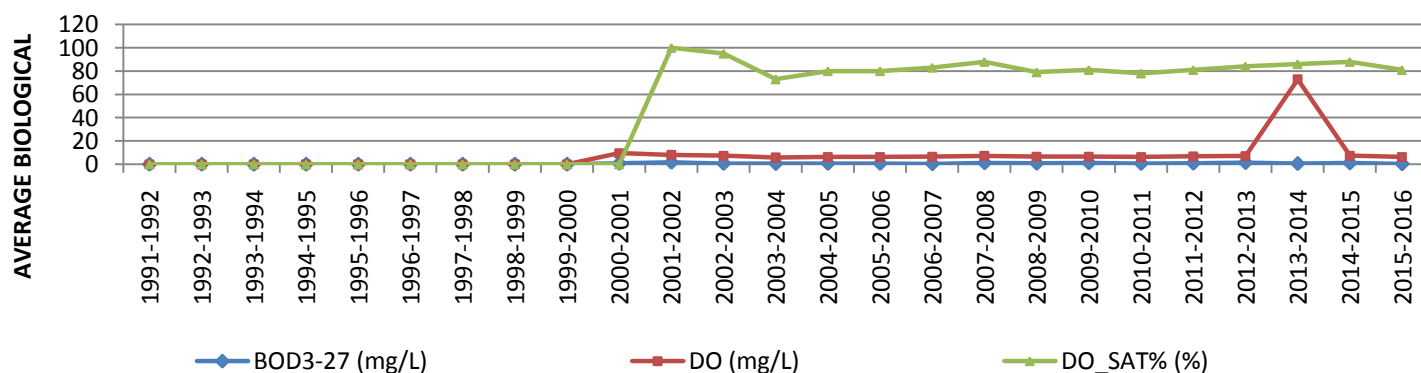
WATER QUALITY PROPERTIES AT SITE RAMPUR, TRIBUTARY: JONK



WATER QUALITY PROPERTIES AT SITE RAMPUR, TRIBUTARY: JONK



WATER QUALITY PROPERTIES AT SITE RAMPUR, TRIBUTARY: JONK

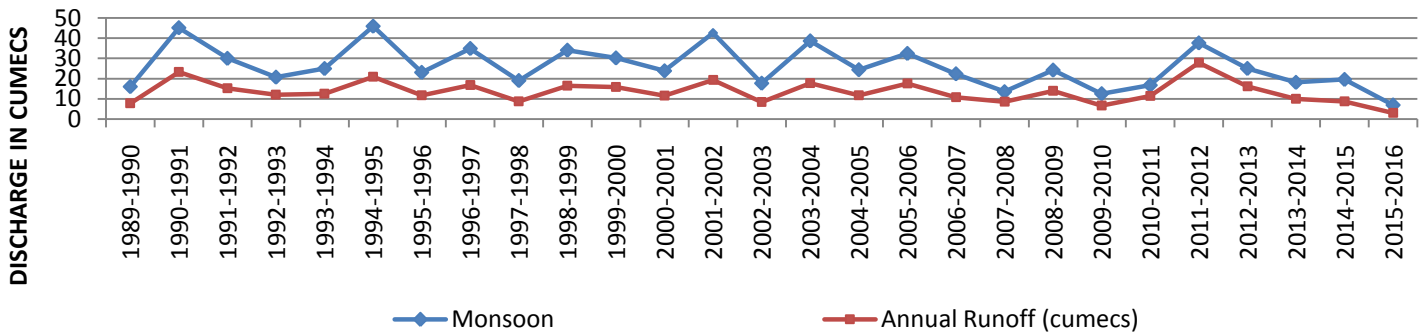


HASDEO SUB-BASIN

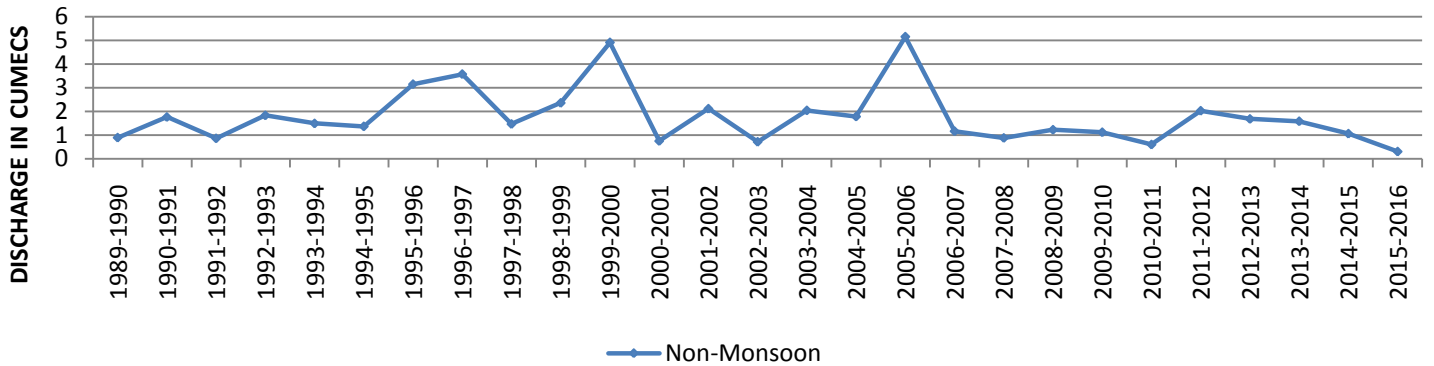
SITE MANENDRAGARH

YEAR WISE TREND OF SITE MANENDRAGARH

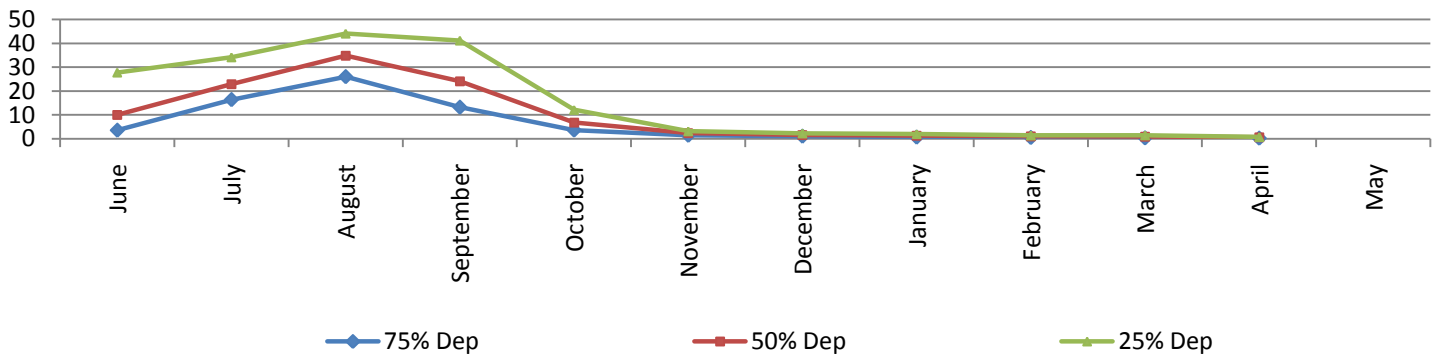
ANNUAL AVERAGE DISCHARGE SITE MANENDRAGARH, TRIBUTARY:HASDEO



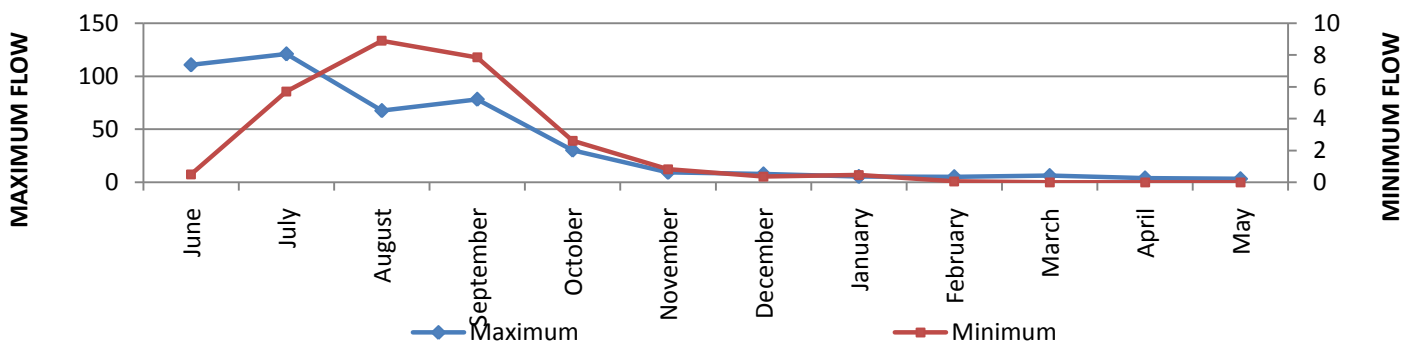
TOTAL ANNUAL DISCHARGE SITE MANENDRAGARH, TRIBUTARY:HASDEO

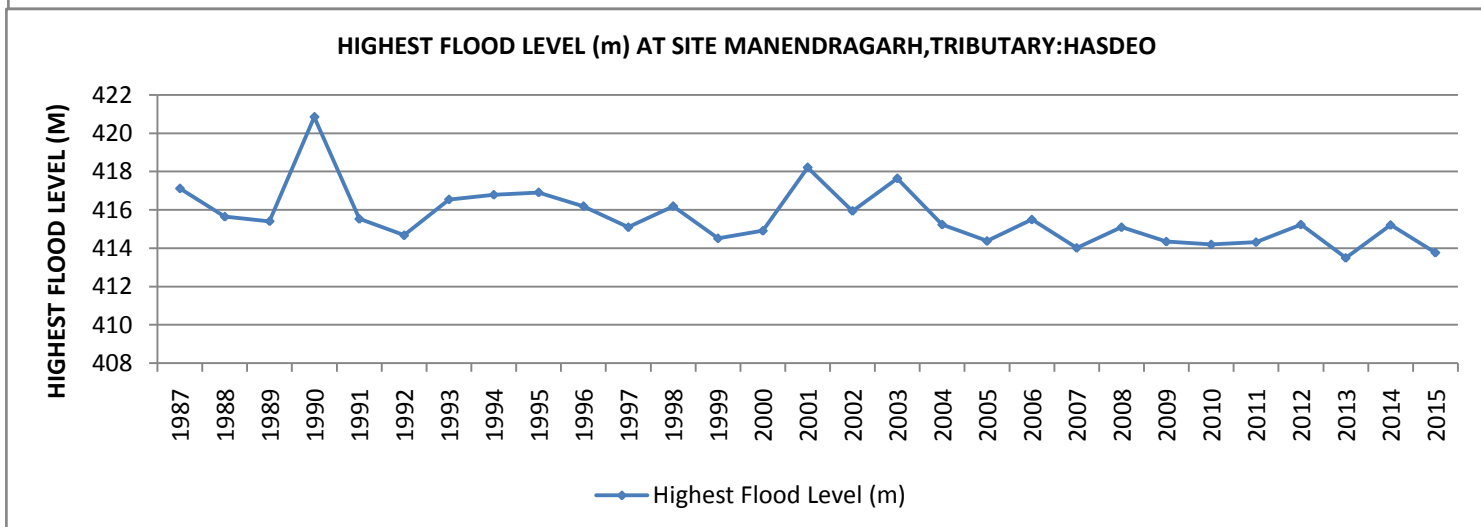
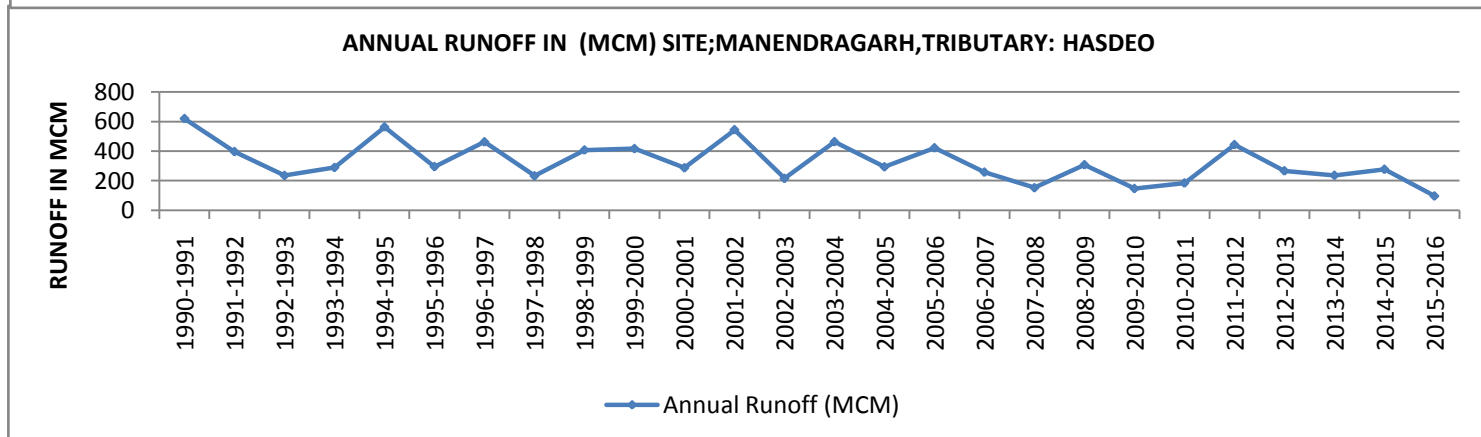
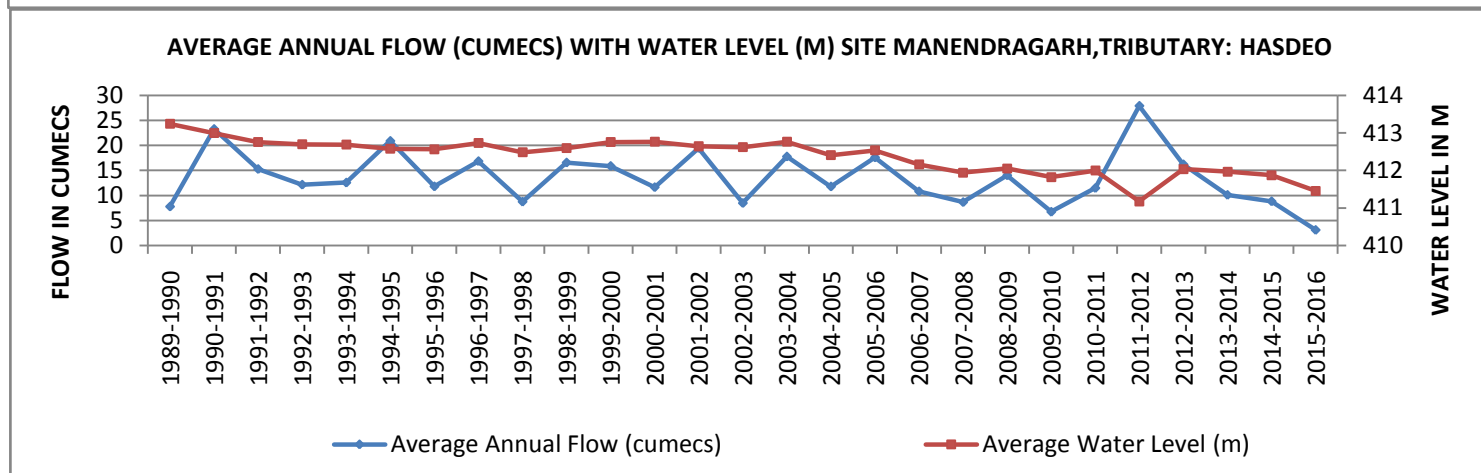
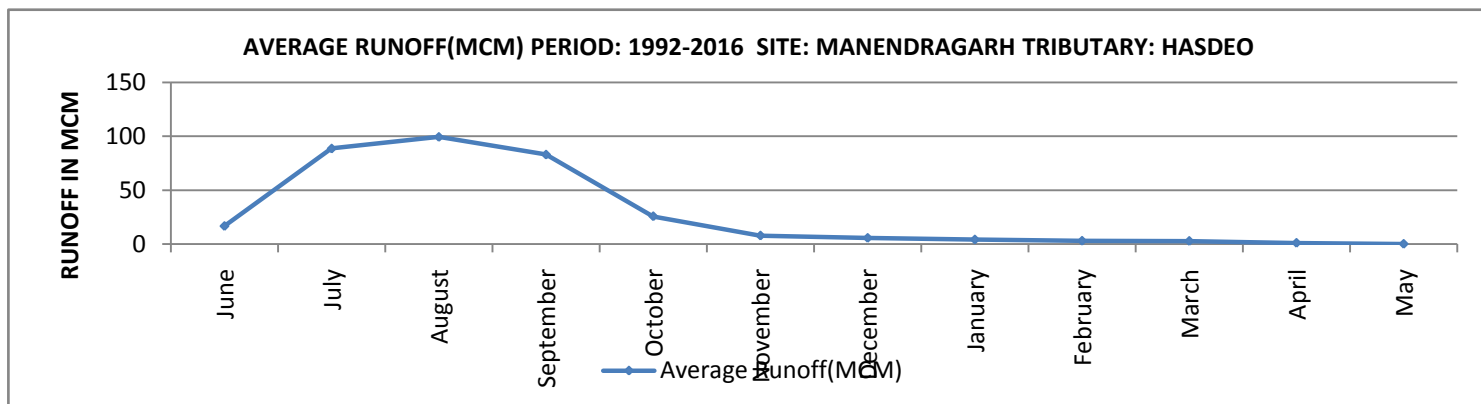


DEPENDABILITY FLOW FROM JUNE TO MAY SITE MANENDRAGARH,TRIBUTARY:HASDEO

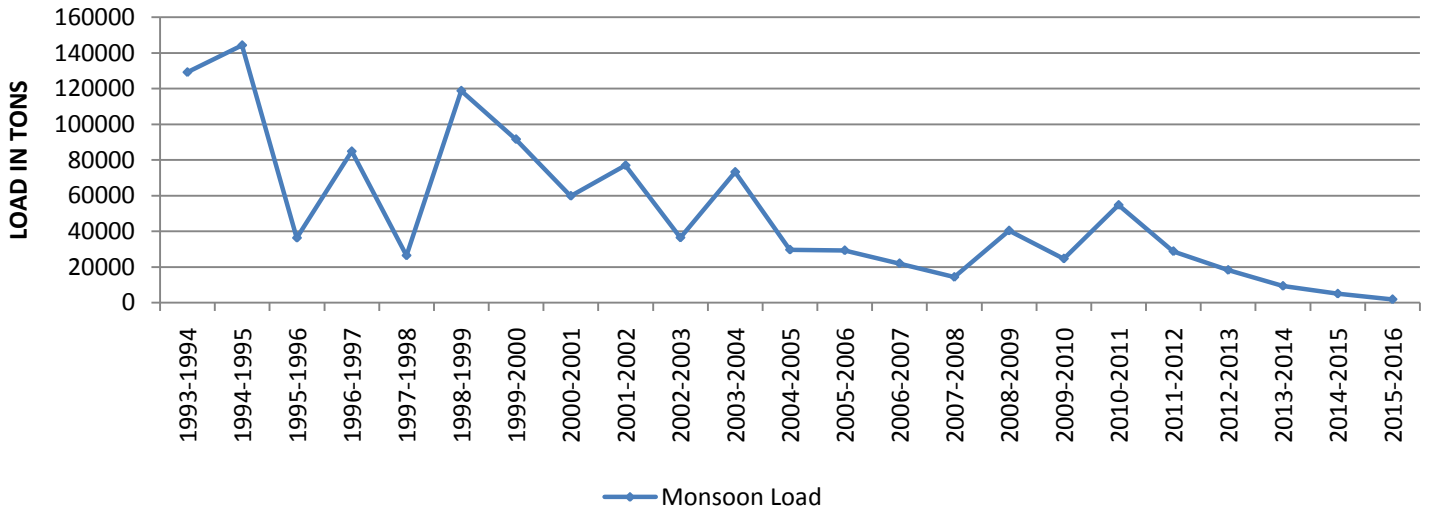


MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE MANENDRAGARH,TRIBUTARY:HASDEO

