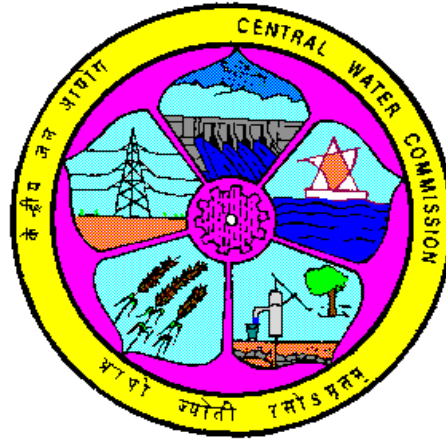


FOR OFFICIAL USE ONLY

**GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION**



**GODAVARI BASIN
WATER QUALITY YEAR BOOK (Vol. III)
(JUNE 2015– MAY 2016)**

**GODAVARI CIRCLE
HYDERABAD
December 2016**

P R E F A C E

One of the main functions of the Central Water Commission (CWC) is monitoring of river water quality in all the important river basins of India. For River Godavari and its tributaries water quality monitoring is carried out as a part of hydrological observation programme. River Water Samples are collected from the hydrological stations maintained by the CWC and analysed in the laboratories set up at divisional headquarters. The water quality data thus generated is published every year in the form of Water Quality Year Book.

For Godavari basin the Water Quality is monitored at 31 hydrological observation stations (Upper Godavari Division-8, Lower Godavari Division-8, Wainganga Division-15). The water samples collected from the hydrological stations under Godavari Circle are being analysed at Level-III Water Quality Laboratory, Upper Godavari Division, Hyderabad and those collected from hydrological stations under Wainganga Division are being analyzed at Level II Water Quality Laboratory at Nagpur.

The water samples received in the respective laboratories are analysed for physical, chemical, biological & bacteriological parameters, organo-chloro pesticides and trace & toxic elements. In addition to above parameters six chemical indices are derived mathematically based upon the observed data. Then the waters are classified with the help of US Salinity Diagram.

The Water Quality Year Book is useful to all the water resources planners, managers and water users in Godavari basin. Its usefulness will further improve, particularly for planning drinking water supply, irrigation, and industrial and sewage disposal schemes.

Hyderabad
December 2016

(O.R.K.REDDY)
Superintending Engineer
Godavari Circle

CONTENTS

1.	Introduction			
1.1	Water Quality monitoring in Godavari Basin			1
1.2	Classification of Water Quality Stations			1
2.	Water Quality Data			
2.1	Background notes			2
2.2	Observation/Sampling Techniques			2
2.3	Frequency of Sample collection			3
2.4	Analysis techniques			3
2.5	Parameters analysed in WQ Lab.			4
2.6	Calculated Parameters			6
2.7	Method of presentation			7
2.8	Godavari Basin Map			9
2.9	Water Quality Data			
2.9.1	Godavari	at	Polavaram	9
2.9.2	Godavari	at	Bhadrachalam	19
2.9.3	Sabari	at	Konta	27
2.9.4	Murredu	at	Sangam	37
2.9.5	Godavari	at	Perur	43
2.9.6	Indravati	at	Pathagudem	53
2.9.7	Indravati	at	Jagdapur	63
2.9.8	Indravati	at	Nowrangpur	73
2.9.9	Pranahita	at	Tekra	83
2.9.10	Peddavagu	at	Bhatpally	93
2.9.11	Wardha	at	Bamini	103
2.9.12	Penganga	at	P.G.Bridge	113
2.9.13	Wunna	at	Nandgaon	123
2.9.14	Wardha	at	Hivra	133
2.9.15	Wainganga	at	Asthi	143
2.9.16	Wainganga	at	Pauni	153
2.9.17	Kanhan	at	Satrapur	163
2.9.18	Bagh	at	Rajegaon	173
2.9.19	Wainganga	at	Kumhari	183
2.9.20	Wardha	at	Sakmur	193
2.9.21	Khobragarhi	at	Wairagarh	199
2.9.22	Khanan	at	Ramakona	204
2.9.23	Wainganga	at	Keolari	210
2.9.24	Godavari	at	Mancherial	216
2.9.25	Peddavagu	at	Gandlapet	226
2.9.26	Godavari	at	Nanded	234
2.9.27	Manjira	at	Saigaon	236
2.9.28	Purna	at	Purna	244
2.9.29	Godavari	at	Dhalegaon	252
2.9.30	Godavari	at	Kopergaon	260
2.9.31	Pravara	at	Pachegaon	276

1.0 INTRODUCTION

The Godavari is the largest river in South India extending over nearly 10% of Geographical area of the country. The total catchment area of the Godavari basin is 3,12,812 sq. km., draining parts of the states of Maharashtra, Karnataka, Madhya Pradesh, Chattisgarh, Orissa, Telangana and Andhra Pradesh. The river Godavari rises at an elevation of 1,067 m in the Western Ghats near Thriambak Hills in the Nasik district of Maharashtra. After flowing for about 1,465 km., in generally south-east direction, through Maharashtra, Telangana and Andhra Pradesh, it falls into the Bay of Bengal. The Pravara, the Manjira and the Maner are the major right bank tributaries while the Purna, the Pranahita, the Indravati and the Sabari are the major left bank tributaries on the Godavari River.

1.1 Water Quality Monitoring in Godavari Basin

The Central Water Commission is monitoring the quality of river water for the Godavari basin since 1978. This volume contains data on water quality monitored at 31 hydrological observation stations operated by Central Water Commission during the Water Year 2015-16. Out of these 31 water quality stations, 16 are monitored by the Wainganga Division, Nagpur and the remaining 15 are monitored by the Upper Godavari Division, Hyderabad in the Godavari Basin covered by the Godavari Circle at Hyderabad. These stations have been marked in the layout map at page No.9.

For the analysis of river water samples in the Godavari Basin, two laboratories – One Water Quality Laboratory, Level III at Krishna & Godavari Basin, Hyderabad (attached to Upper Godavari Division) and the other Water Quality Laboratory, Level II at Nagpur (attached to Wainganga Division) are being maintained by the Central Water Commission.

1.2 Classification of Water Quality Stations

Based on the location of the water quality stations, they are classified as (i) Base line Stations, (ii) Flux Stations and (iii) Trend Stations.

(i) Base line Stations: These are the water quality stations, where there is no influence of human activities on water quality. At these stations, water quality is

monitored 4 times a year for perennial rivers and 3 to four 4 times a year for seasonal rivers.

(ii) Flux Stations: These stations are also known as impact stations. These stations meant for measuring the mass of particular pollutant on main river stream for measuring the extent of pollution due to human interference or geological feature at any point of time and are necessary for measuring impact of pollution control measures adopted. These stations shall be monitored 12 to 24 times in a year depending up on the pollution potential or importance of water use.

(iii) Trend Stations: These stations are designated for water quality monitoring to show how the water quality at a particular point on a water course varies over time, normally, due to influence of human activities. These stations are monitored twelve times in a year.

2.0 WATER QUALITY DATA

2.1 Back Ground Notes

- 1.** Water year commences from 1st June of the calendar year and extends to 31st May of the next calendar and covers one complete hydrologic cycle.
- 2.** The month and year from which data are collected are indicated in the history sheet.
- 3.** Based on Conductivity and Sodium Adsorption Ratio, the water samples have been classified as per U.S. Salinity Laboratory Standard, 1953.

2.2 Observation/Sampling Techniques

A single grab sample at each station is collected on the designated dates from 10 to 20 cm below the water surface in the discharge measuring section from the flow portion of the stream.

Water samples are collected, in general, in two polythene/polypropylene bottles of one litre capacity – one for the analysis of physico-chemical parameters and the other one for analysis of biological parameters. Water sample meant for analysis of bacteriological analysis is collected in a sterilized glass bottle of 250 mL capacity whose mouth is sealed with aluminum foil. The water sample meant for analysis of pesticides is collected in a glass bottle of one litre capacity and for analysis of Trace

& Toxic elements collected in one litre capacity of polythene/ polypropylene bottle. The sample bottles are labeled and proper care is taken against leakage.

The samples are transported in ice-boxes to the respective laboratories with a minimum loss of time to ensure that they reach the laboratories within 24 hours of collection. The parameters like pH, electrical conductance, dissolved oxygen, carbonate & bicarbonate, Hardness (Ca, Total), coliforms (both Faecal and Total) and Ammonical Nitrogen are analysed immediately after the receipt of water samples in the laboratory. Later the samples, after filtration through membrane filter papers, are preserved at 4°C for analysis of other parameters as per the prescribed time periods.

2.3 Frequency of Sample collection

For baseline, trend stations and Flux stations samples are collected once in a month.

The frequency of sampling for various parameters at various stations are summarized in Table 2.1.

Table 2.1 Frequency of sampling in Godavari Basin during WY 2015 - 16

Parameters	Frequency	Stations
Physico-Chemical including Boron	Once in a month	All stations under Godavari Basin
Biological	Once in a month	All stations under Godavari Basin
Bacteriological	Once in a month	All stations under Godavari Basin
Organo-chloro Pesticides	Once in a year	All Stations under Level-II Laboratory, Nagpur and All Stations under Level-III Laboratory, Hyderabad
Trace & Toxic elements	Once in a year	All Stations under Level-II Laboratory, Nagpur and All Stations under Level-III Laboratory, Hyderabad

2.4 Analysis Techniques:

The Water samples, received from different water quality monitoring stations are analysed for different parameters by following the "STANDARD METHODS FOR

THE EXAMINATION OF WATER AND WASTE WATER” – APHA, AWWA & WPCF, 20th Edition.

2.4.1 Wet Chemical analysis by titrimetry:

Titrimetry is used to estimate the quantities of total hardness, calcium, carbonate, bicarbonate, chloride, dissolved oxygen, biochemical oxygen demand and chemical oxygen demand. In this procedure, analysis is carried out to find the volume of a solution of accurately known concentration, which reacts quantitatively with the known volume of sample from which the concentration of the required parameter is evaluated.

2.4.2. Instrumental methods:

The instrumental methods, the relevant parameters analysed and instruments used are given hereunder.

S.No	Method	Parameter analysed	Instrument used
1	Potentiometric method	pH	Digital pH meter
2	Conductometric method	Electrical Conductance	Digital Conductivity meter
3	Nephelometric method	Sulphate & Turbidity	Nephelo-Turbid Meter
4	Flame Emission Photometric method	Sodium & Potassium	Flame Photometer
5	Colorimetric method	Iron, Ammonical Nitrogen, Nitrate-Nitrogen, Nitrite-Nitrogen, Phosphate-Phosphorous, Silicon, Boron & Fluoride	UV-VIS Spectrophotometer
6	Gravimetric method	Total dissolved solids	Hot Air oven for total dryness at 105°C
7	Chromatographic method	Aldrin, BHC, DDT, Dieldrin and Endosulphan	Gas Chromatograph
8	Atomic Absorption method	Arsenic, Cadmium, Chromium, Lead, Nickel, and Zinc	Atomic Absorption Spectrometer
9	Oxidative Combustion Infrared Analysis method	Total Organic Carbon	Total Organic Carbon Analyzer

2.5 Parameters analysed in the Water Quality Laboratory:

The Krishna & Godavari Basin Water Quality Laboratory, Level III, under Upper Godavari Division, Hyderabad analyses 40 parameters which includes Pesticides, Trace & Toxic elements, Total Organic Carbon along with 32 parameters observed at level-II laboratory, while the Water Quality Laboratory at Wainganga Division, Nagpur analyses 25 Level-II parameters. As per guidelines for Evaluation and Assessment of Environment Laboratory for Recognition for Water Analysis under Environment (Protection) Act, 1986.

2.5.1 Parameters analysed at Level -II Laboratories

a) Physico – chemical Parameters:

i) pH ii) Electrical Conductance iii) Sodium iv) Potassium v) Calcium vi) Magnesium vii) Iron viii) Ammonical Nitrogen ix) Nitrate-Nitrogen x) Nitrite-Nitrogen xi) ortho-Phosphorous- Phosphate xii) Carbonate xiii) Bicarbonate xiv) Chloride xv) Silicon xvi) Fluoride xvii) Sulphate xviii) Turbidity xix) Total Dissolved Solids and xx) Boron

b) Biological Parameters:

i) Dissolved Oxygen ii) Bio-chemical Oxygen Demand and iii) Chemical Oxygen demand

c) Bacteriological Parameters:

i) Total Coli form count and ii) Faecal Coliform count.

2.5.2 Parameters analyzed at Level –III Laboratory

In addition to the above mentioned analyzed at Level II lab parameters, the following parameters were analyzed at Level- III Laboratory at Hyderabad.

a) Organo-chloro Pesticides:

i) Aldrin ii) BHC iii) Dieldrin iv) DDT and v) Endosulphan

b) Trace & Toxic Elements:

i) Arsenic ii) Cadmium iii) Chromium iv) Lead v) Nickel vi) Zinc and vii) Mercury

c) Total Organic Carbon

2.5.3 Details of samples

Total number of samples collected and number of parameters analysed during the water year 2015-16 in the Godavari Basin are given below.

Divisional Laboratory	No of samples		No. of parameters analysed
	Collected	Analysed	
Wainganga (Level II)	161	161	4025
Upper Godavari (Level III)	109	109	3345
Total	270	270	7370

2.6 Calculated parameters:

Six Parameters are calculated based on the measured results of other parameters. The details are given below.

1) Phenolphthalein and Total Alkalinity:

Using the following conditions, the phenolphthalein Alkalinity (PA) and Total Alkalinity (TA) are calculated from the values of carbonate and bicarbonate values.

Condition	OH ⁻ Alkalinity as CaCO ₃ mg/L	CO ₃ ⁻ Alkalinity as CaCO ₃ mg/L	HCO ₃ ⁻ Alkalinity as CaCO ₃ mg/L
PA = 0	0	0	TA
PA < 1/2 TA	0	2PA	TA - 2PA
PA = 1/2 TA	0	2PA	0
PA > 1/2 TA	2P - T	2(TA - PA)	0
PA = TA	T	0	0

$$a) \text{CO}_3^{--} \text{ mg/L} = \text{CO}_3^{--} \text{ Alkalinity as CaCO}_3 \text{ mg/L} \times 0.60$$

$$b) \text{HCO}_3^{--} \text{ mg/L} = \text{HCO}_3^{--} \text{ Alkalinity as CaCO}_3 \text{ mg/L} \times 1.22$$

$$2) \text{Calcium ion (Ca}^{++}) : \text{Ca}^{++} \text{ mg/L} = 0.4 \times \text{Ca-Hardness as CaCO}_3 \text{ mg/L}$$

$$3) \text{Magnesium ion (Mg}^{++}) :$$

$$\text{Mg}^{++} \text{ mg/L} = 0.243 \times [\text{Total Hardness as CaCO}_3 \text{ mg/L} - \text{Ca-Hardness as CaCO}_3 \text{ mg/L}]$$

$$4) \text{Sodium Percentage (\%Na)} = (\%Na) = \frac{\text{Na}^+ \times 100}{[\text{K}^+ + \text{Na}^+ + \text{Ca}^{++} + \text{Mg}^{++}]}$$

(Ionic concentrations are in meq/L)

$$5) \text{Sodium Adsorption Ratio (SAR)} = \frac{\text{Na}^+}{\sqrt{(\text{Ca}^{++} + \text{Mg}^{++})/2}}$$

(Ionic concentrations are in meq/L)

$$6) \text{ Residual Sodium Carbonate (RSC)} = \text{CO}_3^{--} + \text{HCO}_3^- - (\text{Ca}^{++} + \text{Mg}^{++})$$

(Ionic concentrations are in meq/L)

2.7 Method of presentation:

This volume presents Station-wise water quality data. For each station, the history sheet, water quality data sheet and water quality summery for the current year and water quality data seasonal average from 1996-97 are included. The station wise data for each water quality station is arranged along the river moving upstream from the sea or confluence with river/international boundary, towards its source, giving inter-se priority to stations on intermediate tributary in similar fashion. Tolerance limits of water quality parameters for different designated uses according to Bureau of Indian Standard code BIS: 2296 – 1982 are given in Table 2.3.

Table 2.3 Tolerance limit relating to selected pollution parameters for inland surface waters required for different uses as prescribed by the Bureau of Indian Standards (BIS:2296-1982)

Sl. No	Constituents	Unit	Designated use class of inland surface water				
			A	B	C	D	E
1	pH		6.5-8.5	6.5-8.5	6.5-8.5	6.5-8.5	6.0-8.5
2	EC at 25°C	µS/cm, Max	-	-	-	1000	2250
3	DO	mg/L, Min	6	5	4	4	-
4	BOD	mg/L, Max	2	3	3	-	-
5	Total coliform organisms	MPN/100 ml, Max	50*	500*	5000*	-	-
6	Colour,	Hazen units, Max	10	300	300	-	-
7	Odour		Un-objectionable	-	-	-	-
8	Taste		Tasteless	-	-	-	-
9	Total dissolved solids	mg/L, Max	500	-	1500	-	2100
10	Total Hardness	as CaCO ₃ , mg/L, Max	300	-	-	-	-
11	Calcium hardness	as CaCO ₃ , mg/L, Max	200	-	-	-	-
12	Magnesium	as CaCO ₃ , mg/L, Max	100	-	-	-	-
13	Iron	as Fe, mg/L, Max	0.3	-	50	-	-
14	Chloride	as Cl, mg/L, Max	250	-	600	-	600
15	Fluoride	as F, mg/L, Max	1.5	1.5	1.5	-	-
16	Sulphate	as SO ₄ , mg/L, Max	400	-	400	-	1000
17	Nitrate	as NO ₃ , mg/L, Max	20	-	50	-	-
18	Free Ammonia	as N, mg/L, Max	-	-	-	1.2	-
19	Arsenic	as As, mg/L, Max	0.05	0.2	0.2	-	-
20	Boron	as B, mg/L, Max	-	-	-	-	2
21	Cadmium	as Cd, mg/L, Max	0.01	-	0.01	-	-
22	Chromium	as Cr ⁶⁺ , mg/L, Max	0.05	0.05	0.05	-	-
23	Copper	as Cu, mg/L, Max	1.5	-	1.50	-	-
24	Cyanide	as CN, mg/L, Max	0.05	0.05	0.05	-	-
25	Lead	as Pb, mg/L, Max	0.1	-	0.10	-	-
26	Manganese	as Mn, mg/L, Max	0.5	-	-	-	-
27	Mercury	as Hg mg/L, Max	0.001	-	-	-	-
28	Zinc	as Zn, mg/L, Max	15	-	15	-	-
29	Pesticides		Absent	-	Absent	-	-
30	Free carbon dioxide	as CO ₂ , mg/L, Max	-	-	-	6	-
31	Phenolic compound	as C ₆ H ₅ OH, mg/L, Max	0.002	0.005	0.005	-	-
32	Sodium percent,	Max	-	-	-	-	60
33	SAR	Max	-	-	-	-	26

A Drinking water source without conventional treatment but after disinfections

B Outdoor bathing-organised

C Drinking water source with conventional treatment followed by disinfections

D Propagation of wildlife, fisheries

E Irrigation, industrial cooling and controlled waste disposal

*** If the coliform count is more than the prescribed tolerance limit, the criteria for coliform shall be satisfied if not more than 20% of samples show more than the tolerance limit specified and not more than 5% of samples show more than 4 times the tolerance limit. Further, the faecal coliform should not be more than 40% of the total coliform.**

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Polavaram	Code	: AG000C3
State	: Andhra Pradesh	District	West Godavari
Basin	: Godavari	Independent River	: Godavari
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Godavari
Division	: Lower Godavari Div., Hyderabad	Sub-Division	: Lower Godavari 2, Rajahmundry
Drainage Area	: 307800 Sq. Km.	Bank	: Right
Latitude	: 17°15'07"	Longitude	: 81°38'53"
	Opening Date	Closing Date	
Gauge	: 01.01.1966		
Discharge	: 01.01.1966		
Sediment	: 25.10.1966		
Water Quality	: 25.10.1966		

Water Quality Datasheet for the period : 2015-2016

Station Name : Polavaram (AG000C3)

Local River : Godavari

River Water Analysis

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	221.8	2868	2628	7523	2575	515.9	321.5	248.9	189.0	218.2	138.0	154.0
2	Colour_Cod (-)	Clear	Brown	Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	191	205	174	132	183	214	337	249	952	153	353	182
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)									8.2	8.1		8.8
6	pH_GEN (pH units)	7.8	7.6	7.3	7.0	7.4	8.1	8.2	8.3	8.8	8.4	8.7	8.2
7	TDS (mg/L)	152	182	144	246	126	11	198	100	107	94	90	97
8	Temp (deg C)	31.0	30.0	31.0	29.5	27.0	31.0	29.0	28.0	27.0	29.0	32.0	33.0
9	Turb (NTU)	0.1	457.0	102.0	194.0	42.0	3.0	3.0	2.0	12.0	12.0	2.0	5.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	2.0	4.3	3.7	0.0
2	ALK-TOT (mgCaCO3/L)	71	108	84	54	69	92	94	83	73	50	62	56
3	B (mg/L)	0.13	0.00	0.22	0.01	0.00	0.00	0.00					
4	Ca (mg/L)	12	16	18	12	19	19	19	14	15	11	12	11
5	Cl (mg/L)	7.8	8.5	11.6	3.9	3.5	7.5	7.2	6.7	6.3	4.2	6.6	2.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	2.4	5.2	4.5	0.0
7	F (mg/L)	0.02	0.44	0.21	0.01	0.26	0.12	0.11	0.01	0.16	0.01	0.19	0.01
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	87	132	103	66	84	112	115	93	84	50	67	68
10	K (mg/L)	2.1	2.5	2.5	2.0	2.1	2.1	1.8	1.8	1.9	1.2	10.9	2.2
11	Mg (mg/L)	6.3	8.7	9.7	5.8	9.7	9.2	10.2	7.0	7.0	4.0	6.0	5.0
12	Na (mg/L)	10.4	18.3	17.5	10.8	15.9	16.6	14.4	11.8	12.1	9.0	9.8	9.9
13	NH3-N (mg N/L)	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.08
14	NO2+NO3 (mg N/L)	0.17	0.82	0.63	0.45	0.43	0.49	0.24	0.92	0.51	0.80	0.97	0.15
15	NO2-N (mgN/L)	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.01	0.05	0.00	0.00
16	NO3-N (mgN/L)	0.17	0.82	0.62	0.44	0.42	0.49	0.24	0.92	0.50	0.76	0.96	0.15
17	o-PO4-P (mg P/L)	0.050	0.190	0.250	0.116	0.143	0.080	0.026	0.082	0.070	0.127	0.128	0.070
18	SiO2 (mg/L)	13.7	8.4	12.1	13.0	16.7	14.2	14.3	13.8	10.3	15.2	14.3	14.4
19	SO4 (mg/L)	8.6	12.1	21.0	8.7	20.6	9.6	7.2	11.3	11.3	7.9	7.0	4.4

Water Quality Datasheet for the period : 2015-2016

Station Name : Polavaram (AG000C3)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.2	1.9	2.2	1.6	1.2	1.5	1.1	0.8	0.7	1.0	0.3	0.3
2	COD (mg/L)	20.3	12.2	4.8	6.9	10.2	4.8	2.4	2.0	6.4	0.8	1.6	1.6
3	DO (mg/L)									7.4	7.0		6.0
4	DO_SAT% (%)									93	91		84
5	FCol-MPN (MPN/100mL)	2	2400	2800	16000	9000	2200	1400	1100	130	330	2200	9000
6	Tcol-MPN (MPN/100mL)	230	9000	16000	16000	16000	5000	2800	16000	16000	1400	16000	16000
7	TOC (mg/L)	1.9	2.1	1.9	2.8	2.3	2.3	2.4	3.3				
	TRACE & TOXIC												
1	As (µg/L)											0.3	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Hg (µg/L)											0.0	
5	Ni (µg/L)											0.0	
6	Pb (µg/L)											0.0	
7	Zn (µg/L)											0.1	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	30	40	44	30	48	48	48	35	38	28	30	28
2	HAR_Total (mgCaCO3/L)	56	76	84	54	88	86	91	64	67	44	55	48
3	Na% (%)	28	33	30	29	28	29	25	28	28	30	24	30
4	RSC (-)	0.3	0.6	0.0	0.0	0.0	0.1	0.1	0.4	0.1	0.1	0.2	0.2
5	SAR (-)	0.6	0.9	0.8	0.6	0.7	0.8	0.7	0.6	0.6	0.6	0.6	0.6
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Polavaram (AG000C3)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

Sub-Division : Lower Godavari 2, Rajahmundry

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	367	22433	94.34	1665
2	EC_GEN (µmho/cm)	12	952	132	277
3	pH_FLD (pH units)	3	8.8	8.1	8.4
4	pH_GEN (pH units)	12	8.8	7.0	8
5	TDS (mg/L)	12	246	11	129
6	Temp (deg C)	12	33.0	27.0	29.8
7	Turb (NTU)	12	457.0	0.1	69.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	4.3	0.0	1.1
2	ALK-TOT (mgCaCO3/L)	12	108	50	75
3	B (mg/L)	7	0.22	0.00	0.05
4	Ca (mg/L)	12	19	11	15
5	Cl (mg/L)	12	11.6	2.9	6.4
6	CO3 (mg/L)	12	5.2	0.0	1.4
7	F (mg/L)	12	0.44	0.01	0.13
8	Fe (mg/L)	12	0.1	0.0	0
9	HCO3 (mg/L)	12	132	50	88
10	K (mg/L)	12	10.9	1.2	2.8
11	Mg (mg/L)	12	10.2	4.0	7.4
12	Na (mg/L)	12	18.3	9.0	13
13	NH3-N (mg N/L)	12	0.08	0.01	0.01
14	NO2+NO3 (mg N/L)	12	0.97	0.15	0.55
15	NO2-N (mgN/L)	12	0.05	0.00	0.01
16	NO3-N (mgN/L)	12	0.96	0.15	0.54
17	o-PO4-P (mg P/L)	12	0.250	0.026	0.111
18	SiO2 (mg/L)	12	16.7	8.4	13.4
19	SO4 (mg/L)	12	21.0	4.4	10.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	2.2	0.2	1.1
2	COD (mg/L)	12	20.3	0.8	6.2
3	DO (mg/L)	3	7.4	6.0	6.8
4	DO_SAT% (%)	3	93	84	89
5	FCol-MPN (MPN/100mL)	12	16000	2	3880
6	Tcol-MPN (MPN/100mL)	12	16000	230	10869
7	TOC (mg/L)	8	3.3	1.9	2.4
	TRACE & TOXIC				
1	As (µg/L)	1	0.3	0.3	0.3
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.0	0.0	0
4	Hg (µg/L)	1	0.0	0.0	0
5	Ni (µg/L)	1	0.0	0.0	0
6	Pb (µg/L)	1	0.0	0.0	0
7	Zn (µg/L)	1	0.1	0.1	0.1
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	48	28	37
2	HAR_Total (mgCaCO3/L)	12	91	44	68
3	Na% (%)	12	33	24	29
4	RSC (-)	12	0.6	0.0	0.2
5	SAR (-)	12	0.9	0.6	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Polavaram (AG000C3)

Local River : Godavari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	5629	3000	5753	2122	6818	4584	4090	3769	2687	8445	3623	4813	6418	3501	3163
2	EC_GEN (µmho/cm)	164	166	186	148	186	172	215	184	161	191	195	186	242	163	177
3	pH_FLD (pH units)															
4	pH_GEN (pH units)	8.2	8.2	8.0	8.0	8.0	8.1	8.1	7.9	7.9	7.8	8.0	8.1	7.9	7.9	7.4
5	TDS (mg/L)								125	102	138	126	152	152	132	170
6	Temp (deg C)	29.3	28.8	28.8	28.6	30.5	29.4	30.2	30.8	30.3	30.7	29.9	29.0	28.7	30.2	29.7
7	Turb (NTU)								54.2	8.9	40.9	5.3	25.4	5.3	103.2	159.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.2	1.6	0.8	0.0	0.8	2.7	3.0	0.0	0.8	0.8	1.6	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	74	65	76	66	78	71	72	65	60	77	76	70	87	65	77
3	B (mg/L)	0.04	0.08	0.04	0.10	0.07	0.10	0.14	0.08	0.16	0.06	0.10	0.17	0.05	0.22	0.07
4	Ca (mg/L)	20	22	24	17	18	18	15	15	14	18	17	15	20	14	15
5	Cl (mg/L)	7.5	11.4	13.6	15.2	11.1	13.0	23.1	15.1	11.0	13.8	15.4	10.2	10.1	12.6	7.1
6	CO3 (mg/L)	1.4	1.9	1.0	0.0	1.0	3.2	3.7	0.0	1.0	1.0	1.9	0.0	0.0	0.0	0.0
7	F (mg/L)	0.44	0.55	0.37	0.26	0.28	0.17	0.24	0.25	0.25	0.19	0.36	0.16	0.28	0.18	0.19
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.5	0.2	0.1	0.1
9	HCO3 (mg/L)	88	76	91	80	93	80	81	80	71	92	89	85	107	80	94
10	K (mg/L)	1.5	1.1	1.8	1.8	1.8	2.1	2.1	2.1	1.8	2.4	2.2	2.3	2.1	2.4	2.3
11	Mg (mg/L)	3.8	3.7	3.9	5.4	5.1	4.2	7.6	8.2	6.8	7.2	7.0	9.6	10.7	7.4	8.0
12	Na (mg/L)	9.8	10.7	9.8	8.9	10.0	10.6	17.0	9.5	7.5	10.6	15.8	11.7	12.8	15.2	14.6
13	NH3-N (mg N/L)	0.05	0.04	0.02	0.04	0.02	0.05	0.26	0.06	0.13	0.07	0.24	0.03	0.06	0.04	0.01
14	NO2+NO3 (mg N/L)	0.38	0.63	0.41	1.31	0.55	0.68	1.89	0.74	0.48	0.66	0.61	0.45	0.57	0.41	0.50
15	NO2-N (mgN/L)				0.05	0.02	0.01	0.01	0.06	0.03	0.03	0.01	0.00	0.00	0.01	0.00
16	NO3-N (mgN/L)	0.38	2.77	0.41	1.30	0.52	0.67	1.87	0.68	0.45	0.63	0.60	0.45	0.57	0.40	0.49
17	o-PO4-P (mg P/L)	0.011	0.055	0.019	0.042	0.028			0.018	0.009	0.012	0.018	0.162	0.125	0.209	0.150
18	P-Tot (mgP/L)						0.032	0.009								
19	SiO2 (mg/L)	13.4	23.4	15.0	18.0	18.0	13.5	12.2	13.2	12.8	14.6	20.8	11.6	15.8	14.9	12.8
20	SO4 (mg/L)	5.7	6.7	7.8	4.4	1.0	1.0	7.0	6.6	5.7	6.9	9.2	13.2	12.2	12.2	14.2

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Polavaram (AG000C3)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.6	0.5	0.5	0.5	0.7	0.9	0.5	0.9	0.7	0.9	1.2	0.7	0.7	0.8	1.4
2	COD (mg/L)			7.9	43.7	10.7	7.5	20.7	4.8	3.6	7.0	7.2	12.1	8.6	5.9	10.9
3	DO (mg/L)	6.6	6.4	5.9	6.4	6.3	6.0	5.9	5.7	5.6	6.0	6.0	5.9	6.0	6.1	
4	DO_SAT% (%)	86	82	76	83	84	79	78	76	74	81	79	77	77	81	
5	FCol-MPN (MPN/100mL)	92	170	1215	163	833	6266	8754	6924	7184	7168	8446	3946	4426	6952	6040
6	Tcol-MPN (MPN/100mL)	3050	2177	2315	1887	1185	7940	10684	7224	8080	8436	11460	7100	10860	8406	11446
7	TOC (mg/L)				5.4			1.2	2.0	1.5	3.1	1.6	1.5	0.4	1.5	2.2
	TRACE & TOXIC															
1	As (µg/L)												7.5	5.1		
2	Cd (µg/L)		31.8	1.2	0.0			0.0					0.5	0.1		
3	Cr (µg/L)		19.5	14.4	7.4			27.0					10.1	4.5		
4	Cu (µg/L)			6.8	1.5								42.8	19.1		
5	Hg (µg/L)							0.3						0.7		
6	Mn (mg/L)				0.01											
7	Ni (µg/L)							10.7					1.7	12.7		
8	Pb (µg/L)		1.0	16.9	6.7			16.6					0.0	3.6		
9	Se (µg/L)															
10	Zn (µg/L)				18.6			550.3					1.0	9.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	49	54	61	43	45	46	38	38	35	44	42	38	50	35	38
2	HAR_Total (mgCaCO3/L)	65	69	77	65	67	63	69	72	63	74	71	78	94	66	72
3	Na% (%)	23	24	20	22	25	25	33	22	20	23	30	26	22	32	30
4	RSC (-)	0.2	0.0	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.2
5	SAR (-)	0.5	0.6	0.5	0.5	0.5	0.6	1.0	0.5	0.4	0.5	0.8	0.6	0.6	0.8	0.7
	PESTICIDES															
1	Aldrin (µg/L)							0.1								
2	BHC (µg/L)			0.1	0.0			0.1								
3	DDT (µg/L)			0.1	0.0			0.1								
4	Dieldrin (µg/L)			0.1	0.0			0.0								
5	Endos (µg/L)			0.1	0.1			0.1								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Polavaram (AG000C3)

Local River : Godavari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	438.7	346.0	906.7	484.2	1236	819.9	666.4	339.2	215.7	966.3	352.8	621.3	1693	530.5	318.8
2	EC_GEN (µmho/cm)	212	274	196	138	259	259	238	214	261	256	291	257	261	188	438
3	pH_FLD (pH units)															8.2
4	pH_GEN (pH units)	8.5	8.4	8.3	8.2	8.4	8.5	8.1	8.3	8.3	8.4	8.4	8.2	8.0	7.9	8.4
5	TDS (mg/L)								145	153	193	176	176	166	145	104
6	Temp (deg C)	25.9	24.8	25.8	25.8	25.8	26.4	26.1	28.0	25.5	25.4	26.3	26.3	25.8	24.9	28.8
7	Turb (NTU)								6.9	1.1	4.5	0.5	1.5	18.8	3.1	5.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	5.0	6.7	0.5	3.5	8.2	7.1	1.9	4.0	4.9	8.2	6.2	1.1	0.0	0.0	1.4
2	ALK-TOT (mgCaCO3/L)	98	106	98	70	104	103	90	82	117	103	117	112	103	84	86
3	B (mg/L)	0.00	0.00	0.07	0.07	0.09	0.07	0.16	0.03	0.17	0.16	0.12	0.08	0.03	0.15	0.00
4	Ca (mg/L)	23	34	32	19	23	25	17	18	24	23	23	21	22	18	17
5	Cl (mg/L)	10.7	16.8	7.8	14.2	13.8	20.3	15.3	15.9	15.0	19.1	14.9	11.3	10.4	8.1	6.9
6	CO3 (mg/L)	6.0	6.6	0.6	4.2	9.9	8.5	2.3	4.9	5.9	9.8	7.5	1.3	0.0	0.0	1.6
7	F (mg/L)	0.47	0.63	0.28	0.16	0.36	0.13	0.28	0.21	0.32	0.23	0.40	0.35	0.25	0.20	0.10
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.2	0.3	0.2	0.0	0.1	0.1	0.0
9	HCO3 (mg/L)	107	116	118	76	107	108	106	91	130	105	128	135	126	102	101
10	K (mg/L)	1.4	1.0	1.6	1.7	2.2	1.7	1.2	2.0	2.2	2.3	2.2	1.8	2.3	2.1	1.9
11	Mg (mg/L)	5.8	6.2	1.5	2.3	8.4	9.2	9.7	9.3	13.8	10.4	12.2	11.6	11.8	9.1	8.3
12	Na (mg/L)	15.5	17.3	11.8	11.3	13.5	13.2	10.9	10.8	11.3	14.0	17.9	18.2	21.1	15.2	13.7
13	NH3-N (mg N/L)	0.01	0.05	0.12	0.11	0.06	0.16	0.11	0.12	0.04	0.14	0.16	0.04	0.00	0.06	0.01
14	NO2+NO3 (mg N/L)	0.07	0.12	0.28	0.27	0.37	0.66	0.85	0.20	0.16	0.34	0.19	0.66	0.36	0.23	0.54
15	NO2-N (mgN/L)				0.01	0.00	0.00	0.04	0.04	0.01	0.02	0.01	0.00	0.00	0.03	0.00
16	NO3-N (mgN/L)	0.07	0.52	0.28	0.26	0.36	0.66	0.80	0.16	0.16	0.32	0.18	0.66	0.36	0.20	0.54
17	o-PO4-P (mg P/L)	0.074	0.005	0.011	0.011	0.013			0.006	0.021	0.019	0.032	0.019	0.053	0.082	0.065
18	P-Tot (mgP/L)						0.010	0.099								
19	SiO2 (mg/L)	13.2	31.0	22.3	14.5	20.3	17.2	15.6	15.8	13.8	34.3	12.7	19.8	15.9	15.9	13.2
20	SO4 (mg/L)	8.8	10.2	2.3	0.0	0.3	5.3	7.0	7.7	9.6	10.6	12.9	11.2	15.4	11.8	9.8

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Polavaram (AG000C3)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.3	1.0	0.4	1.1	0.7	0.2	0.5	0.5	0.7	0.6	0.6	1.1	1.2	0.8	1.0
2	COD (mg/L)			15.4	23.7	26.7	8.1	29.0	2.1	6.3	2.6	7.6	7.8	6.5	6.6	3.9
3	DO (mg/L)	7.2	7.2	7.0	6.3	7.5	6.3	6.7	6.7	7.0	7.0	7.0	7.3	7.0	7.4	7.4
4	DO_SAT% (%)	88	87	86	76	92	78	83	85	86	84	86	90	86	90	93
5	FCol-MPN (MPN/100mL)	120	120	40	85	1840	11433	660	1215	6918	16000	4358	4078	4110	1040	1208
6	Tcol-MPN (MPN/100mL)	2345	5605	65	155	4027	16000	935	1223	12085	16000	4983	4408	4290	7100	9950
7	TOC (mg/L)				6.2			0.4	1.7	1.9	1.4	1.3	1.0	1.2	5.8	2.7
	TRACE & TOXIC															
1	As (µg/L)		1.3							0.0		0.4				
2	Cd (µg/L)		3.8	2.3	0.0		1.0		1.1	0.2	17.5	0.0			0.0	
3	Cr (µg/L)		10.6	2.0	0.0		15.0		0.0	0.0	4.1	0.6			2.1	
4	Cu (µg/L)			4.0	0.0							15.7			1.5	
5	Hg (µg/L)		4.4				0.0									
6	Mn (mg/L)				0.01											
7	Ni (µg/L)						1.0		0.0	1.3	78.9	2.6			0.1	
8	Pb (µg/L)		42.5	23.0	67.5		1.0		0.0	0.0	72.2	0.5			1.4	
9	Se (µg/L)		2.0													
10	Zn (µg/L)				0.0		198.0		50.3	7.5	19.1	16.0			4.0	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	56	85	79	47	56	63	44	46	59	56	58	53	54	45	42
2	HAR_Total (mgCaCO3/L)	80	110	85	56	91	101	84	84	117	100	109	101	103	82	77
3	Na% (%)	29	25	23	29	24	22	21	22	17	23	26	28	30	28	27
4	RSC (-)	0.4	0.0	0.3	0.3	0.3	0.2	0.2	0.0	0.1	0.1	0.2	0.3	0.1	0.1	0.2
5	SAR (-)	0.8	0.7	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.6	0.7	0.8	0.9	0.7	0.7
	PESTICIDES															
1	Aldrin (µg/L)						0.0		0.0	0.0	0.0	0.0				
2	BHC (µg/L)		0.1	0.1	0.0		0.1		0.0	0.1	0.7	0.0				
3	DDT (µg/L)		0.1	0.1	0.0		0.1		0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)		0.0	0.0	0.0		0.0		0.0	0.0	0.0	0.0				
5	Endos (µg/L)		0.1	0.1	0.1		0.1		0.0	0.1	0.0	0.0				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Polavaram (AG000C3)

Local River : Godavari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	202.4	135.9	314.6	305.8	481.6	309.4	266.7	148.2	130.3	335.7	219.8	341.1	402.4	222.3	170.1
2	EC_GEN (µmho/cm)	168	174	147	134	230	266	236	152	161	166	185	219	262	182	229
3	pH_FLD (pH units)															8.5
4	pH_GEN (pH units)	8.5	8.4	8.3	8.1	8.3	8.3	7.9	7.8	8.2	8.3	8.2	8.2	8.3	7.7	8.4
5	TDS (mg/L)								103	103	129	129	185	188	122	94
6	Temp (deg C)	29.4	28.0	28.5	28.5	29.5	28.3	29.0	29.0	29.7	29.3	29.7	28.3	28.7	26.7	31.3
7	Turb (NTU)								0.4	0.6	0.9	0.3	0.7	3.7	3.3	6.3
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	3.3	3.8	4.5	0.0	6.8	1.3	0.0	0.0	3.2	2.6	1.4	0.0	1.4	0.0	2.7
2	ALK-TOT (mgCaCO3/L)	71	69	56	64	82	110	84	58	70	63	68	72	90	68	56
3	B (mg/L)	0.00	0.00	0.02	0.06	0.08	0.04	0.11	0.15	0.02	0.11	0.02	0.21	0.12	0.01	
4	Ca (mg/L)	15	22	14	16	16	18	14	13	13	13	12	15	20	13	11
5	Cl (mg/L)	11.0	18.0	8.3	11.9	17.3	21.3	18.0	10.3	12.2	15.5	9.8	10.4	12.1	7.7	4.6
6	CO3 (mg/L)	3.9	2.3	5.4	0.0	8.1	1.6	0.0	0.0	3.9	3.2	1.7	0.0	1.7	0.0	3.2
7	F (mg/L)	0.37	0.46	0.24	0.22	0.30	0.15	0.21	0.24	0.23	0.17	0.55	0.37	0.14	0.19	0.07
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.2	0.1	0.4	0.2	0.2	0.7	0.2	0.2	0.2	0.0	0.0
9	HCO3 (mg/L)	79	80	57	78	84	131	103	71	77	70	79	87	107	83	62
10	K (mg/L)	1.4	1.0	1.3	1.9	2.0	1.5	2.2	1.9	2.0	2.1	2.0	2.3	2.2	2.1	4.8
11	Mg (mg/L)	4.5	3.5	3.3	3.0	7.3	15.2	9.7	5.8	9.1	8.2	6.8	8.0	10.7	7.2	5.0
12	Na (mg/L)	21.0	10.3	6.7	8.5	13.0	14.4	14.0	7.8	8.9	10.3	10.9	16.2	21.6	14.4	9.6
13	NH3-N (mg N/L)	0.03	0.06	0.34	0.06	0.05	0.25	0.32	0.25	0.22	0.25	0.03	0.02	0.02	0.02	0.04
14	NO2+NO3 (mg N/L)	0.10	0.15	0.01	0.27	0.34	0.82	0.50	0.17	0.12	0.33	0.24	0.63	0.65	0.20	0.64
15	NO2-N (mgN/L)				0.01	0.00	0.04	0.02	0.03	0.01	0.01	0.01	0.00	0.00	0.02	0.02
16	NO3-N (mgN/L)	0.10	0.67	0.01	0.26	0.34	0.78	0.48	0.14	0.11	0.32	0.23	0.63	0.65	0.18	0.62
17	o-PO4-P (mg P/L)	0.000	0.010	0.005	0.008	0.025			0.016	0.007	0.048	0.004	0.063	0.001	0.148	0.108
18	P-Tot (mgP/L)						0.122	0.228								
19	SiO2 (mg/L)	10.4	11.3	14.0	8.5	15.0	16.3	11.3	18.1	13.1	27.6	12.4	11.6	14.2	14.1	14.6
20	SO4 (mg/L)	4.9	5.0	5.0	0.0	6.0	6.3	9.7	6.4	6.5	8.6	6.2	4.3	18.6	12.4	6.4

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Polavaram (AG000C3)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.4	0.9	0.6	1.6	1.1	1.2	0.8	0.5	1.1	0.6	0.2	0.8	2.0	1.1	0.5
2	COD (mg/L)			14.1	8.9	20.1	9.6	10.7	4.5	3.5	3.2	2.3	3.5	5.3	4.9	1.3
3	DO (mg/L)	6.5	6.7	6.8	6.5	5.9	6.2	5.6	6.1	6.5	6.2	6.2	5.6	6.8	6.1	6.5
4	DO_SAT% (%)	85	86	88	84	77	79	72	79	85	81	81	72	88	75	87
5	FCol-MPN (MPN/100mL)	90	2100	0	30	9500	5403	6567	1780	10787	8380	317	827	5335	8	3843
6	Tcol-MPN (MPN/100mL)	430	11000	40	30	12333	5417	6700	3123	10800	10723	557	3077	5335	367	11133
7	TOC (mg/L)				5.4			1.3	1.1	1.7	1.2	1.1	1.0	0.8	1.5	
	TRACE & TOXIC															
1	As (µg/L)		1.9							0.2		0.6	4.1	0.0	0.2	0.3
2	Cd (µg/L)		2.8	2.3	0.0	0.0	2.0	0.0	1.1	0.0	0.0	0.1	0.9	0.0	1.0	0.0
3	Cr (µg/L)		15.0	2.0	0.0	6.0	2.0	10.7	0.0	0.0	0.0	0.9	0.7	0.2	0.0	0.0
4	Cu (µg/L)			2.3	0.0							1.0	4.8	2.1		
5	Hg (µg/L)		0.2				0.1	0.8				0.0	0.9	0.0	0.1	0.0
6	Mn (mg/L)				0.00											
7	Ni (µg/L)					1.0	1.0	3.7	0.0	0.7	0.0	1.6	4.8	5.0	2.5	0.0
8	Pb (µg/L)		35.7	24.8	25.0	19.0	4.0	5.4	1.0	0.0	12.6	1.8	2.7	0.3	3.0	0.0
9	Se (µg/L)		2.0													
10	Zn (µg/L)		25.7		3.5	104.0	35.0	45.2	12.2	6.6	32.1	3.3	26.1	4.5	7.0	0.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	37	55	35	39	39	44	34	33	34	33	30	36	51	33	28
2	HAR_Total (mgCaCO3/L)	56	69	49	51	69	107	75	58	72	67	58	70	95	63	49
3	Na% (%)	44	25	22	26	28	23	29	22	21	25	28	33	34	32	28
4	RSC (-)	0.3	0.0	0.1	0.3	0.3	0.2	0.2	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.1
5	SAR (-)	1.2	0.6	0.4	0.5	0.7	0.6	0.7	0.5	0.5	0.6	0.6	0.8	1.0	0.8	0.6
	PESTICIDES															
1	Aldrin (µg/L)					0.0	0.0	0.0	0.0	0.0	0.0	0.0				
2	BHC (µg/L)		0.1	0.1	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0				
3	DDT (µg/L)		0.1	0.4	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)		0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
5	Endos (µg/L)		0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Bhadrachalam	Code	: AG000E7
State	: Telangana	District	Khammam
Basin	: Godavari	Independent River	: Godavari
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Godavari
Division	: Lower Godavari Div., Hyderabad	Sub-Division	: Lower Godavari 1, Bhadrachalam
Drainage Area	: 280505 Sq. Km.	Bank	: Left
Latitude	: 17°39'57"	Longitude	: 80°53'02"
	Opening Date		Closing Date
Gauge	: 15.06.2007		
Discharge	: 11.07.2007		
Sediment	:		
Water Quality	: 03.10.2006		

Water Quality Datasheet for the period : 2015-2016

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	37.17	1837	1904	6206	1933	434.5	137.8	96.14	53.05	9.872	6.213	6.987
2	Colour_Cod (-)	Clear	Clear	Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)							470	433	656	905	1152	716
4	EC_GEN (µmho/cm)	335	219	173	134	189	239	376	336	1242	355	817	309
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)							6.4	6.5	6.9	6.7	7.3	6.9
7	pH_GEN (pH units)	8.2	7.6	7.4	7.6	7.6	8.2	8.2	8.5	8.7	8.7	8.8	8.4
8	TDS (mg/L)	212	118	126	248	138	63	211	217	189	229	234	274
9	Temp (deg C)	31.0	27.0	25.5	26.0	25.0	27.0	28.0	24.0	25.5	26.0	28.0	30.0
10	Turb (NTU)	1.0	341.0	99.0	181.0	41.0	6.0	3.0	5.0	17.0	23.0	12.0	11.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	8.1	5.4	3.5	5.8
2	ALK-TOT (mgCaCO3/L)	139	84	82	50	76	114	131	138	144	133	145	137
3	B (mg/L)	0.11	0.00	0.14	0.00	0.00	0.00	0.00					
4	Ca (mg/L)	23	18	17	11	18	22	26	27	26	28	29	24
5	Cl (mg/L)	18.4	12.7	9.5	3.9	4.2	7.8	1.2	17.0	17.0	22.9	23.7	25.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	9.7	6.5	4.2	7.0
7	F (mg/L)	0.24	0.27	0.25	0.01	0.35	0.18	0.18	0.08	0.37	0.20	0.41	0.27
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	169	102	100	62	93	139	160	160	156	149	168	153
10	K (mg/L)	3.4	2.7	2.9	1.8	2.0	2.0	2.0	2.4	2.6	2.4	3.4	3.7
11	Mg (mg/L)	13.6	9.2	9.2	5.3	8.7	10.9	14.0	14.0	14.0	14.0	16.0	18.0
12	Na (mg/L)	27.3	17.9	16.5	6.6	13.8	16.6	19.5	22.9	24.7	27.3	35.3	39.5
13	NH3-N (mg N/L)	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.03
14	NO2+NO3 (mg N/L)	0.03	1.10	0.69	0.55	0.37	0.15	0.13	0.56	0.22	0.67	0.57	0.15
15	NO2-N (mgN/L)	0.00	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.01	0.07	0.01	0.01
16	NO3-N (mgN/L)	0.03	1.09	0.69	0.53	0.35	0.15	0.13	0.56	0.21	0.60	0.56	0.14
17	o-PO4-P (mg P/L)	0.080	0.200	0.259	0.101	0.089	0.055	0.034	0.094	0.060	0.102	0.108	0.020
18	SiO2 (mg/L)	22.5	10.4	12.6	14.4	17.0	14.4	14.8	16.5	13.2	19.6	19.6	24.6
19	SO4 (mg/L)	21.8	11.2	20.5	21.4	24.0	14.0	7.0	23.0	26.2	19.9	27.4	24.2

Water Quality Datasheet for the period : 2015-2016

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.6	1.4	1.2	0.4	1.5	0.4	0.7	0.7	0.8	2.0	0.6	1.9
2	COD (mg/L)	11.7	4.5	2.4	20.4	11.5	0.8	2.0	6.0	6.8	2.0	2.4	2.4
3	DO (mg/L)							7.8	7.0	6.5	7.0	6.3	5.9
4	DO_SAT% (%)							100	83	79	86	80	78
5	FCol-MPN (MPN/100mL)	20	2400	9000	16000	9000	90	1700	360		2200	16000	3500
6	Tcol-MPN (MPN/100mL)	3500	16000	16000	16000	16000	5000	9000	9000		2800	16000	16000
7	TOC (mg/L)	2.2	2.0	2.1	1.9	1.5	1.5	2.0	1.5				
	TRACE & TOXIC												
1	As (µg/L)											0.0	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Hg (µg/L)											0.0	
5	Ni (µg/L)											0.0	
6	Pb (µg/L)											0.0	
7	Zn (µg/L)											2.0	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	58	44	42	28	44	54	64	68	65	70	73	60
2	HAR_Total (mgCaCO3/L)	115	82	80	50	80	99	122	126	123	128	139	135
3	Na% (%)	33	31	30	22	27	26	25	28	30	31	35	38
4	RSC (-)	0.5	0.0	0.0	0.0	0.0	0.3	0.2	0.3	0.4	0.1	0.1	0.1
5	SAR (-)	1.1	0.9	0.8	0.4	0.7	0.7	0.8	0.9	1.0	1.1	1.3	1.5
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

Sub-Division : Lower Godavari 1, Bhadrachalam

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	21030	5.320	1345
2	EC_FLD (μmho/cm)	6	1152	433	722
3	EC_GEN (μmho/cm)	12	1242	134	394
4	pH_FLD (pH units)	6	7.3	6.4	6.8
5	pH_GEN (pH units)	12	8.8	7.4	8.2
6	TDS (mg/L)	12	274	63	188
7	Temp (deg C)	12	31.0	24.0	26.9
8	Turb (NTU)	12	341.0	1.0	61.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	8.1	0.0	2.2
2	ALK-TOT (mgCaCO3/L)	12	145	50	114
3	B (mg/L)	7	0.14	0.00	0.04
4	Ca (mg/L)	12	29	11	22
5	Cl (mg/L)	12	25.9	1.2	13.7
6	CO3 (mg/L)	12	9.7	0.0	2.6
7	F (mg/L)	12	0.41	0.01	0.23
8	Fe (mg/L)	12	0.1	0.0	0
9	HCO3 (mg/L)	12	169	62	134
10	K (mg/L)	12	3.7	1.8	2.6
11	Mg (mg/L)	12	18.0	5.3	12.2
12	Na (mg/L)	12	39.5	6.6	22.3
13	NH3-N (mg N/L)	12	0.03	0.01	0.01
14	NO2+NO3 (mg N/L)	12	1.10	0.03	0.43
15	NO2-N (mgN/L)	12	0.07	0.00	0.01
16	NO3-N (mgN/L)	12	1.09	0.03	0.42
17	o-PO4-P (mg P/L)	12	0.259	0.020	0.1
18	SiO2 (mg/L)	12	24.6	10.4	16.6
19	SO4 (mg/L)	12	27.4	7.0	20
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	2.0	0.4	1
2	COD (mg/L)	12	20.4	0.8	6.1
3	DO (mg/L)	6	7.8	5.9	6.7
4	DO_SAT% (%)	6	100	78	84
5	FCol-MPN (MPN/100mL)	11	16000	20	5479
6	Tcol-MPN (MPN/100mL)	11	16000	2800	11391
7	TOC (mg/L)	8	2.2	1.5	1.8
	TRACE & TOXIC				
1	As (μg/L)	1	0.0	0.0	0
2	Cd (μg/L)	1	0.0	0.0	0
3	Cr (μg/L)	1	0.0	0.0	0
4	Hg (μg/L)	1	0.0	0.0	0
5	Ni (μg/L)	1	0.0	0.0	0
6	Pb (μg/L)	1	0.0	0.0	0
7	Zn (μg/L)	1	2.0	2.0	2
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	73	28	56
2	HAR_Total (mgCaCO3/L)	12	139	50	107
3	Na% (%)	12	38	22	30
4	RSC (-)	12	0.5	0.0	0.2
5	SAR (-)	12	1.5	0.4	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2016

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Flood										Winter									
		Jun - Oct										Nov - Feb									
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL																				
1	Q (cumec)		5945	2847	2220	8385	3641	4483	7440	2994	2383		409.6	208.8	195.5	677.4	233.5	345.5	1165	276.2	180.4
2	EC_FLD (µmho/cm)																				520
3	EC_GEN (µmho/cm)	200	334	301	289	231	324	260	232	753	210	403	355	358	309	334	351	339	328	253	548
4	pH_FLD (pH units)																				6.6
5	pH_GEN (pH units)	7.9	8.3	8.3	8.3	7.9	8.3	8.0	8.0	7.8	7.7	8.5	8.3	8.4	8.4	8.4	8.4	8.2	8.1	8.1	8.4
6	TDS (mg/L)			194	176	157	284	188	159	455	168			232	186	226	222	222	207	201	170
7	Temp (deg C)	27.5	28.6	29.0	29.3	30.3	30.0	28.6	28.6	30.2	26.9	26.3	23.1	27.3	25.6	26.4	26.8	25.3	27.5	26.3	26.1
8	Turb (NTU)			20.9	13.6	32.0	4.0	22.8	14.4	85.2	132.6			0.9	1.6	4.3	0.0	1.3	19.8	1.8	7.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	0.0	4.6	5.4	6.5	4.7	5.0	0.0	0.9	0.0	0.0	11.0	5.4	8.5	8.8	10.2	4.0	1.1	0.0	0.0	2.9
2	ALK-TOT (mgCaCO3/L)	75	117	99	92	90	109	93	96	198	86	161	137	133	129	136	152	135	136	120	132
3	B (mg/L)	0.07	0.09	0.18	0.12	0.11	0.13	0.19	0.09	0.18	0.05	0.08	0.20	0.02	0.15	0.15	0.19	0.15	0.01	0.16	0.00
4	Ca (mg/L)	16	21	21	21	18	21	19	23	38	17	33	26	27	29	19	27	27	28	29	25
5	Cl (mg/L)	7.0	25.7	26.6	23.6	19.2	29.2	17.9	17.3	33.0	9.7	25.5	27.5	26.3	21.5	27.1	18.8	16.3	14.9	12.6	10.7
6	CO3 (mg/L)	0.0	5.6	6.5	7.8	5.7	6.0	0.0	1.0	0.0	0.0	13.3	6.5	10.2	10.7	12.3	4.8	1.3	0.0	0.0	3.5
7	F (mg/L)	0.11	0.45	0.39	0.42	0.28	0.33	0.16	0.52	0.42	0.22	0.18	0.45	0.45	0.38	0.34	0.61	0.57	0.28	0.28	0.20
8	Fe (mg/L)	0.1	0.1	0.2	0.2	0.3	0.2	0.3	0.1	0.1	0.0	0.1	0.2	0.3	0.2	0.2	0.2	0.0	0.1	0.1	0.0
9	HCO3 (mg/L)	92	132	107	96	98	121	114	115	241	105	169	155	141	136	141	175	162	166	146	154
10	K (mg/L)	4.5	2.7	2.5	2.9	2.7	3.0	2.7	3.0	3.0	2.6	2.2	2.0	2.9	2.6	2.6	2.6	2.0	2.9	2.4	2.3
11	Mg (mg/L)	5.4	12.1	12.1	11.4	9.7	12.6	11.5	13.0	23.7	9.2	13.7	14.3	17.1	14.8	21.2	15.5	14.8	15.9	13.1	13.2
12	Na (mg/L)	18.0	25.3	19.7	18.2	15.8	22.6	18.3	24.1	81.0	16.4	30.8	24.4	20.4	16.7	21.1	24.5	25.6	26.3	22.6	20.9
13	NH3-N (mg N/L)	0.05	0.25	0.07	0.18	0.07	0.30	0.01	0.07	0.02	0.01	0.05	0.16	0.13	0.06	0.15	0.18	0.04	0.00	0.19	0.01
14	NO2+NO3 (mg N/L)	1.95	1.33	0.63	0.47	0.47	0.45	0.54	0.77	0.98	0.55	0.49	0.56	0.12	0.13	0.26	0.17	0.76	0.47	0.08	0.27
15	NO2-N (mgN/L)	0.00	0.03	0.10	0.03	0.02	0.01	0.00	0.00	0.01	0.01	0.03	0.05	0.03	0.01	0.02	0.02	0.00	0.00	0.02	0.00
16	NO3-N (mgN/L)	1.95	1.29	0.53	0.44	0.45	0.44	0.54	0.77	0.97	0.54	0.47	0.51	0.09	0.12	0.25	0.15	0.76	0.47	0.06	0.26
17	o-PO4-P (mg P/L)			0.009	0.015	0.007	0.079	0.157	0.043	0.202	0.146			0.005	0.040	0.013	0.038	0.067	0.208	0.112	0.061
18	P-Tot (mgP/L)	0.060	0.020									0.006	0.117								
19	SiO2 (mg/L)	15.9	17.6	16.8	17.2	14.3	24.2	13.7	15.9	18.7	15.4	19.7	16.3	17.6	13.9	34.3	13.0	18.5	17.2	17.5	14.7
20	SO4 (mg/L)	10.0	12.2	12.2	13.9	10.1	17.2	15.4	22.7	24.9	19.8	12.0	14.3	14.5	13.7	15.0	13.6	19.3	25.5	23.3	17.6

Water Quality Seasonal Average for the period: 2006-2016

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Flood										Winter									
		Jun - Oct										Nov - Feb									
		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	1.7	0.5	0.5	0.8	0.9	1.0	0.7	0.6	0.9	1.0	0.6	0.6	0.8	0.7	1.1	0.7	0.4	1.0	0.8	0.7
2	COD (mg/L)	13.8	28.9	3.8	5.1	4.7	7.1	9.4	6.8	8.7	10.1	11.1	16.8	2.9	4.9	3.9	5.7	17.7	5.9	5.0	3.9
3	DO (mg/L)	7.1	5.8	5.8	5.5	5.4	5.8	6.2	6.4	6.1		6.5	6.4	6.1	6.8	7.1	6.8	6.9	7.1	7.7	7.1
4	DO_SAT% (%)	89	75	75	72	72	76	80	83	81		78	74	77	82	88	84	83	90	95	87
5	FCol-MPN (MPN/100mL)	300	12900	7264	10140	9700	12058	7400	4306	7156	7284	8867	9350	12750	13250	16000	8628	4295	703	8065	717
6	Tcol-MPN (MPN/100mL)	600	13060	7748	10460	9726	12075	8480	9906	8046	13500	6400	9850	13250	14250	16000	9325	8658	1265	8133	7667
7	TOC (mg/L)		0.9	3.0	1.7	3.0	2.1	1.7	0.4	18.2	2.0	25.7	0.6	1.8	2.2	1.4	1.5	1.1	2.4	10.2	1.7
	TRACE & TOXIC																				
1	As (µg/L)							7.3	0.7						0.0		0.3				
2	Cd (µg/L)		0.0					0.0	0.1			1.0		1.3	0.0	0.0	0.0			0.4	
3	Cr (µg/L)		21.8					2.1	2.1			3.5		0.0	0.0	0.4	1.2			21.5	
4	Cu (µg/L)							0.7	2.5								10.5			2.0	
5	Hg (µg/L)		0.0						0.4			0.0									
6	Ni (µg/L)		8.5					4.7	13.6			1.0		2.9	0.4	0.6	2.0			0.5	
7	Pb (µg/L)		13.0					0.0	0.4			1.0		16.0	2.0	12.8	0.6			16.7	
8	Zn (µg/L)		118.7					13.7	2.0			45.0		100.2	0.0	22.1	19.8			27.0	
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	40	53	53	51	44	52	46	57	94	43	83	65	66	72	48	69	67	71	72	63
2	HAR_Total (mgCaCO3/L)	63	103	104	99	85	104	94	111	193	82	140	124	137	133	136	133	129	137	126	118
3	Na% (%)	37	33	26	24	24	29	27	29	34	29	32	29	24	21	25	28	30	29	27	27
4	RSC (-)	0.3	0.3	0.1	0.0	0.1	0.1	0.3	0.0	0.2	0.1	0.4	0.3	0.0	0.0	0.1	0.4	0.2	0.1	0.1	0.3
5	SAR (-)	1.0	1.1	0.8	0.7	0.7	0.9	0.8	1.0	1.8	0.8	1.1	0.9	0.8	0.6	0.8	0.9	1.0	1.0	0.9	0.8
	PESTICIDES																				
1	Aldrin (µg/L)											0.0		0.0	0.0	0.0	0.0				
2	BHC (µg/L)											0.1		0.0	0.1	0.0	0.0				
3	DDT (µg/L)											0.1		0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)											0.0		0.0	0.0	0.0	0.0				
5	Endos (µg/L)											0.1		0.1	0.1	0.0	0.0				

Water Quality Seasonal Average for the period: 2006-2016

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Summer									
		Mar - May									
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL										
1	Q (cumec)		138.6	30.02	22.85	95.23	35.22	79.40	107.6	65.03	7.691
2	EC_FLD (µmho/cm)										924
3	EC_GEN (µmho/cm)	506	466	404	393	397	381	436	416	357	494
4	pH_FLD (pH units)										7.0
5	pH_GEN (pH units)	8.6	8.4	8.3	8.5	8.4	8.4	8.4	8.2	8.2	8.6
6	TDS (mg/L)			300	231	278	227	263	269	242	246
7	Temp (deg C)	27.7	26.2	30.0	30.0	29.3	29.3	29.7	29.3	29.3	28.0
8	Turb (NTU)			0.4	0.4	1.4	0.0	0.8	4.7	5.0	15.3
	CHEMICAL										
1	Alk-Phen (mgCaCO3/L)	5.2	6.0	10.0	13.0	10.7	4.2	2.8	0.0	1.2	4.9
2	ALK-TOT (mgCaCO3/L)	168	168	135	143	152	151	162	158	146	138
3	B (mg/L)	0.03	3.09	0.18	0.03	0.13	0.03	0.26	0.14	0.11	
4	Ca (mg/L)	30	20	27	25	23	27	32	30	31	27
5	Cl (mg/L)	36.3	31.7	39.5	39.9	37.5	30.6	25.7	22.4	18.6	24.2
6	CO3 (mg/L)	6.3	7.3	12.1	15.6	12.9	5.1	3.4	0.0	1.4	5.9
7	F (mg/L)	0.18	0.39	0.73	0.44	0.44	1.19	0.95	0.33	0.39	0.29
8	Fe (mg/L)	0.1	0.3	0.2	0.2	0.5	0.2	0.1	0.3	0.1	0.0
9	HCO3 (mg/L)	192	190	140	142	160	174	190	193	175	157
10	K (mg/L)	2.5	3.8	3.9	3.7	3.6	3.4	3.4	3.0	3.0	3.2
11	Mg (mg/L)	21.4	21.2	19.5	17.8	21.7	15.1	18.2	17.2	17.5	16.0
12	Na (mg/L)	42.6	40.0	26.7	35.4	33.8	32.6	36.4	33.7	28.1	34.1
13	NH3-N (mg N/L)	0.06	0.31	0.20	0.25	0.22	0.04	0.02	0.02	0.02	0.01
14	NO2+NO3 (mg N/L)	0.54	0.36	0.21	0.08	0.14	0.13	0.94	0.86	0.12	0.46
15	NO2-N (mgN/L)	0.01	0.03	0.02	0.01	0.01	0.02	0.00	0.00	0.02	0.03
16	NO3-N (mgN/L)	0.53	0.32	0.19	0.06	0.13	0.10	0.94	0.86	0.10	0.43
17	o-PO4-P (mg P/L)			0.000	0.013	0.015	0.019	0.070	0.001	0.100	0.077
18	P-Tot (mgP/L)	0.074	0.309								
19	SiO2 (mg/L)	17.5	15.3	18.6	11.6	34.3	14.3	15.6	18.4	16.8	21.3
20	SO4 (mg/L)	23.7	19.7	22.7	24.5	26.0	25.2	22.9	28.5	25.9	23.8