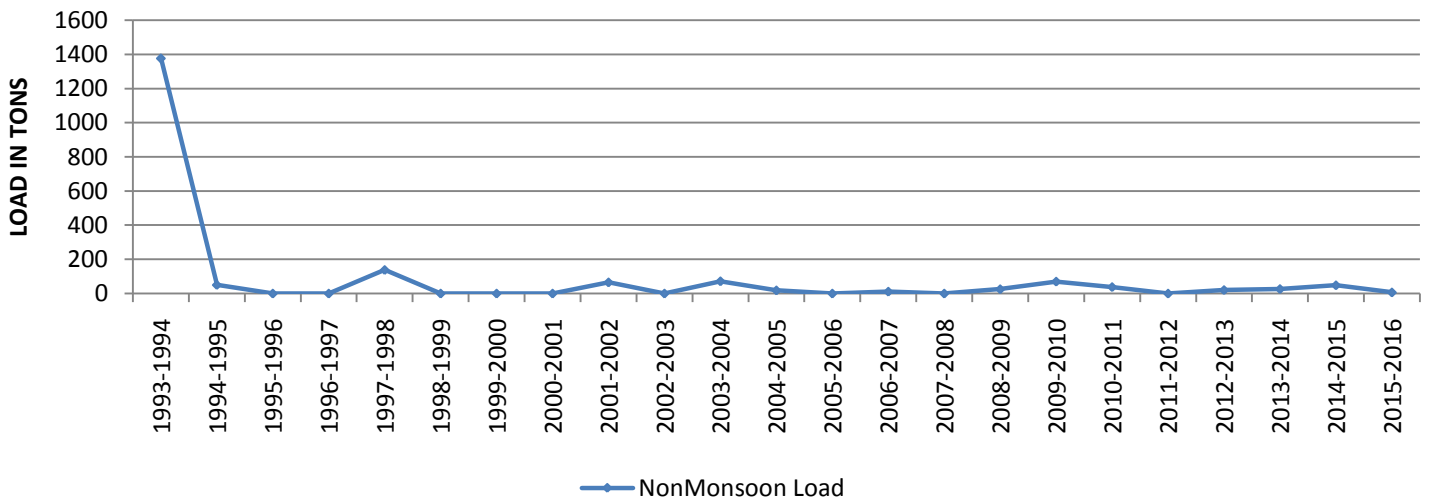




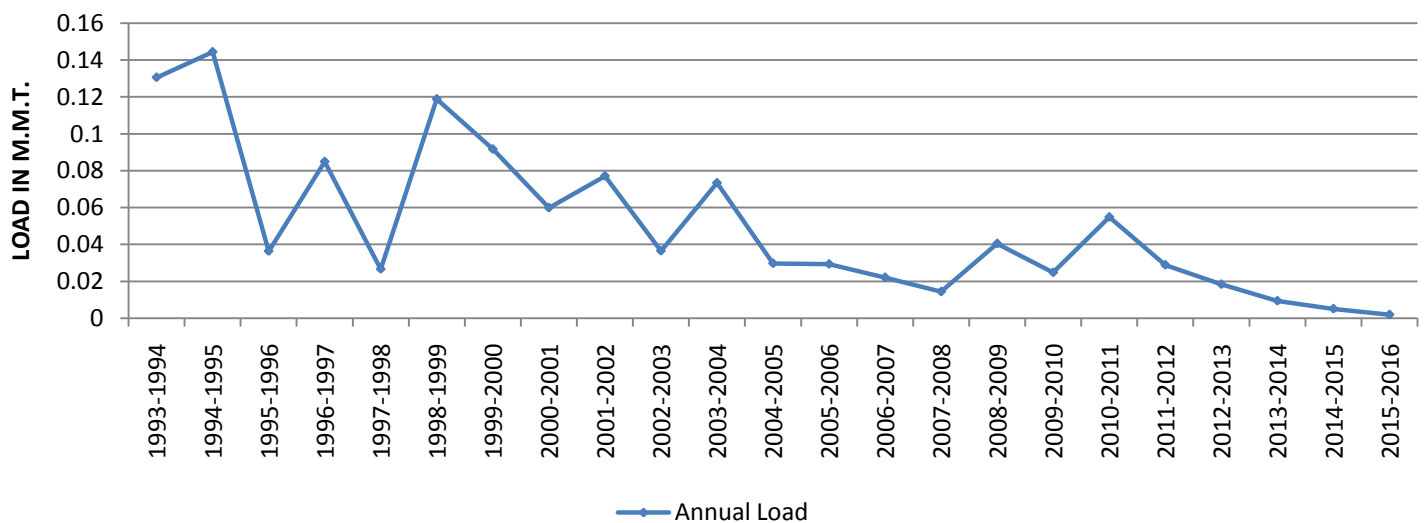
MONSOON LOAD AT SITE MANENDRAGARH, TRIBUTARY: HASDEO



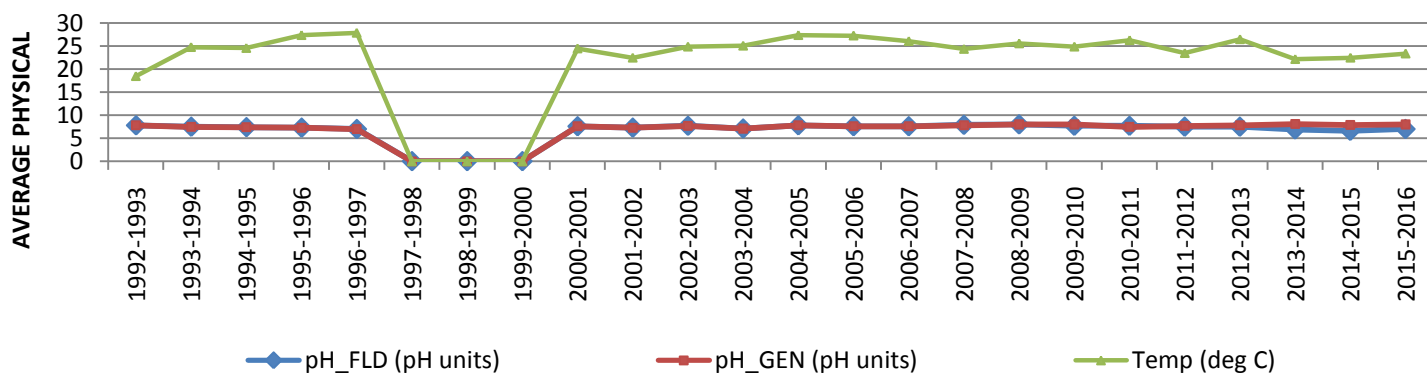
NON MONSOON LOAD AT SITE MANENDRAGARH, TRIBUTARY: HASDEO



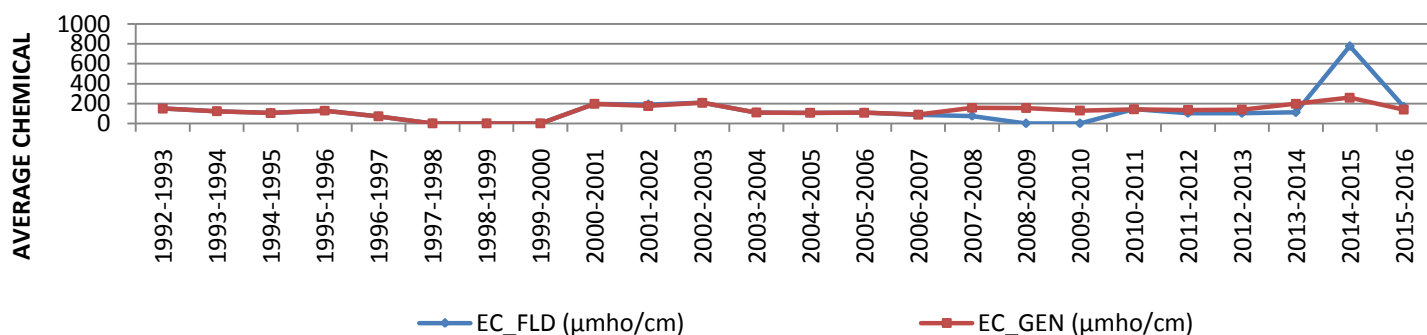
ANNUAL LOAD (MILLION M.T.) AT SITE MANENDRAGARH, TRIBUTARY: HASDEO



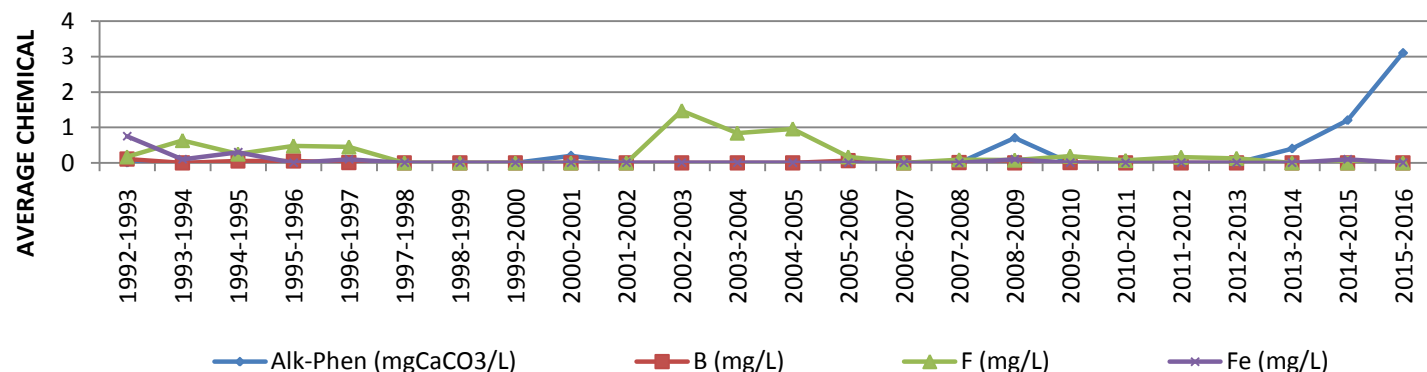
WATER QUALITY PROPERTIES AT SITE MANENDRAGARH,TRIBUTARY: HASDEO



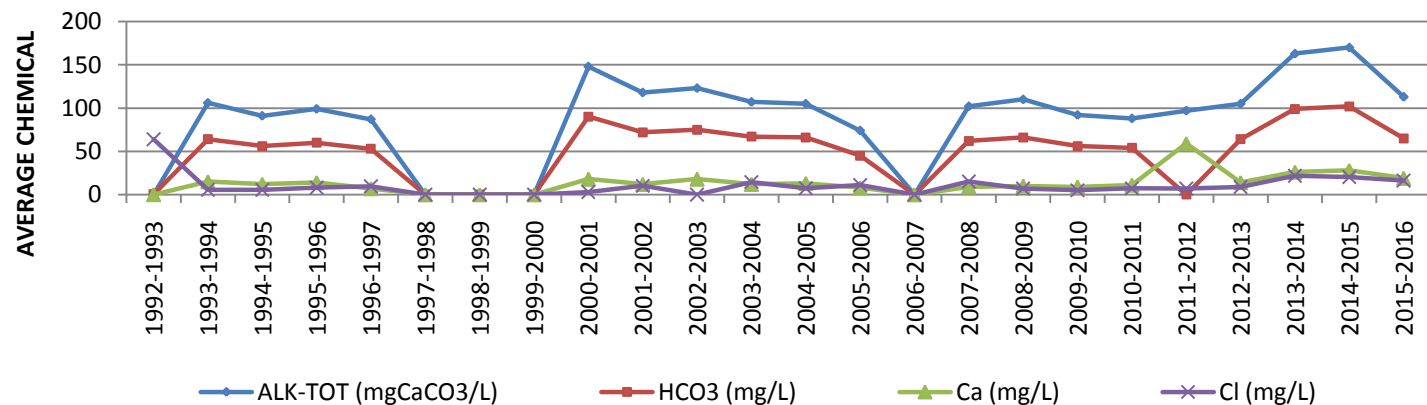
WATER QUALITY PROPERTIES AT SITE MANENDRAGARH, TRIBUTARY:HASDEO



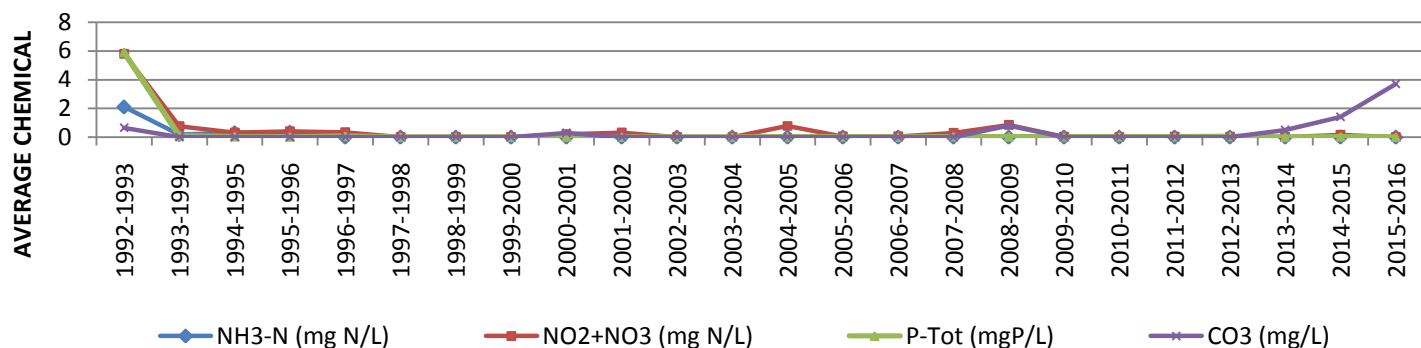
WATER QUALITY PROPERTIES AT SITE MANENDRAGARH, TRIBUTARY: HASDEO



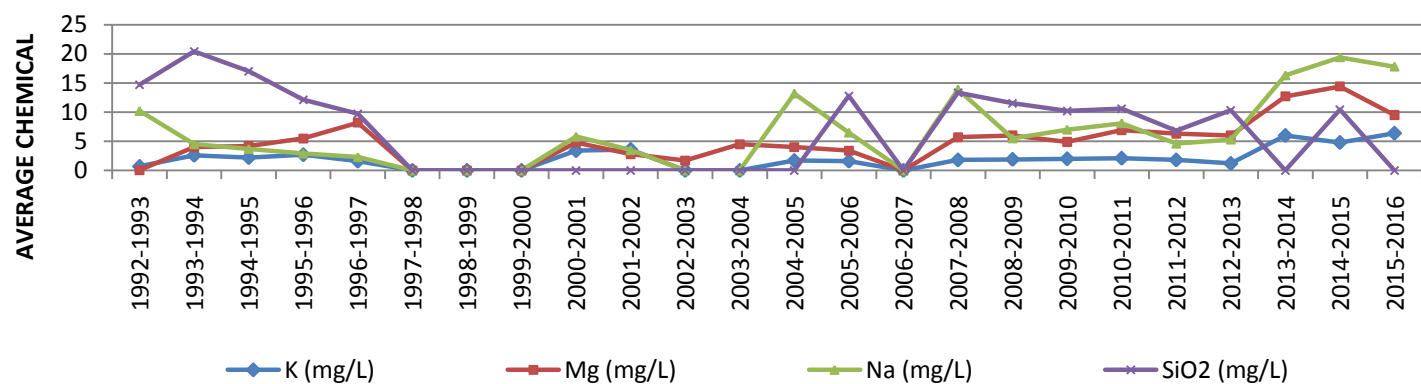
WATER QUALITY PROPERTIES AT SITE MANENDRAGARH, TRIBUTARY: HASDEO



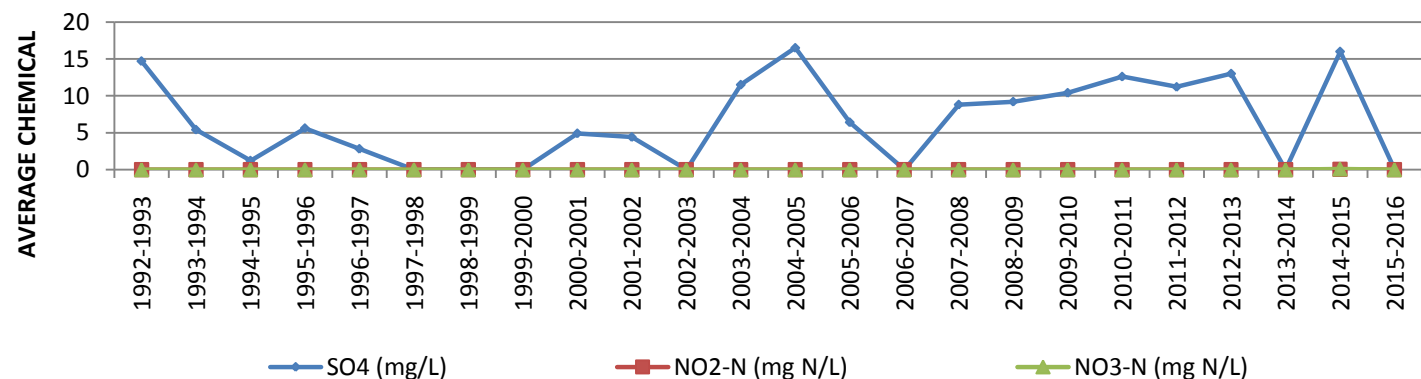
WATER QUALITY PROPERTIES AT SITE MANENDRAGARH, TRIBUTARY: SEONATH



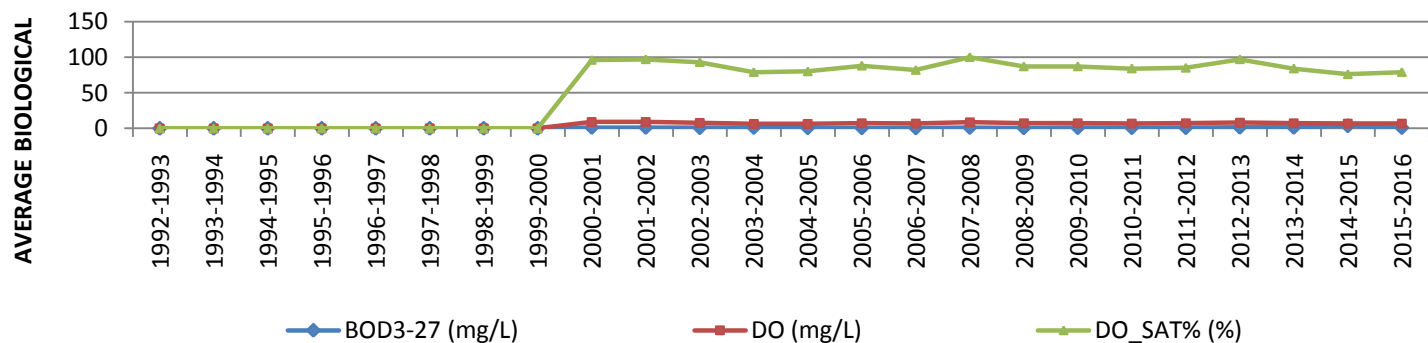
WATER QUALITY PROPERTIES AT SITE MANENDRAGARH, TRIBUTARY: HASDEO



WATER QUALITY PROPERTIES AT SITE MANENDRAGARH, TRIBUTARY: HASDEO

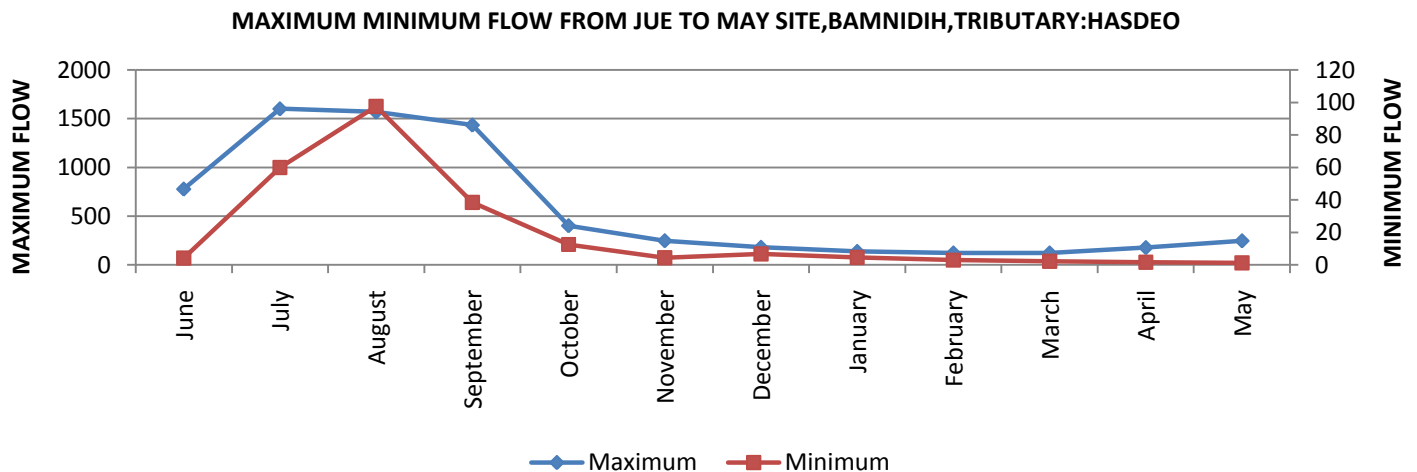
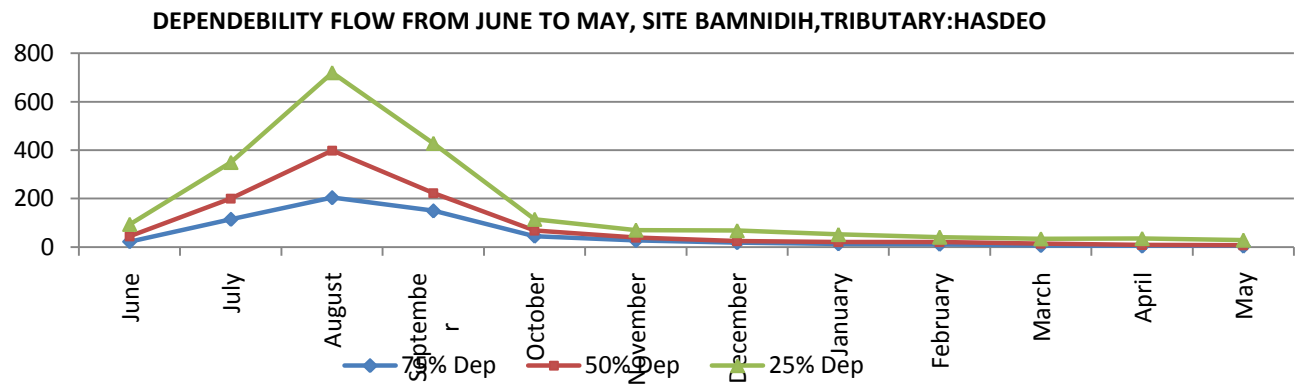
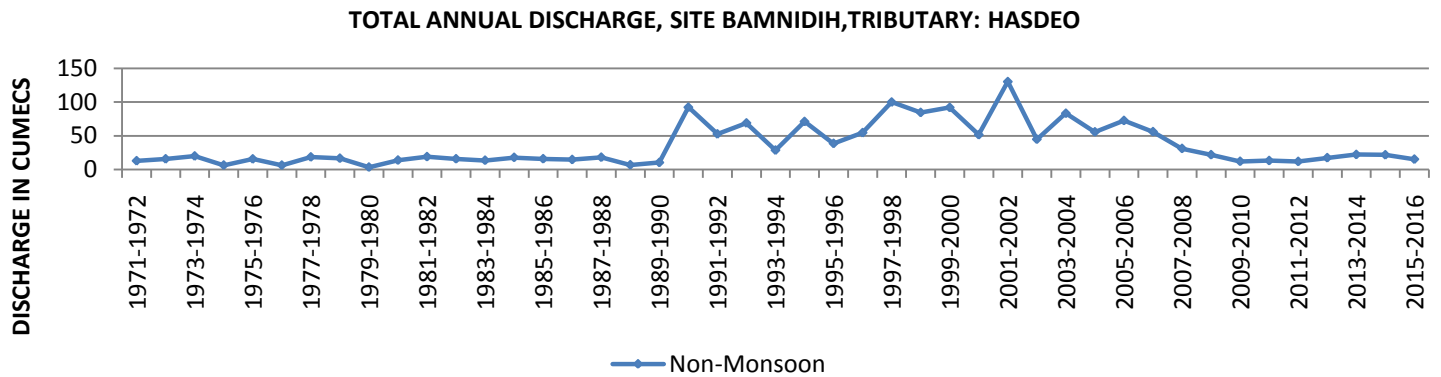
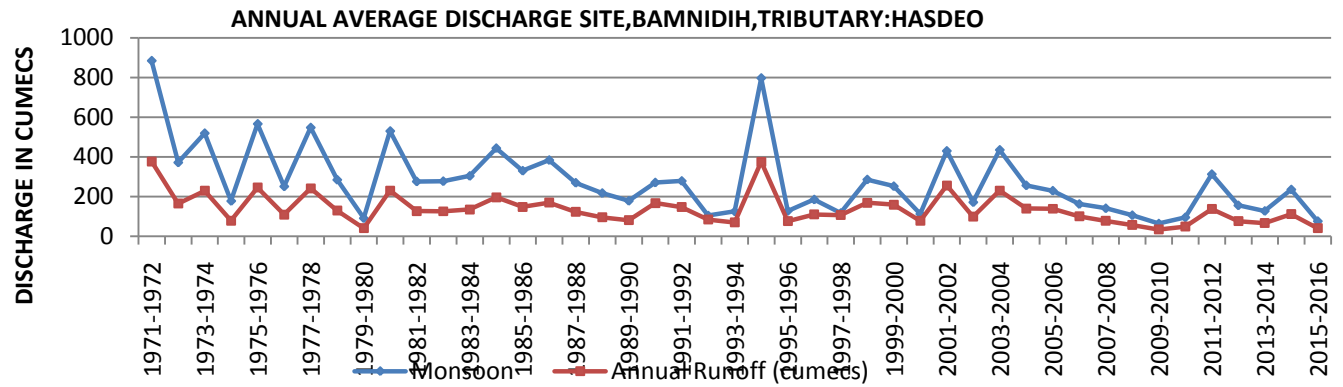


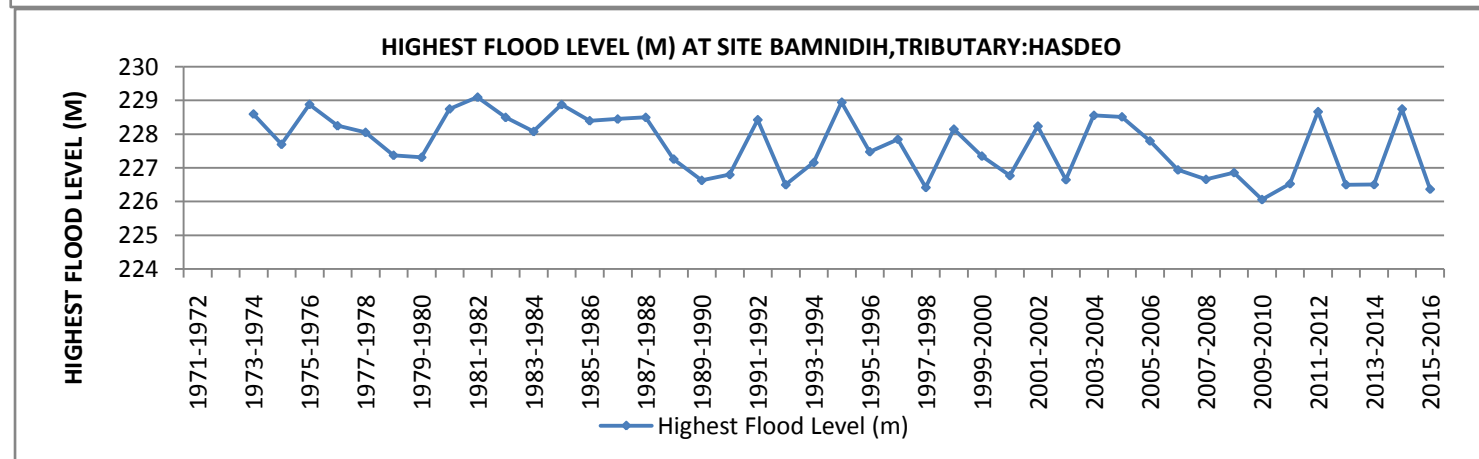
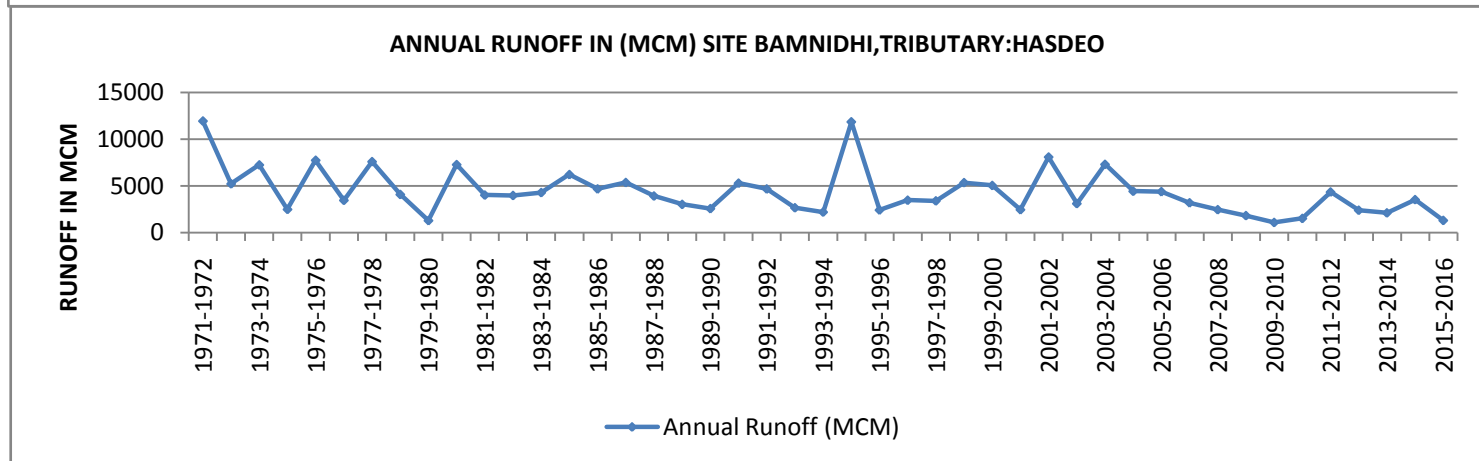
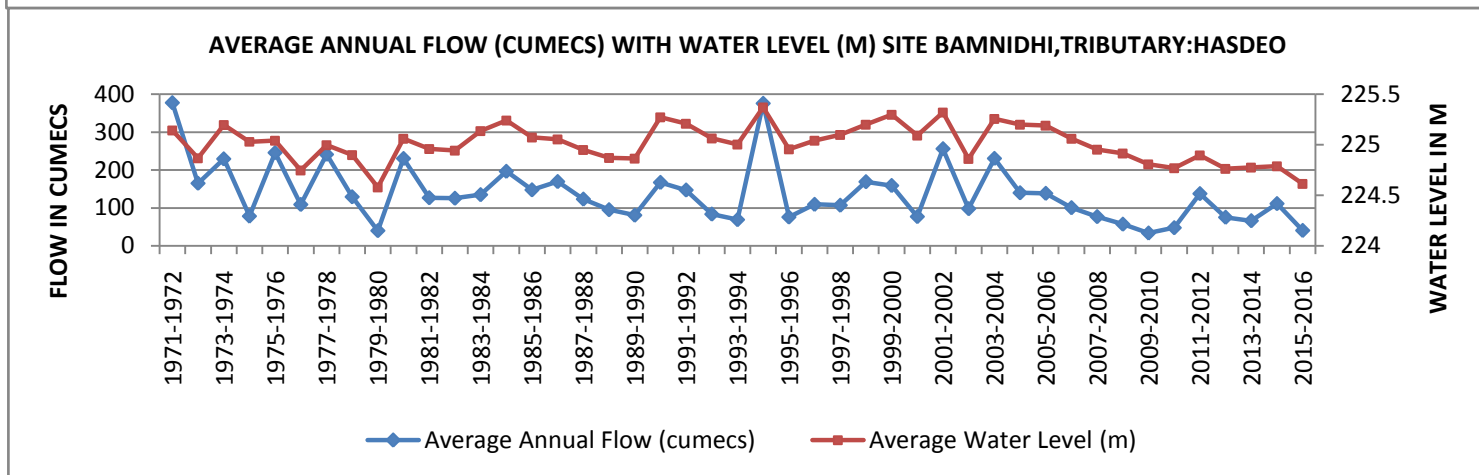
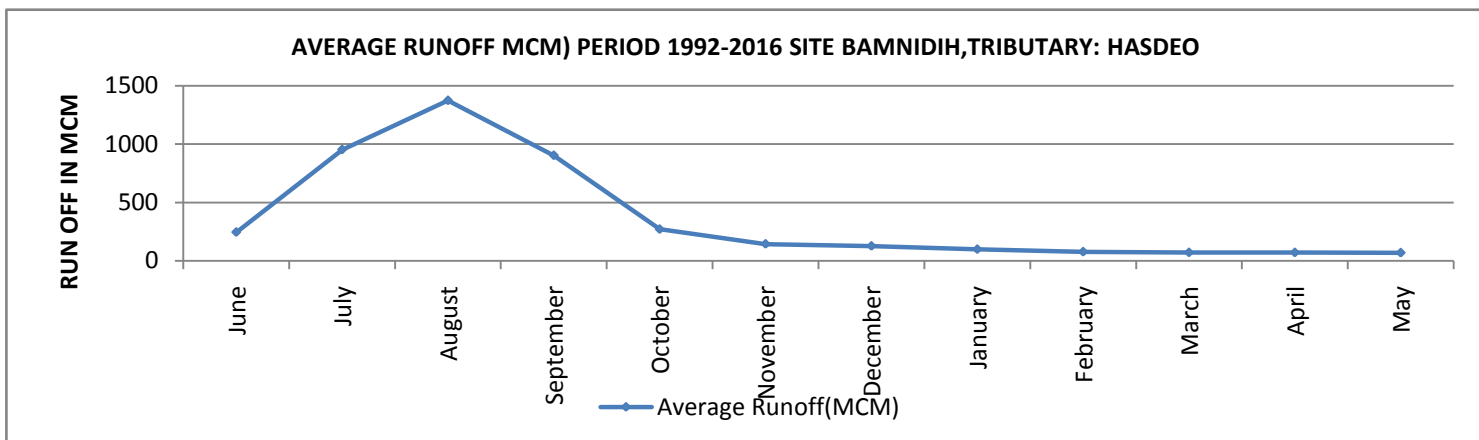
WATER QUALITY PROPERTIES AT SITE MANENDRAGARH, TRIBUTARY: HASDEO



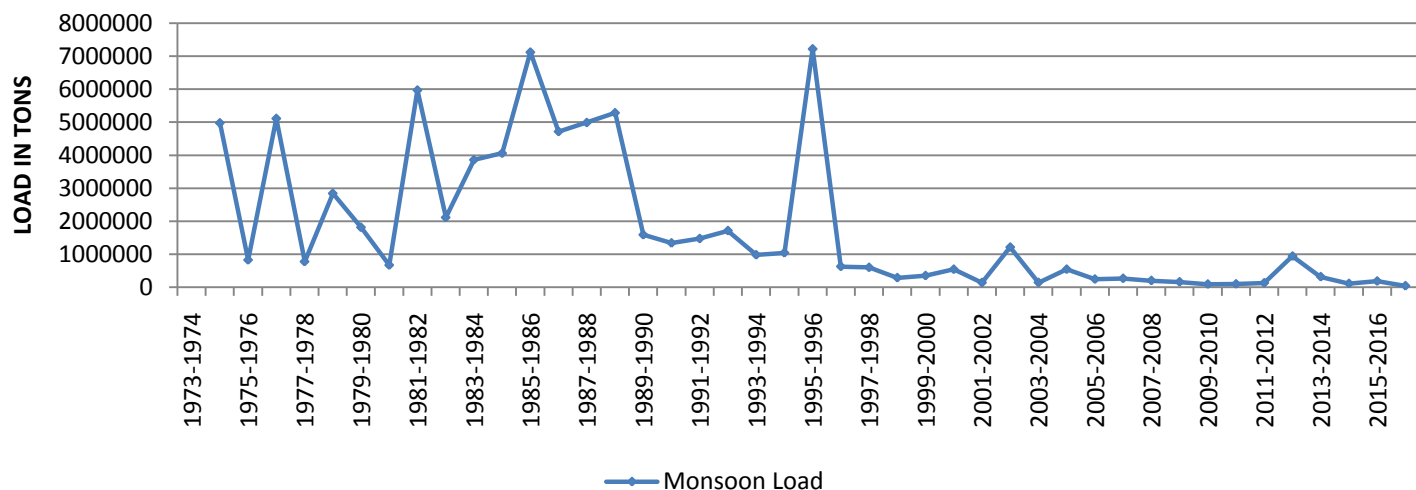
SITE BAHMNIDHI

YEAR WISE TREND OF SITE BAMNIDHI

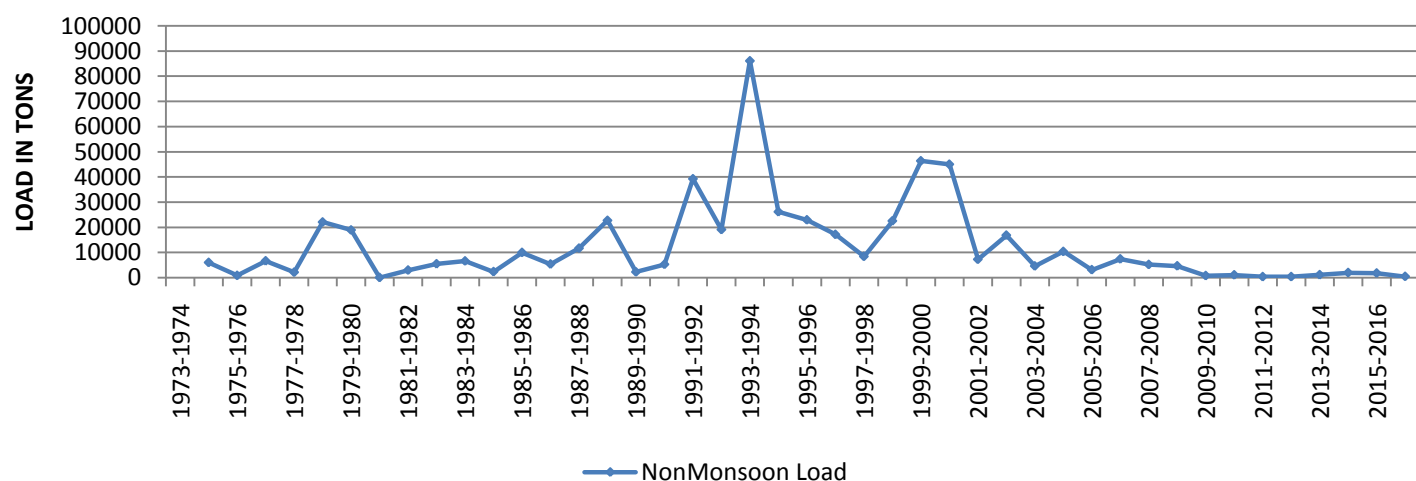




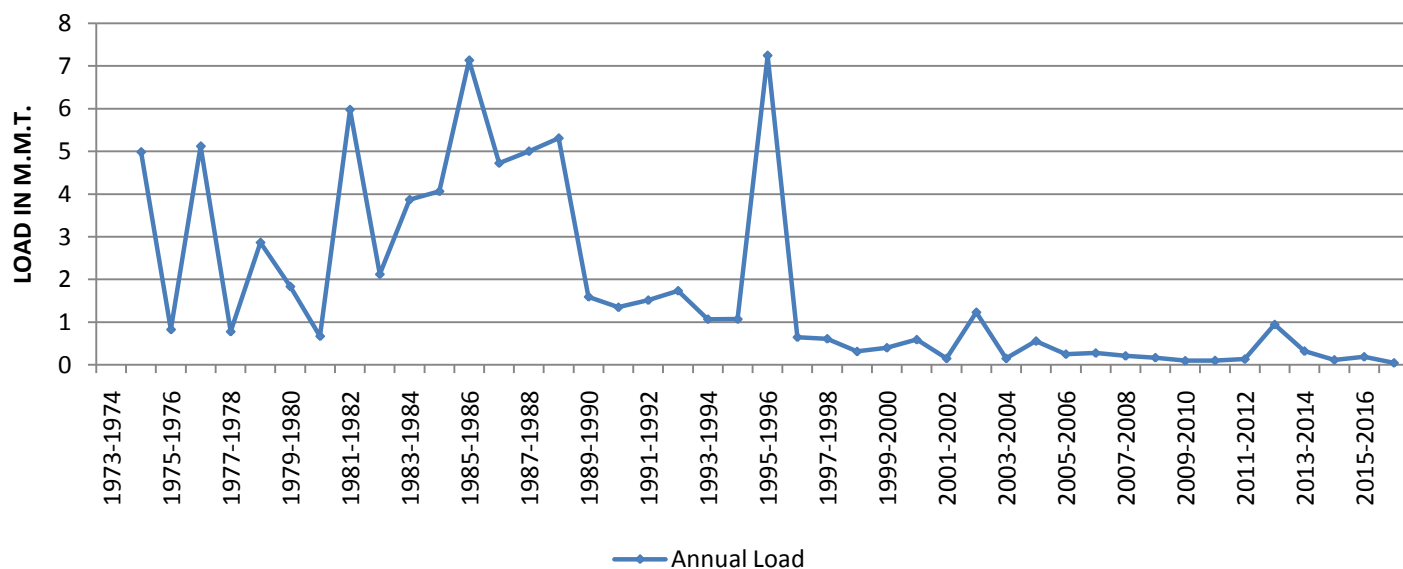
MONSOON LOAD AT SITE BAMNIDHI, TRIBUTARY:HASDEO

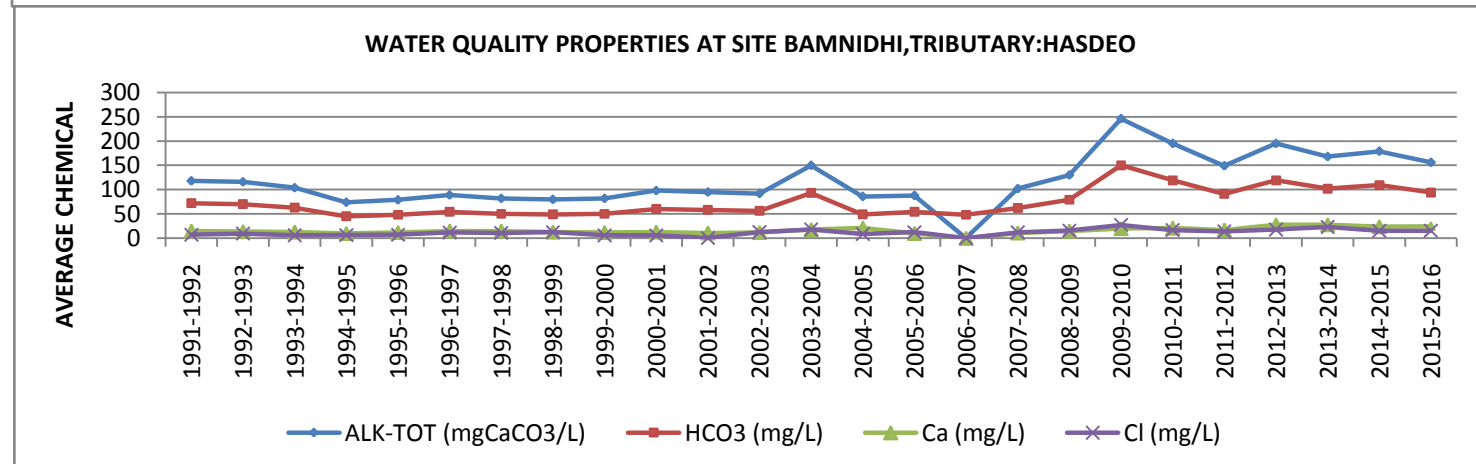
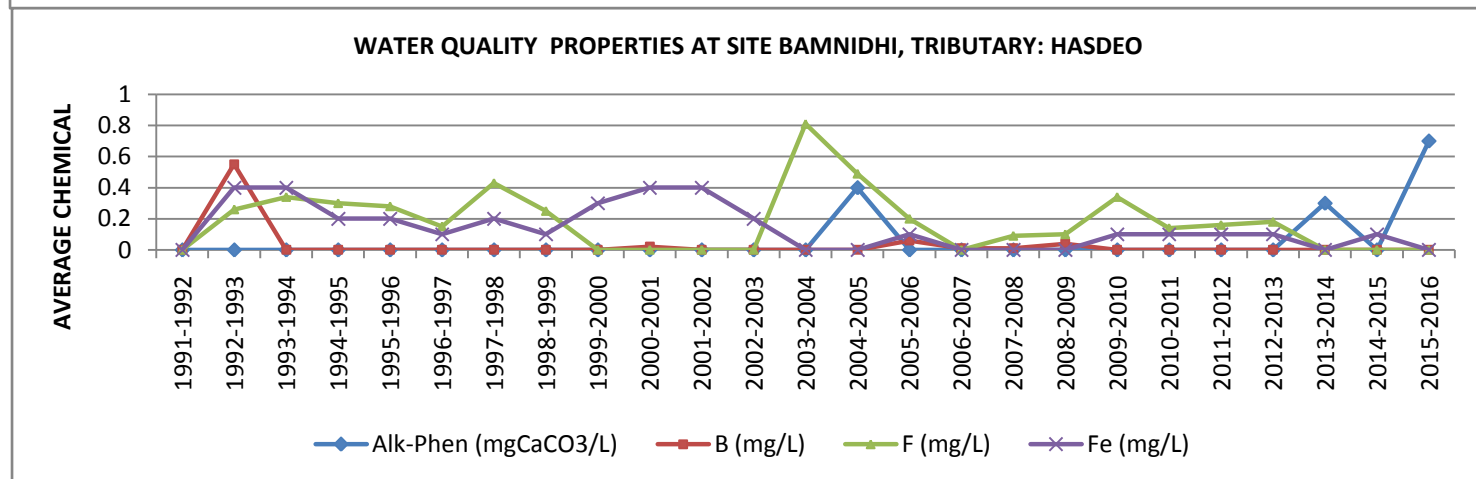
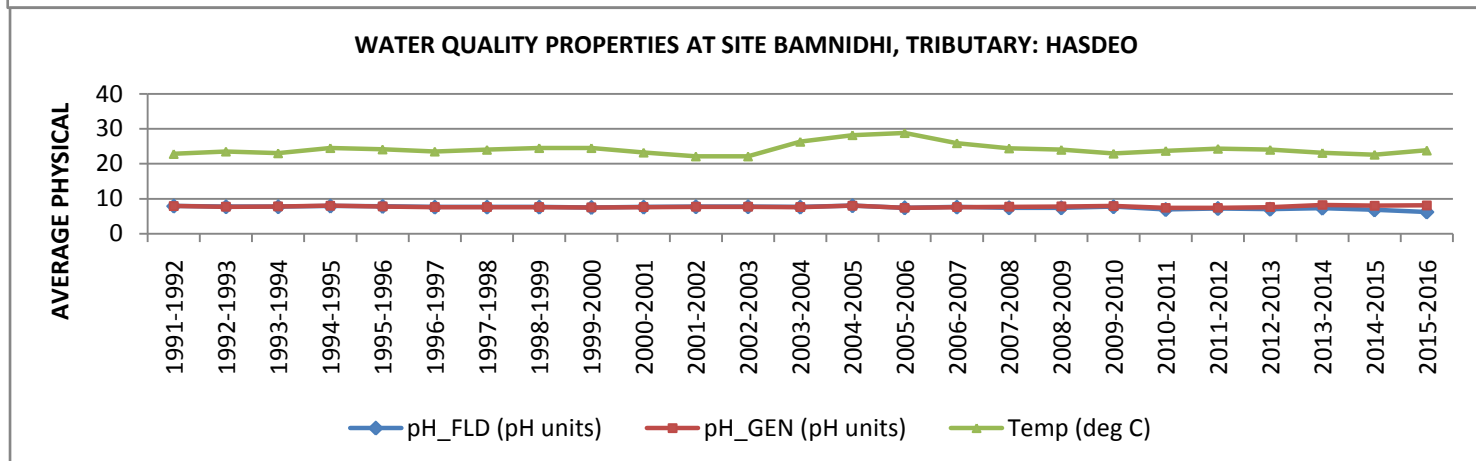
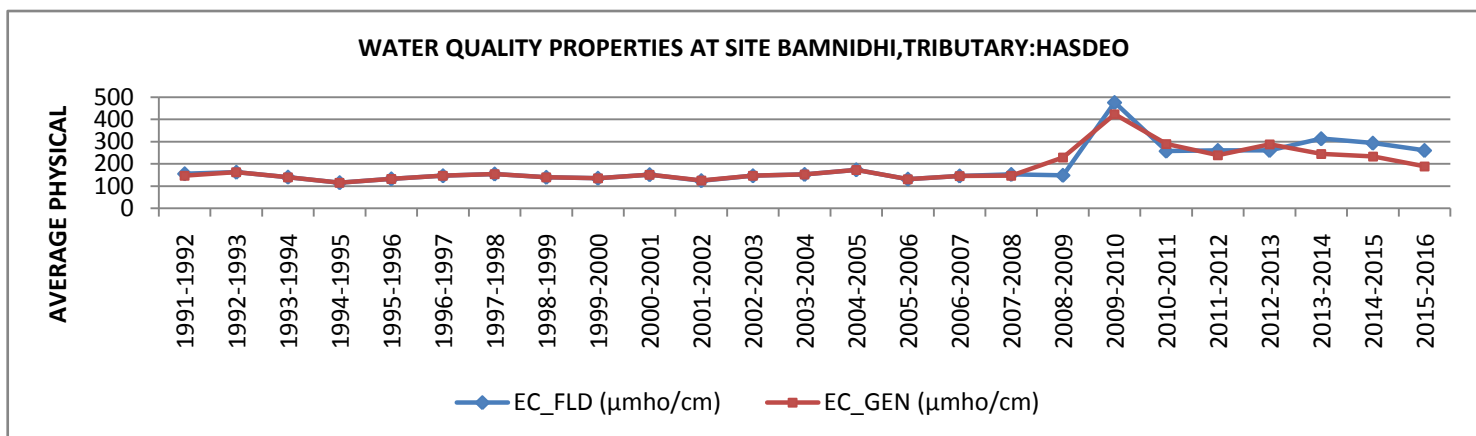


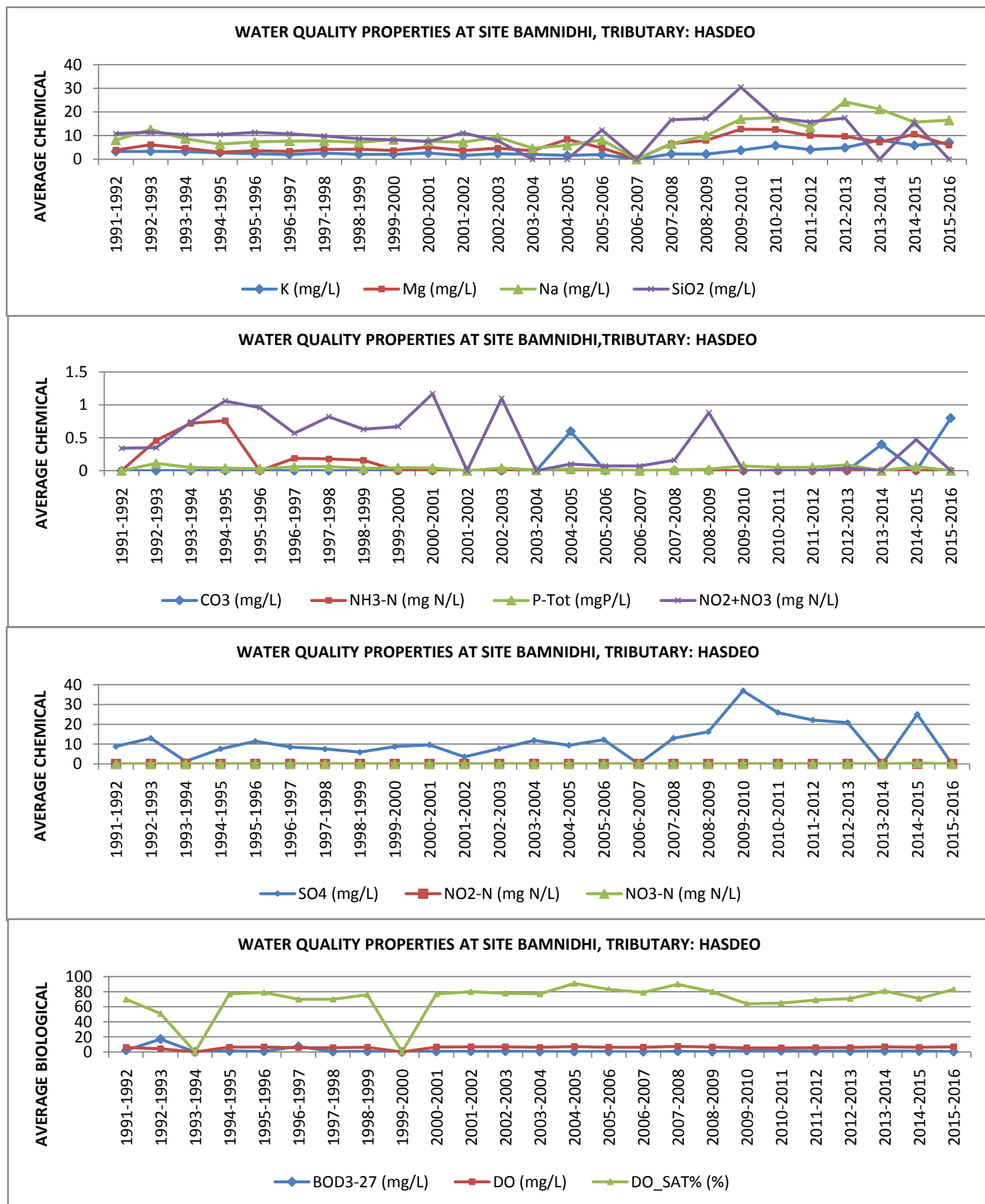
NON MONSOON LOAD AT SITE BAMNIDHI, TRIBUTARY: HASDEO



ANNUAL LOAD (MILLION M.T.) AT SITE BAMNIDHI,TRIBUTARY:HASDEO





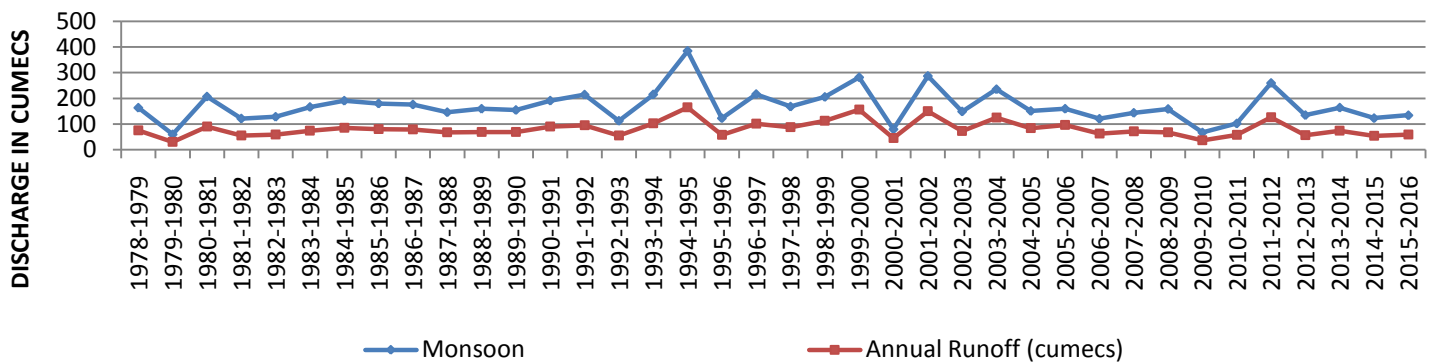


MAND SUB-BASIN

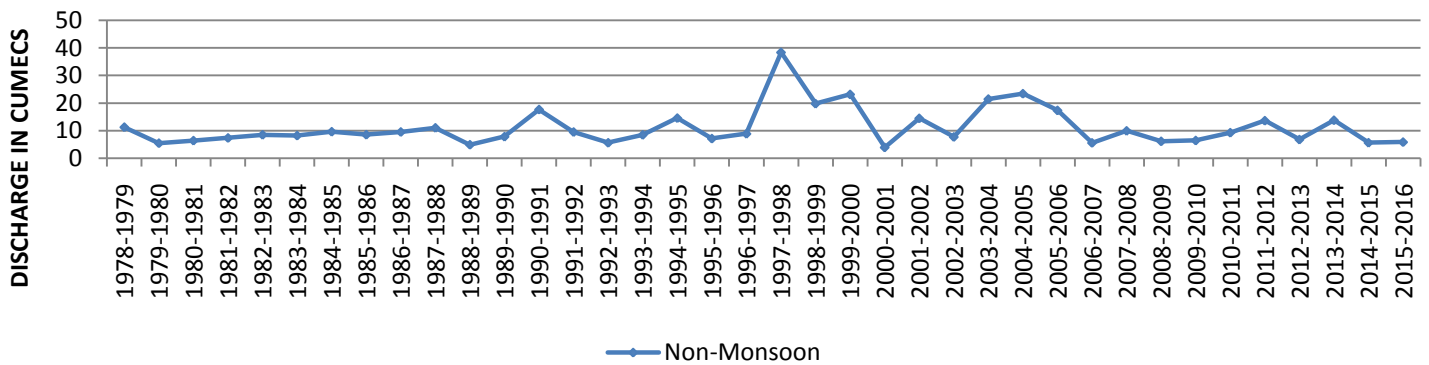
SITE KURUBHATA

YEAR WISE TREND OF SITE KURUBHATA

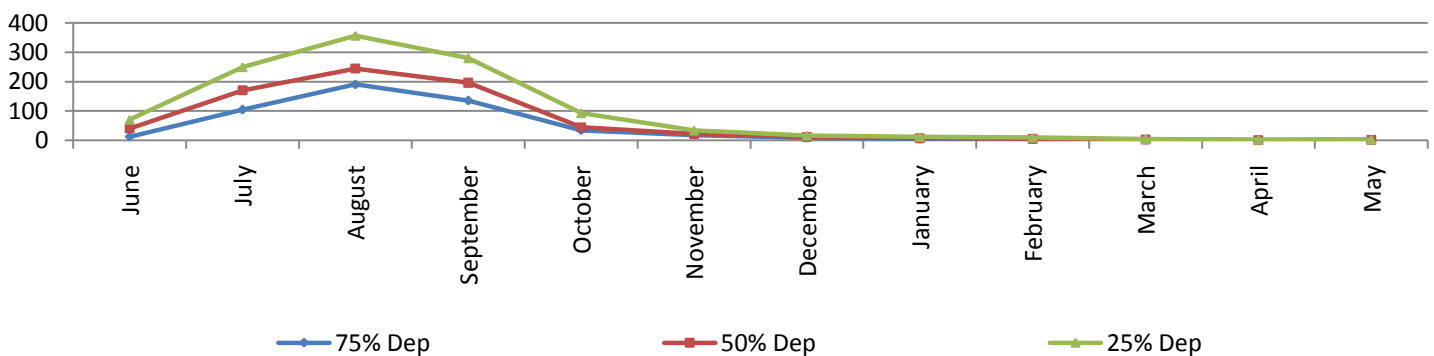
ANNUAL AVERAGE DISCHARGE SITE KURUBHATA, TRIBUTARY:MAND



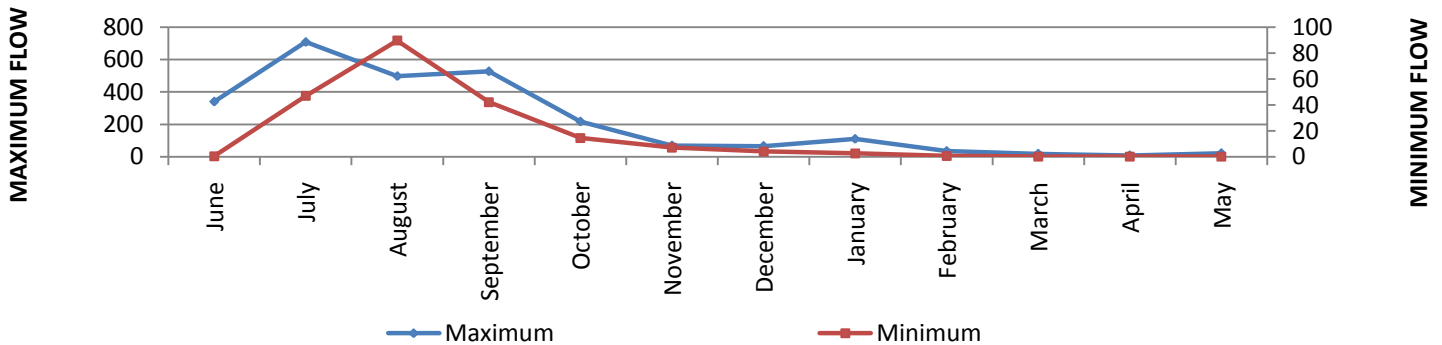
TOTAL ANNUAL DISCHARGE SITE KURUBHATA, TRIBUTARY:MAND

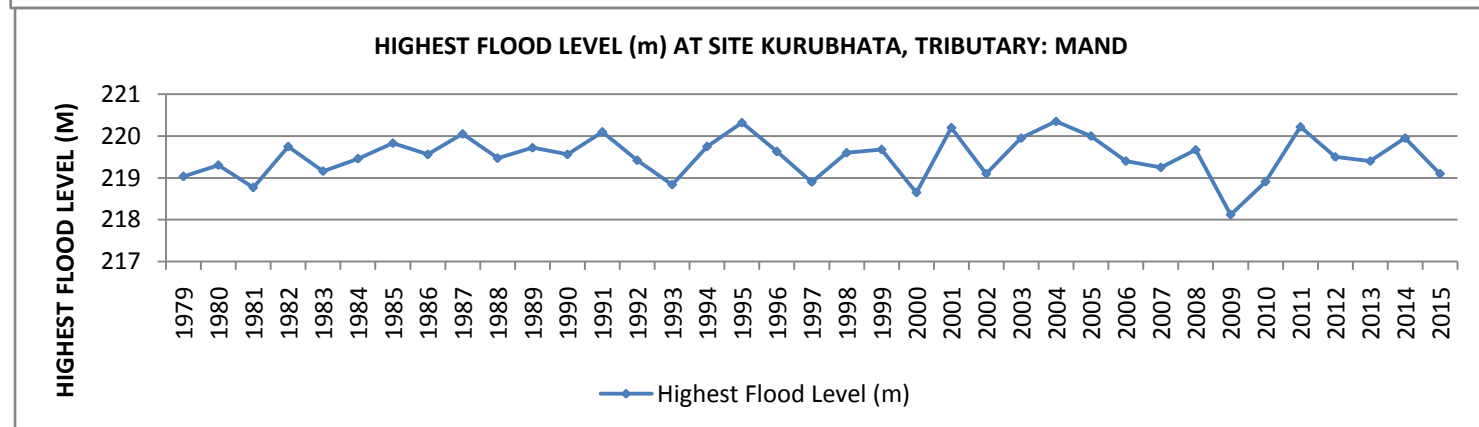
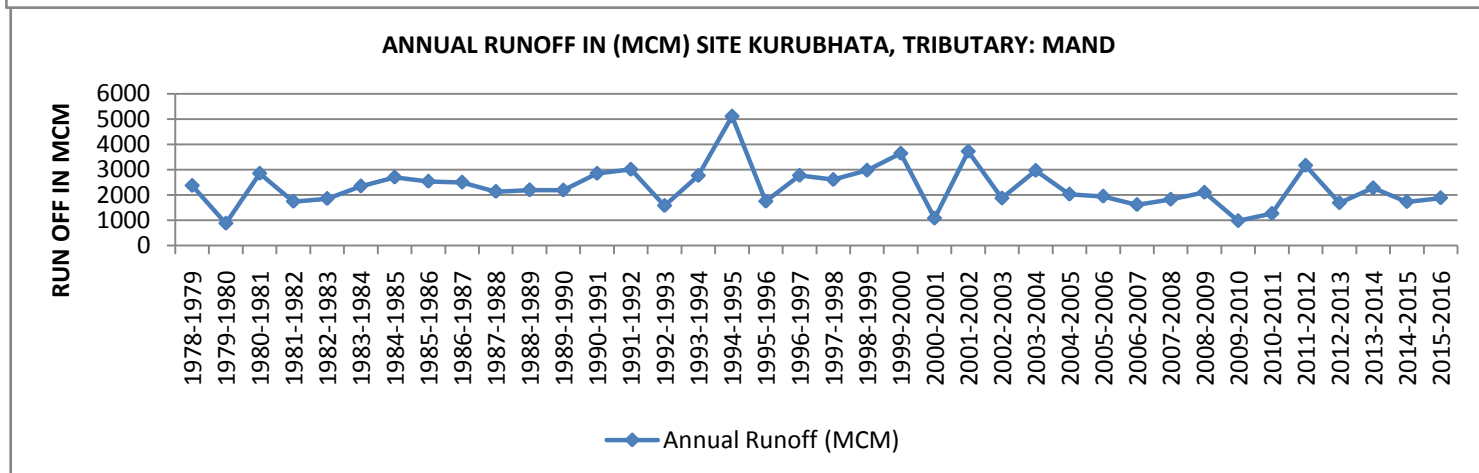
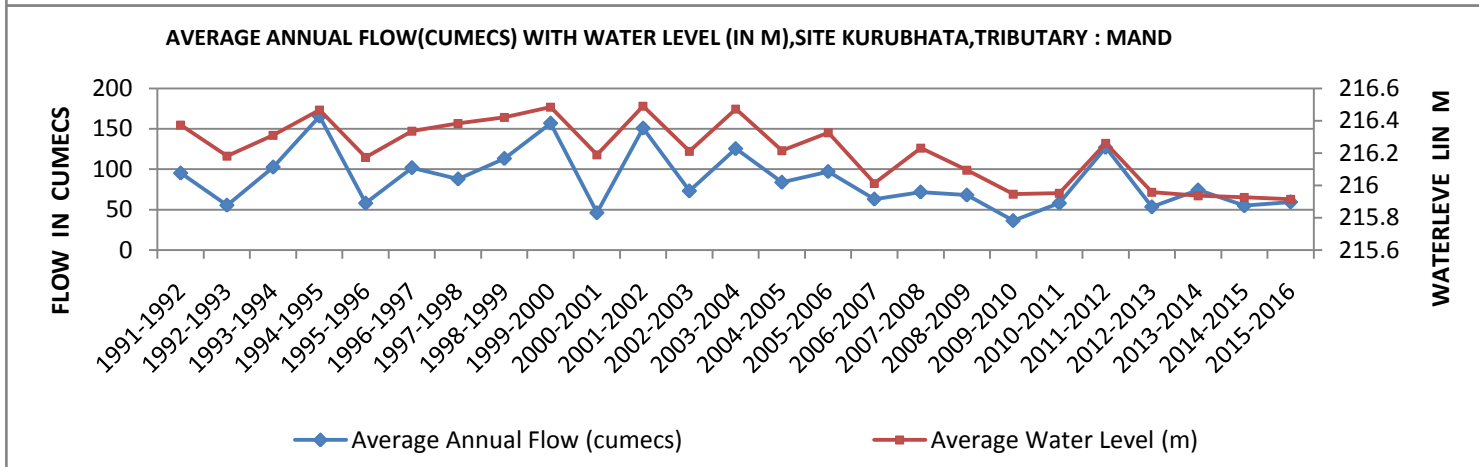
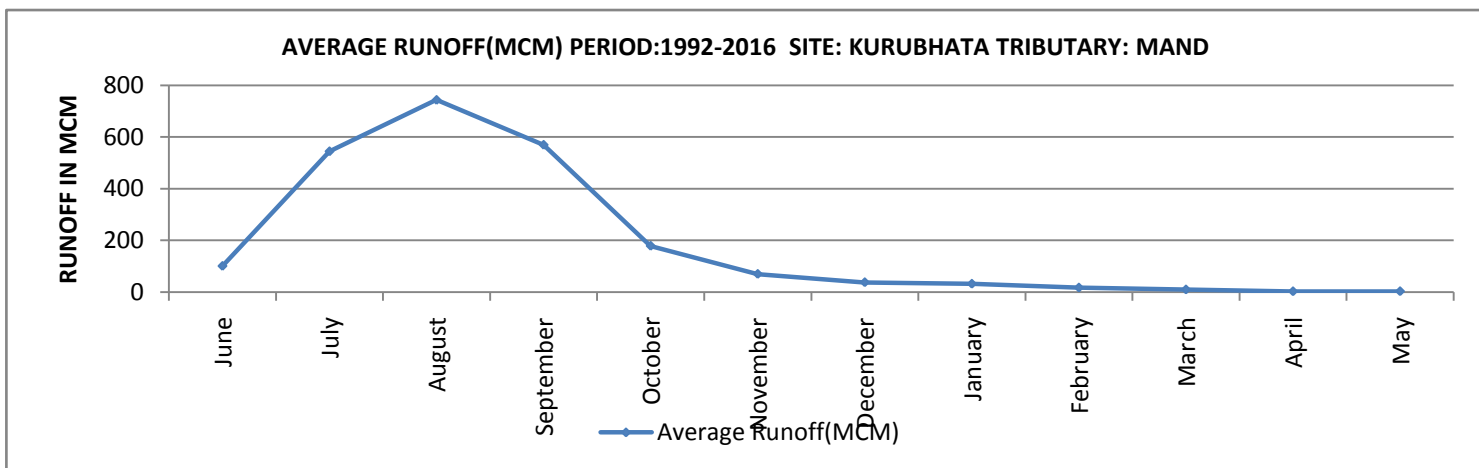


DEPENDIBILITY FLOW FROM JUNE TO MAY SITE KURUBHATA,TRIBUTARY:MAND

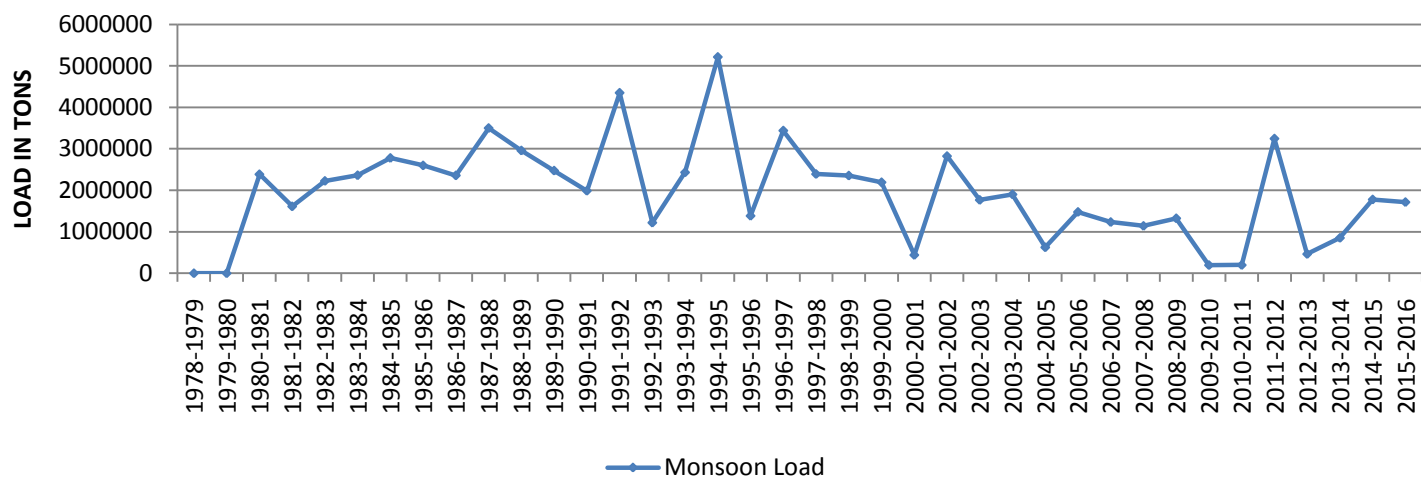


MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE KURUBHATA, TRIBUTARY: MAND