Water Quality Seasonal Average for the period: 2006-2016

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Summer									
		Mar - May									
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOL										
1	BOD3-27 (mg/L)	0.7	0.7	0.5	0.9	0.9	0.7	0.7	1.3	0.7	1.5
2	COD (mg/L)	20.0	6.3	2.3	10.5	5.8	7.0	3.6	5.7	4.1	2.3
3	DO (mg/L)	6.1	5.7	6.1	6.0	6.2	6.2	6.6	6.3	5.8	6.4
4	DO_SAT% (%)	78	70	75	79	80	81	86	82	75	81
5	FCol-MPN (MPN/100mL)	510	1667	2167	10933	7433	1667	990	180	14	7233
6	Tcol-MPN (MPN/100mL)	610	2133	2933	11100	9133	4133	7100	390	1070	11600
7	TOC (mg/L)		2.0	1.5	2.7	1.8	1.8	2.1	9.3	8.0	
	TRACE & TOXIC										
1	As (µg/L)				0.5		0.5	3.7	4.2	0.6	0.0
2	Cd (µg/L)	3.0	0.7	1.5	0.0	0.0	0.1	1.1	0.0	1.0	0.0
3	Cr (µg/L)	18.0	6.2	0.0	0.0	0.6	0.8	0.3	0.4	0.0	0.0
4	Cu (µg/L)						5.0	0.6	3.0		
5	Hg (µg/L)	4.5	0.2				1.8	0.5	0.4	0.2	0.0
6	Ni (µg/L)	1.0	6.7	0.0	0.3	1.3	2.4	9.6	4.5	4.9	0.0
7	Pb (µg/L)	54.0	19.1	15.0	0.0	14.8	8.9	4.1	0.0	12.0	0.0
8	Zn (µg/L)	25.0	16.1	5.9	73.3	15.2	18.9	12.7	10.5	25.0	2.0
	CHEMICAL INDICES										
1	HAR_Ca (mgCaCO3/L)	76	49	68	62	58	68	80	74	77	68
2	HAR_Total (mgCaCO3/L)	165	138	150	136	148	131	155	146	150	134
3	Na% (%)	35	38	27	35	33	35	33	33	29	35
4	RSC (-)	0.1	0.6	0.1	0.2	0.1	0.4	0.2	0.3	0.2	0.1
5	SAR (-)	1.4	1.5	1.0	1.3	1.2	1.2	1.3	1.2	1.0	1.3
	PESTICIDES										
1	Aldrin (µg/L)	0.0	0.0	0.0	0.0	0.0	0.0				
2	BHC (µg/L)	0.1	0.0	0.0	0.1	0.2	0.0				
3	DDT (µg/L)	0.1	0.0	0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)	0.0	0.0	0.0	0.0	0.0	0.0				
5	Endos (µg/L)	0.1	0.1	0.0	0.0	0.0	0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Konta	Code	: AGC00C5
State	: Chhattisgarh	District	Dantewara
Basin	: Godavari	Independent River	: Godavari
Tributary	: Sabari	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Sabari
Division	: Lower Godavari Div., Hyderabad	Sub-Division	: Lower Godavari 1, Bhadrachalam
Drainage Area	: 19550 Sq. Km.	Bank	: Left
Latitude	: 17°47'56"	Longitude	: 81°23'18"
	Opening Date	Closing Date	
Gauge	: 05.02.1964		
Discharge	: 28.10.1965		
Sediment	: 01.01.1968		
Water Quality	: 05.05.1968		

Water Quality Datasheet for the period : 2015-2016

Station Name : Konta (AGC00C5)

Local River : Sabari

River Water Analysis

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	181.4	531.9	352.7	2410	560.0	262.9	194.3	184.1	208.0	246.6	162.0	223.0
2	Colour_Cod (-)	Clear	Dark Brown	Dark Brown	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)							909	394	586	539	800	205
4	EC_GEN (µmho/cm)	103	97	128	70	131	160	277	180	917	141	260	163
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)							5.3	6.1	6.1	6.0	5.5	5.6
7	pH_GEN (pH units)	8.1	7.2	7.3	7.3	7.4	7.9	8.1	8.3	8.6	8.4	8.4	8.0
8	TDS (mg/L)	62	66	120	150	102	6	115	120	95	106	83	106
9	Temp (deg C)	32.0	29.0	29.0	29.0	29.0	28.0	28.0	23.0	25.0	27.0	30.0	33.0
10	Turb (NTU)	6.0	258.0	96.0	185.0	48.0	3.0	2.0	1.0	22.0	35.0	11.0	11.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	6.0	4.9	2.8	0.0
2	ALK-TOT (mgCaCO3/L)	53	65	61	30	53	80	72	87	88	57	62	63
3	B (mg/L)	0.07	0.00	0.20	0.00	0.00	0.08	0.00					
4	Ca (mg/L)	9	10	10	8	13	15	16	17	17	14	14	12
5	Cl (mg/L)	3.6	2.6	2.1	2.4	1.0	3.9	1.6	4.5	5.1	2.6	4.0	1.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	7.2	5.9	3.4	0.0
7	F (mg/L)	0.01	0.14	0.06	0.01	0.13	0.00	0.01	0.01	0.13	0.01	0.01	0.01
8	Fe (mg/L)	0.0	0.0	0.1	0.2	0.4	0.0	0.0	0.0	0.0	0.1	0.0	0.0
9	HCO3 (mg/L)	65	79	74	36	65	98	88	98	93	58	69	77
10	K (mg/L)	1.4	1.8	2.1	1.9	1.4	1.2	1.3	1.4	1.7	1.1	1.3	1.1
11	Mg (mg/L)	4.4	4.3	5.3	3.4	6.3	6.8	8.0	8.0	9.0	6.0	7.0	6.0
12	Na (mg/L)	7.9	8.4	9.7	4.5	9.9	8.1	7.5	7.1	8.4	5.2	4.8	6.3
13	NH3-N (mg N/L)	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
14	NO2+NO3 (mg N/L)	0.10	0.48	0.30	0.17	0.16	0.17	0.06	0.77	0.22	0.58	0.80	0.49
15	NO2-N (mgN/L)	0.00	0.01	0.01	0.00	0.00	0.01	0.00	0.00	0.00	0.06	0.01	0.07
16	NO3-N (mgN/L)	0.10	0.47	0.29	0.17	0.15	0.17	0.06	0.77	0.21	0.52	0.79	0.42
17	o-PO4-P (mg P/L)	0.090	0.480	0.285	0.065	0.147	0.059	0.077	0.044	0.025	0.095	0.064	0.070
18	SiO2 (mg/L)	12.8	18.7	12.5	15.2	20.4	13.7	14.5	13.0	12.4	13.6	12.9	15.0
19	SO4 (mg/L)	3.8	9.6	14.7	12.5	15.0	1.5	4.1	3.4	10.7	9.7	4.6	2.3

Water Quality Datasheet for the period : 2015-2016

Station Name : Konta (AGC00C5)

Division : Lower Godavari Div., Hyderabad

Local River : Sabari

River Water Analysis

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.7	0.6	0.5	0.4	0.6	0.5	0.5	1.2	0.3	1.9	0.8	0.7
2	COD (mg/L)	4.5	2.0	1.2	7.7	5.1	2.8	1.2	7.6	4.4	2.0	2.4	1.6
3	DO (mg/L)							6.8	7.2	5.8	6.6	5.9	5.6
4	DO_SAT% (%)							87	84	70	83	78	78
5	FCol-MPN (MPN/100mL)	2	9000	2800	1700	700	140	1300	260	700	1400	340	16000
6	Tcol-MPN (MPN/100mL)	1300	16000	16000	16000	9000	3000	9000	2800	5000	1700	1700	16000
7	TOC (mg/L)	0.9	1.8	1.7	1.9	1.4	2.0	1.9	2.2				
	TRACE & TOXIC												
1	As (µg/L)											0.0	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Hg (µg/L)											0.0	
5	Ni (µg/L)											0.0	
6	Pb (µg/L)											0.0	
7	Zn (µg/L)											4.5	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	22	26	26	20	32	38	40	43	43	35	35	30
2	HAR_Total (mgCaCO3/L)	40	44	48	34	58	66	73	76	80	60	64	55
3	Na% (%)	29	29	29	21	27	21	18	17	18	16	14	20
4	RSC (-)	0.3	0.4	0.3	0.0	0.0	0.3	0.0	0.2	0.2	0.0	0.0	0.2
5	SAR (-)	0.5	0.6	0.6	0.3	0.6	0.4	0.4	0.4	0.4	0.3	0.3	0.4
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Konta (AGC00C5)

Division : Lower Godavari Div., Hyderabad

Local River : Sabari

Sub-Division : Lower Godavari 1, Bhadrachalam

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	7468	49.11	527.7
2	EC_FLD (μmho/cm)	6	909	205	572
3	EC_GEN (μmho/cm)	12	917	70	219
4	pH_FLD (pH units)	6	6.1	5.3	5.8
5	pH_GEN (pH units)	12	8.6	7.2	7.9
6	TDS (mg/L)	12	150	6	94
7	Temp (deg C)	12	33.0	23.0	28.5
8	Turb (NTU)	12	258.0	1.0	56.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	6.0	0.0	1.4
2	ALK-TOT (mgCaCO3/L)	12	88	30	64
3	B (mg/L)	7	0.20	0.00	0.05
4	Ca (mg/L)	12	17	8	13
5	Cl (mg/L)	12	5.1	1.0	2.9
6	CO3 (mg/L)	12	7.2	0.0	1.7
7	F (mg/L)	12	0.14	0.00	0.04
8	Fe (mg/L)	12	0.4	0.0	0.1
9	HCO3 (mg/L)	12	98	36	75
10	K (mg/L)	12	2.1	1.1	1.5
11	Mg (mg/L)	12	9.0	3.4	6.2
12	Na (mg/L)	12	9.9	4.5	7.3
13	NH3-N (mg N/L)	12	0.02	0.01	0.01
14	NO2+NO3 (mg N/L)	12	0.80	0.06	0.36
15	NO2-N (mgN/L)	12	0.07	0.00	0.01
16	NO3-N (mgN/L)	12	0.79	0.06	0.34
17	o-PO4-P (mg P/L)	12	0.480	0.025	0.125
18	SiO2 (mg/L)	12	20.4	12.4	14.6
19	SO4 (mg/L)	12	15.0	1.5	7.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.9	0.3	0.7
2	COD (mg/L)	12	7.7	1.2	3.5
3	DO (mg/L)	6	7.2	5.6	6.3
4	DO_SAT% (%)	6	87	70	80
5	FCol-MPN (MPN/100mL)	12	16000	2	2862
6	Tcol-MPN (MPN/100mL)	12	16000	1300	8125
7	TOC (mg/L)	8	2.2	0.9	1.7
	TRACE & TOXIC				
1	As (μg/L)	1	0.0	0.0	0
2	Cd (μg/L)	1	0.0	0.0	0
3	Cr (μg/L)	1	0.0	0.0	0
4	Hg (μg/L)	1	0.0	0.0	0
5	Ni (μg/L)	1	0.0	0.0	0
6	Pb (μg/L)	1	0.0	0.0	0
7	Zn (μg/L)	1	4.5	4.5	4.5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	43	20	32
2	HAR_Total (mgCaCO3/L)	12	80	34	58
3	Na% (%)	12	29	14	21
4	RSC (-)	12	0.4	0.0	0.2
5	SAR (-)	12	0.6	0.3	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Konta (AGC00C5)

Local River : Sabari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	398.5	267.5	710.0	514.2	503.5	841.0	1203	762.8	478.7	859.6	654.4	953.6	908.4	1529	807.2
2	EC_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	89	100	86	91	107	87	165	137	107	88	94	103	102	89	106
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	8.0	7.8	7.9	8.0	8.0	7.8	7.9	7.8	7.9	7.7	7.8	7.9	7.9	7.7	7.5
6	TDS (mg/L)								90	72	68	70	89	72	69	100
7	Temp (deg C)	26.9	31.1	29.3	29.6	30.6	29.5	30.7	28.9	34.0	29.7	29.6	28.8	27.8	28.9	29.6
8	Turb (NTU)								389.9	32.3	65.0	11.0	28.8	15.6	123.0	118.6
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	42	38	39	44	37	39	48	51	43	44	39	45	44	40	52
3	B (mg/L)	0.03	0.11	0.10	0.21	0.04	0.05	0.15	0.09	0.11	0.06	0.10	0.17	0.05	0.19	0.05
4	Ca (mg/L)	10	11	13	12	11	9	7	11	9	10	10	10	11	9	10
5	Cl (mg/L)	4.8	12.2	6.6	18.9	8.0	8.0	20.4	9.9	6.5	6.5	6.7	4.1	4.1	3.2	2.3
6	CO3 (mg/L)	0.0	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	0.0
7	F (mg/L)	0.35	0.38	0.36	0.24	0.23	0.11	0.35	0.17	0.17	0.19	0.11	0.05	0.21	0.09	0.07
8	Fe (mg/L)	0.1	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.1	0.5	0.2	0.3	0.2	0.1	0.2
9	HCO3 (mg/L)	51	46	47	54	45	47	59	62	50	54	48	55	54	49	64
10	K (mg/L)	1.2	1.0	1.0	1.4	1.5	1.3	1.4	1.5	1.3	1.6	1.3	1.9	1.6	1.7	1.7
11	Mg (mg/L)	3.2	2.4	2.7	3.9	3.0	3.9	5.9	5.9	5.5	4.4	3.7	6.0	5.9	4.8	4.7
12	Na (mg/L)	4.0	10.4	3.0	16.8	5.6	5.1	17.2	6.9	3.6	4.3	3.8	8.0	7.8	7.3	8.1
13	NH3-N (mg N/L)	0.01	0.07	0.04	0.04	0.10	0.05	0.22	0.06	0.30	0.09	0.27	0.02	0.07	0.04	0.01
14	NO2+NO3 (mg N/L)	0.35	0.82	0.37	0.59	1.15	0.69	1.18	0.33	0.33	0.25	0.21	0.41	0.50	0.38	0.24
15	NO2-N (mgN/L)				0.01	0.01	0.01	0.03	0.07	0.03	0.02	0.01	0.00	0.00	0.01	0.00
16	NO3-N (mgN/L)	0.35	0.82	0.37	0.58	1.14	0.68	1.16	0.26	0.31	0.24	0.20	0.41	0.50	0.37	0.24
17	o-PO4-P (mg P/L)	0.035	0.046	0.040	0.030	0.014			0.019	0.015	0.004	0.025	0.151	0.032	0.217	0.213
18	P-Tot (mgP/L)						0.042	0.021								
19	SiO2 (mg/L)	11.1	15.8	20.8	12.6	15.6	10.6	16.9	14.4	11.8	12.9	13.9	9.4	11.3	13.3	15.9
20	SO4 (mg/L)	3.4	2.2	3.2	6.5	2.6	1.6	2.8	2.8	0.9	1.0	1.1	11.9	12.0	9.3	11.1

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Konta (AGC00C5)

Division : Lower Godavari Div., Hyderabad

Local River : Sabari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.4	0.5	0.4	0.7	1.1	0.3	0.5	0.5	0.5	0.8	0.9	0.5	0.6	0.8	0.6
2	COD (mg/L)			7.5	6.4	22.3	17.3	28.9	2.7	2.4	5.1	6.7	17.0	10.4	9.3	4.1
3	DO (mg/L)	6.7	5.8	6.5	6.2	6.5	6.4	5.3	6.0	6.0	5.7	6.0	6.2	6.4	6.3	
4	DO_SAT% (%)	83	78	85	81	86	84	72	78	75	75	79	80	81	82	
5	FCol-MPN (MPN/100mL)	390	547	2315	65	584	10060	7240	6586	7540	10634	8658	2040	798	7026	2840
6	Tcol-MPN (MPN/100mL)	2765	8943	5965	110	598	12900	7760	6634	8260	11440	8825	7600	8640	7960	11660
7	TOC (mg/L)				6.1			0.7	2.3	1.4	2.0	1.2	1.3	0.3	1.0	1.5
	TRACE & TOXIC															
1	As (µg/L)												13.3	1.2		
2	Cd (µg/L)							0.0					0.4	0.1		
3	Cr (µg/L)							30.5					3.4	0.9		
4	Cu (µg/L)												2.4	1.4		
5	Hg (µg/L)							0.0						0.2		
6	Ni (µg/L)							8.5					1.3	10.9		
7	Pb (µg/L)							9.2					0.5	1.4		
8	Zn (µg/L)							71.3					29.4	0.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	26	28	33	30	27	23	17	28	23	24	24	25	28	24	25
2	HAR_Total (mgCaCO3/L)	39	38	44	46	39	39	42	52	46	42	40	50	53	43	45
3	Na% (%)	17	33	13	43	23	22	37	21	14	18	17	28	22	26	27
4	RSC (-)	0.1	0.0	0.0	0.1	0.0	0.1	0.2	0.0	0.0	0.1	0.0	0.2	0.0	0.0	0.2
5	SAR (-)	0.3	0.7	0.2	1.1	0.4	0.4	1.2	0.4	0.2	0.3	0.3	0.6	0.5	0.5	0.5
	PESTICIDES															
1	Aldrin (µg/L)							0.0								
2	BHC (µg/L)							0.1								
3	DDT (µg/L)							0.1								
4	Dieldrin (µg/L)							0.0								
5	Endos (µg/L)							0.1								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Konta (AGC00C5)

Local River : Sabari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	190.8	75.71	272.2	235.6	264.0	214.7	301.5	193.0	76.34	315.5	121.9	185.4	467.4	306.0	212.3
2	EC_FLD (µmho/cm)															630
3	EC_GEN (µmho/cm)	102	113	92	88	103	291	151	136	181	119	166	150	144	128	383
4	pH_FLD (pH units)															5.8
5	pH_GEN (pH units)	8.2	8.2	8.1	8.0	7.9	8.4	7.7	8.2	8.1	8.2	8.0	7.9	7.9	7.8	8.2
6	TDS (mg/L)								98	113	98	125	124	117	90	84
7	Temp (deg C)	21.8	24.9	25.6	25.4	25.6	25.9	25.8	27.3	21.3	24.4	26.1	26.1	24.4	22.5	26.0
8	Turb (NTU)								3.6	2.6	6.1	0.0	2.3	24.8	5.0	7.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.0	0.0	0.0	0.5	0.0	4.4	0.0	0.5	1.0	0.0	0.0	1.1	0.0	0.0	2.4
2	ALK-TOT (mgCaCO3/L)	51	47	40	45	40	111	52	62	90	56	82	73	63	61	82
3	B (mg/L)	0.00	0.00	0.04	0.06	0.19	0.08	0.24	0.00	0.19	0.12	0.15	0.07	0.10	0.16	0.04
4	Ca (mg/L)	15	15	13	9	11	32	11	15	21	11	18	14	15	16	16
5	Cl (mg/L)	4.5	4.5	3.7	11.7	7.0	20.0	14.1	7.9	9.2	7.4	5.5	3.0	3.7	3.2	3.8
6	CO3 (mg/L)	1.1	0.0	0.0	0.6	0.0	5.3	0.0	0.6	1.2	0.0	0.0	1.3	0.0	0.0	2.8
7	F (mg/L)	0.34	0.16	0.39	0.13	0.18	0.15	0.19	0.15	0.18	0.08	0.37	0.35	0.14	0.10	0.04
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.2	0.2	0.5	0.3	0.2	0.3	0.2	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	60	57	49	54	49	124	63	75	107	69	100	87	76	75	94
10	K (mg/L)	0.8	0.5	1.1	1.5	1.4	1.3	1.0	1.2	1.5	1.4	1.3	1.4	1.6	1.7	1.4
11	Mg (mg/L)	2.7	3.6	2.7	2.1	3.2	8.6	7.1	5.4	9.0	6.8	7.9	8.5	8.1	6.6	8.0
12	Na (mg/L)	6.3	3.3	3.5	18.3	3.8	17.7	6.9	5.0	6.1	4.7	7.5	9.0	9.1	7.5	7.7
13	NH3-N (mg N/L)	0.07	0.07	0.10	0.03	0.06	0.05	0.10	0.09	0.05	0.12	0.16	0.02	0.00	0.05	0.00
14	NO2+NO3 (mg N/L)	0.07	0.14	0.48	0.45	0.49	1.82	1.05	0.09	0.07	0.26	0.13	0.75	0.21	0.15	0.30
15	NO2-N (mgN/L)				0.01	0.00	0.00	0.04	0.03	0.01	0.02	0.01	0.00	0.00	0.02	0.00
16	NO3-N (mgN/L)	0.07	0.14	0.48	0.44	0.48	1.82	1.01	0.06	0.07	0.25	0.12	0.75	0.21	0.13	0.30
17	o-PO4-P (mg P/L)	0.328	0.010	0.011	0.010	0.003			0.004	0.014	0.019	0.346	0.090	0.046	0.046	0.051
18	P-Tot (mgP/L)						0.015	0.168								
19	SiO2 (mg/L)	13.6	14.0	20.8	13.0	17.5	17.1	13.2	14.6	13.9	27.5	12.8	15.6	14.3	14.2	13.4
20	SO4 (mg/L)	2.8	1.0	2.3	0.5	0.3	10.5	2.5	0.3	0.4	1.2	3.5	5.9	11.5	6.9	4.9

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Konta (AGC00C5)

Division : Lower Godavari Div., Hyderabad

Local River : Sabari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.5	0.9	0.6	0.5	0.7	0.4	0.3	0.5	0.7	0.3	0.6	0.8	0.6	0.7	0.6
2	COD (mg/L)			30.1	13.7	9.5	21.7	21.9	2.1	4.0	2.8	4.0	8.9	5.9	4.5	4.0
3	DO (mg/L)	7.0	7.2	6.9	6.6	7.4	6.3	6.9	6.8	7.4	7.1	6.9	7.4	7.3	7.6	6.6
4	DO_SAT% (%)	79	87	84	79	90	76	84	85	83	85	85	92	87	88	80
5	FCol-MPN (MPN/100mL)	150	5570	130	40	8115	6200	3300	2775	10500	8838	1725	425	408	295	600
6	Tcol-MPN (MPN/100mL)	12215	17500	205	70	8150	10833	3625	3925	16000	11750	5700	1208	1475	1065	4950
7	TOC (mg/L)				6.6			0.2	1.3	1.5	0.8	0.8	0.8	0.8	4.0	2.0
	TRACE & TOXIC															
1	As (µg/L)									0.1		0.1				
2	Cd (µg/L)						1.0		1.1	0.0	0.0	0.0			0.1	
3	Cr (µg/L)						9.0		0.0	0.0	5.0	0.6			0.4	
4	Cu (µg/L)											18.2			1.7	
5	Hg (µg/L)						0.0									
6	Ni (µg/L)						1.0		0.0	0.0	0.5	3.5			0.6	
7	Pb (µg/L)						1.0		0.0	0.0	0.0	10.0			2.0	
8	Zn (µg/L)						178.0		94.1	0.0	17.5	20.6			16.0	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	36	37	32	21	26	79	27	38	52	27	44	35	39	40	41
2	HAR_Total (mgCaCO3/L)	47	51	43	30	39	114	57	60	89	56	77	70	72	67	74
3	Na% (%)	27	12	15	56	16	16	21	15	13	16	17	22	21	19	18
4	RSC (-)	0.2	0.0	0.0	0.3	0.0	0.2	0.0	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.2
5	SAR (-)	0.5	0.2	0.2	1.6	0.3	0.6	0.4	0.3	0.3	0.3	0.4	0.5	0.5	0.4	0.4
	PESTICIDES															
1	Aldrin (µg/L)						0.1		0.0	0.0	0.0	0.0				
2	BHC (µg/L)						0.9		0.1	0.1	0.1	0.0				
3	DDT (µg/L)						0.2		0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)						0.6		0.0	0.0	0.0	0.0				
5	Endos (µg/L)						0.1		0.2	0.0	0.6	0.0				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Konta (AGC00C5)

Local River : Sabari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	177.5	135.1	235.8	140.9	177.6	219.5	218.7	158.0	102.8	241.0	97.14	240.7	172.7	205.7	210.5
2	EC_FLD (µmho/cm)															515
3	EC_GEN (µmho/cm)	90	66	88	178	113	110	143	134	128	106	153	125	125	136	188
4	pH_FLD (pH units)															5.7
5	pH_GEN (pH units)	8.3	8.0	8.1	8.0	8.0	8.0	7.7	7.8	8.0	8.1	8.0	8.2	7.8	7.8	8.3
6	TDS (mg/L)								93	97	95	110	95	93	111	98
7	Temp (deg C)	28.8	28.8	28.9	27.0	29.7	29.2	30.0	31.5	30.2	28.3	28.3	28.7	27.0	28.3	30.0
8	Turb (NTU)								8.4	0.8	3.6	0.0	3.7	2.4	9.7	19.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.6	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
2	ALK-TOT (mgCaCO3/L)	37	33	39	72	44	49	55	53	67	45	72	54	58	72	61
3	B (mg/L)	0.00	0.00	0.02	0.06	0.01	0.00	0.12	0.13	0.01	0.17	0.02	0.19	0.17	0.01	
4	Ca (mg/L)	10	10	11	16	13	11	10	13	13	11	14	12	14	13	13
5	Cl (mg/L)	7.7	3.0	4.7	22.4	8.7	11.0	11.0	9.4	8.9	8.0	6.8	4.3	2.9	3.1	2.6
6	CO3 (mg/L)	0.8	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1
7	F (mg/L)	0.41	0.36	0.13	0.35	0.17	0.12	0.13	0.20	0.18	0.08	0.35	0.49	0.07	0.15	0.01
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.1	0.3	0.4	0.2	0.3	0.5	0.1	0.2	0.4	0.1	0.1
9	HCO3 (mg/L)	44	40	47	73	54	59	68	65	82	55	88	65	70	88	68
10	K (mg/L)	2.5	0.7	0.9	1.5	1.3	1.9	1.9	1.6	1.5	1.5	1.8	1.4	1.6	1.8	1.1
11	Mg (mg/L)	2.4	1.8	2.1	5.6	2.7	7.3	7.5	5.3	6.9	4.8	6.3	5.7	6.3	6.7	6.3
12	Na (mg/L)	5.7	2.7	2.7	24.5	3.3	3.2	5.3	5.5	5.3	4.6	6.1	7.5	7.3	7.3	5.4
13	NH3-N (mg N/L)	0.04	0.06	0.15	0.15	0.08	0.05	0.43	0.20	0.22	0.19	0.03	0.01	0.02	0.01	0.01
14	NO2+NO3 (mg N/L)	0.52	0.20	0.01	0.26	0.78	0.87	0.39	0.25	0.07	0.26	0.12	0.82	0.25	0.13	0.62
15	NO2-N (mgN/L)				0.00	0.00	0.02	0.01	0.02	0.01	0.01	0.01	0.00	0.00	0.02	0.04
16	NO3-N (mgN/L)	0.52	0.20	0.01	0.26	0.77	0.85	0.38	0.23	0.06	0.26	0.11	0.82	0.25	0.11	0.58
17	o-PO4-P (mg P/L)	0.037	0.023	0.004	0.010	0.008			0.000	0.007	0.023	0.013	0.061	0.001	0.107	0.076
18	P-Tot (mgP/L)						0.151	0.194								
19	SiO2 (mg/L)	10.3	16.3	15.3	9.5	12.0	13.7	9.3	14.4	13.1	23.8	10.1	12.8	10.8	13.6	13.8
20	SO4 (mg/L)	0.0	1.7	1.7	1.5	0.0	1.0	1.0	0.5	0.2	1.0	2.4	4.4	10.8	3.9	5.5

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Konta (AGC00C5)

Division : Lower Godavari Div., Hyderabad

Local River : Sabari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.5	0.7	0.5	0.7	0.5	0.6	0.6	0.5	0.7	0.5	0.6	0.4	0.7	0.8	1.1
2	COD (mg/L)			55.7	0.0	27.3	13.8	7.7	4.0	6.7	2.0	2.5	4.9	5.3	3.7	2.0
3	DO (mg/L)	6.2	6.2	6.4	6.8	6.4	6.0	6.1	6.0	6.4	6.4	6.6	6.1	6.5	6.0	6.0
4	DO_SAT% (%)	80	80	82	85	84	78	80	82	85	82	84	78	81	76	80
5	FCol-MPN (MPN/100mL)	920	2100	750		5000	5607	1843	3857	6323	6233	1643	933	887	2	5913
6	Tcol-MPN (MPN/100mL)	1220	11000	2100		6333	5673	3843	6207	6573	7233	4723	3267	3153	5513	6467
7	TOC (mg/L)				5.2			1.0	1.8	3.2	1.1	1.2	2.0	0.6	1.5	
	TRACE & TOXIC															
1	As (µg/L)									0.0		0.2	6.1	3.6	0.1	0.0
2	Cd (µg/L)					0.0	3.0	0.0	1.4	0.0	0.0	0.1	0.8	0.0	1.0	0.0
3	Cr (µg/L)					6.0	2.0	8.8	0.0	0.0	2.0	1.7	0.4	1.1	0.0	0.0
4	Cu (µg/L)											2.7	0.2	2.2		
5	Hg (µg/L)						0.0	0.3				0.0	0.5	0.2	0.1	0.0
6	Ni (µg/L)					1.0	1.0	4.5	0.0	0.0	0.0	2.6	3.9	5.3	3.1	0.0
7	Pb (µg/L)					48.0	1.0	6.4	4.0	0.0	4.3	3.8	0.7	1.2	5.0	0.0
8	Zn (µg/L)					83.0	12.0	57.7	8.1	0.0	30.3	3.6	24.9	4.0	6.0	4.5
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	25	24	27	40	32	27	24	33	32	28	35	30	35	32	33
2	HAR_Total (mgCaCO3/L)	35	31	35	63	44	58	56	55	61	48	62	54	61	60	60
3	Na% (%)	26	16	14	48	14	11	17	17	16	17	17	22	20	21	16
4	RSC (-)	0.1	0.1	0.1	0.2	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.1	0.0	0.3	0.1
5	SAR (-)	0.4	0.2	0.2	1.4	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3
	PESTICIDES															
1	Aldrin (µg/L)					0.0	0.0	0.0	0.0	0.0	0.0	0.0				
2	BHC (µg/L)					0.0	0.1	0.0	0.0	0.0	0.4	0.0				
3	DDT (µg/L)					0.0	0.1	0.0	0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)					0.0	0.1	0.0	0.0	0.0	0.0	0.0				
5	Endos (µg/L)					0.0	0.1	0.0	0.0	0.0	0.0	0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Sangam	Code	: SANGAM
State	: Andhra Pradesh	District	Khammam
Basin	: Godavari	Independent River	: Godavari
Tributary	: Kinnerasani	Sub Tributary	: Murredu
Sub-Sub Tributary	: ---	Local River	: Murredu
Division	: L Godavari Div., Hyderabad	Sub-Division	: L G SD No 1, Bhardrachalam
Drainage Area	: 1565 Sq. Km.	Bank	: Left
Latitude	: 17°35'50"	Longitude	: 80°49'40"
	Opening Date		Closing Date
Gauge	: 11.06.1996		
Discharge	: 24.08.1996		
Sediment	:		
Water Quality	:		

Water Quality Datasheet for the period : 2015-2016

Station Name : Sangam (SANGAM)

Local River : Murredu

River Water Analysis

Division : L Godavari Div., Hyderabad

Sub-Division : L G SD No 1, Bhardrachalam

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	33.06	2.000	18.74	13.56	2.822	2.207	0.708	0.301	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Clear	Clear	Other	Other	Other	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)							789	860	581	94	898	1010
4	EC_GEN (μmho/cm)	540	390	268	417	489	410	569	394	1442	445	1023	341
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)							6.0	6.0	6.8	7.0	5.5	6.6
7	pH_GEN (pH units)	8.0	7.7	7.7	7.4	7.8	8.0	8.1	8.2	8.7	8.3	8.4	8.0
8	TDS (mg/L)	352	210	286	372	312	197	313	305	252	295	306	287
9	Temp (deg C)	28.0	26.0	30.0	30.0	30.0	30.0	28.0	25.0	24.0	23.0	29.0	29.0
10	Turb (NTU)	1.0	630.0	23.0	68.0	26.0	25.0	12.0	5.0	61.0	48.0	105.0	103.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.6	4.1	4.0	0.0
2	ALK-TOT (mgCaCO3/L)	148	138	131	166	158	157	157	147	153	143	165	145
3	B (mg/L)	0.61	0.05	0.14	0.10	0.00	0.00	0.00					
4	Ca (mg/L)	35	28	32	34	38	34	34	35	34	32	38	34
5	Cl (mg/L)	51.3	29.2	30.1	30.3	27.4	27.9	31.3	28.6	29.1	27.8	31.6	29.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	4.9	4.8	0.0
7	F (mg/L)	0.94	0.76	0.86	0.85	1.12	0.94	0.82	0.54	0.83	0.58	0.75	0.62
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
9	HCO3 (mg/L)	180	168	160	202	193	192	192	179	170	165	192	177
10	K (mg/L)	7.2	4.5	5.2	4.5	4.6	4.7	5.1	5.7	6.0	5.3	6.7	6.8
11	Mg (mg/L)	20.4	16.0	18.9	18.4	19.9	19.3	19.0	20.0	19.0	17.0	22.0	19.0
12	Na (mg/L)	39.2	37.3	36.1	35.1	42.7	38.5	30.3	31.9	33.1	31.0	38.8	34.7
13	NH3-N (mg N/L)	0.01	0.05	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
14	NO2+NO3 (mg N/L)	0.00	0.98	0.53	1.18	0.73	0.60	0.14	0.76	0.31	0.69	0.77	0.33
15	NO2-N (mgN/L)	0.00	0.02	0.01	0.04	0.00	0.00	0.00	0.00	0.01	0.03	0.01	0.01
16	NO3-N (mgN/L)	0.00	0.96	0.52	1.14	0.73	0.60	0.14	0.76	0.30	0.66	0.76	0.33
17	o-PO4-P (mg P/L)	0.130	0.140	0.312	0.120	0.179	0.079	0.051	0.075	0.090	0.155	0.102	0.100
18	SiO2 (mg/L)	22.0	10.8	12.0	18.0	19.8	15.1	14.8	14.8	14.7	18.6	17.3	19.7
19	SO4 (mg/L)	64.0	33.5	69.0	23.0	31.0	48.0	29.3	61.8	55.8	45.0	57.5	62.0

Water Quality Datasheet for the period : 2015-2016

Station Name : Sangam (SANGAM)

Division : L Godavari Div., Hyderabad

Local River : Murredu

River Water Analysis

Sub-Division : L G SD No 1, Bhardrachalam

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.4	0.1	0.5	1.0	0.4	0.4	0.8	0.9	0.2	0.2	0.9	1.0
2	COD (mg/L)	5.0	5.7	1.6	4.0	11.0	5.7	6.0	5.6	7.6	2.4	3.2	3.2
3	DO (mg/L)							6.8	6.7		6.6	6.0	5.0
4	DO_SAT% (%)							87	81		77	78	64
5	FCol-MPN (MPN/100mL)	2	5000	110	9000	16000	3000	2200	3500	2800	3500	3500	1300
6	Tcol-MPN (MPN/100mL)	1700	16000	16000	16000	16000	5000	9000	16000	9000	16000	16000	16000
7	TOC (mg/L)	2.6	2.9	1.9	9.6	11.1	4.1	2.2	2.3				
	TRACE & TOXIC												
1	As (µg/L)											0.0	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Hg (µg/L)											0.0	
5	Ni (µg/L)											0.0	
6	Pb (µg/L)											0.0	
7	Zn (µg/L)											2.1	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	88	70	80	84	94	84	85	88	85	80	95	85
2	HAR_Total (mgCaCO3/L)	173	137	159	161	177	164	164	171	164	151	187	164
3	Na% (%)	32	36	32	32	34	33	28	28	30	30	30	31
4	RSC (-)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
5	SAR (-)	1.3	1.4	1.3	1.2	1.4	1.3	1.0	1.1	1.1	1.1	1.2	1.2
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Sangam (SANGAM)

Division : L Godavari Div., Hyderabad

Local River : Murredu

Sub-Division : L G SD No 1, Bhardrachalam

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
PHYSICAL					
1	Q (cumec)	366	302.6	0.000	8.229
2	EC_FLD (µmho/cm)	6	1010	94	705
3	EC_GEN (µmho/cm)	12	1442	268	561
4	pH_FLD (pH units)	6	7.0	5.5	6.3
5	pH_GEN (pH units)	12	8.7	7.4	8
6	TDS (mg/L)	12	372	197	291
7	Temp (deg C)	12	30.0	23.0	27.7
8	Turb (NTU)	12	630.0	1.0	92.3
CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	12	6.6	0.0	1.2
2	ALK-TOT (mgCaCO3/L)	12	166	131	151
3	B (mg/L)	7	0.61	0.00	0.13
4	Ca (mg/L)	12	38	28	34
5	Cl (mg/L)	12	51.3	27.4	31.1
6	CO3 (mg/L)	12	8.0	0.0	1.5
7	F (mg/L)	12	1.12	0.54	0.8
8	Fe (mg/L)	12	0.1	0.0	0
9	HCO3 (mg/L)	12	202	160	181
10	K (mg/L)	12	7.2	4.5	5.5
11	Mg (mg/L)	12	22.0	16.0	19.1
12	Na (mg/L)	12	42.7	30.3	35.7
13	NH3-N (mg N/L)	12	0.05	0.01	0.01
14	NO2+NO3 (mg N/L)	12	1.18	0.00	0.58
15	NO2-N (mgN/L)	12	0.04	0.00	0.01
16	NO3-N (mgN/L)	12	1.14	0.00	0.57
17	o-PO4-P (mg P/L)	12	0.312	0.051	0.128
18	SiO2 (mg/L)	12	22.0	10.8	16.5
19	SO4 (mg/L)	12	69.0	23.0	48.3
BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	12	1.0	0.1	0.6
2	COD (mg/L)	12	11.0	1.6	5.1
3	DO (mg/L)	5	6.8	5.0	6.2
4	DO_SAT% (%)	5	87	64	77
5	FCol-MPN (MPN/100mL)	12	16000	2	4159
6	Tcol-MPN (MPN/100mL)	12	16000	1700	12725
7	TOC (mg/L)	8	11.1	1.9	4.6
TRACE & TOXIC					
1	As (µg/L)	1	0.0	0.0	0
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.0	0.0	0
4	Hg (µg/L)	1	0.0	0.0	0
5	Ni (µg/L)	1	0.0	0.0	0
6	Pb (µg/L)	1	0.0	0.0	0
7	Zn (µg/L)	1	2.1	2.1	2.1
CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	12	95	70	85
2	HAR_Total (mgCaCO3/L)	12	187	137	164
3	Na% (%)	12	36	28	31
4	RSC (-)	12	0.1	0.0	0
5	SAR (-)	12	1.4	1.0	1.2
PESTICIDES					

Water Quality Seasonal Average for the period: 2013-2016

Station Name : Sangam (SANGAM)

Local River : Murredu

River Water

Division : L Godavari Div., Hyderabad

Sub-Division : L G SD No 1, Bhardrachalam

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2013	2014	2015	2013-2014	2014-2015	2015-2016	2014	2015	2016
	PHYSICAL									
1	Q (cumec)	27.55	21.24	13.47	6.551	2.364	1.510	0.000	0.425	0.000
2	EC_FLD (µmho/cm)						743			667
3	EC_GEN (µmho/cm)	382	522	421	460	419	704	487	535	603
4	pH_FLD (pH units)						6.3			6.4
5	pH_GEN (pH units)	8.0	8.1	7.7	8.0	8.0	8.3	8.0	8.1	8.2
6	TDS (mg/L)	209	330	306	296	300	267	290	379	296
7	Temp (deg C)	26.0	27.2	28.8	25.8	25.5	26.8	25.7	28.7	27.0
8	Turb (NTU)	14.2	22.8	149.6	38.0	10.0	25.8	24.3	13.7	85.3
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)	0.0	0.8	0.0	0.0	0.0	1.7	0.0	1.2	2.7
2	ALK-TOT (mgCaCO3/L)	126	156	148	152	170	154	146	147	151
3	B (mg/L)	0.35	0.28	0.18	0.10	0.19	0.00	0.20	0.33	
4	Ca (mg/L)	29	35	33	35	41	34	34	34	35
5	Cl (mg/L)	23.9	31.8	33.7	22.1	37.0	29.2	23.0	37.8	29.5
6	CO3 (mg/L)	0.0	1.0	0.0	0.0	0.0	2.0	0.0	1.4	3.2
7	F (mg/L)	0.68	1.02	0.91	0.95	1.16	0.78	0.85	0.66	0.65
8	Fe (mg/L)	0.1	0.1	0.0	0.1	0.1	0.0	0.6	0.0	0.0
9	HCO3 (mg/L)	153	188	181	186	208	183	178	177	178
10	K (mg/L)	3.8	5.1	5.2	3.6	5.3	5.4	4.8	6.2	6.2
11	Mg (mg/L)	16.0	20.0	18.7	20.8	21.4	19.3	19.4	19.2	19.3
12	Na (mg/L)	30.2	39.9	38.1	36.6	41.8	33.4	34.7	40.4	34.8
13	NH3-N (mg N/L)	0.07	0.05	0.02	0.00	0.05	0.00	0.03	0.01	0.01
14	NO2+NO3 (mg N/L)	0.73	0.88	0.68	0.65	0.32	0.45	1.46	0.36	0.60
15	NO2-N (mgN/L)	0.00	0.02	0.01	0.00	0.03	0.00	0.00	0.02	0.01
16	NO3-N (mgN/L)	0.73	0.86	0.67	0.65	0.30	0.45	1.46	0.34	0.58
17	o-PO4-P (mg P/L)	0.065	0.244	0.176	0.168	0.136	0.074	0.044	0.090	0.119
18	SiO2 (mg/L)	14.3	16.0	16.5	16.8	18.1	14.9	16.9	18.4	18.5
19	SO4 (mg/L)	27.1	43.4	44.1	42.5	44.9	48.7	49.1	60.5	54.8

Water Quality Seasonal Average for the period: 2013-2016

Station Name : Sangam (SANGAM)

Division : L Godavari Div., Hyderabad

Local River : Murredu

River Water

Sub-Division : L G SD No 1, Bhardrachalam

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2013	2014	2015	2013-2014	2014-2015	2015-2016	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	0.6	0.8	0.5	1.1	1.1	0.6	0.4	0.6	0.7
2	COD (mg/L)	7.3	15.5	5.4	5.3	5.4	6.2	4.8	7.6	2.9
3	DO (mg/L)	5.8	6.3		6.6	7.4	6.7	6.3	6.2	5.8
4	DO_SAT% (%)	71	80		81	90	84	77	80	73
5	FCol-MPN (MPN/100mL)	3877	6934	6022	348	1108	2875	1613	2	2767
6	Tcol-MPN (MPN/100mL)	10767	7506	13140	733	2450	9750	10710	1890	16000
7	TOC (mg/L)	2.9	11.1	5.6	4.9	19.4	2.9	8.4	12.0	
	TRACE & TOXIC									
1	As (µg/L)							4.7	7.2	0.0
2	Cd (µg/L)					0.4		0.0	3.0	0.0
3	Cr (µg/L)					0.9		0.2	0.0	0.0
4	Cu (µg/L)					1.6		4.0		
5	Hg (µg/L)							0.2	0.1	0.0
6	Ni (µg/L)					0.5		9.1	10.6	0.0
7	Pb (µg/L)					2.6		0.0	19.0	0.0
8	Zn (µg/L)					5.0		6.2	19.0	2.1
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	71	87	83	88	103	85	85	85	87
2	HAR_Total (mgCaCO3/L)	138	171	161	174	193	166	166	165	167
3	Na% (%)	31	33	33	31	31	30	30	34	30
4	RSC (-)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0
5	SAR (-)	1.1	1.3	1.3	1.2	1.3	1.1	1.2	1.4	1.2
	PESTICIDES									

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Perur	Code	: AG000G7
State	: Andhra Pradesh	District	Khammam
Basin	: Godavari	Independent River	: Godavari
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Godavari
Division	: Lower Godavari Div., Hyderabad	Sub-Division	: Lower Godavari 1, Bhadrachalam
Drainage Area	: 268200 Sq. Km.	Bank	: Left
Latitude	: 18°33'00"	Longitude	: 80°22'00"
	Opening Date	Closing Date	
Gauge	: 11.03.1964		
Discharge	: 17.09.1965		
Sediment	: 24.02.1968		
Water Quality	: 24.10.1968		

Water Quality Datasheet for the period : 2015-2016

Station Name : Perur (AG000G7)

Local River : Godavari

River Water Analysis

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	41.20	1430	1384	6764	1566	317.8	121.2	82.19	54.83	42.98	21.04	3.997
2	Colour_Cod (-)	Clear	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)							935	1175	817	1167	840	835
4	EC_GEN (μmho/cm)	328	217	179	144	225	259	518	292	1358	409	761	308
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)							6.5	6.7	6.9	6.5	6.6	6.9
7	pH_GEN (pH units)	7.5	7.6	7.3	7.0	7.3	8.2	8.1	8.2	8.6	8.4	8.6	7.8
8	TDS (mg/L)	188	200	130	180	132	54	201	221	210	248	224	196
9	Temp (deg C)	26.0	28.0	29.5	28.5	28.5	30.0	26.0	26.0	24.0	26.0	28.5	31.0
10	Turb (NTU)	2.0	58.0	60.0	207.0	8.0	1.0	4.0	2.0	15.0	12.0	2.0	4.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	4.6	4.9	0.0
2	ALK-TOT (mgCaCO3/L)	116	79	79	74	93	111	125	130	152	140	151	793
3	B (mg/L)	0.11	0.00	0.27	0.00	0.00	0.00	0.00					
4	Ca (mg/L)	22	17	18	16	20	21	25	27	28	28	28	24
5	Cl (mg/L)	13.1	4.8	9.5	4.4	4.1	9.0	10.5	14.7	17.2	21.2	20.1	16.3
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	5.6	5.9	0.0
7	F (mg/L)	0.20	0.33	0.26	0.01	0.29	0.25	0.22	0.04	0.42	0.06	0.17	0.08
8	Fe (mg/L)	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	142	96	96	90	114	135	152	158	180	159	172	968
10	K (mg/L)	2.9	2.9	3.3	2.0	2.7	2.0	1.9	2.5	2.8	2.5	3.4	3.3
11	Mg (mg/L)	12.1	9.2	9.7	7.3	9.7	9.2	13.0	13.0	14.0	14.0	15.0	12.0
12	Na (mg/L)	25.8	15.5	20.2	11.0	14.0	18.0	19.8	25.7	29.1	31.3	34.9	28.7
13	NH3-N (mg N/L)	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.08	0.11	0.37
14	NO2+NO3 (mg N/L)	0.04	1.48	0.76	0.47	0.54	0.21	0.11	0.87	0.42	0.60	0.90	0.35
15	NO2-N (mgN/L)	0.00	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.07	0.01	0.01
16	NO3-N (mgN/L)	0.04	1.46	0.75	0.46	0.53	0.21	0.11	0.87	0.40	0.53	0.89	0.35
17	α-PO4-P (mg P/L)	0.070	0.050	0.317	0.113	0.121	0.066	0.030	0.070	0.078	0.165	0.022	0.070
18	SiO2 (mg/L)	22.5	8.0	8.0	13.9	15.9	15.5	15.3	15.7	16.6	21.7	22.7	23.1
19	SO4 (mg/L)	20.7	12.2	20.9	10.6	2.9	15.8	7.1	28.8	37.8	31.0	31.5	16.0

Water Quality Datasheet for the period : 2015-2016

Station Name : Perur (AG000G7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.6	1.4	0.7	1.4	1.3	0.8	1.1	1.0	2.7	1.0	0.2	1.6
2	COD (mg/L)	5.9	2.4	2.0	8.1	3.0	1.2	4.0	4.4	6.8	2.0	2.8	9.6
3	DO (mg/L)							6.7	7.2	4.9	6.6	6.0	5.2
4	DO_SAT% (%)							83	89	58	81	77	69
5	FCol-MPN (MPN/100mL)	2	2800	1400	9000	330	2	16000	140	1100	700	1400	5000
6	Tcol-MPN (MPN/100mL)	170	16000	16000	16000	9000	80	16000	16000	3000	1700	16000	9000
7	TOC (mg/L)	1.9	3.0	2.0	2.4	2.4	1.7	2.3	5.9				
	TRACE & TOXIC												
1	As (µg/L)											0.6	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Hg (µg/L)											0.0	
5	Ni (µg/L)											0.0	
6	Pb (µg/L)											0.0	
7	Zn (µg/L)											6.4	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	54	42	46	40	50	52	62	68	70	70	70	60
2	HAR_Total (mgCaCO3/L)	104	80	86	70	90	90	116	122	128	128	133	110
3	Na% (%)	34	29	33	25	25	30	27	31	33	34	36	35
4	RSC (-)	0.3	0.0	0.0	0.1	0.1	0.4	0.2	0.2	0.5	0.2	0.4	13.7
5	SAR (-)	1.1	0.8	0.9	0.6	0.6	0.8	0.8	1.0	1.1	1.2	1.3	1.2
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Perur (AG000G7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

Sub-Division : Lower Godavari 1, Bhadrachalam

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
PHYSICAL					
1	Q (cumec)	366	22779	1.627	1347
2	EC_FLD (µmho/cm)	6	1175	817	962
3	EC_GEN (µmho/cm)	12	1358	144	416
4	pH_FLD (pH units)	6	6.9	6.5	6.7
5	pH_GEN (pH units)	12	8.6	7.0	7.9
6	TDS (mg/L)	12	248	54	182
7	Temp (deg C)	12	31.0	24.0	27.7
8	Turb (NTU)	12	207.0	1.0	31.3
CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	12	4.9	0.0	1
2	ALK-TOT (mgCaCO3/L)	12	793	74	170
3	B (mg/L)	7	0.27	0.00	0.06
4	Ca (mg/L)	12	28	16	23
5	Cl (mg/L)	12	21.2	4.1	12.1
6	CO3 (mg/L)	12	5.9	0.0	1.2
7	F (mg/L)	12	0.42	0.01	0.19
8	Fe (mg/L)	12	0.3	0.0	0
9	HCO3 (mg/L)	12	968	90	205
10	K (mg/L)	12	3.4	1.9	2.7
11	Mg (mg/L)	12	15.0	7.3	11.5
12	Na (mg/L)	12	34.9	11.0	22.8
13	NH3-N (mg N/L)	12	0.37	0.01	0.05
14	NO2+NO3 (mg N/L)	12	1.48	0.04	0.56
15	NO2-N (mgN/L)	12	0.07	0.00	0.01
16	NO3-N (mgN/L)	12	1.46	0.04	0.55
17	o-PO4-P (mg P/L)	12	0.317	0.022	0.098
18	SiO2 (mg/L)	12	23.1	8.0	16.6
19	SO4 (mg/L)	12	37.8	2.9	19.6
BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	12	2.7	0.2	1.2
2	COD (mg/L)	12	9.6	1.2	4.4
3	DO (mg/L)	6	7.2	4.9	6.1
4	DO_SAT% (%)	6	89	58	76
5	FCol-MPN (MPN/100mL)	12	16000	2	3156
6	Tcol-MPN (MPN/100mL)	12	16000	80	9913
7	TOC (mg/L)	8	5.9	1.7	2.7
TRACE & TOXIC					
1	As (µg/L)	1	0.6	0.6	0.6
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.0	0.0	0
4	Hg (µg/L)	1	0.0	0.0	0
5	Ni (µg/L)	1	0.0	0.0	0
6	Pb (µg/L)	1	0.0	0.0	0
7	Zn (µg/L)	1	6.4	6.4	6.3
CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	12	70	40	57
2	HAR_Total (mgCaCO3/L)	12	133	70	105
3	Na% (%)	12	36	25	31
4	RSC (-)	12	13.7	0.0	1.3
5	SAR (-)	12	1.3	0.6	1
PESTICIDES					

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Perur (AG000G7)

Local River : Godavari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	1476	2486	3369	1894	3955	7563	5924	2914	1847	7256	4446	5004	3694	2913	2237
2	EC_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	232	241	229	224	244	214	247	283	289	210	260	237	255	289	219
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	8.4	8.1	8.2	8.1	8.3	8.1	8.3	8.2	8.1	8.0	8.3	8.1	7.8	8.0	7.3
6	TDS (mg/L)								191	182	146	192	181	180	217	166
7	Temp (deg C)	29.8	28.2	28.9	28.2	28.6	28.3	28.3	27.8	27.0	27.7	29.3	28.4	30.1	29.9	28.1
8	Turb (NTU)								35.1	7.6	58.6	4.7	21.8	8.2	49.6	67.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	3.5	3.8	2.8	1.2	6.2	1.3	2.4	1.6	6.1	3.2	3.5	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	93	93	97	95	93	92	71	87	98	77	100	86	96	100	88
3	B (mg/L)	0.03	0.09	0.01	0.05	0.09	0.09	0.11	0.11	0.13	0.07	0.10	0.21	0.08	0.22	0.08
4	Ca (mg/L)	24	26	27	28	24	21	16	22	18	17	18	21	22	21	19
5	Cl (mg/L)	12.2	16.0	25.2	14.9	13.6	17.8	25.5	34.5	26.7	16.1	18.7	12.2	9.9	11.5	7.2
6	CO3 (mg/L)	4.2	4.6	3.4	1.4	7.4	1.6	2.8	1.9	7.3	3.8	4.2	0.0	0.0	0.0	0.0
7	F (mg/L)	0.81	0.83	0.53	0.30	0.18	3.44	0.24	0.41	0.34	0.33	0.29	0.22	0.35	0.37	0.22
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1
9	HCO3 (mg/L)	105	104	112	113	99	109	81	102	105	87	114	105	117	122	108
10	K (mg/L)	1.7	1.5	2.0	2.5	2.7	2.5	2.3	2.9	2.7	2.4	2.7	2.6	2.1	2.4	2.7
11	Mg (mg/L)	5.1	7.1	5.2	6.6	5.7	6.5	8.2	8.8	12.3	8.7	12.2	9.9	11.8	10.0	9.6
12	Na (mg/L)	16.4	18.0	18.4	11.5	15.2	14.5	19.1	23.0	20.1	14.1	16.7	17.3	15.8	25.9	17.3
13	NH3-N (mg N/L)	0.01	0.10	0.01	0.04	0.12	0.05	0.31	0.06	0.17	0.09	0.22	0.02	0.05	0.06	0.00
14	NO2+NO3 (mg N/L)	0.57	0.54	0.56	0.65	0.59	0.61	1.92	0.96	0.35	0.48	0.49	0.83	0.58	0.27	0.66
15	NO2-N (mgN/L)				0.01	0.05	0.02	0.05	0.10	0.02	0.02	0.01	0.00	0.00	0.01	0.01
16	NO3-N (mgN/L)	0.57	0.54	0.56	0.65	0.54	0.60	1.87	0.86	0.32	0.45	0.48	0.83	0.58	0.26	0.65
17	o-PO4-P (mg P/L)	0.008	0.012	0.023	0.035	0.019			0.017	0.011	0.017	0.023	0.166	0.065	0.125	0.134
18	P-Tot (mgP/L)						0.036	0.010								
19	SiO2 (mg/L)	14.5	46.6	19.0	16.8	21.0	10.0	15.6	18.0	16.8	14.4	23.4	13.8	15.3	14.7	13.7
20	SO4 (mg/L)	8.2	11.4	11.4	5.4	7.0	5.0	12.6	12.0	14.1	8.9	12.8	19.6	19.3	31.6	13.5
	BIOLOGICAL/BACTERIOLOGICAL															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Perur (AG000G7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1	BOD3-27 (mg/L)	0.6	0.8	0.6	0.6	0.8	0.4	0.6	0.9	0.5	1.4	1.0	0.8	1.0	0.7	1.1
2	COD (mg/L)			23.7	51.9	28.9	4.2	23.6	3.4	2.8	8.4	4.8	9.9	7.6	9.9	4.3
3	DO (mg/L)	6.6	5.7	6.1	6.1	5.7	5.9	5.6	5.8	5.5	5.8	6.1	6.2	6.2	6.1	
4	DO_SAT% (%)	86	73	78	78	74	76	71	73	69	74	80	79	81	80	
5	FCol-MPN (MPN/100mL)					648	7480	9714	9662	2762	7420	13250	870	468	3727	2706
6	Tcol-MPN (MPN/100mL)					648	10800	9742	9674	4396	8230	14250	3938	5000	5488	11434
7	TOC (mg/L)				6.3			0.9	2.2	1.5	1.7	1.8	1.5	0.4	6.2	2.3
	TRACE & TOXIC															
1	As (µg/L)												10.1			
2	Cd (µg/L)							0.0					0.2			
3	Cr (µg/L)							15.7					2.0			
4	Cu (µg/L)												0.2			
5	Hg (µg/L)							0.0								
6	Ni (µg/L)							7.6					1.6			
7	Pb (µg/L)							11.7					1.0			
8	Zn (µg/L)							335.9					94.2			
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	59	66	67	70	61	52	40	55	45	43	44	52	55	53	46
2	HAR_Total (mgCaCO3/L)	80	96	89	97	84	79	74	91	97	79	95	93	104	95	86
3	Na% (%)	25	25	28	16	27	23	31	32	25	25	25	25	23	33	29
4	RSC (-)	0.3	0.1	0.2	0.1	0.2	0.3	0.2	0.0	0.1	0.0	0.2	0.2	0.1	0.2	0.1
5	SAR (-)	0.7	0.7	0.8	0.5	0.7	0.6	0.9	1.0	0.8	0.7	0.7	0.8	0.7	1.1	0.8
	PESTICIDES															
1	Aldrin (µg/L)							0.0								
2	BHC (µg/L)							0.1								
3	DDT (µg/L)							0.1								
4	Dieldrin (µg/L)							0.1								
5	Endos (µg/L)							0.1								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Perur (AG000G7)

Local River : Godavari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	248.4	171.6	560.8	201.1	625.7	429.4	326.1	207.4	153.0	678.9	215.3	309.2	947.3	272.3	144.0
2	EC_FLD (µmho/cm)															976
3	EC_GEN (µmho/cm)	351	342	277	243	379	398	312	369	298	340	342	345	358	259	607
4	pH_FLD (pH units)															6.7
5	pH_GEN (pH units)	8.5	8.3	8.6	8.4	8.5	8.5	7.9	8.3	8.4	8.4	8.4	7.9	7.8	7.9	8.3
6	TDS (mg/L)								241	180	230	243	210	230	194	172
7	Temp (deg C)	23.3	25.3	25.5	24.8	24.9	26.0	26.1	25.9	24.3	26.0	26.5	24.9	26.3	23.5	26.5
8	Turb (NTU)								1.6	1.6	2.2	0.0	1.8	11.0	2.8	5.5
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	7.7	2.1	3.6	8.1	7.7	7.0	3.0	7.4	8.8	11.7	4.1	1.1	0.0	0.0	0.5
2	ALK-TOT (mgCaCO3/L)	154	123	115	115	152	158	123	139	134	135	153	147	127	122	129
3	B (mg/L)	0.00	0.00	0.08	0.10	0.10	0.07	0.16	0.03	0.17	0.16	0.12	0.11	0.04	0.15	0.00
4	Ca (mg/L)	42	34	39	29	38	26	24	29	32	26	28	26	26	27	25
5	Cl (mg/L)	16.5	17.5	12.8	21.0	19.8	23.5	23.7	31.5	17.5	24.9	18.1	14.9	14.8	14.6	12.9
6	CO3 (mg/L)	9.3	2.5	4.3	9.7	9.2	8.4	3.6	8.9	10.7	14.2	4.9	1.3	0.0	0.0	0.6
7	F (mg/L)	0.63	0.60	0.41	0.30	0.42	0.18	0.35	0.47	0.41	0.31	0.58	0.43	0.31	0.29	0.23
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.2	0.3	0.2	0.0	0.1	0.1	0.0
9	HCO3 (mg/L)	169	145	132	121	167	176	143	152	142	136	177	177	155	149	156
10	K (mg/L)	1.9	2.3	1.8	2.3	2.6	1.8	2.4	2.6	2.3	2.6	2.5	1.9	2.5	2.2	2.3
11	Mg (mg/L)	6.8	10.1	3.3	5.2	7.2	18.1	11.1	16.5	14.0	15.2	15.0	16.7	16.9	12.7	12.3
12	Na (mg/L)	27.3	25.3	19.8	19.0	23.5	26.5	21.4	22.0	13.4	21.1	25.4	23.4	23.4	21.7	23.1
13	NH3-N (mg N/L)	0.05	0.06	0.17	0.04	0.08	0.05	0.23	0.07	0.07	0.15	0.16	0.01	0.00	0.08	0.01
14	NO2+NO3 (mg N/L)	0.13	0.11	0.52	0.27	0.25	0.25	1.59	0.10	0.08	0.25	0.10	0.79	0.42	0.18	0.40
15	NO2-N (mgN/L)				0.01	0.01	0.00	0.05	0.03	0.01	0.02	0.02	0.00	0.00	0.02	0.00
16	NO3-N (mgN/L)	0.13	0.10	0.52	0.26	0.25	0.25	1.54	0.06	0.07	0.23	0.08	0.79	0.42	0.15	0.40
17	o-PO4-P (mg P/L)	0.015	0.040	0.022	0.017	0.017			0.007	0.016	0.022	0.009	0.096	0.023	0.061	0.061
18	P-Tot (mgP/L)						0.017	0.108								
19	SiO2 (mg/L)	16.1	17.5	14.0	11.8	19.5	19.0	15.9	17.5	15.1	36.5	12.7	20.2	20.3	17.4	15.8
20	SO4 (mg/L)	20.5	18.0	10.3	2.3	8.8	14.3	13.3	16.6	11.5	15.2	17.0	14.4	20.5	19.9	22.4
	BIOLOGICAL/BACTERIOLOGICAL															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Perur (AG000G7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
1	BOD3-27 (mg/L)	0.1	1.1	0.5	0.6	0.6	0.5	0.6	0.3	0.7	1.2	0.5	0.8	1.3	0.7	1.4
2	COD (mg/L)			24.6	25.9	21.5	15.7	20.3	1.4	6.3	3.1	8.7	11.5	10.4	5.3	4.1
3	DO (mg/L)	7.2	6.9	6.8	6.5	7.3	7.1	6.5	6.5	6.8	6.8	6.4	7.2	7.3	7.8	6.3
4	DO_SAT% (%)	84	83	84	78	88	87	80	80	81	84	79	87	90	92	76
5	FCol-MPN (MPN/100mL)					5363	3000	1275	4165	13250	16000	5383	79	634	976	4311
6	Tcol-MPN (MPN/100mL)					5707	7733	2050	4233	16000	16000	8808	525	813	2551	8770
7	TOC (mg/L)				10.6			0.8	1.9	1.5	1.3	1.2	1.3	5.0	9.3	3.3
	TRACE & TOXIC															
1	As (µg/L)									0.1		0.1				
2	Cd (µg/L)						1.0		0.8	0.4	0.0	0.0			0.0	
3	Cr (µg/L)						5.0		0.0	0.0	0.0	0.7			1.5	
4	Cu (µg/L)											9.1			1.4	
5	Hg (µg/L)						0.0									
6	Ni (µg/L)						1.0		2.4	2.3	0.0	0.7			0.0	
7	Pb (µg/L)						50.0		15.0	0.0	0.0	0.6			2.1	
8	Zn (µg/L)						71.0		8.8	20.8	3.8	16.6			6.0	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	104	85	97	73	96	65	60	73	79	65	69	64	66	66	63
2	HAR_Total (mgCaCO3/L)	132	126	111	94	125	140	106	141	137	129	132	134	136	119	114
3	Na% (%)	31	28	28	30	28	29	28	25	17	26	29	28	26	28	30
4	RSC (-)	0.4	0.0	0.1	0.4	0.5	0.5	0.4	0.0	0.1	0.2	0.5	0.4	0.1	0.1	0.3
5	SAR (-)	1.0	0.9	0.8	0.9	0.9	1.0	0.9	0.8	0.5	0.8	1.0	0.9	0.9	0.9	0.9
	PESTICIDES															
1	Aldrin (µg/L)						0.0		0.0	0.0	0.0	0.0				
2	BHC (µg/L)						0.1		0.0	0.2	0.1	0.0				
3	DDT (µg/L)						0.1		0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)						0.0		0.0	0.0	0.0	0.0				
5	Endos (µg/L)						0.1		0.0	0.0	0.0	0.0				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Perur (AG000G7)