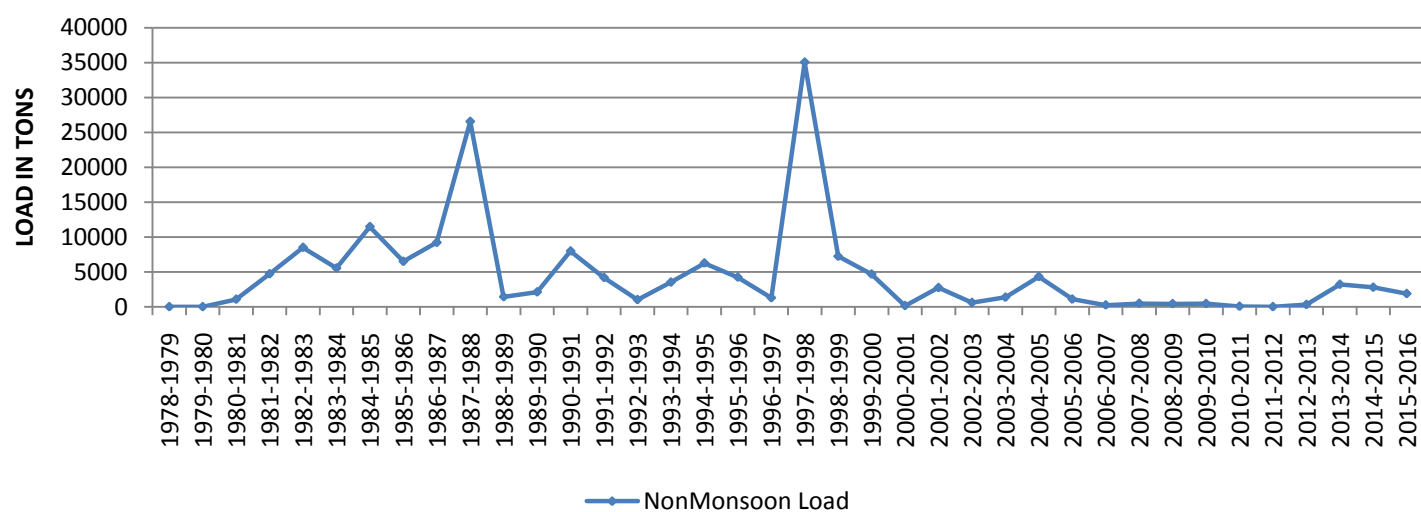




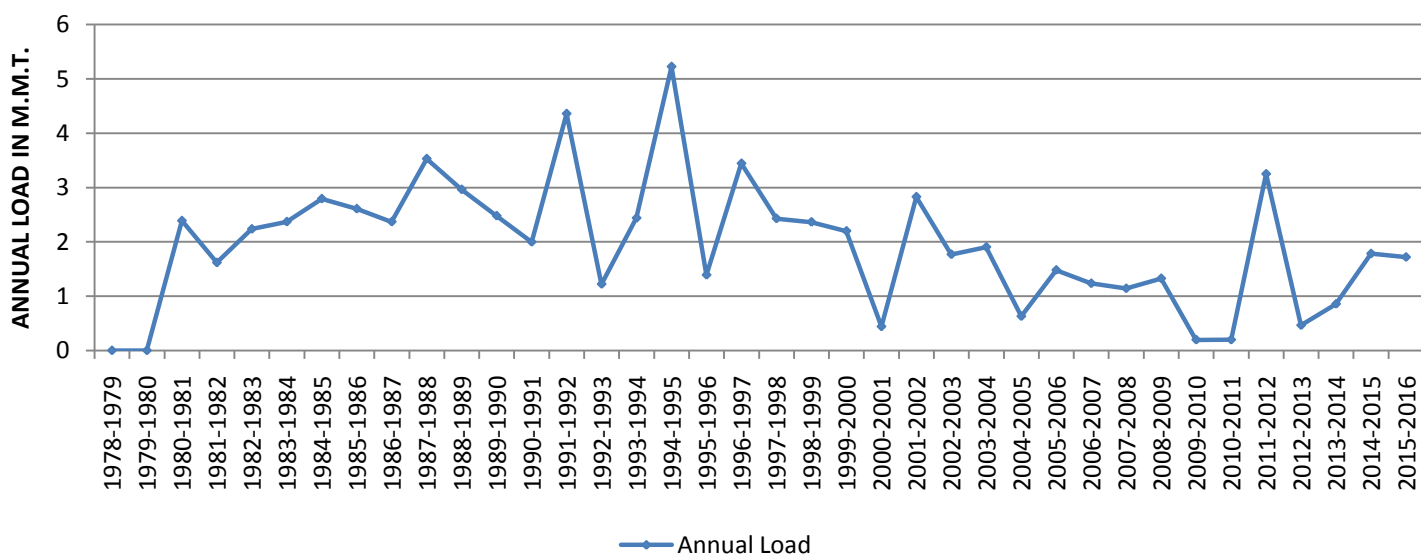
MONSOON LOAD AT SITE KURUBHATA, TRIBUTARY:MAND

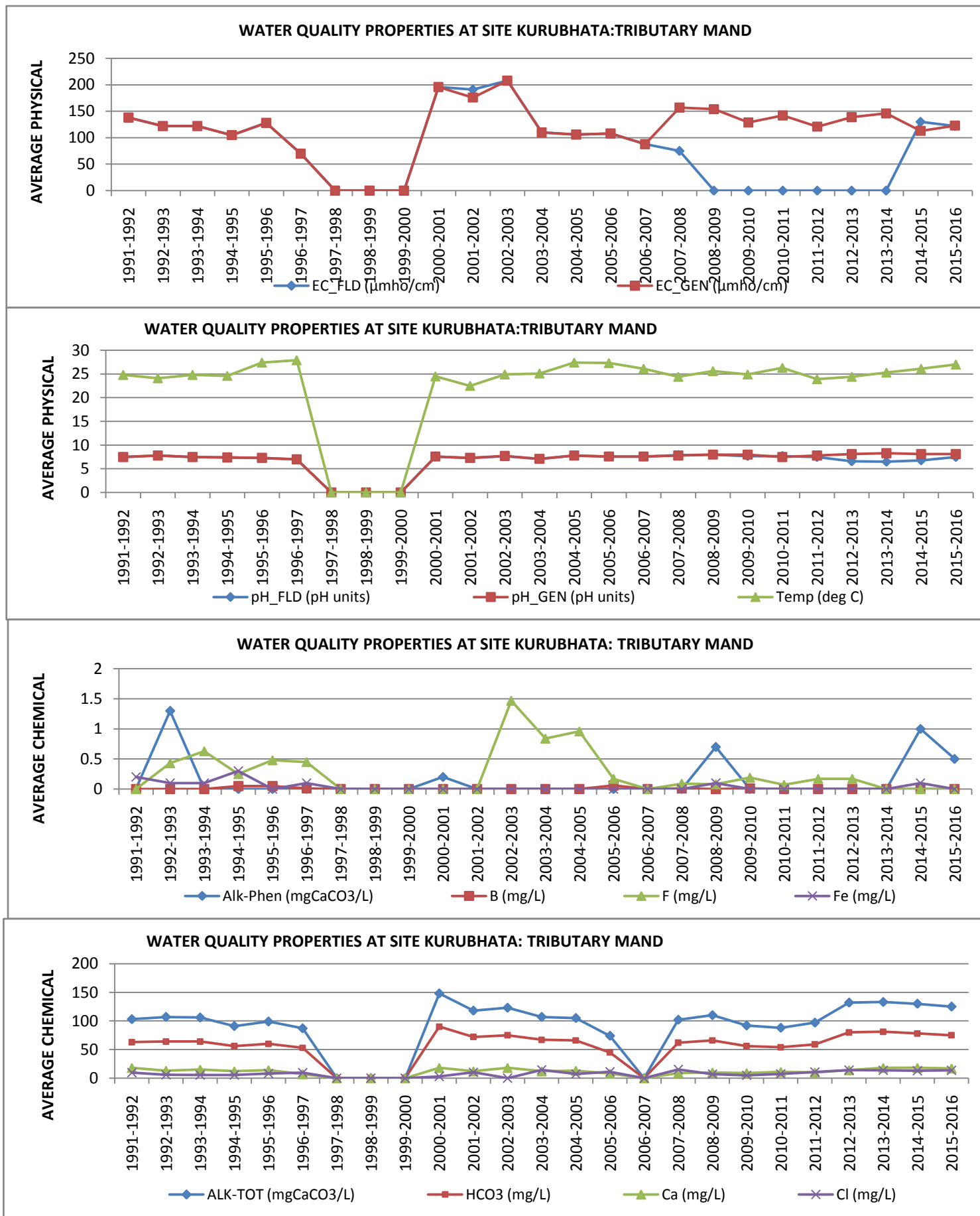


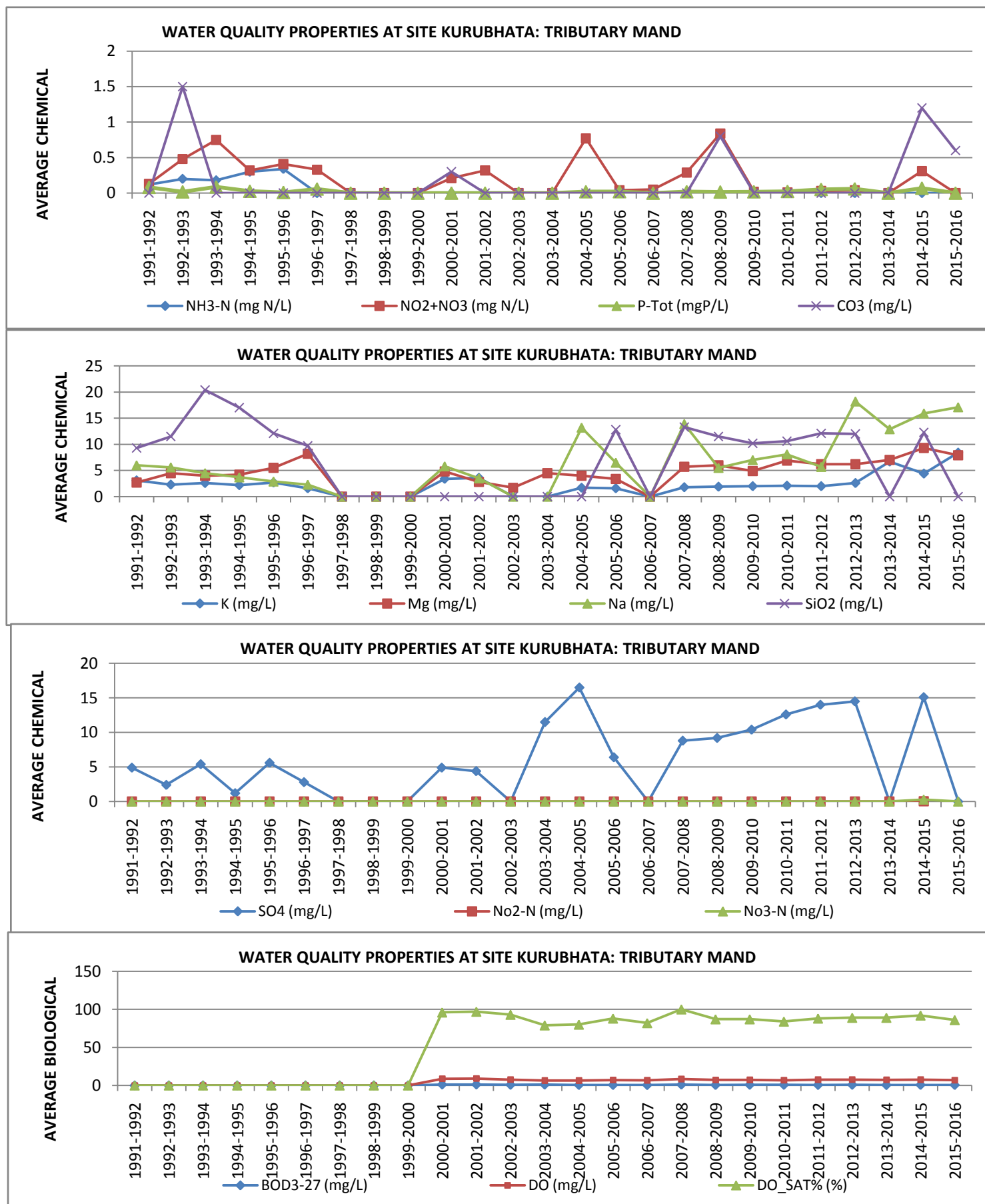
NON MONSOON LOAD AT SITE KURUBHATA, TRIBUTARY: MAND



ANNUAL LOAD (MILLION M.T.) SITE KURUBHATA, MAND





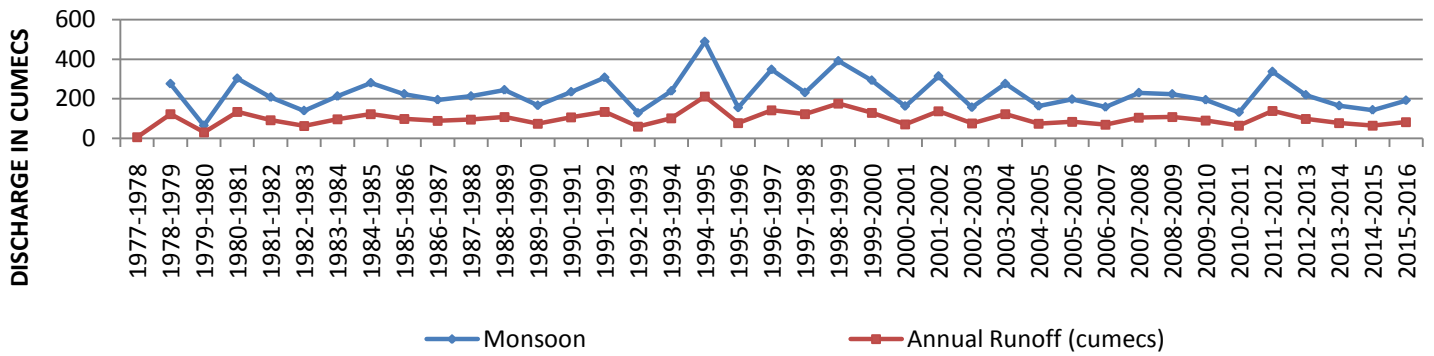


IB SUB-BASIN

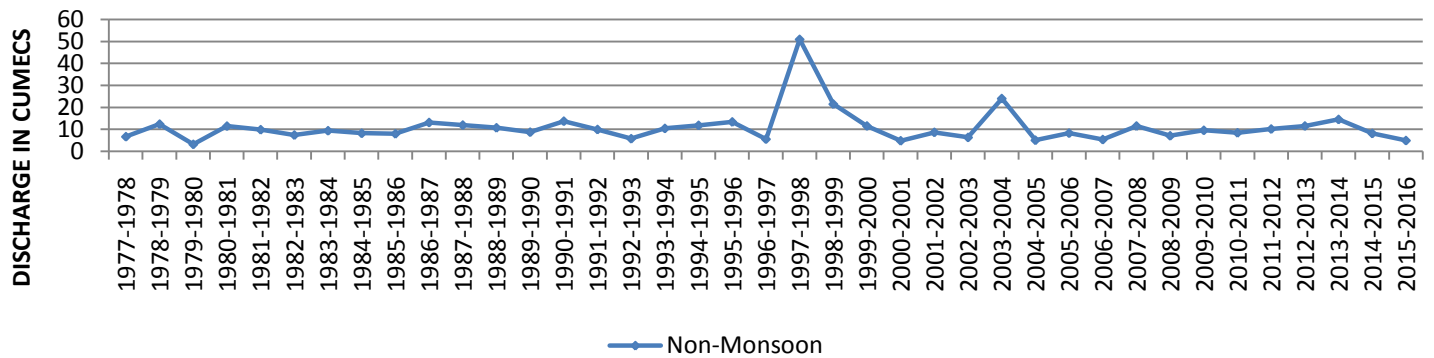
SITE SUNDARGARH

YEAR WISE TREND OF SITE SUNDARGARH

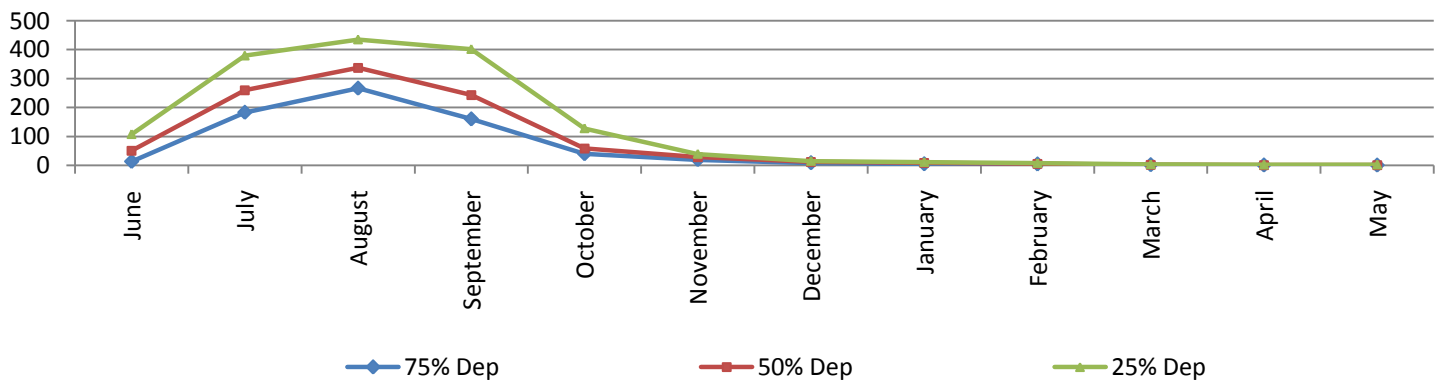
ANNUAL AVERAGE DISCHARGE SITE SUNDARGARH, TRIBUTARY:IB



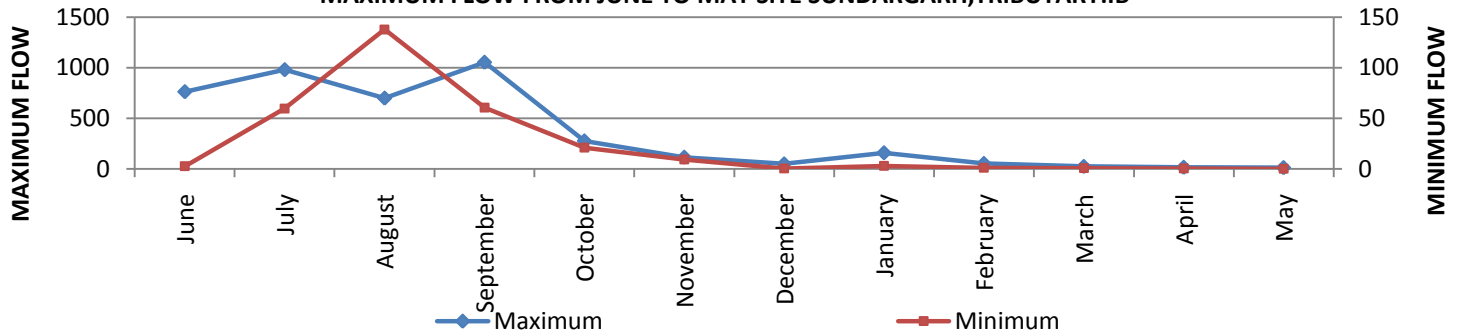
TOTAL ANNUAL DISCHARGE SITE SUNDARGARH, TRIBUTARY:IB

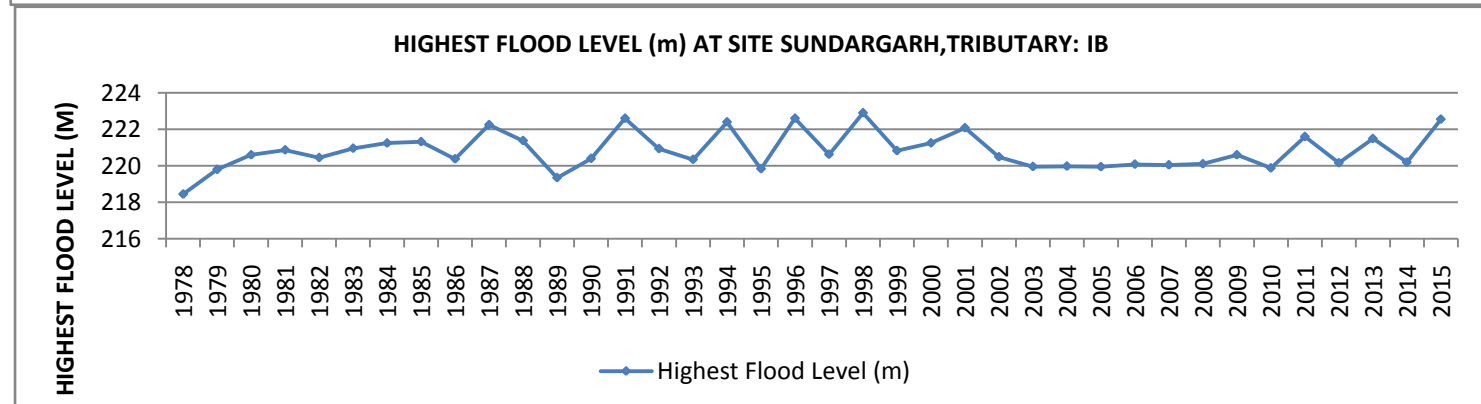
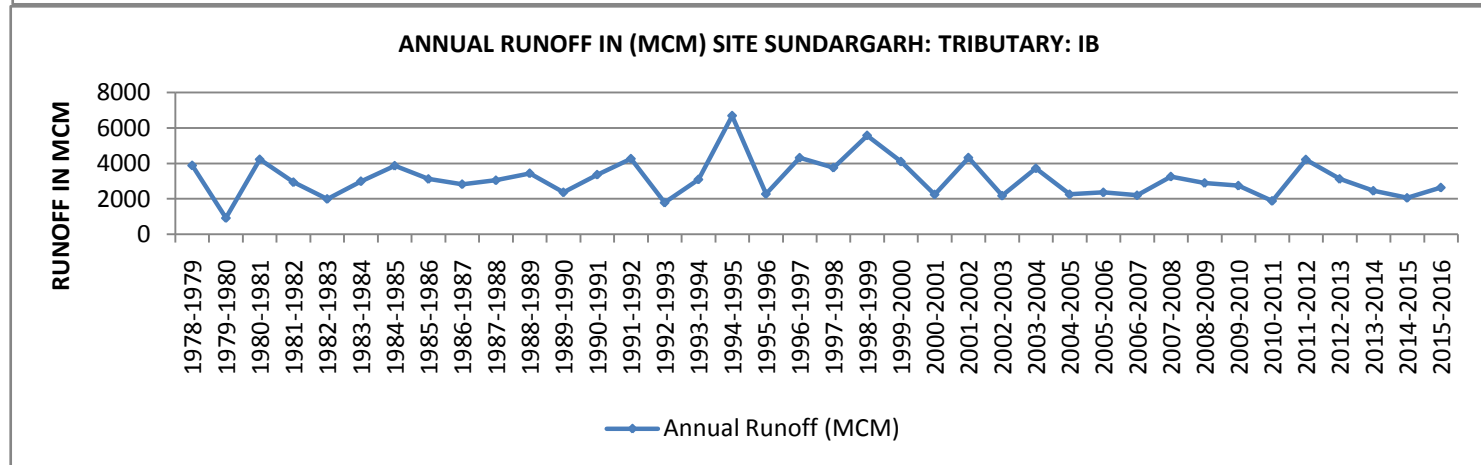
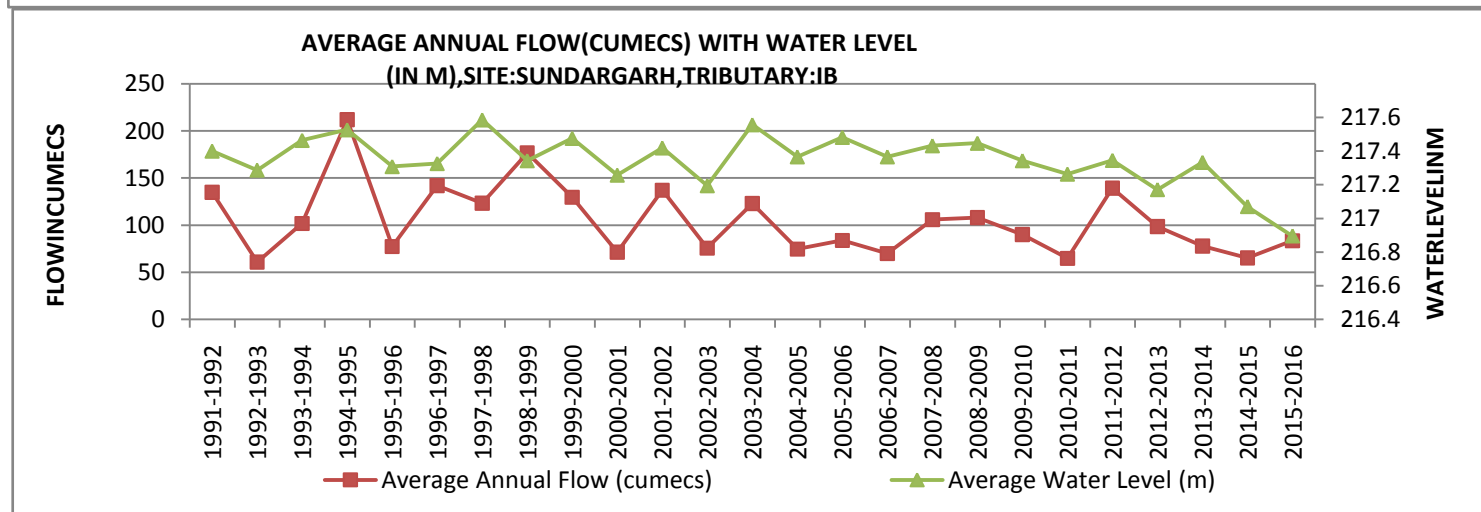
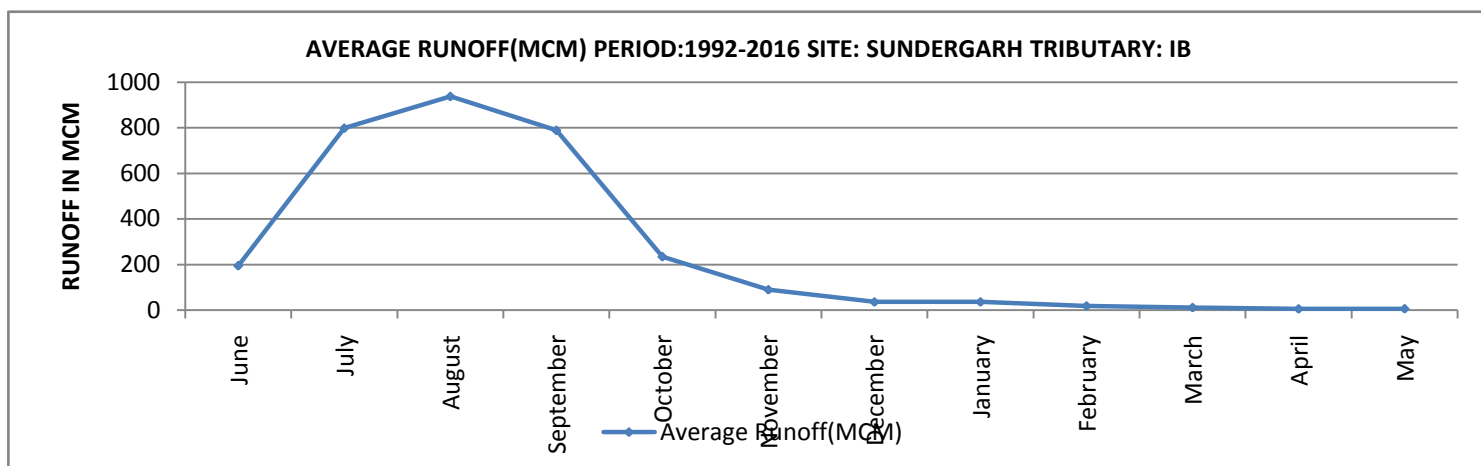


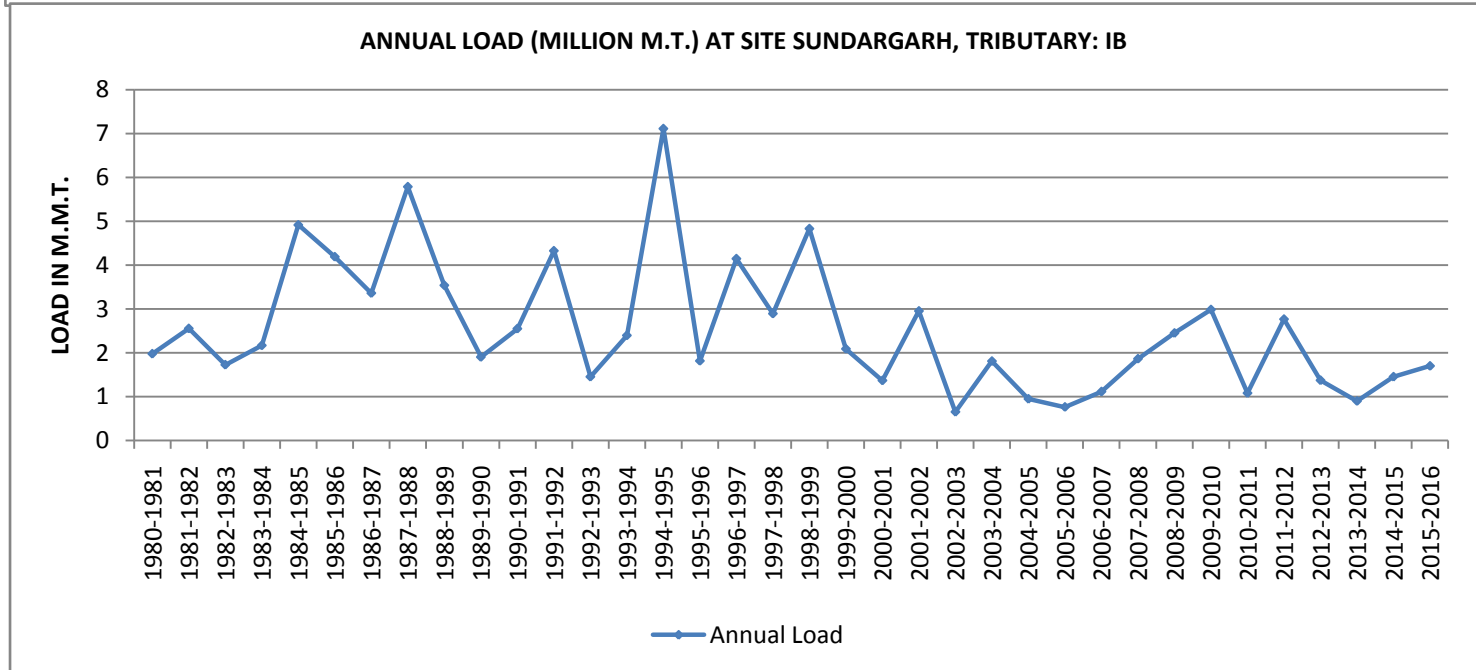
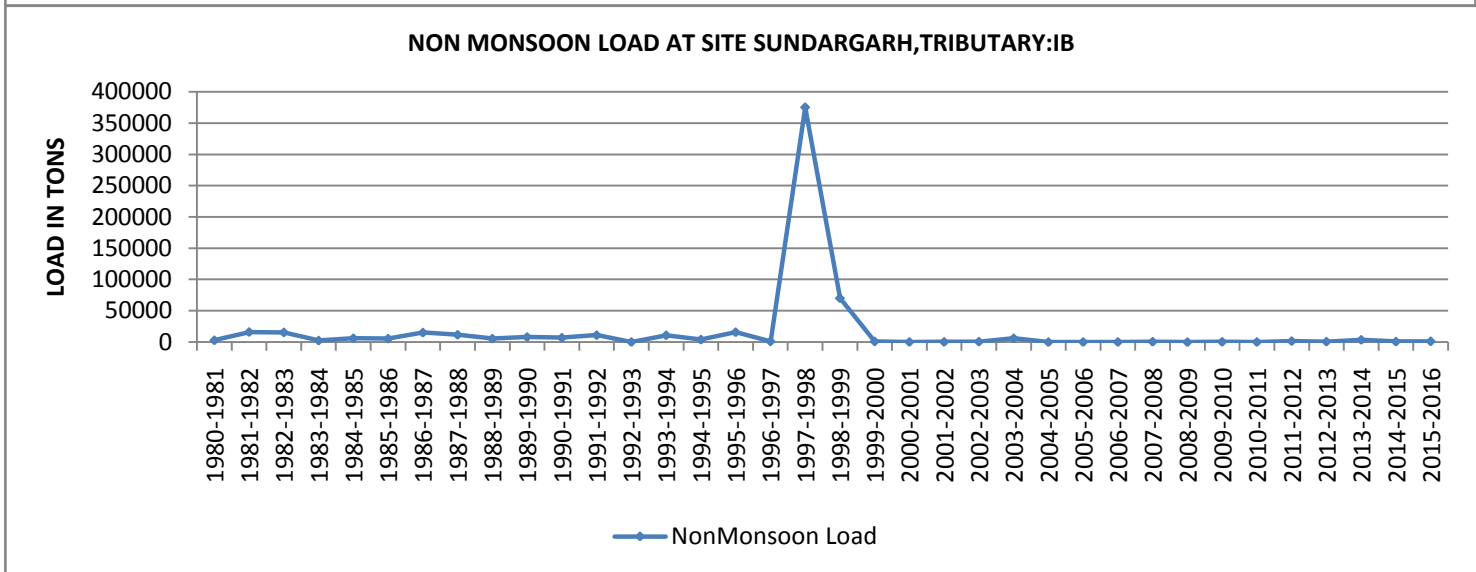
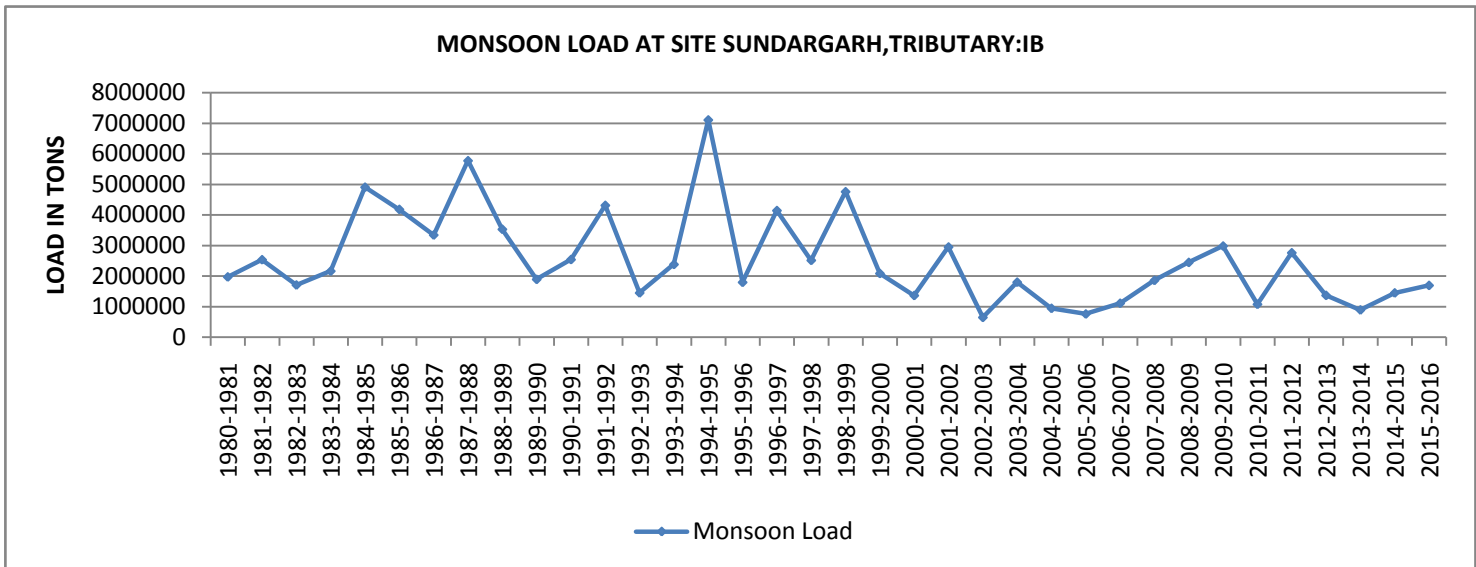
DEPENDABILITY FLOW FROM JUNE TO MAY SITE SUNDARGARH, TRIBUTARY:IB

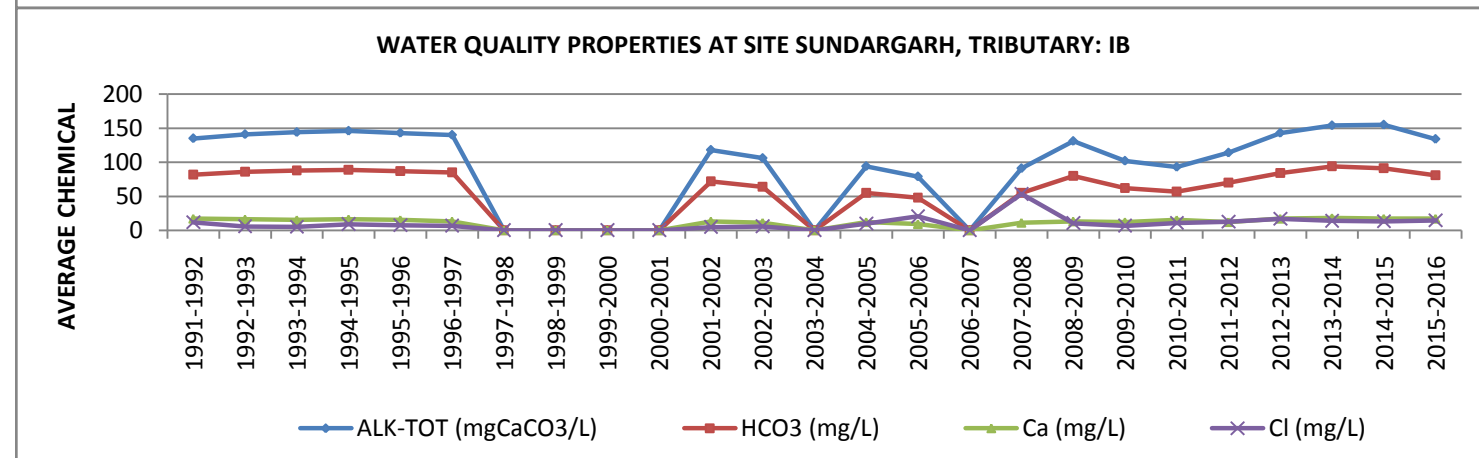
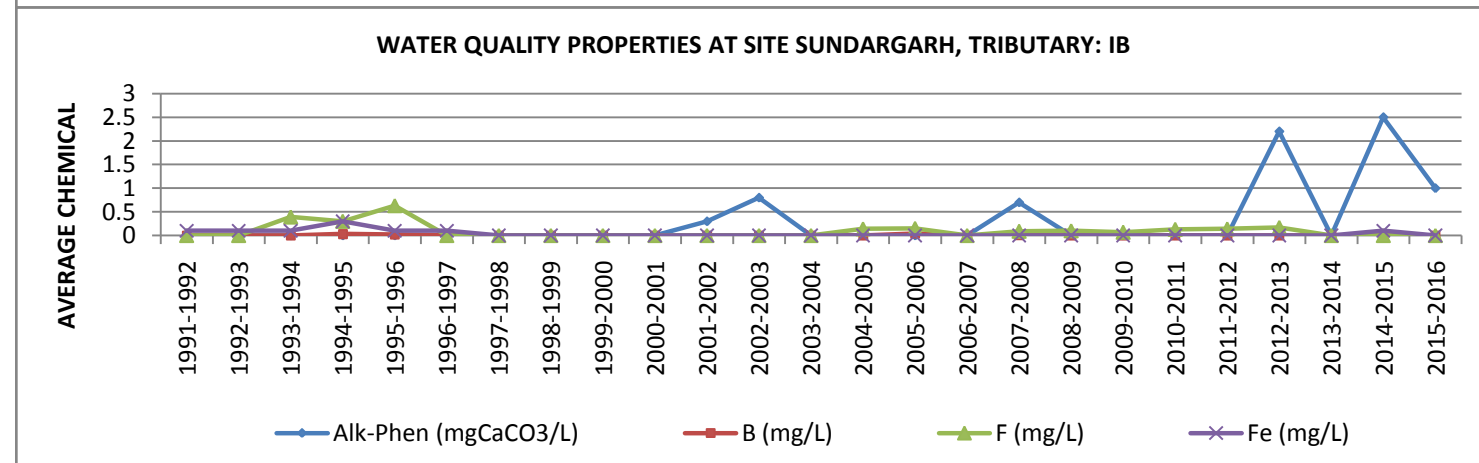
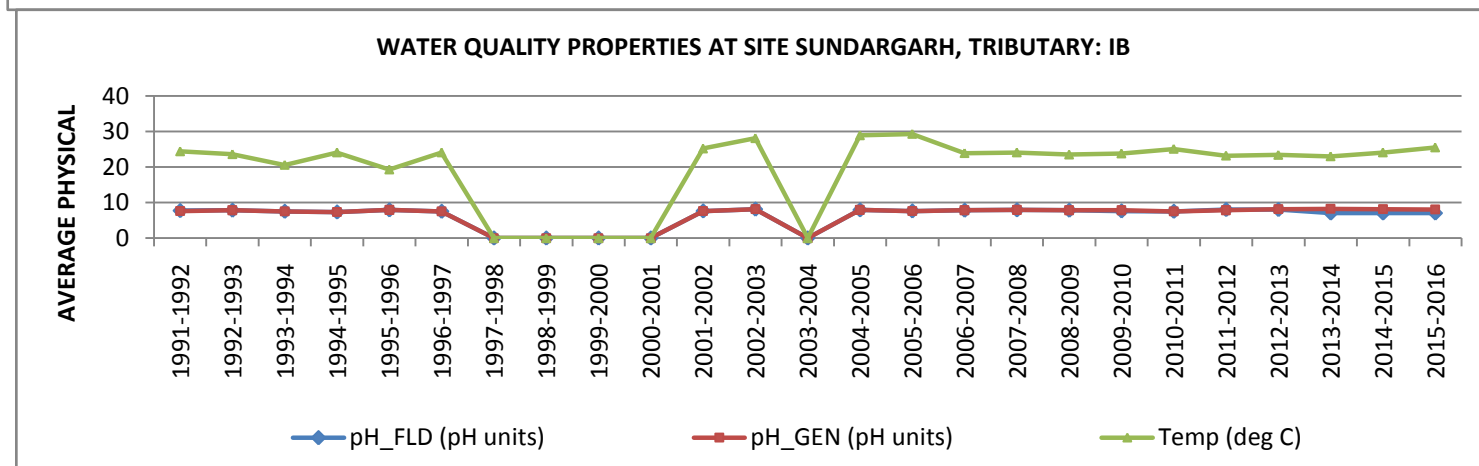
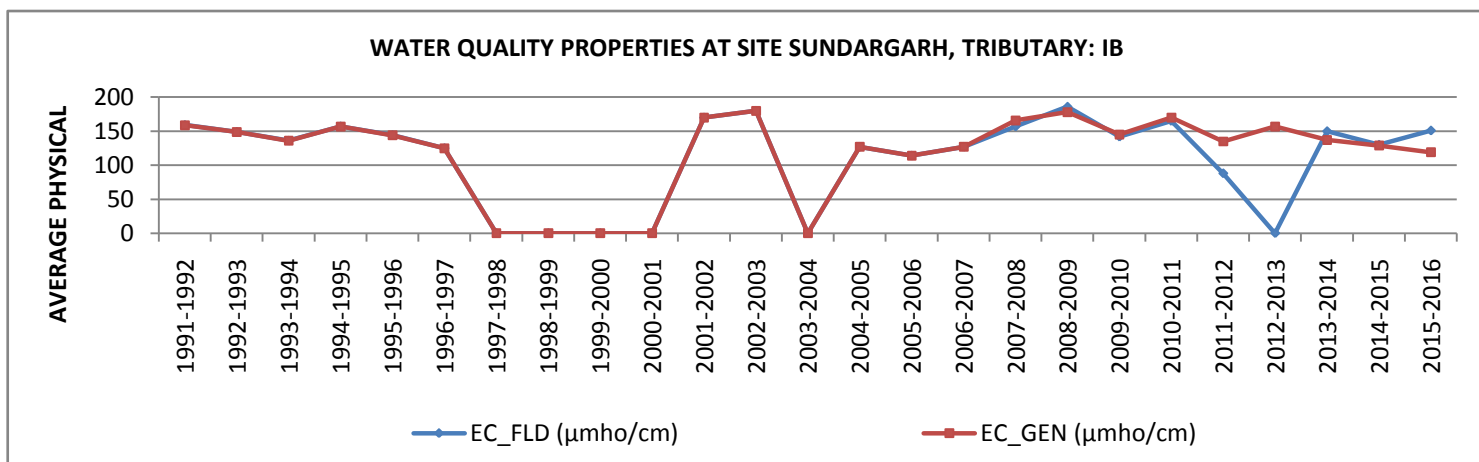


MAXIMUM FLOW FROM JUNE TO MAY SITE SUNDARGARH, TRIBUTARY:IB

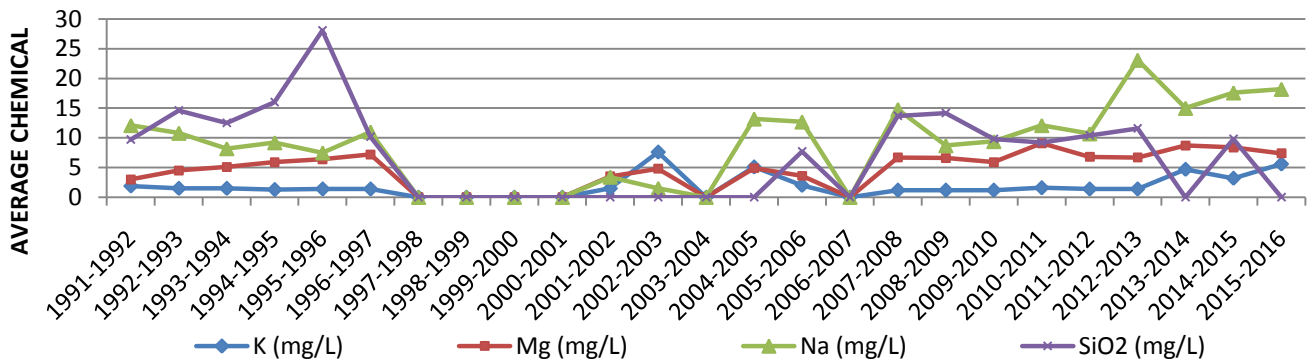




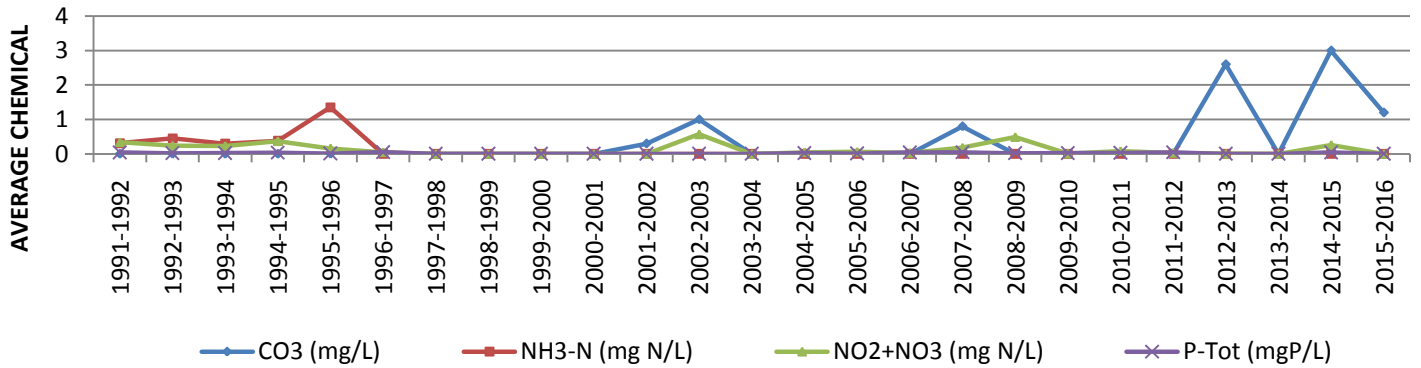




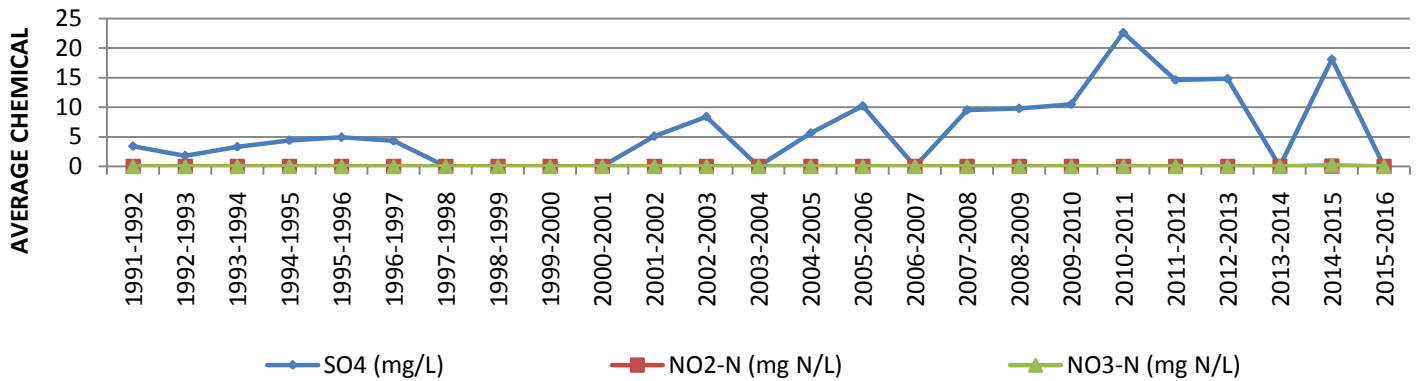
WATER QUALITY PROPERTIES AT SITE SUNDARGARH, TRIBUTARY: IB



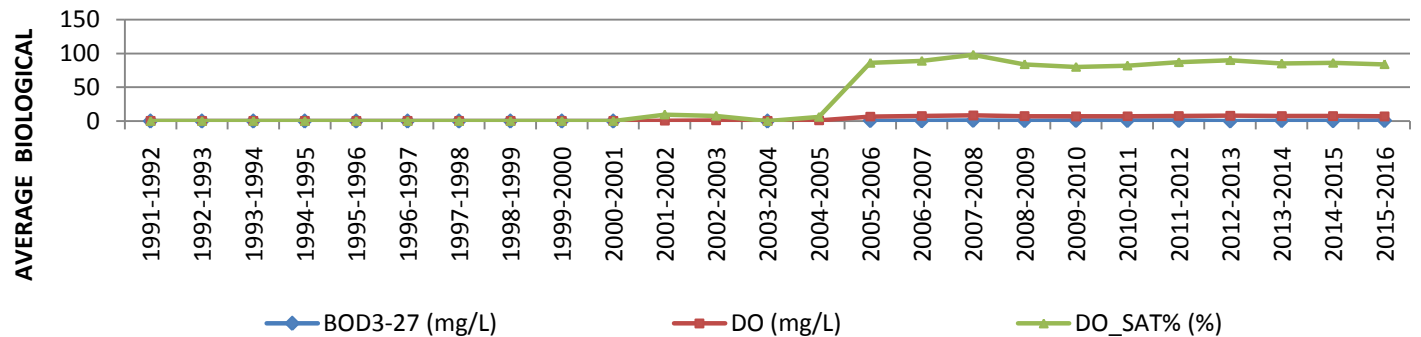
WATER QUALITY PROPERTIES AT SITE SUNDARGARH,TRIBUTARY: IB



WATER QUALITY PROPERTIES AT SITE SUNDARGARH, TRIBUTARY: IB



WATER QUALITY PROPERTIES AT SITE SUNDARGARH, TRIBUTARY:IB

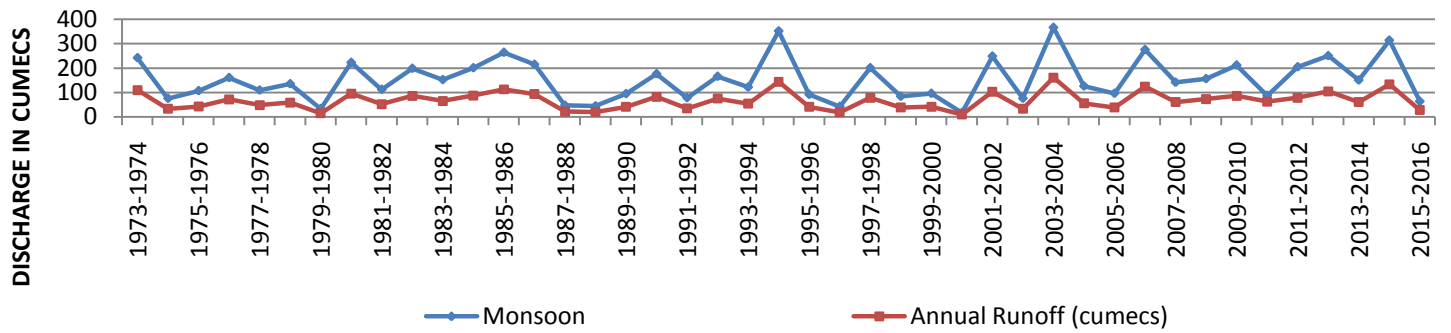


ONG SUB-BASIN

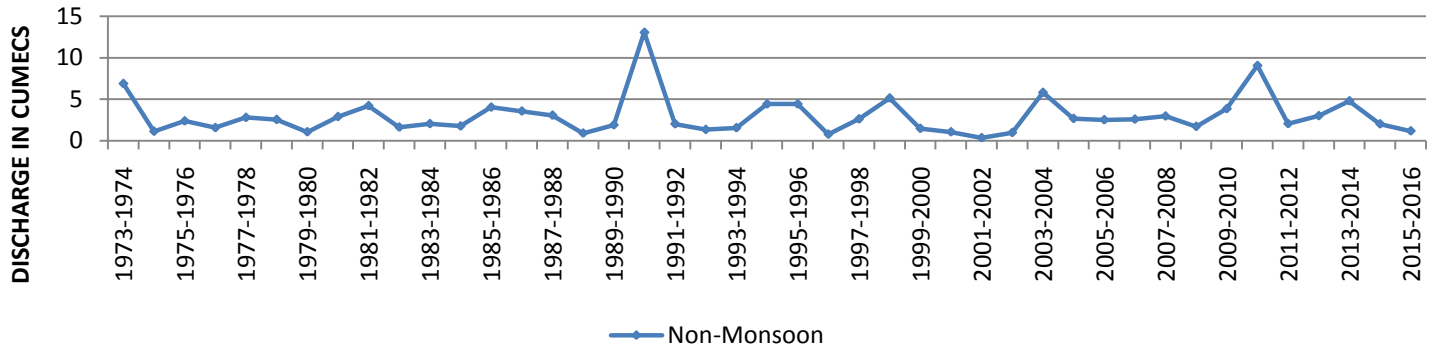
SITE SALEBHATA

YEAR WISE TREND OF SITE SALEBHATA

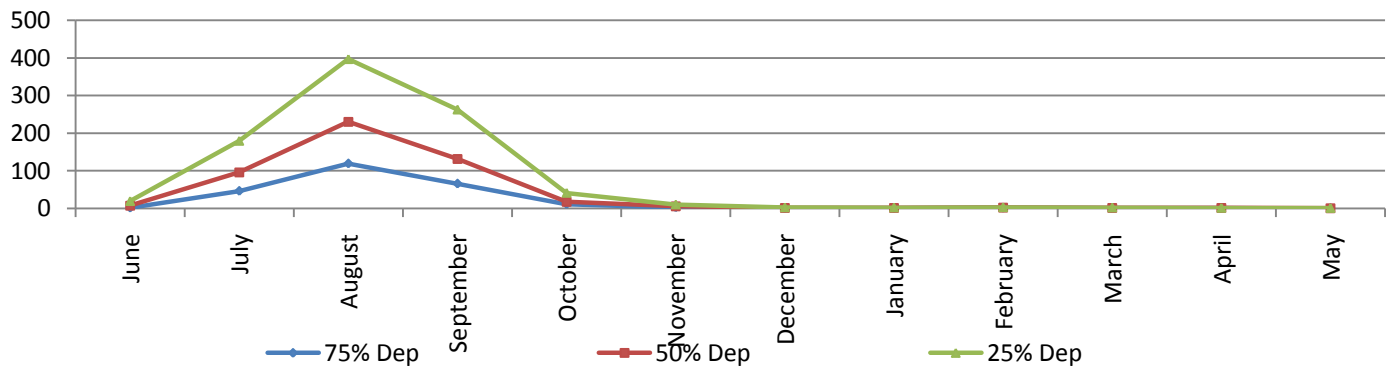
ANNUAL AVERAGE DISCHARGE SITE SALEBHATA, TRIBUTARY: ONG



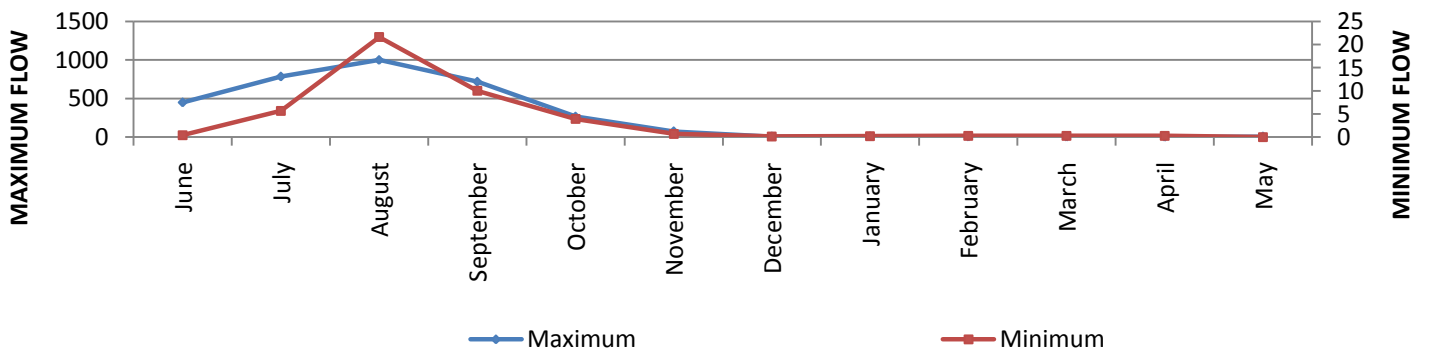
TOTAL ANNUAL DISCHARGE SITE SALEBHATA, TRIBUTARY: ONG

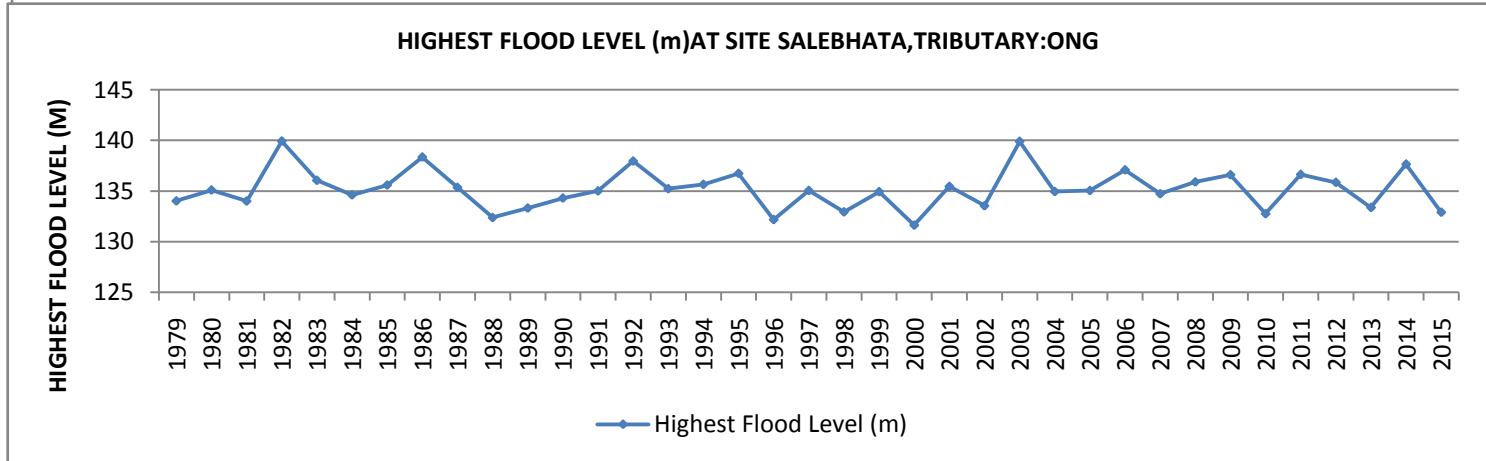
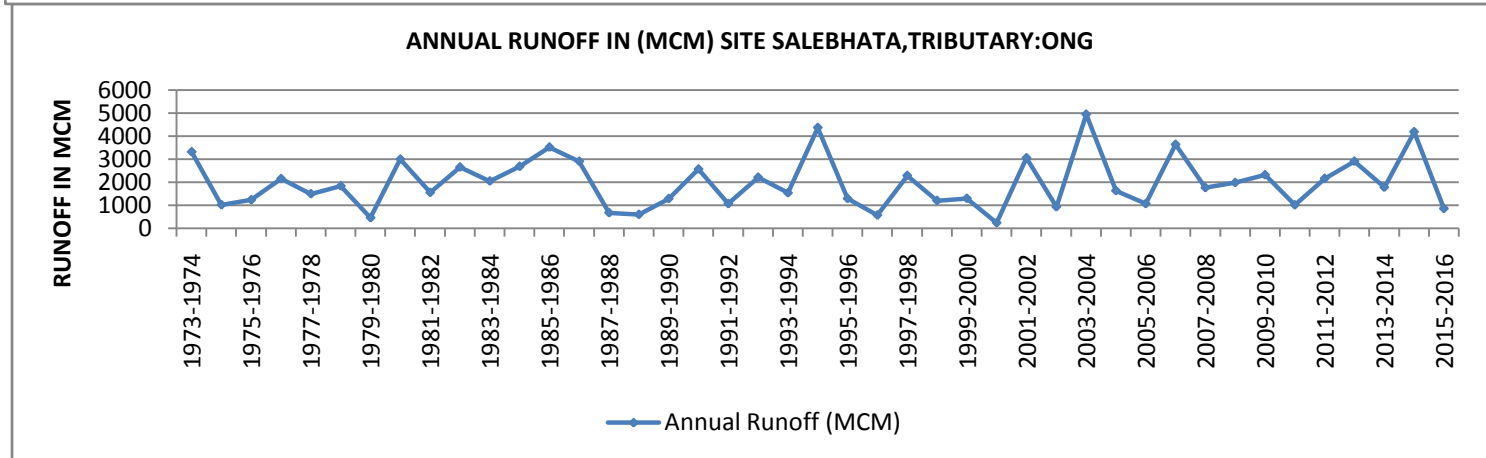
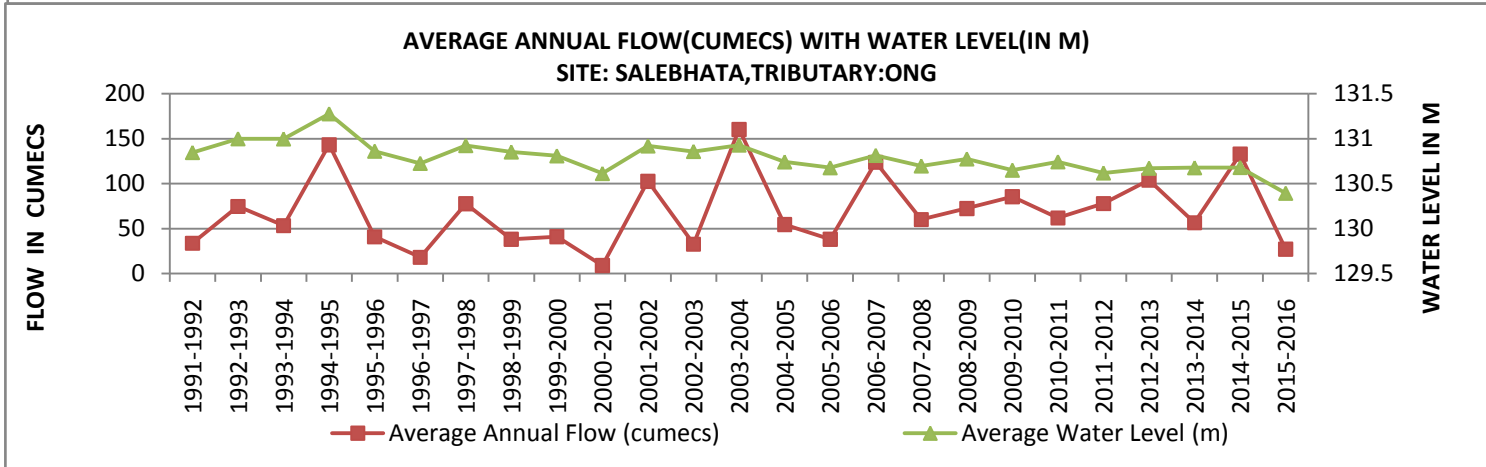
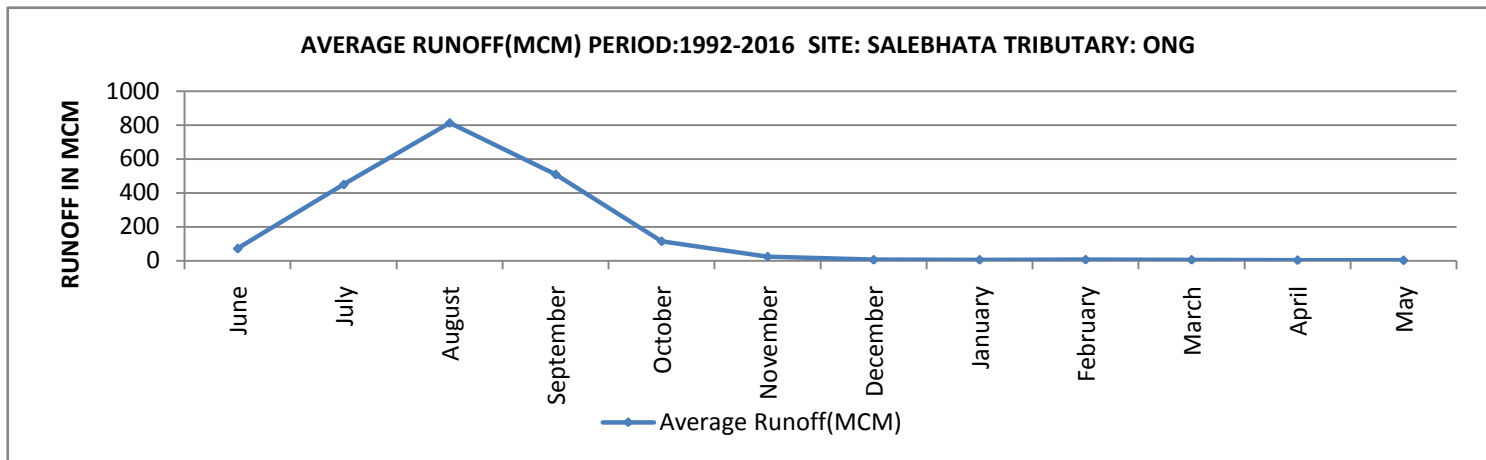


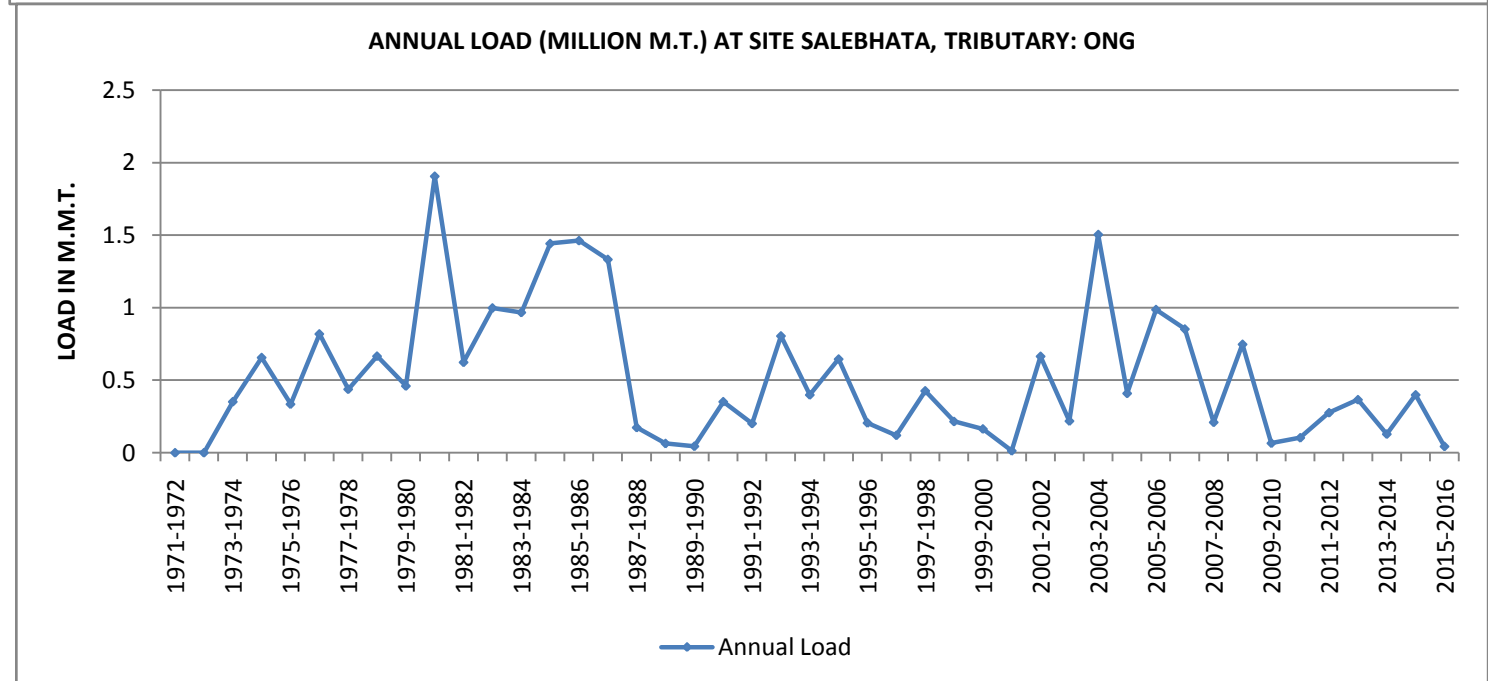
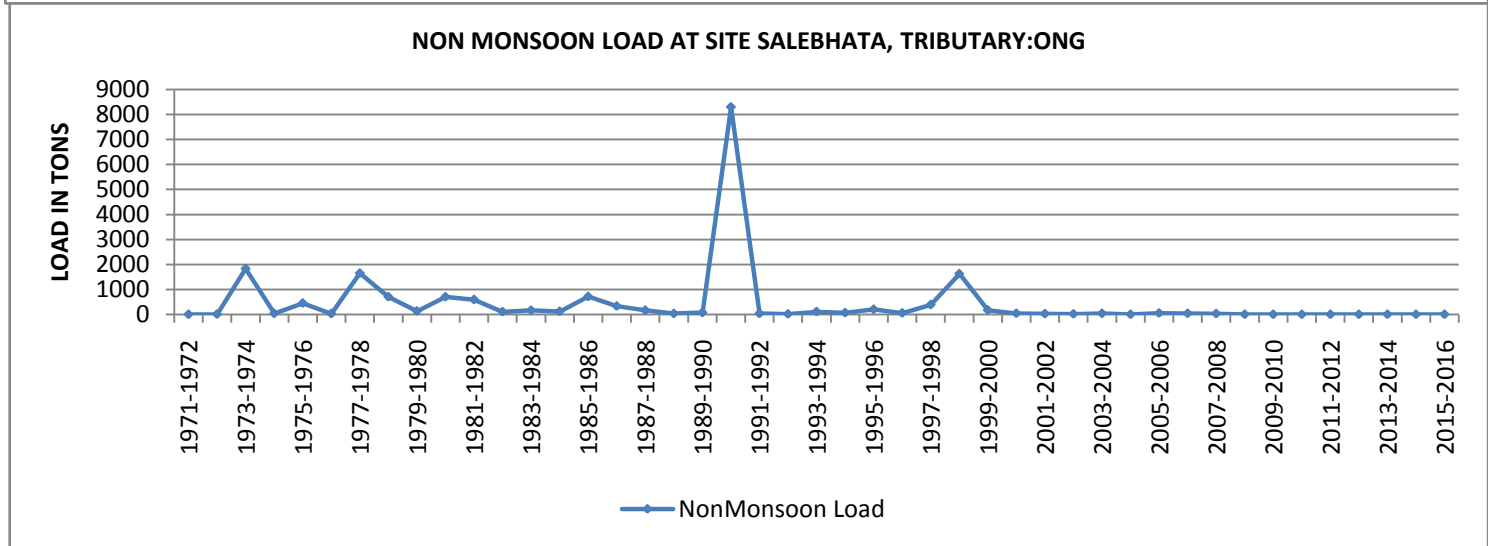
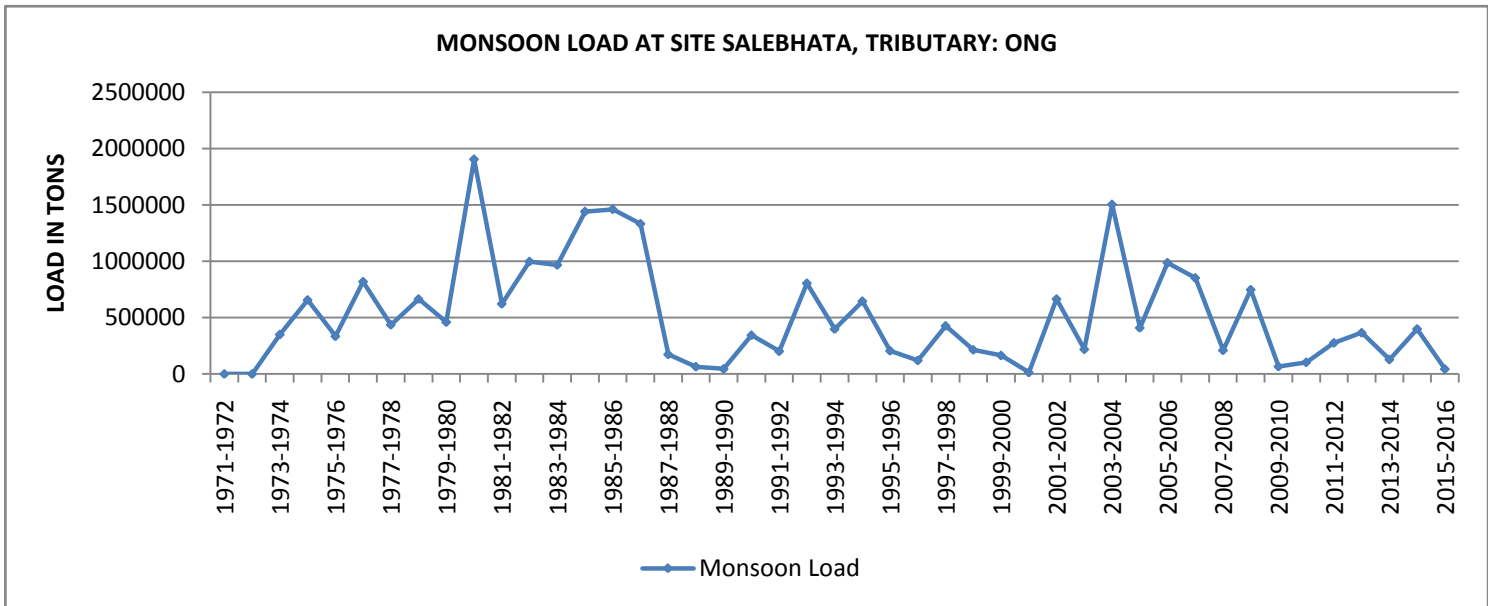
DEPENDABILITY FLOW FROM JUNE TO MAY SITE SALEBHATA, TRIBUTARY: ONG



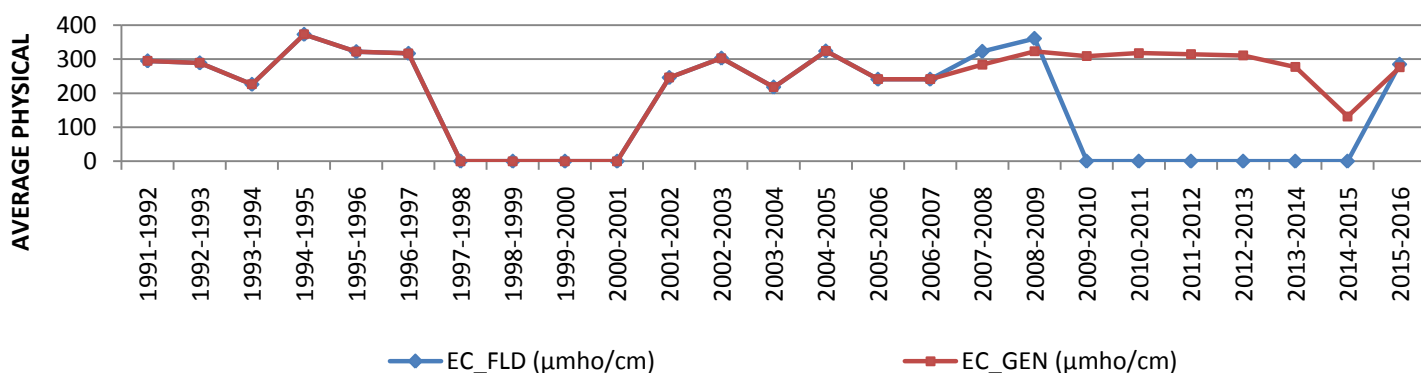
MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE SALEBHATA, TRIBUTARY: ONG