Local River : Godavari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	46.39	38.12	56.09	49.36	80.80	62.17	79.31	28.60	26.50	104.8	21.54	71.24	103.9	57.31	22.67
2	EC_FLD (µmho/cm)															947
3	EC_GEN (µmho/cm)	442	398	397	327	456	445	466	498	379	396	462	443	429	379	493
4	pH_FLD (pH units)															6.6
5	pH_GEN (pH units)	8.7	8.6	8.5	8.2	8.5	8.6	8.4	8.3	8.3	8.4	8.4	8.3	8.2	7.7	8.3
6	TDS (mg/L)								291	233	293	311	338	254	229	223
7	Temp (deg C)	28.5	27.5	28.0	26.2	25.5	26.8	26.0	27.0	25.8	28.0	27.8	28.7	28.0	25.7	28.5
8	Turb (NTU)								0.4	0.9	0.9	0.0	0.8	4.0	5.0	6.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	11.0	10.0	11.7	3.5	6.8	6.5	7.4	7.1	10.4	10.0	2.8	1.4	0.0	0.0	3.2
2	ALK-TOT (mgCaCO3/L)	181	147	151	137	170	170	166	158	145	152	170	165	167	140	361
3	B (mg/L)	0.00	0.00	0.04	0.13	0.13	0.02	0.12	0.24	0.05	0.14	0.03	0.24	0.13	0.03	
4	Ca (mg/L)	43	33	36	37	31	25	20	30	26	24	26	30	30	27	27
5	Cl (mg/L)	28.0	33.0	21.7	23.3	28.8	35.3	33.0	42.9	30.6	36.5	28.1	22.0	20.8	16.7	19.2
6	CO3 (mg/L)	13.2	12.0	14.0	4.2	8.1	7.9	8.9	8.6	12.5	12.0	3.4	1.7	0.0	0.0	3.8
7	F (mg/L)	0.94	0.79	0.53	0.46	0.49	0.28	0.43	0.64	0.44	0.48	0.71	0.60	0.47	0.41	0.10
8	Fe (mg/L)	0.0	0.0	0.0	0.2	0.2	0.1	0.3	0.3	0.3	0.5	0.2	0.2	0.1	0.0	0.0
9	HCO3 (mg/L)	193	155	156	158	191	191	184	175	152	161	200	198	204	171	433
10	K (mg/L)	2.8	1.9	2.6	3.5	3.2	2.5	3.0	3.9	3.7	3.5	3.5	3.0	3.0	2.9	3.1
11	Mg (mg/L)	8.4	15.1	7.3	4.5	14.7	24.1	20.8	20.5	14.5	19.4	14.1	17.5	17.2	15.5	13.7
12	Na (mg/L)	62.3	42.0	22.9	25.7	30.0	38.7	36.1	32.7	29.0	34.8	33.2	31.7	34.4	30.8	31.6
13	NH3-N (mg N/L)	0.02	0.07	0.35	0.16	0.04	0.05	0.24	0.14	0.21	0.17	0.05	0.01	0.02	0.02	0.19
14	NO2+NO3 (mg N/L)	0.09	0.13	0.01	0.12	0.34	0.48	0.23	0.20	0.12	0.10	0.12	0.63	0.56	0.14	0.62
15	NO2-N (mgN/L)				0.01	0.00	0.02	0.04	0.02	0.01	0.01	0.01	0.00	0.00	0.02	0.03
16	NO3-N (mgN/L)	0.09	0.13	0.01	0.10	0.34	0.46	0.19	0.18	0.10	0.10	0.11	0.63	0.56	0.12	0.59
17	o-PO4-P (mg P/L)	0.360	0.017	0.000	0.017	0.020			0.000	0.008	0.028	0.074	0.062	0.007	0.123	0.086
18	P-Tot (mgP/L)						0.109	0.309								
19	SiO2 (mg/L)	15.9	14.3	10.7	7.0	19.3	16.9	16.0	15.3	12.4	38.4	15.1	14.2	17.5	18.3	22.5
20	SO4 (mg/L)	29.7	18.0	15.7	8.3	18.7	18.0	19.0	20.5	20.8	25.8	23.7	15.5	28.7	21.9	26.2
	BIOLOGICAL/BACTERIOLOGICAL															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Perur (AG000G7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	BOD3-27 (mg/L)	0.4	1.2	0.5	0.5	0.4	0.5	0.7	0.5	1.0	0.7	0.6	0.7	0.9	0.9	0.9
2	COD (mg/L)			12.6	17.5	40.8	16.0	13.0	2.9	3.2	3.8	5.6	4.0	4.8	9.3	4.8
3	DO (mg/L)	6.1	6.6	6.1	6.0	5.8	5.9	5.9	6.0	5.9	6.1	6.3	5.8	6.2	6.2	5.9
4	DO_SAT% (%)	78	83	78	74	71	73	79	75	73	78	80	75	78	76	76
5	FCol-MPN (MPN/100mL)					225	533	2400	2473	8390	907	827	5411	177	28	2367
6	Tcol-MPN (MPN/100mL)					1400	913	2400	3807	10740	1107	1730	5667	373	5403	8900
7	TOC (mg/L)				3.9			1.7	1.8	3.7	2.0	1.5	2.0	3.2	7.5	
	TRACE & TOXIC															
1	As (µg/L)									0.9		1.2	7.8	2.4	0.5	0.6
2	Cd (µg/L)					0.0	3.0	0.7	1.6	0.1	0.0	0.0	1.3	0.0	1.0	0.0
3	Cr (µg/L)					6.0	16.0	7.4	0.0	0.0	0.0	0.8	11.6	0.1	0.0	0.0
4	Cu (µg/L)											3.9	0.6	1.7		
5	Hg (µg/L)						0.3	1.1				0.0	0.7	0.2	0.1	0.0
6	Ni (µg/L)					5.0	8.0	5.2	1.0	0.4	1.5	1.3	16.7	5.2	5.8	0.0
7	Pb (µg/L)					28.0	14.0	17.5	20.0	0.0	12.5	4.4	0.5	2.1	6.0	0.0
8	Zn (µg/L)					75.0	41.0	24.8	21.9	170.9	37.1	13.4	76.2	5.5	3.0	6.3
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	108	82	90	92	77	63	49	75	66	60	64	76	75	68	67
2	HAR_Total (mgCaCO3/L)	143	144	120	110	137	164	136	161	127	141	123	148	147	133	124
3	Na% (%)	48	39	28	33	31	34	36	30	32	34	36	31	33	33	35
4	RSC (-)	0.8	0.2	0.6	0.5	0.7	0.3	0.6	0.1	0.4	0.3	1.0	0.4	0.4	0.2	4.8
5	SAR (-)	2.3	1.5	0.9	1.1	1.1	1.3	1.4	1.1	1.1	1.3	1.3	1.1	1.2	1.2	1.2
	PESTICIDES															
1	Aldrin (µg/L)					0.0		0.0	0.0	0.0	0.0	0.0				
2	BHC (µg/L)					0.0		0.2	0.0	0.1	0.5	0.0				
3	DDT (µg/L)					0.0		0.0	0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)					0.0		0.0	0.0	0.0	0.0	0.0				
5	Endos (µg/L)					0.0		0.0	0.0	0.0	0.0	0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Pathagudem	Code	: AGG00B5
State	: Chhattisgarh	District	Dantewara
Basin	: Godavari	Independent River	: Godavari
Tributary	: Indravathi	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Indravathi
Division	: Lower Godavari Div., Hyderabad	Sub-Division	: Indravati SD, Jagdalpur
Drainage Area	: 40000 Sq. Km.	Bank	: Left
Latitude	: 18°49'00"	Longitude	: 80°21'00"
	Opening Date	Closing Date	
Gauge	: 01.07.1964		
Discharge	: 20.07.1964		
Sediment	: 21.07.1965		
Water Quality	: 01.01.1972		

Water Quality Datasheet for the period : 2015-2016

Station Name : Pathagudem (AGG00B5)

Local River : Indravathi

Division : Lower Godavari Div., Hyderabad

Sub-Division : Indravati SD, Jagdalpur

River Water Analysis

S.No	Parameters	01.06.2015	01.07.2015	01.09.2015	01.10.2015	03.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL											
1	Q (cumec)	115.7	579.0	3956	763.6	109.0	52.24	27.85	13.52	6.679	6.785	0.741
2	Colour_Cod (-)	Clear	Clear	Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)								193	168	418	
4	EC_GEN (µmho/cm)	190	70	66	105	147	174	158	858	167	336	206
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
6	pH_FLD (pH units)								7.1	6.5	7.2	
7	pH_GEN (pH units)	8.0	7.2	7.0	7.8	7.2	6.7	8.4	8.7	8.5	8.7	8.5
8	TDS (mg/L)	98	40	194	94	13	108	122	88	122	109	135
9	Temp (deg C)	29.0	25.0	26.0	27.0	25.0	24.0	24.0	23.0	29.0	27.0	29.0
10	Turb (NTU)	1.0	291.0	275.0	18.0	0.1	0.1	1.0	3.0	2.0	0.1	2.0
	CHEMICAL											
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	3.5	7.1	4.3	4.6	4.0
2	ALK-TOT (mgCaCO3/L)	88	42	29	53	67	75	82	91	79	81	83
3	B (mg/L)	0.02	0.00	0.00	0.00	0.00	0.00					
4	Ca (mg/L)	18	9	8	10	14	14	15	15	17	16	17
5	Cl (mg/L)	5.7	0.5	1.4	1.0	1.2	1.0	3.5	2.5	1.2	3.7	2.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	4.2	8.5	5.2	5.6	4.8
7	F (mg/L)	0.10	0.01	0.01	0.24	0.03	0.02	0.01	0.17	0.01	0.11	0.03
8	Fe (mg/L)	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	107	51	35	65	82	92	91	94	86	87	92
10	K (mg/L)	2.1	1.8	2.3	1.3	1.4	1.2	1.4	1.6	0.9	1.4	1.7
11	Mg (mg/L)	9.2	4.8	2.9	4.8	6.3	7.0	7.0	7.0	8.0	8.0	9.0
12	Na (mg/L)	12.9	5.2	5.3	8.9	8.4	8.9	10.4	7.1	9.1	8.8	9.6
13	NH3-N (mg N/L)	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.03	0.11
14	NO2+NO3 (mg N/L)	0.02	0.72	0.22	0.02	0.26	0.12	0.65	0.23	0.46	0.68	0.18
15	NO2-N (mgN/L)	0.00	0.01	0.01	0.00	0.07	0.00	0.00	0.02	0.03	0.02	0.00
16	NO3-N (mgN/L)	0.02	0.72	0.21	0.02	0.19	0.12	0.65	0.21	0.44	0.66	0.18
17	o-PO4-P (mg P/L)	0.170	0.060	0.052	0.124	0.060	0.046	0.079	0.036	0.164	0.080	0.060
18	SiO2 (mg/L)	20.7	13.2	16.1	19.4	14.4	16.8	17.1	15.1	21.8	16.8	22.9
19	SO4 (mg/L)	4.0	14.6	15.8	4.0	0.8	0.0	10.3	3.7	5.3	1.6	1.7

Water Quality Datasheet for the period : 2015-2016

Station Name : Pathagudem (AGG00B5)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water Analysis

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	01.06.2015	01.07.2015	01.09.2015	01.10.2015	03.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL											
1	BOD3-27 (mg/L)	0.2	0.5	0.2	0.8	0.2	0.4	1.0	0.5	1.2	0.5	0.9
2	COD (mg/L)	12.6	0.8	29.8	25.6	4.4	0.8	1.6	1.2	1.6	2.8	5.6
3	DO (mg/L)								6.8	4.0	6.9	
4	DO_SAT% (%)								79	52	87	
5	FCol-MPN (MPN/100mL)	70	60	5000	140	800	1700	210	170	170	1300	16000
6	Tcol-MPN (MPN/100mL)	330	1300	16000	1700	3500	16000	16000	9000	1700	3000	16000
7	TOC (mg/L)	2.6	1.4	1.7	1.7	1.3	1.3	2.9				
	TRACE & TOXIC											
1	As (µg/L)										0.0	
2	Cd (µg/L)										0.0	
3	Cr (µg/L)										0.0	
4	Hg (µg/L)										0.0	
5	Ni (µg/L)										0.0	
6	Pb (µg/L)										0.0	
7	Zn (µg/L)										3.7	
	CHEMICAL INDICES											
1	HAR_Ca (mgCaCO3/L)	44	22	20	26	34	35	38	38	43	40	43
2	HAR_Total (mgCaCO3/L)	82	42	32	46	60	64	67	67	76	73	80
3	Na% (%)	25	20	25	29	23	23	25	18	21	20	20
4	RSC (-)	0.1	0.0	0.0	0.2	0.1	0.2	0.3	0.5	0.1	0.2	0.1
5	SAR (-)	0.6	0.4	0.4	0.6	0.5	0.5	0.6	0.4	0.5	0.4	0.5
	PESTICIDES											

Water Quality Summary for the period : 2015-2016

Station Name : Pathagudem (AGG00B5)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

Sub-Division : Indravati SD, Jagdalpur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	17670	0.172	587.6
2	EC_FLD (µmho/cm)	3	418	168	260
3	EC_GEN (µmho/cm)	11	858	66	225
4	pH_FLD (pH units)	3	7.2	6.5	6.9
5	pH_GEN (pH units)	11	8.7	6.7	7.9
6	TDS (mg/L)	11	194	13	102
7	Temp (deg C)	11	29.0	23.0	26.2
8	Turb (NTU)	11	291.0	0.1	53.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	7.1	0.0	2.1
2	ALK-TOT (mgCaCO3/L)	11	91	29	70
3	B (mg/L)	6	0.02	0.00	0
4	Ca (mg/L)	11	18	8	14
5	Cl (mg/L)	11	5.7	0.5	2.2
6	CO3 (mg/L)	11	8.5	0.0	2.6
7	F (mg/L)	11	0.24	0.01	0.07
8	Fe (mg/L)	11	0.2	0.0	0.1
9	HCO3 (mg/L)	11	107	35	80
10	K (mg/L)	11	2.3	0.9	1.6
11	Mg (mg/L)	11	9.2	2.9	6.7
12	Na (mg/L)	11	12.9	5.2	8.6
13	NH3-N (mg N/L)	11	0.11	0.01	0.02
14	NO2+NO3 (mg N/L)	11	0.72	0.02	0.33
15	NO2-N (mgN/L)	11	0.07	0.00	0.02
16	NO3-N (mgN/L)	11	0.72	0.02	0.31
17	o-PO4-P (mg P/L)	11	0.170	0.036	0.085
18	SiO2 (mg/L)	11	22.9	13.2	17.7
19	SO4 (mg/L)	11	15.8	0.0	5.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	1.2	0.2	0.6
2	COD (mg/L)	11	29.8	0.8	7.9
3	DO (mg/L)	3	6.9	4.0	5.9
4	DO_SAT% (%)	3	87	52	73
5	FCol-MPN (MPN/100mL)	11	16000	60	2329
6	Tcol-MPN (MPN/100mL)	11	16000	330	7685
7	TOC (mg/L)	7	2.9	1.3	1.8
	TRACE & TOXIC				
1	As (µg/L)	1	0.0	0.0	0
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.0	0.0	0
4	Hg (µg/L)	1	0.0	0.0	0
5	Ni (µg/L)	1	0.0	0.0	0
6	Pb (µg/L)	1	0.0	0.0	0
7	Zn (µg/L)	1	3.7	3.7	3.7
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	44	20	35
2	HAR_Total (mgCaCO3/L)	11	82	32	63
3	Na% (%)	11	29	18	23
4	RSC (-)	11	0.5	0.0	0.2
5	SAR (-)	11	0.6	0.4	0.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Pathagudem (AGG00B5)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	733.1	533.3	2347	1176	627.6	3530	2258	1017	1608	1483	2300	1876	723.3	1570	1354
2	EC_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	122	127	79	105	162	127	128	113	146	112	132	127	134	129	108
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	7.9	8.0	7.6	7.9	8.1	7.6	8.0	8.2	8.0	8.0	8.3	7.9	7.8	7.7	7.5
6	TDS (mg/L)								79	96	83	97	104	81	103	107
7	Temp (deg C)	29.4	30.4	28.8	29.3	29.0	30.0	29.2	28.0	28.7	29.0	27.3	28.3	29.0	25.6	26.8
8	Turb (NTU)								25.4	14.1	12.4	0.2	21.5	17.0	86.2	146.3
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.1	0.8	0.0	0.0	2.8	0.0	3.6	0.0	2.6	5.1	4.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	61	58	37	50	116	58	50	49	65	53	60	54	70	63	53
3	B (mg/L)	0.03	0.11	0.03	0.12	0.06	0.11	0.13	0.10	0.14	0.16	0.10	0.17	0.03	0.17	0.01
4	Ca (mg/L)	16	14	11	14	20	15	9	10	15	11	12	10	15	13	11
5	Cl (mg/L)	4.6	11.2	5.0	16.3	8.4	9.0	7.9	7.0	5.5	7.9	7.2	3.0	5.3	3.6	2.1
6	CO3 (mg/L)	2.5	1.0	0.0	0.0	3.4	0.0	4.3	0.0	3.1	6.2	4.8	0.0	0.0	0.0	0.0
7	F (mg/L)	0.23	0.51	0.45	0.28	0.22	0.15	0.35	0.11	0.20	0.15	0.10	0.12	0.30	0.11	0.09
8	Fe (mg/L)	0.1	0.0		0.1	0.1	0.1	0.1	0.3	0.1	0.3	0.2	0.4	0.1	0.1	0.1
9	HCO3 (mg/L)	70	68	45	61	67	71	52	60	73	53	64	65	86	77	65
10	K (mg/L)	1.6	1.0	1.4	1.3	1.9	2.0	1.7	1.4	1.7	1.6	1.6	2.3	1.8	2.1	1.9
11	Mg (mg/L)	2.7	2.7	3.0	3.8	1.9	4.8	5.5	5.2	5.9	6.1	7.9	7.2	7.7	7.0	5.4
12	Na (mg/L)	4.8	12.8	3.3	7.9	7.8	5.0	6.7	5.3	3.9	5.4	4.1	7.9	10.6	9.5	8.1
13	NH3-N (mg N/L)	0.03	0.05	0.02	0.03	0.09	0.05	0.23	0.05	0.10	0.09	0.33	0.01	0.09	0.06	0.01
14	NO2+NO3 (mg N/L)	0.20	0.84	1.31	0.59	1.53	0.29	0.63	0.27	0.22	0.15	0.13	0.22	0.39	0.30	0.25
15	NO2-N (mgN/L)				0.01	0.04	0.00	0.00	0.16	0.01	0.02	0.01	0.00	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.20	0.84	0.02	0.58	1.49	0.29	0.63	0.11	0.21	0.13	0.13	0.22	0.39	0.29	0.24
17	o-PO4-P (mg P/L)	0.007	0.052	0.093	0.058	0.024			0.006	0.023	0.009	0.013	0.160	0.175	0.215	0.101
18	P-Tot (mgP/L)						0.027	0.207								
19	SiO2 (mg/L)	15.0	52.2	20.0	15.3	20.2	11.4	8.8	13.4	16.1	16.7	21.2	14.0	18.3	19.5	17.3
20	SO4 (mg/L)	0.2	2.4	2.3	2.4	1.2	1.0	1.0	0.0	0.6	1.0	1.0	11.8	6.6	11.8	9.6

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Pathagudem (AGG00B5)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.2	0.9	0.4	0.9	0.5	0.5	0.7	0.6	0.4	0.6	0.8	0.9	0.6	1.1	0.4
2	COD (mg/L)			1.0	12.7	28.8	30.8	17.0	5.1	1.6	2.5	7.9	16.8	7.0	10.1	17.2
3	DO (mg/L)	6.6	5.7	6.6	6.3	5.9	5.6	6.1	5.8	5.6	6.0	5.9	6.8	5.9	6.3	
4	DO_SAT% (%)	86	76	86	82	77	74	80	75	73	72	75	88	77	77	
5	FCol-MPN (MPN/100mL)	1215	537	2300	290	613	5867	4026	8010	6233	6140	7433	495	248	4214	1318
6	Tcol-MPN (MPN/100mL)	3340	8090	2300	570	613	6133	4686	8010	6600	8340	11467	1013	4308	7082	4833
7	TOC (mg/L)				5.3			0.9	1.8	2.8	2.8	1.7	1.3	0.3	1.3	1.8
	TRACE & TOXIC															
1	As (µg/L)				0.0								11.5			
2	Cd (µg/L)		3.7	1.0	0.0			0.0					0.8			
3	Cr (µg/L)		23.8	2.0	5.8			23.7					2.1			
4	Cu (µg/L)			4.7	0.6								0.6			
5	Hg (µg/L)							0.0								
6	Mn (mg/L)				0.01											
7	Ni (µg/L)							7.5					7.9			
8	Pb (µg/L)		1.0	3.0	5.5			10.8					5.3			
9	Se (µg/L)															
10	Zn (µg/L)				51.8			922.8					78.0			
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	39	36	27	35	51	38	24	25	37	26	30	26	36	33	28
2	HAR_Total (mgCaCO3/L)	51	47	39	51	59	58	47	47	62	52	63	56	68	62	51
3	Na% (%)	18	37	15	25	24	14	24	19	11	18	14	23	25	25	25
4	RSC (-)	0.2	0.2	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1
5	SAR (-)	0.3	1.0	0.2	0.5	0.5	0.3	0.4	0.3	0.2	0.3	0.2	0.5	0.6	0.5	0.5
	PESTICIDES															
1	Aldrin (µg/L)							0.0								
2	BHC (µg/L)							0.1								
3	DDT (µg/L)							0.1								
4	Dieldrin (µg/L)							0.0								
5	Endos (µg/L)							0.1								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Pathagudem (AGG00B5)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	38.62	24.30	299.0	106.4	142.8	85.68	112.4	50.73	30.61	180.5	46.93	80.61	342.4	141.1	50.65
2	EC_FLD (µmho/cm)															193
3	EC_GEN (µmho/cm)	149	139	131	136	165	184	163	152	145	142	319	219	132	134	334
4	pH_FLD (pH units)															7.1
5	pH_GEN (pH units)	8.3	8.2	8.1	7.9	8.2	8.3	8.0	8.2	8.3	8.2	8.1	8.0	8.0	7.8	7.7
6	TDS (mg/L)								107	99	103	233	131	96	89	83
7	Temp (deg C)	22.7	22.0	28.0	24.3	25.3	24.0	26.0	25.3	22.7	24.5	23.0	24.8	24.5	23.3	24.0
8	Turb (NTU)								1.9	1.1	6.3	0.0	1.0	10.0	2.8	1.1
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.3	0.0	0.0	2.0	5.0	1.6	2.0	1.5	2.6	1.4	2.7	0.0	0.0	0.0	2.6
2	ALK-TOT (mgCaCO3/L)	75	65	67	64	135	94	70	71	74	68	185	108	69	67	79
3	B (mg/L)	0.00	0.00	0.00	0.08	0.11	0.02	0.21	0.00	0.12	0.15	0.13	0.07	0.07	0.16	0.00
4	Ca (mg/L)	17	20	21	17	15	27	16	18	15	15	31	19	14	16	14
5	Cl (mg/L)	6.3	4.0	5.7	14.4	6.8	10.5	10.4	9.3	7.8	6.6	6.5	10.8	3.2	2.9	2.0
6	CO3 (mg/L)	1.5	0.0	0.0	2.4	6.0	1.9	2.4	1.8	3.2	1.6	3.3	0.0	0.0	0.0	3.2
7	F (mg/L)	0.33	0.18	0.36	0.18	0.21	0.09	0.18	0.15	0.26	0.09	0.85	0.34	0.07	0.12	0.06
8	Fe (mg/L)	0.0	0.0	0.1	0.0	0.1	0.0	0.2	0.4	0.2	0.3	0.2	0.0	0.3	0.1	0.0
9	HCO3 (mg/L)	88	79	82	74	76	111	81	83	83	80	219	132	84	82	90
10	K (mg/L)	1.1	0.5	0.9	1.7	1.2	1.1	1.2	1.0	1.2	1.6	1.6	0.9	1.7	1.5	1.4
11	Mg (mg/L)	4.9	3.9	3.3	2.7	6.5	5.1	6.2	6.1	8.5	8.0	15.8	10.7	7.6	7.8	6.8
12	Na (mg/L)	6.0	4.0	5.0	13.3	6.0	5.5	5.9	5.9	4.5	3.3	16.7	14.8	10.3	9.1	8.7
13	NH3-N (mg N/L)	0.01	0.05	0.14	0.04	0.07	0.05	0.14	0.07	0.11	0.12	0.17	0.01	0.04	0.06	0.01
14	NO2+NO3 (mg N/L)	0.17	0.05	0.11	0.55	0.24	0.19	0.40	0.12	0.10	0.16	0.26	0.46	0.12	0.06	0.32
15	NO2-N (mgN/L)				0.01	0.00	0.00	0.02	0.04	0.00	0.02	0.03	0.00	0.00	0.02	0.02
16	NO3-N (mgN/L)	0.17	0.01	0.14	0.53	0.24	0.19	0.39	0.09	0.10	0.14	0.23	0.46	0.12	0.04	0.29
17	o-PO4-P (mg P/L)	0.010	0.010	0.100	0.013	0.015			0.004	0.017	0.017	0.000	0.072	0.046	0.088	0.055
18	P-Tot (mgP/L)						0.003	0.241								
19	SiO2 (mg/L)	13.0	32.0	23.7	12.0	18.8	14.9	14.7	16.8	13.9	28.8	12.5	16.7	16.0	16.9	15.8
20	SO4 (mg/L)	0.3	1.0	0.7	0.0	1.0	1.0	1.0	0.0	1.7	1.0	4.2	3.2	7.8	7.4	3.7

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Pathagudem (AGG00B5)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.3	0.5	0.5	0.7	0.6	0.6	0.4	0.2	0.3	0.5	0.5	0.7	0.5	0.6	0.5
2	COD (mg/L)			17.4	32.3	13.0	14.8	21.8	1.6	2.1	2.0	6.4	9.5	5.1	2.5	2.0
3	DO (mg/L)	6.9	7.1	7.1	6.5	7.5	6.9	6.8	6.4	7.1	6.7	6.7	7.6	7.1	7.8	6.8
4	DO_SAT% (%)	80	81	91	78	91	81	84	78	82	79	78	91	85	91	79
5	FCol-MPN (MPN/100mL)	50	30	90	30	587	315	3425	1360	11233	8667	1310	69	765	193	720
6	Tcol-MPN (MPN/100mL)	12115	30	230	430	1040	465	5575	2388	11600	11333	1900	168	1700	303	11125
7	TOC (mg/L)				6.2			0.1	1.5	1.4	1.1	0.9	1.1	0.5	0.9	1.8
	TRACE & TOXIC															
1	As (µg/L)		1.0							0.2		0.2				
2	Cd (µg/L)		4.1	1.7	0.0				0.6	0.0	0.0	0.0			0.0	
3	Cr (µg/L)		2.0	2.0	0.0				0.0	0.0	0.2	1.3			3.4	
4	Cu (µg/L)			4.7	0.0							27.4			2.0	
5	Hg (µg/L)		0.0													
6	Mn (mg/L)				0.34											
7	Ni (µg/L)								1.2	0.2	0.0	0.0			2.0	
8	Pb (µg/L)		19.0	2.3	52.7				4.0	0.0	8.9	0.7			1.3	
9	Se (µg/L)															
10	Zn (µg/L)		7.2		0.0				56.1	0.0	15.3	8.4			13.0	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	43	50	53	42	38	68	39	44	39	37	76	48	35	40	36
2	HAR_Total (mgCaCO3/L)	63	66	66	54	65	89	65	70	74	70	142	92	66	72	64
3	Na% (%)	17	12	14	33	16	12	16	15	12	9	18	29	25	21	22
4	RSC (-)	0.2	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.0	0.0	0.9	0.5	0.1	0.0	0.3
5	SAR (-)	0.3	0.2	0.3	0.8	0.3	0.3	0.3	0.3	0.2	0.2	0.5	0.7	0.6	0.5	0.5
	PESTICIDES															
1	Aldrin (µg/L)								0.0	0.0	0.0	0.0				
2	BHC (µg/L)								0.0	0.1	0.0	0.0				
3	DDT (µg/L)								0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)								0.0	0.1	0.0	0.0				
5	Endos (µg/L)								0.1	0.1	0.4	0.0				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Pathagudem (AGG00B5)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	6.547	3.377	14.16	9.773	10.08	11.52	12.63	2.491	2.167	13.59	2.300	10.85	15.94	13.68	4.735
2	EC_FLD (µmho/cm)															293
3	EC_GEN (µmho/cm)	171	170	180	157	201	193	205	181	168	146	176	260	165	156	236
4	pH_FLD (pH units)															6.8
5	pH_GEN (pH units)	8.4	8.2	8.3	8.2	8.3	8.4	8.1	8.3	8.6	8.5	8.1	8.2	8.0	7.5	8.6
6	TDS (mg/L)								123	116	125	135	202	108	108	122
7	Temp (deg C)	27.7	29.0	28.3	29.0	29.0	25.0		27.0	27.5	26.3	25.0	24.7	23.0	22.3	28.3
8	Turb (NTU)								0.1	0.6	1.0	0.0	0.6	2.0	2.7	1.4
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.9	3.0	2.0	4.2	4.5	0.7	0.0	9.3	8.8	6.0	0.0	1.4	0.0	0.0	4.3
2	ALK-TOT (mgCaCO3/L)	87	83	96	84	169	95	83	85	89	71	84	122	74	62	81
3	B (mg/L)	0.00	0.00	0.04	0.09	0.09	0.02	0.19	0.11	0.01	0.12	0.02	0.20	0.09	0.01	
4	Ca (mg/L)	22	22	29	16	18	22	16	20	16	16	15	20	17	15	17
5	Cl (mg/L)	6.0	20.5	12.3	9.2	8.7	14.7	11.3	8.2	10.2	7.4	4.5	5.6	2.7	3.2	2.5
6	CO3 (mg/L)	2.3	3.6	2.4	5.0	5.4	0.8	0.0	11.2	10.6	7.2	0.0	1.7	0.0	0.0	5.2
7	F (mg/L)	0.37	0.41	0.24	0.32	0.20	0.14	0.12	0.36	0.15	0.15	0.37	0.33	0.04	0.18	0.05
8	Fe (mg/L)	0.0		0.0	0.1	0.1	0.1	0.3	0.2	0.2	0.6	0.2	0.2	0.4	0.4	0.0
9	HCO3 (mg/L)	101	94	112	93	98	114	101	81	87	72	103	146	90	76	88
10	K (mg/L)	1.4	0.8	1.5	1.9	1.3	0.8	1.7	1.4	1.8	1.5	2.1	2.0	1.7	1.8	1.3
11	Mg (mg/L)	3.2	6.9	4.8	5.2	8.1	9.7	8.3	7.9	8.9	6.3	8.1	10.9	8.6	8.0	8.3
12	Na (mg/L)	12.0	7.0	8.5	10.0	5.7	7.4	10.3	6.3	7.9	5.3	9.2	16.2	10.0	11.7	9.2
13	NH3-N (mg N/L)	0.02	0.06	0.14	0.08	0.06	0.05	0.20	0.22	0.22	0.22	0.04	0.04	0.07	0.01	0.05
14	NO2+NO3 (mg N/L)	0.16	0.25	0.32	0.12	0.35	0.31	0.19	0.24	0.03	0.15	0.11	0.74	0.06	0.20	0.44
15	NO2-N (mgN/L)				0.01	0.00	0.04	0.01	0.02	0.01	0.01	0.02	0.00	0.00	0.02	0.02
16	NO3-N (mgN/L)	0.16	0.25	0.36	0.11	0.35	0.27	0.19	0.22	0.02	0.14	0.09	0.74	0.06	0.18	0.43
17	o-PO4-P (mg P/L)	0.000	0.010	0.004	0.012	0.013			0.012	0.082	0.012	0.006	0.058	0.001	0.163	0.101
18	P-Tot (mgP/L)						0.128	0.284								
19	SiO2 (mg/L)	11.3	11.0	16.0	9.0	15.3	17.3	12.0	17.1	14.8	28.0	12.8	17.4	15.1	16.1	20.5
20	SO4 (mg/L)	0.0	1.0	4.7	0.0	1.0	1.0	1.0	0.4	0.0	1.0	2.6	1.9	9.8	17.1	2.8

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Pathagudem (AGG00B5)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.9	1.0	0.7	0.5	0.3	0.9	0.7	0.7	0.9	0.6	0.7	0.6	0.9	0.5	0.9
2	COD (mg/L)			19.0	16.1	52.7	17.7	8.3	5.6	3.9	2.0	3.6	3.3	4.9	2.7	3.3
3	DO (mg/L)	6.0	6.2	5.9	6.4	6.3	5.5	6.2	6.3	6.8	6.4	5.8	6.1	6.4	6.2	5.5
4	DO_SAT% (%)	77	80	76	83	82	67		79	85	79	69	72	75	71	69
5	FCol-MPN (MPN/100mL)	30		40	30	8400	813	510	457	8020	5420	287	268	45	15	5823
6	Tcol-MPN (MPN/100mL)	30		70	30	8700	813	777	557	8020	5483	407	468	91	5910	6900
7	TOC (mg/L)				5.4			1.0	2.2	1.9	1.0	1.4	1.5	1.7	1.9	
	TRACE & TOXIC															
1	As (µg/L)		1.0	0.0								0.5	6.1	1.2	0.1	0.0
2	Cd (µg/L)		2.6	2.0	0.0	0.0	3.0	0.0	1.7		0.0	0.1	0.8	0.0	1.0	0.0
3	Cr (µg/L)		20.2	6.0	0.0	3.0	2.0	0.0	0.0		0.0	0.4	0.5	0.4	0.0	0.0
4	Cu (µg/L)			1.6	0.0							6.0	0.3	3.5		
5	Hg (µg/L)		0.3				0.0	1.0				0.0	0.5	0.2	0.0	0.0
6	Mn (mg/L)			0.01	0.00											
7	Ni (µg/L)					1.0	1.0	4.3	0.0		0.0	0.4	1.9	7.5	2.6	0.0
8	Pb (µg/L)		33.0	15.4	0.0	60.0	1.0	11.5	11.0		7.7	1.9	4.7	0.5	9.0	0.0
9	Se (µg/L)		2.0													
10	Zn (µg/L)		15.5	0.0	3.0	162.0	16.0	65.9	15.1		6.7	6.3	2.6	4.0	2.0	3.7
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	55	56	71	39	46	55	39	50	41	41	37	51	41	39	42
2	HAR_Total (mgCaCO3/L)	68	85	91	61	80	95	74	83	78	67	71	97	77	72	76
3	Na% (%)	27	15	17	26	13	14	23	14	18	14	21	26	21	25	20
4	RSC (-)	0.4	0.0	0.1	0.5	0.2	0.1	0.2	0.1	0.2	0.1	0.3	0.5	0.1	0.0	0.1
5	SAR (-)	0.6	0.3	0.4	0.6	0.3	0.3	0.5	0.3	0.4	0.3	0.5	0.7	0.5	0.6	0.5
	PESTICIDES															
1	Aldrin (µg/L)						0.0	0.0	0.0		0.0	0.0				
2	BHC (µg/L)					0.1	0.1	0.0	0.0		0.3	0.0				
3	DDT (µg/L)						0.1	0.0	0.0		0.0	0.0				
4	Dieldrin (µg/L)					0.0	0.0	0.0	0.0		0.0	0.0				
5	Endos (µg/L)					0.1	0.1	0.0	0.0		0.0	0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Jagdalpur	Code	: AGG00R9
State	: Chhattisgarh	District	Bastar
Basin	: Godavari	Independent River	: Godavari
Tributary	: Indravathi	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Indravathi
Division	: Lower Godavari Div., Hyderabad	Sub-Division	: Indravati SD, Jagdalpur
Drainage Area	: 7380 Sq. Km.	Bank	: Left
Latitude	: 19°06'30"	Longitude	: 82°01'30"
	Opening Date	Closing Date	
Gauge	: 04.08.1964		
Discharge	: 21.09.1965		
Sediment	: 21.09.1965		
Water Quality	: 01.12.1979		

Water Quality Datasheet for the period : 2015-2016

Station Name : Jagdalpur (AGG00R9)
Local River : Indravathi

River Water Analysis

Division : Lower Godavari Div., Hyderabad
Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	01.07.2015	01.09.2015	01.10.2015
		A	A	A
	PHYSICAL			
1	Q (cumec)	99.12	401.4	80.76
2	Colour_Cod (-)	Brown	Clear	Clear
3	EC_GEN (µmho/cm)	116	69	141
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	7.0	7.0	7.6
6	TDS (mg/L)	64	164	102
7	Temp (deg C)	25.0	23.0	26.0
8	Turb (NTU)	690.0	203.0	19.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	56	63	66
3	B (mg/L)	0.00	0.00	0.00
4	Ca (mg/L)	12	18	14
5	Cl (mg/L)	3.7	2.4	2.0
6	CO3 (mg/L)	0.0	0.0	0.0
7	F (mg/L)	0.01	0.01	0.27
8	Fe (mg/L)	0.1	0.1	0.0
9	HCO3 (mg/L)	68	77	81
10	K (mg/L)	2.3	1.9	1.9
11	Mg (mg/L)	5.8	5.6	6.3
12	Na (mg/L)	8.2	4.4	9.6
13	NH3-N (mg N/L)	0.01	0.01	0.01
14	NO2+NO3 (mg N/L)	0.66	0.41	0.40
15	NO2-N (mgN/L)	0.02	0.00	0.01
16	NO3-N (mgN/L)	0.64	0.40	0.40
17	o-PO4-P (mg P/L)	0.220	0.069	0.191
18	SiO2 (mg/L)	10.2	12.4	17.8
19	SO4 (mg/L)	17.6	11.4	0.6

Water Quality Datasheet for the period : 2015-2016

Station Name : Jagdalpur (AGG00R9)
Local River : Indravathi

Division : Lower Godavari Div., Hyderabad
Sub-Division : Indravati SD, Jagdalpur

River Water Analysis

S.No	Parameters	01.07.2015	01.09.2015	01.10.2015
		A	A	A
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	0.7	0.3	2.5
2	COD (mg/L)	2.4	3.7	6.4
3	FCol-MPN (MPN/100mL)	5000	5000	1300
4	Tcol-MPN (MPN/100mL)	16000	16000	2200
5	TOC (mg/L)	1.7	1.4	2.1
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	30	44	34
2	HAR_Total (mgCaCO3/L)	54	67	60
3	Na% (%)	24	12	25
4	RSC (-)	0.0	0.0	0.1
5	SAR (-)	0.5	0.2	0.5
	PESTICIDES			

Water Quality Summary for the period : 2015-2016

Station Name : Jagdalpur (AGG00R9)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

Sub-Division : Indravati SD, Jagdalpur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	2851	0.000	70.12
2	EC_GEN (µmho/cm)	3	141	69	109
3	pH_GEN (pH units)	3	7.6	7.0	7.2
4	TDS (mg/L)	3	164	64	110
5	Temp (deg C)	3	26.0	23.0	24.7
6	Turb (NTU)	3	690.0	19.0	304
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	3	66	56	62
3	B (mg/L)	3	0.00	0.00	0
4	Ca (mg/L)	3	18	12	14
5	Cl (mg/L)	3	3.7	2.0	2.7
6	CO3 (mg/L)	3	0.0	0.0	0
7	F (mg/L)	3	0.27	0.01	0.1
8	Fe (mg/L)	3	0.1	0.0	0.1
9	HCO3 (mg/L)	3	81	68	75
10	K (mg/L)	3	2.3	1.9	2
11	Mg (mg/L)	3	6.3	5.6	5.9
12	Na (mg/L)	3	9.6	4.4	7.4
13	NH3-N (mg N/L)	3	0.01	0.01	0.01
14	NO2+NO3 (mg N/L)	3	0.66	0.40	0.49
15	NO2-N (mgN/L)	3	0.02	0.00	0.01
16	NO3-N (mgN/L)	3	0.64	0.40	0.48
17	o-PO4-P (mg P/L)	3	0.220	0.069	0.16
18	SiO2 (mg/L)	3	17.8	10.2	13.5
19	SO4 (mg/L)	3	17.6	0.6	9.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3	2.5	0.3	1.2
2	COD (mg/L)	3	6.4	2.4	4.2
3	FCol-MPN (MPN/100mL)	3	5000	1300	3767
4	Tcol-MPN (MPN/100mL)	3	16000	2200	11400
5	TOC (mg/L)	3	2.1	1.4	1.7
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	44	30	36
2	HAR_Total (mgCaCO3/L)	3	67	54	61
3	Na% (%)	3	25	12	20
4	RSC (-)	3	0.1	0.0	0.1
5	SAR (-)	3	0.5	0.2	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Jagdalpur (AGG00R9)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	84.41	104.4	113.7	74.71	39.79	389.2	167.7	234.5	67.75	111.5	194.3	122.4	264.4	168.4	193.8
2	EC_GEN (µmho/cm)	143	144	147	152	181	159	157	149	147	146	195	335	113	97	109
3	pH_GEN (pH units)	7.8	7.9	7.7	7.8	7.8	7.7	8.0	8.0	7.6	7.8	8.2	7.7	7.6	7.6	7.2
4	TDS (mg/L)								95	92	112	116	272	71	73	110
5	Temp (deg C)	26.0	26.5	24.6	25.5	25.5	26.3	25.7	26.0	24.8	25.5	26.0	25.3	25.8	25.5	24.7
6	Turb (NTU)								34.9	77.6	52.7	0.3	28.0	42.6	257.5	304.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.1	0.7	0.0	0.0	2.8	0.0	1.2	0.0	0.0	0.0	2.7	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	66	68	76	65	74	73	60	63	57	66	89	57	53	46	62
3	B (mg/L)	0.02	0.05	0.03	0.10	0.06	0.07	0.09	0.01	0.17	0.07	0.14	0.16	0.04	0.16	0.00
4	Ca (mg/L)	19	19	21	19	21	19	14	13	13	16	20	14	14	11	14
5	Cl (mg/L)	5.2	12.8	12.0	9.3	8.4	8.0	12.2	8.0	8.4	9.5	7.6	5.1	4.3	10.4	2.7
6	CO3 (mg/L)	2.5	0.8	0.0	0.0	3.4	0.0	1.4	0.0	0.0	0.0	3.2	0.0	0.0	0.0	0.0
7	F (mg/L)	0.26	0.74	0.47	0.25	0.30	0.16	0.29	0.27	0.27	0.13	0.21	0.12	0.11	0.07	0.10
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.1	0.5	0.2	0.4	0.2	0.3	0.2	0.4	0.2	0.3	0.1
9	HCO3 (mg/L)	75	82	93	79	83	89	71	77	69	81	101	70	65	57	75
10	K (mg/L)	1.5	1.4	1.1	1.6	1.7	2.0	1.7	1.1	1.6	1.9	1.6	2.1	1.9	2.4	2.0
11	Mg (mg/L)	3.1	4.0	6.9	4.6	3.3	5.2	6.0	7.7	8.1	6.4	9.7	8.3	6.4	6.0	5.9
12	Na (mg/L)	4.4	15.0	4.8	4.5	9.0	5.0	10.0	5.5	4.8	5.2	5.0	9.0	9.0	9.3	7.4
13	NH3-N (mg N/L)	0.01	0.04	0.01	0.04	0.06	0.05	0.22	0.09	0.15	0.08	0.23	0.02	0.07	0.04	0.01
14	NO2+NO3 (mg N/L)	0.49	0.95	0.28	0.63	0.59	0.77	1.37	0.75	0.66	0.44	0.29	0.41	0.69	1.08	0.49
15	NO2-N (mgN/L)				0.02	0.05	0.02	0.02	0.15	0.04	0.03	0.03	0.00	0.00	0.01	0.01
16	NO3-N (mgN/L)	0.49	0.95	0.28	0.62	0.54	0.75	1.35	0.59	0.61	0.41	0.26	0.41	0.69	1.07	0.48
17	o-PO4-P (mg P/L)	0.030	0.006	0.026	0.036	0.025			0.004	0.018	0.019	0.016	0.210	0.108	0.207	0.160
18	P-Tot (mgP/L)						0.040	0.022								
19	SiO2 (mg/L)	10.7	11.6	17.4	14.0	17.6	12.4	9.2	8.8	11.0	13.3	18.0	10.4	14.1	16.4	13.5
20	SO4 (mg/L)	0.4	13.8	4.8	1.3	5.2	3.5	1.0	1.0	3.5	2.2	1.1	15.1	14.5	16.3	9.9

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Jagdalpur (AGG00R9)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.5	0.2	1.1	1.0	0.7	0.6	0.6	0.7	0.5	0.8	0.9	1.0	0.9	1.2	1.2
2	COD (mg/L)			85.3	31.3	24.9	27.3	24.4	5.9	2.9	5.3	3.9	14.0	11.9	18.6	4.2
3	DO (mg/L)	6.5	5.5	5.8	6.4	6.4	5.8	6.0	5.5	5.7	5.5	6.1	6.1	6.2	6.4	
4	DO_SAT% (%)	79	68	69	78	77	72	74	68	68	67	75	74	76	78	
5	FCol-MPN (MPN/100mL)	150	1187	2400	1500	1010	6575	7740	8650	7526	7660	11467	5250	6800	5000	3767
6	Tcol-MPN (MPN/100mL)	6250	5167	4600	4600	1600	8800	8360	8850	11200	8580	11667	9350	12550	6450	11400
7	TOC (mg/L)				5.7			0.7	1.6	1.4	1.9	1.0	1.1	0.4	1.4	1.7
	TRACE & TOXIC															
1	As (µg/L)				0.0								13.4	2.1		
2	Cd (µg/L)		4.5	1.3	0.0			0.0					0.0	0.1		
3	Cr (µg/L)		77.5	3.1	7.0			35.1					9.0	3.2		
4	Cu (µg/L)			3.8	1.2								1.5	4.3		
5	Hg (µg/L)							0.0						0.3		
6	Mn (mg/L)				0.02											
7	Ni (µg/L)							9.1					2.5	11.4		
8	Pb (µg/L)		1.0	12.2	7.0			12.5					5.2	0.4		
9	Se (µg/L)															
10	Zn (µg/L)				18.8			769.0					19.1	1.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	47	48	53	46	52	48	35	33	33	41	49	34	35	28	36
2	HAR_Total (mgCaCO3/L)	60	65	82	65	66	69	60	64	67	67	90	68	61	53	61
3	Na% (%)	15	29	13	13	24	14	28	15	14	15	13	20	23	27	20
4	RSC (-)	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.1
5	SAR (-)	0.3	0.8	0.2	0.3	0.5	0.3	0.7	0.3	0.3	0.3	0.2	0.5	0.5	0.6	0.4
	PESTICIDES															
1	Aldrin (µg/L)							0.0								
2	BHC (µg/L)							0.1								
3	DDT (µg/L)							0.1								
4	Dieldrin (µg/L)							0.0								
5	Endos (µg/L)							0.1								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Jagdalpur (AGG00R9)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	3.945	3.420	19.89	8.307	22.20	12.12	8.852	5.807	5.849	16.74	4.888	3.263	23.01	10.65	
2	EC_GEN (µmho/cm)	282	293	207	237	275	283	299	298	276	269	283	290	199	199	
3	pH_GEN (pH units)	8.4	8.3	8.0	8.3	7.9	8.3	8.0	8.3	8.4	8.3	8.2	7.9	7.9	7.6	
4	TDS (mg/L)								191	162	157	182	184	120	170	
5	Temp (deg C)	18.5	20.5	20.8	19.0	19.8	23.2	19.9	20.9	20.5	20.4	21.7	20.3	20.8	19.8	
6	Turb (NTU)								1.7	1.2	13.5	0.0	2.5	5.5	3.6	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	7.1	1.7	1.0	8.7	3.9	4.9	1.0	2.0	10.3	7.2	0.0	0.0	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	159	122	108	141	121	131	133	147	147	120	155	158	123	140	
3	B (mg/L)	0.00	0.00	0.05	0.06	0.19	0.04	0.24	0.07	0.14	0.15	0.09	0.11	0.04	0.15	
4	Ca (mg/L)	47	40	32	34	36	34	31	38	35	24	31	33	27	28	
5	Cl (mg/L)	5.3	6.0	7.0	15.1	9.5	19.0	12.6	10.2	8.0	9.9	4.3	6.9	8.5	5.7	
6	CO3 (mg/L)	8.5	2.0	1.2	10.5	4.7	5.9	1.2	2.3	12.4	8.6	0.0	0.0	0.0	0.0	
7	F (mg/L)	0.36	0.08	0.37	0.15	0.23	0.11	0.12	0.24	0.27	0.15	0.41	0.28	0.15	0.14	
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.1	
9	HCO3 (mg/L)	176	145	129	150	138	148	160	175	154	129	190	193	150	171	
10	K (mg/L)	1.6	0.8	1.4	2.0	1.8	1.4	1.3	1.7	1.6	1.8	1.7	1.2	1.7	2.1	
11	Mg (mg/L)	6.6	12.6	5.3	7.5	9.2	12.0	13.8	13.4	13.3	13.3	15.3	18.5	15.0	12.4	
12	Na (mg/L)	5.3	4.0	6.3	10.4	5.0	5.8	6.1	6.1	5.1	6.0	8.0	9.7	10.4	8.4	
13	NH3-N (mg N/L)	0.03	0.07	0.12	0.04	0.08	0.05	0.16	0.26	0.06	0.11	0.15	0.02	0.00	0.01	
14	NO2+NO3 (mg N/L)	0.01	0.16	0.25	0.32	0.38	0.28	0.70	0.15	0.15	0.25	0.21	1.01	0.21	0.29	
15	NO2-N (mgN/L)				0.02	0.01	0.00	0.04	0.03	0.01	0.02	0.03	0.00	0.00	0.00	
16	NO3-N (mgN/L)	0.01	0.16	0.25	0.30	0.37	0.28	0.66	0.12	0.14	0.23	0.19	1.01	0.21	0.29	
17	o-PO4-P (mg P/L)	0.040	0.000	0.022	0.010	0.009			0.004	0.032	0.020	0.071	0.076	0.078	0.069	
18	P-Tot (mgP/L)						0.003	0.154								
19	SiO2 (mg/L)	11.9	15.0	17.8	17.0	19.3	14.6	16.4	17.3	15.9	27.5	13.8	17.7	12.2	14.6	
20	SO4 (mg/L)	0.7	36.5	0.8	0.0	0.0	1.0	1.0	0.3	0.0	1.3	3.1	3.3	4.6	2.4	

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Jagdalpur (AGG00R9)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.8	0.7	0.4	0.9	0.7	1.4	0.4	0.4	1.1	0.9	0.6	1.6	0.8	0.9	
2	COD (mg/L)			42.2	49.7	21.7	14.3	14.4	3.2	9.0	3.3	3.7	9.9	3.5	3.1	
3	DO (mg/L)	6.9	6.8	6.9	7.3	7.8	7.2	6.9	6.2	7.6	7.0	7.1	7.6	7.1	8.3	
4	DO_SAT% (%)	73	76	77	78	85	80	76	69	84	77	80	84	78	90	
5	FCol-MPN (MPN/100mL)	825	930	150	160	7177	3700	2110	1095	12500	16000	5810	716	4178	155	
6	Tcol-MPN (MPN/100mL)	5950	1500	200	2335	13667	4000	2768	1230	16000	16000	6210	2793	4290	4650	
7	TOC (mg/L)				3.9			0.8	1.4	1.0	0.9	0.8	0.6	1.2	2.5	
	TRACE & TOXIC															
1	As (µg/L)		1.0							0.1		0.0				
2	Cd (µg/L)		5.2	2.3	0.0		1.0		1.0	0.0	0.0	0.0			0.0	
3	Cr (µg/L)		3.3	2.0	0.0		19.0		0.0	0.0	0.0	0.2			2.5	
4	Cu (µg/L)			4.0	0.0							6.9			1.5	
5	Hg (µg/L)		0.0				0.0									
6	Mn (mg/L)				0.01											
7	Ni (µg/L)						1.0		0.7	0.7	0.0	1.1			0.1	
8	Pb (µg/L)		19.5	28.7	52.3		1.0		7.0	0.0	10.5	0.6			19.4	
9	Se (µg/L)		2.0													
10	Zn (µg/L)				0.0		200.0		14.8	1.2	20.0	24.0			4.0	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	118	100	79	86	89	86	77	94	86	59	78	82	67	70	
2	HAR_Total (mgCaCO3/L)	146	152	101	117	127	136	134	150	142	114	142	159	130	122	
3	Na% (%)	7	5	12	16	8	9	9	8	7	10	11	12	16	13	
4	RSC (-)	0.3	0.0	0.2	0.5	0.1	0.1	0.0	0.0	0.1	0.1	0.3	0.0	0.0	0.4	
5	SAR (-)	0.2	0.1	0.3	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.4	0.3	
	PESTICIDES															
1	Aldrin (µg/L)						0.0		0.0	0.0	0.0	0.0				
2	BHC (µg/L)						0.1		0.0	0.2	0.0	0.0				
3	DDT (µg/L)						0.1		0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)						0.0		0.0	0.1	0.0	0.0				
5	Endos (µg/L)						0.1		0.0	0.0	0.0	0.2				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Jagdalpur (AGG00R9)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	2.537	2.617	3.068	3.502	2.774	2.791	4.447	1.792	3.140	6.608	0.744	0.000	0.000		
2	EC_GEN (µmho/cm)	277	255	228	269	333	293	288	284	258	216	299	320	324		
3	pH_GEN (pH units)	8.3	8.3	8.3	8.1	8.1	8.4	8.0	8.3	8.1	8.1	8.1	8.1	8.1		
4	TDS (mg/L)								181	159	162	220	212	204		
5	Temp (deg C)	25.0	24.5	25.8	24.3	27.0	23.7	21.8	24.5	25.0	23.3	24.3	25.0	19.0		
6	Turb (NTU)								0.3	0.6	1.0	0.0	0.9	0.1		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	3.8	3.7	5.8	0.0	0.0	2.6	0.0	7.5	2.9	0.0	0.0	0.0	0.0		
2	ALK-TOT (mgCaCO3/L)	151	130	113	143	163	144	136	140	133	108	139	172	157		
3	B (mg/L)	0.00	0.00	0.09	0.09	0.07	0.08	0.15	0.16	0.05	0.12	0.03	0.20	0.25		
4	Ca (mg/L)	49	33	27	43	30	34	25	33	30	25	26	35	35		
5	Cl (mg/L)	6.3	16.0	8.7	12.4	9.3	14.3	12.7	8.9	7.5	11.3	6.7	5.5	5.4		
6	CO3 (mg/L)	4.6	4.4	7.0	0.0	0.0	3.2	0.0	9.0	3.5	0.0	0.0	0.0	0.0		
7	F (mg/L)	0.44	0.36	0.23	0.37	0.22	0.16	0.19	0.20	0.19	0.14	0.34	0.41	0.17		
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.0	0.3	0.3	0.2	0.2	0.6	0.2	0.2	0.1		
9	HCO3 (mg/L)	175	150	124	174	199	169	166	153	155	132	169	210	192		
10	K (mg/L)	1.8	1.1	1.4	2.1	1.9	1.3	1.7	2.0	1.8	2.0	2.5	2.0	1.8		
11	Mg (mg/L)	3.7	13.1	9.5	5.5	15.4	16.5	14.3	15.0	13.6	10.3	14.4	19.9	20.4		
12	Na (mg/L)	10.7	4.5	5.0	6.3	5.3	5.6	7.1	5.2	5.6	7.9	6.3	14.1	12.5		
13	NH3-N (mg N/L)	0.18	0.04	0.22	0.12	0.05	0.05	0.29	0.14	0.21	0.18	0.05	0.01	0.00		
14	NO2+NO3 (mg N/L)	0.10	0.11	0.23	0.09	0.29	0.23	0.27	0.17	0.03	0.20	0.19	0.70	0.10		
15	NO2-N (mgN/L)				0.01	0.05	0.01	0.01	0.02	0.01	0.01	0.03	0.00	0.00		
16	NO3-N (mgN/L)	0.10	0.11	0.23	0.08	0.25	0.21	0.26	0.15	0.02	0.19	0.16	0.70	0.10		
17	o-PO4-P (mg P/L)	0.000	0.010	0.005	0.334	0.007			0.022	0.071	0.020	0.020	0.049	0.001		
18	P-Tot (mgP/L)						0.147	0.273								
19	SiO2 (mg/L)	10.4	10.0	13.0	9.0	14.3	14.2	10.7	15.9	13.3	29.7	11.2	14.5	15.5		
20	SO4 (mg/L)	0.0	0.0	0.8	1.3	0.0	1.0	1.3	0.7	0.1	1.2	2.4	1.0	5.3		

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Jagdalpur (AGG00R9)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.8	1.4	1.0	0.3	1.1	1.4	0.5	0.9	0.9	0.8	1.6	0.5	0.7		
2	COD (mg/L)			20.5	22.0	40.0	30.7	5.7	3.2	3.4	2.6	7.5	3.2	4.0		
3	DO (mg/L)	6.3	7.0	6.2	6.2	5.0	6.3	5.5	6.3	5.7	5.9	5.8	6.4	7.3		
4	DO_SAT% (%)	76	85	76	74	63	73	70	75	69	69	69	77	79		
5	FCol-MPN (MPN/100mL)	140	11000	11000	24000	5700	8410	3267	3843	16000	7800	920	230	800		
6	Tcol-MPN (MPN/100mL)	750	24000	24000	24000	9200	10767	4133	6177	16000	9333	1933	1700	2200		
7	TOC (mg/L)				3.2			0.9	1.0	1.3	1.1	1.1	0.8	0.8		
	TRACE & TOXIC															
1	As (µg/L)		1.0	0.0								0.7	10.0			
2	Cd (µg/L)		3.3	1.8	0.0	0.0	3.0	0.0	1.4		0.0	0.1	0.0			
3	Cr (µg/L)		12.6	4.3	0.0	2.0	8.0	0.0	0.0		0.0	0.5	0.2			
4	Cu (µg/L)			3.1	0.0							5.8	0.1			
5	Hg (µg/L)		0.0				0.1	3.0				0.0	0.0			
6	Mn (mg/L)			0.00	0.00											
7	Ni (µg/L)					27.0	1.0	5.6	73.0		0.0	2.3	20.8			
8	Pb (µg/L)		41.0	17.0	20.0	66.0	14.0	14.2	9.0		12.9	3.3	3.2			
9	Se (µg/L)		2.0													
10	Zn (µg/L)		14.9	27.0	49.0	32.0	14.0	16.3	55.5		3.5	11.0	1.1			
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	123	81	67	107	75	86	62	82	75	63	64	88	88		
2	HAR_Total (mgCaCO3/L)	138	135	106	130	138	155	121	144	132	106	124	171	173		
3	Na% (%)	14	7	9	9	8	7	11	7	8	13	10	15	14		
4	RSC (-)	0.2	0.1	0.2	0.3	0.5	0.1	0.3	0.0	0.1	0.1	0.3	0.0	0.0		
5	SAR (-)	0.4	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.5	0.4		
	PESTICIDES															
1	Aldrin (µg/L)					0.0	0.0	0.0	0.0		0.0	0.0				
2	BHC (µg/L)					0.0	0.1	0.0	0.0		0.0	0.0				
3	DDT (µg/L)					0.0	0.1	0.0	0.0		0.0	0.0				
4	Dieldrin (µg/L)					0.0	0.1	0.0	0.0		0.1	0.0				
5	Endos (µg/L)					0.0	0.1	0.0	0.0		0.1	0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Nowrangpur	Code	: AGG00U7
State	: Orissa	District	Nowrangpur
Basin	: Godavari	Independent River	: Godavari
Tributary	: Indravathi	Sub Tributary	: --'
Sub-Sub Tributary	: --'	Local River	: Indravathi
Division	: L Godavari Div., Hyderabad	Sub-Division	: Indravathi S D, Jagdalpur
Drainage Area	: 3545 Sq. Km.	Bank	: Right
Latitude	: 19°12'00"	Longitude	: 82°31'00"
	Opening Date	Closing Date	
Gauge	: 24.06.1965		
Discharge	: 20.06.1971		
Sediment	: 21.06.1971		
Water Quality	: 01.01.1972		

Water Quality Datasheet for the period : 2015-2016

Station Name : Nowrangpur (AGG00U7)

Local River : Indravathi

River Water Analysis

Division : L Godavari Div., Hyderabad

Sub-Division : Indravathi S D, Jagdalpur

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	03.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	1.846	13.01	7.632	158.7	29.81	8.419	5.676	4.960	3.429	2.643	2.845	1.784
2	Colour_Cod (-)	Clear	Light Brown	Brown	Brown	Clear	Clear	Brown	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)		141	138					126		186	110	128
4	EC_GEN (μmho/cm)	120	84	171	60	133	113	209	118	781	131	215	163
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)								6.3		7.4	6.1	6.5
7	pH_GEN (pH units)	7.3	7.2	7.8	7.4	7.8	7.3	6.7	8.1	8.6	7.8	8.2	7.2
8	TDS (mg/L)	72	60	128	218	84	80	99	93	66	91	69	73
9	Temp (deg C)	27.0	25.0	31.8	30.8	28.0	20.0	26.9	21.0	16.0	25.0	28.0	32.0
10	Turb (NTU)	4.0	916.0	63.0	218.0	31.0	9.0	7.0	2.0	24.0	12.0	15.0	13.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	48	49	55	29	52	60	65	57	72	50	51	47
3	B (mg/L)	0.45	0.00	0.12	0.00	0.00	0.00	0.00					
4	Ca (mg/L)	8	6	12	7	11	12	12	11	13	10	10	10
5	Cl (mg/L)	2.1	2.1	3.2	1.9	1.2	2.2	10.2	2.0	3.1	2.9	3.1	0.6
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0
7	F (mg/L)	0.11	0.01	0.11	0.01	0.23	0.01	0.01	0.01	0.04	0.01	0.08	0.01
8	Fe (mg/L)	0.0	0.5	0.1	0.2	0.2	0.0	0.0	0.1	0.1	0.0	0.1	0.0
9	HCO3 (mg/L)	59	60	67	35	63	73	79	70	76	61	62	57
10	K (mg/L)	1.9	2.3	1.9	2.7	1.7	1.2	1.6	1.6	1.2	1.2	1.5	1.6
11	Mg (mg/L)	3.9	2.9	5.8	2.4	4.8	5.6	6.0	5.0	5.0	7.0	4.0	4.0
12	Na (mg/L)	9.0	10.1	8.3	11.5	9.9	15.2	6.7	6.6	8.3	6.4	4.1	4.3
13	NH3-N (mg N/L)	0.01	0.02	0.01	0.01	0.01	0.11	0.01	0.01	0.01	0.02	0.03	0.02
14	NO2+NO3 (mg N/L)	0.08	0.52	0.56	0.53	0.36	0.43	0.49	0.79	0.42	0.82	0.83	0.34
15	NO2-N (mgN/L)	0.00	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.07	0.01	0.05
16	NO3-N (mgN/L)	0.08	0.51	0.55	0.52	0.36	0.42	0.49	0.79	0.41	0.75	0.82	0.29
17	o-PO4-P (mg P/L)	0.150	0.230	0.208	0.327	0.194	0.113	0.039	0.053	0.092	0.133	0.720	0.080
18	SiO2 (mg/L)	18.5	12.1	10.5	12.9	19.5	16.0	15.4	16.5	13.9	18.4	16.0	16.5
19	SO4 (mg/L)	4.8	5.6	8.7	17.8	5.5	10.3	0.0	5.1	4.7	3.8	1.9	6.3

Water Quality Datasheet for the period : 2015-2016

Station Name : Nowrangpur (AGG00U7)

Division : L Godavari Div., Hyderabad

Local River : Indravathi

River Water Analysis

Sub-Division : Indravathi S D, Jagdalpur

S.No	Parameters	01.06.2015	01.07.2015	01.08.2015	01.09.2015	01.10.2015	03.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.4	1.2	0.6	1.8	1.2	0.2	0.3	1.2	0.6	1.1	0.6	1.1
2	COD (mg/L)	5.0	10.6	0.4	4.0	6.8	1.6	10.1	2.4	0.8	1.6	2.0	3.2
3	DO (mg/L)								8.2		8.1	7.6	8.3
4	DO_SAT% (%)								92		98	97	114
5	FCol-MPN (MPN/100mL)	20	9000	110	1700	1300	3000	1100	70	330	260	1700	9000
6	Tcol-MPN (MPN/100mL)	220	16000	1300	9000	1700	9000	5000	16000	1700	16000	2800	16000
7	TOC (mg/L)	1.1	1.7	1.1	1.5	1.3	2.4	1.3	1.6				
	TRACE & TOXIC												
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	20	16	30	18	28	30	30	28	33	25	25	25
2	HAR_Total (mgCaCO3/L)	36	28	54	28	48	53	55	48	53	54	42	42
3	Na% (%)	34	42	24	44	30	38	20	22	25	20	17	18
4	RSC (-)	0.2	0.4	0.0	0.0	0.1	0.1	0.2	0.2	0.4	0.0	0.2	0.1
5	SAR (-)	0.7	0.8	0.5	0.9	0.6	0.9	0.4	0.4	0.5	0.4	0.3	0.3
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : Nowrangpur (AGG00U7)
Local River : Indravathi

Division : L Godavari Div., Hyderabad
Sub-Division : Indravathi S D, Jagdalpur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	1184	1.249	25.28
2	EC_FLD (µmho/cm)	6	186	110	138
3	EC_GEN (µmho/cm)	12	781	60	191
4	pH_FLD (pH units)	4	7.4	6.1	6.6
5	pH_GEN (pH units)	12	8.6	6.7	7.6
6	TDS (mg/L)	12	218	60	94
7	Temp (deg C)	12	32.0	16.0	26
8	Turb (NTU)	12	916.0	2.0	109.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	4.6	0.0	0.4
2	ALK-TOT (mgCaCO3/L)	12	72	29	53
3	B (mg/L)	7	0.45	0.00	0.08
4	Ca (mg/L)	12	13	6	10
5	Cl (mg/L)	12	10.2	0.6	2.9
6	CO3 (mg/L)	12	5.6	0.0	0.5
7	F (mg/L)	12	0.23	0.01	0.05
8	Fe (mg/L)	12	0.5	0.0	0.1
9	HCO3 (mg/L)	12	79	35	64
10	K (mg/L)	12	2.7	1.2	1.7
11	Mg (mg/L)	12	7.0	2.4	4.7
12	Na (mg/L)	12	15.2	4.1	8.4
13	NH3-N (mg N/L)	12	0.11	0.01	0.02
14	NO2+NO3 (mg N/L)	12	0.83	0.08	0.51
15	NO2-N (mgN/L)	12	0.07	0.00	0.02
16	NO3-N (mgN/L)	12	0.82	0.08	0.5
17	o-PO4-P (mg P/L)	12	0.720	0.039	0.195
18	SiO2 (mg/L)	12	19.5	10.5	15.5
19	SO4 (mg/L)	12	17.8	0.0	6.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.8	0.2	0.9
2	COD (mg/L)	12	10.6	0.4	4
3	DO (mg/L)	4	8.3	7.6	8.1
4	DO_SAT% (%)	4	114	92	100
5	FCol-MPN (MPN/100mL)	12	9000	20	2299
6	Tcol-MPN (MPN/100mL)	12	16000	220	7893
7	TOC (mg/L)	8	2.4	1.1	1.5
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	33	16	26
2	HAR_Total (mgCaCO3/L)	12	55	28	45
3	Na% (%)	12	44	17	28
4	RSC (-)	12	0.4	0.0	0.2
5	SAR (-)	12	0.9	0.3	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Nowrangpur (AGG00U7)