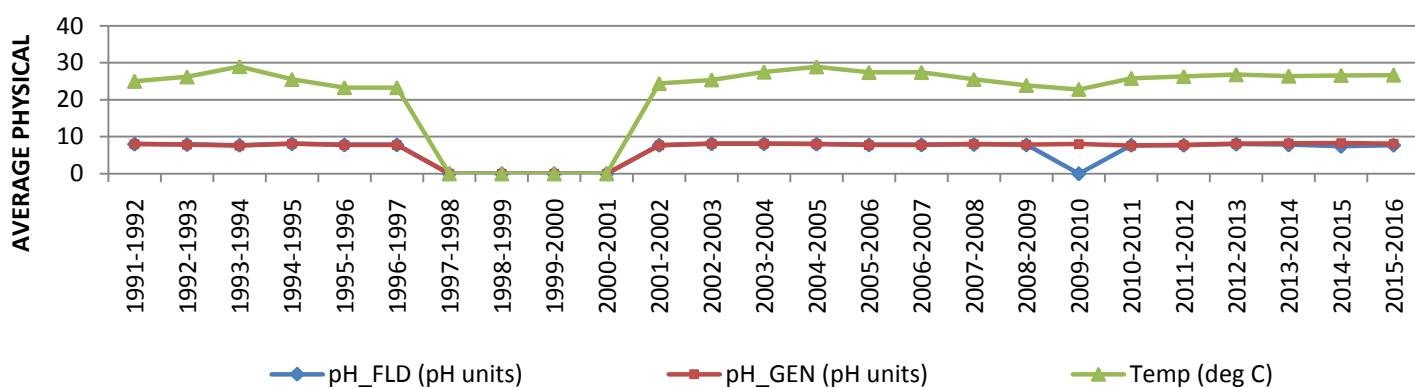




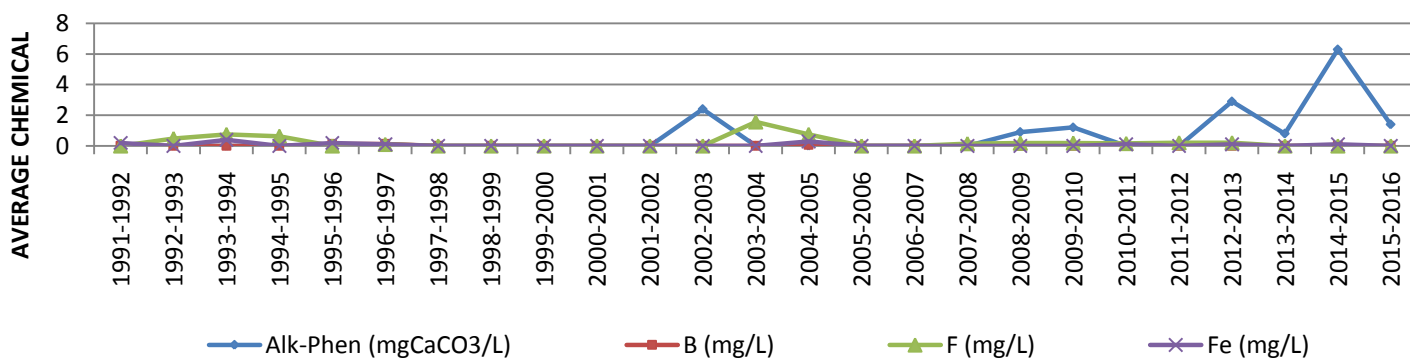
WATER QUALITY PROPERTIES AT SITE SALEBHATA, TRIBUTARY: ONG



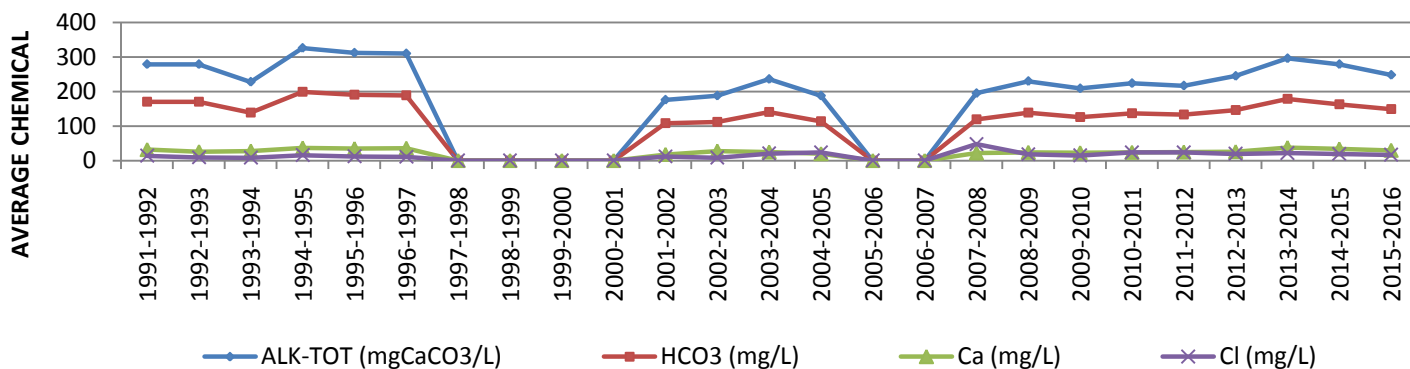
WATER QUALITY PROPERTIES AT SITE SALEBHATA, TRIBUTARY: ONG



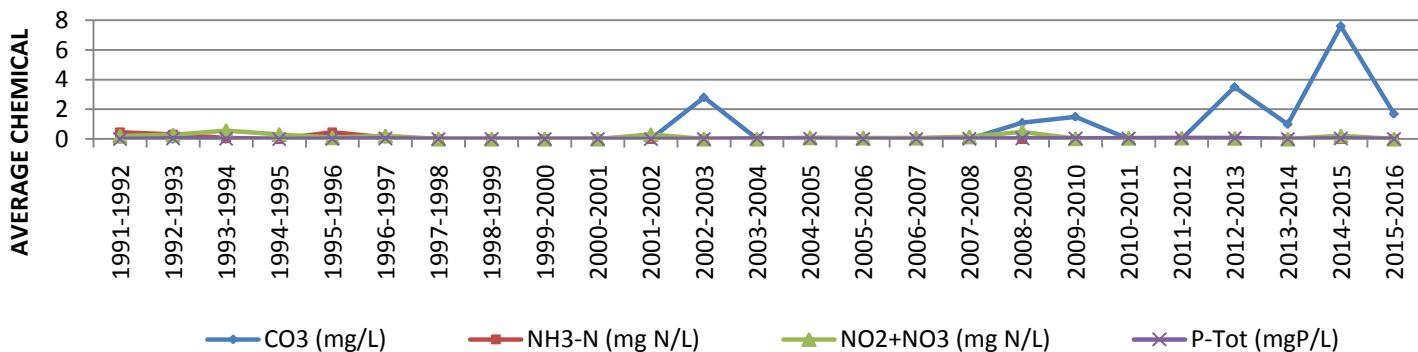
WATER AUALITY PROPERTIES AT SITE SALEBHATA, TRIBUTARY: ONG



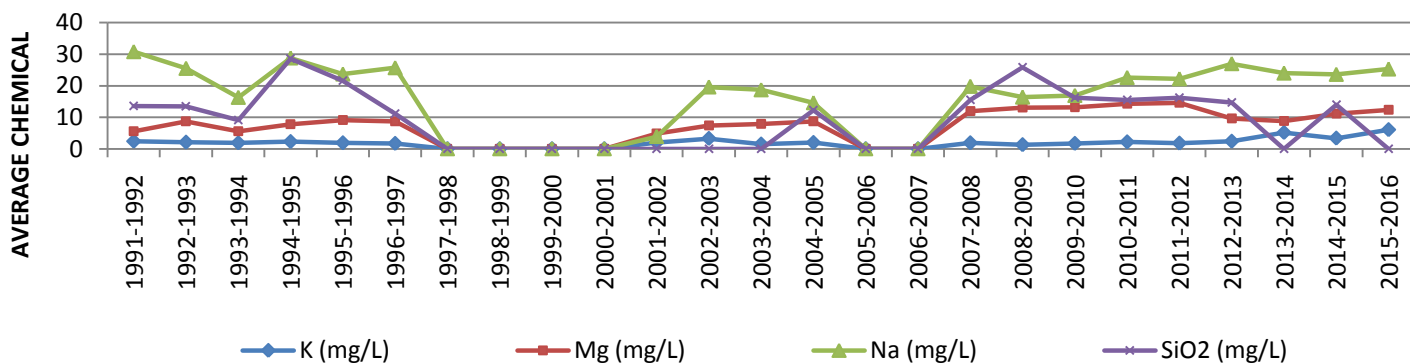
WATER QUALITY PROPERTIES AT SITE SALEBHATA, TRIBUTARY: ONG



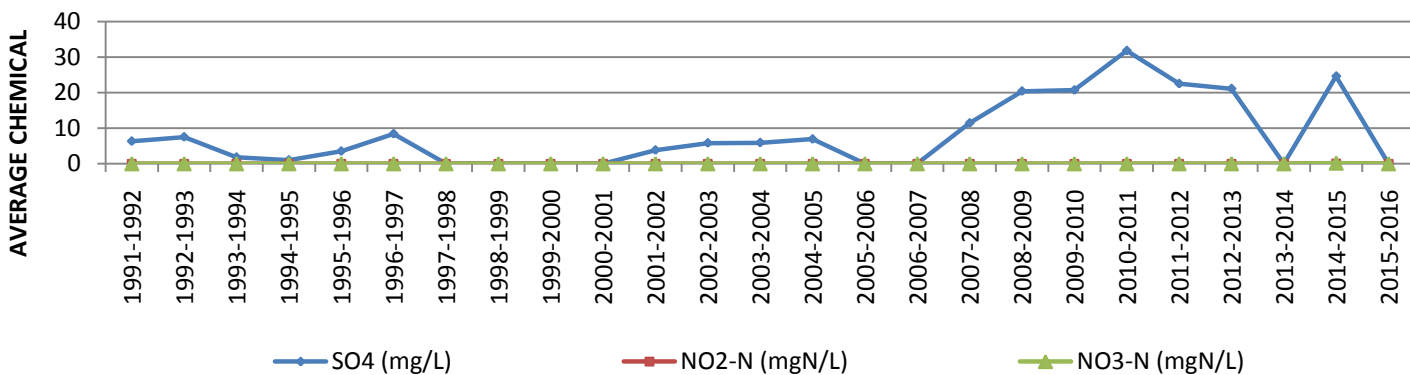
WATER QUALITY PROPERTIES AT SITE SALEBHATA, TRIBUTARY: ONG



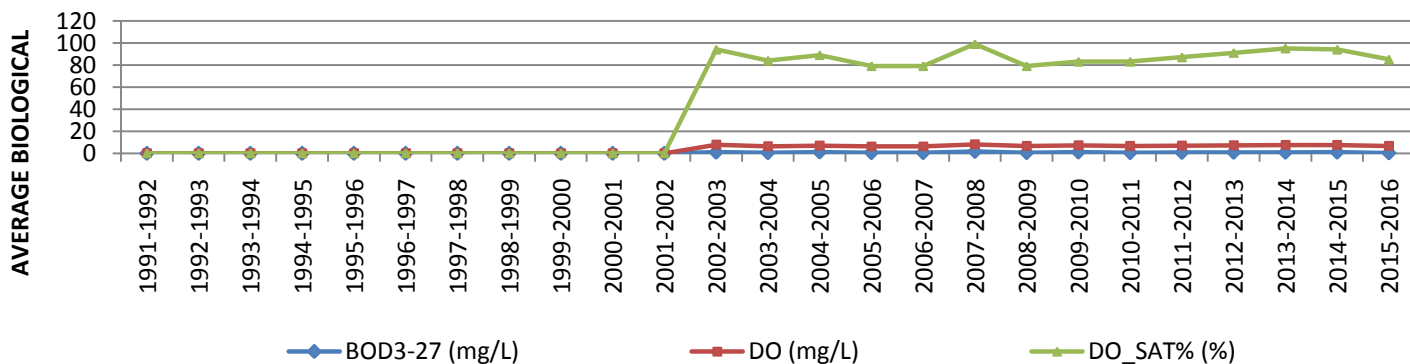
WATER QUALITY PROPERTIES AT SITE SALEBHATA, TRIBUTARY:ONG



WATER QUALITY PROPERTIES AT SITE SALEBHATA, TRIBUTARY: ONG



WATER QUALITY PROPERTIES AT SITE SALEBHATA, TRIBUTARY:ONG

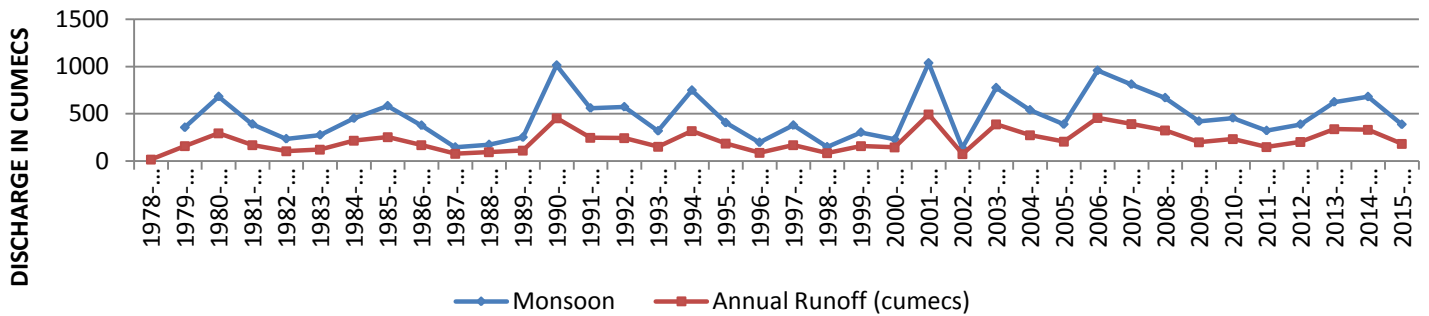


TEL SUB-BASIN

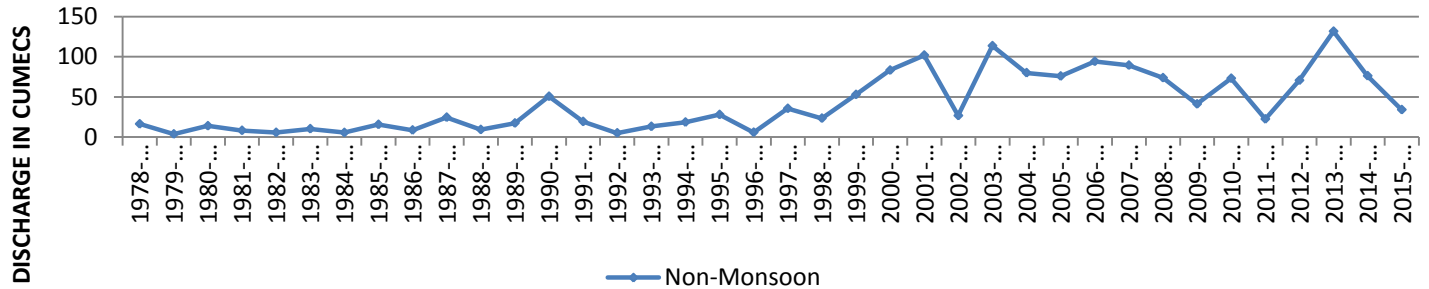
SITE KESINGA

YEAR WISE TREND OF SITE KESINGA

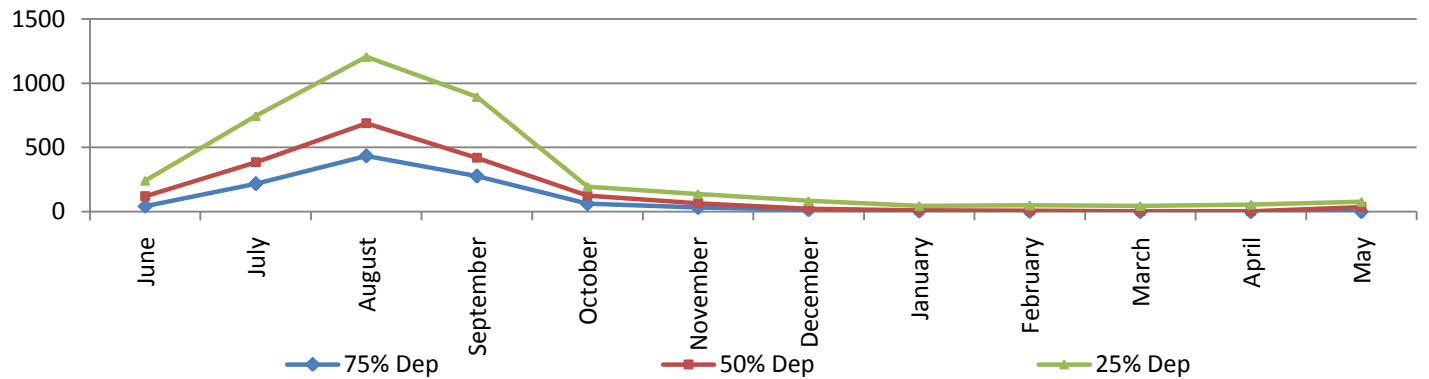
ANNUAL AVERAGE DISCHARGE SITE KESINGA, TRIBUTARY: TEL



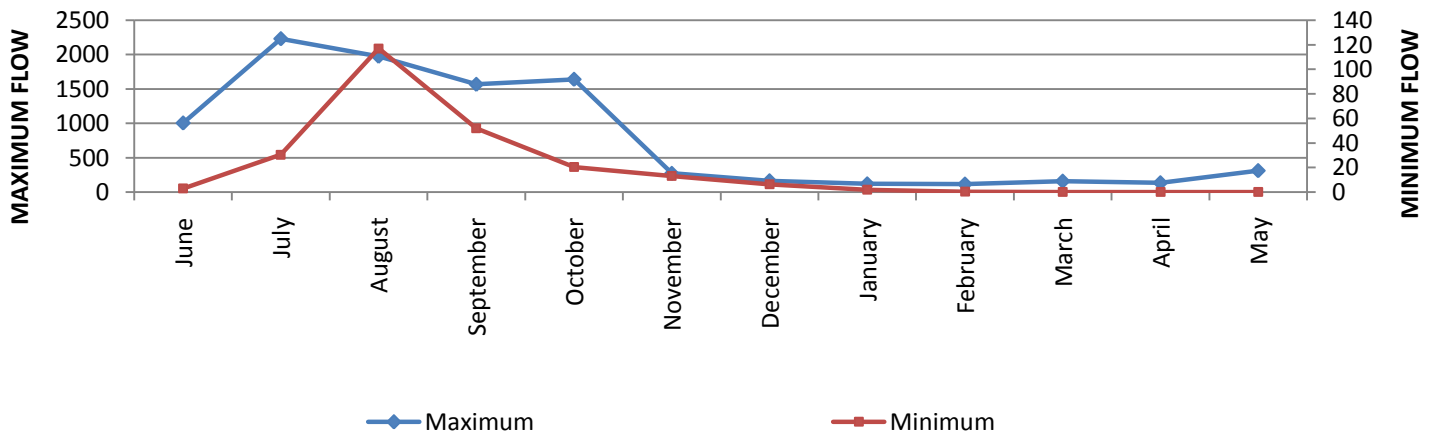
TOTAL ANNUAL DISCHARGE SITE KESINGA, TRIBUTARY: TEL



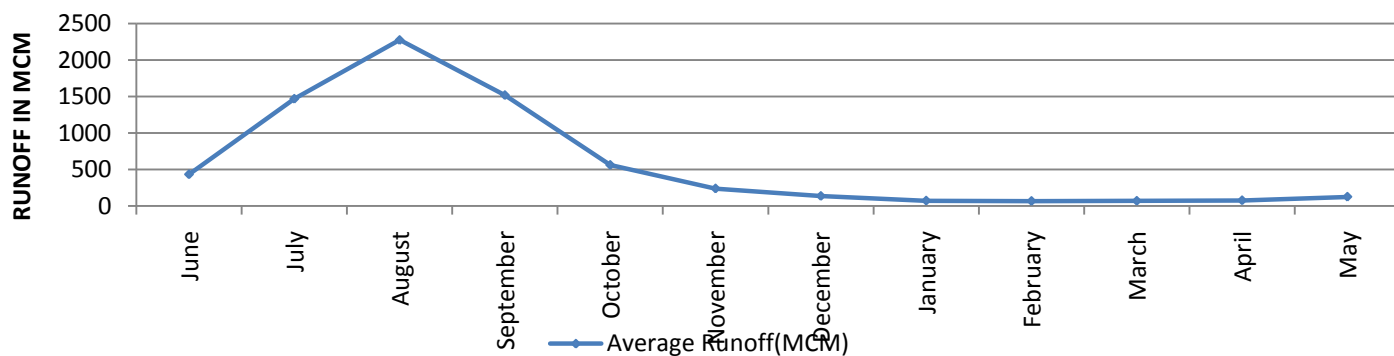
DEPENDABILITY FLOW FROM JUNE TO MAY SITE KESINGA, TRIBUTARY: TEL



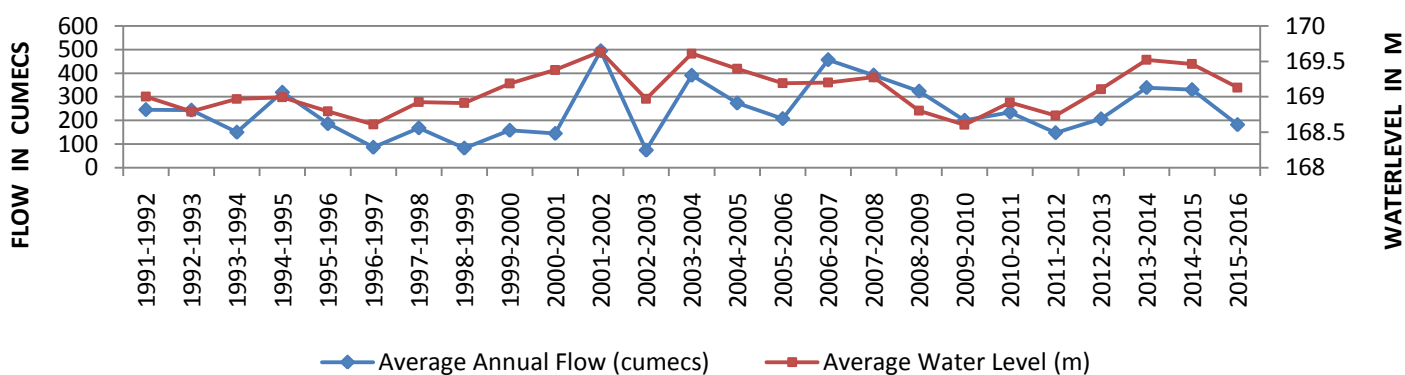
MAXIMUM MINIMUM FLOW SITE KESINGA, TRIBUTARY: TEL



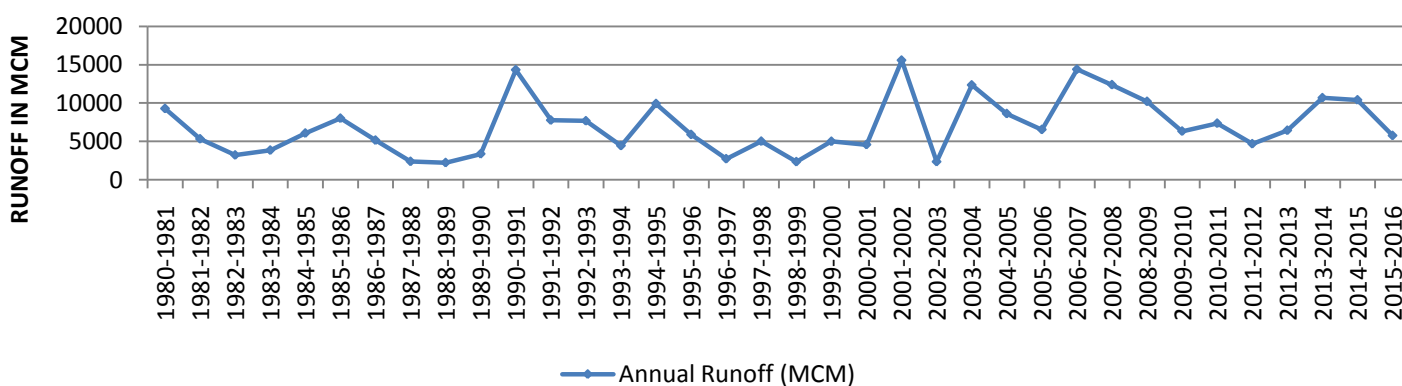
AVERAGE RUNOFF(MCM) PERIOD:1992-2016 SITE: KESINGA TRIBUTARY: TEL



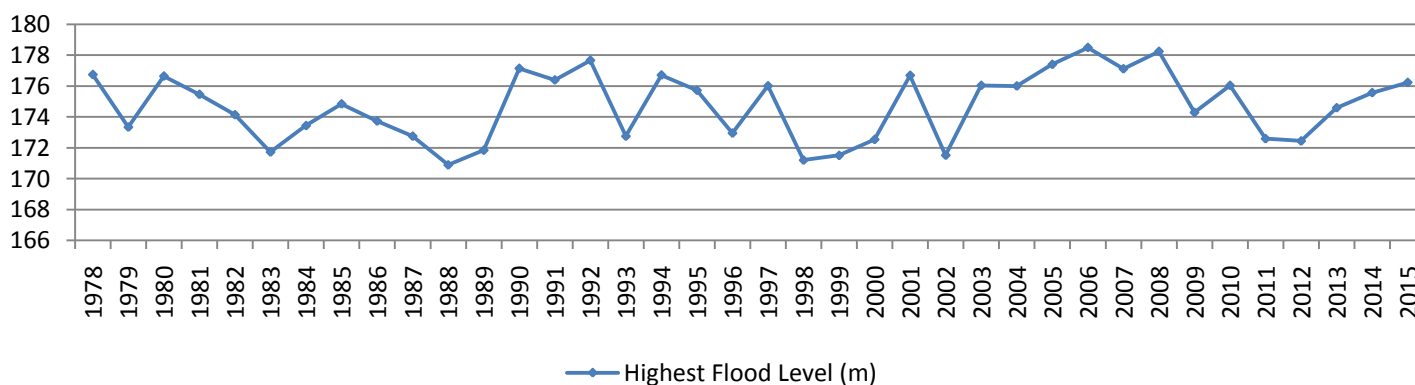
AVERAGE ANNUAL FLOW(CUMecs) WITH WATER LEVEL(IN M),SITE KESINGA,TRIBUTARY:TEL



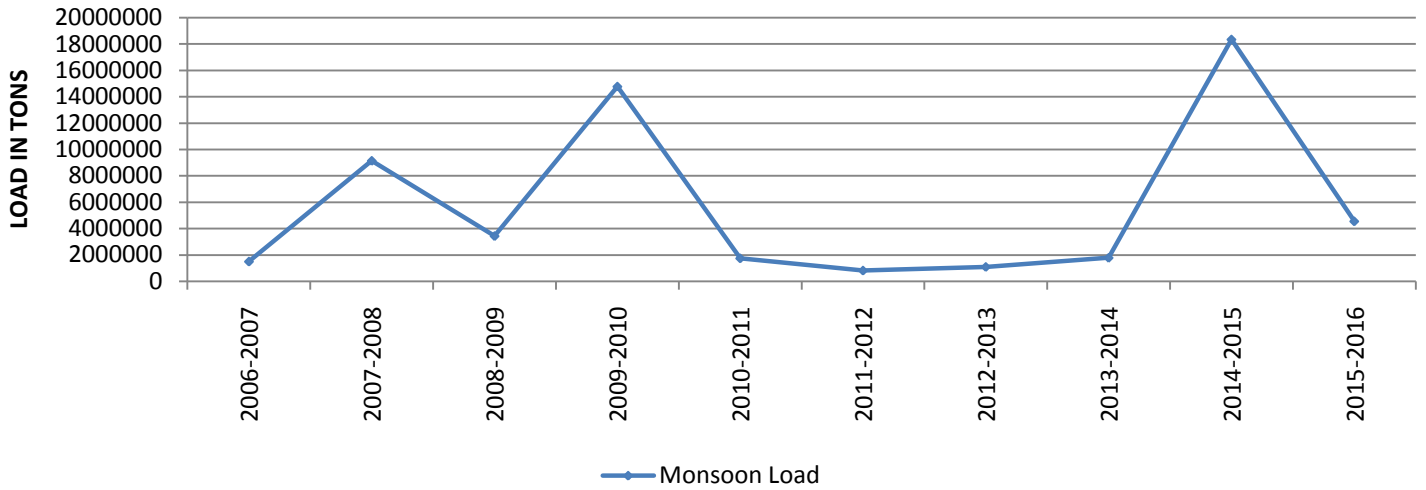
ANNUAL RUNOFF IN (MCM) SITE KESINGA,TRIBUTARY: TEL



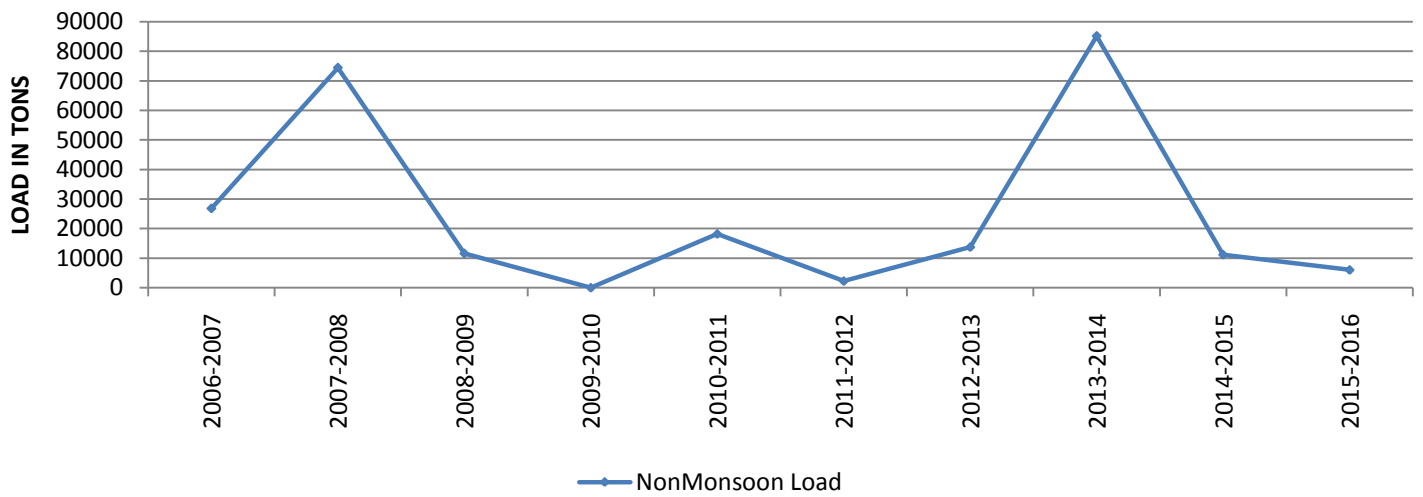
HIGHEST FLOOD LEVEL (m) AT SITE KESINGA, TRIBUTARY: TEL



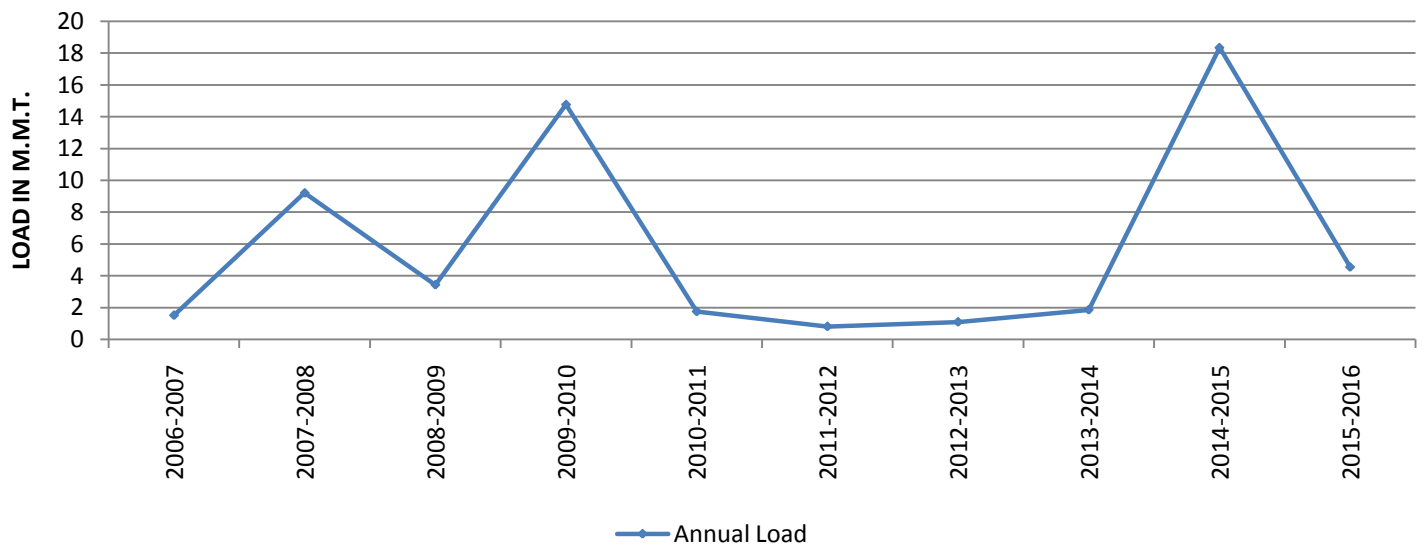
MONSOON LOAD AT SITE KESINGA, TRIBUTARY: TEL

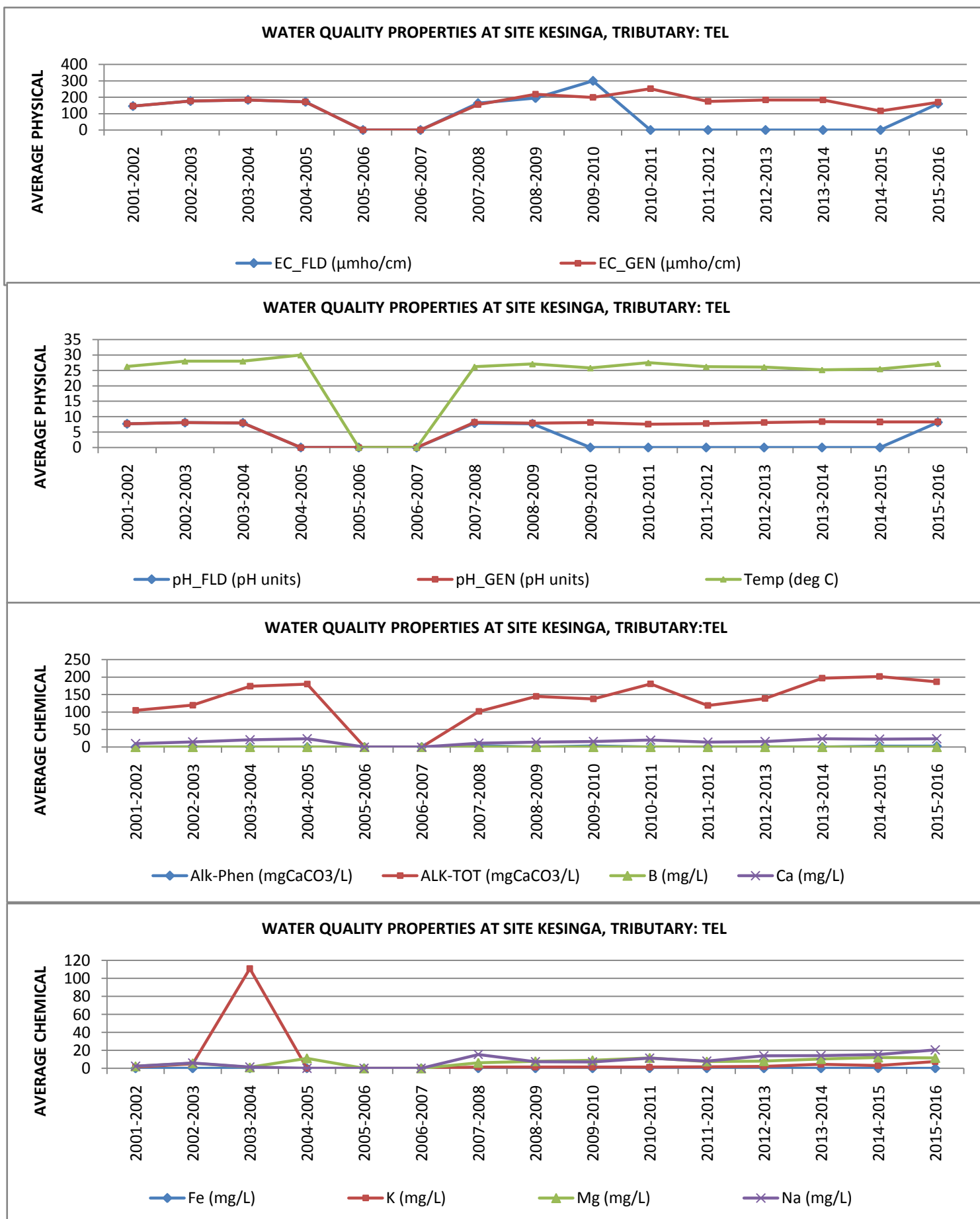


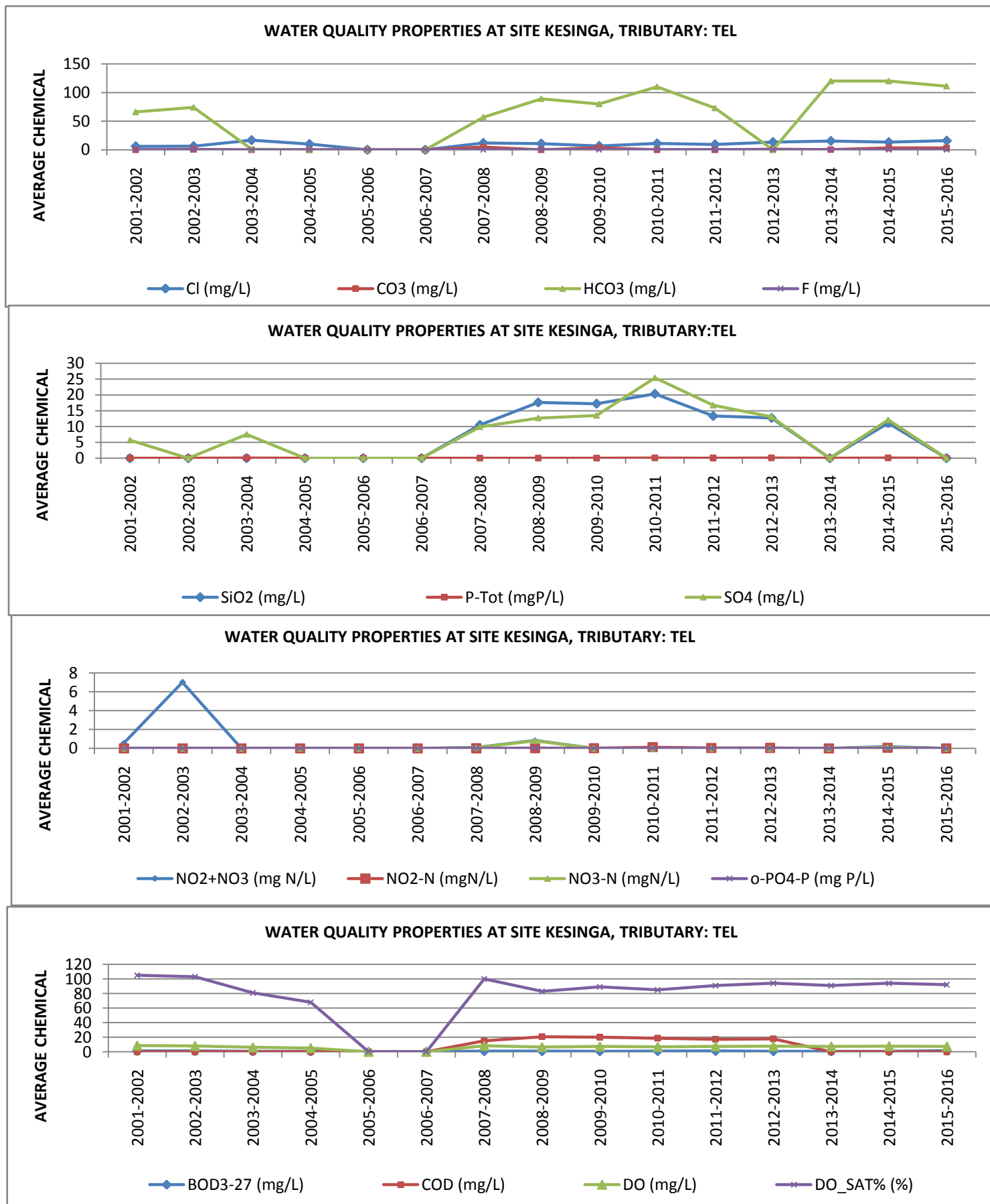
NON MONSOON LOAD AT SITE KESINGA, TRIBUTARY: TEL



ANNUAL LOAD (MILLION M.T.) SITE KESINGA, TRIBUTARY:TEL



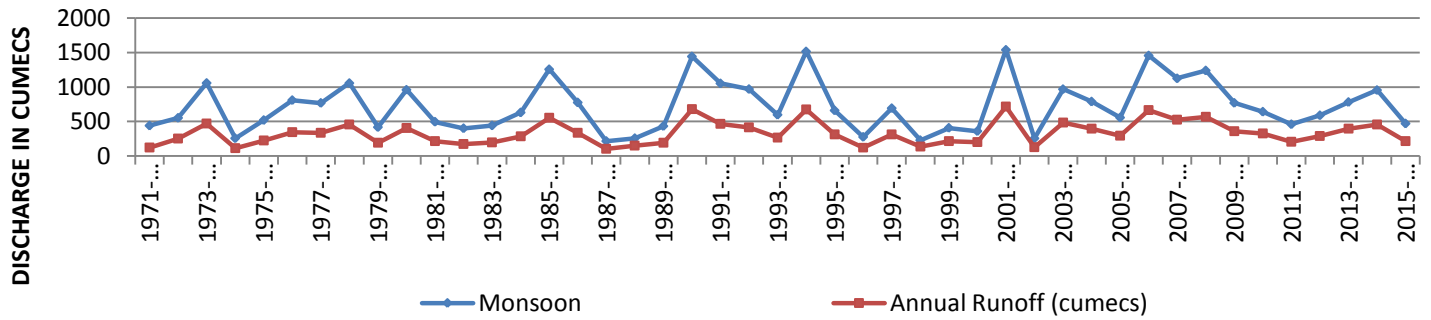




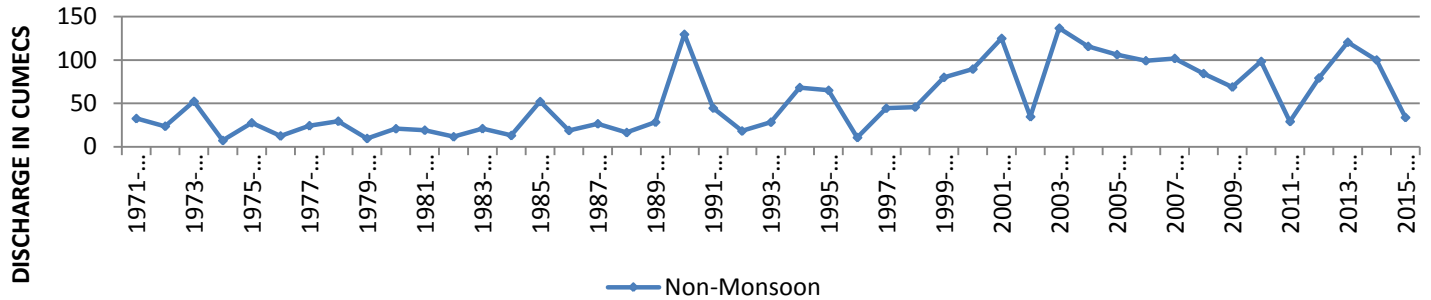
SITE KANTAMAL

YEAR WISE TREND OF SITE KANTAMAL

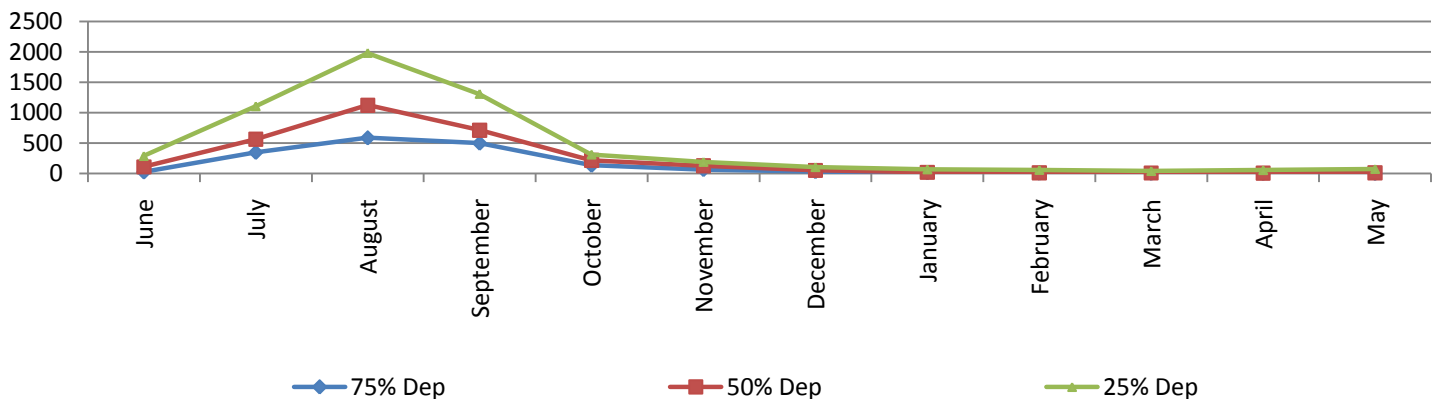
ANNUAL AVERAGE DISCHARGE SITE KANTAMAL, TRIBUTARY: TEL



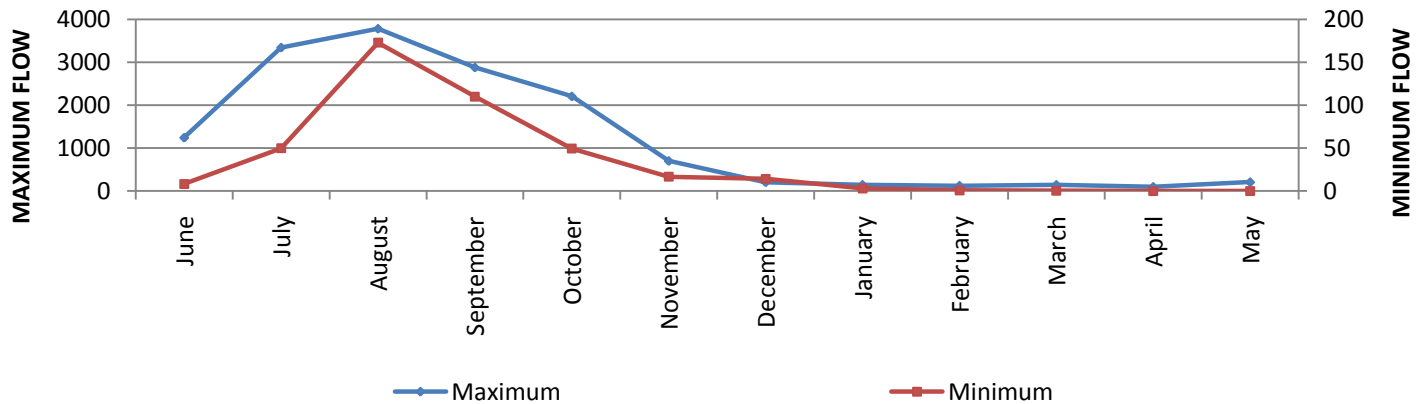
TOTAL ANNUAL DISCHARGE SITE KANTAMAL, TRIBUTARY: TEL



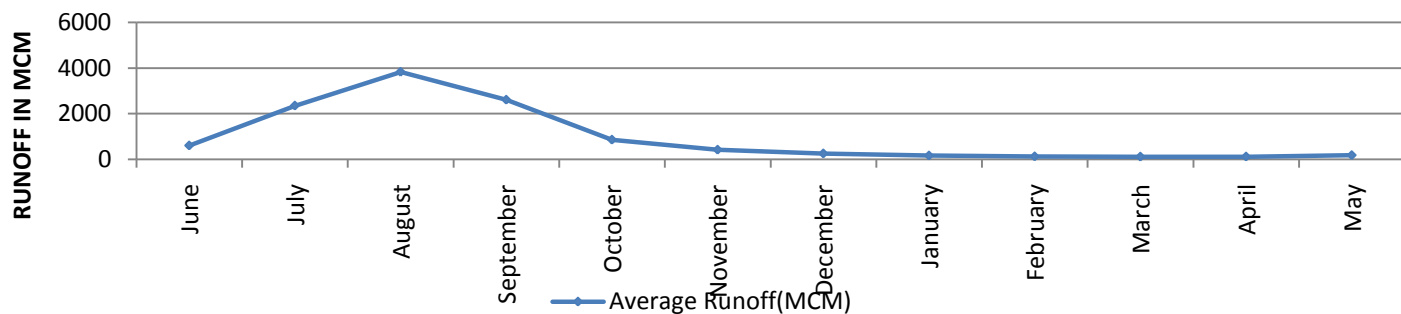
DEPENDABILITY FLOW FROM JUNE TO MAY SITE KANTAMAL, TRIBUTARY: TEL



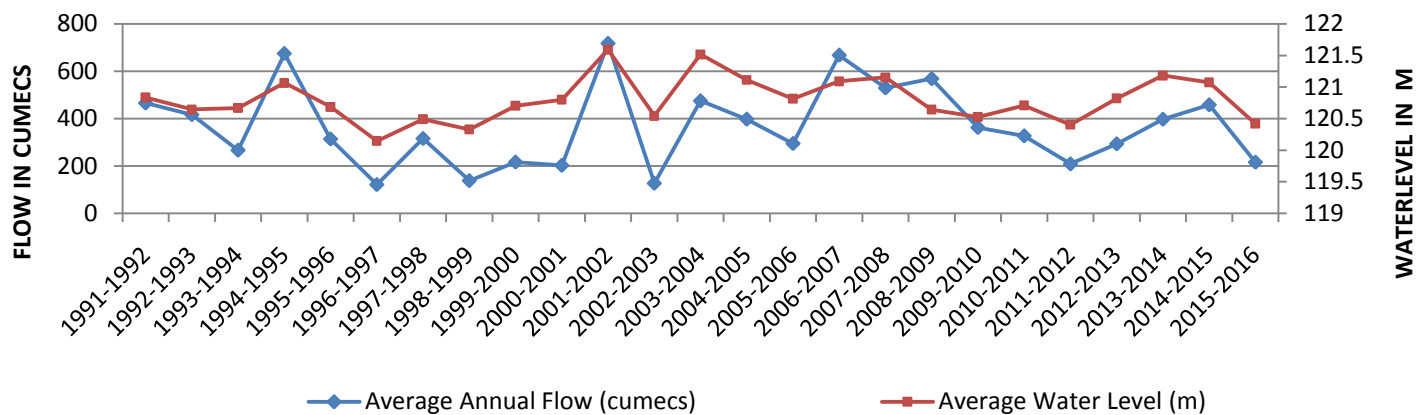
MAXIMUM MINIMUM FLOW FROM JUNE TO MAY SITE KANTAMAL, TRIBUTARY: TEL



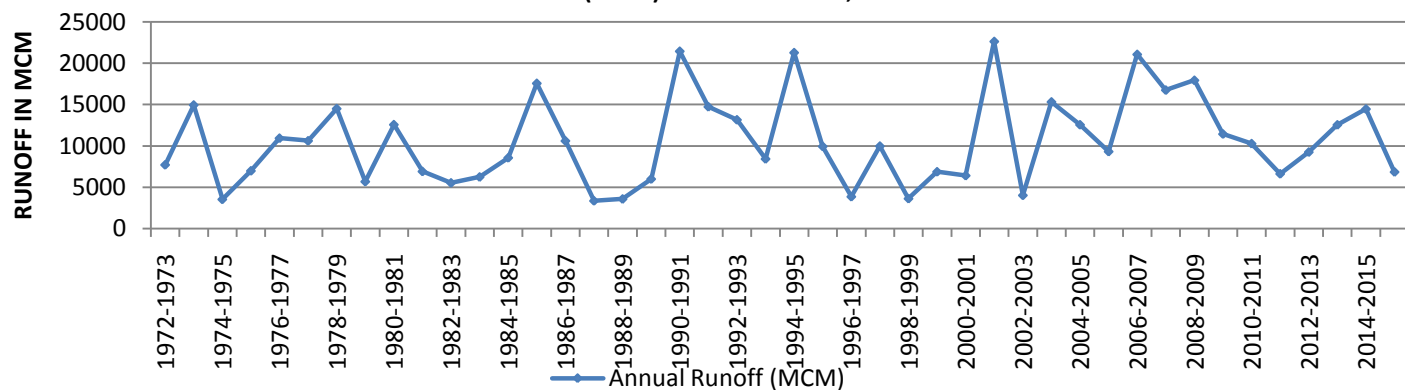
AVERAGE RUNOFF (MCM) PERIOD 1992-2016 SITE KANTAMAL, TRIBUTARY:TEL



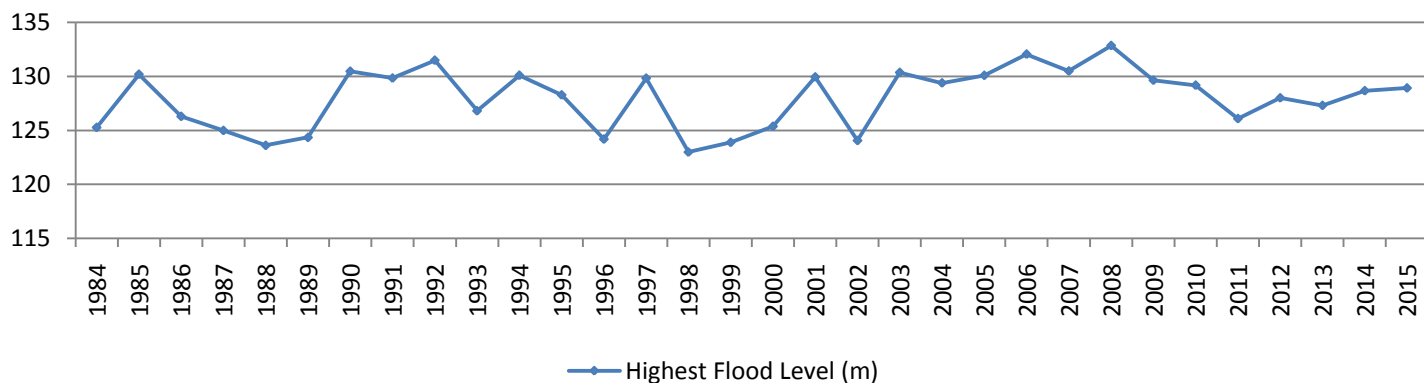
AVERAGE ANNUAL FLOW(CUMECs) WITH WATER LEVEL(IN M, SITE KANTAMAL, TRIBUTARY:TEL



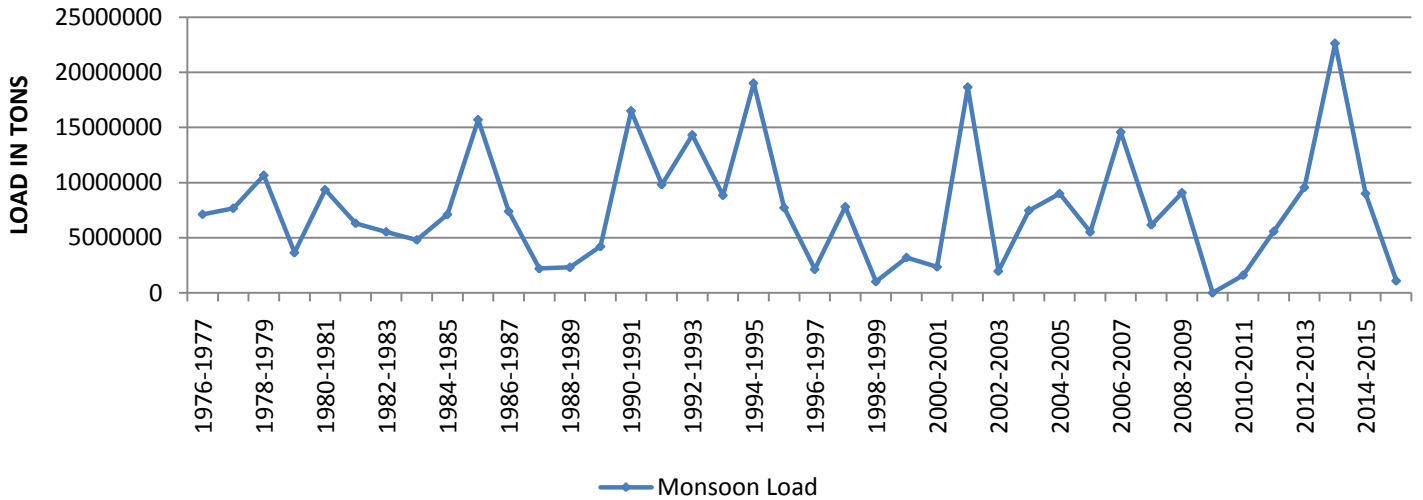
ANNUAL RUNOFF IN (MCM) SITE KANTAMAL, TRIBUTARY : TEL



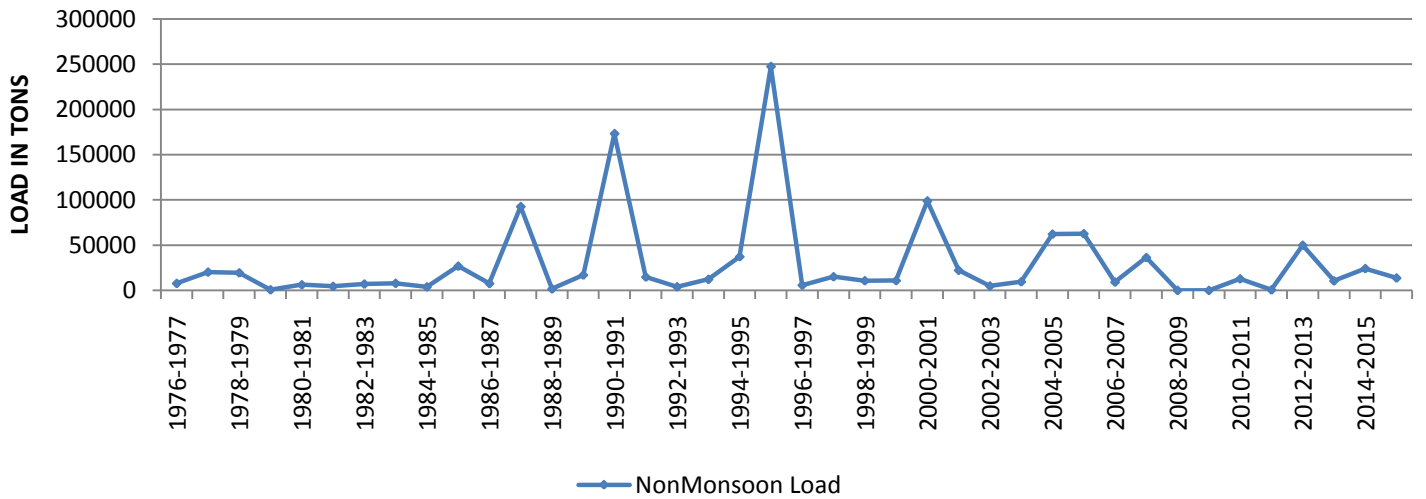
HIGHEST FLOOD LEVEL (m) AT SITE KANTAMAL, TRIBUTARY: TEL



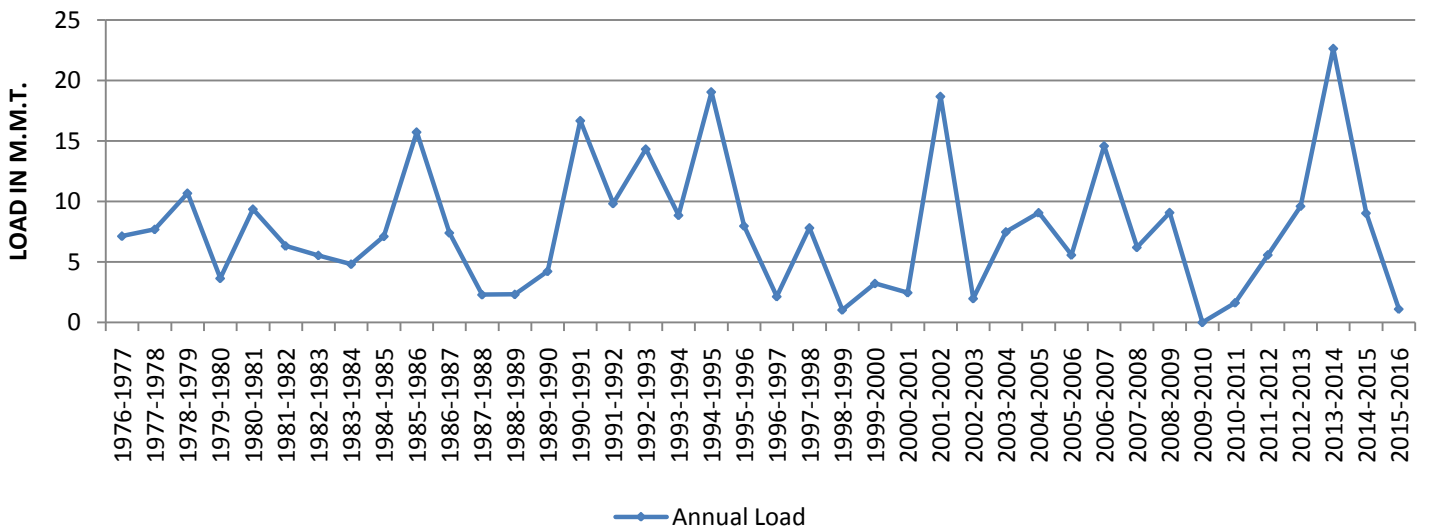
MONSOON LOAD AT SITE KANTAMAL, TRIBUTARY:TEL

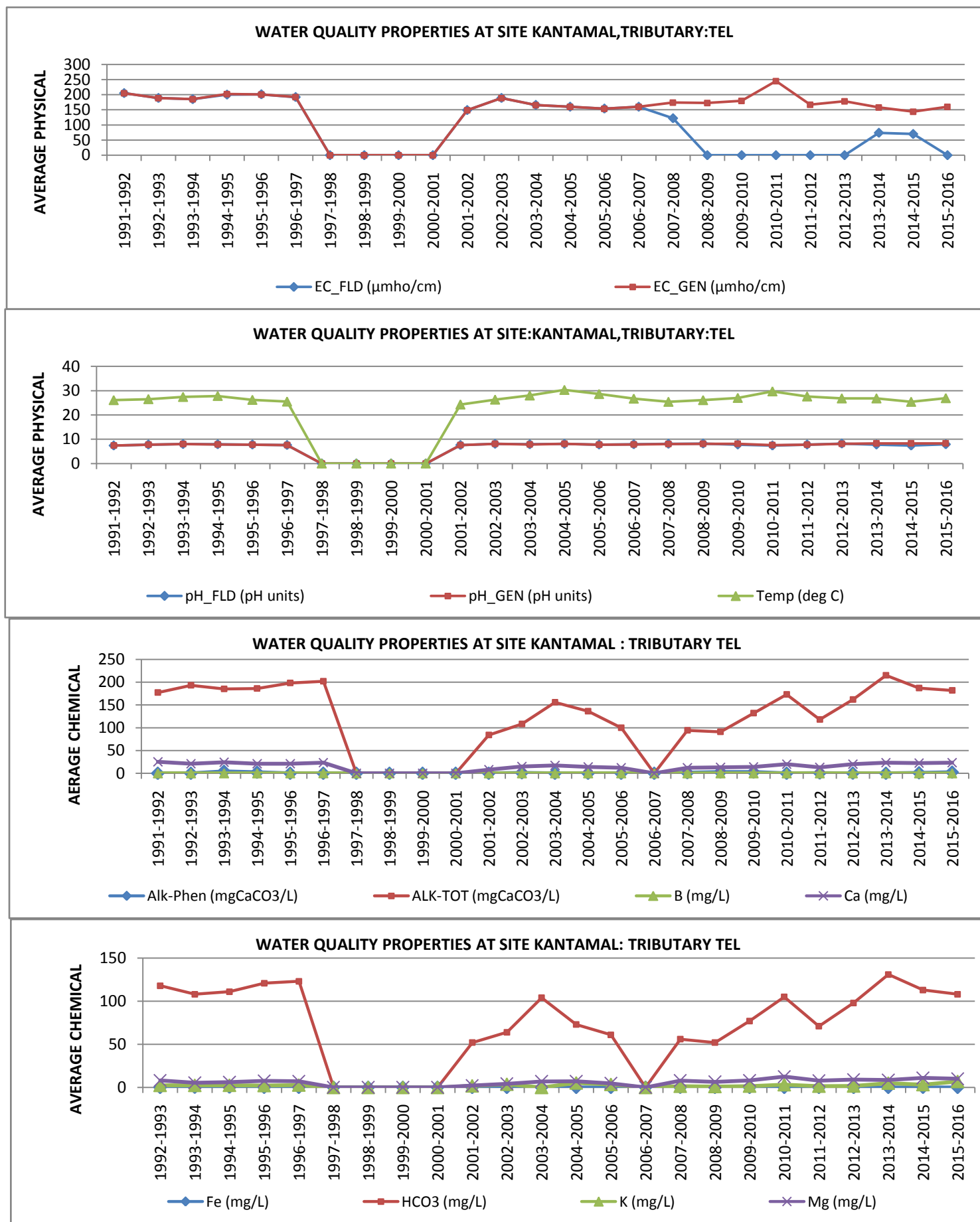


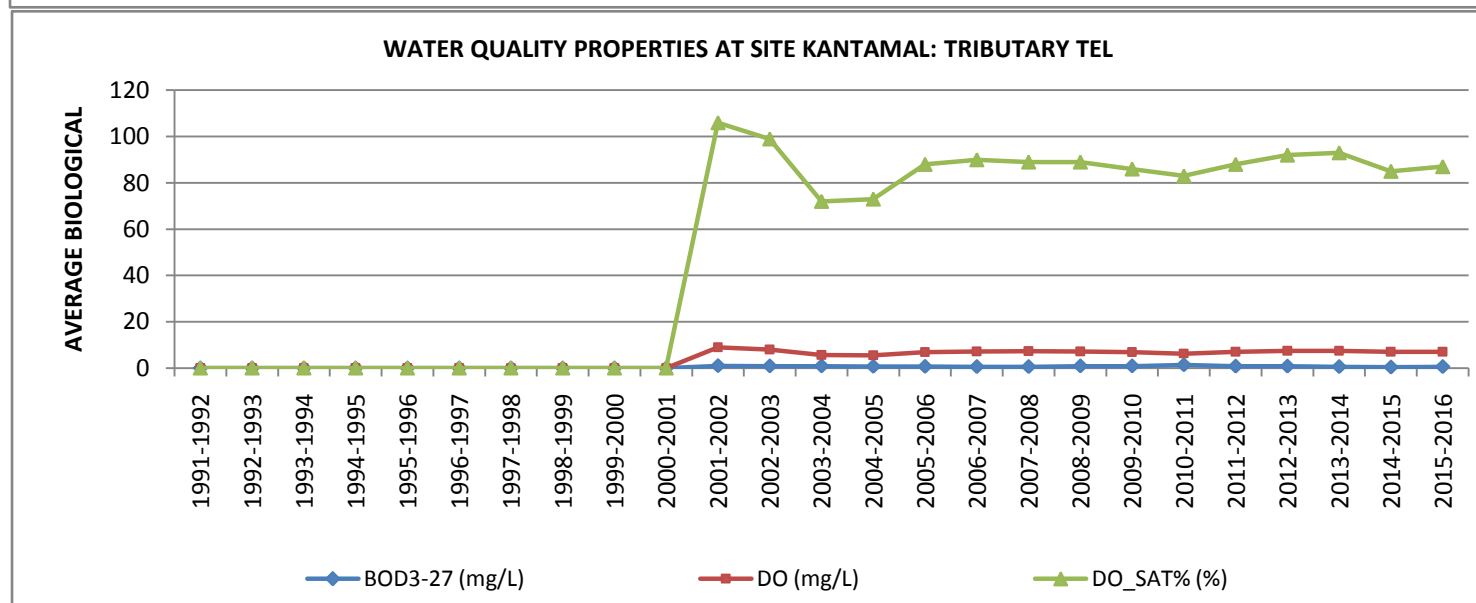
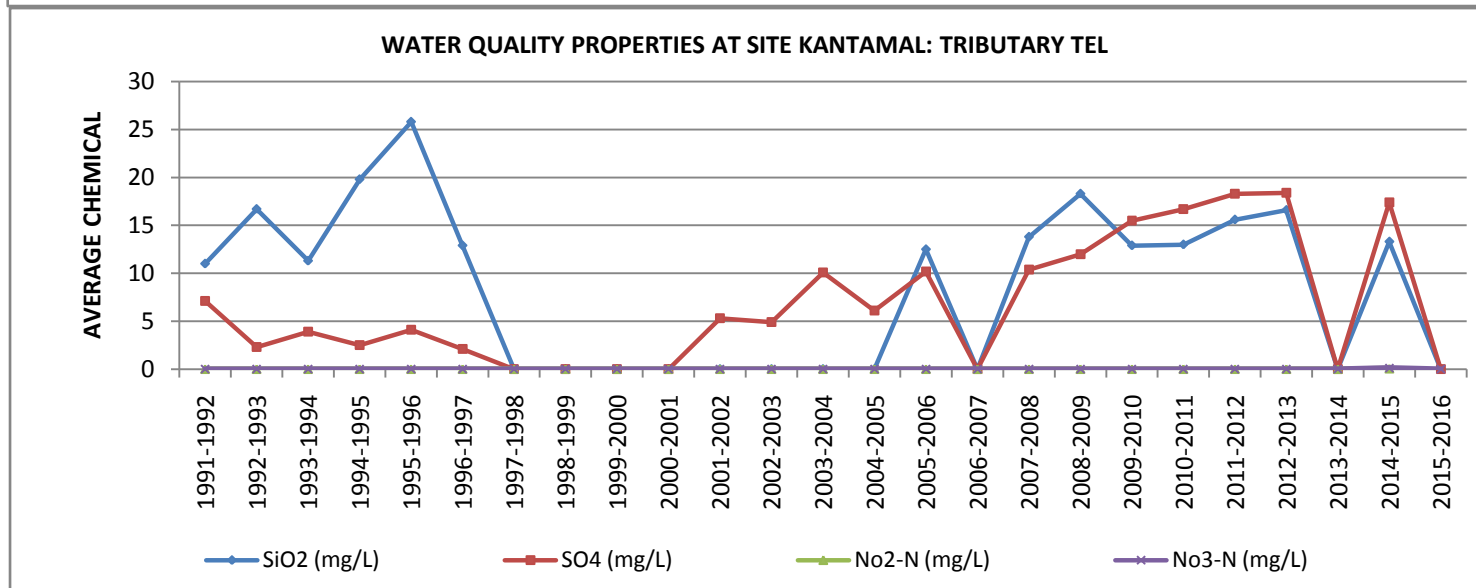
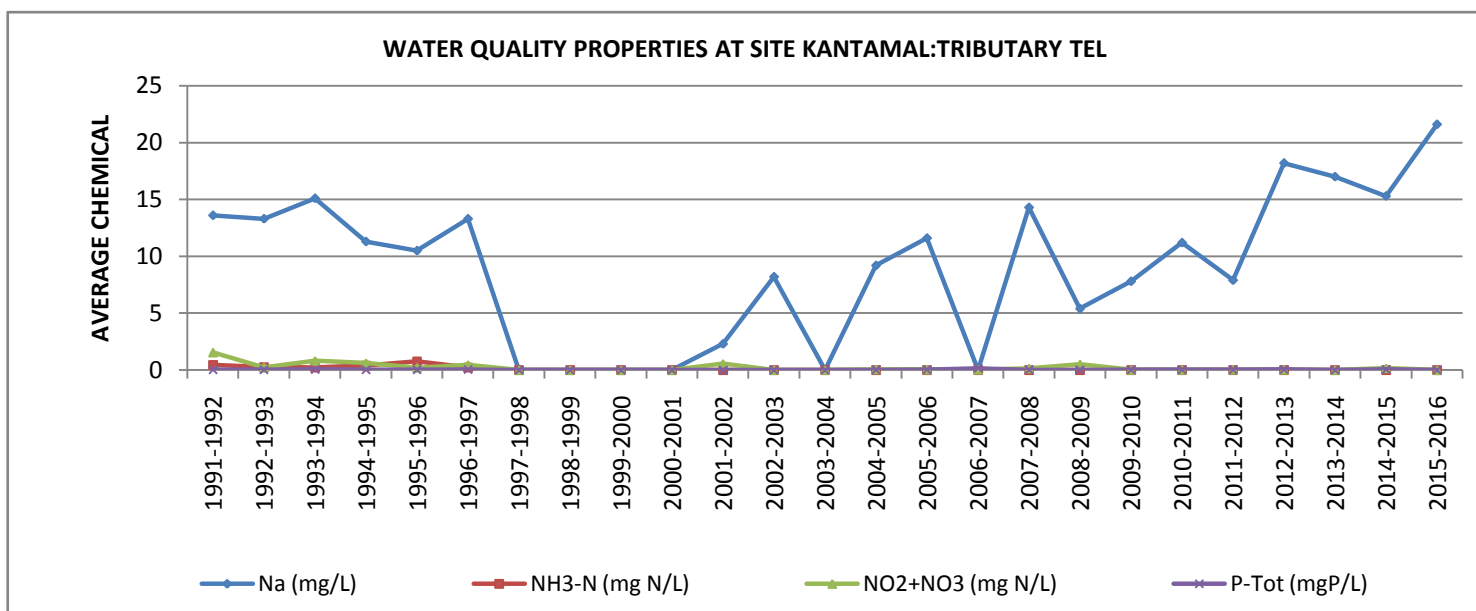
NON MONSOON LOAD AT SITE KANTAMAL, TRIBUTARY: TEL