Local River : Indravathi

River Water

Division : L Godavari Div., Hyderabad

Sub-Division : Indravathi S D, Jagdalpur

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	38.56	26.25	64.76	34.23	17.49								184.6	59.43	42.21
2	EC_FLD (µmho/cm)															140
3	EC_GEN (µmho/cm)	144	129	73	131	117								111	97	114
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	7.9	7.8	7.9	7.5	7.9								7.7	7.7	7.5
6	TDS (mg/L)													93	68	112
7	Temp (deg C)	27.8	28.8	26.0	27.0	27.6								27.0	25.2	28.5
8	Turb (NTU)													38.0	184.4	246.4
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0								0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	49	54	31	57	47								39	47	47
3	B (mg/L)	0.00	0.08	0.05	0.12	0.03								0.04	0.21	0.11
4	Ca (mg/L)	12	16	12	15	14								11	10	9
5	Cl (mg/L)	6.3	12.5	12.0	16.2	8.7								3.5	7.6	2.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0								0.0	0.0	0.0
7	F (mg/L)	0.15	0.38	0.33	0.25	0.26								0.16	0.11	0.09
8	Fe (mg/L)	0.1	0.0	0.0	0.1	0.1								0.2	0.1	0.2
9	HCO3 (mg/L)	59	66	37	69	58								47	57	57
10	K (mg/L)	1.2	1.0	1.3	1.7	1.8								1.7	2.1	2.1
11	Mg (mg/L)	2.7	2.4	1.6	2.6	2.4								6.0	5.1	4.0
12	Na (mg/L)	4.5	9.3	6.3	13.2	5.8								7.2	8.9	9.8
13	NH3-N (mg N/L)	0.02	0.08	0.00	0.04	0.05								0.08	0.08	0.01
14	NO2+NO3 (mg N/L)	0.51	1.20	0.51	0.68	0.61								1.41	0.88	0.41
15	NO2-N (mgN/L)				0.01	0.01								0.00	0.02	0.01
16	NO3-N (mgN/L)	0.51	1.20	0.51	0.67	0.60								1.41	0.86	0.40
17	o-PO4-P (mg P/L)	0.005	0.010	0.040	0.072	0.022								0.080	0.258	0.222
18	SiO2 (mg/L)	11.4	11.8	16.0	12.5	19.2								19.1	18.6	14.7
19	SO4 (mg/L)	2.3	3.0	3.7	2.8	0.8								17.1	14.0	8.5

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Nowrangpur (AGG00U7)

Division : L Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravathi S D, Jagdalpur

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.8	1.0	0.7	0.6	0.5								1.2	0.8	1.0
2	COD (mg/L)			7.5	18.8	29.9								13.0	8.1	5.3
3	DO (mg/L)	6.8	5.8	6.7	5.9	6.2								6.0	5.8	
4	DO_SAT% (%)	87	75	82	74	79								75	69	
5	FCol-MPN (MPN/100mL)					471								6167	9672	2426
6	Tcol-MPN (MPN/100mL)					511								11400	10140	5644
7	TOC (mg/L)				5.8									0.2	0.9	1.4
	TRACE & TOXIC															
1	As (µg/L)													1.3		
2	Cd (µg/L)													0.2		
3	Cr (µg/L)													5.5		
4	Cu (µg/L)													2.3		
5	Hg (µg/L)													0.1		
6	Ni (µg/L)													15.3		
7	Pb (µg/L)													7.1		
8	Zn (µg/L)													3.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	31	41	30	37	34								29	26	22
2	HAR_Total (mgCaCO3/L)	42	51	36	48	44								54	47	39
3	Na% (%)	19	23	26	38	22								21	28	35
4	RSC (-)	0.1	0.1	0.0	0.3	0.1								0.0	0.2	0.2
5	SAR (-)	0.3	0.6	0.5	0.9	0.4								0.4	0.6	0.7
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	Dieldrin (µg/L)															
4	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Nowrangpur (AGG00U7)

Local River : Indravathi

River Water

Division : L Godavari Div., Hyderabad

Sub-Division : Indravathi S D, Jagdalpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	3.103	3.316	13.66	4.662	12.67								17.32	8.065	5.621
2	EC_FLD (µmho/cm)															126
3	EC_GEN (µmho/cm)	137	139	136	124	158								166	118	305
4	pH_FLD (pH units)															6.3
5	pH_GEN (pH units)	8.0	7.7	7.8	7.7	7.8								7.8	7.7	7.7
6	TDS (mg/L)													114	85	85
7	Temp (deg C)	19.0	22.5	22.5	21.0	19.5								23.5	22.3	21.0
8	Turb (NTU)													8.5	7.8	10.5
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.0	0.0	0.0								0.0	0.0	1.2
2	ALK-TOT (mgCaCO3/L)	70	58	68	70	64								71	55	63
3	B (mg/L)	0.00	0.00	0.03	0.08	0.10								0.02	0.16	0.00
4	Ca (mg/L)	17	18	21	15	16								16	13	12
5	Cl (mg/L)	4.3	5.5	5.1	12.5	9.0								3.0	5.6	4.4
6	CO3 (mg/L)	0.0	0.0	1.2	0.0	0.0								0.0	0.0	1.4
7	F (mg/L)	0.31	0.23	0.28	0.14	0.23								0.09	0.12	0.02
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.1								0.3	0.1	0.0
9	HCO3 (mg/L)	86	71	80	85	78								87	67	75
10	K (mg/L)	1.6	0.9	1.6	1.9	2.0								1.8	1.8	1.4
11	Mg (mg/L)	3.6	3.4	5.8	2.7	4.7								8.5	5.5	5.4
12	Na (mg/L)	5.0	3.5	4.5	17.3	6.8								9.8	9.3	9.2
13	NH3-N (mg N/L)	0.03	0.06	0.10	0.04	0.03								0.00	0.04	0.03
14	NO2+NO3 (mg N/L)	0.14	0.15	0.48	0.68	0.26								0.33	0.18	0.53
15	NO2-N (mgN/L)				0.01	0.00								0.00	0.03	0.00
16	NO3-N (mgN/L)	0.14	0.15	0.48	0.67	0.26								0.33	0.15	0.53
17	o-PO4-P (mg P/L)	0.013	0.010	0.027	0.014	0.012								0.061	0.059	0.074
18	SiO2 (mg/L)	24.8	17.0	16.8	18.0	20.5								16.4	18.8	15.4
19	SO4 (mg/L)	1.0	1.0	9.8	0.0	0.0								6.7	5.9	5.0

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Nowrangpur (AGG00U7)

Division : L Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravathi S D, Jagdalpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.2	1.4	0.4	0.5	0.9								0.5	0.6	0.6
2	COD (mg/L)			40.5	29.8	36.7								3.1	3.0	3.7
3	DO (mg/L)	6.7	6.5	6.8	6.4	7.8								7.4	7.6	8.2
4	DO_SAT% (%)	73	76	78	72	85								87	87	92
5	FCol-MPN (MPN/100mL)					327								978	710	1125
6	Tcol-MPN (MPN/100mL)					1300								2090	5418	7925
7	TOC (mg/L)				5.5									0.5	3.9	1.7
	TRACE & TOXIC															
1	As (µg/L)															
2	Cd (µg/L)														0.4	
3	Cr (µg/L)														1.8	
4	Cu (µg/L)														1.6	
5	Hg (µg/L)															
6	Ni (µg/L)														0.2	
7	Pb (µg/L)														2.8	
8	Zn (µg/L)														4.0	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	42	45	51	38	39								40	32	30
2	HAR_Total (mgCaCO3/L)	56	59	75	50	58								75	55	52
3	Na% (%)	16	11	13	42	20								21	26	26
4	RSC (-)	0.3	0.0	0.0	0.4	0.2								0.0	0.1	0.2
5	SAR (-)	0.3	0.2	0.2	1.1	0.4								0.5	0.5	0.6
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	Dieldrin (µg/L)															
4	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Nowrangpur (AGG00U7)

Local River : Indravathi

River Water

Division : L Godavari Div., Hyderabad

Sub-Division : Indravathi S D, Jagdalpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)		2.061	3.685	2.679	2.157								3.445	2.220	2.424
2	EC_FLD (µmho/cm)															141
3	EC_GEN (µmho/cm)		135	120	175	175								118	113	170
4	pH_FLD (pH units)															6.7
5	pH_GEN (pH units)		7.9	7.7	8.1	7.7								7.8	7.0	7.7
6	TDS (mg/L)													76	75	78
7	Temp (deg C)		28.3	26.3	25.7	25.0								24.3	27.3	28.3
8	Turb (NTU)													3.0	22.0	13.3
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)		0.0	0.0	4.2	0.0								0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)		58	64	97	73								52	57	49
3	B (mg/L)		0.00	0.02	0.09	0.08								0.10	0.00	
4	Ca (mg/L)		17	16	29	21								11	10	10
5	Cl (mg/L)		8.3	5.8	9.8	9.7								2.6	1.9	2.2
6	CO3 (mg/L)		0.0	0.0	5.0	0.0								0.0	0.0	0.0
7	F (mg/L)		0.51	0.23	0.30	0.41								0.07	0.09	0.03
8	Fe (mg/L)		0.0	0.0	0.1	0.1								0.3	0.4	0.0
9	HCO3 (mg/L)		71	78	109	89								64	69	60
10	K (mg/L)		1.0	1.9	2.1	2.0								1.7	2.0	1.4
11	Mg (mg/L)		3.2	3.1	2.1	5.0								6.0	5.2	5.0
12	Na (mg/L)		4.7	6.4	9.3	4.7								7.3	8.4	4.9
13	NH3-N (mg N/L)		0.07	0.18	0.10	0.06								0.02	0.02	0.02
14	NO2+NO3 (mg N/L)		0.37	0.22	0.14	0.30								0.76	0.15	0.66
15	NO2-N (mgN/L)				0.01	0.00								0.00	0.04	0.04
16	NO3-N (mgN/L)		0.37	0.22	0.13	0.30								0.76	0.11	0.62
17	o-PO4-P (mg P/L)		0.010	0.006	0.013	0.030								0.001	0.110	0.311
18	SiO2 (mg/L)		14.3	20.3	10.7	16.7								15.0	18.4	17.0
19	SO4 (mg/L)		1.0	4.3	0.3	0.0								4.0	7.2	4.0

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Nowrangpur (AGG00U7)

Division : L Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravathi S D, Jagdalpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)		1.2	0.8	0.4	0.6								1.1	0.7	0.9
2	COD (mg/L)			31.3	5.9	32.7								5.3	2.1	2.3
3	DO (mg/L)		6.6	6.1	5.3	5.9								7.1	5.8	8.0
4	DO_SAT% (%)		85	75	65	71								85	73	103
5	FCol-MPN (MPN/100mL)					1665								5335	14	3653
6	Tcol-MPN (MPN/100mL)					12500								5353	270	11600
7	TOC (mg/L)				6.8									0.5	1.1	
	TRACE & TOXIC															
1	As (µg/L)													1.1	0.2	
2	Cd (µg/L)					0.0								0.0	0.0	
3	Cr (µg/L)					7.0								1.0	0.0	
4	Cu (µg/L)													3.0		
5	Hg (µg/L)													0.5	0.0	
6	Ni (µg/L)					1.0								6.3	2.4	
7	Pb (µg/L)					48.0								0.2	7.8	
8	Zn (µg/L)					135.0								23.6	7.8	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)		41	39	72	53								28	26	25
2	HAR_Total (mgCaCO3/L)		54	52	81	74								53	47	46
3	Na% (%)		16	21	22	12								23	26	18
4	RSC (-)		0.1	0.2	0.3	0.1								0.1	0.2	0.1
5	SAR (-)		0.3	0.4	0.5	0.2								0.5	0.5	0.3
	PESTICIDES															
1	Aldrin (µg/L)					0.0										
2	BHC (µg/L)					0.0										
3	Dieldrin (µg/L)					0.0										
4	Endos (µg/L)					0.0										

HISTORY SHEET

		Water Year	: 2015-2016
Site	: TEKRA	Code	: AGH00C4
State	: Maharashtra	District	Gadchiroli
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Pranhita
Division	: Wainganga Div., Nagpur	Sub-Division	: L Wainganga SD, Chandrapur
Drainage Area	: 108780 Sq. Km.	Bank	: Left
Latitude	: 18°58'42"	Longitude	: 79°56'49"
	Opening Date	Closing Date	
Gauge	: 01.06.1964		
Discharge	: 15.07.1964		
Sediment	: 01.07.1965		
Water Quality	: 15.06.1966		

Water Quality Datasheet for the period : 2015-2016

Station Name : TEKRA (AGH00C4)

Local River : Pranhita

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)												
2	Colour_Cod (-)	Clear	Light Brown	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	380	289	330	163	306	339	386	468	422	407	485	474
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_GEN (pH units)	8.7	8.3	8.4	7.9	8.4	8.5	8.4	8.3	8.4	8.4	8.4	8.5
6	Temp (deg C)	29.0	24.0	24.0	24.0	26.0	23.0	20.0	20.0	18.0	23.0	23.0	26.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	5.2	5.2	10.4	0.0	12.9	10.4	5.2	6.0	9.0	9.0	9.0	9.0
2	ALK-TOT (mgCaCO3/L)	110	127	104	78	110	156	173	195	183	189	204	162
3	B (mg/L)	0.09	0.19	0.11	0.64	0.36	0.49	0.21	0.28	0.31	0.23	0.19	0.17
4	Ca (mg/L)	22	34	34	25	30	31	35	34	32	60	56	28
5	Cl (mg/L)	21.9	15.9	17.9	11.9	15.9	17.9	19.9	23.9	25.8	24.7	28.8	25.8
6	CO3 (mg/L)	6.2	6.2	12.5	0.0	15.6	12.5	6.2	7.2	10.8	10.8	10.8	10.8
7	F (mg/L)	0.05	0.21	1.80	0.00	0.28	0.39	0.24	0.46	0.09	0.18	0.20	0.27
8	Fe (mg/L)	0.1	0.0	0.1	0.1	0.3	0.2	0.0	0.0	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	121	143	102	95	103	165	198	223	201	209	227	176
10	K (mg/L)	2.1	2.6	2.1	2.1	2.5	1.7	2.6	2.4	3.1	3.1	3.4	3.8
11	Mg (mg/L)	11.5	6.6	9.3	3.3	18.7	13.9	16.0	18.2	11.2	17.7	13.9	20.3
12	Na (mg/L)	23.9	17.2	15.3	10.5	19.9	20.6	22.2	41.5	38.0	37.4	50.3	38.5
13	NH3-N (mg N/L)	0.08	0.03	0.09	0.03	0.21	0.05	0.11	0.07	0.06	0.19	0.16	0.00
14	NO2+NO3 (mg N/L)	6.21	7.59	12.14	3.58	7.47	4.92	3.53	4.76	3.01	9.14	1.98	1.37
15	NO2-N (mgN/L)	0.18	0.01	0.00	0.03	0.01	0.07	0.03	0.01	0.01	0.25	0.26	0.20
16	NO3-N (mgN/L)	6.03	7.58	12.14	3.56	7.46	4.86	3.50	4.75	3.01	8.89	1.72	1.17
17	o-PO4-P (mg P/L)	0.093	0.061	0.121	0.052	0.086	0.110	0.013	0.133	0.041	0.123	0.089	0.090
18	SiO2 (mg/L)	21.0	18.6	15.5	14.1	19.6	16.8	20.6	17.2	19.7	17.2	26.5	29.9
19	SO4 (mg/L)	26.3	3.8	18.0	16.4	78.0	21.3	11.6	18.3	26.3	28.7	16.0	48.0

Water Quality Datasheet for the period : 2015-2016

Station Name : TEKRA (AGH00C4)

Division : Wainganga Div., Nagpur

Local River : Pranhita

River Water Analysis

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	2.0	1.2	2.0	0.4	1.7	1.5	2.2	1.7	1.8	1.1	2.3	3.0
2	COD (mg/L)	13.0	37.8	11.6	17.2	14.9	48.3	50.4	28.9	13.4	63.4	39.7	30.5
3	DO (mg/L)	6.8	5.7	6.2	6.1	6.5	6.8	5.8	7.7	8.0	6.1	7.6	7.8
4	DO_SAT% (%)	88	68	74	72	80	79	64	85	85	71	89	96
5	FCol-MPN (MPN/100mL)	40	80	40	130	20	20	20	20	20	20	80	70
6	Tcol-MPN (MPN/100mL)	140	140	260	2200	80	20	40	60	40	130	130	170
	TRACE & TOXIC												
1	As (µg/L)								0.5			3.3	
2	Cd (µg/L)								0.2			0.3	
3	Cr (µg/L)								0.3			1.5	
4	Cu (µg/L)								0.7			2.2	
5	Ni (µg/L)								0.2			9.6	
6	Pb (µg/L)								0.3			1.4	
7	Zn (µg/L)								5.5			3.6	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	54	86	84	63	75	77	88	86	79	150	141	71
2	HAR_Total (mgCaCO3/L)	102	114	123	77	153	135	155	162	126	223	199	155
3	Na% (%)	33	24	21	22	22	25	23	36	39	26	35	35
4	RSC (-)	0.2	0.3	0.0	0.0	0.0	0.4	0.4	0.7	1.1	0.0	0.1	0.2
5	SAR (-)	1.0	0.7	0.6	0.5	0.7	0.8	0.8	1.4	1.5	1.1	1.6	1.4
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : TEKRA (AGH00C4)

Division : Wainganga Div., Nagpur

Local River : Pranhita

Sub-Division : L Wainganga SD, Chandrapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	12	485	163	371
3	pH_GEN (pH units)	12	8.7	7.9	8.4
4	Temp (deg C)	12	29.0	18.0	23.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	12.9	0.0	7.6
2	ALK-TOT (mgCaCO3/L)	12	204	78	149
3	B (mg/L)	12	0.64	0.09	0.27
4	Ca (mg/L)	12	60	22	35
5	Cl (mg/L)	12	28.8	11.9	20.9
6	CO3 (mg/L)	12	15.6	0.0	9.1
7	F (mg/L)	12	1.80	0.00	0.35
8	Fe (mg/L)	12	0.3	0.0	0.1
9	HCO3 (mg/L)	12	227	95	164
10	K (mg/L)	12	3.8	1.7	2.6
11	Mg (mg/L)	12	20.3	3.3	13.4
12	Na (mg/L)	12	50.3	10.5	27.9
13	NH3-N (mg N/L)	12	0.21	0.00	0.09
14	NO2+NO3 (mg N/L)	12	12.14	1.37	5.47
15	NO2-N (mgN/L)	12	0.26	0.00	0.09
16	NO3-N (mgN/L)	12	12.14	1.17	5.39
17	o-PO4-P (mg P/L)	12	0.133	0.013	0.084
18	SiO2 (mg/L)	12	29.9	14.1	19.7
19	SO4 (mg/L)	12	78.0	3.8	26.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	3.0	0.4	1.7
2	COD (mg/L)	12	63.4	11.6	30.8
3	DO (mg/L)	12	8.0	5.7	6.8
4	DO_SAT% (%)	12	96	64	79
5	FCol-MPN (MPN/100mL)	12	130	20	47
6	Tcol-MPN (MPN/100mL)	12	2200	20	284
	TRACE & TOXIC				
1	As (µg/L)	2	3.3	0.5	1.9
2	Cd (µg/L)	2	0.3	0.2	0.2
3	Cr (µg/L)	2	1.5	0.3	0.9
4	Cu (µg/L)	2	2.2	0.7	1.4
5	Ni (µg/L)	2	9.6	0.2	4.9
6	Pb (µg/L)	2	1.4	0.3	0.8
7	Zn (µg/L)	2	5.5	3.6	4.5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	150	54	88
2	HAR_Total (mgCaCO3/L)	12	223	77	144
3	Na% (%)	12	39	21	28
4	RSC (-)	12	1.1	0.0	0.3
5	SAR (-)	12	1.6	0.5	1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : TEKRA (AGH00C4)

Local River : Pranhita

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	1362	1162	1871	1100	1794	2954	4596	1385	683.2	3227	2551	1764	2512	1215	
2	EC_GEN (µmho/cm)	273	344	291	265	223	245	268	315	385	325	329	327	328	375	294
3	pH_GEN (pH units)	8.2	8.3	8.2	8.1	8.5	8.3	8.4	8.4	8.4	8.5	8.4	8.6	8.0	7.9	8.3
4	Temp (deg C)	22.7	27.4	28.9	30.1	27.0	24.5	23.1	19.3	24.0	25.8	29.5	28.2	27.0	28.1	25.4
5	Turb (NTU)						54.8	218.5	72.2	38.5	14.6	29.8	8.0	13.3	21.2	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.2	3.5	0.7	5.2	5.8	3.6	3.8	3.0	3.6	6.9	4.0	4.7	2.9	0.0	6.7
2	ALK-TOT (mgCaCO3/L)	114	139	118	118	98	97	112	125	137	117	146	197	146	168	106
3	B (mg/L)	0.37	0.64	0.54	0.19	0.23	0.43	0.60	0.80	0.33	0.47	0.58	0.15	0.20	0.16	0.28
4	Ca (mg/L)	26	30	27	25	27	23	28	29	25	26	30	36	32	33	29
5	Cl (mg/L)	14.5	21.6	23.4	16.2	8.0	12.9	14.5	15.9	24.4	19.7	21.9	25.0	19.2	18.0	16.7
6	CO3 (mg/L)	1.4	4.3	0.8	6.2	7.0	4.3	4.6	3.6	4.4	8.3	4.8	5.7	3.5	0.0	8.1
7	F (mg/L)	0.34	0.56	0.52	0.46	0.53	0.21	0.25	0.25	0.29	0.30	0.41	0.71	0.44	0.47	0.47
8	Fe (mg/L)	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.0	0.2	0.0	0.4	0.2	0.4	0.1	0.1
9	HCO3 (mg/L)	136	160	143	131	105	109	127	145	158	126	168	229	171	205	113
10	K (mg/L)	2.6	2.7	2.8	3.0	1.5	2.0	1.8	1.9	2.7	2.4	2.9	3.1	3.9	2.9	2.3
11	Mg (mg/L)	9.4	12.3	9.2	9.5	7.2	8.5	9.2	10.8	16.9	11.6	16.6	21.0	14.9	15.8	9.9
12	Na (mg/L)	17.6	24.8	24.6	19.9	11.4	14.1	12.6	19.6	30.7	17.6	35.2	21.1	22.7	30.9	17.3
13	NH3-N (mg N/L)	0.40	0.26	0.23	0.23	0.14	0.20	0.58	0.32	0.31	0.32	0.13	0.00	0.04	0.24	0.09
14	NO2+NO3 (mg N/L)	0.77	0.82	0.52	1.33	0.94	0.94	1.27	0.60	0.22	0.46	0.90	1.33	1.67	1.72	7.40
15	NO2-N (mgN/L)	0.01	0.03	0.02	0.07	0.03	0.04	0.07	0.11	0.05	0.01	0.04	0.07	0.01	0.00	0.04
16	NO3-N (mgN/L)	0.76	0.78	0.51	1.25	0.91	0.90	1.21	0.49	0.17	0.45	0.85	1.26	1.66	1.71	7.35
17	o-PO4-P (mg P/L)	0.044	0.018	0.020	0.091	0.008	0.039	0.062	0.087	0.039	0.050	0.010	0.074	0.062	0.157	0.083
18	SiO2 (mg/L)	25.6	30.2	23.4	25.4	61.4	34.7	31.7	28.0	95.3	27.8	55.7	33.9	16.4	17.4	17.7
19	SO4 (mg/L)	10.4	14.6	13.2	14.2	15.6	8.4	11.1	18.9	20.4	12.2	19.1	10.8	20.0	7.8	28.5

Water Quality Seasonal Average for the period: 2001-2016

Station Name : TEKRA (AGH00C4)

Division : Wainganga Div., Nagpur

Local River : Pranhita

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.9	1.1	1.0	1.2	1.0	1.0	1.6	1.1	1.2	2.5	2.8	1.5	10.3	10.4	1.5
2	COD (mg/L)							39.4	37.6	38.3	50.3	41.4	39.2	55.1	31.8	18.9
3	DO (mg/L)	6.2	6.6	6.7	6.3	6.6	6.8	6.8	6.4	6.7	7.2	7.1	6.4	5.7	6.0	6.3
4	DO_SAT% (%)	71	83	86	83	82	81	79	69	80	88	93	82	72	77	76
5	FCol-MPN (MPN/100mL)	3123	1420	3010	680	351	460	1200	130	220	150	190	5560	160	190	62
6	Tcol-MPN (MPN/100mL)	4720	2020	33770	1540	2113	980	5700	390	490	230	4230	26880	5360	436	564
	TRACE & TOXIC															
1	As (µg/L)												13.1	2.2		
2	Cd (µg/L)												1.2	0.7		
3	Cr (µg/L)												4.6	6.1		
4	Cu (µg/L)												9.2	7.5		
5	Hg (µg/L)													0.2		
6	Ni (µg/L)												8.9	10.4		
7	Pb (µg/L)					47.0							2.5	0.2		
8	Zn (µg/L)												2.7	1.6		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	65	75	69	62	68	58	71	73	62	64	76	90	80	82	72
2	HAR_Total (mgCaCO3/L)	104	126	107	102	98	94	109	118	132	112	145	177	142	148	114
3	Na% (%)	23	25	26	27	20	22	17	23	27	22	31	18	23	30	25
4	RSC (-)	0.2	0.3	0.3	0.4	0.1	0.1	0.1	0.3	0.2	0.2	0.1	0.5	0.2	0.4	0.1
5	SAR (-)	0.7	0.9	0.9	0.9	0.5	0.6	0.5	0.8	1.1	0.7	1.3	0.7	0.8	1.1	0.7
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : TEKRA (AGH00C4)

Local River : Pranhita

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	96.91	112.4	229.0	95.49	311.1	371.8	179.8	82.53	88.29	307.7	145.1	161.7	493.6	142.6	
2	EC_GEN (µmho/cm)	436	389	367	350	376	362	386	400	371	433	444	487	508	403	404
3	pH_GEN (pH units)	8.4	8.3	8.5	8.6	8.6	8.6	8.7	8.5	8.5	8.6	8.4	8.6	8.3	8.3	8.4
4	Temp (deg C)	20.5	19.9	23.9	24.0	22.1	22.8	19.8	18.9	23.6	24.5	27.4	27.0	25.6	24.3	20.3
5	Turb (NTU)						24.1	1.7	0.8	1.1	1.6	21.9	0.9	1.5	0.6	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	5.9	3.2	9.1	7.9	6.7	7.7	4.2	4.1	3.6	5.9	5.0	6.4	5.5	1.3	7.6
2	ALK-TOT (mgCaCO3/L)	171	178	160	145	168	147	163	166	131	167	167	240	259	181	177
3	B (mg/L)	0.37	0.30	0.33	0.27	0.25	0.49	0.61	0.62	0.53	0.84	0.24	0.29	0.13	0.54	0.32
4	Ca (mg/L)	30	34	34	25	34	30	34	34	32	32	33	39	57	37	33
5	Cl (mg/L)	24.3	21.3	19.0	21.4	18.5	18.8	18.8	20.1	21.7	22.7	22.2	24.5	20.7	19.0	21.9
6	CO3 (mg/L)	7.1	3.9	11.0	9.5	8.1	9.2	5.1	5.0	4.7	7.0	6.0	7.7	6.6	1.5	9.2
7	F (mg/L)	0.37	0.72	0.60	0.78	0.54	0.61	0.30	0.59	0.38	0.34	0.34	0.49	0.31	0.34	0.29
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.5	0.3	0.0	0.1
9	HCO3 (mg/L)	194	210	173	157	188	161	188	192	155	189	191	277	303	218	197
10	K (mg/L)	2.7	2.3	2.1	2.7	3.0	2.2	2.3	1.8	1.8	2.1	2.1	4.1	2.8	2.2	2.4
11	Mg (mg/L)	16.1	14.1	13.9	16.5	14.6	12.7	16.1	15.8	15.7	17.7	23.4	22.4	37.3	17.6	14.8
12	Na (mg/L)	36.5	29.3	28.7	26.0	29.1	24.1	31.3	27.5	19.4	26.3	29.2	44.0	32.4	27.9	30.6
13	NH3-N (mg N/L)	0.29	0.21	0.17	0.12	0.04	0.50	0.13	0.45	0.32	0.12	0.14	0.05	0.12	0.01	0.07
14	NO2+NO3 (mg N/L)	0.40	0.34	0.39	1.07	0.82	0.60	0.67	0.16	0.28	0.31	0.45	0.88	2.58	4.77	4.06
15	NO2-N (mgN/L)	0.01	0.02	0.02	0.11	0.02	0.07	0.03	0.01	0.03	0.01	0.01	0.01	0.01	0.01	0.03
16	NO3-N (mgN/L)	0.39	0.32	0.37	0.96	0.81	0.53	0.63	0.15	0.26	0.30	0.43	0.87	2.57	4.76	4.03
17	o-PO4-P (mg P/L)	0.019	0.010	0.013	0.148	0.021	0.034	0.041	0.034	0.044	0.045	0.000	0.050	0.521	0.171	0.074
18	SiO2 (mg/L)	32.9	29.5	21.0	22.7	51.8	31.0	31.3	31.6	75.9	35.4	65.1	37.9	13.0	12.0	18.5
19	SO4 (mg/L)	18.1	13.8	12.0	18.5	16.1	13.3	287.9	10.0	14.6	20.3	22.0	23.1	15.5	13.6	19.4

Water Quality Seasonal Average for the period: 2001-2016

Station Name : TEKRA (AGH00C4)

Division : Wainganga Div., Nagpur

Local River : Pranhita

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.8	1.3	1.0	0.9	1.6	1.2	1.5	1.1	1.3	1.8	0.9	1.7	1.4	1.9	1.8
2	COD (mg/L)							38.8	53.1	42.9	48.6	63.3	31.5	27.0	26.3	35.3
3	DO (mg/L)	7.1	7.5	7.6	7.3	8.4	7.7	7.8	7.6	7.8	8.3	7.2	7.5	7.0	7.1	7.1
4	DO_SAT% (%)	79	82	90	86	95	88	86	81	91	98	90	94	85	85	78
5	FCol-MPN (MPN/100mL)	238	550	633	175	100	138	525	100	100	100	100	100	100	36	20
6	Tcol-MPN (MPN/100mL)	392	1000	867	275	138	275	100	100	100	100	138	350	238	123	40
	TRACE & TOXIC															
1	As (µg/L)											0.4				0.5
2	Cd (µg/L)											0.2			0.3	0.2
3	Cr (µg/L)											72.5			0.6	0.3
4	Cu (µg/L)											127.2			6.0	0.7
5	Hg (µg/L)															
6	Ni (µg/L)											71.5			1.2	0.2
7	Pb (µg/L)											0.9			0.8	0.3
8	Zn (µg/L)											36.2			6.0	5.5
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	74	84	84	63	84	75	85	86	81	81	83	98	143	92	83
2	HAR_Total (mgCaCO3/L)	141	143	142	132	145	128	152	152	146	155	181	191	298	166	144
3	Na% (%)	35	30	31	30	30	29	31	28	22	26	26	33	20	27	31
4	RSC (-)	0.6	0.7	0.5	0.3	0.5	0.4	0.3	0.3	0.0	0.3	0.0	1.0	0.0	0.4	0.7
5	SAR (-)	1.3	1.1	1.1	1.0	1.1	0.9	1.1	1.0	0.7	0.9	0.9	1.4	0.8	0.9	1.1
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : TEKRA (AGH00C4)

Local River : Pranhita

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	17.03	30.05	47.31	18.38	61.02	52.42	61.09	5.533	23.98	49.95	18.15	45.40	86.80	35.30	
2	EC_GEN (µmho/cm)	543	413	432	416	404	412	443	570	426	473	481	505	456	462	455
3	pH_GEN (pH units)	8.4	8.2	8.4	8.6	8.7	8.5	8.6	8.7	8.4	8.5	8.5	8.7	8.3	8.4	8.4
4	Temp (deg C)	25.5	30.2	27.5	24.7	22.0	23.9	20.1	23.6	19.4	29.1	28.2	26.7	26.6	26.0	24.0
5	Turb (NTU)						0.9	1.8	0.9	0.4	1.1	0.5	0.6	1.7	0.5	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	9.5	3.5	13.4	7.3	6.2	6.9	4.6	3.8	6.6	6.0	6.1	8.5	3.5	7.9	9.0
2	ALK-TOT (mgCaCO3/L)	206	182	182	159	141	155	155	212	193	165	229	223	183	180	185
3	B (mg/L)	0.53	0.27	0.62	0.14	0.18	0.46	1.18	0.20	0.67	0.20	0.17	0.15	0.28	0.14	0.20
4	Ca (mg/L)	30	29	30	29	30	28	30	33	28	36	35	36	49	33	48
5	Cl (mg/L)	48.2	33.7	34.0	36.9	32.7	27.5	31.5	43.1	35.7	33.8	34.6	36.0	26.7	25.3	26.4
6	CO3 (mg/L)	11.4	4.2	16.1	8.8	7.5	8.3	5.6	4.6	7.9	7.3	7.3	10.2	4.3	9.5	10.8
7	F (mg/L)	0.57	0.47	0.42	0.93	0.34	0.25	0.46	0.56	0.60	0.36	0.42	0.79	0.82	0.40	0.22
8	Fe (mg/L)	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.0
9	HCO3 (mg/L)	228	214	190	176	157	172	178	250	219	187	265	251	214	200	204
10	K (mg/L)	4.7	3.9	3.6	3.9	2.5	3.3	2.9	3.4	2.7	2.8	4.5	4.8	3.2	2.3	3.4
11	Mg (mg/L)	23.7	18.8	19.0	18.6	13.6	15.5	14.9	22.8	22.0	29.2	32.6	27.7	13.8	16.2	17.3
12	Na (mg/L)	48.0	42.0	38.3	38.9	34.0	32.5	43.9	56.9	41.7	47.7	41.7	47.2	40.4	40.1	42.1
13	NH3-N (mg N/L)	0.26	0.30	0.17	0.28	0.14	0.46	0.21	0.23	0.15	0.46	0.20	0.02	0.91	0.11	0.11
14	NO2+NO3 (mg N/L)	0.28	0.21	0.33	0.97	0.29	0.68	0.17	0.14	0.16	1.14	0.64	0.25	3.31	5.22	4.16
15	NO2-N (mgN/L)	0.02	0.02	0.01	0.17	0.01	0.03	0.03	0.00	0.00	0.02	0.01	0.01	0.01	0.01	0.24
16	NO3-N (mgN/L)	0.26	0.18	0.32	0.80	0.28	0.65	0.14	0.14	0.16	1.11	0.63	0.25	3.30	5.22	3.93
17	o-PO4-P (mg P/L)	0.021	0.100	0.016	0.123	0.028	0.069	0.227	0.021	0.052	0.026	0.003	0.035	0.635	0.176	0.101
18	SiO2 (mg/L)	35.5	28.7	28.0	19.0	75.0	33.1	27.7	91.3	33.3	62.8	14.6	18.5	19.0	35.1	24.5
19	SO4 (mg/L)	19.2	22.3	18.7	31.7	25.0	16.5	29.1	31.5	16.3	22.3	25.6	13.1	12.3	26.4	30.9

Water Quality Seasonal Average for the period: 2001-2016

Station Name : TEKRA (AGH00C4)

Division : Wainganga Div., Nagpur

Local River : Pranhita

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.2	0.6	0.8	0.8	1.0	1.3	1.4	1.4	1.9	1.4	2.3	1.4	1.6	2.6	2.1
2	COD (mg/L)							65.1	44.4	27.9	25.8	57.6	76.5	53.0	29.7	44.5
3	DO (mg/L)	6.7	7.0	6.2	6.6	7.1	7.3	7.1	6.8	6.8	7.1	6.9	6.2	6.4	5.9	7.2
4	DO_SAT% (%)	82	93	79	79	81	86	78	80	81	92	88	77	79	73	85
5	FCol-MPN (MPN/100mL)	1131	100	100	100	100	100	100	100	100	100	200	100	167	43	57
6	Tcol-MPN (MPN/100mL)	625	150	183	150	100	150	183	100	100	100	483	183	650	130	143
	TRACE & TOXIC															
1	As (µg/L)											0.7	2.5	4.4	0.8	3.3
2	Cd (µg/L)						8.0					0.8	1.7	0.0	1.0	0.3
3	Cr (µg/L)						17.0					0.0	1.2	0.7	5.9	1.5
4	Cu (µg/L)												0.8	4.9		2.2
5	Hg (µg/L)						1.9					0.1	0.1	0.1	0.0	
6	Ni (µg/L)						1.0					0.0	10.5	5.1	3.1	9.6
7	Pb (µg/L)						127.0					23.8	0.7	0.8	14.0	1.4
8	Zn (µg/L)						31.0					19.3	19.0	12.6	28.0	3.6
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	76	72	74	72	75	70	75	83	71	89	89	89	121	84	121
2	HAR_Total (mgCaCO3/L)	174	150	153	150	132	134	137	178	163	211	225	205	179	151	193
3	Na% (%)	37	37	35	35	36	34	40	41	35	27	28	33	33	36	32
4	RSC (-)	0.7	0.7	0.6	0.2	0.2	0.4	0.4	0.7	0.6	0.0	0.6	0.4	0.1	0.6	0.1
5	SAR (-)	1.6	1.5	1.3	1.4	1.3	1.2	1.7	1.9	1.4	1.2	1.2	1.4	1.3	1.5	1.3
	PESTICIDES															
1	Aldrin (µg/L)						0.0					0.0				
2	BHC (µg/L)						0.1					0.1				
3	DDT (µg/L)						0.1					0.0				
4	Dieldrin (µg/L)						0.0					0.0				
5	Endos (µg/L)						0.1					0.1				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: BHATPALLI	Code	: AGH10L0
State	: Telangana	District	Adilabad
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wardha
Sub-Sub Tributary	: -	Local River	: Peddavagu
Division	: Wainganga Div., Nagpur	Sub-Division	: Wardha SD, Chandrapur
Drainage Area	: 3100 Sq. Km.	Bank	: Left
Latitude	: 19°19'50"	Longitude	: 79°30'14"
	Opening Date	Closing Date	
Gauge	: 12.08.1986		
Discharge	: 01.10.1986		
Sediment	: 07.10.1988		
Water Quality	: 04.01.1988		

Water Quality Datasheet for the period : 2015-2016

Station Name : BHATPALLI (AGH10L0)

Local River :

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)												
2	Colour_Cod (-)	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	560	342	480	461	477	487	528	544	505	438	557	600
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_GEN (pH units)	8.8	8.4	8.0	8.1	8.2	8.6	8.4	8.3	8.0	8.1	8.4	8.3
6	Temp (deg C)	34.0	24.0	24.0	22.0	28.0	24.0	23.0	17.0	19.0	25.0	26.0	28.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	12.9	5.2	0.0	0.0	0.0	5.2	7.8	9.0	0.0	0.0	6.0	6.0
2	ALK-TOT (mgCaCO3/L)	247	158	215	265	232	159	281	264	264	192	254	180
3	B (mg/L)	0.14	0.20	0.15	0.75	0.34	0.30	0.04	0.23	0.30	0.10	0.12	0.16
4	Ca (mg/L)	24	19	25	41	40	22	39	44	37	39	63	20
5	Cl (mg/L)	15.9	15.9	19.9	13.9	17.9	15.9	21.9	25.8	15.9	12.3	14.4	19.9
6	CO3 (mg/L)	15.6	6.2	0.0	0.0	0.0	6.2	9.4	10.8	0.0	0.0	7.2	7.2
7	F (mg/L)	0.01	0.47	0.00	0.39	0.64	0.83	0.32	1.01	0.65	0.59	0.74	0.69
8	Fe (mg/L)	0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0
9	HCO3 (mg/L)	269	180	262	324	283	181	324	300	322	234	295	205
10	K (mg/L)	1.9	1.9	1.8	2.8	2.3	2.4	2.3	2.5	2.4	2.3	2.3	2.7
11	Mg (mg/L)	24.7	21.4	28.0	19.2	23.1	23.0	27.8	17.7	15.5	13.4	15.5	25.1
12	Na (mg/L)	45.1	21.9	35.9	43.3	36.8	22.7	44.7	55.8	49.7	40.7	61.4	45.0
13	NH3-N (mg N/L)	0.06	0.03	0.03	0.03	0.16	0.09	0.19	0.11	0.09	0.20		0.00
14	NO2+NO3 (mg N/L)	6.56	10.24	13.66	9.74	12.61	10.66	8.87	9.43	6.56	16.06	2.35	1.48
15	NO2-N (mgN/L)	0.01	0.04	0.00	0.05	0.01	0.03	0.01	0.02	0.01	0.10	0.21	0.22
16	NO3-N (mgN/L)	6.55	10.20	13.66	9.69	12.60	10.63	8.86	9.41	6.56	15.96	2.14	1.26
17	o-PO4-P (mg P/L)	0.073	0.059	0.090	0.078	0.109	0.120	0.013	0.149	0.063	0.000	0.063	0.088
18	SiO2 (mg/L)	36.4	33.6	33.5	31.2	31.4	31.8	42.0	38.6	38.1	32.9	39.7	48.1
19	SO4 (mg/L)	26.0	1.8	20.2	19.0	35.8	24.9	21.9	15.4	8.6	11.6	13.0	16.8

Water Quality Datasheet for the period : 2015-2016

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River :

River Water Analysis

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	20.0	1.0	2.9	1.5	2.6	1.6	2.2	2.1	20.0	1.9	1.8	1.8
2	COD (mg/L)	51.0	41.5	34.0	10.2	20.6	30.1	46.1	36.8	46.4	78.6	27.5	13.7
3	DO (mg/L)	5.1	6.3	6.9	6.4	7.5	7.5	8.1	9.0	5.0	6.7	6.2	6.3
4	DO_SAT% (%)	72	75	82	73	96	89	94	93	54	81	76	80
5	FCol-MPN (MPN/100mL)	110	110	70	1300	110	270	800	70	170	60	170	110
6	Tcol-MPN (MPN/100mL)	170	270	130	9000	3000	5000	1700	260	340	130	330	170
	TRACE & TOXIC												
1	As (µg/L)								1.3			1.6	
2	Cd (µg/L)								0.2			0.3	
3	Cr (µg/L)								1.6			1.4	
4	Cu (µg/L)								0.4			2.8	
5	Ni (µg/L)								0.4			1.3	
6	Pb (µg/L)								0.6			1.7	
7	Zn (µg/L)								3.0			4.1	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	61	48	63	102	100	55	97	110	93	97	159	51
2	HAR_Total (mgCaCO3/L)	164	137	180	182	196	151	213	184	157	153	223	155
3	Na% (%)	37	26	30	34	29	24	31	40	40	36	37	38
4	RSC (-)	1.7	0.4	0.7	1.7	0.7	0.2	1.4	1.6	2.2	0.8	0.6	0.5
5	SAR (-)	1.5	0.8	1.2	1.4	1.1	0.8	1.3	1.8	1.7	1.4	1.8	1.6
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River :

Sub-Division : Wardha SD, Chandrapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	12	600	342	498
3	pH_GEN (pH units)	12	8.8	8.0	8.3
4	Temp (deg C)	12	34.0	17.0	24.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	12.9	0.0	4.3
2	ALK-TOT (mgCaCO3/L)	12	281	158	226
3	B (mg/L)	12	0.75	0.04	0.24
4	Ca (mg/L)	12	63	19	34
5	Cl (mg/L)	12	25.8	12.3	17.5
6	CO3 (mg/L)	12	15.6	0.0	5.2
7	F (mg/L)	12	1.01	0.00	0.53
8	Fe (mg/L)	12	0.1	0.0	0.1
9	HCO3 (mg/L)	12	324	180	265
10	K (mg/L)	12	2.8	1.8	2.3
11	Mg (mg/L)	12	28.0	13.4	21.2
12	Na (mg/L)	12	61.4	21.9	41.9
13	NH3-N (mg N/L)	11	0.20	0.00	0.09
14	NO2+NO3 (mg N/L)	12	16.06	1.48	9.02
15	NO2-N (mgN/L)	12	0.22	0.00	0.06
16	NO3-N (mgN/L)	12	15.96	1.26	8.96
17	o-PO4-P (mg P/L)	12	0.149	0.000	0.075
18	SiO2 (mg/L)	12	48.1	31.2	36.4
19	SO4 (mg/L)	12	35.8	1.8	17.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	20.0	1.0	4.9
2	COD (mg/L)	12	78.6	10.2	36.4
3	DO (mg/L)	12	9.0	5.0	6.8
4	DO_SAT% (%)	12	96	54	81
5	FCol-MPN (MPN/100mL)	12	1300	60	279
6	Tcol-MPN (MPN/100mL)	12	9000	130	1708
	TRACE & TOXIC				
1	As (µg/L)	2	1.6	1.3	1.4
2	Cd (µg/L)	2	0.3	0.2	0.2
3	Cr (µg/L)	2	1.6	1.4	1.5
4	Cu (µg/L)	2	2.8	0.4	1.6
5	Ni (µg/L)	2	1.3	0.4	0.8
6	Pb (µg/L)	2	1.7	0.6	1.1
7	Zn (µg/L)	2	4.1	3.0	3.5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	159	48	86
2	HAR_Total (mgCaCO3/L)	12	223	137	175
3	Na% (%)	12	40	24	34
4	RSC (-)	12	2.2	0.2	1.1
5	SAR (-)	12	1.8	0.8	1.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BHATPALLI (AGH10L0)

Local River :

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	52.58	39.24	41.37	19.31	34.16	35.39	36.41	15.13	44.77	67.75	48.97	122.1	136.8	11.87	
2	EC_GEN (µmho/cm)	391	430	407	406	416	410	416	465	451	393	418	432	433	517	464
3	pH_GEN (pH units)	8.2	8.2	8.4	8.5	8.5	8.4	8.5	8.4	8.3	8.4	8.4	8.7	8.4	7.9	8.3
4	Temp (deg C)	26.2	26.9	26.0	27.7	27.2	27.9	29.3	27.0	28.0	28.3	27.0	27.8	26.6	28.2	26.4
5	Turb (NTU)						15.2	187.2	67.8	31.8	20.6	10.8	3.0	2.8	3.0	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.7	2.4	6.6	8.3	6.1	6.0	4.9	2.9	2.7	5.4	4.0	3.6	5.8	1.2	3.6
2	ALK-TOT (mgCaCO3/L)	182	213	192	204	190	175	180	221	206	186	193	250	182	238	223
3	B (mg/L)	0.39	0.84	0.53	0.24	0.25	0.45	0.55	0.91	0.29	0.36	0.28	0.26	0.13	0.18	0.32
4	Ca (mg/L)	33	30	33	32	33	30	35	35	32	37	36	43	44	34	30
5	Cl (mg/L)	10.2	10.5	9.3	12.6	10.8	9.1	15.9	12.6	14.5	10.8	12.8	13.3	47.9	16.1	16.7
6	CO3 (mg/L)	3.3	2.9	7.9	10.1	7.3	7.3	5.9	3.5	3.2	6.5	4.8	4.4	7.0	1.5	4.4
7	F (mg/L)	0.55	0.54	0.60	0.56	0.73	0.53	0.55	0.58	0.65	0.53	0.55	0.61	0.63	0.86	0.30
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.2	0.1	0.1
9	HCO3 (mg/L)	215	254	218	228	217	199	207	262	244	214	226	297	208	288	263
10	K (mg/L)	2.2	2.3	2.0	2.7	1.3	1.9	1.6	2.0	2.3	1.7	2.2	2.7	3.0	2.6	2.1
11	Mg (mg/L)	16.0	19.4	16.8	19.7	18.1	17.7	20.1	21.2	17.4	16.5	21.4	26.7	24.6	29.0	23.3
12	Na (mg/L)	25.6	33.6	29.0	34.2	33.1	26.7	22.8	39.7	41.5	14.7	42.5	29.8	30.6	48.8	36.6
13	NH3-N (mg N/L)	0.39	0.25	0.29	0.22	0.09	0.16	0.54	0.34	0.25	0.28	0.17	0.02	0.10	0.34	0.06
14	NO2+NO3 (mg N/L)	1.19	1.34	1.69	3.18	1.40	1.81	2.21	0.93	0.22	1.31	1.16	2.01	1.38	2.90	10.56
15	NO2-N (mgN/L)	0.02	0.02	0.02	0.06	0.02	0.05	0.05	0.17	0.08	0.01	0.04	0.12	0.01	0.06	0.02
16	NO3-N (mgN/L)	1.17	1.32	1.67	3.12	1.37	1.77	2.16	0.76	0.14	1.30	1.12	1.89	1.38	2.83	10.54
17	o-PO4-P (mg P/L)	0.067	0.025	0.018	0.096	0.039	0.023	0.045	0.072	0.028	0.248	0.015	0.100	0.048	0.119	0.082
18	SiO2 (mg/L)	45.0	55.1	46.8	48.8	38.7	52.6	45.2	48.4	118.5	35.6	82.4	50.9	27.7	34.7	33.2
19	SO4 (mg/L)	8.9	9.5	9.9	11.9	26.9	8.4	12.6	14.7	14.5	8.8	16.5	15.0	18.4	14.7	20.6

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.1	1.0	0.8	1.3	1.5	1.5	1.2	1.6	2.6	22.7	2.3	1.9	1.5	1.9	5.6
2	COD (mg/L)							50.7	51.9	50.0	96.0	31.3	45.5	36.3	23.0	31.5
3	DO (mg/L)	6.9	7.1	7.1	7.1	7.3	7.1	6.9	6.7	6.8	5.9	7.3	6.4	6.5	6.7	6.4
4	DO_SAT% (%)	86	89	88	90	92	91	91	84	85	77	92	81	81	87	80
5	FCol-MPN (MPN/100mL)	16289	5697	1583	1143	785	2690	880	660	380	250	200	1530	4100	758	340
6	Tcol-MPN (MPN/100mL)	33111	8670	9957	5133	2100	25180	2350	2630	1940	4475	1770	12230	49290	4386	2514
	TRACE & TOXIC															
1	As (µg/L)												6.3	5.0		
2	Cd (µg/L)												0.8	0.4		
3	Cr (µg/L)												0.8	4.7		
4	Cu (µg/L)												25.6	5.7		
5	Hg (µg/L)													0.4		
6	Ni (µg/L)												0.6	10.3		
7	Pb (µg/L)					62.0							1.6	0.6		
8	Zn (µg/L)					24.0							2.5	9.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	82	76	84	80	81	74	88	87	81	91	89	107	111	85	75
2	HAR_Total (mgCaCO3/L)	149	157	154	162	157	148	171	175	154	160	178	218	213	206	172
3	Na% (%)	27	31	28	30	30	27	21	31	35	17	33	22	23	33	31
4	RSC (-)	0.7	1.1	0.8	0.9	0.7	0.6	0.2	0.9	1.1	0.5	0.4	0.7	0.0	0.7	1.1
5	SAR (-)	0.9	1.2	1.0	1.2	1.1	0.9	0.8	1.3	1.5	0.5	1.4	0.9	0.9	1.5	1.2
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)					0.0										
5	Endos (µg/L)					0.1										

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BHATPALLI (AGH10L0)

Local River :

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	8.323	3.936	6.999	5.358	23.03	9.084	5.041	4.593	1.879	13.92	4.453	7.694	14.37	8.175	
2	EC_GEN (µmho/cm)	537	554	549	501	489	503	514	569	627	539	510	539	653	529	516
3	pH_GEN (pH units)	8.5	8.3	8.5	8.6	8.5	8.4	8.6	8.4	8.4	8.4	8.6	8.4	8.3	8.3	8.3
4	Temp (deg C)	20.7	20.9	20.3	20.4	21.0	22.5	24.0	20.8	21.3	22.8	22.3	23.5	23.5	23.3	20.8
5	Turb (NTU)						2.1	4.3	0.5	1.7	0.9	5.8	1.4	1.7	0.4	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	6.3	2.9	8.2	9.2	8.6	6.8	4.7	3.3	6.4	5.9	6.8	4.5	5.9	3.7	5.5
2	ALK-TOT (mgCaCO3/L)	253	292	277	268	253	225	228	265	267	249	238	282	309	269	242
3	B (mg/L)	0.44	0.35	0.40	0.25	0.26	0.39	0.47	0.68	0.53	0.90	0.20	0.21	0.18	0.54	0.22
4	Ca (mg/L)	32	33	15	30	35	34	30	33	42	39	30	41	67	38	35
5	Cl (mg/L)	14.9	13.0	14.0	11.5	10.6	13.0	15.8	12.8	16.7	13.1	15.3	14.4	14.8	13.5	19.9
6	CO3 (mg/L)	8.0	3.5	9.9	11.0	10.3	8.2	5.7	4.0	7.7	7.1	8.2	5.5	7.1	4.5	6.6
7	F (mg/L)	0.68	0.76	0.62	0.83	1.23	0.97	0.53	0.79	0.63	0.46	0.75	0.80	0.61	0.55	0.70
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.5	0.3	0.0	0.1
9	HCO3 (mg/L)	295	350	318	304	287	258	266	315	310	289	274	332	362	319	282
10	K (mg/L)	1.9	2.5	2.0	2.2	2.5	2.0	2.1	1.5	2.0	1.7	1.8	2.9	2.1	2.1	2.4
11	Mg (mg/L)	22.9	25.5	24.8	30.2	25.5	21.7	25.6	24.4	27.5	24.5	34.2	28.4	33.2	28.6	21.0
12	Na (mg/L)	48.9	50.3	48.8	47.2	40.7	38.2	45.0	42.7	48.2	37.8	49.8	45.5	44.2	44.0	43.2
13	NH3-N (mg N/L)	0.33	0.27	0.15	0.13	0.04	0.44	0.07	0.43	0.48	0.08	0.17	0.05	0.06	0.06	0.12
14	NO2+NO3 (mg N/L)	1.80	0.74	1.19	1.78	0.86	2.02	2.36	0.26	0.52	1.34	1.28	3.55	2.49	10.15	8.88
15	NO2-N (mgN/L)	0.02	0.02	0.03	0.10	0.02	0.09	0.09	0.04	0.05	0.02	0.01	0.03	0.01	0.01	0.01
16	NO3-N (mgN/L)	1.78	0.71	1.16	1.69	0.84	1.93	2.28	0.21	0.47	1.32	1.28	3.52	2.48	10.13	8.87
17	o-PO4-P (mg P/L)	0.020	0.015	0.062	0.146	0.034	0.041	0.057	0.044	0.406	0.037	0.002	0.061	0.233	0.188	0.086
18	SiO2 (mg/L)	63.9	55.3	56.5	45.6	90.8	53.6	53.2	56.7	92.6	57.8	130.3	72.0	25.4	18.6	37.6
19	SO4 (mg/L)	11.8	9.9	12.8	21.5	11.0	12.2	12.1	12.5	16.0	16.5	19.4	16.9	11.9	20.6	17.7

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.8	1.2	1.2	1.8	1.2	1.6	1.5	2.2	2.0	1.8	2.0	2.2	2.1	2.3	6.5
2	COD (mg/L)							72.8	66.6	67.7	55.5	71.6	27.2	43.3	27.0	39.8
3	DO (mg/L)	8.0	8.8	8.7	8.7	8.3	8.0	8.2	8.3	7.8	7.9	9.4	7.7	8.4	7.8	7.4
4	DO_SAT% (%)	90	98	97	96	93	92	98	93	88	91	108	91	99	92	83
5	FCol-MPN (MPN/100mL)	2050	6808	992	296	275	788	313	125	750	138	588	250	588	113	328
6	Tcol-MPN (MPN/100mL)	3225	10592	12213	592	675	2225	340	263	3238	400	3063	6925	11263	530	1825
	TRACE & TOXIC															
1	As (µg/L)											0.2				1.3
2	Cd (µg/L)											0.0			0.2	0.2
3	Cr (µg/L)											6.3			4.6	1.6
4	Cu (µg/L)											197.0			9.9	0.4
5	Hg (µg/L)															
6	Ni (µg/L)											40.3			0.0	0.3
7	Pb (µg/L)											0.6			0.7	0.6
8	Zn (µg/L)											22.7			3.0	3.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	79	84	36	76	89	84	75	84	105	98	75	104	168	94	89
2	HAR_Total (mgCaCO3/L)	175	190	140	202	195	175	182	185	220	200	217	222	306	213	176
3	Na% (%)	38	36	45	33	31	32	35	33	32	29	33	31	25	31	34
4	RSC (-)	1.6	2.1	2.8	1.3	1.2	1.0	0.9	1.6	1.0	1.0	0.5	1.2	0.5	1.1	1.3
5	SAR (-)	1.6	1.6	1.9	1.4	1.3	1.3	1.5	1.4	1.5	1.2	1.5	1.3	1.1	1.3	1.4
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BHATPALLI (AGH10L0)

Local River :

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	3.176	1.642	2.351	1.269	1.173	1.625	8.366	1.936	0.158	3.893	2.115	3.878	7.173	5.364	
2	EC_GEN (μmho/cm)	556	507	540	491	580	538	471	579	634	565	542	515	556	585	532
3	pH_GEN (pH units)	8.2	8.3	8.5	8.5	8.3	8.5	8.5	8.5	8.3	8.3	8.5	8.6	8.2	8.3	8.3
4	Temp (deg C)	25.4	25.8	27.2	27.1	26.0	26.0	25.3	27.0	26.0	25.7	25.7	24.7	25.7	25.3	26.3
5	Turb (NTU)						0.8	9.3	0.9	1.8	0.9	0.7	0.5	0.6	0.8	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	5.9	6.2	14.8	7.3	5.5	7.0	3.8	4.3	3.3	3.7	6.6	6.0	4.9	1.7	4.0
2	ALK-TOT (mgCaCO3/L)	264	266	274	256	240	221	214	236	278	227	287	273	251	229	209
3	B (mg/L)	0.58	0.25	0.48	0.20	0.14	0.65	1.14	0.25	0.50	0.16	0.18	0.15	0.38	0.23	0.13
4	Ca (mg/L)	24	28	29	29	32	28	31	28	37	34	31	35	51	33	41
5	Cl (mg/L)	21.9	15.0	14.4	13.7	15.6	12.5	11.4	37.4	31.5	21.8	15.9	17.0	16.2	17.1	15.5
6	CO3 (mg/L)	7.1	7.4	17.8	8.8	6.6	8.4	4.6	5.2	4.0	4.4	8.0	7.3	6.0	2.0	4.8
7	F (mg/L)	0.75	0.52	0.79	0.85	0.41	0.54	0.53	0.65	0.71	0.61	0.66	1.09	0.99	0.36	0.67
8	Fe (mg/L)	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.1	0.1	0.1	0.0
9	HCO3 (mg/L)	308	310	298	294	280	253	252	277	331	268	334	318	294	276	245
10	K (mg/L)	2.6	2.1	3.0	2.5	1.8	2.2	4.2	2.5	1.7	1.7	2.3	3.2	2.4	2.2	2.4
11	Mg (mg/L)	27.6	25.0	26.3	25.9	21.1	21.2	16.7	26.3	30.7	30.5	42.3	32.8	23.6	27.8	18.0
12	Na (mg/L)	54.8	53.3	54.3	50.1	52.8	48.7	48.8	57.1	53.4	61.3	54.8	53.2	48.5	51.6	49.0
13	NH3-N (mg N/L)	0.29	0.24	0.24	0.17	0.13	0.48	0.22	0.08	0.26	0.33	0.23	0.03	0.46	0.09	0.10
14	NO2+NO3 (mg N/L)	0.71	0.41	0.73	1.32	1.02	1.87	0.36	0.14	0.26	1.65	0.45	0.78	7.08	7.65	6.63
15	NO2-N (mgN/L)	0.02	0.02	0.01	0.09	0.04	0.10	0.03	0.00	0.02	0.05	0.02	0.01	0.08	0.01	0.18
16	NO3-N (mgN/L)	0.69	0.39	0.71	1.23	0.98	1.77	0.33	0.14	0.23	1.60	0.43	0.77	7.00	7.64	6.45
17	o-PO4-P (mg P/L)	0.027	0.020	0.019	0.208	0.069	0.076	0.248	0.038	0.210	0.039	0.015	0.046	0.565	0.235	0.050
18	SiO2 (mg/L)	53.3	52.2	49.7	48.2		54.0	42.8	120.2	26.2	87.8	30.1	27.9	29.2	51.1	40.2
19	SO4 (mg/L)	14.3	15.4	18.0	18.9	427.5	13.8	21.9	16.8	16.0	15.7	24.6	11.7	12.7	24.1	13.8

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.0	1.0	0.9	1.6	1.2	1.4	1.8	1.6	1.4	2.0	2.6	16.9	3.9	2.7	1.8
2	COD (mg/L)							94.4	70.3	55.7	36.0	49.5	83.3	48.7	32.7	39.9
3	DO (mg/L)	7.5	8.3	7.7	7.8	7.1	7.4	6.9	7.6	8.1	7.3	8.2	4.9	6.8	7.0	6.4
4	DO_SAT% (%)	92	102	96	98	87	92	84	93	100	89	101	57	83	85	79
5	FCol-MPN (MPN/100mL)	1017	1166	294	406	283	250	300	200	433	300	400	150	317	173	113
6	Tcol-MPN (MPN/100mL)	2094	30333	1194	878	500	567	967	250	600	400	2683	3567	11083	363	210
	TRACE & TOXIC															
1	As (µg/L)											0.9	2.1	3.0	1.2	1.6
2	Cd (µg/L)						8.0					0.5	1.4	0.0	1.0	0.3
3	Cr (µg/L)						48.0					0.0	1.6	2.4	5.7	1.4
4	Cu (µg/L)												0.1	2.9		2.8
5	Hg (µg/L)						1.2					0.0	0.1	0.1	0.0	
6	Ni (µg/L)						1.0					0.0	6.0	7.0	2.5	1.3
7	Pb (µg/L)						70.0					22.0	0.9	0.5	13.0	1.7
8	Zn (µg/L)						49.0					18.9	11.1	23.4	0.0	4.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	59	69	71	72	80	69	78	71	92	84	78	87	127	81	102
2	HAR_Total (mgCaCO3/L)	174	173	181	179	168	157	148	180	220	211	254	224	226	197	177
3	Na% (%)	40	40	39	37	41	40	40	41	34	40	32	34	32	36	37
4	RSC (-)	1.8	1.9	1.9	1.6	1.5	1.3	1.3	1.2	1.2	0.5	0.8	1.0	0.5	0.8	0.7
5	SAR (-)	1.8	1.8	1.8	1.6	1.8	1.7	1.8	1.9	1.6	1.9	1.5	1.6	1.4	1.6	1.6
	PESTICIDES															
1	Aldrin (µg/L)						0.0					0.0				
2	BHC (µg/L)						0.1					0.0				
3	DDT (µg/L)						0.1					0.0				
4	Dieldrin (µg/L)						0.1					0.0				
5	Endos (µg/L)						0.1					0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: BAMNI	Code	: AGH30E2
State	: Maharashtra	District	Chandrapur
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wardha
Sub-Sub Tributary	:	Local River	: Wardha
Division	: Wainganga Div., Nagpur	Sub-Division	: Wardha Sub-division, Chandrapur
Drainage Area	: 46020 Sq. Km.	Bank	: Left
Latitude	: 19°48'53"	Longitude	: 79°22'46"
	Opening Date	Closing Date	
Gauge	: 12.01.1964		
Discharge	: 16.10.1965		
Sediment	: 13.12.1965		
Water Quality	: 03.06.1966		

Water Quality Datasheet for the period : 2015-2016

Station Name : BAMNI (AGH30E2)

Local River : Wardha

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Wardha Sub-division,Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)												
2	Colour_Cod (-)	Clear	Light Brown	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Light Brown	Clear
3	EC_GEN (μmho/cm)	741	418	460	449	523	589	592	596	585	556	1075	1527
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_GEN (pH units)	8.7	8.1	7.7	8.1	8.0	8.5	8.0	7.8	8.0	8.0	7.7	7.7
6	Temp (deg C)	28.0	27.0	30.0	28.0	28.0	28.0	26.0	20.0	20.0	25.0	29.0	30.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	10.4	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	244	138	147	187	111	198	208	201	255	210	362	228
3	B (mg/L)	0.10	0.18	0.17	0.61	0.26	0.20	0.09	0.45	0.22	0.19	0.17	0.20
4	Ca (mg/L)	40	43	37	37	63	46	48	41	45	79	109	47
5	Cl (mg/L)	51.7	27.8	45.7	29.8	107.2	41.8	45.7	39.8	43.7	47.3	102.8	334.0
6	CO3 (mg/L)	12.5	0.0	0.0	0.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.01	0.21	0.28	0.00	0.43	0.48	0.17	0.49	0.11	0.14	0.17	0.06
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.0	0.1	0.1
9	HCO3 (mg/L)	273	168	180	228	135	223	254	245	312	256	442	278
10	K (mg/L)	5.7	4.0	3.5	3.8	4.5	2.3	2.4	5.9	4.4	5.0	10.3	31.3
11	Mg (mg/L)	20.3	11.0	19.8	16.5	15.4	23.0	21.4	26.2	21.4	23.0	41.2	16.6
12	Na (mg/L)	68.7	23.2	30.9	33.1	33.6	41.7	44.7	61.7	51.8	53.6	110.1	180.3
13	NH3-N (mg N/L)	0.07	0.08	0.02	0.03	0.19	0.29	0.43	0.22	0.19	0.32	0.20	0.02
14	NO2+NO3 (mg N/L)	8.51	10.39	10.74	8.31	16.52	11.24	8.87	13.32	5.44	15.28	3.14	6.42
15	NO2-N (mgN/L)	0.11	0.11	0.00	0.02	0.05	0.07	0.01	0.01	0.01	0.19	0.41	0.37
16	NO3-N (mgN/L)	8.40	10.28	10.74	8.29	16.48	11.17	8.86	13.31	5.43	15.09	2.73	6.05
17	o-PO4-P (mg P/L)	0.138	0.059	0.123	0.089	0.130	0.140	0.030	0.352	0.046	0.336	0.261	0.122
18	SiO2 (mg/L)	36.0	25.9	19.5	24.5	21.9	24.2	27.3	22.4	18.1	22.2	30.6	45.5
19	SO4 (mg/L)	9.8	1.7	45.6	30.0	40.2	64.0	40.1	60.1	44.0	57.3	48.3	13.4

Water Quality Datasheet for the period : 2015-2016

Station Name : BAMNI (AGH30E2)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water Analysis

Sub-Division : Wardha Sub-division, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	35.0	2.5	15.0	3.1	1.7	15.0	3.8	1.6	1.2	45.0	4.2	10.0
2	COD (mg/L)	55.0	37.9	26.0	73.3	20.6	28.0	48.5	21.5	32.5	80.3	49.9	41.1
3	DO (mg/L)	4.3	6.0	4.5	6.4	5.0	4.3	6.7	5.4	6.1	3.8	5.9	2.9
4	DO_SAT% (%)	55	75	60	82	64	55	83	59	67	46	77	38
5	FCol-MPN (MPN/100mL)	210	20	20	130	80	220	110	80	140	80	110	130
6	Tcol-MPN (MPN/100mL)	2800	80	80	1300	1300	800	220	1700	1100	270	260	300
	TRACE & TOXIC												
1	As (µg/L)								1.2			3.2	
2	Cd (µg/L)								0.5			0.6	
3	Cr (µg/L)								0.4			1.7	
4	Cu (µg/L)								0.9			6.2	
5	Ni (µg/L)								0.9			8.1	
6	Pb (µg/L)								3.0			2.5	
7	Zn (µg/L)								4.6			9.7	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	100	106	93	93	156	115	120	101	112	198	273	117
2	HAR_Total (mgCaCO3/L)	184	152	175	162	220	210	209	211	202	294	445	186
3	Na% (%)	44	24	27	30	24	30	32	38	35	28	34	64
4	RSC (-)	1.2	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.9
5	SAR (-)	2.2	0.8	1.0	1.1	1.0	1.3	1.4	1.9	1.6	1.4	2.3	5.8
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : BAMNI (AGH30E2)