ANNUAL LOAD AT SITE KANTAMAL, TRIBUTARY: TEL





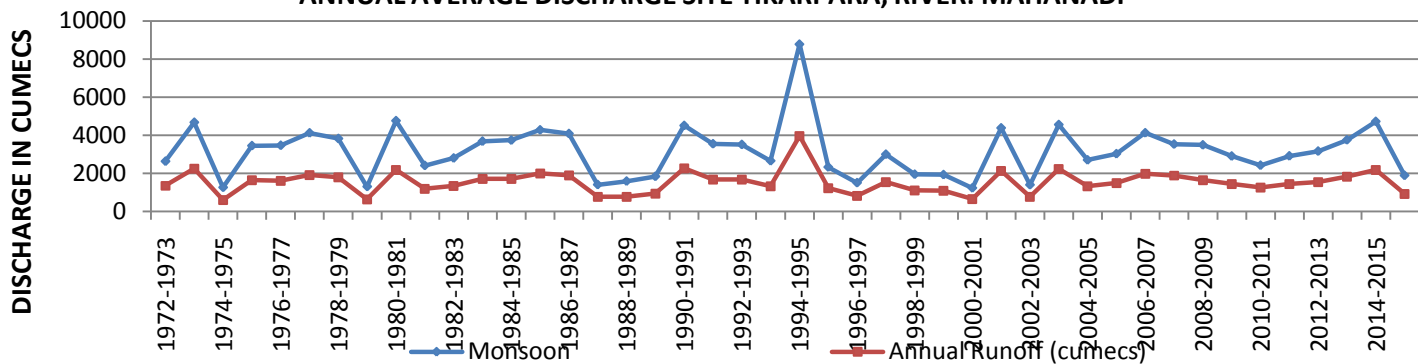


LOWER MAHANADI SUB-BASIN

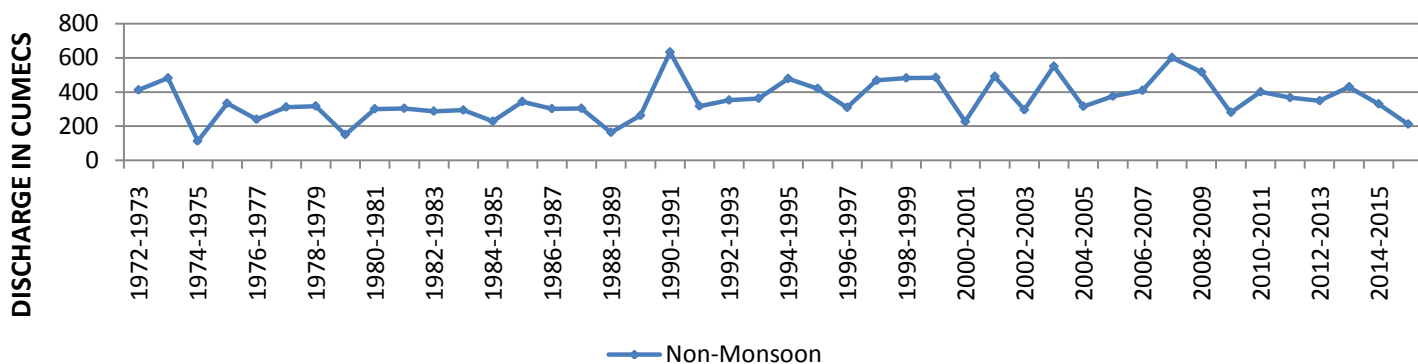
SITE TIKARPARA

YEAR WISE TREND OF SITE TIKARPARA

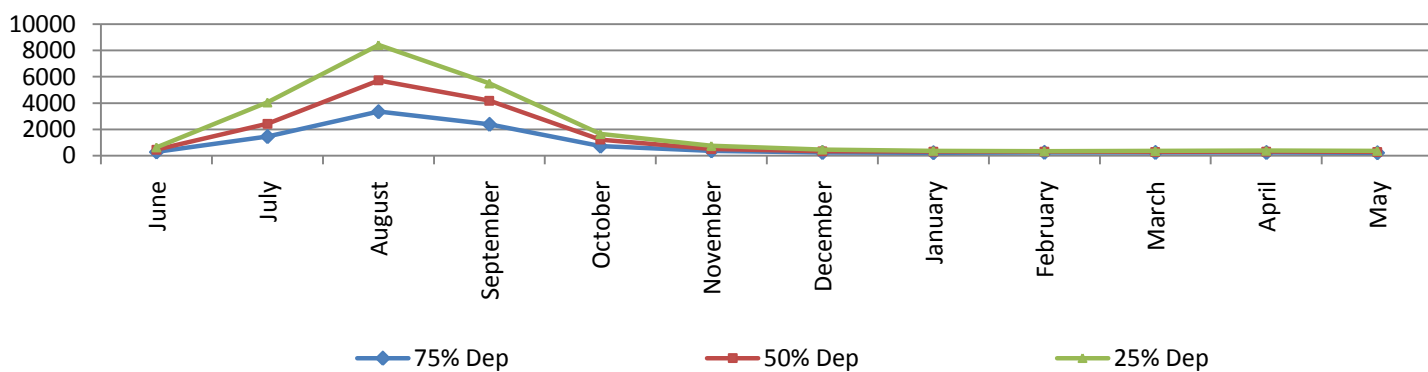
ANNUAL AVERAGE DISCHARGE SITE TIKARPARA, RIVER: MAHANADI



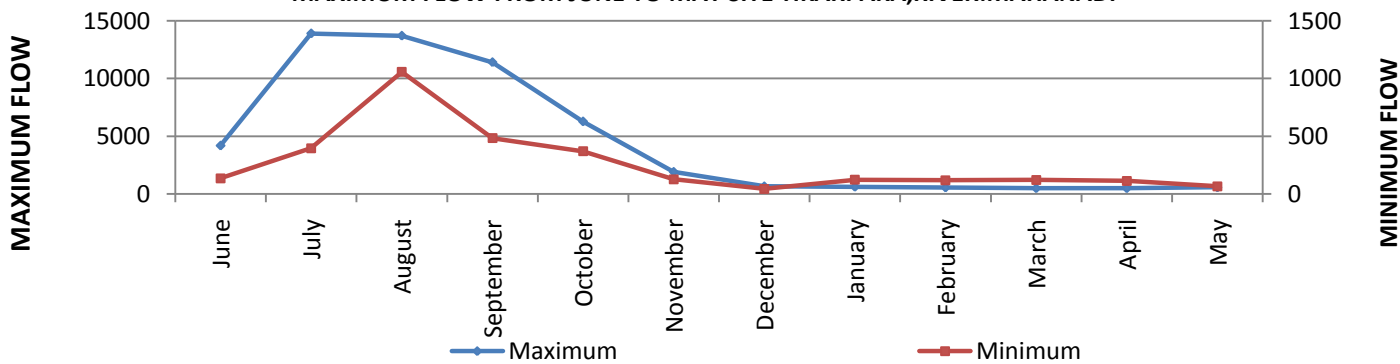
TOTAL ANNUAL DISCHARGE SITE TIKARPARA, RIVER: MAHANADI

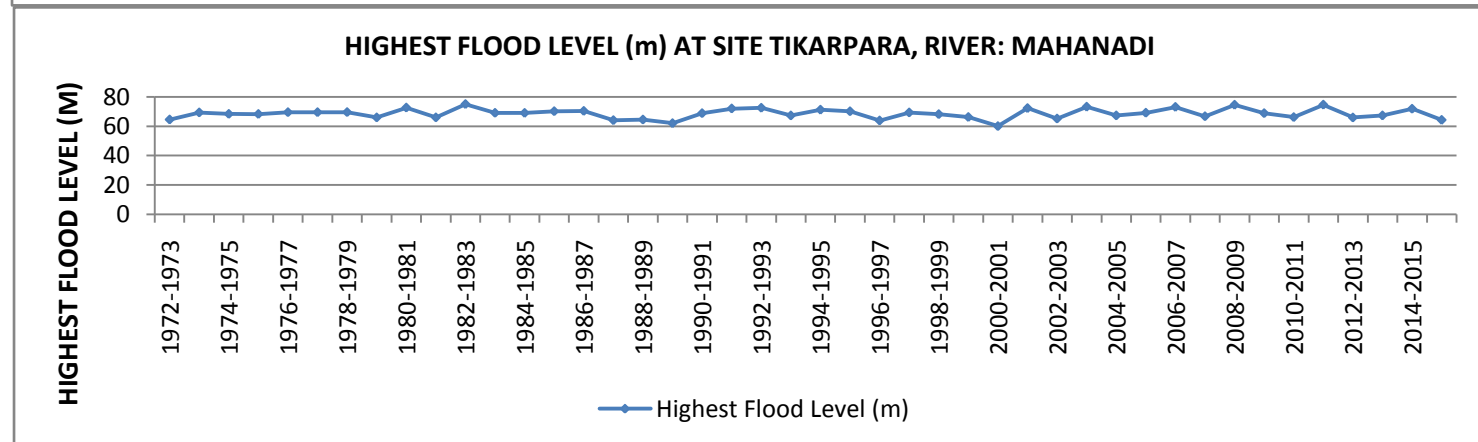
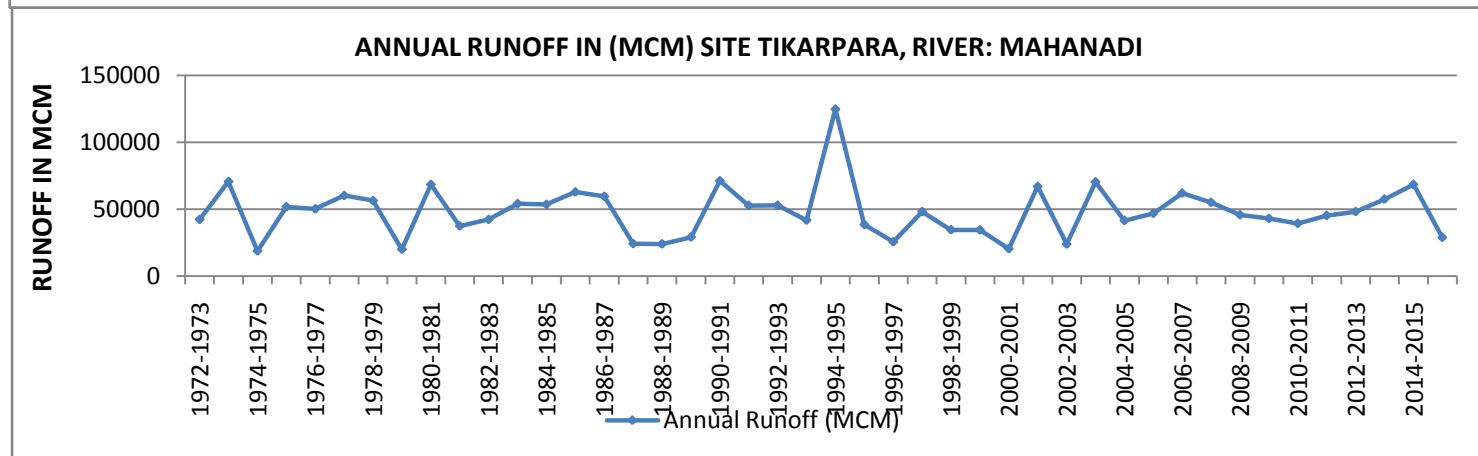
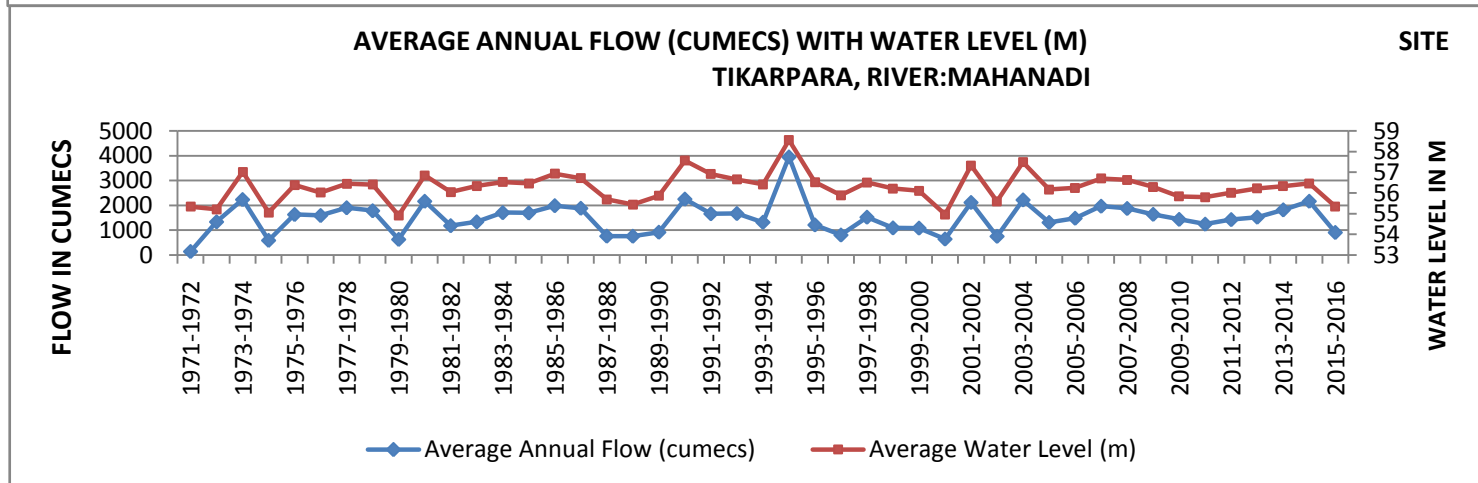
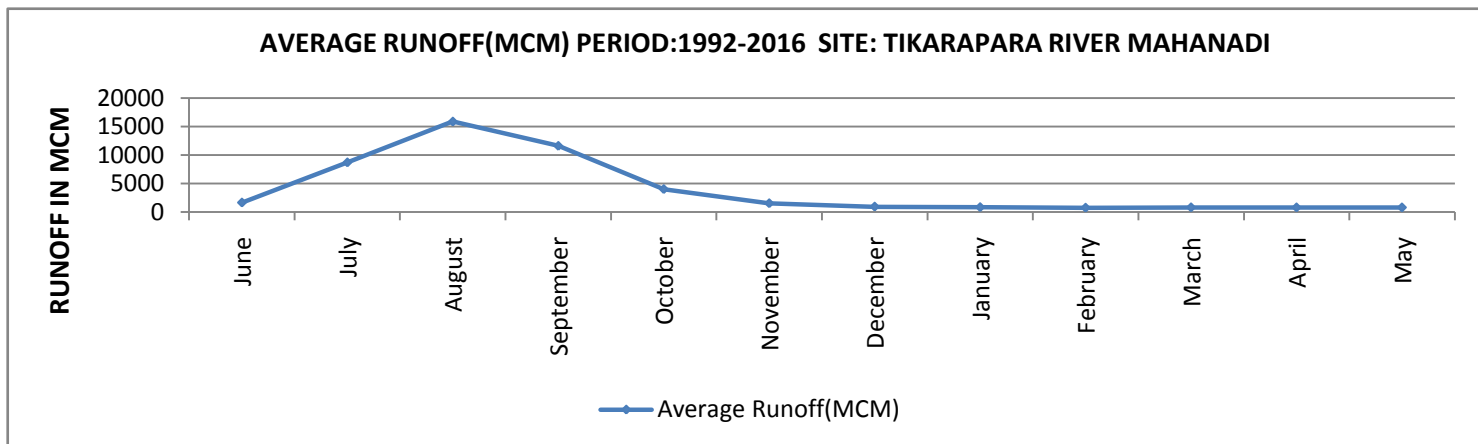


DEPENDABILITY FLOW FROM JUNE TO MAY SITE TIKARPARA, RIVER: MAHANADI

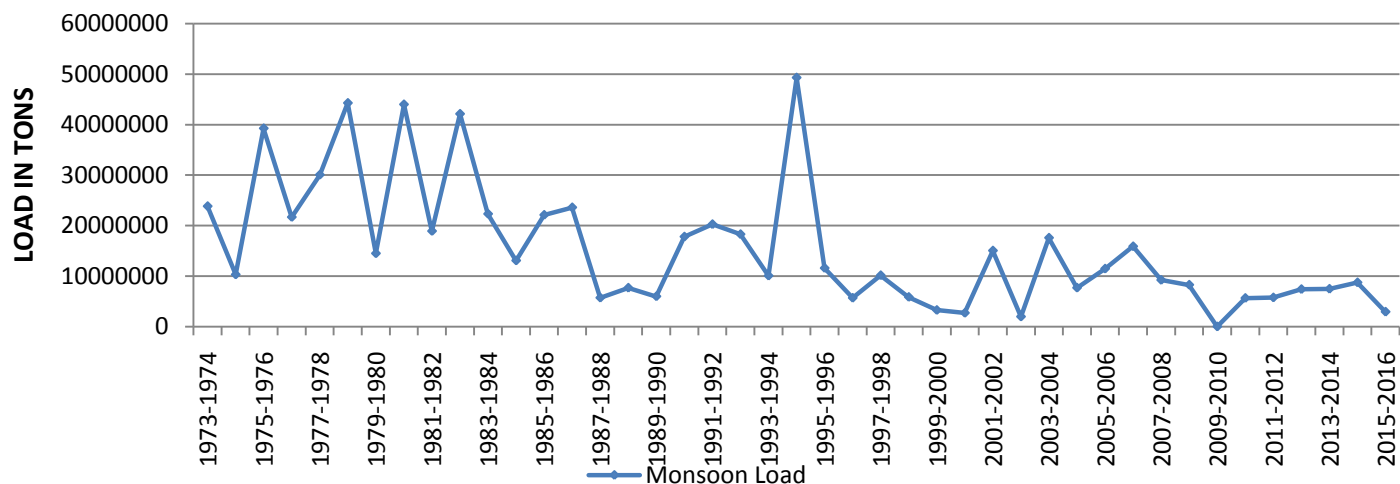


MAXIMUM FLOW FROM JUNE TO MAY SITE TIKARPARA, RIVER: MAHANADI

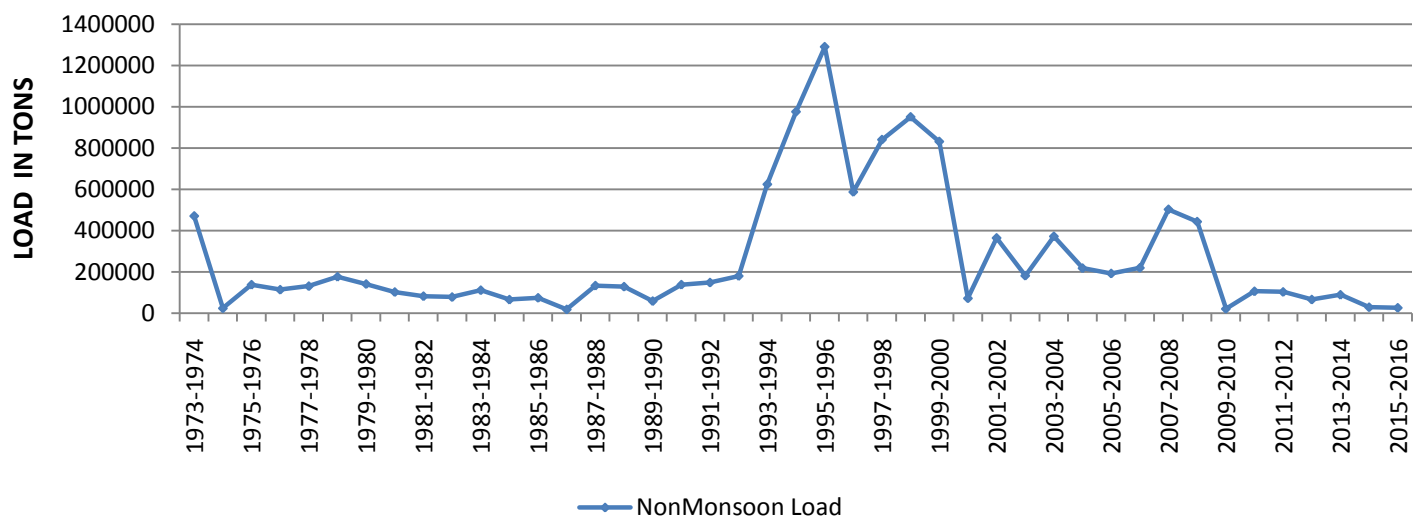




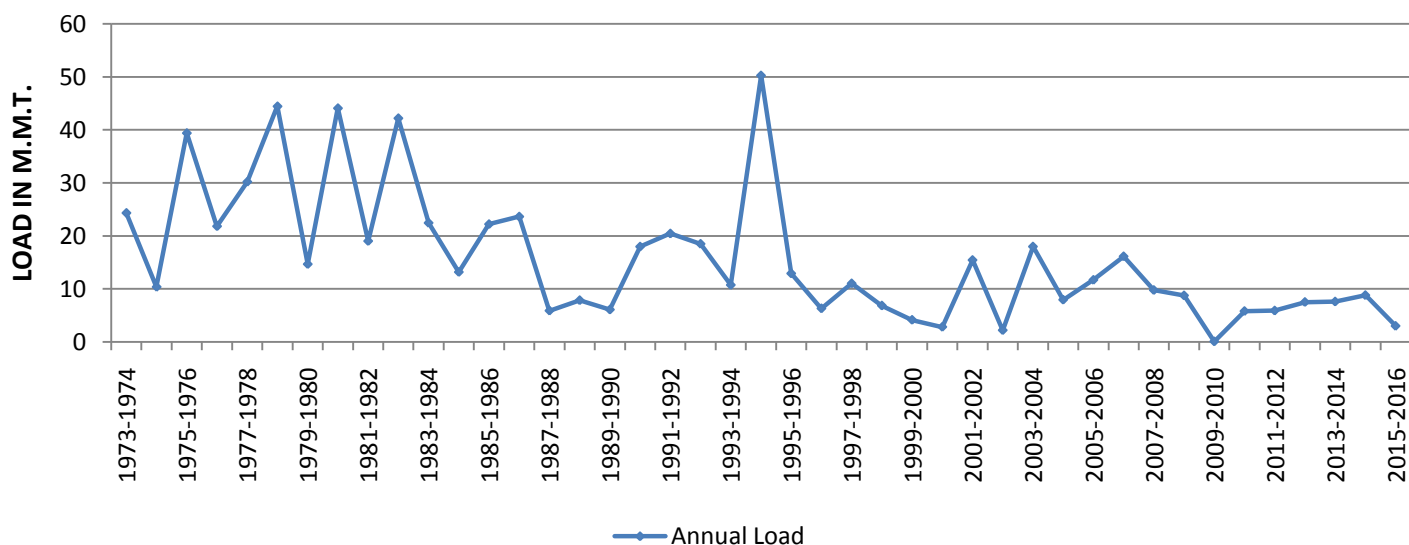
MONSOON LOAD AT SITE TIKARPARA, RIVER: MAHANADI



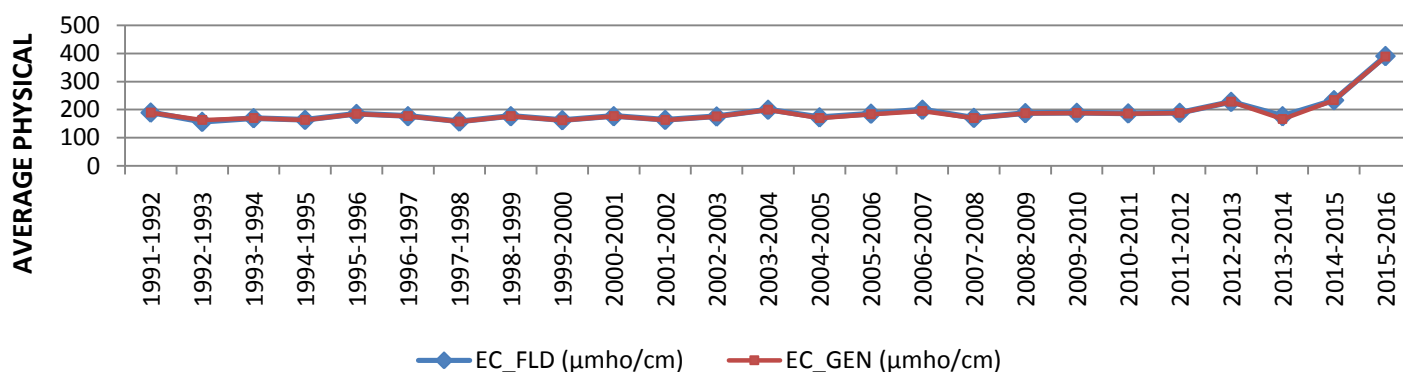
NON MONSOON LOAD AT SITE TIKARPARA, RIVER: MAHANADI



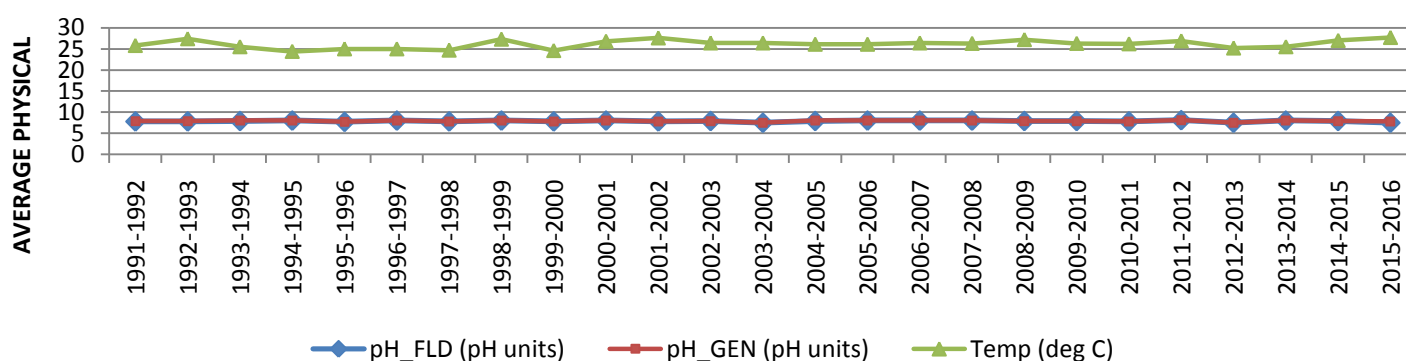
ANNUAL LOAD (MILLION M.T.) AT SITE TIKARPARA, RIVER: MAHANADI



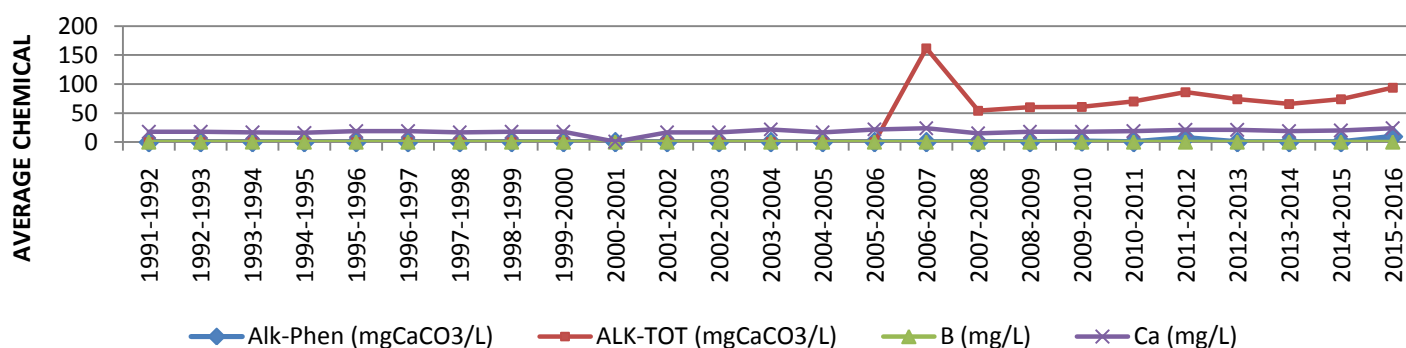
WATER QUALITY PROPERTIES AT SITE TIKARPARA, RIVER: MAHANADI



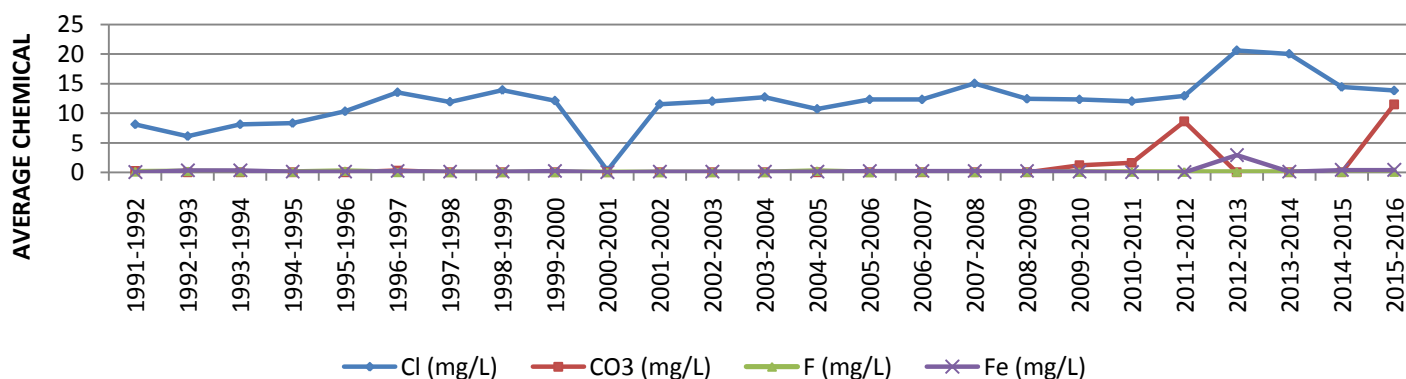
WATER QUALITY PROPERTIES AT SITE TIKARPARA, RIVER: MAHANADI



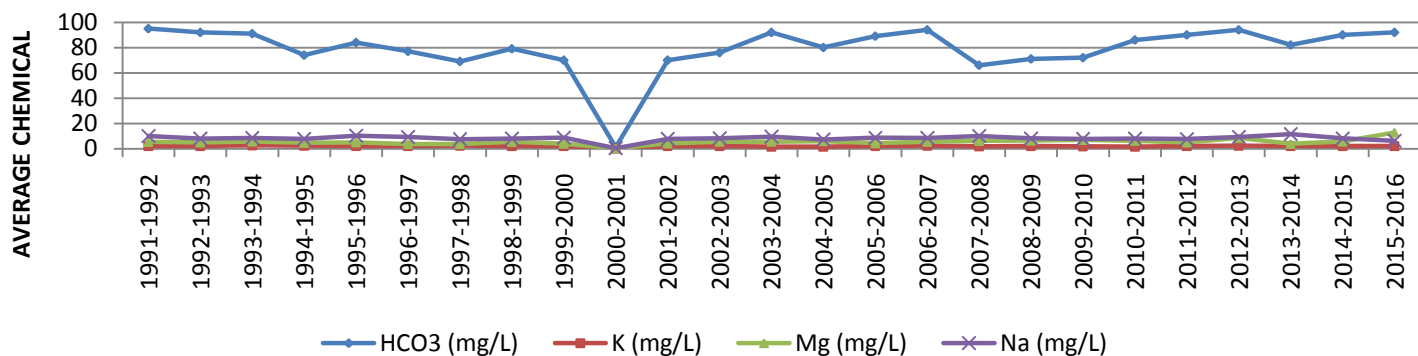
WATER QUALITY PROPERTIES AT SITE TIKARPARA, RIVER: MAHANADI



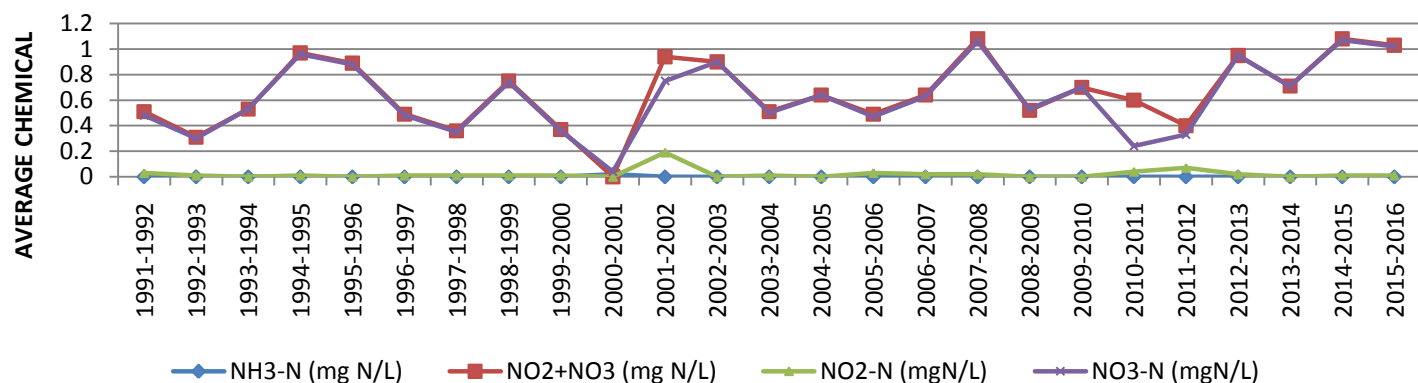
WATER QUALITY PROPERTIES AT SITE TIKARPARA, RIVER: MAHANADI



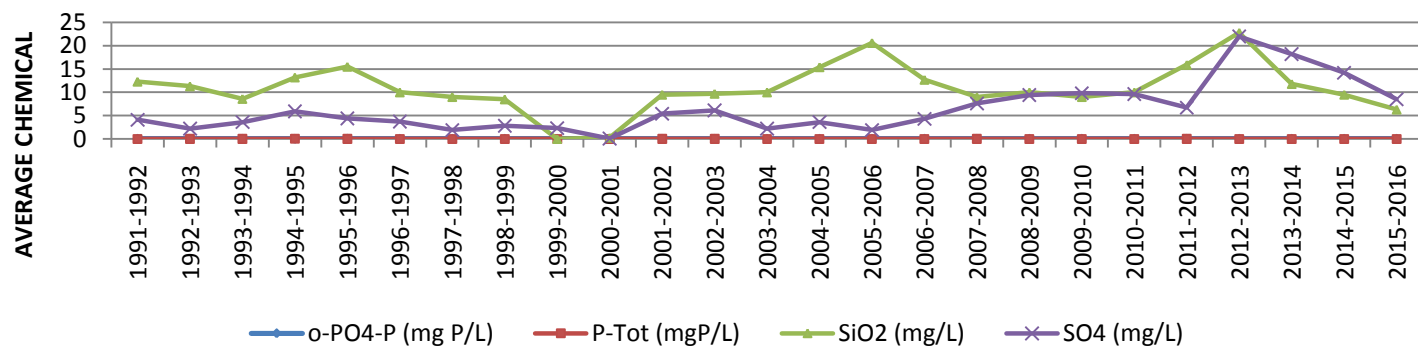
WATER QUALITY PROPERTIES AT SITE TIKARPARA, RIVER:MAHANADI



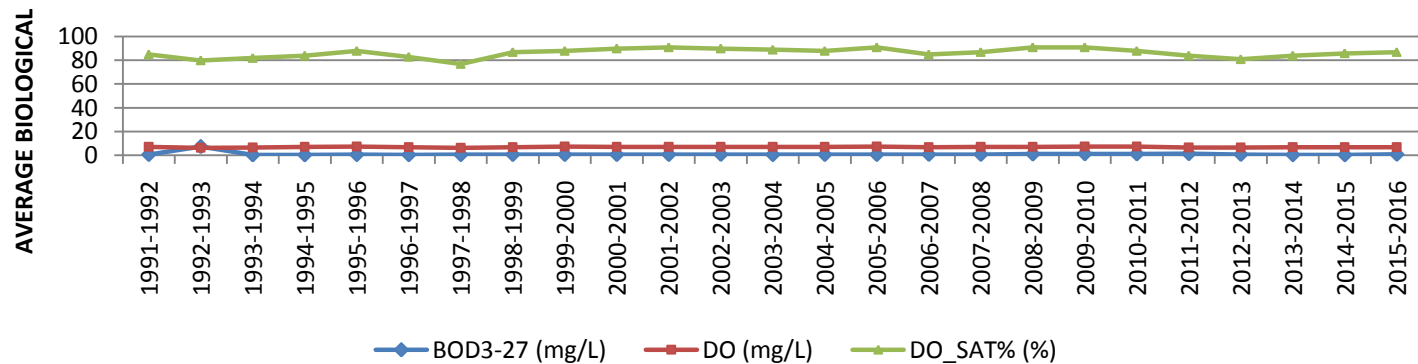
WATER QUALITY PROPERTIES AT SITE TIKARPARA, RIVER: MAHANADI



WATER QUALITY PROPERTIES AT SITE TIKARPARA, RIVER:MAHANADI



WATER QUALITY PROPERTIES AT SITE TIKARPARA,RIVER: MAHANADI



MAHANADI RIVER

BOD3-27 (mg/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	3.0	0.4	1.2	3.3	0.3	1.2	2.6	0.2	1.5
BASANTPUR	1.9	0.3	0.8	1.9	0.3	0.8	1.9	0.1	0.8
TIKARAPARA	4.5	0.4	1.0	1.5	0.6	0.9	0.8	0.2	0.4

Parameter-DO (mg/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	8.7	5.0	7.0	8.6	4.5	6.7	8.9	5.6	7.8
BASANTPUR	8.3	5.1	6.8	8.6	5.0	6.9	8.7	5.6	7.0
TIKARAPARA	8.6	5.6	7.1	8.7	5.9	7.1	10.90	5.20	6.90

Parameter -- FLUORIDE

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	0.65	0.12	0.34	0.45	0.09	0.20	0.28	0.12	0.20
BASANTPUR	0.44	0.14	0.29	0.34	0.13	0.18	0.32	0.18	0.23
TIKARAPARA	0.19	0.01	0.05	0.13	0.03	0.06	0.05	0.05	0.05

Parameter -- Fe

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	0.32	0.12	0.17	0.10	0.00	0.02	0.10	0.00	0.00
BASANTPUR	0.42	0.09	0.19	0.13	0.01	0.06	0.10	0.10	0.10
TIKARAPARA	0.65	0.14	0.31	0.85	0.24	0.70	0.50	0.30	0.40

Parameter -- EC

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	301	88	171	266	83	146	176	85	118
BASANTPUR	321	128	208	388	147	248	371	122	257
TIKARAPARA	255	119	177	264	113	184	310	121	234

Parameter -- So₄

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	19.6	3.4	8.7	21.4	4.9	11.0	21.4	4.9	11.0
BASANTPUR	24.4	6.5	13.7	29.8	11.7	20.0	32.0	26.4	29.0
TIKARAPARA	10.7	2.0	6.2	12.1	2.9	8.8	17.2	10.6	14.2

CHLORIDE

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	20.3	4.8	9.7	27.0	4.5	10.9	18.0	10.0	11.8
BASANTPUR	23.7	7.2	14.0	25.5	7.2	15.5	31.0	8.0	18.1
TIKARAPARA	17.4	7.4	11.7	18.5	8.3	12.8	20.7	9.4	14.4

Mg (mg/l)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	9.6	2.0	5.2	11.7	2.6	6.3	17.5	2.9	9.9
BASANTPUR	13.4	2.9	7.1	19.5	4.3	10.2	31.1	5.1	13.2
TIKARAPARA	10.9	2.7	6.0	13.1	3.7	7.6	9.7	1.9	5.7

HAR_Ca (mgCaCO₃/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	77.0	22.5	46.2	60.6	15.5	33.9	60.0	16.0	42.0
BASANTPUR	74.5	28.0	47.3	85.09	31.73	54.64	104.0	32.0	68.0
TIKARAPARA	70.1	27.8	45.7	67.1	27.4	44.9	87.0	36.0	50.0

HAR_Total (mgCaCO₃/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
RAJIM	112.3	37.1	67.7	106	32	60	117.0	56.0	83.0
BASANTPUR	122.7	47.5	76.7	159	58	97	210.0	73.0	123.0
TIKARAPARA	111.8	48.6	77.5	129	55	91	95.0	56.0	74.0

SEONATH RIVER

BOD3-27 (mg/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Simga	2.7	0.4	1.2	2.6	0.4	1.2	1.8	0.1	1.0
Jondhra	2.7	0.5	1.2	3.1	0.5	1.2	2.7	0.4	1.2

Parameter-DO (mg/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Simga	9.2	4.8	6.8	2.6	0.4	1.2	1.8	0.1	1.0
Jondhra	9.6	5.1	7.4	9.4	4.6	7.2	2.7	0.4	1.2

Parameter -- FLUORIDE

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Simga	0.76	0.14	0.41	0.45	0.12	0.23	0.32	0.16	0.23
Jondhra	0.76	0.12	0.40	0.32	0.08	0.17	0.32	0.16	0.24

Parameter --EC

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Simga	527	183	365	365	253	315	554	219	393
Jondhra	539	212	378	448	171	322	375	115	283

Parameter --Fe

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Simga	0.42	0.05	0.16	0.20	0.01	0.07	0.10	0.10	0.10
Jondhra	0.29	0.08	0.15	0.14	0.00	0.03	0.10	0.00	0.00

Parameter --CHLORIDE

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Simga	50.0	20.8	25.0	49.8	36.0	25.2	67.0	16.0	35.6
Jondhra	38.2	8.0	20.3	43.7	7.2	22.2	28.0	11.0	20.8

Parameter - Mg (mg/l)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Simga	22.9	5.3	12.5	27.0	6.9	15.5	30.1	8.8	16.0
Jondhra	21.3	6.5	13.6	22.0	6.9	13.7	20.4	5.8	14.2

Parameter - Sulphate (So4)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Simga	33.2	8.1	18.5	39.8	11.4	23.5	23.0	23.0	23.0
Jondhra	33.8	8.3	20.1	37.7	10.3	20.9	22.0	16.4	19.5

HAR_Total (mgCaCO3/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Simga	204.2	74.0	135.4	226.0	71.9	140.5	209.0	113.0	155.0
Jondhra	208.3	82.2	138.8	188.5	67.5	125.2	205.0	76.0	154.0

RIVER HASDEO

Parameter - BOD3-27 (mg/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Manendragarh	3.2	0.4	1.1	3.6	0.4	1.2	21.0	0.1	3.5
Bamnidihi	9.7	0.3	1.9	3.6	0.2	0.9	3.2	0.1	1.2

Parameter-DO (mg/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Manendragarh	9.2	6.0	7.5	8.9	5.9	7.5	9.5	4.2	6.7
Bamnidihi	8.3	4.0	6.4	8.6	3.9	6.6	9.1	3.2	6.3

Parameter -- FLUORIDE

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Manendragarh	0.52	0.13	0.29	0.17	0.07	0.11	0.16	0.10	0.13
Bamnidihi	0.48	0.13	0.26	0.32	0.10	0.17	0.20	0.12	0.18

Parameter --EC

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Manendragarh	279.8	93.1	169.0	276.9	99.9	167.3	655.0	77.0	259.0
Bamnidihi	293.0	113.9	175.2	391.5	132.4	213.5	607.0	97.0	233.0

Parameter --CHLORIDE

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Manendragarh	16.6	4.9	9.8	19.4	5.4	11.2	42.0	10.0	20.3
Bamnidihi	21.4	5.8	11.2	28.9	6.6	14.4	21.0	7.0	15.3

Parameter - Fe

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Manendragarh	0.21	0.11	0.15	0.06	0.04	0.04	0.10	0.10	0.10
Bamnidihi	0.67	0.09	0.27	0.17	0.03	0.07	0.10	0.10	0.10

Parameter-Mg (mg/l)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Manendragarh	11.9	2.6	6.7	14.6	4.1	8.3	29.2	5.8	14.4
Bamnidihi	10.4	2.9	6.0	14.2	4.0	8.4	18.5	3.9	10.6

Parameter-Sulphate

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Manendragarh	23.7	6.5	14.4	26.6	7.9	15.4	18.5	14.0	16.0
Bamnidihi	21.2	5.3	12.1	27.6	9.0	17.3	32.0	21.0	25.0

HAR_Total (mgCaCO₃/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Manendragarh	117.5	39.2	72.3	128.0	41.6	75.1	334.0	56.0	131.0
Bamnidihi	97.1	41.0	64.2	123.5	49.5	81.1	157.0	44.0	105.0

RIVER TEL**BOD₃₋₂₇ (mg/L)**

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Kesinga	5.6	2.0	4.2	7.8	2.8	5.8	1.7	0.1	0.6
Kantamal	1.6	0.3	0.8	1.6	0.3	0.7	1.1	0.1	0.4

Parameter-DO (mg/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Kesinga	15.7	9.4	12.8	19.4	10.9	15.7	9.3	6.4	7.8
Kantamal	9.3	5.2	7.1	9.2	5.2	7.0	9.2	4.7	7.1

Parameter -- FLUORIDE

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Kesinga	2.11	0.98	1.40	2.09	1.12	1.47	10.70	6.30	8.00
Kantamal	4.71	0.16	0.88	0.38	0.11	0.20	0.26	0.12	0.17

Parameter --CHLORIDE

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Kesinga	27.9	8.7	16.8	32.1	10.0	20.3	17.0	4.0	13.3
Kantamal	33.2	4.9	14.2	41.1	4.4	16.6	22.0	5.0	14.6

Parameter --Fe

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Kesinga	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1
Kantamal	0.6	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.1

Parameter --EC

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Kesinga	269.1	104.2	184.1	294.5	101.6	191.3	230.0	117.0	166.0
Kantamal	281.3	108.3	180.8	287.6	104.7	169.8	195.0	97.0	144.0

Parameter-Mg (mg/l)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Kesinga	15.3	4.0	8.6	18.1	4.4	9.8	20.4	4.9	12.1
Kantamal	12.6	2.5	6.6	16.0	3.4	7.7	16.5	3.9	10.9

Parameter-Sulphate

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average

Kesinga	18.6	6.6	12.0	23.9	8.5	15.1	13.5	11.0	12.1
Kantamal	17.8	4.2	9.6	25.1	6.7	13.9	21.5	13.5	17.4

Parameter-HAR_Total (mgCaCO3/L)

SITE NAME (From U/S to D/S)	Since inception of sites			Last 10 years 2004-05 to 2014-15			One Year		
	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average	Av. Yearly Max.	Av. Yearly Min.	Annual Average
Kesinga	123.1	40.3	78.4	139.4	39.3	82.4	153.0	64.0	109.0
Kantamal	116.5	39.1	71.3	131.8	39.0	71.6	130.0	56.0	100.0