Division : Wainganga Div., Nagpur

Local River : Wardha

Sub-Division : Wardha Sub-division,Chandrapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (μmho/cm)	12	1527	418	676
3	pH_GEN (pH units)	12	8.7	7.7	8
4	Temp (deg C)	12	30.0	20.0	26.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	10.4	0.0	1.5
2	ALK-TOT (mgCaCO3/L)	12	362	111	207
3	B (mg/L)	12	0.61	0.09	0.24
4	Ca (mg/L)	12	109	37	53
5	Cl (mg/L)	12	334.0	27.8	76.4
6	CO3 (mg/L)	12	12.5	0.0	1.8
7	F (mg/L)	12	0.49	0.00	0.21
8	Fe (mg/L)	12	0.1	0.0	0.1
9	HCO3 (mg/L)	12	442	135	249
10	K (mg/L)	12	31.3	2.3	6.9
11	Mg (mg/L)	12	41.2	11.0	21.3
12	Na (mg/L)	12	180.3	23.2	61.1
13	NH3-N (mg N/L)	12	0.43	0.02	0.17
14	NO2+NO3 (mg N/L)	12	16.52	3.14	9.85
15	NO2-N (mgN/L)	12	0.41	0.00	0.11
16	NO3-N (mgN/L)	12	16.48	2.73	9.73
17	o-PO4-P (mg P/L)	12	0.352	0.030	0.152
18	SiO2 (mg/L)	12	45.5	18.1	26.5
19	SO4 (mg/L)	12	64.0	1.7	37.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	45.0	1.2	11.5
2	COD (mg/L)	12	80.3	20.6	42.9
3	DO (mg/L)	12	6.7	2.9	5.1
4	DO_SAT% (%)	12	83	38	63
5	FCol-MPN (MPN/100mL)	12	220	20	111
6	Tcol-MPN (MPN/100mL)	12	2800	80	851
	TRACE & TOXIC				
1	As (μg/L)	2	3.2	1.2	2.2
2	Cd (μg/L)	2	0.6	0.5	0.6
3	Cr (μg/L)	2	1.7	0.4	1
4	Cu (μg/L)	2	6.2	0.9	3.5
5	Ni (μg/L)	2	8.1	0.9	4.5
6	Pb (μg/L)	2	3.0	2.5	2.7
7	Zn (μg/L)	2	9.7	4.6	7.1
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	273	93	132
2	HAR_Total (mgCaCO3/L)	12	445	152	221
3	Na% (%)	12	64	24	34
4	RSC (-)	12	1.2	0.0	0.3
5	SAR (-)	12	5.8	0.8	1.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BAMNI (AGH30E2)

Local River : Wardha

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha Sub-division, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	493.2	419.1	578.2	60.24	335.2	539.5	1220	106.5	54.99	1243	1272	545.0	1046	767.2	
2	EC_GEN (μmho/cm)	420	479	529	573	855	378	449	649	687	338	405	910	627	538	518
3	pH_GEN (pH units)	8.2	8.0	8.3	8.2	8.2	8.3	8.2	8.1	8.1	8.2	8.2	8.5	8.3	7.6	8.1
4	Temp (deg C)	29.1	29.6	29.9	29.1	30.2	30.1	30.4	31.0	30.6	30.3	29.2	28.0	27.7	29.2	28.2
5	Turb (NTU)						34.0	77.5	105.6	32.7	24.4	16.6	1.6	6.0	12.1	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.8	1.1	3.8	1.2	4.6	2.9	3.4	2.6	1.3	4.7	2.5	5.4	3.6	0.8	2.1
2	ALK-TOT (mgCaCO3/L)	141	167	158	155	140	132	145	203	157	149	149	255	243	243	165
3	B (mg/L)	0.42	0.72	0.50	0.26	0.25	0.35	0.63	1.07	0.31	0.46	0.32	0.17	0.18	0.22	0.26
4	Ca (mg/L)	35	38	43	43	77	30	37	53	53	33	38	89	62	41	44
5	Cl (mg/L)	34.9	49.9	65.8	74.4	161.4	24.4	17.9	52.4	118.0	15.0	32.4	115.5	62.8	41.2	52.5
6	CO3 (mg/L)	3.4	1.4	4.6	1.5	5.5	3.5	4.1	3.2	1.6	5.6	3.1	6.6	4.4	1.0	2.5
7	F (mg/L)	0.63	0.77	0.61	0.56	1.05	0.33	0.47	0.52	0.57	0.35	0.36	0.53	0.67	0.79	0.19
8	Fe (mg/L)	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.7	0.1	0.4	0.1	0.0
9	HCO3 (mg/L)	165	200	184	186	159	154	169	242	188	170	175	297	288	294	197
10	K (mg/L)	3.9	4.6	4.8	6.0	7.1	2.8	2.2	3.6	4.8	2.1	13.6	9.8	9.4	4.4	4.3
11	Mg (mg/L)	14.7	18.1	19.6	19.4	19.4	13.0	14.3	16.7	23.1	12.3	18.1	28.7	25.8	25.6	16.6
12	Na (mg/L)	29.3	38.8	42.6	47.8	56.3	21.9	17.8	54.6	65.2	11.4	29.4	24.4	62.6	54.6	37.9
13	NH3-N (mg N/L)	0.39	0.25	0.24	0.24	0.16	0.16	0.48	0.64	0.20	0.22	0.19	0.00	1.86	0.29	0.08
14	NO2+NO3 (mg N/L)	1.62	1.65	2.41	6.72	1.64	1.59	2.69	1.37	0.35	0.92	0.89	3.68	3.56	3.80	10.89
15	NO2-N (mgN/L)	0.03	0.13	0.09	0.32	0.24	0.02	0.11	0.28	0.16	0.00	0.39	0.28	0.02	0.02	0.06
16	NO3-N (mgN/L)	1.59	1.52	2.32	6.40	1.40	1.57	2.58	1.09	0.20	0.92	0.50	3.40	3.54	3.78	10.84
17	o-PO4-P (mg P/L)	0.108	0.095	0.088	0.399	0.417	0.056	0.041	0.304	0.037	0.103	0.007	0.317	0.344	0.150	0.108
18	SiO2 (mg/L)	34.9	40.8	43.7	38.9	47.1	39.5	38.7	37.6	79.0	26.8	66.1	49.3	21.1	20.8	25.5
19	SO4 (mg/L)	22.9	24.1	34.2	40.9	66.6	18.7	17.4	42.3	36.4	13.6	23.4	22.5	28.8	23.7	25.4

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BAMNI (AGH30E2)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Wardha Sub-division, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	6.2	3.6	3.0	5.9	8.2	2.7	12.8	31.3	1.9	2.2	2.8	31.7	18.2	57.4	11.5
2	COD (mg/L)							30.5	73.0	71.5	69.2	46.4	85.1	56.1	125.4	42.6
3	DO (mg/L)	6.2	6.2	6.3	6.0	6.3	7.0	5.6	3.8	5.7	6.8	6.8	5.0	4.3	5.4	5.2
4	DO_SAT% (%)	80	81	83	78	83	93	74	51	76	90	88	64	54	70	67
5	FCol-MPN (MPN/100mL)	24243	2693	1073	633	388	490	1580	910	1140	163	190	2150	770	2418	92
6	Tcol-MPN (MPN/100mL)	52747	5850	11210	1580	1760	1450	3990	5320	4230	813	850	12050	49860	4380	1112
	TRACE & TOXIC															
1	As (µg/L)												6.8	4.2		
2	Cd (µg/L)												1.0	1.3		
3	Cr (µg/L)												6.7	6.5		
4	Cu (µg/L)												20.4	7.3		
5	Hg (µg/L)													0.1		
6	Ni (µg/L)												4.7	16.2		
7	Pb (µg/L)					67.0							4.3	1.1		
8	Zn (µg/L)					64.0							4.2	5.5		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	87	94	107	107	193	76	92	134	134	82	95	221	155	102	110
2	HAR_Total (mgCaCO3/L)	148	170	188	188	274	130	151	203	230	134	170	341	263	209	179
3	Na% (%)	26	27	27	32	26	23	18	28	37	16	23	16	27	32	30
4	RSC (-)	0.2	0.4	0.2	0.1	0.1	0.1	0.1	0.5	0.1	0.4	0.0	0.5	0.0	0.8	0.4
5	SAR (-)	1.0	1.2	1.2	1.4	1.2	0.8	0.6	1.4	1.8	0.5	0.9	0.6	1.6	1.6	1.2
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)					0.0										
5	Endos (µg/L)					0.1										

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BAMNI (AGH30E2)

Local River : Wardha

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha Sub-division, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	26.67	26.66	21.81	70.27	44.59	52.24	43.10	15.60	5.558	87.18	27.95	43.79	115.4	32.06	
2	EC_GEN (µmho/cm)	506	474	581	666	569	539	545	760	1137	554	534	643	692	586	591
3	pH_GEN (pH units)	8.5	8.1	8.3	8.2	8.4	8.3	8.5	8.2	7.8	8.3	8.5	8.3	8.2	8.1	8.1
4	Temp (deg C)	23.4	24.5	23.8	23.5	23.3	25.3	24.3	25.6	22.9	24.3	23.5	23.8	23.5	23.8	23.5
5	Turb (NTU)						2.6	3.4	0.8	1.4	3.2	13.3	2.5	4.1	0.6	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	5.5	1.1	6.1	1.9	9.5	7.3	5.2	0.0	0.0	2.2	5.9	4.1	1.8	1.7	1.9
2	ALK-TOT (mgCaCO3/L)	190	207	202	160	226	190	209	183	250	203	206	254	264	214	216
3	B (mg/L)	0.39	0.36	0.40	0.19	0.26	0.43	0.45	0.61	0.64	0.97	0.23	0.34	0.23	0.32	0.24
4	Ca (mg/L)	33	37	47	51	50	38	43	58	92	38	49	52	73	45	45
5	Cl (mg/L)	30.9	30.7	53.3	90.5	38.9	38.3	35.5	79.2	201.8	41.7	50.9	49.5	29.6	32.6	42.7
6	CO3 (mg/L)	6.6	1.3	7.4	2.3	11.5	8.8	6.3	0.0	0.0	2.7	7.1	4.9	2.2	2.0	2.3
7	F (mg/L)	0.62	0.52	0.57	0.97	0.81	0.65	0.45	0.83	0.51	0.37	0.48	0.62	0.33	0.33	0.31
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.8	0.5	0.4	0.0	0.1
9	HCO3 (mg/L)	218	251	232	191	252	214	242	224	305	242	237	300	318	256	258
10	K (mg/L)	3.4	4.2	3.5	7.5	4.9	3.6	4.0	4.1	9.5	2.8	4.0	5.3	6.6	3.4	3.8
11	Mg (mg/L)	22.3	20.7	22.4	21.7	24.3	20.4	26.2	25.2	36.8	25.3	27.9	34.0	30.7	26.3	23.0
12	Na (mg/L)	39.7	36.3	44.7	54.5	43.3	37.5	45.9	45.8	90.4	35.8	46.7	49.1	43.4	45.6	50.0
13	NH3-N (mg N/L)	0.33	0.27	0.20	0.20	0.04	0.37	0.13	0.53	0.63	0.15	0.15	0.13	1.35	0.04	0.28
14	NO2+NO3 (mg N/L)	1.17	1.14	1.83	7.18	1.22	2.49	3.69	0.42	0.91	1.13	1.13	1.50	4.08	7.30	9.71
15	NO2-N (mgN/L)	0.10	0.09	0.14	0.73	0.02	0.18	0.09	0.11	0.09	0.02	0.17	0.03	0.01	0.02	0.02
16	NO3-N (mgN/L)	1.07	1.05	1.69	6.44	1.19	2.31	3.61	0.30	0.82	1.10	0.96	1.47	4.07	7.27	9.69
17	o-PO4-P (mg P/L)	0.045	0.068	0.086	0.486	0.047	0.049	0.098	0.152	0.326	0.052	0.011	0.096	0.518	0.241	0.142
18	SiO2 (mg/L)	44.8	41.8	43.1	34.4	84.6	48.3	43.7	52.0	90.8	48.8	107.8	63.8	20.6	14.5	23.0
19	SO4 (mg/L)	30.7	21.9	31.4	47.1	29.3	29.2	29.8	40.7	47.8	31.1	38.2	34.8	34.8	41.4	52.1

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BAMNI (AGH30E2)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Wardha Sub-division, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.9	1.1	1.0	2.5	1.9	1.4	8.7	1.7	36.3	2.5	3.6	3.3	2.7	2.5	5.4
2	COD (mg/L)							41.6	80.3	90.3	45.7	67.4	43.9	45.8	32.0	32.6
3	DO (mg/L)	7.1	7.3	6.9	5.8	7.0	7.2	5.8	5.4	2.0	7.7	6.7	7.3	6.6	7.1	5.6
4	DO_SAT% (%)	83	87	82	69	82	87	70	67	23	92	79	86	77	83	66
5	FCol-MPN (MPN/100mL)	392	571	546	1355	175	375	238	175	1888	100	1213	288	713	108	138
6	Tcol-MPN (MPN/100mL)	700	867	1408	3677	400	825	250	513	5300	638	3125	9263	10188	400	955
	TRACE & TOXIC															
1	As (µg/L)											0.9				1.2
2	Cd (µg/L)											0.2			0.6	0.5
3	Cr (µg/L)											5.8			2.0	0.4
4	Cu (µg/L)											135.4			6.0	0.9
5	Hg (µg/L)															
6	Ni (µg/L)											18.0			0.3	0.9
7	Pb (µg/L)											0.4			1.2	3.0
8	Zn (µg/L)											18.9			5.0	4.6
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	81	93	118	128	124	96	106	146	229	95	122	131	182	113	112
2	HAR_Total (mgCaCO3/L)	174	180	211	218	226	181	215	251	383	201	238	272	310	223	208
3	Na% (%)	33	30	31	34	29	31	31	28	34	27	30	28	24	31	34
4	RSC (-)	0.4	0.6	0.1	0.0	0.3	0.3	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.3
5	SAR (-)	1.3	1.2	1.3	1.6	1.3	1.2	1.4	1.3	2.0	1.1	1.3	1.3	1.1	1.3	1.5
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BAMNI (AGH30E2)

Local River : Wardha

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha Sub-division, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	4.992	6.034	6.814	3.764	15.78	14.47	27.08	3.293	11.01	28.80	9.549	15.60	24.07	9.160	
2	EC_GEN (µmho/cm)	878	688	934	1562	590	600	694	1658	1386	614	620	981	645	885	1053
3	pH_GEN (pH units)	8.0	8.1	8.0	8.1	8.3	8.4	8.3	7.7	7.7	8.0	8.1	8.3	8.0	8.1	7.8
4	Temp (deg C)	29.1	29.5	28.8	29.1	29.0	28.3	28.8	29.0	29.0	27.0	26.7	27.3	25.3	27.3	28.0
5	Turb (NTU)						1.1	6.6	0.7	0.9	2.2	1.0	1.4	1.3	0.9	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.4	1.0	2.1	0.6	3.2	3.7	3.0	0.0	0.0	0.0	3.6	4.8	2.1	1.1	0.0
2	ALK-TOT (mgCaCO3/L)	211	194	204	239	141	178	218	270	222	204	218	294	194	228	267
3	B (mg/L)	0.78	0.28	0.61	0.19	0.25	0.73	1.02	0.28	0.82	0.43	0.10	0.15	0.16	0.19	0.19
4	Ca (mg/L)	56	48	65	115	49	44	45	107	86	47	39	63	56	51	78
5	Cl (mg/L)	115.2	109.3	152.1	342.3	85.2	62.5	54.2	412.7	231.2	59.7	67.2	147.2	53.4	71.7	161.4
6	CO3 (mg/L)	2.9	1.2	2.5	0.7	3.8	4.4	3.6	0.0	0.0	0.0	4.4	5.8	2.6	1.4	0.0
7	F (mg/L)	1.99	0.42	0.78	1.12	0.57	0.34	0.58	0.95	0.62	0.36	0.84	0.65	0.80	0.43	0.12
8	Fe (mg/L)	0.3	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.4	0.1	0.2	0.1	0.1
9	HCO3 (mg/L)	251	234	243	290	164	208	259	329	270	248	258	347	232	276	325
10	K (mg/L)	13.4	7.7	12.4	21.2	5.6	4.8	9.1	12.5	10.3	4.1	5.3	12.9	4.3	8.1	15.5
11	Mg (mg/L)	27.6	26.7	26.2	38.4	16.8	17.2	18.5	61.4	55.8	26.3	43.4	37.0	17.6	26.3	26.9
12	Na (mg/L)	94.4	68.7	104.2	171.9	61.3	46.7	70.0	171.3	68.3	67.5	58.3	135.5	57.7	105.4	114.7
13	NH3-N (mg N/L)	0.32	0.28	0.24	0.49	0.13	0.44	0.42	0.15	0.36	0.28	0.29	0.02	0.96	0.09	0.18
14	NO2+NO3 (mg N/L)	2.77	1.52	1.97	8.10	2.05	1.51	0.36	0.96	0.34	1.61	0.99	0.53	5.98	6.80	8.28
15	NO2-N (mgN/L)	0.07	0.09	0.13	0.27	0.04	0.15	0.03	0.02	0.01	0.10	0.26	0.02	0.36	0.01	0.32
16	NO3-N (mgN/L)	2.69	1.43	1.84	7.82	2.01	1.35	0.33	0.93	0.33	1.50	0.73	0.51	5.62	6.79	7.96
17	o-PO4-P (mg P/L)	0.321	0.308	0.326	2.233	0.121	0.117	0.138	0.486	0.186	0.074	0.032	0.124	0.884	0.202	0.240
18	SiO2 (mg/L)	40.8	49.6	40.6	42.4	92.5	46.7	45.2	111.8	33.7	75.8	23.5	23.8	24.0	34.6	32.7
19	SO4 (mg/L)	81.1	56.8	97.6	109.7	42.2	33.4	44.0	49.6	47.7	25.3	50.9	18.7	15.4	72.4	39.7

Water Quality Seasonal Average for the period: 2001-2016

Station Name : BAMNI (AGH30E2)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Wardha Sub-division, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	5.9	20.1	14.2	23.7	11.0	9.4	7.3	52.9	40.9	4.2	16.8	12.7	3.9	3.5	19.7
2	COD (mg/L)							78.9	150.8	134.3	89.5	125.1	93.1	43.3	36.0	57.1
3	DO (mg/L)	5.4	5.9	4.8	3.5	4.2	5.9	4.8	2.8	3.2	6.5	4.2	4.2	6.9	6.6	4.2
4	DO_SAT% (%)	69	77	62	45	56	75	60	34	40	81	52	52	85	83	54
5	FCol-MPN (MPN/100mL)	544	1699	444	2450	450	100	100	100	283	883	3467	533	643	80	107
6	Tcol-MPN (MPN/100mL)	956	2042	1028	27600	1283	150	267	300	550	2250	57833	9850	25350	1147	277
	TRACE & TOXIC															
1	As (µg/L)											1.2	2.6	0.9	1.3	3.2
2	Cd (µg/L)						8.0					0.0	1.8	0.0	1.0	0.6
3	Cr (µg/L)						102.0					0.0	1.6	0.6	6.3	1.7
4	Cu (µg/L)												1.7	13.2		6.2
5	Hg (µg/L)						2.8					0.1	0.2	0.1	0.0	
6	Ni (µg/L)						1.0					3.7	9.7	5.2	6.0	8.1
7	Pb (µg/L)						54.0					21.8	1.2	0.1	15.0	2.5
8	Zn (µg/L)						69.0					6.9	12.7	17.2	0.0	9.7
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	139	119	162	288	122	111	111	268	215	119	98	158	139	128	196
2	HAR_Total (mgCaCO3/L)	254	230	271	448	191	182	188	524	448	228	279	312	213	237	308
3	Na% (%)	43	38	43	43	40	35	42	41	28	45	30	41	36	45	42
4	RSC (-)	0.1	0.2	0.0	0.2	0.0	0.0	0.8	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.3
5	SAR (-)	2.5	2.0	2.7	3.4	1.9	1.5	2.2	3.2	1.6	2.2	1.5	3.2	1.7	2.9	3.1
	PESTICIDES															
1	Aldrin (µg/L)						0.0					0.0				
2	BHC (µg/L)						0.1					0.0				
3	DDT (µg/L)						0.1					0.0				
4	Dieldrin (µg/L)						0.0					0.0				
5	Endos (µg/L)						0.1					0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: P.G.BRIDGE	Code	: AGH32D5
State	: Maharashtra	District	Yeotmal
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wardha
Sub-Sub Tributary	: Penganga	Local River	: Penganga
Division	: Wainganga Div., Nagpur	Sub-Division	: Penganga Sd, Yeotmal
Drainage Area	: 18441 Sq. Km.	Bank	: Left
Latitude	: 19°49'03"	Longitude	: 78°34'40"
	Opening Date	Closing Date	
Gauge	: 25.12.1964		
Discharge	: 21.07.1965		
Sediment	: 19.10.1965		
Water Quality	: 31.05.1966		

Water Quality Datasheet for the period : 2015-2016

Station Name : P.G.BRIDGE (AGH32D5)

Local River : Penganga

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.03.2016
		A	A	A	A	A	A	A	A	A
	PHYSICAL									
1	Q (cumec)									
2	Colour_Cod (-)	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	580	273	285	397	419	471	476	456	387
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.9	8.5	8.1	8.2	8.4	8.5	8.4	8.8	8.6
6	Temp (deg C)	26.5	27.0	27.0	28.0	26.5	26.0	26.0	26.5	25.0
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)	5.2	10.4	0.0	0.0	5.2	5.2	7.8	0.0	6.0
2	ALK-TOT (mgCaCO3/L)	234	124	131	192	134	142	207	132	201
3	B (mg/L)	0.26	0.15	0.11	0.59	0.43	0.13	0.10	0.14	0.09
4	Ca (mg/L)	23	37	27	35	44	25	29	19	56
5	Cl (mg/L)	31.8	11.9	17.9	19.9	19.9	29.8	27.8	113.3	28.8
6	CO3 (mg/L)	6.2	12.5	0.0	0.0	6.2	6.2	9.4	0.0	7.2
7	F (mg/L)	0.01	0.10	0.01	0.00	0.34	0.45	0.24	0.41	0.21
8	Fe (mg/L)	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0
9	HCO3 (mg/L)	273	126	160	235	151	160	233	161	231
10	K (mg/L)	2.6	2.0	2.1	3.0	3.2	3.2	3.1	3.6	2.9
11	Mg (mg/L)	25.8	6.0	13.7	24.2	22.5	22.5	25.1	27.8	11.2
12	Na (mg/L)	49.2	12.5	17.6	22.3	21.5	29.8	35.1	51.9	29.3
13	NH3-N (mg N/L)	0.09	0.03	0.06	0.02	0.09	0.11	0.15	0.17	0.20
14	NO2+NO3 (mg N/L)	6.73	8.76	7.60	13.28	14.68	17.05	10.80	8.66	7.02
15	NO2-N (mgN/L)	0.02	0.03	0.00	0.03	0.01	0.04	0.01	0.00	0.09
16	NO3-N (mgN/L)	6.71	8.73	7.60	13.25	14.67	17.01	10.80	8.66	6.93
17	o-PO4-P (mg P/L)	0.066	0.046	0.086	0.067	0.097	0.077	0.143	0.149	0.178
18	SiO2 (mg/L)	37.0	31.4	18.9	29.6	30.9	32.2	38.9	29.0	56.5
19	SO4 (mg/L)	23.0	3.3	14.4	15.6	89.6	24.3	23.4	18.3	14.9

Water Quality Datasheet for the period : 2015-2016

Station Name : P.G.BRIDGE (AGH32D5)

Division : Wainganga Div., Nagpur

Local River : Penganga

River Water Analysis

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.03.2016
		A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	50.0	2.0	2.8	3.3	2.6	2.0	1.7	2.3	3.5
2	COD (mg/L)	67.0	39.4	19.5	15.5	20.1	23.2	72.2	24.0	81.2
3	DO (mg/L)	5.2	8.2	6.4	9.8	6.7	6.6	8.0	9.6	5.9
4	DO_SAT% (%)	64	103	80	125	83	81	99	118	71
5	FCol-MPN (MPN/100mL)	70	40	40	80	40	170	170	120	90
6	Tcol-MPN (MPN/100mL)	110	110	70	800	270	500	800	700	1100
	TRACE & TOXIC									
1	As (µg/L)								0.6	
2	Cd (µg/L)								0.3	
3	Cr (µg/L)								1.5	
4	Cu (µg/L)								0.6	
5	Ni (µg/L)								0.3	
6	Pb (µg/L)								0.8	
7	Zn (µg/L)								3.4	
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	57	93	68	88	111	62	73	49	139
2	HAR_Total (mgCaCO3/L)	164	118	125	189	205	155	177	164	186
3	Na% (%)	39	19	23	20	18	29	30	40	25
4	RSC (-)	1.4	0.1	0.1	0.1	0.0	0.0	0.6	0.0	0.3
5	SAR (-)	1.7	0.5	0.7	0.7	0.7	1.0	1.1	1.8	0.9
	PESTICIDES									

Water Quality Summary for the period : 2015-2016

Station Name : P.G.BRIDGE (AGH32D5)

Local River : Penganga

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	9	580	273	416
3	pH_GEN (pH units)	9	8.9	8.1	8.5
4	Temp (deg C)	9	28.0	25.0	26.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	9	10.4	0.0	4.4
2	ALK-TOT (mgCaCO3/L)	9	234	124	166
3	B (mg/L)	9	0.59	0.09	0.22
4	Ca (mg/L)	9	56	19	33
5	Cl (mg/L)	9	113.3	11.9	33.5
6	CO3 (mg/L)	9	12.5	0.0	5.3
7	F (mg/L)	9	0.45	0.00	0.2
8	Fe (mg/L)	9	0.1	0.0	0
9	HCO3 (mg/L)	9	273	126	192
10	K (mg/L)	9	3.6	2.0	2.8
11	Mg (mg/L)	9	27.8	6.0	19.9
12	Na (mg/L)	9	51.9	12.5	29.9
13	NH3-N (mg N/L)	9	0.20	0.02	0.1
14	NO2+NO3 (mg N/L)	9	17.05	6.73	10.51
15	NO2-N (mgN/L)	9	0.09	0.00	0.03
16	NO3-N (mgN/L)	9	17.01	6.71	10.48
17	o-PO4-P (mg P/L)	9	0.178	0.046	0.101
18	SiO2 (mg/L)	9	56.5	18.9	33.8
19	SO4 (mg/L)	9	89.6	3.3	25.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	9	50.0	1.7	7.8
2	COD (mg/L)	9	81.2	15.5	40.2
3	DO (mg/L)	9	9.8	5.2	7.4
4	DO_SAT% (%)	9	125	64	92
5	FCol-MPN (MPN/100mL)	9	170	40	91
6	Tcol-MPN (MPN/100mL)	9	1100	70	496
	TRACE & TOXIC				
1	As (µg/L)	1	0.6	0.6	0.6
2	Cd (µg/L)	1	0.3	0.3	0.3
3	Cr (µg/L)	1	1.5	1.5	1.5
4	Cu (µg/L)	1	0.6	0.6	0.6
5	Ni (µg/L)	1	0.3	0.3	0.3
6	Pb (µg/L)	1	0.8	0.8	0.8
7	Zn (µg/L)	1	3.4	3.4	3.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	9	139	49	82
2	HAR_Total (mgCaCO3/L)	9	205	118	165
3	Na% (%)	9	40	18	27
4	RSC (-)	9	1.4	0.0	0.3
5	SAR (-)	9	1.8	0.5	1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : P.G.BRIDGE (AGH32D5)

Local River : Penganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	503.2	765.4	204.9	18.24	414.8	143.3	120.3	28.62	77.19	542.3	210.1	222.0	1768	285.4	
2	EC_GEN (μmho/cm)	326	317	350	309	298	327	326	382	253	304	379	423	383	409	391
3	pH_GEN (pH units)	8.2	8.1	8.4	8.6	8.3	7.4	8.5	8.5	8.3	8.3	8.5	8.7	8.4	8.0	8.4
4	Temp (deg C)	29.2	28.6	29.7	30.9	29.4	29.7	26.9	27.6	27.4	25.5	26.8	27.1	26.7	27.9	27.0
5	Turb (NTU)						21.5	97.5	55.3	55.0	33.5	18.6	1.7	6.9	4.0	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.8	2.3	6.4	6.2	4.3	4.3	5.0	4.5	2.1	3.8	5.1	4.4	4.7	0.8	4.1
2	ALK-TOT (mgCaCO3/L)	150	165	172	150	130	130	140	156	106	122	149	253	197	170	163
3	B (mg/L)	0.38	0.58	0.41	0.19	0.23	0.36	0.67	0.63	0.32	0.47	0.28	0.23	0.19	0.19	0.31
4	Ca (mg/L)	30	29	29	26	33	30	33	32	24	31	34	43	38	34	33
5	Cl (mg/L)	12.0	9.3	10.4	11.9	9.9	11.4	11.9	16.3	8.7	11.9	21.0	22.7	19.2	22.9	20.3
6	CO3 (mg/L)	2.5	2.8	7.7	7.5	5.2	5.2	6.0	5.5	2.5	4.6	6.1	5.2	5.7	1.0	5.0
7	F (mg/L)	0.38	0.54	0.55	0.32	0.50	0.22	0.45	0.22	0.28	0.26	0.32	0.67	0.52	0.70	0.09
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.6	1.4	0.4	0.2	0.0
9	HCO3 (mg/L)	177	196	194	167	149	148	159	179	124	140	170	298	228	206	189
10	K (mg/L)	2.4	2.0	2.0	3.4	1.8	1.8	1.8	2.2	2.0	1.8	2.7	3.5	3.7	2.9	2.6
11	Mg (mg/L)	14.2	15.6	17.0	13.0	10.9	13.5	13.7	16.1	10.3	11.9	19.7	29.4	24.7	21.2	18.5
12	Na (mg/L)	16.8	17.3	24.6	22.2	15.2	14.2	13.0	20.7	10.8	6.7	32.8	23.6	24.4	32.0	24.6
13	NH3-N (mg N/L)	0.35	0.25	0.23	0.22	0.08	0.19	0.58	0.33	0.21	0.24	0.18	0.00	0.08	0.21	0.06
14	NO2+NO3 (mg N/L)	1.08	1.36	1.23	1.32	1.97	1.69	1.77	0.32	0.19	1.39	1.59	2.61	4.85	2.42	10.21
15	NO2-N (mgN/L)	0.02	0.03	0.03	0.11	0.08	0.07	0.12	0.10	0.06	0.00	0.02	0.08	0.01	0.00	0.02
16	NO3-N (mgN/L)	1.07	1.33	1.20	1.21	1.89	1.63	1.65	0.21	0.13	1.38	1.57	2.53	4.83	2.42	10.19
17	o-PO4-P (mg P/L)	0.055	0.010	0.026	0.095	0.008	0.025	0.037	0.044	0.049	0.054	0.009	0.078	0.052	0.154	0.072
18	SiO2 (mg/L)	39.9	39.8	41.0	37.3	60.5	43.5	37.6	40.8	75.8	26.5	80.2	47.9	21.0	23.4	29.6
19	SO4 (mg/L)	9.6	8.0	8.2	6.4	13.9	6.9	8.8	15.3	8.6	6.9	16.5	14.6	13.5	10.7	29.2

Water Quality Seasonal Average for the period: 2001-2016

Station Name : P.G.BRIDGE (AGH32D5)

Division : Wainganga Div., Nagpur

Local River : Penganga

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.7	0.9	0.7	3.1	3.1	2.3	1.9	2.0	2.1	1.5	2.6	1.7	1.4	2.9	12.1
2	COD (mg/L)							39.5	47.4	82.2	72.1	41.5	48.2	35.8	34.0	32.3
3	DO (mg/L)	6.4	6.9	6.7	7.2	6.8	7.3	6.9	6.6	6.8	6.7	7.2	6.7	6.9	6.9	7.3
4	DO_SAT% (%)	84	89	88	96	89	95	86	83	85	82	90	84	85	88	91
5	FCol-MPN (MPN/100mL)	20130	4125	490	2950	1178	240	780	100	350	325	130	610	15440	326	54
6	Tcol-MPN (MPN/100mL)	29688	5000	1080	30338	4838	390	1750	213	913	7163	780	6730	49020	832	272
	TRACE & TOXIC															
1	As (µg/L)												13.4	3.1		
2	Cd (µg/L)												1.6	0.4		
3	Cr (µg/L)												0.3	0.8		
4	Cu (µg/L)												38.7	5.5		
5	Hg (µg/L)													0.1		
6	Ni (µg/L)												1.5	8.7		
7	Pb (µg/L)					43.0							1.3	1.4		
8	Zn (µg/L)					2.0							3.8	3.3		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	76	73	73	66	84	74	83	80	60	76	84	108	95	85	83
2	HAR_Total (mgCaCO3/L)	135	138	143	120	129	130	140	147	103	126	166	230	197	173	160
3	Na% (%)	20	19	25	28	19	18	16	22	21	11	30	17	20	28	24
4	RSC (-)	0.3	0.6	0.6	0.6	0.1	0.2	0.1	0.2	0.1	0.1	0.0	0.6	0.3	0.1	0.4
5	SAR (-)	0.6	0.6	1.0	0.9	0.6	0.5	0.5	0.7	0.5	0.3	1.1	0.7	0.8	1.0	0.8
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)					0.0										
5	Endos (µg/L)					0.1										

Water Quality Seasonal Average for the period: 2001-2016

Station Name : P.G.BRIDGE (AGH32D5)

Local River : Penganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	7.335	19.57	8.708	1.655	16.04	13.82	5.157	1.428	0.164	29.20	6.921	11.21	39.62	1.996	
2	EC_GEN (µmho/cm)	450	436	465	336	455	448	435	477	487	459	474	480	572	490	468
3	pH_GEN (pH units)	8.6	8.3	8.4	8.6	8.5	8.5	8.7	8.4	8.6	8.6	8.7	8.5	8.3	8.3	8.6
4	Temp (deg C)	27.1	28.5	24.4	27.3	24.4	25.8	22.9	23.0	19.5	25.0	26.0	26.3	26.1	22.0	26.2
5	Turb (NTU)						3.4	1.1	0.8	0.7	3.1	3.3	1.8	3.0	3.4	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	8.5	4.6	6.9	7.6	10.0	10.0	4.2	5.7	7.2	7.2	6.8	5.0	8.4	4.5	4.3
2	ALK-TOT (mgCaCO3/L)	202	210	223	175	198	185	186	190	190	189	191	253	246	239	160
3	B (mg/L)	0.41	0.56	0.28	0.31	0.25	0.46	0.63	0.80	0.76	0.86	0.21	0.37	0.22	0.41	0.12
4	Ca (mg/L)	25	33	34	25	40	32	32	39	42	32	36	43	64	35	24
5	Cl (mg/L)	17.4	14.0	17.8	7.6	16.9	18.5	17.6	16.3	17.0	23.3	24.3	25.6	37.8	23.8	57.0
6	CO3 (mg/L)	10.2	5.6	8.3	9.2	12.0	12.0	5.1	6.9	8.7	8.7	8.2	6.0	10.1	5.4	5.2
7	F (mg/L)	0.58	0.65	0.49	0.58	0.74	0.69	0.43	0.62	0.09	0.36	0.35	0.40	0.30	0.35	0.36
8	Fe (mg/L)		0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.1	0.1
9	HCO3 (mg/L)	225	245	255	195	217	202	216	218	214	212	216	296	280	281	185
10	K (mg/L)	2.3	2.2	2.0	3.0	2.8	2.1	2.2	1.6	1.6	1.8	2.0	3.4	2.4	2.3	3.3
11	Mg (mg/L)	22.2	23.2	22.4	19.0	18.4	21.3	23.7	17.4	20.3	24.3	28.8	32.3	30.8	28.0	25.1
12	Na (mg/L)	36.0	28.5	37.0	24.6	30.0	26.4	29.5	25.6	20.2	25.8	32.0	31.9	33.5	36.4	38.9
13	NH3-N (mg N/L)	0.32	0.27	0.13	0.13	0.05	0.52	0.06	0.51	0.48	0.22	0.15	0.06	0.09	0.10	0.14
14	NO2+NO3 (mg N/L)	0.94	1.11	1.73	2.19	1.42	2.77	4.43	0.19	0.18	1.42	1.63	1.83	5.57	8.46	12.17
15	NO2-N (mgN/L)	0.01	0.02	0.03	0.10	0.05	0.04	0.05	0.01	0.04	0.02	0.01	0.01	0.01	0.02	0.02
16	NO3-N (mgN/L)	0.93	1.09	1.70	2.09	1.37	2.73	4.38	0.18	0.14	1.40	1.62	1.81	5.57	8.44	12.15
17	o-PO4-P (mg P/L)	0.020	0.010	0.010	0.090	0.026	0.031	0.052	0.041	0.052	0.045	0.003	0.055	0.597	0.226	0.123
18	SiO2 (mg/L)	53.3	52.0	52.8	33.0	84.9	51.3	46.7	35.0	70.5	55.2	121.6	76.0	23.1	15.6	33.4
19	SO4 (mg/L)	11.3	23.5	11.8	8.3	13.6	11.4	11.0	12.7	11.5	14.2	17.4	14.8	13.0	21.5	22.0

Water Quality Seasonal Average for the period: 2001-2016

Station Name : P.G.BRIDGE (AGH32D5)

Division : Wainganga Div., Nagpur

Local River : Penganga

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.2	1.2	0.8	2.1	1.5	1.2	2.5	1.9	2.1	1.8	1.7	1.1	2.1	2.8	2.0
2	COD (mg/L)							53.7	38.8	10.1	46.7	51.7	28.5	122.5	31.8	39.8
3	DO (mg/L)	7.9	7.9	7.7	7.7	8.6	8.1	6.8	7.5	8.9	8.8	8.6	7.6	7.8	8.3	8.1
4	DO_SAT% (%)	99	102	92	97	102	98	79	87	96	106	106	93	96	95	99
5	FCol-MPN (MPN/100mL)	213	738	288	1383	100	238	100	100	100	100	238	363	238	73	153
6	Tcol-MPN (MPN/100mL)	304	900	575	9133	138	763	100	100	400	100	500	863	2388	133	667
	TRACE & TOXIC															
1	As (µg/L)											0.2				0.6
2	Cd (µg/L)											0.2			1.2	0.3
3	Cr (µg/L)											3.3			1.1	1.5
4	Cu (µg/L)											101.9			3.5	0.6
5	Hg (µg/L)															
6	Ni (µg/L)											35.0			0.0	0.3
7	Pb (µg/L)											0.4			0.8	0.8
8	Zn (µg/L)											31.8			4.0	3.4
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	63	81	85	63	99	79	79	97	105	79	89	107	159	86	61
2	HAR_Total (mgCaCO3/L)	155	178	178	142	176	168	178	169	190	180	209	241	287	203	166
3	Na% (%)	33	25	31	26	27	25	26	25	19	24	25	22	21	28	33
4	RSC (-)	1.0	0.7	0.9	0.7	0.5	0.4	0.3	0.4	0.0	0.3	0.0	0.4	0.0	0.8	0.2
5	SAR (-)	1.3	0.9	1.2	0.9	1.0	0.9	1.0	0.9	0.6	0.8	1.0	0.9	0.9	1.1	1.3
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : P.G.BRIDGE (AGH32D5)

Local River : Penganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	0.623	3.024	0.459	0.016	3.161	3.676	2.781			1.587	0.871	3.158	9.421	0.000	
2	EC_GEN (μmho/cm)	459	368	458		373	391	414			412	433	491	444	491	387
3	pH_GEN (pH units)	8.6	8.3	8.4		8.7	8.6	8.6			8.4	8.5	8.7	8.3	8.4	8.6
4	Temp (deg C)	30.1	30.2	27.0		29.0	26.5	23.5			22.7	27.8	27.0	26.7	26.2	25.0
5	Turb (NTU)						1.4	6.5			2.9	1.0	0.9	2.2	5.7	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	12.7	2.9	13.8		5.6	5.6	2.9			3.7	6.7	7.3	9.9	5.6	6.0
2	ALK-TOT (mgCaCO3/L)	214	197	226		146	171	181			194	209	245	201	203	201
3	B (mg/L)	0.49	0.32	0.30		0.18	0.61	0.98			0.23	0.16	0.24	0.15	0.25	0.09
4	Ca (mg/L)	18	23	26		28	25	27			33	28	35	37	34	56
5	Cl (mg/L)	20.6	13.7	20.5		16.3	14.7	19.9			22.2	26.5	31.1	22.8	25.9	28.8
6	CO3 (mg/L)	15.3	3.5	16.7		6.7	6.8	3.5			4.4	8.0	8.7	11.9	6.8	7.2
7	F (mg/L)	0.70	0.40	0.42		0.43	0.42	0.44			0.27	0.56	0.48	0.58	0.38	0.21
8	Fe (mg/L)	0.2	0.1	0.0		0.0	0.0	0.0			0.0	0.2	0.0	0.2	0.1	0.0
9	HCO3 (mg/L)	230	233	242		165	195	213			227	238	281	222	234	231
10	K (mg/L)	3.5	2.2	2.2		2.0	2.5	3.1			1.9	2.9	4.1	3.2	2.6	2.9
11	Mg (mg/L)	23.9	23.7	24.8		15.5	17.8	19.6			23.7	36.5	34.4	22.3	19.9	11.2
12	Na (mg/L)	40.4	26.0	39.0		29.1	26.8	37.0			32.1	37.4	41.0	35.8	34.7	29.3
13	NH3-N (mg N/L)	0.21	0.27	0.29		0.12	0.45	0.26			0.56	0.38	0.02	0.45	0.11	0.20
14	NO2+NO3 (mg N/L)	0.32	0.21	0.55		0.49	1.24	0.23			1.26	0.31	0.31	5.68	7.10	7.01
15	NO2-N (mgN/L)	0.01	0.02	0.05		0.03	0.03	0.04			0.04	0.01	0.01	0.00	0.01	0.09
16	NO3-N (mgN/L)	0.31	0.18	0.50		0.47	1.21	0.19			1.22	0.29	0.30	5.68	7.10	6.93
17	o-PO4-P (mg P/L)	0.020	0.017	0.020		0.031	0.062	0.041			0.060	0.008	0.037	0.594	0.243	0.178
18	SiO2 (mg/L)	49.2	49.3	45.5		87.8	45.6	34.2			77.6	26.2	25.9	31.2	52.7	56.5
19	SO4 (mg/L)	8.4	8.3	13.0		11.5	7.2	15.2			11.3	23.4	13.5	10.3	20.1	14.9

Water Quality Seasonal Average for the period: 2001-2016

Station Name : P.G.BRIDGE (AGH32D5)

Division : Wainganga Div., Nagpur

Local River : Penganga

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.9	0.7	1.6		1.6	1.7	2.1			2.5	2.8	1.5	3.8	2.9	3.5
2	COD (mg/L)							64.5			38.5	49.8	40.7	39.7	28.3	81.2
3	DO (mg/L)	6.6	7.3	5.8		7.4	7.9	7.1			7.9	7.6	6.5	7.5	7.3	5.9
4	DO_SAT% (%)	86	97	71		95	98	83			91	96	81	93	90	71
5	FCol-MPN (MPN/100mL)	270	600	1550		200	100	100			100	200	150	273	103	90
6	Tcol-MPN (MPN/100mL)	360	1750	4475		450	300	133			100	517	567	3100	593	1100
	TRACE & TOXIC															
1	As (µg/L)											0.7	2.3	3.2	0.0	
2	Cd (µg/L)						8.0					0.0	1.6	0.1	1.0	
3	Cr (µg/L)						34.0					0.0	1.7	0.6	0.0	
4	Cu (µg/L)												2.7	5.3		
5	Hg (µg/L)						1.1					0.2	0.1	0.1	0.1	
6	Ni (µg/L)						1.0					0.0	14.9	5.0	2.8	
7	Pb (µg/L)						72.0					16.7	3.7	0.1	6.0	
8	Zn (µg/L)						66.0					16.5	1.9	13.6	5.0	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	44	57	65		70	62	68			83	70	87	94	85	139
2	HAR_Total (mgCaCO3/L)	144	155	169		134	137	149			182	222	230	187	168	186
3	Na% (%)	38	26	33		32	30	33			32	26	28	29	30	25
4	RSC (-)	1.4	0.9	1.2		0.3	0.7	0.7			0.5	0.2	0.6	0.4	0.7	0.3
5	SAR (-)	1.5	0.9	1.3		1.1	1.0	1.3			1.2	1.1	1.2	1.2	1.2	0.9
	PESTICIDES															
1	Aldrin (µg/L)						0.0					0.0				
2	BHC (µg/L)						0.1					0.0				
3	DDT (µg/L)						0.1					0.0				
4	Dieldrin (µg/L)						0.1					0.0				
5	Endos (µg/L)						0.1					0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: NANDGAON	Code	: AGH3AF4
State	: Maharashtra	District	Wardha
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wardha
Sub-Sub Tributary	: Wunna	Local River	: Wunna
Division	: Wainganga Div., Nagpur	Sub-Division	: Penganga Sd, Yeotmal
Drainage Area	: 4580 Sq. Km.	Bank	: Left
Latitude	: 20°32'00"	Longitude	: 78°49'33"
	Opening Date	Closing Date	
Gauge	: 28.10.1985		
Discharge	: 21.07.1986		
Sediment	: 13.07.1988		
Water Quality	: 01.01.1988		

Water Quality Datasheet for the period : 2015-2016

Station Name : NANDGAON (AGH3AF4)

Local River : Wunna

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A
	PHYSICAL										
1	Q (cumec)										
2	Colour_Cod (-)	Brown	Light Brown	Brown	Light Brown	Brown	Light Brown	Brown	Clear	Clear	Light Brown
3	EC_GEN (µmho/cm)	454	482	499	543	443	455	427	396	407	544
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.4	8.0	8.0	8.3	8.5	8.0	8.0	8.1	8.1	8.5
6	Temp (deg C)	27.5	27.0	25.5	27.0	23.9	20.5	15.0	18.5	22.5	23.0
	CHEMICAL										
1	Alk-Phen (mgCaCO3/L)	7.8	0.0	0.0	5.2	5.2	0.0	0.0	0.0	0.0	6.0
2	ALK-TOT (mgCaCO3/L)	190	181	242	184	166	211	201	201	187	204
3	B (mg/L)	0.25	0.06	0.67	0.48	0.08	0.14	0.16	0.31	0.27	0.22
4	Ca (mg/L)	64	49	53	36	36	41	36	48	56	56
5	Cl (mg/L)	31.8	39.8	29.8	41.8	25.8	27.8	21.9	23.9	24.7	57.6
6	CO3 (mg/L)	9.4	0.0	0.0	6.2	6.2	0.0	0.0	0.0	0.0	7.2
7	F (mg/L)	0.19	1.86	0.00	0.37	0.43	0.18	0.40	0.05	0.11	0.12
8	Fe (mg/L)	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1
9	HCO3 (mg/L)	213	221	295	211	190	257	245	245	228	234
10	K (mg/L)	4.4	3.4	2.7	3.0	2.6	2.4	2.3	2.2	2.9	3.9
11	Mg (mg/L)	3.3	18.1	24.7	33.0	18.2	18.7	19.3	13.9	22.5	14.4
12	Na (mg/L)	29.2	25.6	28.3	38.7	27.0	31.7	34.0	24.1	43.6	62.3
13	NH3-N (mg N/L)	0.06	0.07	0.03	0.14	0.05	0.04	0.11	0.09	0.23	0.13
14	NO2+NO3 (mg N/L)	9.42	12.55	15.84	14.41	5.90	6.34	5.51	3.46	8.11	2.36
15	NO2-N (mgN/L)	0.01	0.00	0.02	0.01	0.04	0.01	0.01	0.01	0.07	0.26
16	NO3-N (mgN/L)	9.41	12.55	15.82	14.41	5.87	6.33	5.50	3.45	8.04	2.10
17	o-PO4-P (mg P/L)	0.019	0.118	0.084	0.121	0.095	0.116	0.145	0.029	0.192	0.112
18	SiO2 (mg/L)	38.1	26.3	35.6	35.9	25.9	35.0	22.4	20.2	26.4	12.2
19	SO4 (mg/L)	1.8	30.0	11.2	85.6	24.7	19.1	14.4	19.6	30.1	19.0

Water Quality Datasheet for the period : 2015-2016

Station Name : NANDGAON (AGH3AF4)

Division : Wainganga Div., Nagpur

Local River : Wunna

River Water Analysis

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL										
1	BOD3-27 (mg/L)	2.0	20.0	10.0	2.4	1.8	1.1	1.0	1.8	20.0	1.4
2	COD (mg/L)	43.4	28.2	19.9	21.4	57.7	44.7	21.7	17.7	85.2	25.5
3	DO (mg/L)	5.9	5.2	3.6	6.7	6.5	6.0	6.8	6.9	4.2	5.8
4	DO_SAT% (%)	74	65	44	84	76	66	67	73	48	68
5	FCol-MPN (MPN/100mL)	130	170	1300	130	700	130	170	40	20	80
6	Tcol-MPN (MPN/100mL)	220	270	5000	16000	2800	2200	330	1700	220	130
	TRACE & TOXIC										
1	As (µg/L)							0.7			3.9
2	Cd (µg/L)							0.4			0.1
3	Cr (µg/L)							0.3			1.0
4	Cu (µg/L)							0.9			3.4
5	Ni (µg/L)							1.0			1.1
6	Pb (µg/L)							1.1			1.0
7	Zn (µg/L)							5.1			4.2
	CHEMICAL INDICES										
1	HAR_Ca (mgCaCO3/L)	161	122	131	91	89	101	90	119	141	141
2	HAR_Total (mgCaCO3/L)	175	198	234	228	165	179	171	177	235	201
3	Na% (%)	26	22	21	27	26	28	30	23	29	40
4	RSC (-)	0.3	0.0	0.2	0.0	0.1	0.6	0.6	0.5	0.0	0.1
5	SAR (-)	1.0	0.8	0.8	1.1	0.9	1.0	1.1	0.8	1.2	1.9
	PESTICIDES										

Water Quality Summary for the period : 2015-2016

Station Name : NANDGAON (AGH3AF4)

Division : Wainganga Div., Nagpur

Local River : Wunna

Sub-Division : Penganga Sd, Yeotmal

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	10	544	396	465
3	pH_GEN (pH units)	10	8.5	8.0	8.2
4	Temp (deg C)	10	27.5	15.0	23
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	7.8	0.0	2.4
2	ALK-TOT (mgCaCO3/L)	10	242	166	197
3	B (mg/L)	10	0.67	0.06	0.26
4	Ca (mg/L)	10	64	36	47
5	Cl (mg/L)	10	57.6	21.9	32.5
6	CO3 (mg/L)	10	9.4	0.0	2.9
7	F (mg/L)	10	1.86	0.00	0.37
8	Fe (mg/L)	10	0.1	0.0	0.1
9	HCO3 (mg/L)	10	295	190	234
10	K (mg/L)	10	4.4	2.2	3
11	Mg (mg/L)	10	33.0	3.3	18.6
12	Na (mg/L)	10	62.3	24.1	34.5
13	NH3-N (mg N/L)	10	0.23	0.03	0.09
14	NO2+NO3 (mg N/L)	10	15.84	2.36	8.39
15	NO2-N (mgN/L)	10	0.26	0.00	0.04
16	NO3-N (mgN/L)	10	15.82	2.10	8.35
17	o-PO4-P (mg P/L)	10	0.192	0.019	0.103
18	SiO2 (mg/L)	10	38.1	12.2	27.8
19	SO4 (mg/L)	10	85.6	1.8	25.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	20.0	1.0	6.2
2	COD (mg/L)	10	85.2	17.7	36.5
3	DO (mg/L)	10	6.9	3.6	5.8
4	DO_SAT% (%)	10	84	44	67
5	FCol-MPN (MPN/100mL)	10	1300	20	287
6	Tcol-MPN (MPN/100mL)	10	16000	130	2887
	TRACE & TOXIC				
1	As (µg/L)	2	3.9	0.7	2.3
2	Cd (µg/L)	2	0.4	0.1	0.3
3	Cr (µg/L)	2	1.0	0.3	0.7
4	Cu (µg/L)	2	3.4	0.9	2.1
5	Ni (µg/L)	2	1.1	1.0	1.1
6	Pb (µg/L)	2	1.1	1.0	1
7	Zn (µg/L)	2	5.1	4.2	4.6
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	161	89	119
2	HAR_Total (mgCaCO3/L)	10	235	165	196
3	Na% (%)	10	40	21	27
4	RSC (-)	10	0.6	0.0	0.2
5	SAR (-)	10	1.9	0.8	1.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : NANDGAON (AGH3AF4)

Local River : Wunna

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	40.28	38.98	24.59	4.989	23.17	91.24	48.81	8.783	137.1	63.37	295.5	108.3	286.8	19.53	
2	EC_GEN (µmho/cm)	388	351	394	377	466	380	362	459	454	418	502	523	395	542	495
3	pH_GEN (pH units)	8.2	8.2	8.3	8.4	8.4	8.4	8.6	8.3	8.0	8.2	8.3	8.7	8.3	7.9	8.2
4	Temp (deg C)	26.4	27.3	27.8	27.0	20.4	22.7	24.3	26.6	26.2	26.0	22.3	25.4	24.5	28.1	26.8
5	Turb (NTU)						9.8	8.9	25.7	13.5	3.5	10.6	1.7	1.9	12.2	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	3.0	3.4	5.4	6.8	6.1	5.3	4.9	4.1	0.0	3.1	3.6	5.4	4.5	0.8	3.2
2	ALK-TOT (mgCaCO3/L)	90	159	163	169	185	133	139	185	161	161	184	252	167	202	199
3	B (mg/L)	0.35	0.76	0.39	0.18	0.26	0.45	0.62	0.45	0.27	0.39	0.27	0.17	0.23	0.45	0.37
4	Ca (mg/L)	30	28	30	25	37	31	34	40	35	38	38	42	33	42	50
5	Cl (mg/L)	19.3	20.4	25.2	25.7	35.2	21.3	18.2	30.2	37.4	20.1	33.0	43.5	18.5	41.3	35.8
6	CO3 (mg/L)	3.6	4.1	6.5	8.2	7.3	6.4	5.9	5.0	0.0	3.8	4.4	6.6	5.5	1.0	3.9
7	F (mg/L)	0.42	0.55	0.51	0.35	0.94	0.25	0.36	0.35	0.55	0.30	0.37	0.73	0.39	0.58	0.61
8	Fe (mg/L)	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.1	0.3	0.1	0.1
9	HCO3 (mg/L)	103	185	186	190	211	149	157	216	196	189	215	294	193	244	235
10	K (mg/L)	2.7	3.0	2.9	4.1	2.8	2.4	1.7	3.0	3.6	2.2	2.9	5.2	3.7	3.4	3.4
11	Mg (mg/L)	17.0	14.8	18.2	19.4	17.8	13.3	15.2	17.6	17.7	15.6	24.6	23.0	19.4	25.8	19.8
12	Na (mg/L)	26.4	26.8	25.2	33.2	34.3	22.2	15.0	29.4	29.5	15.9	46.1	44.8	25.4	44.4	30.5
13	NH3-N (mg N/L)	0.35	0.30	0.27	0.20	0.10	0.19	0.56	0.39	0.23	0.26	0.13	0.12	0.06	0.29	0.07
14	NO2+NO3 (mg N/L)	1.13	1.21	1.11	2.41	1.25	1.27	2.10	0.26	0.43	1.12	0.97	2.37	2.48	1.98	13.05
15	NO2-N (mgN/L)	0.01	0.12	0.08	0.58	0.04	0.04	0.05	0.04	0.30	0.02	0.16	0.58	0.01	0.00	0.01
16	NO3-N (mgN/L)	1.11	1.09	1.03	1.83	1.21	1.23	2.05	0.22	0.14	1.10	0.81	1.79	2.47	1.98	13.05
17	o-PO4-P (mg P/L)	0.046	0.024	0.022	0.115	0.014	0.029	0.043	0.129	0.076	0.026	0.007	0.094	0.059	0.155	0.085
18	SiO2 (mg/L)	34.9	35.8	33.8	31.7	58.6	43.9	39.8	42.5	65.5	32.1	72.0	42.7	21.4	23.9	34.0
19	SO4 (mg/L)	13.0	11.6	14.2	15.5	20.7	14.8	13.0	24.7	19.5	11.5	24.3	22.4	22.3	12.6	32.2

Water Quality Seasonal Average for the period: 2001-2016

Station Name : NANDGAON (AGH3AF4)

Division : Wainganga Div., Nagpur

Local River : Wunna

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.7	1.8	3.7	2.7	4.5	1.3	13.3	3.1	2.0	1.5	8.8	24.4	1.4	2.2	8.6
2	COD (mg/L)							96.9	25.6	45.9	56.8	38.7	108.4	55.7	48.2	28.2
3	DO (mg/L)	5.6	6.1	5.6	5.8	5.4	7.4	5.5	5.6	6.0	5.9	5.6	4.6	6.7	6.3	5.3
4	DO_SAT% (%)	69	77	71	73	60	86	65	70	74	72	64	55	81	80	67
5	FCol-MPN (MPN/100mL)	17800	43500	1990	1130	1048	930	640	1575	633	300	400	880	12375	582	433
6	Tcol-MPN (MPN/100mL)	42800	45620	5850	2920	5350	2460	1340	12488	10233	3638	3938	20450	64975	2762	5373
	TRACE & TOXIC															
1	As (µg/L)												9.3	5.1		
2	Cd (µg/L)												1.1	0.7		
3	Cr (µg/L)												1.2	1.1		
4	Cu (µg/L)												31.4	8.4		
5	Hg (µg/L)													0.1		
6	Ni (µg/L)												2.0	11.3		
7	Pb (µg/L)					49.0							2.2	0.5		
8	Zn (µg/L)												2.9	15.9		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	75	71	75	62	92	76	86	101	87	96	96	106	83	104	126
2	HAR_Total (mgCaCO3/L)	146	133	151	143	166	132	149	174	161	160	199	202	164	212	209
3	Na% (%)	27	29	25	32	28	25	18	25	26	18	30	29	24	30	24
4	RSC (-)	0.0	0.5	0.3	0.5	0.4	0.1	0.1	0.3	0.0	0.1	0.1	1.1	0.2	0.2	0.1
5	SAR (-)	0.9	1.0	0.9	1.2	1.1	0.8	0.5	1.0	1.0	0.6	1.4	1.4	0.9	1.3	0.9
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)					0.1										

Water Quality Seasonal Average for the period: 2001-2016

Station Name : NANDGAON (AGH3AF4)

Local River : Wunna

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	5.807	6.036	5.220	17.02	9.644	8.214	8.663	3.560	5.032	9.038	9.630	9.655	11.04	11.65	
2	EC_GEN (µmho/cm)	377	392	406	399	447	433	438	526	516	524	505	470	578	470	430
3	pH_GEN (pH units)	8.3	8.2	8.5	8.4	8.6	8.5	8.5	8.2	8.2	8.3	8.5	8.5	8.3	8.2	8.2
4	Temp (deg C)	19.4	19.8	19.1	17.5	17.8	20.6	18.4	23.0	20.3	21.6	16.8	17.0	24.0	22.4	19.5
5	Turb (NTU)						1.1	1.1	0.8	0.9	1.2	10.6	1.1	1.2	0.9	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.6	1.4	9.2	5.9	9.5	8.1	4.2	1.6	2.1	4.5	5.9	6.3	5.6	0.8	1.3
2	ALK-TOT (mgCaCO3/L)	124	185	188	171	178	169	177	184	171	213	199	241	249	195	195
3	B (mg/L)	0.44	0.89	0.27	0.25	0.23	0.52	0.82	0.61	1.00	0.94	0.19	0.25	0.21	0.52	0.17
4	Ca (mg/L)	26	32	32	29	35	32	38	37	41	39	42	46	69	41	40
5	Cl (mg/L)	17.9	21.5	20.5	26.8	22.0	22.2	18.5	41.9	40.5	29.5	27.0	27.2	22.6	17.5	24.9
6	CO3 (mg/L)	3.1	1.6	11.1	7.0	11.5	9.8	5.1	2.0	2.5	5.5	7.1	7.6	6.7	1.0	1.6
7	F (mg/L)	0.44	0.52	0.41	0.63	0.54	0.62	0.19	0.63	0.38	0.35	0.38	0.40	0.26	0.30	0.26
8	Fe (mg/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.0	0.1
9	HCO3 (mg/L)	145	223	207	195	194	187	206	221	203	249	228	278	290	236	234
10	K (mg/L)	1.8	1.8	2.2	3.1	2.6	1.5	2.1	2.0	2.4	1.7	1.9	3.3	2.2	1.8	2.4
11	Mg (mg/L)	16.5	17.4	16.4	20.1	18.5	19.5	17.2	19.0	20.0	24.2	27.6	26.4	27.4	19.9	17.5
12	Na (mg/L)	27.4	29.5	34.3	35.9	29.5	27.7	29.8	39.0	33.4	33.2	33.8	32.8	32.8	25.0	29.2
13	NH3-N (mg N/L)	0.33	0.22	0.15	0.15	0.05	0.47	0.11	0.78	0.47	0.12	0.16	0.07	0.15	0.07	0.07
14	NO2+NO3 (mg N/L)	0.25	0.26	0.91	2.04	0.78	0.68	3.54	0.20	0.28	0.75	1.05	1.52	2.34	5.60	5.30
15	NO2-N (mgN/L)	0.01	0.01	0.11	0.11	0.04	0.05	0.07	0.03	0.09	0.02	0.17	0.02	0.01	0.01	0.02
16	NO3-N (mgN/L)	0.25	0.25	0.81	1.93	0.74	0.63	3.47	0.17	0.19	0.72	0.88	1.50	2.33	5.60	5.29
17	o-PO4-P (mg P/L)	0.018	0.010	0.012	0.105	0.044	0.059	0.067	0.036	0.067	0.040	0.007	0.051	0.306	0.158	0.096
18	SiO2 (mg/L)	33.8	31.0	32.5	29.4	71.7	42.3	44.2	50.1	60.8	46.4	93.3	60.0	20.0	16.0	25.9
19	SO4 (mg/L)	11.0	11.5	12.3	19.9	16.2	14.0	13.0	17.0	18.0	18.2	22.2	18.0	13.4	19.0	19.5

Water Quality Seasonal Average for the period: 2001-2016

Station Name : NANDGAON (AGH3AF4)

Division : Wainganga Div., Nagpur

Local River : Wunna

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	2.5	0.8	0.4	1.3	1.7	1.1	2.7	1.5	14.9	1.5	1.5	1.5	1.5	3.4	1.4
2	COD (mg/L)							21.9	34.8	83.8	43.5	74.9	33.7	42.0	31.3	35.5
3	DO (mg/L)	5.3	6.2	7.2	7.0	7.9	7.0	7.1	7.0	5.3	8.3	6.5	6.7	6.7	7.3	6.6
4	DO_SAT% (%)	58	68	77	74	83	77	75	82	59	93	67	70	79	83	71
5	FCol-MPN (MPN/100mL)	588	1325	1313	2450	913	250	421	175	1363	400	1938	2800	313	40	260
6	Tcol-MPN (MPN/100mL)	1154	2388	3388	7325	2725	613	2136	325	5613	13125	7438	8713	16275	223	1758
	TRACE & TOXIC															
1	As (µg/L)											0.0				0.7
2	Cd (µg/L)											0.0			0.9	0.4
3	Cr (µg/L)											5.1			2.6	0.3
4	Cu (µg/L)											84.6			4.1	0.9
5	Hg (µg/L)															
6	Ni (µg/L)											58.0			0.1	1.0
7	Pb (µg/L)											0.4			0.8	1.1
8	Zn (µg/L)											29.9			3.0	5.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	66	81	80	73	88	79	96	93	102	98	105	115	173	102	100
2	HAR_Total (mgCaCO3/L)	135	153	148	156	165	160	168	173	185	199	220	225	288	185	173
3	Na% (%)	30	28	32	30	27	27	27	31	28	26	24	24	21	23	27
4	RSC (-)	0.3	0.7	0.8	0.4	0.3	0.2	0.2	0.3	0.1	0.4	0.1	0.5	0.0	0.3	0.5
5	SAR (-)	1.0	1.0	1.2	1.2	1.0	1.0	1.0	1.3	1.1	1.0	1.0	1.0	0.9	0.8	1.0
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : NANDGAON (AGH3AF4)

Local River : Wunna

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	1.603	1.801	4.471	2.206	5.865	5.684	3.860	0.287	8.943	7.888	3.789	1.235	5.556	2.275	
2	EC_GEN (µmho/cm)	382	364	416	489	408	403	436	562	456	426	451	488	512	555	476
3	pH_GEN (pH units)	8.2	7.9	8.3	8.4	8.4	8.5	8.4	8.3	8.3	8.0	8.3	8.3	8.1	8.1	8.3
4	Temp (deg C)	24.6	20.8	20.5	20.5	21.8	25.0	26.7	26.0	22.0	19.0	27.0	23.0	27.0	29.3	22.8
5	Turb (NTU)						0.8	1.3	0.9	0.9	1.2	0.8	0.5	1.2	1.0	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.2	0.0	6.2	6.8	2.9	6.2	3.6	2.2	3.7	1.2	6.1	3.6	0.0	2.8	3.0
2	ALK-TOT (mgCaCO3/L)	75	164	231	196	144	136	164	172	165	168	220	261	195	154	195
3	B (mg/L)	0.64	0.18	0.60	0.25	0.29	0.75	1.04	0.37	0.75	0.13	0.14	0.35	0.17	0.16	0.25
4	Ca (mg/L)	20	26	25	27	30	31	34	27	35	36	36	47	46	31	56
5	Cl (mg/L)	27.2	34.0	28.7	51.0	29.1	20.4	27.9	72.9	33.4	24.9	38.1	31.2	31.1	42.9	41.1
6	CO3 (mg/L)	1.4	0.0	7.5	8.2	3.5	7.5	4.3	2.6	4.5	1.5	7.3	4.4	0.0	3.4	3.6
7	F (mg/L)	0.56	0.45	0.32	0.67	0.34	0.35	0.39	0.44	0.61	0.24	0.38	0.11	0.36	0.36	0.12
8	Fe (mg/L)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.3	0.1	0.1
9	HCO3 (mg/L)	88	200	205	223	169	150	191	205	192	202	254	310	238	181	231
10	K (mg/L)	3.3	2.9	2.9	3.8	2.0	3.0	3.4	4.0	2.0	1.7	3.1	3.5	2.9	2.8	3.4
11	Mg (mg/L)	19.1	20.5	21.3	18.4	12.3	14.1	14.7	23.7	19.4	23.6	31.7	31.7	22.0	12.5	18.4
12	Na (mg/L)	20.3	32.0	35.7	63.2	35.2	29.1	36.4	57.6	24.8	25.5	43.7	33.1	35.0	48.5	53.0
13	NH3-N (mg N/L)	0.27	0.26	0.36	0.12	0.10	0.45	0.25	0.14	0.35	0.81	0.24	0.02	0.39	0.11	0.18
14	NO2+NO3 (mg N/L)	0.33	0.21	0.38	1.17	0.28	0.86	0.17	0.23	0.14	1.36	0.46	0.97	6.40	6.81	5.24
15	NO2-N (mgN/L)	0.02	0.00	0.01	0.05	0.00	0.02	0.03	0.00	0.00	0.04	0.02	0.00	0.02	0.00	0.17
16	NO3-N (mgN/L)	0.31	0.21	0.38	1.13	0.28	0.84	0.14	0.23	0.14	1.32	0.45	0.97	6.38	6.81	5.07
17	o-PO4-P (mg P/L)	0.017	0.015	0.010	0.074	0.026	0.059	0.055	0.045	0.010	0.078	0.006	0.048	0.887	0.256	0.152
18	SiO2 (mg/L)	36.6	34.0	35.7	33.1	81.0	36.8	38.1	81.2	27.7	65.0	31.9	14.9	31.1	40.5	19.3
19	SO4 (mg/L)	10.6	17.0	11.7	10.9	17.3	12.6	21.3	17.0	12.0	12.5	29.9	19.2	14.8	15.2	24.6

Water Quality Seasonal Average for the period: 2001-2016

Station Name : NANDGAON (AGH3AF4)

Division : Wainganga Div., Nagpur

Local River : Wunna

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	2.5	0.8	1.2	2.8	1.6	9.2	2.9	9.2	2.4	4.8	3.9	20.0	1.7	2.9	10.7
2	COD (mg/L)							37.2	40.2	22.7	39.2	40.9	52.4	51.5	25.7	55.3
3	DO (mg/L)	4.4	6.3	5.3	5.4	6.8	4.7	6.5	3.9	7.2	6.2	6.8	4.0	5.9	6.0	5.0
4	DO_SAT% (%)	53	70	59	60	78	56	81	48	82	67	86	47	74	78	58
5	FCol-MPN (MPN/100mL)	606	1275	650	400	100	200	100	100	700	583	300	200	600	137	50
6	Tcol-MPN (MPN/100mL)	1017	3375	1900	1567	175	500	250	317	1350	2217	9217	850	7500	650	175
	TRACE & TOXIC															
1	As (µg/L)											1.4	5.3	0.5	0.0	3.9
2	Cd (µg/L)						6.0					0.0	0.4	0.0	1.0	0.1
3	Cr (µg/L)						46.0					0.0	1.1	0.0	0.0	1.0
4	Cu (µg/L)												2.8			3.4
5	Hg (µg/L)						1.1					0.2	0.1	0.1	0.0	
6	Ni (µg/L)						1.0					0.0	26.1	0.0	3.5	1.1
7	Pb (µg/L)						15.0					18.2	2.8	0.0	13.0	1.0
8	Zn (µg/L)						53.0					7.8	5.0	27.7	0.0	4.2
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	51	64	63	67	76	77	85	69	89	90	89	117	116	78	141
2	HAR_Total (mgCaCO3/L)	130	149	152	143	127	136	146	167	170	189	221	249	207	131	218
3	Na% (%)	25	30	33	47	36	31	34	41	24	23	29	22	27	43	34
4	RSC (-)	0.0	0.3	0.6	1.1	0.4	0.3	0.4	0.1	0.0	0.0	0.3	0.3	0.1	0.5	0.0
5	SAR (-)	0.8	1.2	1.3	2.3	1.4	1.1	1.3	1.9	0.8	0.8	1.3	0.9	1.1	1.8	1.6
	PESTICIDES															
1	Aldrin (µg/L)						0.0					0.0				
2	BHC (µg/L)						0.1					0.0				
3	DDT (µg/L)						0.1					0.0				
4	Dieldrin (µg/L)						0.0					0.0				
5	Endos (µg/L)						0.1					0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: HIVRA	Code	: AGH30Q1
State	: Maharashtra	District	Wardha
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wardha
Sub-Sub Tributary	: -	Local River	: Wardha
Division	: Wainganga Div., Nagpur	Sub-Division	: Penganga Sd, Yeotmal
Drainage Area	: 10240 Sq. Km.	Bank	: Left
Latitude	: 20°32'52"	Longitude	: 78°19'30"
	Opening Date	Closing Date	
Gauge	: 20.11.1986		
Discharge	: 11.08.1987		
Sediment	: 26.06.1990		
Water Quality	: 16.12.1987		

Water Quality Datasheet for the period : 2015-2016

Station Name : HIVRA (AGH30Q1)

Local River : Wardha

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL											
1	Q (cumec)											
2	Colour_Cod (-)	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	503	407	360	358	505	567	400	452	412	419	529
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
5	pH_GEN (pH units)	8.8	8.6	8.3	8.0	8.3	8.7	8.3	8.4	8.5	8.4	8.5
6	Temp (deg C)	30.0	30.0	30.0	29.0	29.0	29.0	25.0	22.0	22.0	26.0	25.0
	CHEMICAL											
1	Alk-Phen (mgCaCO3/L)	5.2	5.2	5.2	0.0	10.4	10.4	5.2	12.0	6.0	9.0	6.0
2	ALK-TOT (mgCaCO3/L)	215	205	166	164	165	247	198	225	210	214	246
3	B (mg/L)	0.12	0.16	0.28	0.25	0.09	0.33	0.35	0.23	0.15	0.13	0.15
4	Ca (mg/L)	26	29	23	32	38	19	34	30	27	55	53
5	Cl (mg/L)	23.9	21.9	19.9	15.9	31.8	29.8	21.9	19.9	17.9	18.5	28.8
6	CO3 (mg/L)	6.2	6.2	6.2	0.0	12.5	12.5	6.2	14.4	7.2	10.8	7.2
7	F (mg/L)	0.06	0.17	0.01	0.00	0.40	0.52	0.18	0.34	0.09	0.12	0.18
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.1
9	HCO3 (mg/L)	250	238	189	200	176	276	228	245	242	239	285
10	K (mg/L)	1.9	2.0	2.0	2.9	3.0	2.9	2.6	3.0	2.5	3.0	2.9
11	Mg (mg/L)	19.8	17.0	22.0	13.2	24.7	27.8	17.1	20.3	17.7	24.1	18.2
12	Na (mg/L)	40.6	34.5	24.9	29.8	45.7	62.2	32.6	52.0	43.4	44.1	71.0
13	NH3-N (mg N/L)	0.08	0.08	0.00	0.04	0.09	0.11	0.12	0.07	0.11	0.20	0.14
14	NO2+NO3 (mg N/L)	5.23	5.58	9.81	10.18	11.13	5.97	6.30	5.95	3.62	8.08	2.60
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.02	0.02	0.05	0.01	0.01	0.01	0.07	0.21
16	NO3-N (mgN/L)	5.22	5.58	9.81	10.16	11.12	5.92	6.29	5.94	3.61	8.01	2.39
17	o-PO4-P (mg P/L)	0.226	0.011	0.110	0.070	0.072	0.079	0.118	0.153	0.032	0.054	0.070
18	SiO2 (mg/L)	25.5	37.1	21.2	23.9	65.9	32.1	31.5	27.9	22.3	22.4	27.8
19	SO4 (mg/L)	17.8	3.5	18.2	14.8	104.6	24.4	15.6	17.1	6.6	7.3	7.0

Water Quality Datasheet for the period : 2015-2016

Station Name : HIVRA (AGH30Q1)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water Analysis

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL											
1	BOD3-27 (mg/L)	2.2	1.5	1.4	3.0	1.6	1.3	1.2	1.3	1.4	15.0	2.8
2	COD (mg/L)	10.0	38.4	19.0	16.4	23.6	30.7	50.0	37.4	30.6	96.0	20.4
3	DO (mg/L)	5.6	5.9	6.1	6.7	7.1	7.0	6.0	8.0	7.9	4.5	5.9
4	DO_SAT% (%)	74	78	81	87	92	91	73	92	90	55	71
5	FCoI-MPN (MPN/100mL)	40	40	90	130	80	80	80	90	90	40	70
6	TcoI-MPN (MPN/100mL)	90	80	260	16000	1300	500	170	170	140	130	170
	TRACE & TOXIC											
1	As (µg/L)								1.1			1.9
2	Cd (µg/L)								0.4			0.4
3	Cr (µg/L)								2.5			4.7
4	Cu (µg/L)								1.1			1.2
5	Ni (µg/L)								0.3			0.7
6	Pb (µg/L)								1.6			0.9
7	Zn (µg/L)								4.4			3.5
	CHEMICAL INDICES											
1	HAR_Ca (mgCaCO3/L)	66	72	57	79	95	46	86	75	68	137	132
2	HAR_Total (mgCaCO3/L)	148	143	148	134	198	162	157	160	142	237	208
3	Na% (%)	37	34	27	32	33	45	31	41	40	29	42
4	RSC (-)	1.4	1.3	0.4	0.6	0.0	1.7	0.8	1.3	1.4	0.0	0.8
5	SAR (-)	1.5	1.3	0.9	1.1	1.4	2.1	1.1	1.8	1.6	1.2	2.1
	PESTICIDES											

Water Quality Summary for the period : 2015-2016

Station Name : HIVRA (AGH30Q1)

Local River : Wardha

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	11	567	358	447
3	pH_GEN (pH units)	11	8.8	8.0	8.4
4	Temp (deg C)	11	30.0	22.0	27
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	12.0	0.0	6.8
2	ALK-TOT (mgCaCO3/L)	11	247	164	205
3	B (mg/L)	11	0.35	0.09	0.2
4	Ca (mg/L)	11	55	19	33
5	Cl (mg/L)	11	31.8	15.9	22.7
6	CO3 (mg/L)	11	14.4	0.0	8.1
7	F (mg/L)	11	0.52	0.00	0.19
8	Fe (mg/L)	11	0.1	0.0	0
9	HCO3 (mg/L)	11	285	176	233
10	K (mg/L)	11	3.0	1.9	2.6
11	Mg (mg/L)	11	27.8	13.2	20.2
12	Na (mg/L)	11	71.0	24.9	43.7
13	NH3-N (mg N/L)	11	0.20	0.00	0.09
14	NO2+NO3 (mg N/L)	11	11.13	2.60	6.77
15	NO2-N (mgN/L)	11	0.21	0.00	0.04
16	NO3-N (mgN/L)	11	11.12	2.39	6.73
17	o-PO4-P (mg P/L)	11	0.226	0.011	0.09
18	SiO2 (mg/L)	11	65.9	21.2	30.7
19	SO4 (mg/L)	11	104.6	3.5	21.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	15.0	1.2	3
2	COD (mg/L)	11	96.0	10.0	33.9
3	DO (mg/L)	11	8.0	4.5	6.4
4	DO_SAT% (%)	11	92	55	80
5	FCol-MPN (MPN/100mL)	11	130	40	75
6	Tcol-MPN (MPN/100mL)	11	16000	80	1728
	TRACE & TOXIC				
1	As (µg/L)	2	1.9	1.1	1.5
2	Cd (µg/L)	2	0.4	0.4	0.4
3	Cr (µg/L)	2	4.7	2.5	3.6
4	Cu (µg/L)	2	1.2	1.1	1.1
5	Ni (µg/L)	2	0.7	0.3	0.5
6	Pb (µg/L)	2	1.6	0.9	1.3
7	Zn (µg/L)	2	4.4	3.5	4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	137	46	83
2	HAR_Total (mgCaCO3/L)	11	237	134	167
3	Na% (%)	11	45	27	36
4	RSC (-)	11	1.7	0.0	0.9
5	SAR (-)	11	2.1	0.9	1.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : HIVRA (AGH30Q1)

Local River : Wardha

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	35.25	113.3	70.06	5.642	318.3	91.34	187.9	65.60	9.944	41.44	120.4	121.1	363.9	324.5	
2	EC_GEN (µmho/cm)	399	386	388	329	385	358	304	435	352	384	394	353	402	512	427
3	pH_GEN (pH units)	8.3	8.3	8.5	8.4	8.3	8.2	8.5	8.5	8.2	8.3	8.4	8.5	8.5	8.0	8.4
4	Temp (deg C)	27.0	28.1	26.8	27.6	27.5	27.8	27.1	27.3	28.0	28.7	28.0	27.9	28.7	28.8	29.6
5	Turb (NTU)						27.3	67.3	35.2	16.8	6.8	9.1	3.1	2.3	5.9	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	4.2	3.7	8.1	4.2	6.0	2.3	4.7	3.6	0.9	3.6	4.8	5.4	5.8	1.2	5.2
2	ALK-TOT (mgCaCO3/L)	172	172	192	167	162	144	133	188	132	161	169	205	213	228	183
3	B (mg/L)	0.41	0.84	0.52	0.20	0.28	0.37	0.60	0.80	0.35	0.63	0.27	0.14	0.17	0.45	0.18
4	Ca (mg/L)	30	29	24	26	28	31	36	25	25	32	34	33	33	29	30
5	Cl (mg/L)	19.0	17.0	15.2	15.8	16.2	14.7	11.4	19.6	23.4	15.4	15.6	17.0	16.5	23.4	22.7
6	CO3 (mg/L)	5.1	6.1	9.7	5.1	7.3	2.8	5.7	4.3	1.0	4.3	5.8	6.6	7.0	1.5	6.2
7	F (mg/L)	0.41	0.37	0.48	0.30	0.92	0.35	0.28	0.38	0.45	0.21	0.25	0.64	0.51	0.58	0.13
8	Fe (mg/L)	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.4	0.2	0.3	0.1	0.0
9	HCO3 (mg/L)	200	211	215	193	183	170	150	220	158	187	194	237	245	275	211
10	K (mg/L)	3.2	3.1	3.3	4.4	2.8	2.8	1.7	2.4	3.3	2.1	2.6	2.7	4.1	3.7	2.4
11	Mg (mg/L)	15.4	16.3	18.5	16.1	15.9	11.4	11.6	16.8	12.3	15.0	19.0	18.6	24.3	23.1	19.3
12	Na (mg/L)	30.6	33.0	36.8	30.7	37.0	21.3	10.8	43.5	36.6	16.4	33.7	29.6	40.8	62.1	35.1
13	NH3-N (mg N/L)	0.36	0.23	0.21	0.19	0.08	0.22	0.49	0.28	0.22	0.36	0.14	0.26	0.05	0.32	0.06
14	NO2+NO3 (mg N/L)	1.30	1.00	0.85	1.98	1.01	1.87	1.60	0.14	0.22	0.75	0.94	1.52	2.62	2.23	8.39
15	NO2-N (mgN/L)	0.01	0.03	0.01	0.17	0.03	0.12	0.10	0.02	0.01	0.01	0.02	0.08	0.01	0.00	0.01
16	NO3-N (mgN/L)	1.30	0.97	0.84	1.81	0.98	1.75	1.51	0.11	0.21	0.74	0.92	1.44	2.61	2.22	8.38
17	o-PO4-P (mg P/L)	0.046	0.012	0.014	0.119	0.017	0.028	0.065	0.056	0.031	0.028	0.008	0.071	0.035	0.172	0.098
18	SiO2 (mg/L)	36.7	40.6	34.4	28.6	51.5	31.0	37.1	32.1	41.5	30.1	61.8	38.3	15.8	20.8	34.7
19	SO4 (mg/L)	12.3	12.0	10.8	9.5	31.1	10.3	284.4	20.3	14.6	11.0	24.2	24.1	21.3	11.0	31.8

Water Quality Seasonal Average for the period: 2001-2016

Station Name : HIVRA (AGH30Q1)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.1	0.9	0.8	3.5	1.7	1.6	1.3	15.6	5.8	2.6	2.1	1.8	1.8	6.9	1.9
2	COD (mg/L)							31.2	118.6	107.2	67.9	52.1	73.5	46.0	30.8	21.5
3	DO (mg/L)	6.5	6.3	6.4	5.7	6.1	6.1	6.7	6.2	4.3	7.0	6.8	6.6	6.3	6.3	6.3
4	DO_SAT% (%)	81	80	80	72	76	76	84	78	55	90	87	84	81	81	82
5	FCol-MPN (MPN/100mL)	23064	4430	1490	2650	1063	3438	425	160	850	100	350	890	3770	324	76
6	Tcol-MPN (MPN/100mL)	46243	4640	2650	8663	249	11563	1175	440	3675	700	850	27640	39510	842	3546
	TRACE & TOXIC															
1	As (µg/L)												8.1	4.7		
2	Cd (µg/L)												1.1	0.3		
3	Cr (µg/L)												0.4	2.3		
4	Cu (µg/L)												40.8	10.9		
5	Hg (µg/L)													0.6		
6	Ni (µg/L)												2.9	7.7		
7	Pb (µg/L)					54.0							2.8	0.8		
8	Zn (µg/L)					19.0							3.6	2.8		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	76	72	61	66	70	78	90	63	62	80	84	81	81	73	74
2	HAR_Total (mgCaCO3/L)	140	140	138	133	136	125	138	132	113	142	163	159	183	169	154
3	Na% (%)	30	32	33	31	32	27	14	38	40	20	28	27	31	39	33
4	RSC (-)	0.7	0.9	1.1	0.7	0.7	0.4	0.0	1.1	0.4	0.4	0.2	1.0	0.8	1.2	0.7
5	SAR (-)	1.1	1.2	1.4	1.1	1.4	0.9	0.4	1.6	1.5	0.6	1.1	1.0	1.3	2.0	1.2
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)					0.1										
5	Endos (µg/L)					0.1										

Water Quality Seasonal Average for the period: 2001-2016

Station Name : HIVRA (AGH30Q1)

Local River : Wardha

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	2.566	3.267	3.169	3.472	10.26	13.30	13.22			0.000	0.279	2.600	14.25	1.640	
2	EC_GEN (µmho/cm)	544	469	432	424	446	484	468	494		481	444	464	566	448	458
3	pH_GEN (pH units)	8.6	8.5	8.7	8.8	8.5	8.6	8.6	8.8		8.3	8.4	8.5	8.0	8.3	8.5
4	Temp (deg C)	22.4	22.3	23.3	22.3	23.3	23.3	23.3	26.3		29.0	23.0	24.5	25.5	26.0	24.5
5	Turb (NTU)						1.7	1.2	1.1		4.7	1.3	2.5	2.0	0.8	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	11.3	10.9	8.8	7.1	5.2	9.5	4.7	5.0		3.5	5.4	6.3	6.0	3.6	8.4
2	ALK-TOT (mgCaCO3/L)	243	222	204	219	208	196	219	209		192	229	257	231	236	220
3	B (mg/L)	0.51	0.59	0.31	0.25	0.24	0.28	0.70	0.61		1.73	0.08	0.31	0.11	0.44	0.27
4	Ca (mg/L)	22	23	24	21	30	33	35	23		31	35	42	55	34	28
5	Cl (mg/L)	26.7	20.0	20.0	13.1	19.2	23.4	19.0	18.8		17.8	17.8	22.9	18.3	20.4	22.4
6	CO3 (mg/L)	13.6	13.1	10.6	8.5	6.3	11.4	5.7	6.0		4.2	6.6	7.6	7.2	4.3	10.1
7	F (mg/L)	0.42	0.49	0.42	0.57	0.41	0.30	0.24	0.61		0.25	0.47	0.40	0.26	0.29	0.28
8	Fe (mg/L)		0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.1	0.4	0.3	0.0	0.1
9	HCO3 (mg/L)	269	244	227	250	241	216	256	243		226	266	298	267	279	248
10	K (mg/L)	2.7	2.3	2.3	3.0	3.3	2.4	2.4	2.0		1.6	1.0	3.6	2.6	2.3	2.8
11	Mg (mg/L)	23.9	23.3	16.4	24.0	23.0	19.3	23.6	21.8		21.0	35.0	22.8	23.2	23.2	20.7
12	Na (mg/L)	61.3	46.8	50.8	45.4	35.4	37.0	39.6	45.0		25.2	32.6	43.5	38.7	44.4	47.5
13	NH3-N (mg N/L)	0.28	0.15	0.17	0.15	0.05	0.52	0.14	0.92		0.06	0.20	0.07	0.21	0.04	0.10
14	NO2+NO3 (mg N/L)	1.04	0.68	0.55	0.75	0.75	1.75	2.70	0.24		0.19	0.54	2.22	3.58	6.49	5.46
15	NO2-N (mgN/L)	0.01	0.01	0.02	0.03	0.01	0.03	0.03	0.01		0.03	0.03	0.02	0.00	0.02	0.02
16	NO3-N (mgN/L)	1.03	0.66	0.53	0.72	0.74	1.72	2.66	0.22		0.17	0.51	2.19	3.58	6.47	5.44
17	o-PO4-P (mg P/L)	0.017	0.010	0.010	0.092	0.018	0.026	0.054	0.078		0.052	0.000	0.039	0.382	0.198	0.096
18	SiO2 (mg/L)	38.8	37.0	27.3	32.9	71.4	44.6	48.8	33.9		39.3	159.0	66.7	20.1	18.0	28.4
19	SO4 (mg/L)	14.3	11.8	9.5	9.8	14.4	13.0	12.4	11.3		16.0	17.8	15.4	15.3	18.3	15.9

Water Quality Seasonal Average for the period: 2001-2016

Station Name : HIVRA (AGH30Q1)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.9	0.8	0.5	0.7	0.9	1.1	1.0	2.1		2.7	0.8	2.2	1.4	2.2	1.3
2	COD (mg/L)							74.7	45.9		39.6	86.2	32.9	32.8	32.8	37.2
3	DO (mg/L)	8.0	7.0	6.4	6.9	7.5	7.9	7.3	6.7		8.4	6.8	7.5	7.4	7.9	7.2
4	DO_SAT% (%)	92	81	74	78	88	92	85	82		109	79	90	90	98	86
5	FCol-MPN (MPN/100mL)	438	588	213	238	100	100	115	100		100	100	200	175	48	85
6	Tcol-MPN (MPN/100mL)	7104	663	425	475	100	238	428	100		400	100	750	613	108	245
	TRACE & TOXIC															
1	As (µg/L)											0.6				1.1
2	Cd (µg/L)											0.3			0.5	0.4
3	Cr (µg/L)											6.1			3.7	2.5
4	Cu (µg/L)											171.8			6.3	1.1
5	Hg (µg/L)															
6	Ni (µg/L)											54.0			0.2	0.3
7	Pb (µg/L)											0.4			1.1	1.6
8	Zn (µg/L)											8.8			5.0	4.4
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	55	58	59	53	74	83	87	58		78	88	105	138	86	69
2	HAR_Total (mgCaCO3/L)	155	155	128	153	170	163	185	149		166	234	200	235	183	155
3	Na% (%)	46	39	46	38	31	33	32	40		25	23	32	27	33	39
4	RSC (-)	1.8	1.4	1.5	1.3	0.8	0.7	0.7	1.2		0.6	0.0	1.2	0.4	1.1	1.3
5	SAR (-)	2.2	1.6	2.0	1.6	1.2	1.3	1.3	1.6		0.9	0.9	1.3	1.1	1.4	1.7
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : HIVRA (AGH30Q1)

Local River : Wardha

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	2.814	1.271	3.552	1.367	3.132	6.111	10.91			0.000	0.000	5.082	2.302	10.72	
2	EC_GEN (µmho/cm)	588	401	476	404	421	414	482				469	460	583	552	474
3	pH_GEN (pH units)	8.6	8.3	8.4	8.6	8.5	8.4	8.6				8.3	8.7	8.2	8.3	8.4
4	Temp (deg C)	26.2	23.0	24.2	24.4	26.5	23.3	25.3				27.3	26.7	26.7	26.0	25.5
5	Turb (NTU)						1.4	3.9				0.7	0.5	1.1	1.6	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	20.4	12.2	13.9	9.3	8.7	6.5	3.7				4.8	6.7	0.0	4.0	7.5
2	ALK-TOT (mgCaCO3/L)	280	205	234	217	172	171	211				184	237	214	245	230
3	B (mg/L)	0.65	0.20	0.57	0.17	0.26	0.75	0.92				0.16	0.18	0.17	0.39	0.14
4	Ca (mg/L)	19	18	18	25	25	24	26				33	34	45	27	54
5	Cl (mg/L)	27.3	17.0	14.7	13.8	18.2	11.0	19.9				22.0	22.0	36.3	22.9	23.6
6	CO3 (mg/L)	24.5	14.7	16.7	11.3	10.5	7.8	4.5				5.8	8.0	0.0	4.8	9.0
7	F (mg/L)	0.41	0.46	0.31	0.47	0.36	0.34	0.32				0.44	0.24	0.54	0.44	0.15
8	Fe (mg/L)	0.2	0.0	0.0	0.0	0.0	0.0	0.0				0.2	0.0	0.3	0.1	0.0
9	HCO3 (mg/L)	280	220	252	242	189	193	248				213	272	261	290	262
10	K (mg/L)	4.5	1.6	3.1	3.3	2.6	2.3	1.4				2.6	3.9	3.2	2.4	3.0
11	Mg (mg/L)	21.6	21.6	27.0	18.2	15.7	19.0	20.5				32.1	22.1	20.9	25.7	21.1
12	Na (mg/L)	77.2	41.0	46.3	44.1	43.5	30.1	51.9				42.6	46.5	64.8	52.4	57.5
13	NH3-N (mg N/L)	0.30	0.21	0.25	0.07	0.12	0.26	0.21				0.15	0.01	0.87	0.10	0.17
14	NO2+NO3 (mg N/L)	0.40	0.27	0.43	1.04	0.38	1.16	0.18				0.42	0.43	5.34	6.78	5.34
15	NO2-N (mgN/L)	0.02	0.00	0.01	0.07	0.00	0.03	0.04				0.02	0.02	0.01	0.01	0.14
16	NO3-N (mgN/L)	0.39	0.27	0.42	0.96	0.37	1.12	0.14				0.41	0.41	5.33	6.78	5.20
17	o-PO4-P (mg P/L)	0.015	0.010	0.010	0.086	0.065	0.041	0.034				0.003	0.034	0.762	0.249	0.062
18	SiO2 (mg/L)	32.9	26.0	31.7	29.3	80.1	37.5	39.2				33.8	22.1	28.7	45.7	25.1
19	SO4 (mg/L)	14.4	11.0	10.3	10.1	14.7	9.6	19.5				25.0	11.6	16.0	22.9	7.1

Water Quality Seasonal Average for the period: 2001-2016

Station Name : HIVRA (AGH30Q1)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	67.1	1.0	0.7	3.1	1.3	1.1	2.2				2.3	2.9	3.0	3.0	8.9
2	COD (mg/L)							61.2				104.2	46.7	47.3	30.3	58.2
3	DO (mg/L)	6.3	6.8	4.5	5.3	6.9	6.8	7.4				6.9	8.0	6.8	7.3	5.2
4	DO_SAT% (%)	77	79	54	63	85	80	90				87	100	84	90	63
5	FCol-MPN (MPN/100mL)	356	250	917	600	150	100	400				450	183	517	103	55
6	Tcol-MPN (MPN/100mL)	517	350	1900	1800	233	100	1467				5067	1400	1033	947	150
	TRACE & TOXIC															
1	As (µg/L)											1.3	3.0	4.0	0.0	1.9
2	Cd (µg/L)						7.0					0.0	1.6	0.0	1.0	0.4
3	Cr (µg/L)						66.0					0.0	1.6	0.7	0.0	4.7
4	Cu (µg/L)												4.0	2.8		1.2
5	Hg (µg/L)						1.1					0.1	0.0	0.1	0.1	
6	Ni (µg/L)						1.0					0.8	5.9	3.6	3.7	0.7
7	Pb (µg/L)						37.0					17.5	1.4	4.1	14.0	0.9
8	Zn (µg/L)						33.0					18.2	11.5	5.6	19.0	3.5
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	48	45	46	64	63	60	65				83	86	114	68	134
2	HAR_Total (mgCaCO3/L)	138	135	158	140	128	139	151				216	177	201	176	222
3	Na% (%)	53	40	38	40	42	32	41				29	35	40	38	35
4	RSC (-)	2.7	1.4	1.5	1.6	0.9	0.7	1.2				0.0	1.2	0.7	1.4	0.4
5	SAR (-)	2.9	1.5	1.6	1.6	1.7	1.1	1.9				1.3	1.5	2.0	1.7	1.7
	PESTICIDES															
1	Aldrin (µg/L)						0.0					0.0				
2	BHC (µg/L)						0.1					0.0				
3	DDT (µg/L)						0.1					0.0				
4	Dieldrin (µg/L)						0.1					0.0				
5	Endos (µg/L)						0.1					0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: ASHTI	Code	: AGH40A4
State	: Maharashtra	District	Gadchiroli
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wainganga
Sub-Sub Tributary	: -	Local River	: Wainganga
Division	: Wainganga Div., Nagpur	Sub-Division	: L Wainganga SD, Chandrapur
Drainage Area	: 50990 Sq. Km.	Bank	: Left
Latitude	: 19°41'12"	Longitude	: 79°47'13"
	Opening Date	Closing Date	
Gauge	: 01.08.1965		
Discharge	: 14.07.1965		
Sediment	: 14.03.1966		
Water Quality	: 01.06.1966		

Water Quality Datasheet for the period : 2015-2016

Station Name : ASHTI (AGH40A4)

Local River : Wainganga

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)												
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	285	278	239	130	225	300	287	286	247	256	314	317
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_GEN (pH units)	8.6	8.4	7.9	7.5	8.2	8.5	8.5	8.7	8.8	8.7	9.0	9.0
6	Temp (deg C)	32.0	29.0	29.5	28.5	31.0	27.5	26.5	23.0	25.0	27.0	27.0	30.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	5.2	10.4	0.0	0.0	0.0	5.2	7.8	9.0	9.0	17.9	12.0	14.9
2	ALK-TOT (mgCaCO3/L)	101	121	114	65	110	159	140	141	153	171	151	123
3	B (mg/L)	0.06	0.12	0.13	0.34	0.22	0.15	0.34	0.25	0.19	0.09	0.07	0.14
4	Ca (mg/L)	18	29	31	20	45	33	30	33	21	41	43	25
5	Cl (mg/L)	17.9	17.9	13.9	8.0	11.9	11.9	19.9	13.9	15.9	16.5	20.6	25.8
6	CO3 (mg/L)	6.2	12.5	0.0	0.0	0.0	6.2	9.4	10.8	10.8	21.6	14.4	18.0
7	F (mg/L)	0.11	0.17	0.01	0.01	0.20	0.23	0.18	0.42	0.02	0.16	0.09	0.28
8	Fe (mg/L)	0.1	0.0	0.1	0.5	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1
9	HCO3 (mg/L)	111	123	140	79	134	181	152	150	165	165	155	113
10	K (mg/L)	2.0	2.7	2.1	2.0	2.0	2.1	2.0	2.2	1.8	2.8	3.3	4.5
11	Mg (mg/L)	9.9	10.4	11.0	8.2	6.0	15.5	12.3	8.6	13.9	18.7	13.4	7.5
12	Na (mg/L)	19.4	18.0	13.0	9.8	15.0	18.8	21.2	26.6	22.3	24.0	31.6	28.7
13	NH3-N (mg N/L)	0.08	0.07	0.00	0.18	0.19	0.05	0.22	0.39	0.35	0.22	0.17	0.00
14	NO2+NO3 (mg N/L)	5.09	11.77	7.59	10.43	4.34	3.53	8.17	4.15	3.19	8.00	2.72	1.84
15	NO2-N (mgN/L)	0.02	0.06	0.00	0.04	0.00	0.02	0.01	0.00	0.01	0.41	0.20	0.32
16	NO3-N (mgN/L)	5.07	11.71	7.59	10.39	4.34	3.51	8.16	4.15	3.19	7.59	2.52	1.52
17	o-PO4-P (mg P/L)	0.169	0.065	0.107	0.095	0.091	0.065	0.078	0.125	0.034	0.140	0.073	0.087
18	SiO2 (mg/L)	18.6	18.9	15.4	14.6	10.4	14.3	13.5	13.1	5.5	3.4	12.3	23.5
19	SO4 (mg/L)	13.5	3.4	16.2	17.0	46.4	10.3	14.9	9.3	4.7	7.3	6.3	14.4

Water Quality Datasheet for the period : 2015-2016

Station Name : ASHTI (AGH40A4)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water Analysis

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	2.2	4.5	1.7	1.0	1.0	1.4	1.4	1.1	1.1	1.7	3.0	3.4
2	COD (mg/L)	39.0	21.3	28.2	24.9	28.1	53.4	30.8	23.5	27.2	99.5	41.5	30.5
3	DO (mg/L)	6.4	6.5	6.9	6.0	6.0	7.5	6.7	8.4	7.2	6.5	7.8	9.5
4	DO_SAT% (%)	88	85	90	77	81	94	83	98	87	82	98	126
5	FCol-MPN (MPN/100mL)	340	80	140	170	230	40	20	80	40	60	90	20
6	Tcol-MPN (MPN/100mL)	2800	220	800	2200	2200	130	80	130	300	170	170	40
	TRACE & TOXIC												
1	As (µg/L)								1.1			2.0	
2	Cd (µg/L)								0.1			0.2	
3	Cr (µg/L)								4.3			0.4	
4	Cu (µg/L)								0.6			4.2	
5	Ni (µg/L)								0.3			0.8	
6	Pb (µg/L)								0.2			0.7	
7	Zn (µg/L)								5.4			20.1	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	45	72	77	50	113	82	75	82	53	104	108	62
2	HAR_Total (mgCaCO3/L)	87	116	123	84	138	146	126	117	111	182	164	93
3	Na% (%)	32	25	19	20	19	22	26	33	30	22	29	39
4	RSC (-)	0.3	0.1	0.0	0.0	0.0	0.3	0.3	0.5	0.9	0.0	0.0	0.6
5	SAR (-)	0.9	0.7	0.5	0.5	0.6	0.7	0.8	1.1	0.9	0.8	1.1	1.3
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : ASHTI (AGH40A4)

Division : Wainganga Div., Nagpur

Local River : Wainganga

Sub-Division : L Wainganga SD, Chandrapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN ($\mu\text{mho/cm}$)	12	317	130	264
3	pH_GEN (pH units)	12	9.0	7.5	8.5
4	Temp (deg C)	12	32.0	23.0	28
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	12	17.9	0.0	7.6
2	ALK-TOT (mgCaCO ₃ /L)	12	171	65	129
3	B (mg/L)	12	0.34	0.06	0.18
4	Ca (mg/L)	12	45	18	31
5	Cl (mg/L)	12	25.8	8.0	16.2
6	CO ₃ (mg/L)	12	21.6	0.0	9.2
7	F (mg/L)	12	0.42	0.01	0.16
8	Fe (mg/L)	12	0.5	0.0	0.1
9	HCO ₃ (mg/L)	12	181	79	139
10	K (mg/L)	12	4.5	1.8	2.5
11	Mg (mg/L)	12	18.7	6.0	11.3
12	Na (mg/L)	12	31.6	9.8	20.7
13	NH ₃ -N (mg N/L)	12	0.39	0.00	0.16
14	NO ₂ +NO ₃ (mg N/L)	12	11.77	1.84	5.9
15	NO ₂ -N (mgN/L)	12	0.41	0.00	0.09
16	NO ₃ -N (mgN/L)	12	11.71	1.52	5.81
17	o-PO ₄ -P (mg P/L)	12	0.169	0.034	0.094
18	SiO ₂ (mg/L)	12	23.5	3.4	13.6
19	SO ₄ (mg/L)	12	46.4	3.4	13.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃ -27 (mg/L)	12	4.5	1.0	2
2	COD (mg/L)	12	99.5	21.3	37.3
3	DO (mg/L)	12	9.5	6.0	7.1
4	DO_SAT% (%)	12	126	77	91
5	FCoI-MPN (MPN/100mL)	12	340	20	109
6	TcoI-MPN (MPN/100mL)	12	2800	40	770
	TRACE & TOXIC				
1	As ($\mu\text{g/L}$)	2	2.0	1.1	1.6
2	Cd ($\mu\text{g/L}$)	2	0.2	0.1	0.2
3	Cr ($\mu\text{g/L}$)	2	4.3	0.4	2.3
4	Cu ($\mu\text{g/L}$)	2	4.2	0.6	2.4
5	Ni ($\mu\text{g/L}$)	2	0.8	0.3	0.6
6	Pb ($\mu\text{g/L}$)	2	0.7	0.2	0.4
7	Zn ($\mu\text{g/L}$)	2	20.1	5.4	12.8
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	12	113	45	77
2	HAR_Total (mgCaCO ₃ /L)	12	182	84	124
3	Na% (%)	12	39	19	26
4	RSC (-)	12	0.9	0.0	0.2
5	SAR (-)	12	1.3	0.5	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : ASHTI (AGH40A4)

Local River : Wainganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	917.4	734.2	1522	599.0	778.8	1684	2782	2525	471.9	1302	1431	1338	2214	946.6	
2	EC_GEN (µmho/cm)	224	215	215	208	185	164	195	208	290	261	278	257	303	411	231
3	pH_GEN (pH units)	8.2	8.3	8.3	8.5	8.4	8.3	8.4	8.2	8.5	8.3	8.5	8.5	8.6	7.9	8.1
4	Temp (deg C)	28.3	29.3	28.3	28.3	27.9	27.5	29.8	28.6	28.3	29.6	28.2	28.3	29.4	29.4	30.0
5	Turb (NTU)						100.5	161.4	95.8	12.5	18.0	22.6	10.9	10.8	24.0	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.9	1.9	3.5	2.8	4.3	3.1	3.0	1.6	8.0	3.1	5.1	4.7	3.3	0.0	3.1
2	ALK-TOT (mgCaCO3/L)	96	101	90	97	80	69	82	79	106	98	119	163	114	115	102
3	B (mg/L)	0.42	0.89	0.42	0.23	0.20	0.38	0.56	0.83	0.33	0.46	0.26	0.13	0.14	0.28	0.17
4	Ca (mg/L)	22	21	18	21	25	17	25	21	21	22	24	27	29	24	29
5	Cl (mg/L)	12.2	9.4	14.2	9.2	6.9	6.7	10.2	9.5	22.9	17.0	12.8	16.3	24.6	13.2	13.9
6	CO3 (mg/L)	2.3	2.3	4.2	3.4	5.2	3.8	3.7	2.0	9.6	3.8	6.1	5.7	3.9	0.0	3.7
7	F (mg/L)	0.40	0.31	0.71	0.30	0.98	0.13	0.23	0.22	0.43	0.30	0.31	0.50	0.31	0.59	0.10
8	Fe (mg/L)	0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.0	0.1	0.0	0.6	0.1	0.5	0.2	0.1
9	HCO3 (mg/L)	112	119	102	112	87	76	92	93	110	111	132	188	131	141	117
10	K (mg/L)	2.6	2.6	2.6	2.5	1.8	1.7	1.7	1.6	3.9	2.1	2.3	2.3	3.3	2.4	2.2
11	Mg (mg/L)	7.2	6.4	8.5	8.7	4.9	4.4	4.7	3.8	10.5	8.8	14.1	14.3	9.4	14.3	9.1
12	Na (mg/L)	14.2	14.6	15.2	12.5	7.3	8.4	8.1	17.9	26.6	13.8	23.8	20.4	16.1	21.8	15.1
13	NH3-N (mg N/L)	0.36	0.22	0.22	0.18	0.06	0.19	0.56	0.27	0.24	0.32	0.10	0.19	0.07	0.39	0.11
14	NO2+NO3 (mg N/L)	0.65	0.59	0.53	1.38	0.86	0.62	0.88	0.36	0.21	0.25	0.92	1.56	2.04	1.81	7.84
15	NO2-N (mgN/L)	0.03	0.02	0.02	0.12	0.02	0.06	0.07	0.11	0.03	0.01	0.15	0.55	0.01	0.01	0.02
16	NO3-N (mgN/L)	0.61	0.57	0.50	1.25	0.84	0.56	0.81	0.25	0.18	0.24	0.77	1.00	2.03	1.81	7.82
17	o-PO4-P (mg P/L)	0.052	0.016	0.016	0.078	0.021	0.031	0.041	0.034	0.033	0.035	0.010	0.085	0.050	0.208	0.105
18	SiO2 (mg/L)	22.2	24.6	22.4	26.4	61.7	34.3	30.2	24.7	64.7	23.6	44.5	30.1	10.7	10.6	15.6
19	SO4 (mg/L)	6.0	5.2	9.0	8.9	11.2	4.6	8.4	10.8	8.9	7.6	9.9	11.7	13.8	9.6	19.3

Water Quality Seasonal Average for the period: 2001-2016

Station Name : ASHTI (AGH40A4)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.2	0.7	0.8	1.3	1.4	1.1	1.0	1.5	1.0	1.9	2.1	2.3	1.9	1.7	2.1
2	COD (mg/L)							35.9	54.8	69.5	50.9	36.1	64.7	37.1	26.2	28.3
3	DO (mg/L)	6.6	6.7	6.7	6.2	7.1	6.9	6.6	6.2	6.6	6.9	7.0	6.4	6.2	6.3	6.4
4	DO_SAT% (%)	85	87	86	80	90	87	85	80	85	91	89	81	80	83	84
5	FCol-MPN (MPN/100mL)	2673	1480	690	980	275	240	360	380	190	120	220	540	7210	400	192
6	Tcol-MPN (MPN/100mL)	4581	2110	1730	2720	648	330	750	890	520	670	580	7500	39660	944	1644
	TRACE & TOXIC															
1	As (µg/L)												3.4	4.7		
2	Cd (µg/L)												0.2	1.0		
3	Cr (µg/L)												6.1	5.6		
4	Cu (µg/L)												36.5	2.8		
5	Hg (µg/L)													0.2		
6	Ni (µg/L)												1.4	13.9		
7	Pb (µg/L)					44.0							1.0	0.5		
8	Zn (µg/L)					8.0							2.6	1.3		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	54	53	46	53	63	42	63	54	52	56	59	68	72	61	72
2	HAR_Total (mgCaCO3/L)	84	80	81	90	83	60	82	69	96	93	118	128	112	121	110
3	Na% (%)	23	25	22	21	15	20	15	27	31	22	28	23	23	28	23
4	RSC (-)	0.3	0.4	0.2	0.2	0.0	0.2	0.1	0.3	0.3	0.1	0.2	0.7	0.3	0.1	0.1
5	SAR (-)	0.6	0.7	0.7	0.6	0.3	0.4	0.4	0.9	1.2	0.6	0.9	0.8	0.7	0.9	0.6
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)					0.0										
5	Endos (µg/L)					0.1										

Water Quality Seasonal Average for the period: 2001-2016

Station Name : ASHTI (AGH40A4)

Local River : Wainganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	35.13	59.57	141.9	49.53	125.9	96.01	106.8	43.97	83.08	115.4	57.37	94.35	213.1	125.7	
2	EC_GEN (µmho/cm)	318	287	292	284	300	303	314	353	303	337	393	312	397	350	280
3	pH_GEN (pH units)	8.6	8.4	8.6	8.6	8.6	8.6	8.7	8.6	8.5	8.5	8.7	8.6	8.3	8.3	8.6
4	Temp (deg C)	23.3	24.3	26.0	23.1	25.2	25.4	26.3	25.6	22.8	24.9	24.8	24.4	24.6	24.9	25.5
5	Turb (NTU)						0.7	0.4	0.7	0.8	1.0	13.5	0.6	2.4	0.9	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	6.4	6.8	8.3	5.7	6.2	5.9	5.2	5.7	5.7	6.8	6.3	6.4	3.1	1.7	7.7
2	ALK-TOT (mgCaCO3/L)	137	142	140	129	144	126	130	143	121	154	158	204	156	152	148
3	B (mg/L)	0.50	0.88	0.25	0.24	0.22	0.40	0.78	0.66	0.60	0.83	0.17	0.28	0.27	0.51	0.23
4	Ca (mg/L)	23	29	33	23	29	30	29	33	29	30	33	41	48	34	29
5	Cl (mg/L)	15.8	12.3	10.5	12.6	12.6	11.7	14.9	18.3	11.5	16.3	13.0	15.6	16.8	12.1	15.4
6	CO3 (mg/L)	8.4	8.2	10.1	6.9	7.5	7.1	6.3	6.9	6.9	8.2	7.6	7.7	3.8	2.0	9.3
7	F (mg/L)	0.25	0.50	0.33	0.51	0.49	0.24	0.21	0.52	0.35	0.26	0.38	0.36	0.43	0.26	0.22
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.4	0.0	0.0
9	HCO3 (mg/L)	151	157	151	143	161	140	146	160	134	171	178	233	183	181	162
10	K (mg/L)	2.0	1.9	2.0	2.1	2.6	1.7	1.9	1.7	1.8	2.1	1.5	3.0	2.3	1.8	2.0
11	Mg (mg/L)	12.0	11.1	10.5	15.7	12.5	9.2	11.3	11.5	10.9	14.3	17.8	17.9	15.0	13.5	12.6
12	Na (mg/L)	25.3	17.5	18.8	19.4	18.8	17.8	21.3	22.9	14.5	19.6	20.5	24.4	23.7	21.3	22.2
13	NH3-N (mg N/L)	0.35	0.24	0.13	0.13	0.05	0.50	0.08	0.55	0.36	0.08	0.20	0.08	0.07	0.15	0.25
14	NO2+NO3 (mg N/L)	0.18	0.19	0.27	0.93	0.15	0.33	0.45	0.15	0.26	0.14	0.30	0.43	4.28	3.99	4.76
15	NO2-N (mgN/L)	0.01	0.01	0.02	0.09	0.01	0.02	0.10	0.01	0.05	0.01	0.01	0.00	0.01	0.00	0.01
16	NO3-N (mgN/L)	0.17	0.18	0.25	0.84	0.14	0.32	0.35	0.14	0.21	0.13	0.30	0.43	4.27	3.98	4.75
17	o-PO4-P (mg P/L)	0.030	0.010	0.010	0.092	0.016	0.028	0.039	0.031	0.041	0.040	0.002	0.041	0.239	0.156	0.076
18	SiO2 (mg/L)	17.7	18.3	19.8	27.2	44.9	24.8	21.7	35.3	36.5	21.7	46.1	33.4	9.3	9.0	11.6
19	SO4 (mg/L)	8.6	7.8	14.0	20.2	8.6	8.3	7.7	10.6	10.1	11.4	13.7	10.4	50.5	10.4	9.8

Water Quality Seasonal Average for the period: 2001-2016

Station Name : ASHTI (AGH40A4)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.0	0.5	0.5	1.4	1.6	0.7	1.7	1.6	1.2	1.4	1.2	1.1	1.6	2.5	1.3
2	COD (mg/L)							35.0	33.5	39.5	43.8	49.6	99.7	41.0	29.3	33.7
3	DO (mg/L)	8.1	7.4	7.6	8.0	8.3	7.3	7.3	7.4	7.9	8.2	8.1	7.5	6.9	7.4	7.4
4	DO_SAT% (%)	95	87	93	93	102	89	88	86	92	99	96	89	83	88	90
5	FCol-MPN (MPN/100mL)	525	738	100	400	100	100	78	100	100	100	100	1313	125	30	45
6	Tcol-MPN (MPN/100mL)	871	838	138	600	100	100	78	163	100	138	163	12238	463	120	160
	TRACE & TOXIC															
1	As (µg/L)											0.6				1.1
2	Cd (µg/L)											0.0			0.7	0.1
3	Cr (µg/L)											9.3			2.4	4.3
4	Cu (µg/L)											111.5			7.4	0.6
5	Hg (µg/L)															
6	Ni (µg/L)											16.8			0.9	0.3
7	Pb (µg/L)											0.6			4.5	0.2
8	Zn (µg/L)											18.8			4.0	5.4
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	58	72	81	57	73	75	73	81	73	76	83	104	120	85	73
2	HAR_Total (mgCaCO3/L)	107	118	125	122	125	113	120	129	119	135	157	178	182	141	125
3	Na% (%)	33	24	24	25	24	25	28	28	21	23	22	23	23	24	28
4	RSC (-)	0.6	0.5	0.3	0.2	0.4	0.3	0.2	0.3	0.1	0.4	0.1	0.5	0.1	0.2	0.5
5	SAR (-)	1.1	0.7	0.7	0.8	0.7	0.7	0.8	0.9	0.6	0.7	0.7	0.8	0.8	0.8	0.9
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : ASHTI (AGH40A4)

Local River : Wainganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	7.734	13.68	19.39	8.324	28.67	25.52	25.52	1.055	14.19	12.27	6.797	21.87	34.90	14.13	
2	EC_GEN (µmho/cm)	315	287	330	293	293	305	305	334	338	347	315	336	318	323	296
3	pH_GEN (pH units)	8.6	8.4	8.6	8.9	8.5	8.7	8.6	8.8	8.7	8.6	8.6	8.7	8.0	8.4	8.9
4	Temp (deg C)	28.8	29.0	31.7	27.3	28.7	26.5	27.7	27.3	28.7	27.3	27.5	28.5	28.8	28.7	28.0
5	Turb (NTU)						0.5	0.8	0.7	0.4	0.5	0.7	0.3	0.6	0.4	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	9.2	2.9	10.5	11.2	5.6	6.3	4.6	4.9	4.3	6.7	5.5	7.3	0.0	3.4	14.9
2	ALK-TOT (mgCaCO3/L)	135	130	181	133	117	128	125	139	121	144	176	170	142	136	148
3	B (mg/L)	0.62	0.27	0.62	0.23	0.18	0.73	0.89	0.14	0.70	0.16	0.16	0.10	0.20	0.34	0.10
4	Ca (mg/L)	17	22	24	21	30	29	23	20	23	29	27	26	31	25	36
5	Cl (mg/L)	20.1	20.7	20.0	21.0	15.4	16.1	17.3	28.2	27.2	22.0	20.8	22.3	17.1	15.6	21.0
6	CO3 (mg/L)	11.1	3.5	12.7	13.5	6.7	7.6	5.6	5.9	5.2	8.0	6.6	8.7	0.0	4.1	18.0
7	F (mg/L)	0.39	0.32	0.34	0.64	0.31	0.25	0.37	0.41	0.45	0.26	0.34	0.28	0.60	0.35	0.18
8	Fe (mg/L)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.1
9	HCO3 (mg/L)	142	151	148	135	130	141	141	158	137	160	202	190	173	157	144
10	K (mg/L)	3.8	3.1	3.3	3.3	2.1	3.0	1.6	3.0	3.1	2.8	2.9	4.1	2.5	2.2	3.5
11	Mg (mg/L)	14.0	15.2	93.6	12.8	8.3	7.9	10.7	17.5	13.5	23.4	25.0	18.5	15.0	12.1	13.2
12	Na (mg/L)	28.4	23.0	26.7	31.0	19.5	22.7	24.5	33.3	24.4	32.1	26.8	30.0	29.7	22.7	28.1
13	NH3-N (mg N/L)	0.26	0.27	0.17	0.11	0.13	0.40	0.20	0.16	0.21	0.27	0.18	0.02	0.64	0.06	0.13
14	NO2+NO3 (mg N/L)	0.29	0.16	0.28	0.77	0.25	0.63	0.16	0.14	0.09	0.90	0.35	0.06	3.25	4.89	4.18
15	NO2-N (mgN/L)	0.02	0.02	0.01	0.13	0.02	0.02	0.02	0.00	0.00	0.02	0.01	0.03	0.00	0.00	0.31
16	NO3-N (mgN/L)	0.28	0.14	0.27	0.64	0.23	0.61	0.14	0.14	0.09	0.87	0.34	0.03	3.24	4.89	3.88
17	o-PO4-P (mg P/L)	0.014	0.017	0.017	0.099	0.055	0.048	0.031	0.024	0.052	0.062	0.007	0.031	0.708	0.183	0.100
18	SiO2 (mg/L)	18.9	17.7	27.0	19.5	62.1	29.5	37.6	30.2	47.4	39.3	57.4	11.4	15.5	23.0	13.1
19	SO4 (mg/L)	9.8	14.0	10.3	11.2	13.4	10.2	12.6	8.3	12.5	11.9	22.9	8.9	10.8	17.8	9.3

Water Quality Seasonal Average for the period: 2001-2016

Station Name : ASHTI (AGH40A4)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.1	0.7	1.6	1.6	0.9	0.7	0.9	1.4	1.2	1.5	1.7	14.0	2.1	2.8	2.7
2	COD (mg/L)							38.1	53.0	32.2	47.3	39.6	56.3	42.0	29.0	57.2
3	DO (mg/L)	7.1	7.1	6.7	7.0	7.1	7.2	6.6	7.0	6.8	7.5	6.9	6.2	6.7	6.3	7.9
4	DO_SAT% (%)	92	92	91	89	91	89	84	87	87	95	88	79	86	81	102
5	FCol-MPN (MPN/100mL)	150	617	250	150	100	200	100	100	100	100	100	100	273	107	57
6	Tcol-MPN (MPN/100mL)	250	1433	350	250	150	283	100	100	150	100	233	500	1643	220	127
	TRACE & TOXIC															
1	As (µg/L)											0.7	2.8	3.4	1.3	2.0
2	Cd (µg/L)						7.0					0.0	1.2	0.0	1.0	0.2
3	Cr (µg/L)						30.0					0.0	0.1	0.5	0.0	0.4
4	Cu (µg/L)												1.0	5.2		4.2
5	Hg (µg/L)						0.7					0.1	0.0	0.1	0.1	
6	Ni (µg/L)						2.0					0.0	27.7	4.1	1.0	0.8
7	Pb (µg/L)						48.0					13.0	2.6	0.2	11.0	0.7
8	Zn (µg/L)						27.0					25.7	13.3	13.8	6.0	20.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	44	54	59	52	74	72	58	51	58	71	67	65	78	63	91
2	HAR_Total (mgCaCO3/L)	102	118	449	105	108	105	103	124	114	169	171	141	141	113	146
3	Na% (%)	37	29	22	38	28	31	34	36	31	31	25	31	31	30	30
4	RSC (-)	0.7	0.3	0.3	0.6	0.2	0.5	0.5	0.3	0.2	0.0	0.4	0.6	0.1	0.5	0.2
5	SAR (-)	1.2	0.9	0.8	1.3	0.8	1.0	1.1	1.3	1.0	1.1	0.9	1.1	1.1	0.9	1.1
	PESTICIDES															
1	Aldrin (µg/L)						0.0					0.0				
2	BHC (µg/L)						0.1					0.0				
3	DDT (µg/L)						0.1					0.0				
4	Dieldrin (µg/L)						0.0					0.0				
5	Endos (µg/L)						0.1					0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: PAUNI	Code	: AGH40I8
State	: Maharashtra	District	Bhandara
Basin	: Godavari	Independent River	: Godavari
Tributary	:	Sub Tributary	: Wainganga
Sub-Sub Tributary	:	Local River	: Wainganga
Division	: Wainganga Div., Nagpur	Sub-Division	: L Wainganga SD, Chandrapur
Drainage Area	: 35520 Sq. Km.	Bank	: Left
Latitude	: 20°47'46"	Longitude	: 79°38'32"
	Opening Date	Closing Date	
Gauge	: 12.01.1964		
Discharge	: 21.09.1964		
Sediment	: 12.01.1966		
Water Quality	: 12.01.1966		

Water Quality Datasheet for the period : 2015-2016

Station Name : PAUNI (AGH40I8)

Local River :

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)												
2	Colour_Cod (-)	Clear	Clear	Light Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	400	312	246	255	233	304	323	310	314	325	388	361
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_GEN (pH units)	8.5	8.0	7.4	7.7	7.8	8.5	8.0	8.0	8.0	7.9	8.1	7.9
6	Temp (deg C)	29.0	28.0	28.0	28.0	29.0	28.0	25.0	20.0	21.0	28.0	27.0	30.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	12.9	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	160	127	84	94	95	147	151	156	174	150	203	174
3	B (mg/L)	0.08	0.08	0.10	0.31	0.25	0.13	0.28	0.31	0.17	0.19	0.15	0.09
4	Ca (mg/L)	28	34	28	32	26	36	35	28	32	62	54	30
5	Cl (mg/L)	23.9	19.9	17.9	11.9	11.9	15.9	15.9	11.9	17.9	16.5	20.6	25.8
6	CO3 (mg/L)	15.6	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.02	0.17	0.00	0.00	0.16	0.35	0.22	0.35	0.12	0.06	0.14	0.11
8	Fe (mg/L)	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1
9	HCO3 (mg/L)	164	155	103	115	116	167	184	190	212	183	248	212
10	K (mg/L)	3.2	3.4	2.4	2.3	2.6	2.4	2.4	2.7	3.0	3.5	3.2	3.3
11	Mg (mg/L)	16.5	6.0	8.8	2.8	11.5	10.7	13.4	12.8	16.0	18.2	23.0	18.2
12	Na (mg/L)	23.2	18.4	14.7	16.0	14.8	18.6	19.8	23.1	23.4	24.1	31.9	22.6
13	NH3-N (mg N/L)	0.10	0.04	0.04	0.09	0.29	0.05	0.37	0.38	0.37	0.13	0.12	0.01
14	NO2+NO3 (mg N/L)	6.21	7.61	11.50	8.82	6.34	5.63	4.80	2.30	3.25	10.65	2.24	1.70
15	NO2-N (mgN/L)	0.01	0.04	0.00	0.02	0.01	0.03	0.01	0.00	0.01	0.11	0.21	0.28
16	NO3-N (mgN/L)	6.20	7.58	11.50	8.80	6.33	5.60	4.79	2.30	3.25	10.54	2.03	1.42
17	o-PO4-P (mg P/L)	0.318	0.095	0.147	0.124	0.115	0.103	0.093	0.068	0.019	0.130	0.137	0.105
18	SiO2 (mg/L)	15.2	19.3	16.1	19.3	12.2	16.0	13.5	14.4	8.8	12.2	19.7	8.6
19	SO4 (mg/L)	13.8	3.2	20.6	11.6	40.4	16.7	16.1	14.0	8.9	25.9	8.3	18.2

Water Quality Datasheet for the period : 2015-2016

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water Analysis

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	2.7	2.1	4.4	2.5	1.7	1.8	1.0	3.0	2.5	15.0	3.6	3.2
2	COD (mg/L)	26.0	25.3	11.6	37.3	65.0	30.1	47.4	39.2	34.4	93.3	26.1	26.9
3	DO (mg/L)	6.4	6.1	7.0	8.0	6.8	6.7	6.0	7.7	6.8	5.1	6.3	7.7
4	DO_SAT% (%)	83	78	89	102	88	86	73	85	76	65	79	102
5	FCol-MPN (MPN/100mL)	110	110	80	80	170	260	1300	120	140	140	110	16000
6	Tcol-MPN (MPN/100mL)	170	330	900	2200	2400	16000	16000	2800	700	1400	260	16000
	TRACE & TOXIC												
1	As (µg/L)								0.7			2.6	
2	Cd (µg/L)								0.1			0.3	
3	Cr (µg/L)								0.1			1.9	
4	Cu (µg/L)								0.7			2.3	
5	Ni (µg/L)								0.4			1.2	
6	Pb (µg/L)								0.2			0.7	
7	Zn (µg/L)								5.7			6.7	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	70	86	70	79	66	89	88	71	79	154	134	75
2	HAR_Total (mgCaCO3/L)	139	111	107	91	114	133	144	124	146	230	230	151
3	Na% (%)	26	26	23	27	22	23	23	28	25	18	23	24
4	RSC (-)	0.4	0.3	0.0	0.1	0.0	0.3	0.2	0.7	0.6	0.0	0.0	0.5
5	SAR (-)	0.9	0.8	0.6	0.7	0.6	0.7	0.7	0.9	0.8	0.7	0.9	0.8
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

Sub-Division : L Wainganga SD, Chandrapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (μmho/cm)	12	400	233	314
3	pH_GEN (pH units)	12	8.5	7.4	8
4	Temp (deg C)	12	30.0	20.0	26.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	12.9	0.0	1.5
2	ALK-TOT (mgCaCO3/L)	12	203	84	143
3	B (mg/L)	12	0.31	0.08	0.18
4	Ca (mg/L)	12	62	26	35
5	Cl (mg/L)	12	25.8	11.9	17.5
6	CO3 (mg/L)	12	15.6	0.0	1.8
7	F (mg/L)	12	0.35	0.00	0.14
8	Fe (mg/L)	12	0.1	0.0	0.1
9	HCO3 (mg/L)	12	248	103	171
10	K (mg/L)	12	3.5	2.3	2.8
11	Mg (mg/L)	12	23.0	2.8	13.2
12	Na (mg/L)	12	31.9	14.7	20.9
13	NH3-N (mg N/L)	12	0.38	0.01	0.17
14	NO2+NO3 (mg N/L)	12	11.50	1.70	5.92
15	NO2-N (mgN/L)	12	0.28	0.00	0.06
16	NO3-N (mgN/L)	12	11.50	1.42	5.86
17	o-PO4-P (mg P/L)	12	0.318	0.019	0.121
18	SiO2 (mg/L)	12	19.7	8.6	14.6
19	SO4 (mg/L)	12	40.4	3.2	16.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	15.0	1.0	3.6
2	COD (mg/L)	12	93.3	11.6	38.6
3	DO (mg/L)	12	8.0	5.1	6.7
4	DO_SAT% (%)	12	102	65	84
5	FCol-MPN (MPN/100mL)	12	16000	80	1552
6	Tcol-MPN (MPN/100mL)	12	16000	170	4930
	TRACE & TOXIC				
1	As (μg/L)	2	2.6	0.7	1.7
2	Cd (μg/L)	2	0.3	0.1	0.2
3	Cr (μg/L)	2	1.9	0.1	1
4	Cu (μg/L)	2	2.3	0.7	1.5
5	Ni (μg/L)	2	1.2	0.4	0.8
6	Pb (μg/L)	2	0.7	0.2	0.5
7	Zn (μg/L)	2	6.7	5.7	6.2
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	154	66	88
2	HAR_Total (mgCaCO3/L)	12	230	91	143
3	Na% (%)	12	28	18	24
4	RSC (-)	12	0.7	0.0	0.3
5	SAR (-)	12	0.9	0.6	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : PAUNI (AGH40I8)

Local River :

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	402.3	658.3	857.0	224.3	1111										
2	EC_GEN (µmho/cm)	265	319	240	274	325	307	271	318	380	334	345	313	274	327	289
3	pH_GEN (pH units)	8.1	8.1	8.0	8.2	8.4	8.2	8.3	8.2	8.2	8.0	7.9	8.1	8.1	7.6	7.9
4	Temp (deg C)	23.2	27.1	28.8	28.9	28.2	28.8	30.1	29.0	29.0	30.0	28.6	29.0	28.8	29.2	28.4
5	Turb (NTU)						54.0	65.0	60.4	5.9	13.1	7.9	8.4	6.5	7.8	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.3	3.5	0.0	2.2	6.1	2.8	1.9	2.3	1.6	1.4	0.0	2.9	0.0	0.0	2.6
2	ALK-TOT (mgCaCO3/L)	109	128	102	122	130	113	107	116	140	119	127	163	143	132	112
3	B (mg/L)	0.36	0.82	0.39	0.18	0.28	0.33	0.45	0.81	0.33	0.54	0.21	0.13	0.10	0.23	0.16
4	Ca (mg/L)	27	24	25	31	33	31	32	29	31	29	28	35	36	32	30
5	Cl (mg/L)	15.2	24.2	10.8	16.2	24.4	17.7	29.3	16.8	29.4	22.7	14.8	17.3	12.1	17.4	17.1
6	CO3 (mg/L)	1.5	4.3	0.0	2.7	7.3	3.4	2.3	2.8	2.0	1.7	0.0	3.5	0.0	0.0	3.1
7	F (mg/L)	0.45	0.30	0.64	0.32	0.98	0.24	0.29	0.21	0.60	0.32	0.28	0.48	0.34	0.56	0.07
8	Fe (mg/L)	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.5	0.2	0.5	0.1	0.1
9	HCO3 (mg/L)	130	147	125	144	144	131	126	136	166	141	155	191	175	162	131
10	K (mg/L)	3.1	3.9	2.4	3.2	3.8	2.7	2.3	2.2	4.6	2.9	2.8	2.6	3.6	3.1	2.8
11	Mg (mg/L)	7.4	10.2	9.5	10.1	159.3	8.2	7.1	8.4	14.6	10.8	15.2	15.3	15.1	11.7	9.1
12	Na (mg/L)	16.8	27.6	11.8	15.7	27.3	17.7	12.4	22.9	26.7	16.5	24.6	19.5	18.6	26.5	17.4
13	NH3-N (mg N/L)	0.39	0.20	0.23	0.31	0.15	0.19	0.51	0.29	0.30	0.39	0.13	0.16	0.09	0.31	0.11
14	NO2+NO3 (mg N/L)	1.08	0.72	1.21	3.63	0.85	1.19	1.48	0.70	0.29	0.45	0.68	1.66	2.64	1.74	8.10
15	NO2-N (mgN/L)	0.05	0.03	0.09	0.64	0.07	0.10	0.08	0.14	0.04	0.01	0.01	0.40	0.03	0.00	0.01
16	NO3-N (mgN/L)	1.03	0.69	1.12	2.99	0.78	1.09	1.40	0.55	0.25	0.44	0.67	1.26	2.61	1.74	8.08
17	o-PO4-P (mg P/L)	0.091	0.026	0.074	0.251	0.130	0.116	0.039	0.165	0.159	0.126	0.024	0.064	0.059	0.136	0.160
18	SiO2 (mg/L)	23.3	26.6	25.0	29.5	62.2	39.1	30.0	26.0	93.2	26.3	51.6	31.3	14.9	11.7	16.4
19	SO4 (mg/L)	8.5	11.6	11.4	12.3	15.3	13.6	10.0	17.0	12.8	7.9	14.4	15.8	23.1	10.4	17.9

Water Quality Seasonal Average for the period: 2001-2016

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.5	1.7	3.3	1.7	3.9	2.9	2.7	2.9	3.6	9.9	2.3	9.2	4.8	1.8	2.7
2	COD (mg/L)							53.9	56.8	69.2	71.6	35.5	59.7	49.4	26.0	33.0
3	DO (mg/L)	5.7	4.6	6.3	6.6	7.1	6.9	7.1	6.6	6.4	6.8	7.0	5.8	6.7	6.2	6.9
4	DO_SAT% (%)	67	59	81	86	90	90	93	86	84	90	90	75	86	81	88
5	FCol-MPN (MPN/100mL)	7560	14890	5850	4350	1169	590	770	530	1720	290	350	1760	1290	776	110
6	Tcol-MPN (MPN/100mL)	11960	31400	67370	27600	6600	1960	1980	2980	3620	6080	1820	48618	55400	2760	1200
	TRACE & TOXIC															
1	As (µg/L)												5.3	3.5		
2	Cd (µg/L)												1.6	0.3		
3	Cr (µg/L)												0.9	0.6		
4	Cu (µg/L)												15.0	4.1		
5	Hg (µg/L)													0.2		
6	Ni (µg/L)												2.1	7.3		
7	Pb (µg/L)					49.0							1.5	1.3		
8	Zn (µg/L)					1.0							5.8	16.5		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	68	61	64	78	84	77	81	73	77	73	70	87	90	81	74
2	HAR_Total (mgCaCO3/L)	99	103	103	120	747	111	111	108	137	118	134	150	152	130	112
3	Na% (%)	23	30	18	21	21	23	15	25	25	20	28	20	20	30	25
4	RSC (-)	0.2	0.5	0.1	0.1	0.2	0.2	0.0	0.4	0.1	0.1	0.1	0.4	0.1	0.2	0.2
5	SAR (-)	0.7	1.1	0.5	0.6	0.9	0.7	0.5	0.9	1.0	0.6	0.9	0.7	0.7	1.0	0.7
	PESTICIDES															
1	Aldrin (µg/L)					0.0										
2	BHC (µg/L)					0.7										
3	DDT (µg/L)					0.1										
4	Dieldrin (µg/L)					0.0										
5	Endos (µg/L)					0.1										

Water Quality Seasonal Average for the period: 2001-2016

Station Name : PAUNI (AGH40I8)

Local River :

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	26.24	43.44	80.92	113.2											
2	EC_GEN (µmho/cm)	371	309	339	310	352	337	356	370	373	406	408	357	440	288	313
3	pH_GEN (pH units)	8.3	8.1	8.4	8.5	8.4	8.3	8.4	8.4	8.0	8.0	8.1	8.1	7.7	8.1	8.1
4	Temp (deg C)	15.9	22.5	21.3	23.4	25.3	24.0	23.3	23.3	21.3	25.0	23.0	22.5	23.8	23.3	23.5
5	Turb (NTU)						1.0	1.0	1.0	1.2	1.5	4.6	0.7	1.6	0.5	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	3.7	0.0	5.0	5.3	6.2	5.0	3.3	3.2	0.0	0.0	0.0	0.0	1.8	3.0	1.3
2	ALK-TOT (mgCaCO3/L)	151	157	150	144	162	147	160	165	144	162	153	213	180	151	157
3	B (mg/L)	0.51	0.79	0.30	0.23	0.19	0.41	0.83	0.72	0.63	0.89	0.18	0.33	0.34	0.24	0.22
4	Ca (mg/L)	30	36	38	30	44	41	41	38	42	36	39	43	55	35	33
5	Cl (mg/L)	19.5	11.8	14.3	13.8	12.2	13.0	15.6	17.0	15.6	19.9	15.3	17.6	14.8	11.4	15.4
6	CO3 (mg/L)	4.1	0.0	6.1	6.4	7.4	6.0	4.0	3.9	0.0	0.0	0.0	0.0	2.2	3.6	1.6
7	F (mg/L)	0.26	0.43	0.48	0.61	0.46	0.30	0.26	0.56	0.33	0.38	0.33	0.42	0.24	0.26	0.26
8	Fe (mg/L)		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.4	0.0	0.1
9	HCO3 (mg/L)	180	192	170	162	182	167	187	193	176	197	187	260	215	177	188
10	K (mg/L)	2.5	1.9	2.2	2.7	2.2	2.0	2.2	1.7	2.4	3.3	2.0	3.6	2.8	1.9	2.6
11	Mg (mg/L)	13.0	12.0	12.1	15.3	9.9	6.2	11.9	12.8	10.1	14.8	17.8	26.0	16.7	11.5	13.2
12	Na (mg/L)	26.5	17.8	20.8	18.9	19.9	17.5	20.3	20.2	14.6	22.1	22.8	25.2	26.2	18.9	21.2
13	NH3-N (mg N/L)	0.29	0.18	0.15	0.18	0.04	0.52	0.11	0.89	0.48	0.19	0.16	0.09	0.13	0.03	0.29
14	NO2+NO3 (mg N/L)	0.51	0.31	0.88	2.99	0.45	0.60	1.10	0.13	0.41	0.20	0.80	0.90	3.77	3.73	4.00
15	NO2-N (mgN/L)	0.01	0.03	0.14	0.46	0.03	0.08	0.08	0.03	0.06	0.01	0.32	0.01	0.01	0.00	0.01
16	NO3-N (mgN/L)	0.50	0.28	0.74	2.53	0.42	0.53	1.02	0.09	0.35	0.19	0.48	0.89	3.77	3.73	3.98
17	o-PO4-P (mg P/L)	0.035	0.010	0.050	0.117	0.057	0.062	0.090	0.096	0.065	0.072	0.003	0.036	0.330	0.197	0.071
18	SiO2 (mg/L)	19.9	23.8	23.0	22.6	52.2	30.2	26.4	49.2	64.7	23.0	48.8	33.6	8.2	13.4	13.2
19	SO4 (mg/L)	11.3	11.0	15.8	20.2	12.2	9.1	10.0	9.0	12.2	14.6	15.7	12.8	23.5	11.5	13.9

Water Quality Seasonal Average for the period: 2001-2016

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	2.2	0.9	1.6	2.5	2.4	1.5	4.6	2.6	2.1	2.6	2.8	2.6	2.4	2.0	2.1
2	COD (mg/L)							58.6	70.4	60.0	64.5	73.0	30.3	52.8	28.5	37.8
3	DO (mg/L)	6.0	5.7	6.9	7.8	8.4	7.7	6.9	7.5	7.0	7.8	7.6	7.2	7.3	8.0	6.8
4	DO_SAT% (%)	60	66	78	91	102	91	81	88	79	93	89	83	86	93	80
5	FCol-MPN (MPN/100mL)	600	1650	5413	1900	138	1213	875	300	663	175	450	2375	138	65	455
6	Tcol-MPN (MPN/100mL)	1046	3788	34788	7425	163	3550	3538	713	2838	400	2163	6788	5700	430	8875
	TRACE & TOXIC															
1	As (µg/L)											0.8				0.7
2	Cd (µg/L)											0.0			0.0	0.1
3	Cr (µg/L)											3.4			2.1	0.1
4	Cu (µg/L)											114.8			3.2	0.7
5	Hg (µg/L)															
6	Ni (µg/L)											75.3			0.1	0.4
7	Pb (µg/L)											0.3			0.9	0.2
8	Zn (µg/L)											28.3			3.0	5.7
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	75	91	95	75	110	102	102	94	105	91	97	107	138	87	82
2	HAR_Total (mgCaCO3/L)	130	141	145	139	151	128	151	147	147	152	171	215	208	134	137
3	Na% (%)	30	21	24	22	22	23	22	23	17	23	22	20	22	23	25
4	RSC (-)	0.5	0.3	0.1	0.2	0.2	0.4	0.2	0.4	0.1	0.3	0.0	0.1	0.0	0.4	0.4
5	SAR (-)	1.0	0.7	0.8	0.7	0.7	0.7	0.7	0.7	0.5	0.8	0.8	0.8	0.8	0.7	0.8
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : PAUNI (AGH40I8)

Local River :

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	4.344	15.15	32.78	8.796											
2	EC_GEN (µmho/cm)	448	373	417	429	419	388	443	360	392	418	362	403	387	392	358
3	pH_GEN (pH units)	8.2	7.7	8.2	8.5	8.3	8.5	8.2	8.1	7.8	8.1	7.8	8.2	7.8	7.8	8.0
4	Temp (deg C)	23.3	27.8	23.8	28.0	29.0	28.3	28.0	27.7	27.3	28.3	26.0	27.3	26.3	27.0	28.3
5	Turb (NTU)						0.9	1.8	0.4	3.0	1.5	0.9	0.4	0.7	0.9	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	3.2	0.0	2.1	6.7	2.6	3.9	1.7	1.7	0.0	1.8	0.0	1.8	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	174	164	243	194	153	154	184	146	142	174	183	194	190	155	176
3	B (mg/L)	0.74	0.29	0.51	0.13	0.18	0.62	1.05	0.36	0.64	0.19	0.18	0.12	0.21	0.30	0.14
4	Ca (mg/L)	21	34	37	37	32	33	38	27	31	40	31	35	40	34	48
5	Cl (mg/L)	46.4	28.3	24.0	36.4	28.3	21.1	31.0	33.4	26.5	24.9	23.0	26.7	25.5	20.5	21.0
6	CO3 (mg/L)	3.8	0.0	2.5	8.1	3.1	5.4	2.0	2.0	0.0	2.2	0.0	2.2	0.0	0.0	0.0
7	F (mg/L)	0.40	0.46	0.35	0.80	0.50	0.23	0.53	0.53	0.48	0.34	0.40	0.30	0.60	0.30	0.10
8	Fe (mg/L)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.0	0.1
9	HCO3 (mg/L)	205	200	220	220	180	171	220	174	173	208	223	232	232	189	214
10	K (mg/L)	5.1	3.9	4.2	4.7	3.6	3.6	2.5	3.8	14.6	2.8	3.0	5.2	3.3	3.1	3.3
11	Mg (mg/L)	19.4	16.0	17.7	15.8	14.3	11.9	19.3	14.2	11.1	21.7	26.4	20.4	19.5	12.5	19.8
12	Na (mg/L)	46.4	28.0	29.3	39.8	31.8	26.5	33.9	31.0	25.8	30.8	27.1	32.1	33.6	24.4	26.2
13	NH3-N (mg N/L)	0.48	0.42	0.23	0.11	0.40	0.42	0.19	0.42	0.21	0.97	0.18	0.01	0.86	0.16	0.08
14	NO2+NO3 (mg N/L)	0.57	0.90	2.06	3.04	1.16	2.01	0.63	0.14	0.39	0.91	0.54	0.13	3.52	5.10	4.86
15	NO2-N (mgN/L)	0.04	0.11	0.59	0.47	0.17	0.18	0.30	0.00	0.06	0.06	0.03	0.09	0.00	0.00	0.20
16	NO3-N (mgN/L)	0.53	0.79	1.46	2.57	0.98	1.82	0.33	0.14	0.33	0.85	0.51	0.04	3.52	5.10	4.66
17	o-PO4-P (mg P/L)	0.031	0.137	0.140	0.320	0.138	0.220	0.183	0.069	0.127	0.181	0.021	0.058	0.669	0.187	0.124
18	SiO2 (mg/L)	34.4	31.3	35.7	32.6	86.1	37.2	29.1	67.2	41.0	53.9	22.6	13.4	15.2	24.6	13.5
19	SO4 (mg/L)	9.8	15.7	15.0	11.5	14.4	12.0	17.4	8.2	13.0	15.0	24.6	15.0	13.9	18.3	17.5

Water Quality Seasonal Average for the period: 2001-2016

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	3.7	6.3	3.7	3.4	3.6	1.6	2.1	3.0	4.5	3.9	3.3	3.2	2.4	3.3	7.3
2	COD (mg/L)							95.8	83.3	48.2	38.5	62.2	49.5	72.7	44.3	48.8
3	DO (mg/L)	5.0	5.4	6.4	6.8	6.5	6.5	6.7	6.1	5.8	6.2	6.4	6.2	6.5	7.1	6.4
4	DO_SAT% (%)	58	69	76	87	85	83	86	78	74	80	79	78	80	90	82
5	FCol-MPN (MPN/100mL)	1517	7150	3267	3450	667	150	283	567	750	317	600	917	683	307	5417
6	Tcol-MPN (MPN/100mL)	3450	13117	46633	18033	2533	283	667	9867	3083	650	8033	26867	18067	397	5887
	TRACE & TOXIC															
1	As (µg/L)											1.0	3.1	2.8	6.6	2.6
2	Cd (µg/L)						8.0					0.3	1.0	0.1	1.0	0.3
3	Cr (µg/L)						13.0					5.2	1.5	1.3	0.0	1.9
4	Cu (µg/L)												0.8	3.6		2.3
5	Hg (µg/L)						2.3					0.3	0.1	0.2	0.9	
6	Ni (µg/L)						1.0					1.3	4.4	3.3	3.7	1.2
7	Pb (µg/L)						75.0					16.9	1.6	1.2	14.0	0.7
8	Zn (µg/L)						39.0					27.1	1.9	20.4	15.0	6.7
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	52	85	93	92	80	83	94	67	78	99	77	86	100	84	121
2	HAR_Total (mgCaCO3/L)	133	152	167	158	139	133	175	126	124	190	187	171	181	136	204
3	Na% (%)	41	27	27	33	33	29	28	34	28	25	24	29	29	27	22
4	RSC (-)	0.9	0.3	0.4	0.7	0.3	0.3	0.2	0.4	0.4	0.0	0.2	0.6	0.4	0.4	0.2
5	SAR (-)	1.8	1.0	1.0	1.4	1.2	1.0	1.1	1.2	1.0	1.0	0.9	1.1	1.1	0.9	0.8
	PESTICIDES															
1	Aldrin (µg/L)						0.0					0.0				
2	BHC (µg/L)						0.1					0.0				
3	DDT (µg/L)						0.1					0.0				
4	Dieldrin (µg/L)						0.0					0.0				
5	Endos (µg/L)						0.1					0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: SATRAPUR	Code	: AGH4BF6
State	: Maharashtra	District	Nagpur
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wainganga
Sub-Sub Tributary	: Khanan	Local River	: Khanan
Division	: Wainganga Div., Nagpur	Sub-Division	: Upper Wainganga SD, Nagpur
Drainage Area	: 11100 Sq. Km.	Bank	: Left
Latitude	: 21°13'00"	Longitude	: 79°13'59"
	Opening Date	Closing Date	
Gauge	: 07.09.1984		
Discharge	: 30.05.1986		
Sediment	: 01.08.1988		
Water Quality	: 09.12.1987		

Water Quality Datasheet for the period : 2015-2016

Station Name : SATRAPUR (AGH4BF6)

Local River : Khanan

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)												
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	592	443	424	317	445	437	526	582	600	614	747	698
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_GEN (pH units)	8.4	8.2	7.9	7.8	8.2	8.6	8.3	8.2	8.0	8.3	8.5	7.8
6	Temp (deg C)	22.0	22.5	23.5	20.5	23.5	23.0	25.0	19.0	19.0	20.0	25.5	27.5
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	5.2	0.0	0.0	0.0	0.0	5.2	7.8	0.0	0.0	6.0	6.0	0.0
2	ALK-TOT (mgCaCO3/L)	200	182	182	132	134	153	224	201	207	270	248	180
3	B (mg/L)	0.09	0.13	0.15	0.70	0.15	0.17	0.45	0.16	0.11	0.08	0.11	0.08
4	Ca (mg/L)	35	41	46	43	33	26	56	31	41	90	81	36
5	Cl (mg/L)	57.7	19.9	25.8	15.9	23.9	23.9	61.6	45.7	51.7	65.8	84.3	69.6
6	CO3 (mg/L)	6.2	0.0	0.0	0.0	0.0	6.2	9.4	0.0	0.0	7.2	7.2	0.0
7	F (mg/L)	0.25	0.47	0.06	0.01	0.40	0.61	0.40	0.96	0.84	0.16	0.87	0.44
8	Fe (mg/L)	0.0	0.3	0.0	0.1	0.2	0.2	0.0	0.0	0.1	0.0	0.1	0.1
9	HCO3 (mg/L)	232	222	222	161	164	174	254	245	253	315	288	219
10	K (mg/L)	4.9	2.5	2.3	2.2	2.5	2.6	2.7	3.3	3.0	3.9	3.6	4.1
11	Mg (mg/L)	20.9	18.1	17.0	7.1	24.7	22.5	17.7	21.4	24.1	29.4	23.5	45.5
12	Na (mg/L)	68.3	24.3	21.4	19.3	28.2	30.6	42.5	64.5	63.3	59.4	78.3	48.5
13	NH3-N (mg N/L)	0.20	0.07	0.10	0.23	0.18	0.08	0.29	0.56	0.52	0.19	0.14	0.01
14	NO2+NO3 (mg N/L)	4.64	11.21	8.81	10.18	10.04	5.42	5.95	4.64	6.70	6.87	2.30	1.25
15	NO2-N (mgN/L)	0.02	0.02	0.00	0.02	0.00	0.03	0.01	0.00	0.01	0.18	0.19	0.23
16	NO3-N (mgN/L)	4.62	11.19	8.81	10.16	10.04	5.39	5.94	4.63	6.69	6.69	2.11	1.02
17	o-PO4-P (mg P/L)	0.222	0.042	0.094	0.137	0.138	0.130	0.095	0.165	0.012	0.051	0.105	0.097
18	SiO2 (mg/L)	25.7	43.9	28.4	26.6	27.4	28.9	31.5	25.2	24.4	24.8	31.4	28.0
19	SO4 (mg/L)	45.8	4.9	28.6	30.6	92.0	39.9	29.4	30.7	14.0	12.6	14.0	35.4

Water Quality Datasheet for the period : 2015-2016

Station Name : SATRAPUR (AGH4BF6)

Division : Wainganga Div., Nagpur

Local River : Khanan

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	2.0	4.5	4.7	1.5	3.2	2.7	3.6	2.5	2.3	1.5	3.0	15.0
2	COD (mg/L)	18.0	29.8	49.0	16.4	19.2	58.2	25.3	39.2	23.0	91.9	27.2	24.3
3	DO (mg/L)	6.6	8.3	7.0	6.1	7.3	8.5	8.8	10.6	7.5	6.6	11.4	4.8
4	DO_SAT% (%)	75	95	82	67	85	99	106	114	81	73	138	60
5	FCol-MPN (MPN/100mL)	80	220	170	130	220	110	220	130	80	120	80	140
6	Tcol-MPN (MPN/100mL)	500	2200	3000	16000	3000	1300	800	220	260	5000	260	330
	TRACE & TOXIC												
1	As (µg/L)								0.8			3.6	
2	Cd (µg/L)								0.2			0.3	
3	Cr (µg/L)								1.0			1.6	
4	Cu (µg/L)								3.8			2.7	
5	Ni (µg/L)								0.5			0.7	
6	Pb (µg/L)								1.0			2.0	
7	Zn (µg/L)								6.1			3.1	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	88	102	115	109	82	66	139	77	101	225	203	90
2	HAR_Total (mgCaCO3/L)	175	177	186	138	185	160	213	166	202	347	301	280
3	Na% (%)	45	23	20	23	25	29	30	45	40	27	36	27
4	RSC (-)	0.5	0.1	0.0	0.0	0.0	0.0	0.2	0.7	0.1	0.0	0.0	0.0
5	SAR (-)	2.3	0.8	0.7	0.7	0.9	1.1	1.3	2.2	1.9	1.4	2.0	1.3
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : SATRAPUR (AGH4BF6)

Division : Wainganga Div., Nagpur

Local River : Khanan

Sub-Division : Upper Wainganga SD, Nagpur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (μmho/cm)	12	747	317	535
3	pH_GEN (pH units)	12	8.6	7.8	8.2
4	Temp (deg C)	12	27.5	19.0	22.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	7.8	0.0	2.5
2	ALK-TOT (mgCaCO3/L)	12	270	132	193
3	B (mg/L)	12	0.70	0.08	0.2
4	Ca (mg/L)	12	90	26	47
5	Cl (mg/L)	12	84.3	15.9	45.5
6	CO3 (mg/L)	12	9.4	0.0	3
7	F (mg/L)	12	0.96	0.01	0.45
8	Fe (mg/L)	12	0.3	0.0	0.1
9	HCO3 (mg/L)	12	315	161	229
10	K (mg/L)	12	4.9	2.2	3.1
11	Mg (mg/L)	12	45.5	7.1	22.7
12	Na (mg/L)	12	78.3	19.3	45.7
13	NH3-N (mg N/L)	12	0.56	0.01	0.21
14	NO2+NO3 (mg N/L)	12	11.21	1.25	6.5
15	NO2-N (mgN/L)	12	0.23	0.00	0.06
16	NO3-N (mgN/L)	12	11.19	1.02	6.44
17	o-PO4-P (mg P/L)	12	0.222	0.012	0.107
18	SiO2 (mg/L)	12	43.9	24.4	28.8
19	SO4 (mg/L)	12	92.0	4.9	31.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	15.0	1.5	3.9
2	COD (mg/L)	12	91.9	16.4	35.1
3	DO (mg/L)	12	11.4	4.8	7.8
4	DO_SAT% (%)	12	138	60	90
5	FCol-MPN (MPN/100mL)	12	220	80	142
6	Tcol-MPN (MPN/100mL)	12	16000	220	2739
	TRACE & TOXIC				
1	As (μg/L)	2	3.6	0.8	2.2
2	Cd (μg/L)	2	0.3	0.2	0.3
3	Cr (μg/L)	2	1.6	1.0	1.3
4	Cu (μg/L)	2	3.8	2.7	3.2
5	Ni (μg/L)	2	0.7	0.5	0.6
6	Pb (μg/L)	2	2.0	1.0	1.5
7	Zn (μg/L)	2	6.1	3.1	4.6
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	225	66	116
2	HAR_Total (mgCaCO3/L)	12	347	138	211
3	Na% (%)	12	45	20	31
4	RSC (-)	12	0.7	0.0	0.1
5	SAR (-)	12	2.3	0.7	1.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SATRAPUR (AGH4BF6)

Local River : Khanan

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	45.67	57.98	91.83	31.97	154.6	676.8	118.4	32.36	36.41	89.99	122.1	139.1	1043	60.13	
2	EC_GEN (µmho/cm)	357	406	307	364	350	338	307	384	423	416	391	438	361	480	444
3	pH_GEN (pH units)	8.2	7.9	8.2	8.3	8.2	8.2	8.2	8.1	8.2	8.2	8.1	8.6	8.0	7.6	8.1
4	Temp (deg C)	26.3	26.5	27.9	28.0	27.8	27.9	27.7	23.6	25.0	22.6	13.2	16.8	24.4	26.6	22.4
5	Turb (NTU)						18.1	71.4	25.7	11.4	4.4	8.7	3.4	6.2	13.0	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.1	0.6	2.9	3.6	2.3	1.1	1.9	1.0	1.6	2.5	1.5	5.8	2.9	0.0	1.0
2	ALK-TOT (mgCaCO3/L)	138	154	126	157	145	117	127	146	143	148	158	222	168	193	166
3	B (mg/L)	0.40	0.57	0.45	0.25	0.22	0.51	0.57	0.65	0.37	0.45	0.30	0.23	0.15	0.21	0.24
4	Ca (mg/L)	36	37	34	38	41	34	36	35	36	35	43	47	42	47	40
5	Cl (mg/L)	20.6	29.5	15.5	22.0	18.0	18.7	13.9	21.7	29.4	24.4	17.9	22.3	20.6	25.8	28.6
6	CO3 (mg/L)	2.5	0.7	3.4	4.4	2.8	1.3	2.3	1.2	2.0	3.1	1.7	7.0	3.5	0.0	1.2
7	F (mg/L)	0.55	0.43	0.50	0.46	0.71	0.28	0.26	0.41	0.56	0.52	0.37	0.63	0.53	0.61	0.24
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.5	0.1	0.6	0.1	0.1
9	HCO3 (mg/L)	163	186	147	183	171	140	151	176	170	175	189	257	198	235	200
10	K (mg/L)	2.5	3.0	2.1	3.2	2.3	1.6	1.6	1.9	2.6	2.1	2.1	2.3	3.3	3.6	2.9
11	Mg (mg/L)	11.4	14.2	9.0	13.7	11.2	10.4	12.0	13.2	16.7	16.2	15.8	21.9	16.6	17.6	17.6
12	Na (mg/L)	22.4	28.7	15.9	25.5	21.3	17.5	12.8	30.2	26.5	20.7	30.2	27.7	24.0	46.0	32.3
13	NH3-N (mg N/L)	0.38	0.21	1.36	0.19	0.13	0.24	0.43	0.31	0.23	0.25	0.13	0.15	0.06	0.28	0.16
14	NO2+NO3 (mg N/L)	0.80	0.70	0.75	1.35	0.85	0.73	1.66	0.40	0.59	0.37	1.36	1.94	3.06	2.31	8.97
15	NO2-N (mgN/L)	0.02	0.03	0.03	0.04	0.03	0.03	0.06	0.05	0.42	0.00	0.10	0.15	0.00	0.01	0.01
16	NO3-N (mgN/L)	0.78	0.67	0.72	1.30	0.81	0.70	1.60	0.34	0.17	0.36	1.26	1.79	3.06	2.31	8.96
17	o-PO4-P (mg P/L)	0.050	0.029	0.014	0.068	0.023	0.027	0.041	0.043	0.064	0.037	0.017	0.085	0.059	0.107	0.127
18	SiO2 (mg/L)	30.4	34.7	32.5	36.9	56.0	44.6	31.9	34.3	105.3	36.5	66.7	47.6	20.3	20.5	30.4
19	SO4 (mg/L)	19.9	22.9	14.2	19.5	230.0	17.7	14.7	27.5	30.3	19.0	17.5	36.5	25.4	18.7	40.4

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SATRAPUR (AGH4BF6)

Division : Wainganga Div., Nagpur

Local River : Khanan

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.7	1.5	1.7	1.5	1.7	3.0	2.9	1.8	3.8	2.8	4.4	2.9	1.6	1.5	3.2
2	COD (mg/L)							32.7	36.4	105.1	56.8	37.9	45.7	42.4	37.2	26.5
3	DO (mg/L)	7.0	6.9	7.0	7.4	7.1	7.1	7.2	7.2	6.6	7.7	7.7	7.1	6.5	6.8	7.1
4	DO_SAT% (%)	87	86	89	94	90	90	91	85	80	88	73	74	78	84	81
5	FCol-MPN (MPN/100mL)	25593	9182	3400	2087	2671	1450	1240	690	1650	1950	9530	1870	6770	320	164
6	Tcol-MPN (MPN/100mL)	46337	16504	23360	5800	10880	7070	7460	2650	7770	9470	25660	72900	73990	1546	4940
	TRACE & TOXIC															
1	As (µg/L)												3.5	5.8		
2	Cd (µg/L)												1.3	0.2		
3	Cr (µg/L)												0.6	1.5		
4	Cu (µg/L)												29.6	1.8		
5	Hg (µg/L)													0.0		
6	Ni (µg/L)												1.4	8.9		
7	Pb (µg/L)					46.0							3.5	2.3		
8	Zn (µg/L)					21.0							2.8	0.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	89	94	85	95	102	86	91	87	89	87	107	118	104	117	99
2	HAR_Total (mgCaCO3/L)	136	153	122	152	149	129	141	142	159	154	173	209	174	190	172
3	Na% (%)	23	26	19	26	20	19	14	30	26	21	27	21	21	32	27
4	RSC (-)	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.3	0.0	0.1	0.0	0.4	0.0	0.4	0.1
5	SAR (-)	0.8	1.0	0.6	0.9	0.7	0.6	0.4	1.2	0.9	0.7	1.0	0.8	0.8	1.5	1.1
	PESTICIDES															
1	Aldrin (µg/L)					0.0										
2	BHC (µg/L)					0.1										
3	DDT (µg/L)					0.1										
4	Dieldrin (µg/L)					0.0										
5	Endos (µg/L)					0.1										

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SATRAPUR (AGH4BF6)

Local River : Khanan

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	2.151	5.346	21.94	4.040	21.02	9.315	13.36	4.212	12.56	18.74	13.91	13.47	23.02	5.801	
2	EC_GEN (µmho/cm)	590	450	459	615	418	444	459	626	518	529	501	471	623	548	536
3	pH_GEN (pH units)	8.3	8.0	8.2	8.3	8.4	8.4	8.6	8.1	8.3	8.3	8.4	8.5	8.1	8.0	8.3
4	Temp (deg C)	22.3	23.1	20.8	20.5	22.4	25.0	22.5	22.3	16.5	15.6	11.9	17.9	21.8	18.6	21.5
5	Turb (NTU)						1.1	0.4	0.7	1.5	1.5	3.8	0.6	1.9	0.5	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.7	1.4	3.0	4.3	5.7	5.0	2.9	1.6	3.9	6.3	3.6	5.4	1.8	0.0	3.2
2	ALK-TOT (mgCaCO3/L)	197	184	185	203	192	168	179	188	175	199	164	222	242	218	196
3	B (mg/L)	0.48	0.50	0.41	0.22	0.15	0.45	0.80	0.53	0.46	0.93	0.23	0.30	0.34	0.43	0.22
4	Ca (mg/L)	40	42	45	46	36	41	43	52	45	40	41	52	71	52	38
5	Cl (mg/L)	50.9	30.4	28.8	59.6	24.7	26.8	27.9	54.3	26.6	29.6	30.0	32.3	26.2	36.8	45.7
6	CO3 (mg/L)	3.3	1.6	3.6	5.2	6.9	6.0	3.5	2.0	4.7	7.6	4.4	6.6	2.2	0.0	3.9
7	F (mg/L)	0.63	0.60	0.44	0.71	0.57	0.68	0.36	0.73	0.50	0.49	0.56	0.62	0.38	0.43	0.70
8	Fe (mg/L)		0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.7	0.3	0.6	0.0	0.1
9	HCO3 (mg/L)	234	221	219	237	220	193	211	226	204	227	191	257	290	266	231
10	K (mg/L)	2.3	1.8	1.9	3.3	1.9	2.0	2.0	2.1	1.9	2.0	2.0	3.7	2.5	2.2	2.9
11	Mg (mg/L)	21.8	15.3	15.5	23.6	21.0	12.8	18.1	22.3	18.3	20.1	25.5	21.2	25.1	21.8	21.4
12	Na (mg/L)	49.9	33.4	32.1	57.5	26.6	29.4	33.9	36.6	28.8	32.1	38.4	42.0	39.8	44.1	50.2
13	NH3-N (mg N/L)	0.26	0.29	0.14	0.11	0.04	0.47	0.09	0.62	0.58	0.25	0.13	0.10	0.09	0.05	0.36
14	NO2+NO3 (mg N/L)	0.52	0.50	0.63	1.13	0.56	0.60	1.23	0.26	0.52	0.40	0.71	2.07	4.52	4.92	5.67
15	NO2-N (mgN/L)	0.02	0.07	0.02	0.05	0.04	0.08	0.04	0.03	0.05	0.02	0.07	0.01	0.01	0.01	0.01
16	NO3-N (mgN/L)	0.50	0.43	0.61	1.09	0.53	0.53	1.19	0.23	0.48	0.38	0.64	2.06	4.51	4.92	5.66
17	o-PO4-P (mg P/L)	0.010	0.011	0.026	0.069	0.041	0.031	0.047	0.044	0.034	0.085	0.007	0.049	0.325	0.204	0.101
18	SiO2 (mg/L)	38.5	31.7	33.7	35.2	76.7	35.8	40.3	53.4	95.6	40.3	99.9	63.0	19.4	13.1	27.5
19	SO4 (mg/L)	39.0	24.6	25.7	48.2	21.0	20.5	19.0	37.9	25.6	28.0	37.9	29.8	20.8	27.0	28.5

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SATRAPUR (AGH4BF6)

Division : Wainganga Div., Nagpur

Local River : Khanan

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.9	0.8	1.0	2.0	1.8	2.0	1.7	1.5	1.7	1.5	2.3	13.9	1.8	2.7	2.8
2	COD (mg/L)							19.7	40.2	34.2	50.6	50.5	59.2	48.3	29.3	36.4
3	DO (mg/L)	9.0	8.3	8.0	8.2	9.3	8.9	8.1	7.7	8.5	8.3	8.7	8.5	8.5	8.9	8.9
4	DO_SAT% (%)	104	97	89	91	107	107	94	88	87	82	80	90	97	95	100
5	FCol-MPN (MPN/100mL)	671	2000	1171	1158	488	413	313	250	288	313	913	2625	2838	110	135
6	Tcol-MPN (MPN/100mL)	1750	3554	2621	4121	1138	888	900	575	963	450	5238	5563	5550	223	645
	TRACE & TOXIC															
1	As (µg/L)											1.8				0.8
2	Cd (µg/L)											0.3			0.0	0.2
3	Cr (µg/L)											13.7			3.0	1.0
4	Cu (µg/L)											6.5			3.5	3.8
5	Hg (µg/L)															
6	Ni (µg/L)											18.3			0.1	0.5
7	Pb (µg/L)											0.6			1.5	1.0
8	Zn (µg/L)											11.0			3.0	6.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	101	105	111	115	91	103	108	129	113	100	101	129	178	129	96
2	HAR_Total (mgCaCO3/L)	191	169	176	213	178	156	183	222	189	184	208	218	283	220	185
3	Na% (%)	36	29	27	37	24	29	29	26	24	27	29	29	24	30	36
4	RSC (-)	0.2	0.3	0.3	0.1	0.3	0.3	0.0	0.0	0.0	0.3	0.0	0.6	0.1	0.2	0.3
5	SAR (-)	1.6	1.1	1.0	1.7	0.9	1.0	1.1	1.1	0.9	1.0	1.2	1.3	1.1	1.3	1.6
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SATRAPUR (AGH4BF6)

Local River : Khanan

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	0.339	7.123	6.782	0.495	3.502	3.638	4.998	2.686	4.482	4.889	4.418	3.816	6.668	3.154	
2	EC_GEN (µmho/cm)	705	440	487	659	504	486	562	636	659	734	634	674	623	705	686
3	pH_GEN (pH units)	8.0	8.1	8.1	8.2	8.3	8.2	8.3	8.1	8.1	7.9	8.3	8.4	7.7	8.0	8.2
4	Temp (deg C)	25.5	25.7	25.8	28.2	27.3	26.3	22.5	24.3	22.0	13.5	15.3	24.0	25.0	21.3	24.3
5	Turb (NTU)						0.5	1.0	0.4	0.7	0.6	0.9	0.3	0.9	0.6	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.2	1.4	1.6	1.9	3.2	1.9	2.3	0.0	0.0	0.0	4.2	4.8	0.0	0.0	4.0
2	ALK-TOT (mgCaCO3/L)	220	168	189	213	144	169	173	197	186	212	194	284	223	198	233
3	B (mg/L)	0.76	0.29	0.52	0.20	0.20	0.73	1.06	0.29	0.58	0.22	0.23	0.16	0.20	0.36	0.09
4	Ca (mg/L)	46	37	35	46	36	33	44	40	44	45	47	58	51	52	69
5	Cl (mg/L)	84.6	40.9	39.0	55.5	39.8	38.8	47.7	91.4	63.9	54.4	51.3	71.2	49.8	70.2	73.2
6	CO3 (mg/L)	2.7	1.6	1.9	2.3	3.8	2.3	2.8	0.0	0.0	0.0	5.1	5.8	0.0	0.0	4.8
7	F (mg/L)	0.65	0.53	0.65	0.92	0.70	0.44	0.55	0.70	0.75	0.65	0.68	0.53	0.88	0.21	0.49
8	Fe (mg/L)	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.4	0.1	0.0
9	HCO3 (mg/L)	263	202	227	255	168	202	205	240	227	259	227	335	272	241	274
10	K (mg/L)	3.0	2.2	2.9	3.5	2.0	2.3	2.1	3.1	2.5	2.8	3.0	4.4	3.2	3.3	3.9
11	Mg (mg/L)	27.5	17.2	19.6	27.7	330.6	16.6	14.9	31.5	25.0	32.3	37.2	37.9	31.8	18.6	32.8
12	Na (mg/L)	61.0	35.7	41.4	57.0	42.6	39.7	47.9	57.4	45.7	75.2	50.7	66.8	50.1	63.7	62.1
13	NH3-N (mg N/L)	0.25	0.27	0.51	0.16	0.16	0.51	0.30	0.13	0.16	0.52	0.42	0.02	0.72	0.20	0.11
14	NO2+NO3 (mg N/L)	1.00	0.31	0.49	1.77	1.01	0.81	0.33	0.14	0.53	2.49	0.63	0.57	4.85	11.19	3.47
15	NO2-N (mgN/L)	0.05	0.03	0.01	0.11	0.03	0.06	0.05	0.00	0.02	0.94	0.01	0.16	0.02	0.02	0.20
16	NO3-N (mgN/L)	0.95	0.28	0.48	1.66	0.98	0.75	0.28	0.14	0.51	1.55	0.62	0.41	4.84	11.17	3.27
17	o-PO4-P (mg P/L)	0.020	0.017	0.014	0.093	0.031	0.055	0.038	0.041	0.124	0.090	0.021	0.033	0.442	0.197	0.084
18	SiO2 (mg/L)	40.3	33.3	36.2	45.6	86.6	36.5	38.4	80.1	71.3	73.0	25.4	25.7	25.8	46.4	28.1
19	SO4 (mg/L)	39.2	23.9	25.6	55.4	32.0	24.5	32.5	30.2	39.5	35.1	48.5	20.7	19.2	45.3	20.7

Water Quality Seasonal Average for the period: 2001-2016

Station Name : SATRAPUR (AGH4BF6)

Division : Wainganga Div., Nagpur

Local River : Khanan

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.9	0.9	2.3	1.9	1.8	1.8	3.2	1.9	1.7	4.4	3.4	4.5	2.3	2.6	6.5
2	COD (mg/L)							84.7	39.9	35.4	37.7	70.9	37.4	53.0	30.0	47.8
3	DO (mg/L)	7.9	7.5	7.7	7.0	7.6	7.4	7.5	7.4	6.5	8.3	7.8	8.2	7.5	8.1	7.6
4	DO_SAT% (%)	96	92	95	90	96	91	86	87	74	79	78	98	90	91	90
5	FCol-MPN (MPN/100mL)	1633	2761	1028	2094	717	350	433	200	567	5067	5733	2983	173	107	113
6	Tcol-MPN (MPN/100mL)	3317	17333	5344	15828	1583	933	1117	817	6467	32533	42983	55950	2893	353	1863
	TRACE & TOXIC															
1	As (µg/L)											1.1	3.3	4.3	4.0	3.6
2	Cd (µg/L)						8.0					0.2	2.2	0.0	2.0	0.3
3	Cr (µg/L)						22.0					7.1	4.3	4.2	0.0	1.6
4	Cu (µg/L)												2.1	2.0		2.7
5	Hg (µg/L)						0.7					0.3	0.2	0.3	0.1	
6	Ni (µg/L)						1.0					3.2	7.3	0.5	4.3	0.7
7	Pb (µg/L)						22.0					29.0	16.3	0.4	19.0	2.0
8	Zn (µg/L)						35.0					29.1	21.7	6.8	7.0	3.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	114	91	88	115	90	83	110	99	109	114	116	146	127	130	173
2	HAR_Total (mgCaCO3/L)	229	163	170	231	1467	152	172	230	213	248	271	304	259	207	309
3	Na% (%)	37	31	34	34	22	36	37	35	31	48	29	33	29	40	30
4	RSC (-)	0.2	0.2	0.4	0.1	0.0	0.4	0.2	0.1	0.0	0.3	0.0	0.3	0.0	0.0	0.0
5	SAR (-)	1.8	1.2	1.4	1.7	1.0	1.4	1.6	1.7	1.4	2.5	1.3	1.7	1.4	1.9	1.5
	PESTICIDES															
1	Aldrin (µg/L)						0.0					0.0				
2	BHC (µg/L)						0.1					0.0				
3	DDT (µg/L)						0.1					0.0				
4	Dieldrin (µg/L)						0.0					0.0				
5	Endos (µg/L)						0.1					0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: RAJEGAON	Code	: AGH4MC3
State	: Madhya Pradesh	District	Balaghat
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wainganga
Sub-Sub Tributary	: Bagh	Local River	: Bagh
Division	: Wainganga Div., Nagpur	Sub-Division	: Upper Wainganga SD, Nagpur
Drainage Area	: 5380 Sq. Km.	Bank	: Right
Latitude	: 21°37'32"	Longitude	: 80°15'14"
	Opening Date	Closing Date	
Gauge	: 06.12.1985		
Discharge	: 26.07.1986		
Sediment	: 27.08.2014		
Water Quality	: 01.02.2012		

Water Quality Datasheet for the period : 2015-2016

Station Name : RAJEGAON (AGH4MC3)

Local River : Bagh

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.07.2015	01.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016
		A	A	A	A	A	A	A	A	A
	PHYSICAL									
1	Q (cumec)									
2	Colour_Cod (-)	Brown	Light Brown	Brown	Clear	Light Brown	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	111	172	105	174	211	233	251	240	228
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.8	7.5	7.3	7.8	8.3	7.8	7.6	7.9	7.6
6	Temp (deg C)	25.0	26.0	26.0	26.0	24.0	22.0	16.0	21.0	24.0
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	126	64	52	85	112	101	117	126	120
3	B (mg/L)	0.25	0.20	0.37	0.12	0.23	0.47	0.59	0.08	0.05
4	Ca (mg/L)	22	19	9	25	30	29	26	29	51
5	Cl (mg/L)	8.0	9.9	6.0	11.9	6.0	9.9	8.0	8.0	8.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0
7	F (mg/L)	0.01	0.01	0.01	0.06	0.10	0.00	0.10	0.00	0.01
8	Fe (mg/L)	0.2	0.1	0.2	0.1	0.1	0.0	0.0	0.2	0.0
9	HCO3 (mg/L)	153	78	63	104	124	123	143	154	146
10	K (mg/L)	2.6	1.5	1.6	1.5	2.4	1.9	2.1	2.0	2.6
11	Mg (mg/L)	31.9	8.8	8.8	6.0	9.6	4.8	11.8	12.3	16.6
12	Na (mg/L)	8.0	9.4	9.0	11.5	12.4	13.5	16.5	16.0	14.5
13	NH3-N (mg N/L)	0.11	0.22	0.11	0.21	0.11	0.22	0.63	0.43	0.09
14	NO2+NO3 (mg N/L)	9.80	11.05	7.06	4.68	4.74	3.84	3.58	4.46	14.33
15	NO2-N (mgN/L)	0.03	0.00	0.03	0.00	0.08	0.01	0.00	0.01	0.05
16	NO3-N (mgN/L)	9.77	11.05	7.03	4.68	4.66	3.83	3.58	4.45	14.28
17	o-PO4-P (mg P/L)	0.063	0.112	0.084	0.097	0.101	0.085	0.121	0.032	0.085
18	SiO2 (mg/L)	34.4	20.8	20.1	14.5	17.4	21.1	18.8	17.6	22.4
19	SO4 (mg/L)	3.7	9.6	11.2	19.4	13.7	19.9	12.0	28.7	27.4

Water Quality Datasheet for the period : 2015-2016

Station Name : RAJEGAON (AGH4MC3)

Division : Wainganga Div., Nagpur

Local River : Bagh

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.07.2015	01.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016
		A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	1.6	1.8	2.1	1.4	1.5	1.0	1.3	1.1	15.0
2	COD (mg/L)	31.6	56.0	18.7	28.1	43.5	56.6	13.4	32.8	88.8
3	DO (mg/L)	6.1	6.4	7.0	6.4	7.5	6.7	7.1	8.2	4.8
4	DO_SAT% (%)	74	79	86	79	89	77	72	92	57
5	FCol-MPN (MPN/100mL)	80	110	300	170	170	170	170	70	110
6	Tcol-MPN (MPN/100mL)	220	1400	800	800	1100	700	500	220	800
	TRACE & TOXIC									
1	As (µg/L)							0.6		
2	Cd (µg/L)							0.1		
3	Cr (µg/L)							0.2		
4	Cu (µg/L)							0.6		
5	Ni (µg/L)							0.6		
6	Pb (µg/L)							0.1		
7	Zn (µg/L)							5.8		
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	54	48	23	63	75	73	66	73	128
2	HAR_Total (mgCaCO3/L)	187	84	59	89	115	93	115	124	197
3	Na% (%)	8	19	24	22	19	24	23	22	14
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0
5	SAR (-)	0.3	0.4	0.5	0.5	0.5	0.6	0.7	0.6	0.5
	PESTICIDES									

Water Quality Summary for the period : 2015-2016

Station Name : RAJEGAON (AGH4MC3)

Division : Wainganga Div., Nagpur

Local River : Bagh

Sub-Division : Upper Wainganga SD, Nagpur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	9	251	105	192
3	pH_GEN (pH units)	9	8.3	7.3	7.7
4	Temp (deg C)	9	26.0	16.0	23.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	9	5.2	0.0	0.6
2	ALK-TOT (mgCaCO3/L)	9	126	52	100
3	B (mg/L)	9	0.59	0.05	0.26
4	Ca (mg/L)	9	51	9	27
5	Cl (mg/L)	9	11.9	6.0	8.4
6	CO3 (mg/L)	9	6.2	0.0	0.7
7	F (mg/L)	9	0.10	0.00	0.03
8	Fe (mg/L)	9	0.2	0.0	0.1
9	HCO3 (mg/L)	9	154	63	121
10	K (mg/L)	9	2.6	1.5	2
11	Mg (mg/L)	9	31.9	4.8	12.3
12	Na (mg/L)	9	16.5	8.0	12.3
13	NH3-N (mg N/L)	9	0.63	0.09	0.24
14	NO2+NO3 (mg N/L)	9	14.33	3.58	7.06
15	NO2-N (mgN/L)	9	0.08	0.00	0.02
16	NO3-N (mgN/L)	9	14.28	3.58	7.04
17	o-PO4-P (mg P/L)	9	0.121	0.032	0.087
18	SiO2 (mg/L)	9	34.4	14.5	20.8
19	SO4 (mg/L)	9	28.7	3.7	16.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	9	15.0	1.0	3
2	COD (mg/L)	9	88.8	13.4	41.1
3	DO (mg/L)	9	8.2	4.8	6.7
4	DO_SAT% (%)	9	92	57	78
5	FCol-MPN (MPN/100mL)	9	300	70	150
6	Tcol-MPN (MPN/100mL)	9	1400	220	727
	TRACE & TOXIC				
1	As (µg/L)	1	0.6	0.6	0.6
2	Cd (µg/L)	1	0.1	0.1	0.1
3	Cr (µg/L)	1	0.2	0.2	0.2
4	Cu (µg/L)	1	0.6	0.6	0.6
5	Ni (µg/L)	1	0.6	0.6	0.6
6	Pb (µg/L)	1	0.1	0.1	0.1
7	Zn (µg/L)	1	5.8	5.8	5.8
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	9	128	23	67
2	HAR_Total (mgCaCO3/L)	9	197	59	118
3	Na% (%)	9	24	8	19
4	RSC (-)	9	0.2	0.0	0
5	SAR (-)	9	0.7	0.3	0.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : RAJEGAON (AGH4MC3)

Local River : Bagh

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	175.2	173.1	154.0	41.36	468.5						88.54	168.7	595.9	67.77	
2	EC_GEN (µmho/cm)	132	125	97	150	122							134	103	203	141
3	pH_GEN (pH units)	7.8	7.9	7.9	7.7	7.8							8.4	7.6	7.2	7.6
4	Temp (deg C)	27.3	27.3	27.1	28.7	27.7							25.3	26.9	29.5	25.8
5	Turb (NTU)												24.0	19.7	14.4	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0							3.6	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	56	66	41	79	42							80	61	101	82
3	B (mg/L)	0.32	0.55	0.48	0.17	0.21							0.23	0.12	0.21	0.24
4	Ca (mg/L)	16	19	13	18	11							20	17	27	19
5	Cl (mg/L)	5.1	3.8	1.6	5.0	7.1							5.0	9.2	7.6	8.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0							4.4	0.0	0.0	0.0
7	F (mg/L)	0.36	0.17	0.36	0.30	0.94							0.71	0.46	0.44	0.02
8	Fe (mg/L)	0.3	0.3	0.3	0.2	0.9							0.3	1.4	0.1	0.2
9	HCO3 (mg/L)	70	81	50	97	51							89	74	123	100
10	K (mg/L)	1.9	2.1	1.6	2.3	1.8							1.5	2.9	2.4	1.8
11	Mg (mg/L)	4.1	4.4	3.3	6.0	7.1							6.4	8.8	8.1	13.9
12	Na (mg/L)	4.8	5.0	2.8	8.5	3.5							5.1	5.6	14.9	9.5
13	NH3-N (mg N/L)	0.42	0.26	0.54	0.20	0.11							0.00	0.07	0.29	0.16
14	NO2+NO3 (mg N/L)	1.25	0.66	0.76	2.29	0.95							2.27	1.75	1.57	8.15
15	NO2-N (mgN/L)	0.02	0.06	0.02	0.17	0.11							0.29	0.01	0.01	0.02
16	NO3-N (mgN/L)	1.23	0.59	0.74	2.12	0.84							1.97	1.74	1.56	8.13
17	o-PO4-P (mg P/L)	0.053	0.015	0.032	0.110	0.024							0.063	0.039	0.126	0.089
18	SiO2 (mg/L)	21.2	24.5	20.8	28.4	68.5							23.4	19.3	13.8	22.4
19	SO4 (mg/L)	3.9	8.8	8.5	6.2	8.2							7.4	16.3	13.3	11.0

Water Quality Seasonal Average for the period: 2001-2016

Station Name : RAJEGAON (AGH4MC3)

Division : Wainganga Div., Nagpur

Local River : Bagh

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.9	0.9	1.0	1.2	1.4							1.1	1.4	1.6	1.7
2	COD (mg/L)												65.5	71.1	23.6	33.6
3	DO (mg/L)	5.9	5.9	6.2	6.7	5.9							6.5	6.3	6.1	6.5
4	DO_SAT% (%)	74	75	78	86	75							78	78	80	79
5	FCol-MPN (MPN/100mL)	21023	4875	3575	1250	283							150	725	274	165
6	Tcol-MPN (MPN/100mL)	33827	7125	26613	11010	797							9667	63175	800	805
	TRACE & TOXIC															
1	As (µg/L)												3.4	2.2		
2	Cd (µg/L)												1.5	0.2		
3	Cr (µg/L)												0.5	2.0		
4	Cu (µg/L)												25.1	7.3		
5	Hg (µg/L)													0.0		
6	Ni (µg/L)												0.9	12.8		
7	Pb (µg/L)												0.6	0.0		
8	Zn (µg/L)												5.8	2.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	41	48	32	45	27							50	43	67	47
2	HAR_Total (mgCaCO3/L)	58	66	46	70	57							77	79	101	105
3	Na% (%)	15	13	12	18	11							11	13	25	18
4	RSC (-)	0.1	0.1	0.0	0.2	0.0							0.1	0.1	0.2	0.0
5	SAR (-)	0.3	0.3	0.2	0.4	0.2							0.2	0.3	0.7	0.4
	PESTICIDES															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : RAJEGAON (AGH4MC3)

Local River : Bagh

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	1.268	5.318	14.33	39.85							8.720	12.02	14.53	13.18	
2	EC_GEN (µmho/cm)	228	224	181	175							470	229	257	237	234
3	pH_GEN (pH units)	8.1	7.9	7.8	7.8							8.2	8.1	7.6	7.9	7.9
4	Temp (deg C)	20.8	22.0	21.9	20.1							17.0	21.4	21.4	21.5	20.8
5	Turb (NTU)											1.7	0.6	1.9	0.8	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.4	0.0	0.0	0.0							0.0	0.0	0.0	0.0	1.3
2	ALK-TOT (mgCaCO3/L)	111	117	93	92							109	119	118	112	114
3	B (mg/L)	0.45	0.28	0.30	0.17							0.17	0.28	0.17	0.36	0.34
4	Ca (mg/L)	25	26	25	19							51	33	43	26	29
5	Cl (mg/L)	6.3	6.3	4.3	4.6							54.0	8.0	5.9	8.5	7.9
6	CO3 (mg/L)	0.4	0.0	0.0	0.0							0.0	0.0	0.0	0.0	1.6
7	F (mg/L)	0.24	0.21	0.26	0.39							0.66	0.19	0.18	0.16	0.05
8	Fe (mg/L)	0.0	0.0	0.1	0.1							0.2	0.3	0.3	0.0	0.1
9	HCO3 (mg/L)	134	143	114	112							133	145	144	136	136
10	K (mg/L)	1.6	1.5	1.6	1.8							1.4	2.6	1.8	1.5	2.1
11	Mg (mg/L)	8.2	10.2	5.7	12.7							20.8	9.4	9.4	15.1	9.6
12	Na (mg/L)	11.2	8.8	7.5	6.5							32.9	13.4	14.0	13.8	14.6
13	NH3-N (mg N/L)	0.27	0.16	0.17	0.11							0.16	0.08	0.10	0.15	0.35
14	NO2+NO3 (mg N/L)	0.15	0.14	0.38	1.67							0.22	0.21	1.83	3.86	4.15
15	NO2-N (mgN/L)	0.01	0.02	0.03	0.10							0.01	0.01	0.00	0.00	0.02
16	NO3-N (mgN/L)	0.14	0.12	0.35	1.57							0.21	0.20	1.82	3.85	4.13
17	o-PO4-P (mg P/L)	0.010	0.010	0.015	0.419							0.023	0.038	0.431	0.171	0.085
18	SiO2 (mg/L)	33.5	30.8	23.8	34.2							139.2	30.4	11.5	9.0	18.7
19	SO4 (mg/L)	4.3	5.0	5.8	10.8							25.9	14.1	15.9	16.3	18.6

Water Quality Seasonal Average for the period: 2001-2016

Station Name : RAJEGAON (AGH4MC3)

Division : Wainganga Div., Nagpur

Local River : Bagh

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.2	1.8	1.1	1.8							2.0	1.6	1.4	2.7	1.2
2	COD (mg/L)											77.1	29.6	36.0	27.3	36.6
3	DO (mg/L)	7.8	8.6	7.5	7.9							8.1	7.8	7.3	7.4	7.4
4	DO_SAT% (%)	86	98	84	87							84	88	82	84	82
5	FCol-MPN (MPN/100mL)	288	688	388	2300							100	300	138	100	145
6	Tcol-MPN (MPN/100mL)	450	850	688	7125							250	11975	663	340	630
	TRACE & TOXIC															
1	As (µg/L)											0.3				0.6
2	Cd (µg/L)											0.3			0.3	0.1
3	Cr (µg/L)											2.9			2.5	0.2
4	Cu (µg/L)											137.6			4.0	0.6
5	Hg (µg/L)															
6	Ni (µg/L)											45.8			5.2	0.6
7	Pb (µg/L)											0.0			0.8	0.1
8	Zn (µg/L)											38.6			4.0	5.8
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	62	66	61	47							128	82	108	65	72
2	HAR_Total (mgCaCO3/L)	96	108	85	100							215	121	147	128	112
3	Na% (%)	20	15	16	12							25	20	18	19	22
4	RSC (-)	0.3	0.2	0.2	0.0							0.0	0.1	0.0	0.0	0.1
5	SAR (-)	0.5	0.4	0.4	0.3							1.0	0.5	0.5	0.5	0.6
	PESTICIDES															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : RAJEGAON (AGH4MC3)

Local River : Bagh

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	0.000	0.000	4.751	0.302							0.276	0.747	8.319	7.355	
2	EC_GEN (μmho/cm)	299	238	277	257							284	276	224	272	228
3	pH_GEN (pH units)	7.9	7.7	7.8	8.0							8.1	7.9	7.5	7.8	7.6
4	Temp (deg C)	24.2	27.0	26.7	25.0							24.0	24.5	27.3	23.5	24.0
5	Turb (NTU)											2.0	0.4	3.9	26.9	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0							0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	134	134	178	131							122	146	103	103	120
3	B (mg/L)	0.77	0.32	0.57	0.09							0.14	0.23	0.31	0.45	0.05
4	Ca (mg/L)	25	27	28	27							36	41	28	36	51
5	Cl (mg/L)	11.0	5.7	8.7	6.4							12.1	9.2	8.4	9.5	8.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0							0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.53	0.19	0.25	0.54							0.17	0.00	0.49	0.12	0.01
8	Fe (mg/L)	0.3	0.0	0.0	0.0							0.2	0.0	0.3	0.3	0.0
9	HCO3 (mg/L)	164	164	162	159							149	178	126	126	146
10	K (mg/L)	3.0	2.3	2.9	2.0							1.0	3.0	2.7	2.2	2.6
11	Mg (mg/L)	12.2	9.5	13.4	12.3							17.5	15.9	8.6	13.4	16.6
12	Na (mg/L)	17.0	13.7	14.0	13.9							13.3	14.9	18.3	11.5	14.5
13	NH3-N (mg N/L)	0.30	0.27	0.42	0.14							0.14	0.02	0.78	0.10	0.09
14	NO2+NO3 (mg N/L)	1.41	0.23	0.27	1.33							0.35	0.00	3.56	5.04	14.33
15	NO2-N (mgN/L)	0.05	0.04	0.05	0.20							0.01	0.00	0.01	0.01	0.05
16	NO3-N (mgN/L)	1.35	0.18	0.23	1.13							0.34	0.00	3.55	5.03	14.28
17	o-PO4-P (mg P/L)	0.017	0.017	0.010	0.107							0.040	0.043	0.697	0.219	0.085
18	SiO2 (mg/L)	33.6	27.7	31.0	34.1							29.4	15.3	13.7	40.2	22.4
19	SO4 (mg/L)	5.8	5.7	5.7	4.5							9.6	25.8	10.9	13.3	27.4

Water Quality Seasonal Average for the period: 2001-2016

Station Name : RAJEGAON (AGH4MC3)

Division : Wainganga Div., Nagpur

Local River : Bagh

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	2.3	1.9	1.0	2.6							1.4	1.7	2.2	1.8	15.0
2	COD (mg/L)											9.3	57.3	31.7	33.0	88.8
3	DO (mg/L)	5.2	6.5	5.8	5.7							6.9	7.2	6.5	6.2	4.8
4	DO_SAT% (%)	62	79	72	69							82	86	81	73	57
5	FCol-MPN (MPN/100mL)	2320	150	583	933							100	100	223	410	110
6	Tcol-MPN (MPN/100mL)	15420	183	1183	21933							400	200	3227	660	800
	TRACE & TOXIC															
1	As (µg/L)												6.1	3.9	1.3	
2	Cd (µg/L)												0.0	0.2	1.0	
3	Cr (µg/L)												0.7	1.7	0.0	
4	Cu (µg/L)												0.3	10.1		
5	Hg (µg/L)												0.0	0.4	0.1	
6	Ni (µg/L)												10.7	1.7	0.0	
7	Pb (µg/L)												16.8	0.3	1.0	
8	Zn (µg/L)												2.8	12.0	17.0	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	62	68	70	67							90	101	70	91	128
2	HAR_Total (mgCaCO3/L)	113	107	126	119							163	167	106	147	197
3	Na% (%)	24	21	19	20							15	16	26	15	14
4	RSC (-)	0.4	0.6	0.2	0.3							0.0	0.0	0.1	0.0	0.0
5	SAR (-)	0.7	0.6	0.5	0.6							0.5	0.5	0.8	0.4	0.5
	PESTICIDES															

HISTORY SHEET

		Water Year	: 2015-2016
Site	: KUMHARI	Code	: AGH40R6
State	: Madhya Pradesh	District	Balaghat
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wainganga
Sub-Sub Tributary	: -	Local River	: Wainganga
Division	: Wainganga Div., Nagpur	Sub-Division	: Upper Wainganga SD, Nagpur
Drainage Area	: 8070 Sq. Km.	Bank	: Left
Latitude	: 21°53'03"	Longitude	: 80°10'36"
	Opening Date	Closing Date	
Gauge	: 01.12.1986		
Discharge	: 01.12.1986		
Sediment	: 01.09.2014		
Water Quality	: 01.02.2012		

Water Quality Datasheet for the period : 2015-2016

Station Name : KUMHARI (AGH40R6)

Local River : Wainganga

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)												
2	Colour_Cod (-)	Clear	Clear	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	413	285	283	215	233	262	280	322	317	301	389	394
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_GEN (pH units)	8.3	8.0	7.2	7.9	8.0	8.4	8.0	7.8	8.0	8.0	8.2	8.0
6	Temp (deg C)	30.0	25.0	26.0	26.0	26.0	24.0	22.0	16.0	18.0	22.0	25.0	30.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	5.2	0.0	0.0	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	189	94	121	122	138	151	159	165	159	168	237	156
3	B (mg/L)	0.13	0.16	0.28	0.20	0.09	0.35	0.24	0.11	0.06	0.10	0.15	0.12
4	Ca (mg/L)	38	28	36	15	26	35	34	40	45	63	66	33
5	Cl (mg/L)	19.9	9.9	35.8	9.9	8.0	11.9	11.9	9.9	8.0	10.3	10.3	67.6
6	CO3 (mg/L)	6.2	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.08	0.30	0.00	0.00	0.19	0.17	0.12	0.20	0.00	0.01	0.01	0.13
8	Fe (mg/L)	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.0	0.1	0.0
9	HCO3 (mg/L)	218	114	148	149	168	159	193	201	194	205	290	190
10	K (mg/L)	1.4	1.6	1.6	3.8	2.3	1.8	1.4	1.6	1.4	1.8	1.7	1.9
11	Mg (mg/L)	15.9	13.2	12.6	15.4	9.9	10.7	11.2	13.9	13.4	15.5	26.7	28.3
12	Na (mg/L)	19.1	14.1	12.5	24.7	27.1	16.1	16.7	18.9	17.1	18.4	24.3	21.1
13	NH3-N (mg N/L)	0.10	0.08	0.28	0.10	0.24	0.05	0.25	1.10	0.18	0.80	0.12	0.00
14	NO2+NO3 (mg N/L)	4.07	4.86	6.60	10.11	4.39	3.22	4.23	9.13	10.87	14.37	2.11	1.31
15	NO2-N (mgN/L)	0.02	0.00	0.00	0.02	0.00	0.01	0.01	0.00	0.01	0.07	0.19	0.20
16	NO3-N (mgN/L)	4.06	4.86	6.60	10.09	4.39	3.21	4.22	9.13	10.86	14.30	1.92	1.11
17	o-PO4-P (mg P/L)	0.289	0.046	0.162	0.062	0.140	0.132	0.108	0.210	0.034	0.116	0.070	0.114
18	SiO2 (mg/L)	38.7	43.4	25.8	25.8	25.3	28.9	27.5	22.4	23.7	26.4	34.8	28.4
19	SO4 (mg/L)	11.0	4.3	7.8	9.4	34.0	8.1	11.6	8.9	14.1	18.6	12.7	13.2

Water Quality Datasheet for the period : 2015-2016

Station Name : KUMHARI (AGH40R6)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	2.6	1.9	1.5	1.5	1.2	1.7	1.8	2.0	1.7	1.8	1.0	1.4
2	COD (mg/L)	23.0	34.9	46.7	24.4	16.7	38.4	24.8	28.2	25.1	91.5	28.5	21.1
3	DO (mg/L)	8.9	6.8	5.3	6.3	6.0	7.3	7.6	7.7	7.3	7.8	7.0	7.4
4	DO_SAT% (%)	118	82	65	78	74	87	87	78	77	89	85	98
5	FCol-MPN (MPN/100mL)	120	170	220	130	130	80	80	110	270	170	110	110
6	Tcol-MPN (MPN/100mL)	220	800	800	1700	500	170	130	170	1100	260	270	170
	TRACE & TOXIC												
1	As (µg/L)								0.6			1.7	
2	Cd (µg/L)								0.1			0.1	
3	Cr (µg/L)								0.6			0.7	
4	Cu (µg/L)								0.5			1.4	
5	Ni (µg/L)								1.1			0.3	
6	Pb (µg/L)								0.1			0.5	
7	Zn (µg/L)								7.5			2.8	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	95	70	91	39	66	88	86	99	112	157	165	82
2	HAR_Total (mgCaCO3/L)	161	125	143	103	107	133	133	157	168	221	277	200
3	Na% (%)	20	20	16	33	35	21	21	21	18	15	16	19
4	RSC (-)	0.6	0.0	0.0	0.4	0.6	0.4	0.5	0.2	0.0	0.0	0.0	0.0
5	SAR (-)	0.7	0.6	0.5	1.1	1.1	0.6	0.6	0.7	0.6	0.5	0.6	0.7
	PESTICIDES												

Water Quality Summary for the period : 2015-2016

Station Name : KUMHARI (AGH40R6)

Division : Wainganga Div., Nagpur

Local River : Wainganga

Sub-Division : Upper Wainganga SD, Nagpur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	12	413	215	308
3	pH_GEN (pH units)	12	8.4	7.2	8
4	Temp (deg C)	12	30.0	16.0	24.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	10.4	0.0	1.3
2	ALK-TOT (mgCaCO3/L)	12	237	94	155
3	B (mg/L)	12	0.35	0.06	0.17
4	Ca (mg/L)	12	66	15	38
5	Cl (mg/L)	12	67.6	8.0	17.8
6	CO3 (mg/L)	12	12.5	0.0	1.6
7	F (mg/L)	12	0.30	0.00	0.1
8	Fe (mg/L)	12	0.2	0.0	0.1
9	HCO3 (mg/L)	12	290	114	186
10	K (mg/L)	12	3.8	1.4	1.9
11	Mg (mg/L)	12	28.3	9.9	15.6
12	Na (mg/L)	12	27.1	12.5	19.2
13	NH3-N (mg N/L)	12	1.10	0.00	0.27
14	NO2+NO3 (mg N/L)	12	14.37	1.31	6.27
15	NO2-N (mgN/L)	12	0.20	0.00	0.04
16	NO3-N (mgN/L)	12	14.30	1.11	6.23
17	o-PO4-P (mg P/L)	12	0.289	0.034	0.124
18	SiO2 (mg/L)	12	43.4	22.4	29.3
19	SO4 (mg/L)	12	34.0	4.3	12.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	2.6	1.0	1.7
2	COD (mg/L)	12	91.5	16.7	33.6
3	DO (mg/L)	12	8.9	5.3	7.1
4	DO_SAT% (%)	12	118	65	85
5	FCol-MPN (MPN/100mL)	12	270	80	142
6	Tcol-MPN (MPN/100mL)	12	1700	130	524
	TRACE & TOXIC				
1	As (µg/L)	2	1.7	0.6	1.1
2	Cd (µg/L)	2	0.1	0.1	0.1
3	Cr (µg/L)	2	0.7	0.6	0.6
4	Cu (µg/L)	2	1.4	0.5	0.9
5	Ni (µg/L)	2	1.1	0.3	0.7
6	Pb (µg/L)	2	0.5	0.1	0.3
7	Zn (µg/L)	2	7.5	2.8	5.1
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	165	39	96
2	HAR_Total (mgCaCO3/L)	12	277	103	161
3	Na% (%)	12	35	15	21
4	RSC (-)	12	0.6	0.0	0.2
5	SAR (-)	12	1.1	0.5	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KUMHARI (AGH40R6)

Local River : Wainganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	144.3	72.62	251.8	30.42	697.6						113.1	179.8	186.0	93.26	
2	EC_GEN (µmho/cm)	186	225	174	226	210							225	206	304	286
3	pH_GEN (pH units)	8.0	8.1	8.0	8.1	8.0							8.5	8.1	7.2	7.9
4	Temp (deg C)	26.6	26.8	28.4	27.7	28.4							25.4	20.8	27.4	26.6
5	Turb (NTU)												8.6	8.5	12.3	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.6	1.6	0.0	1.2	0.0							5.4	3.6	0.0	1.0
2	ALK-TOT (mgCaCO3/L)	85	107	89	119	100							133	109	142	133
3	B (mg/L)	0.32	0.99	0.59	0.23	0.21							0.15	0.11	0.20	0.17
4	Ca (mg/L)	23	29	20	30	29							32	27	36	29
5	Cl (mg/L)	8.3	9.6	5.6	5.2	6.1							7.2	8.9	8.2	16.7
6	CO3 (mg/L)	0.8	2.0	0.0	1.5	0.0							6.6	4.3	0.0	1.2
7	F (mg/L)	0.36	0.23	0.30	0.31	0.24							0.40	0.33	0.37	0.12
8	Fe (mg/L)	0.1	0.1	0.1	0.1	0.3							0.1	0.5	0.1	0.1
9	HCO3 (mg/L)	103	126	108	142	122							149	124	173	159
10	K (mg/L)	1.8	2.2	1.5	2.1	1.4							1.6	2.3	1.9	2.1
11	Mg (mg/L)	6.1	6.1	7.5	8.5	8.3							14.2	12.4	13.2	13.4
12	Na (mg/L)	7.2	14.2	7.6	11.3	9.5							14.3	11.9	19.1	19.5
13	NH3-N (mg N/L)	0.37	0.28	0.38	0.25	0.11							0.05	0.11	0.42	0.16
14	NO2+NO3 (mg N/L)	0.59	0.69	0.61	1.62	0.47							1.35	1.54	1.39	6.01
15	NO2-N (mgN/L)	0.01	0.06	0.03	0.08	0.07							0.06	0.01	0.01	0.01
16	NO3-N (mgN/L)	0.58	0.63	0.58	1.54	0.39							1.29	1.54	1.38	6.00
17	o-PO4-P (mg P/L)	0.056	0.024	0.022	0.113	0.031							0.085	0.046	0.101	0.140
18	SiO2 (mg/L)	26.8	31.6	28.4	38.3	65.4							46.0	24.3	24.7	31.8
19	SO4 (mg/L)	3.4	10.0	4.8	8.6	17.3							15.9	11.9	10.0	13.3

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KUMHARI (AGH40R6)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.4	2.1	2.2	1.1	2.0							1.2	3.0	1.6	1.7
2	COD (mg/L)												43.9	69.6	26.2	29.1
3	DO (mg/L)	6.6	6.9	6.1	6.8	6.4							7.0	5.6	6.7	6.7
4	DO_SAT% (%)	82	86	78	86	82							85	64	85	83
5	FCol-MPN (MPN/100mL)	18043	23550	1010	1420	210							250	260	274	154
6	Tcol-MPN (MPN/100mL)	3525	96830	1780	5100	652							3030	15880	1520	804
	TRACE & TOXIC															
1	As (µg/L)												4.3	3.1		
2	Cd (µg/L)												1.2	0.2		
3	Cr (µg/L)												0.2	1.0		
4	Cu (µg/L)												21.0	4.8		
5	Hg (µg/L)													0.0		
6	Ni (µg/L)												2.8	9.5		
7	Pb (µg/L)												1.1	0.9		
8	Zn (µg/L)												2.9	3.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	57	74	50	74	72							80	68	89	72
2	HAR_Total (mgCaCO3/L)	82	99	81	110	107							139	120	144	128
3	Na% (%)	15	23	15	17	14							16	17	22	25
4	RSC (-)	0.1	0.2	0.2	0.2	0.1							0.2	0.0	0.1	0.3
5	SAR (-)	0.3	0.7	0.3	0.5	0.4							0.5	0.5	0.7	0.8
	PESTICIDES															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KUMHARI (AGH40R6)

Local River : Wainganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	9.715	16.23	17.42	22.87							31.25	10.22	28.36	19.62	
2	EC_GEN (µmho/cm)	324	275	293	304							726	334	364	316	295
3	pH_GEN (pH units)	8.3	8.0	8.2	8.3							7.0	8.0	8.1	7.8	8.0
4	Temp (deg C)	18.5	21.5	18.8	21.6							16.0	14.0	18.3	16.8	20.0
5	Turb (NTU)											22.1	0.3	1.4	0.8	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	3.7	0.0	0.0	4.9							0.0	0.0	1.1	0.0	2.6
2	ALK-TOT (mgCaCO3/L)	163	134	147	167							271	214	180	149	158
3	B (mg/L)	0.36	0.33	0.34	0.24							0.24	0.25	0.20	0.30	0.19
4	Ca (mg/L)	38	38	39	40							63	52	56	44	39
5	Cl (mg/L)	8.2	7.8	5.8	7.1							56.1	11.9	7.6	7.4	10.4
6	CO3 (mg/L)	4.4	0.0	0.0	5.9							0.0	0.0	1.3	0.0	3.1
7	F (mg/L)	0.31	0.43	0.31	0.45							0.67	0.28	0.35	0.23	0.12
8	Fe (mg/L)	0.0	0.0	0.0	0.0							0.1	0.5	0.5	0.0	0.1
9	HCO3 (mg/L)	186	163	180	192							331	261	217	182	187
10	K (mg/L)	1.2	1.2	1.2	1.4							3.8	2.0	1.4	1.3	1.6
11	Mg (mg/L)	11.5	6.9	10.2	16.5							30.1	21.4	15.2	11.1	12.3
12	Na (mg/L)	13.8	10.8	12.0	13.9							51.3	18.8	16.0	15.8	17.2
13	NH3-N (mg N/L)	0.26	0.17	0.14	0.16							1.20	0.16	0.08	0.12	0.39
14	NO2+NO3 (mg N/L)	0.27	0.29	0.59	1.49							0.20	0.67	2.35	5.55	6.86
15	NO2-N (mgN/L)	0.01	0.01	0.02	0.04							0.01	0.01	0.00	0.00	0.01
16	NO3-N (mgN/L)	0.26	0.28	0.56	1.45							0.20	0.66	2.34	5.54	6.85
17	o-PO4-P (mg P/L)	0.018	0.012	0.012	0.099							0.352	0.061	0.438	0.136	0.121
18	SiO2 (mg/L)	41.8	36.8	34.5	36.1							307.2	56.6	16.1	15.4	25.6
19	SO4 (mg/L)	5.3	3.3	4.5	11.0							61.9	7.7	5.8	12.1	10.7

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KUMHARI (AGH40R6)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.6	1.4	0.7	1.5							1.2	2.8	1.5	2.2	1.8
2	COD (mg/L)											69.7	22.0	54.8	34.0	29.1
3	DO (mg/L)	8.9	8.1	8.1	9.8							7.6	9.4	7.5	8.3	7.5
4	DO_SAT% (%)	95	91	86	112							77	91	79	86	82
5	FCol-MPN (MPN/100mL)	300	1075	138	400							120000	438	1063	328	135
6	Tcol-MPN (MPN/100mL)	604	1700	238	600							120000	3925	2201	758	393
	TRACE & TOXIC															
1	As (µg/L)															0.6
2	Cd (µg/L)											0.2			0.0	0.1
3	Cr (µg/L)											4.4			2.7	0.6
4	Cu (µg/L)											78.9			3.4	0.5
5	Hg (µg/L)															
6	Ni (µg/L)											44.5			0.2	1.1
7	Pb (µg/L)											0.3			0.9	0.1
8	Zn (µg/L)											57.3			5.0	7.5
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	94	94	98	100							158	129	139	110	96
2	HAR_Total (mgCaCO3/L)	141	123	141	169							283	218	203	156	148
3	Na% (%)	17	16	16	15							28	16	15	18	20
4	RSC (-)	0.4	0.2	0.2	0.1							0.0	0.1	0.0	0.2	0.3
5	SAR (-)	0.5	0.4	0.4	0.5							1.3	0.6	0.5	0.6	0.6
	PESTICIDES															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KUMHARI (AGH40R6)

Local River : Wainganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	2.792	2.266	3.283	2.754							5.078	3.997	8.232	9.997	
2	EC_GEN (µmho/cm)	371	283	344	373							331	382	351	309	361
3	pH_GEN (pH units)	8.1	7.7	8.0	8.1							8.4	8.5	7.7	7.6	8.1
4	Temp (deg C)	23.8	24.3	22.7	24.3							22.0	22.3	20.7	22.3	25.7
5	Turb (NTU)											8.5	0.2	0.8	23.6	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0							4.2	6.7	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	177	152	230	198							150	208	172	149	187
3	B (mg/L)	0.68	0.34	0.61	0.11							0.19	0.17	0.11	0.19	0.12
4	Ca (mg/L)	37	38	37	38							38	45	43	37	54
5	Cl (mg/L)	10.8	5.7	8.0	10.9							10.9	8.3	9.4	17.1	29.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0							5.1	8.0	0.0	0.0	0.0
7	F (mg/L)	0.54	0.15	0.32	0.46							0.34	0.22	0.47	0.17	0.05
8	Fe (mg/L)	0.3	0.0	0.0	0.0							0.2	0.0	0.3	0.0	0.0
9	HCO3 (mg/L)	216	186	213	241							173	238	210	181	228
10	K (mg/L)	1.4	1.7	2.2	1.3							1.2	2.1	1.7	1.5	1.8
11	Mg (mg/L)	14.8	7.5	12.9	20.0							18.1	22.4	14.4	11.4	23.5
12	Na (mg/L)	18.1	14.7	19.3	18.5							17.5	19.5	23.7	16.8	21.2
13	NH3-N (mg N/L)	0.28	0.25	0.22	0.10							0.62	0.02	0.65	0.13	0.31
14	NO2+NO3 (mg N/L)	0.40	0.39	0.24	2.78							0.14	0.33	4.09	5.01	5.93
15	NO2-N (mgN/L)	0.02	0.02	0.01	0.05							0.01	0.01	0.00	0.00	0.15
16	NO3-N (mgN/L)	0.37	0.38	0.23	2.73							0.12	0.33	4.09	5.01	5.78
17	o-PO4-P (mg P/L)	0.026	0.027	0.013	0.181							0.023	0.045	0.734	0.199	0.100
18	SiO2 (mg/L)	42.9	35.0	43.7	49.8							36.7	24.5	23.4	34.6	29.9
19	SO4 (mg/L)	8.3	5.7	5.7	6.4							78.4	8.8	5.9	13.1	14.8

Water Quality Seasonal Average for the period: 2001-2016

Station Name : KUMHARI (AGH40R6)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	2.5	1.5	1.6	1.6							8.9	15.9	1.8	2.1	1.4
2	COD (mg/L)											47.1	56.7	37.3	27.7	47.0
3	DO (mg/L)	8.3	6.5	7.1	7.1							5.4	6.0	7.6	6.2	7.4
4	DO_SAT% (%)	99	78	82	84							63	67	84	72	91
5	FCol-MPN (MPN/100mL)	428	283	100	450							150	233	143	447	130
6	Tcol-MPN (MPN/100mL)	728	533	433	1667							467	533	750	813	233
	TRACE & TOXIC															
1	As (µg/L)											0.6	2.5	4.3	0.9	1.7
2	Cd (µg/L)											0.0	1.3	0.1	1.0	0.1
3	Cr (µg/L)											0.0	1.2	6.4	0.0	0.7
4	Cu (µg/L)												1.8	14.9		1.4
5	Hg (µg/L)											0.3	0.1	0.3	0.2	
6	Ni (µg/L)											1.6	6.6	5.0	2.7	0.3
7	Pb (µg/L)											16.7	7.0	0.3	12.0	0.5
8	Zn (µg/L)											9.1	16.1	13.4	0.0	2.8
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	92	95	93	95							95	112	108	92	134
2	HAR_Total (mgCaCO3/L)	154	126	147	178							170	205	168	140	233
3	Na% (%)	20	20	22	18							18	17	23	20	17
4	RSC (-)	0.5	0.5	0.6	0.4							0.3	0.1	0.2	0.4	0.0
5	SAR (-)	0.6	0.6	0.7	0.6							0.6	0.6	0.8	0.6	0.6
	PESTICIDES															

HISTORY SHEET

		Water Year	: 2015-2016
Site	: SAKMUR(SIRPUR)	Code	: AGH30B6
State	: Maharashtra	District	Chandrapur
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wardha
Sub-Sub Tributary	: -	Local River	: Wardha
Division	: Wainganga Div., Nagpur	Sub-Division	: Wardha SD, Chandrapur
Drainage Area	: 47500 Sq. Km.	Bank	: Left
Latitude	: 19°33'41"	Longitude	: 79°36'48"
	Opening Date	Closing Date	
Gauge	: 23.06.1964		
Discharge	: 01.02.1968		
Sediment	: 01.06.2014		
Water Quality	: 01.06.2014		

Water Quality Datasheet for the period : 2015-2016

Station Name : SAKMUR(SIRPUR) (AGH30B6)

Local River : Wardha

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL											
1	Q (cumec)											
2	Colour_Cod (-)	Clear	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	789	367	388	426	460	616	547	510	474	472	623
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
5	pH_GEN (pH units)	8.6	8.3	8.0	8.1	8.2	8.5	8.3	8.2	8.2	8.2	8.5
6	Temp (deg C)	27.0	26.0	25.0	25.5	25.0	29.5	25.0	24.0	29.0	26.0	26.0
	CHEMICAL											
1	Alk-Phen (mgCaCO3/L)	7.8	7.8	0.0	0.0	0.0	5.2	7.8	0.0	0.0	0.0	12.0
2	ALK-TOT (mgCaCO3/L)	195	156	148	177	114	185	192	210	195	204	219
3	B (mg/L)	0.12	0.19	0.06	0.48	0.39	0.72	0.47	0.13	0.12	0.10	0.11
4	Ca (mg/L)	35	38	36	39	43	41	41	36	41	73	67
5	Cl (mg/L)	53.7	23.9	23.9	25.8	29.8	49.7	43.7	33.8	13.9	37.0	61.7
6	CO3 (mg/L)	9.4	9.4	0.0	0.0	0.0	6.2	9.4	0.0	0.0	0.0	14.4
7	F (mg/L)	0.69	0.33	0.01	0.00	0.42	0.55	0.24	0.33	0.20	0.24	0.16
8	Fe (mg/L)	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1
9	HCO3 (mg/L)	219	171	181	216	139	213	216	256	238	249	238
10	K (mg/L)	5.5	2.6	2.5	3.4	3.7	4.6	4.0	4.3	3.3	4.5	4.8
11	Mg (mg/L)	25.3	12.1	19.2	18.7	5.5	25.7	23.5	24.1	24.1	26.7	21.4
12	Na (mg/L)	64.9	21.7	22.3	29.1	27.0	45.7	41.1	45.2	42.2	47.0	72.3
13	NH3-N (mg N/L)	0.10	0.05	0.04	0.01	0.21	0.06	0.16	0.34	0.18	0.28	0.21
14	NO2+NO3 (mg N/L)	6.03	8.17	9.81	9.50	16.06	12.45	6.30	4.61	3.62	7.65	2.33
15	NO2-N (mgN/L)	0.02	0.02	0.00	0.05	0.01	0.06	0.01	0.00	0.01	0.06	0.22
16	NO3-N (mgN/L)	6.01	8.15	9.81	9.46	16.05	12.39	6.29	4.60	3.61	7.59	2.11
17	o-PO4-P (mg P/L)	0.081	0.057	0.171	0.133	0.132	0.077	0.085	0.186	0.053	0.116	0.079
18	SiO2 (mg/L)	22.0	24.9	17.3	24.8	7.7	24.9	22.4	18.7	18.2	17.7	23.0
19	SO4 (mg/L)	43.8	3.3	32.0	24.8	20.2	60.6	35.0	49.4	28.7	44.4	30.1

Water Quality Datasheet for the period : 2015-2016

Station Name : SAKMUR(SIRPUR) (AGH30B6)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water Analysis

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	01.06.2015	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL											
1	BOD3-27 (mg/L)	30.0	1.0	3.3	1.4	30.0	1.6	1.6	1.5	1.4	55.0	2.0
2	COD (mg/L)	47.0	37.2	26.0	20.8	42.5	37.4	45.0	30.5	39.2	70.1	16.9
3	DO (mg/L)	4.2	5.7	7.2	6.7	4.7	7.2	5.5	5.7	6.8	4.3	6.5
4	DO_SAT% (%)	53	70	87	81	57	94	67	68	88	53	80
5	FCol-MPN (MPN/100mL)	20	40	90	40	20	40	40	90	40	80	60
6	Tcol-MPN (MPN/100mL)	40	110	170	900	130	170	80	330	500	500	90
	TRACE & TOXIC											
1	As (µg/L)								0.9			2.5
2	Cd (µg/L)								0.5			0.2
3	Cr (µg/L)								0.3			1.3
4	Cu (µg/L)								1.7			2.4
5	Ni (µg/L)								0.4			1.9
6	Pb (µg/L)								2.4			1.8
7	Zn (µg/L)								6.0			4.5
	CHEMICAL INDICES											
1	HAR_Ca (mgCaCO3/L)	88	95	91	97	106	104	104	90	104	183	168
2	HAR_Total (mgCaCO3/L)	194	145	171	175	129	211	202	191	204	294	257
3	Na% (%)	41	24	22	26	31	32	30	34	31	26	38
4	RSC (-)	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.4	0.0	0.0	0.0
5	SAR (-)	2.0	0.8	0.7	1.0	1.0	1.4	1.3	1.4	1.3	1.2	2.0
	PESTICIDES											

Water Quality Summary for the period : 2015-2016

Station Name : SAKMUR(SIRPUR) (AGH30B6)

Division : Wainganga Div., Nagpur

Local River : Wardha

Sub-Division : Wardha SD, Chandrapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (μmho/cm)	11	789	367	516
3	pH_GEN (pH units)	11	8.6	8.0	8.3
4	Temp (deg C)	11	29.5	24.0	26.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	12.0	0.0	3.7
2	ALK-TOT (mgCaCO3/L)	11	219	114	181
3	B (mg/L)	11	0.72	0.06	0.26
4	Ca (mg/L)	11	73	35	45
5	Cl (mg/L)	11	61.7	13.9	36.1
6	CO3 (mg/L)	11	14.4	0.0	4.4
7	F (mg/L)	11	0.69	0.00	0.29
8	Fe (mg/L)	11	0.1	0.0	0
9	HCO3 (mg/L)	11	256	139	212
10	K (mg/L)	11	5.5	2.5	3.9
11	Mg (mg/L)	11	26.7	5.5	20.6
12	Na (mg/L)	11	72.3	21.7	41.7
13	NH3-N (mg N/L)	11	0.34	0.01	0.15
14	NO2+NO3 (mg N/L)	11	16.06	2.33	7.87
15	NO2-N (mgN/L)	11	0.22	0.00	0.04
16	NO3-N (mgN/L)	11	16.05	2.11	7.82
17	o-PO4-P (mg P/L)	11	0.186	0.053	0.106
18	SiO2 (mg/L)	11	24.9	7.7	20.2
19	SO4 (mg/L)	11	60.6	3.3	33.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	55.0	1.0	11.7
2	COD (mg/L)	11	70.1	16.9	37.5
3	DO (mg/L)	11	7.2	4.2	5.9
4	DO_SAT% (%)	11	94	53	73
5	FCol-MPN (MPN/100mL)	11	90	20	51
6	Tcol-MPN (MPN/100mL)	11	900	40	275
	TRACE & TOXIC				
1	As (μg/L)	2	2.5	0.9	1.7
2	Cd (μg/L)	2	0.5	0.2	0.4
3	Cr (μg/L)	2	1.3	0.3	0.8
4	Cu (μg/L)	2	2.4	1.7	2
5	Ni (μg/L)	2	1.9	0.4	1.2
6	Pb (μg/L)	2	2.4	1.8	2.1
7	Zn (μg/L)	2	6.0	4.5	5.3
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	183	88	112
2	HAR_Total (mgCaCO3/L)	11	294	129	197
3	Na% (%)	11	41	22	30
4	RSC (-)	11	0.4	0.0	0.1
5	SAR (-)	11	2.0	0.7	1.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2016

Station Name : SAKMUR(SIRPUR) (AGH30B6)

Local River : Wardha

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	PHYSICAL						
1	Q (cumec)	761.5		34.79		11.98	
2	EC_GEN (µmho/cm)	566	486	500	537	680	548
3	pH_GEN (pH units)	7.8	8.2	8.2	8.3	8.2	8.3
4	Temp (deg C)	28.4	25.7	25.8	26.9	25.7	26.0
5	Turb (NTU)	7.8		0.8		1.2	
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	1.2	3.1	2.9	3.2	2.3	6.0
2	ALK-TOT (mgCaCO3/L)	209	158	214	196	164	211
3	B (mg/L)	0.22	0.25	0.40	0.36	0.48	0.11
4	Ca (mg/L)	41	38	43	40	33	70
5	Cl (mg/L)	38.8	31.4	35.6	35.3	46.8	49.3
6	CO3 (mg/L)	1.5	3.7	3.5	3.9	2.7	7.2
7	F (mg/L)	0.87	0.29	0.30	0.33	0.50	0.20
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	252	185	254	231	195	243
10	K (mg/L)	4.9	3.5	2.8	4.0	5.2	4.7
11	Mg (mg/L)	24.3	16.1	23.8	24.3	23.7	24.1
12	Na (mg/L)	54.0	33.0	40.8	43.5	56.7	59.6
13	NH3-N (mg N/L)	0.31	0.08	0.06	0.18	0.10	0.24
14	NO2+NO3 (mg N/L)	1.79	9.91	6.15	6.74	6.07	4.99
15	NO2-N (mgN/L)	0.00	0.02	0.01	0.02	0.00	0.14
16	NO3-N (mgN/L)	1.79	9.89	6.14	6.72	6.07	4.85
17	o-PO4-P (mg P/L)	0.171	0.115	0.157	0.100	0.134	0.098
18	SiO2 (mg/L)	17.0	19.3	11.1	21.1	32.4	20.4
19	SO4 (mg/L)	15.0	24.8	34.2	43.4	45.8	37.3

Water Quality Seasonal Average for the period: 2014-2016

Station Name : SAKMUR(SIRPUR) (AGH30B6)

Local River : Wardha

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

River Water

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	4.8	13.1	2.0	1.5	2.7	28.5
2	COD (mg/L)	33.6	34.7	30.5	38.0	27.3	43.5
3	DO (mg/L)	5.9	5.7	7.3	6.3	6.3	5.4
4	DO_SAT% (%)	76	70	89	79	77	67
5	FCol-MPN (MPN/100mL)	516	42	80	53	70	70
6	Tcol-MPN (MPN/100mL)	1438	270	215	270	117	295
	TRACE & TOXIC						
1	As (µg/L)				0.9	0.9	2.5
2	Cd (µg/L)			0.3	0.5	1.0	0.2
3	Cr (µg/L)			3.9	0.3	6.0	1.3
4	Cu (µg/L)			7.2	1.7		2.4
5	Hg (µg/L)					0.0	
6	Ni (µg/L)			0.2	0.4	5.7	1.9
7	Pb (µg/L)			1.0	2.4	15.0	1.8
8	Zn (µg/L)			4.0	6.0	22.0	4.5
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	102	96	108	100	83	175
2	HAR_Total (mgCaCO3/L)	203	163	207	202	182	276
3	Na% (%)	33	29	30	32	40	32
4	RSC (-)	0.3	0.1	0.4	0.1	0.0	0.0
5	SAR (-)	1.6	1.1	1.2	1.3	1.8	1.6
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2015-2016
Site	: WAIRAGARH	Code	: AGH46D4
State	: Maharashtra	District	Gadchiroli
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wainganga
Sub-Sub Tributary	: Khobragarhi	Local River	: Khobragarhi
Division	: Wainganga Div., Nagpur	Sub-Division	: L Wainganga SD, Chandrapur
Drainage Area	: 2600 Sq. Km.	Bank	: Right
Latitude	: 20°25'19"	Longitude	: 80°05'30"
	Opening Date	Closing Date	
Gauge	: 18.07.1992		
Discharge	: 07.08.1992		
Sediment	:		
Water Quality	: 01.10.2014		

Water Quality Datasheet for the period : 2015-16

Station Name : WAIRAGARH(AGH46D4)

Division : Wainganga Div., Nagpur

local River : Khobragarhi

Sub-Division : L Wainganga SD, Chandrapur

River WATER Analysis

S.No	Parameters	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015
		A	A	A	A	A	A
	PHYSICAL						
1	Q (cumec)						
2	Colour_Cod (-)	Clear	Clear	Brown	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	127	125	102	153	153	134
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.9	7.6	7.6	8.1	8.2	8.2
6	Temp (deg C)	26.0	27.0	29.0	28.0	28.0	25.0
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	71	65	55	74	70	78
3	B (mg/L)	0.13	0.24	0.25	0.22	0.64	0.23
4	Ca (mg/L)	20	17	19	22	22	23
5	Cl (mg/L)	11.9	9.9	8.0	11.9	11.9	8.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.10	0.00	0.00	0.12	0.14	0.00
8	Fe (mg/L)	0.1	0.1	0.4	0.1	0.1	0.0
9	HCO3 (mg/L)	86	79	67	91	86	95
10	K (mg/L)	2.2	1.3	2.1	1.7	2.5	1.5
11	Mg (mg/L)	17.0	8.8	3.1	7.1	5.9	1.6
12	Na (mg/L)	8.9		8.3	11.4	12.2	11.5
13	NH3-N (mg N/L)	0.03	0.04	0.01	0.19	0.04	0.10
14	NO2+NO3 (mg N/L)	7.89	5.52	6.55	3.69	3.56	3.26
15	NO2-N (mgN/L)	0.04	0.01	0.02	0.00	0.02	0.01
16	NO3-N (mgN/L)	7.85	5.51	6.53	3.69	3.54	3.25
17	o-PO4-P (mg P/L)	0.048	0.057	0.698	0.095	0.059	0.131
18	SiO2 (mg/L)	25.9	20.8	17.2	20.6	15.1	19.8
19	SO4 (mg/L)	3.2	9.0	4.8	28.0	14.1	4.7
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.1	1.8	0.4	2.1	1.5	3.9
2	COD (mg/L)	39.4	21.3	18.2	28.1	57.1	45.3
3	DO (mg/L)	5.9	7.2	6.1	6.5	6.3	8.4
4	DO_SAT% (%)	73	90	79	83	80	102
5	FCol-MPN (MPN/100mL)	110	70	80	170	170	20
6	Tcol-MPN (MPN/100mL)	270	90	900	16000	1400	40
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	50	43	48	54	55	57
2	HAR_Total (mgCaCO3/L)	121	80	60	84	80	64
3	Na% (%)	14	20	22	22	24	28
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.3
5	SAR (-)	0.4	0.5	0.5	0.5	0.6	0.6
	PESTICIDES						

Water Quality Summary for the period : 2015-16

Station Name : WAIRAGARH(AGH46D4)

Division : Wainganga Div., Nagpur

local River : Khobragarhi

Sub-Division : L Wainganga SD, Chandrapur

River Water Analysis

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (μmho/cm)	6	153	102	132
3	pH_GEN (pH units)	6	8.2	7.6	7.9
4	Temp (deg C)	6	29.0	25.0	27.2
	CHEMICAL				
1	Alk-Phen (mgCaCO ₃ /L)	6	0.0	0.0	0
2	ALK-TOT (mgCaCO ₃ /L)	6	78	55	69
3	B (mg/L)	6	0.64	0.13	0.28
4	Ca (mg/L)	6	23	17	20
5	Cl (mg/L)	6	11.9	8.0	10.3
6	CO ₃ (mg/L)	6	0.0	0.0	0
7	F (mg/L)	6	0.14	0.00	0.06
8	Fe (mg/L)	6	0.4	0.0	0.1
9	HCO ₃ (mg/L)	6	95	67	84
10	K (mg/L)	6	2.5	1.3	1.9
11	Mg (mg/L)	6	17.0	1.6	7.3
12	Na (mg/L)	6	12.2	8.3	10.3
13	NH ₃ -N (mg N/L)	6	0.19	0.01	0.07
14	NO ₂ +NO ₃ (mg N/L)	6	7.89	3.26	5.08
15	NO ₂ -N (mgN/L)	6		0.00	0.01
16	NO ₃ -N (mgN/L)	6	7.85	3.25	5.06
17	o-PO ₄ -P (mg P/L)	6	0.698	0.048	0.181
18	SiO ₂ (mg/L)	6	25.9	15.1	19.9
19	SO ₄ (mg/L)	6	28.0	3.2	10.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD ₃₋₂₇ (mg/L)	6	3.9	0.4	1.8
2	COD (mg/L)	6	57.1	18.2	34.9
3	DO (mg/L)	6	8.4	5.9	6.7
4	DO_SAT% (%)	6	102	73	85
5	FCol-MPN (MPN/100mL)	6	170	20	103
6	Tcol-MPN (MPN/100mL)	6	16000	40	3117
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO ₃ /L)	6	57	43	51
2	HAR_Total (mgCaCO ₃ /L)	6	121	60	81
3	Na% (%)	6	28	14	22
4	RSC (-)	6	0.3	0.0	0
5	SAR (-)	6	0.6	0.4	0.5
	PESTICIDES				

Water Quality Seasonal Average for the period : 2015-16

Station Name : WAIRAGARH(AGH46D4)
local River : Khobragarhi

River WATER Analysis

Division : Wainganga Div., Nagpur
Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	PHYSICAL						
1	Q (cumec)	110.1		1.933			
2	EC_GEN (µmho/cm)	80	127	124	144		
3	pH_GEN (pH units)	7.3	7.8	7.7	8.2		
4	Temp (deg C)	26.8	27.5	19.0	26.5		
5	Turb (NTU)	86.5		1.7			
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	55	66	71	74		
2	B (mg/L)	0.20	0.21	0.25	0.43		
3	Ca (mg/L)	17	19	21	22		
4	Cl (mg/L)	8.4	10.4	6.3	9.9		
5	F (mg/L)	0.39	0.06	0.13	0.07		
6	Fe (mg/L)	0.9	0.2	0.0	0.1		
7	HCO3 (mg/L)	67	81	86	90		
8	K (mg/L)	1.6	1.8	1.3	2.0		
9	Mg (mg/L)	2.4	9.0	4.3	3.7		
10	Na (mg/L)	10.6	9.5	11.2	11.9		
11	NH3-N (mg N/L)	0.14		0.32	0.07		
12	NO2+NO3 (mg N/L)	4.25	5.91	4.14	3.41		
13	NO2-N (mgN/L)	0.02	0.02	0.01	0.01		
14	NO3-N (mgN/L)	4.23	5.89	4.14	3.40		
15	o-PO4-P (mg P/L)	0.159	0.225	0.152	0.095		
16	SiO2 (mg/L)	19.4	21.1	5.2	17.5		
17	SO4 (mg/L)	11.1	11.2	6.7	9.4		

Water Quality Seasonal Average for the period : 2015-16

Station Name : WAIRAGARH(AGH46D4)

local River : Khobragarhi

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

River WATER Analysis

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	2.3	1.3	2.1	2.7		
2	COD (mg/L)	34.0	26.8	38.5	51.2		
3	DO (mg/L)	6.4	6.4	7.3	7.3		
4	DO_SAT% (%)	80	81	79	91		
5	FCol-MPN (MPN/100mL)	125	108	85	95		
6	Tcol-MPN (MPN/100mL)	510	4315	215	720		
	TRACE & TOXIC						
1	Cd (µg/L)			0.0			
2	Cr (µg/L)			0.5			
3	Cu (µg/L)			13.7			
4	Ni (µg/L)			0.5			
5	Pb (µg/L)			0.4			
6	Zn (µg/L)			5.0			
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	42	49	53	56		
2	HAR_Total (mgCaCO3/L)	52	86	71	72		
3	Na% (%)	30	20	26	26		
4	RSC (-)	0.2	0.0	0.1	0.1		
5	SAR (-)	0.6	0.5	0.6	0.6		
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2015-2016
Site	: RAMAKONA	Code	: AGH4BQ3
State	: Madhya Pradesh	District	Chhindwara
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wainganga
Sub-Sub Tributary	: Khanan	Local River	: Khanan
Division	: Wainganga Div., Nagpur	Sub-Division	: Upper Wainganga SD, Nagpur
Drainage Area	: 2500 Sq. Km.	Bank	: Left
Latitude	: 21°43'12"	Longitude	: 78°49'27"
	Opening Date	Closing Date	
Gauge	: 13.02.1986		
Discharge	: 21.11.1986		
Sediment	: 12.11.2014		
Water Quality	: 01.06.2014		

Water Quality Datasheet for the period : 2015-2016

Station Name : RAMAKONA (AGH4BQ3)

Local River : Khanan

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A
	PHYSICAL										
1	Q (cumec)										
2	Colour_Cod (-)	Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	283	363	366	397	518	516	563	540	529	599
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	8.2	7.9	8.2	8.2	8.5	8.1	8.0	7.9	8.1	8.1
6	Temp (deg C)	24.0	23.0	24.0	24.0	21.0	18.0	15.0	15.0	20.0	21.0
	CHEMICAL										
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	120	161	164	198	140	211	193	213	176	265
3	B (mg/L)	0.14	0.06	0.24	0.11	0.36	0.57	0.31	0.08	0.11	0.15
4	Ca (mg/L)	34	43	52	43	42	53	48	52	33	74
5	Cl (mg/L)	11.9	11.9	19.9	19.9	19.9	19.9	15.9	11.9	16.5	16.5
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.17	0.01	0.03	0.64	0.91	0.42	0.89	0.36	0.42	0.46
8	Fe (mg/L)	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	146	197	200	241	159	257	236	260	215	324
10	K (mg/L)	2.2	1.9	2.0	2.0	1.4	2.2	2.2	2.0	2.2	2.0
11	Mg (mg/L)	17.6	15.4	9.3	20.3	25.7	21.9	18.7	25.1	10.7	23.0
12	Na (mg/L)	13.3	15.5	21.2	22.1	13.8	28.3	39.9	37.7	38.0	45.5
13	NH3-N (mg N/L)	0.04	0.06	0.03	0.18	0.05	0.23	0.17	0.17	0.16	0.19
14	NO2+NO3 (mg N/L)	9.76	9.51	9.53	7.50	10.48	7.44	13.34	10.22	9.16	2.74
15	NO2-N (mgN/L)	0.02	0.00	0.02	0.00	0.10	0.01	0.03	0.07	0.09	0.21
16	NO3-N (mgN/L)	9.74	9.51	9.51	7.50	10.38	7.44	13.31	10.15	9.07	2.53
17	o-PO4-P (mg P/L)	0.023	0.126	0.057	0.076	0.124	0.015	0.178	0.051	0.123	0.084
18	SiO2 (mg/L)	26.6	23.3	31.8	31.6	25.4	34.4	34.7	41.3	44.7	14.5
19	SO4 (mg/L)	3.5	40.0	15.0	42.0	84.6	28.9	81.3	21.3	23.6	18.9

Water Quality Datasheet for the period : 2015-2016

Station Name : RAMAKONA (AGH4BQ3)

Division : Wainganga Div., Nagpur

Local River : Khanan

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL										
1	BOD3-27 (mg/L)	1.1	10.0	0.9	3.0	6.5	1.2	1.0	1.2	3.5	5.4
2	COD (mg/L)	37.9	44.3	42.2	26.3	51.6	46.5	11.7	28.1	80.8	30.9
3	DO (mg/L)	6.1	4.5	6.6	7.7	10.3	6.7	8.2	7.2	8.8	7.7
4	DO_SAT% (%)	72	52	78	91	116	71	81	71	97	86
5	FCol-MPN (MPN/100mL)	110	40	80	80	40	20	140	70	20	70
6	Tcol-MPN (MPN/100mL)	220	40	16000	800	230	80	700	220	40	170
	TRACE & TOXIC										
1	As (µg/L)							1.3			1.4
2	Cd (µg/L)							0.2			0.2
3	Cr (µg/L)							0.6			1.3
4	Cu (µg/L)							0.6			2.3
5	Ni (µg/L)							0.3			0.9
6	Pb (µg/L)							1.8			1.3
7	Zn (µg/L)							7.4			3.6
	CHEMICAL INDICES										
1	HAR_Ca (mgCaCO3/L)	86	109	129	109	106	132	119	131	82	185
2	HAR_Total (mgCaCO3/L)	159	173	168	193	213	224	197	236	126	281
3	Na% (%)	15	16	21	20	12	22	30	26	39	26
4	RSC (-)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	1.0	0.0
5	SAR (-)	0.5	0.5	0.7	0.7	0.4	0.8	1.2	1.1	1.5	1.2
	PESTICIDES										

Water Quality Summary for the period : 2015-2016

Station Name : RAMAKONA (AGH4BQ3)

Division : Wainganga Div., Nagpur

Local River : Khanan

Sub-Division : Upper Wainganga SD, Nagpur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	10	599	283	467
3	pH_GEN (pH units)	10	8.5	7.9	8.1
4	Temp (deg C)	10	24.0	15.0	20.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	5.2	0.0	0.5
2	ALK-TOT (mgCaCO3/L)	10	265	120	184
3	B (mg/L)	10	0.57	0.06	0.21
4	Ca (mg/L)	10	74	33	47
5	Cl (mg/L)	10	19.9	11.9	16.4
6	CO3 (mg/L)	10	6.2	0.0	0.6
7	F (mg/L)	10	0.91	0.01	0.43
8	Fe (mg/L)	10	0.1	0.0	0.1
9	HCO3 (mg/L)	10	324	146	223
10	K (mg/L)	10	2.2	1.4	2
11	Mg (mg/L)	10	25.7	9.3	18.8
12	Na (mg/L)	10	45.5	13.3	27.5
13	NH3-N (mg N/L)	10	0.23	0.03	0.13
14	NO2+NO3 (mg N/L)	10	13.34	2.74	8.97
15	NO2-N (mgN/L)	10	0.21	0.00	0.05
16	NO3-N (mgN/L)	10	13.31	2.53	8.91
17	o-PO4-P (mg P/L)	10	0.178	0.015	0.086
18	SiO2 (mg/L)	10	44.7	14.5	30.8
19	SO4 (mg/L)	10	84.6	3.5	35.9
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	10.0	0.9	3.4
2	COD (mg/L)	10	80.8	11.7	40
3	DO (mg/L)	10	10.3	4.5	7.4
4	DO_SAT% (%)	10	116	52	82
5	FCol-MPN (MPN/100mL)	10	140	20	67
6	Tcol-MPN (MPN/100mL)	10	16000	40	1850
	TRACE & TOXIC				
1	As (µg/L)	2	1.4	1.3	1.4
2	Cd (µg/L)	2	0.2	0.2	0.2
3	Cr (µg/L)	2	1.3	0.6	0.9
4	Cu (µg/L)	2	2.3	0.6	1.5
5	Ni (µg/L)	2	0.9	0.3	0.6
6	Pb (µg/L)	2	1.8	1.3	1.5
7	Zn (µg/L)	2	7.4	3.6	5.5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	185	82	119
2	HAR_Total (mgCaCO3/L)	10	281	126	197
3	Na% (%)	10	39	12	23
4	RSC (-)	10	1.0	0.0	0.1
5	SAR (-)	10	1.5	0.4	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2016

Station Name : RAMAKONA (AGH4BQ3)

Local River : Khanan

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	PHYSICAL						
1	Q (cumec)	38.46		1.615		1.002	
2	EC_GEN (µmho/cm)	442	352	484	534	467	564
3	pH_GEN (pH units)	7.8	8.1	8.0	8.1	8.0	8.1
4	Temp (deg C)	23.6	23.8	16.0	17.3	19.3	20.5
5	Turb (NTU)	22.6		0.5		0.5	
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.8	0.0	1.0	1.3	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	193	161	228	189	206	221
3	B (mg/L)	0.29	0.14	0.43	0.33	0.24	0.13
4	Ca (mg/L)	48	43	56	49	47	53
5	Cl (mg/L)	14.9	15.9	14.2	16.9	12.2	16.5
6	CO3 (mg/L)	1.0	0.0	1.2	1.6	0.0	0.0
7	F (mg/L)	0.73	0.21	0.44	0.64	0.34	0.44
8	Fe (mg/L)	0.1	0.1	0.0	0.0	0.1	0.1
9	HCO3 (mg/L)	233	196	276	228	252	269
10	K (mg/L)	2.1	2.0	1.7	2.0	2.0	2.1
11	Mg (mg/L)	15.7	15.7	16.4	22.9	16.4	16.8
12	Na (mg/L)	27.9	18.0	26.5	29.9	25.8	41.8
13	NH3-N (mg N/L)	0.35	0.08	0.05	0.15	0.05	0.17
14	NO2+NO3 (mg N/L)	5.03	9.07	8.55	10.37	8.15	5.95
15	NO2-N (mgN/L)	0.01	0.01	0.01	0.05	0.00	0.15
16	NO3-N (mgN/L)	5.02	9.07	8.54	10.32	8.15	5.80
17	o-PO4-P (mg P/L)	0.163	0.070	0.153	0.092	0.165	0.104
18	SiO2 (mg/L)	19.5	28.3	21.0	33.9	41.1	29.6
19	SO4 (mg/L)	10.4	25.1	16.4	54.0	23.1	21.2

Water Quality Seasonal Average for the period: 2014-2016

Station Name : RAMAKONA (AGH4BQ3)

Local River : Khanan

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

River Water

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	3.0	3.8	8.4	2.5	2.2	4.5
2	COD (mg/L)	26.2	37.7	34.0	34.5	35.0	55.9
3	DO (mg/L)	7.8	6.2	6.7	8.1	7.7	8.3
4	DO_SAT% (%)	92	74	68	85	83	92
5	FCol-MPN (MPN/100mL)	110	78	63	68	63	45
6	Tcol-MPN (MPN/100mL)	634	4265	175	308	153	105
	TRACE & TOXIC						
1	As (µg/L)				1.3	0.8	1.4
2	Cd (µg/L)			0.0	0.2	1.0	0.2
3	Cr (µg/L)			2.5	0.6	5.4	1.3
4	Cu (µg/L)			16.4	0.6		2.3
5	Hg (µg/L)					0.0	
6	Ni (µg/L)			0.1	0.3	3.6	0.9
7	Pb (µg/L)			0.8	1.8	14.0	1.3
8	Zn (µg/L)			5.0	7.4	1.0	3.6
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	119	108	141	122	118	133
2	HAR_Total (mgCaCO3/L)	184	173	209	217	186	204
3	Na% (%)	25	18	22	22	23	33
4	RSC (-)	0.3	0.0	0.4	0.0	0.4	0.5
5	SAR (-)	0.9	0.6	0.8	0.9	0.8	1.3
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2015-2016
Site	: KEOLARI	Code	: AGH40V3
State	: Madhya Pradesh	District	Seoni
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pranhita	Sub Tributary	: Wainganga
Sub-Sub Tributary	: -	Local River	: Wainganga
Division	: Wainganga Div., Nagpur	Sub-Division	: Upper Wainganga SD, Nagpur
Drainage Area	: 2970 Sq. Km.	Bank	: Right
Latitude	: 22°22'50"	Longitude	: 79°54'00"
	Opening Date	Closing Date	
Gauge	: 27.11.1986		
Discharge	: 29.06.1987		
Sediment	:		
Water Quality	: 01.06.2014		

Water Quality Datasheet for the period : 2015-2016

Station Name : KEOLARI (AGH40V3)

Local River : Wainganga

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL											
1	Q (cumec)											
2	Colour_Cod (-)	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	250	327	207	233	300	302	345	348	334	342	313
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
5	pH_GEN (pH units)	8.2	8.0	7.8	8.1	8.4	8.2	8.2	8.1	8.1	8.2	8.2
6	Temp (deg C)	28.0	28.0	26.0	26.0	24.0	22.0	20.0	20.0	23.0	26.0	28.0
	CHEMICAL											
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	5.2	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	120	150	96	102	159	158	171	141	168	199	145
3	B (mg/L)	0.13	0.12	0.46	0.09	0.34	0.26	0.09	0.06	0.09	0.13	0.10
4	Ca (mg/L)	31	39	36	36	40	39	44	51	63	63	26
5	Cl (mg/L)	9.9	17.9	13.9	11.9	19.9	19.9	9.9	11.9	12.3	8.2	15.9
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	6.2	0.0	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.15	0.01	0.00	0.18	0.29	0.11	0.22	0.00	0.01	0.00	0.08
8	Fe (mg/L)	0.1	0.0	0.0	0.2	0.1	0.0	0.0	0.1	0.0	0.1	0.0
9	HCO3 (mg/L)	146	183	117	125	181	192	209	172	205	242	177
10	K (mg/L)	1.4	0.9	1.5	1.7	4.6	1.3	1.7	1.1	2.1	1.4	1.6
11	Mg (mg/L)	13.7	15.9	3.8	28.6	13.9	13.4	16.5	17.1	19.3	17.1	12.7
12	Na (mg/L)	9.5	12.5	10.1	11.0	46.2	12.2	15.9	14.5	15.4	20.9	18.9
13	NH3-N (mg N/L)	0.03	0.07	0.04	0.18	0.03	0.38	0.09	0.07	0.16	0.20	0.01
14	NO2+NO3 (mg N/L)	8.99	13.19	8.84	5.63	6.25	6.04	14.02	7.31	10.06	2.71	2.20
15	NO2-N (mgN/L)	0.01	0.00	0.03	0.01	0.03	0.02	0.08	0.04	0.09	0.20	0.22
16	NO3-N (mgN/L)	8.98	13.19	8.81	5.62	6.23	6.03	13.94	7.26	9.97	2.51	1.98
17	o-PO4-P (mg P/L)	0.042	0.110	0.079	0.111	0.085	0.000	0.145	0.032	0.137	0.068	0.088
18	SiO2 (mg/L)	26.0	27.7	22.6	19.4	21.7	26.8	22.4	20.2	30.9	32.3	56.9
19	SO4 (mg/L)	6.5	9.6	10.8	57.6	14.6	10.1	15.7	7.1	13.0	8.6	13.2

Water Quality Datasheet for the period : 2015-2016

Station Name : KEOLARI (AGH40V3)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.07.2015	03.08.2015	01.09.2015	05.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016	02.05.2016
		A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL											
1	BOD3-27 (mg/L)	2.6	2.4	1.6	2.8	1.2	1.9	0.9	1.7	30.0	2.0	2.6
2	COD (mg/L)	32.3	66.0	70.2	15.8	36.6	34.7	20.6	12.7	72.3	48.8	25.5
3	DO (mg/L)	5.8	5.8	6.5	8.9	7.0	6.1	6.2	7.1	4.4	6.0	7.1
4	DO_SAT% (%)	74	74	80	110	83	70	68	78	51	74	91
5	FCol-MPN (MPN/100mL)	220	60	130	130	80	80	110	90	70	90	110
6	Tcol-MPN (MPN/100mL)	330	130	1300	16000	500	220	1700	300	170	220	5000
	TRACE & TOXIC											
1	As (µg/L)							0.5			1.2	
2	Cd (µg/L)							0.1			0.2	
3	Cr (µg/L)							0.4			6.5	
4	Cu (µg/L)							0.9			4.0	
5	Ni (µg/L)							0.1			0.2	
6	Pb (µg/L)							0.2			0.5	
7	Zn (µg/L)							6.4			15.4	
	CHEMICAL INDICES											
1	HAR_Ca (mgCaCO3/L)	77	97	91	91	99	97	110	128	157	159	64
2	HAR_Total (mgCaCO3/L)	134	164	107	210	157	153	179	199	237	230	117
3	Na% (%)	13	14	17	10	38	15	16	14	12	16	26
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.6
5	SAR (-)	0.4	0.4	0.4	0.3	1.6	0.4	0.5	0.4	0.4	0.6	0.8
	PESTICIDES											

Water Quality Summary for the period : 2015-2016

Station Name : KEOLARI (AGH40V3)

Division : Wainganga Div., Nagpur

Local River : Wainganga

Sub-Division : Upper Wainganga SD, Nagpur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)				
2	EC_GEN (µmho/cm)	11	348	207	300
3	pH_GEN (pH units)	11	8.4	7.8	8.1
4	Temp (deg C)	11	28.0	20.0	24.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	5.2	0.0	0.5
2	ALK-TOT (mgCaCO3/L)	11	199	96	146
3	B (mg/L)	11	0.46	0.06	0.17
4	Ca (mg/L)	11	63	26	43
5	Cl (mg/L)	11	19.9	8.2	13.8
6	CO3 (mg/L)	11	6.2	0.0	0.6
7	F (mg/L)	11	0.29	0.00	0.1
8	Fe (mg/L)	11	0.2	0.0	0.1
9	HCO3 (mg/L)	11	242	117	177
10	K (mg/L)	11	4.6	0.9	1.7
11	Mg (mg/L)	11	28.6	3.8	15.6
12	Na (mg/L)	11	46.2	9.5	17
13	NH3-N (mg N/L)	11	0.38	0.01	0.11
14	NO2+NO3 (mg N/L)	11	14.02	2.20	7.75
15	NO2-N (mgN/L)	11	0.22	0.00	0.07
16	NO3-N (mgN/L)	11	13.94	1.98	7.68
17	o-PO4-P (mg P/L)	11	0.145	0.000	0.082
18	SiO2 (mg/L)	11	56.9	19.4	27.9
19	SO4 (mg/L)	11	57.6	6.5	15.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	30.0	0.9	4.5
2	COD (mg/L)	11	72.3	12.7	39.6
3	DO (mg/L)	11	8.9	4.4	6.4
4	DO_SAT% (%)	11	110	51	78
5	FCol-MPN (MPN/100mL)	11	220	60	106
6	Tcol-MPN (MPN/100mL)	11	16000	130	2352
	TRACE & TOXIC				
1	As (µg/L)	2	1.2	0.5	0.8
2	Cd (µg/L)	2	0.2	0.1	0.1
3	Cr (µg/L)	2	6.5	0.4	3.4
4	Cu (µg/L)	2	4.0	0.9	2.5
5	Ni (µg/L)	2	0.2	0.1	0.1
6	Pb (µg/L)	2	0.5	0.2	0.3
7	Zn (µg/L)	2	15.4	6.4	10.9
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	159	64	106
2	HAR_Total (mgCaCO3/L)	11	237	107	171
3	Na% (%)	11	38	10	17
4	RSC (-)	11	0.6	0.0	0.1
5	SAR (-)	11	1.6	0.3	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2016

Station Name : KEOLARI (AGH40V3)

Local River : Wainganga

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	PHYSICAL						
1	Q (cumec)	25.98		0.000		0.000	
2	EC_GEN (µmho/cm)	323	254	384	324	372	330
3	pH_GEN (pH units)	7.8	8.0	8.0	8.2	8.1	8.2
4	Temp (deg C)	26.6	27.0	20.8	21.5	23.7	25.7
5	Turb (NTU)	5.4		0.5		0.7	
	CHEMICAL						
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	1.7	1.3	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	163	117	172	157	177	170
3	B (mg/L)	0.26	0.20	0.53	0.19	0.40	0.11
4	Ca (mg/L)	37	36	47	43	39	51
5	Cl (mg/L)	10.7	13.4	8.4	15.4	14.6	12.2
6	CO3 (mg/L)	0.0	0.0	2.0	1.6	0.0	0.0
7	F (mg/L)	0.69	0.08	0.21	0.15	0.47	0.03
8	Fe (mg/L)	0.1	0.1	0.0	0.1	0.1	0.0
9	HCO3 (mg/L)	199	143	206	188	217	208
10	K (mg/L)	1.7	1.4	1.1	2.2	1.1	1.7
11	Mg (mg/L)	18.8	15.5	12.4	15.2	17.5	16.3
12	Na (mg/L)	16.2	10.8	13.9	22.2	16.7	18.4
13	NH3-N (mg N/L)	0.33	0.08	0.05	0.14	0.05	0.12
14	NO2+NO3 (mg N/L)	1.95	9.16	7.81	8.41	7.46	4.99
15	NO2-N (mgN/L)	0.00	0.01	0.00	0.04	0.02	0.17
16	NO3-N (mgN/L)	1.95	9.15	7.80	8.36	7.45	4.82
17	o-PO4-P (mg P/L)	0.134	0.086	0.166	0.065	0.257	0.098
18	SiO2 (mg/L)	20.7	23.9	12.8	22.8	42.7	40.0
19	SO4 (mg/L)	7.4	21.1	8.6	11.9	15.6	11.6

Water Quality Seasonal Average for the period: 2014-2016

Station Name : KEOLARI (AGH40V3)

Local River : Wainganga

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

River Water

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	18.6	2.3	2.2	1.4	2.1	11.5
2	COD (mg/L)	47.8	46.1	26.3	26.1	33.3	48.9
3	DO (mg/L)	4.8	6.8	7.5	6.6	6.8	5.8
4	DO_SAT% (%)	60	85	84	75	81	72
5	FCol-MPN (MPN/100mL)	714	135	63	90	87	90
6	Tcol-MPN (MPN/100mL)	3758	4440	115	680	387	1797
	TRACE & TOXIC						
1	As (µg/L)				0.5	0.4	1.2
2	Cd (µg/L)			0.0	0.1	1.0	0.2
3	Cr (µg/L)			0.9	0.4	5.4	6.5
4	Cu (µg/L)			5.2	0.9		4.0
5	Hg (µg/L)					0.0	
6	Ni (µg/L)			0.2	0.1	3.3	0.2
7	Pb (µg/L)			0.7	0.2	9.0	0.5
8	Zn (µg/L)			4.0	6.4	0.0	15.4
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	94	89	118	109	98	126
2	HAR_Total (mgCaCO3/L)	172	154	170	172	171	194
3	Na% (%)	18	14	15	21	18	18
4	RSC (-)	0.1	0.0	0.1	0.0	0.2	0.2
5	SAR (-)	0.5	0.4	0.5	0.8	0.6	0.6
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Mancherial	Code	: AG000J3
State	: Telangana	District	Adilabad
Basin	: Ganga-Brahm-Meghna Basin	Independent River	: Godavari
Tributary	:	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Godavari
Division	: U Godavari Div., Hyderabad	Sub-Division	: Manjira SD, Nizamabad
Drainage Area	: 102900 Sq. Km.	Bank	: Left
Latitude	: 18°50'08"	Longitude	: 79°26'41"
	Opening Date	Closing Date	
Gauge	: 01.03.1964		
Discharge	: 03.07.1964		
Sediment	: 01.07.1965		
Water Quality	: 01.12.1979		

Water Quality Datasheet for the period : 2015-2016

Station Name : Mancherla (AG000J3)

Local River : Godavari

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

River Water Analysis

S.No	Parameters	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A
	PHYSICAL										
1	Q (cumec)	76.89	88.56	69.54	89.10	29.40	23.87	22.19	20.99	15.60	1.304
2	Colour_Cod (-)	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	553	312	269	448	367	749	305	1490	464	820
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.5	6.6	6.4	7.3	8.6	7.8	7.9	8.1	8.2	7.9
6	TDS (mg/L)	310	318	314	270	126	330	260	233	280	252
7	Temp (deg C)	22.0	26.5	27.0	27.0	27.0	21.0	14.5	18.5	19.5	26.5
8	Turb (NTU)	2.0	10.0	15.0	5.0	1.0	2.0	2.0	7.0	14.0	11.0
	CHEMICAL										
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	197	180	186	155	147	170	171	180	181	162
3	B (mg/L)	0.00	0.28	0.09	0.00	0.00	0.00				
4	Ca (mg/L)	33	33	33	29	26	31	30	36	32	30
5	Cl (mg/L)	38.8	38.5	32.2	22.5	15.9	24.0	20.9	20.4	21.3	22.1
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0
7	F (mg/L)	0.91	0.67	0.42	0.74	0.44	0.58	0.33	0.70	0.37	0.58
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
9	HCO3 (mg/L)	240	220	227	189	171	208	209	219	221	198
10	K (mg/L)	3.9	3.6	3.5	3.1	2.7	3.2	3.5	3.3	3.2	3.9
11	Mg (mg/L)	18.9	18.9	17.9	16.0	12.6	17.0	16.0	19.0	17.0	17.0
12	Na (mg/L)	64.7	55.3	47.2	43.2	28.5	38.1	35.0	32.1	34.5	37.3
13	NH3-N (mg N/L)	0.01	0.06	0.01	0.01	0.01	0.02	0.01	0.01	0.03	0.04
14	NO2+NO3 (mg N/L)	0.25	0.30	0.42	0.26	0.33	0.24	1.12	0.40	0.66	1.13
15	NO2-N (mgN/L)	0.03	0.02	0.01	0.01	0.00	0.01	0.01	0.00	0.04	0.01
16	NO3-N (mgN/L)	0.22	0.28	0.40	0.26	0.33	0.23	1.11	0.39	0.62	1.12
17	o-PO4-P (mg P/L)	0.080	0.228	0.136	0.155	0.068	0.049	0.090	0.037	0.140	0.098
18	SiO2 (mg/L)	11.3	12.0	9.5	18.8	11.7	15.2	17.9	16.0	22.2	19.6
19	SO4 (mg/L)	48.0	50.0	23.7	24.0	21.0	3.3	45.7	22.8	25.5	14.0

Water Quality Datasheet for the period : 2015-2016

Station Name : Mancherla (AG000J3)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	01.07.2015	01.08.2015	01.09.2015	01.10.2015	02.11.2015	01.12.2015	01.01.2016	01.02.2016	01.03.2016	01.04.2016
		A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL										
1	BOD3-27 (mg/L)	1.9	0.6	0.9	0.7	0.7	0.6	0.9	1.1	2.1	0.7
2	COD (mg/L)	11.0	11.2	7.7	17.9	6.0	6.5	8.9	10.0	6.4	7.2
3	FCol-MPN (MPN/100mL)	3000	3000	2400	140	7000	3000	170	1700	2800	1700
4	Tcol-MPN (MPN/100mL)	9000	16000	16000	1400	9000	16000	9000	2200	16000	2200
5	TOC (mg/L)	19.5	19.7	15.3	7.9	3.6	5.9	3.9			
	TRACE & TOXIC										
1	As (µg/L)										0.8
2	Cd (µg/L)										0.0
3	Cr (µg/L)										0.0
4	Hg (µg/L)										0.0
5	Ni (µg/L)										0.0
6	Pb (µg/L)										0.0
7	Zn (µg/L)										2.3
	CHEMICAL INDICES										
1	HAR_Ca (mgCaCO3/L)	82	82	82	72	64	78	75	90	80	75
2	HAR_Total (mgCaCO3/L)	161	161	157	139	117	148	142	169	151	146
3	Na% (%)	46	42	39	40	34	35	34	29	33	35
4	RSC (-)	0.7	0.4	0.6	0.3	0.6	0.5	0.6	0.2	0.6	0.3
5	SAR (-)	2.2	1.9	1.6	1.6	1.2	1.4	1.3	1.1	1.2	1.3
	PESTICIDES										

Water Quality Summary for the period : 2015-2016

Station Name : Mancherla (AG000J3)

Division : U Godavari Div., Hyderabad

Local River : Godavari

Sub-Division : Manjira SD, Nizamabad

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	378	369.1	0.000	35.52
2	EC_GEN (µmho/cm)	10	1490	269	578
3	pH_GEN (pH units)	10	8.6	6.4	7.6
4	TDS (mg/L)	10	330	126	269
5	Temp (deg C)	10	27.0	14.5	23
6	Turb (NTU)	10	15.0	1.0	6.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	3.5	0.0	0.3
2	ALK-TOT (mgCaCO3/L)	10	197	147	173
3	B (mg/L)	6	0.28	0.00	0.06
4	Ca (mg/L)	10	36	26	31
5	Cl (mg/L)	10	38.8	15.9	25.7
6	CO3 (mg/L)	10	4.2	0.0	0.4
7	F (mg/L)	10	0.91	0.33	0.57
8	Fe (mg/L)	10	0.1	0.0	0
9	HCO3 (mg/L)	10	240	171	210
10	K (mg/L)	10	3.9	2.7	3.4
11	Mg (mg/L)	10	19.0	12.6	17
12	Na (mg/L)	10	64.7	28.5	41.6
13	NH3-N (mg N/L)	10	0.06	0.01	0.02
14	NO2+NO3 (mg N/L)	10	1.13	0.24	0.51
15	NO2-N (mgN/L)	10	0.04	0.00	0.01
16	NO3-N (mgN/L)	10	1.12	0.22	0.5
17	o-PO4-P (mg P/L)	10	0.228	0.037	0.108
18	SiO2 (mg/L)	10	22.2	9.5	15.4
19	SO4 (mg/L)	10	50.0	3.3	27.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	2.1	0.6	1
2	COD (mg/L)	10	17.9	6.0	9.3
3	FCol-MPN (MPN/100mL)	10	7000	140	2491
4	Tcol-MPN (MPN/100mL)	10	16000	1400	9680
5	TOC (mg/L)	7	19.7	3.6	10.8
	TRACE & TOXIC				
1	As (µg/L)	1	0.8	0.8	0.8
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.0	0.0	0
4	Hg (µg/L)	1	0.0	0.0	0
5	Ni (µg/L)	1	0.0	0.0	0
6	Pb (µg/L)	1	0.0	0.0	0
7	Zn (µg/L)	1	2.3	2.3	2.3
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	90	64	78
2	HAR_Total (mgCaCO3/L)	10	169	117	149
3	Na% (%)	10	46	29	37
4	RSC (-)	10	0.7	0.2	0.5
5	SAR (-)	10	2.2	1.1	1.5
	PESTICIDES				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Mancherla (AG000J3)

Local River : Godavari

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	194.5	106.1	94.37	18.41	289.5	367.5	129.0	53.74	55.37	1143	196.9	181.3	1162	34.58	81.03
2	EC_FLD (µmho/cm)							514								
3	EC_GEN (µmho/cm)	442	415	460	421	357	462	479	515	458	289	482	524	468	592	396
4	pH_FLD (pH units)							8.5								
5	pH_GEN (pH units)	8.5	8.5	8.8	8.6	8.5	8.6	8.6	8.5	8.3	7.5	8.5	8.2	7.3	7.7	6.9
6	TDS (mg/L)								320	270	191	374	383	295	387	303
7	Temp (deg C)	27.9	27.2	27.0	26.2	28.3	26.9	26.4	26.0	25.9	26.3	26.0	26.6	25.5	26.5	25.6
8	Turb (NTU)								2.3	6.0	41.3	0.3	13.2	2.6	5.4	8.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	9.1	10.9	14.0	9.4	8.3	14.2	13.1	14.9	8.7	4.1	13.7	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	188	162	201	182	136	183	159	177	157	109	179	178	151	203	180
3	B (mg/L)	0.06	0.12	0.07	0.67	0.05	0.14	0.08	0.11	0.18	0.20	0.15	0.19	0.13	0.24	0.09
4	Ca (mg/L)	43	39	50	38	31	38	21	28	29	25	30	37	33	35	32
5	Cl (mg/L)	21.4	20.7	20.3	41.1	17.6	35.6	36.0	45.7	41.0	19.1	38.8	39.8	18.8	42.0	33.0
6	CO3 (mg/L)	10.9	13.0	16.8	11.3	9.9	17.1	15.8	17.9	10.5	4.9	16.5	0.0	0.0	0.0	0.0
7	F (mg/L)	0.91	1.12	1.04	0.75	0.57	0.75	0.92	0.87	0.80	0.36	0.67	0.75	0.67	0.82	0.69
8	Fe (mg/L)	0.0	0.0		0.1	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.1	0.1	0.0
9	HCO3 (mg/L)	207	165	211	199	145	189	162	179	170	124	185	217	184	247	219
10	K (mg/L)	2.3	1.6	2.9	3.6	2.8	2.9	3.0	3.3	3.2	2.8	3.2	3.2	3.1	3.6	3.5
11	Mg (mg/L)	9.6	10.6	17.1	8.8	9.7	11.3	22.0	24.9	18.9	10.3	20.4	18.8	18.7	19.6	17.9
12	Na (mg/L)	42.5	38.5	38.3	52.6	20.3	43.4	45.3	33.2	31.7	15.0	38.2	35.1	28.5	62.4	52.6
13	NH3-N (mg N/L)	0.01	0.04	0.03	0.02	0.04	0.05	1.08	0.04	0.15	0.07	0.20	0.02	0.12	0.07	0.02
14	NO2+NO3 (mg N/L)	0.21	0.28	0.29	0.48	0.85	0.47	0.71	0.85	0.36	0.73	0.80	0.32	0.37	0.37	0.31
15	NO2-N (mgN/L)				0.01	0.05	0.01	0.01	0.12	0.04	0.04	0.01	0.00	0.00	0.02	0.02
16	NO3-N (mgN/L)	0.21	0.27	0.29	0.48	0.81	0.46	0.70	0.73	0.32	0.69	0.79	0.32	0.37	0.35	0.29
17	o-PO4-P (mg P/L)	0.010	0.226	0.008	0.065	0.012			0.008	0.019	0.026	0.036	0.151	0.035	0.163	0.150
18	P-Tot (mgP/L)						0.032	0.009								
19	SiO2 (mg/L)	17.4	15.0	18.0	16.5	21.8	17.6	21.5	15.2	15.0	15.5	26.2	16.1	13.9	19.4	12.9
20	SO4 (mg/L)	22.4	21.5	28.3	35.4	15.5	15.6	25.0	26.3	23.3	12.9	27.8	27.5	22.2	40.6	36.4

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Mancherla (AG000J3)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.5	0.6	1.1	1.3	1.3	1.0	0.6	0.5	0.4	1.2	1.0	1.2	2.1	1.0	1.0
2	COD (mg/L)			15.8	16.3	13.0	11.3	17.7	2.3	2.5	8.0	8.2	15.2	9.0	11.6	11.9
3	DO (mg/L)	6.4	5.9	6.6	6.3	6.4	6.5	5.9	5.6	5.7	6.6	6.2	6.3	6.4	5.3	
4	DO_SAT% (%)	81	74	82	77	82	81	73	69	71	82	76	79	78	65	
5	FCol-MPN (MPN/100mL)	190	643	40	135	470	8720	1152	5417	3048	9133	11660	2028	558	3778	2135
6	Tcol-MPN (MPN/100mL)	2240	1120	90	245	470	10560	1924	5417	7580	12333	13280	3688	5358	4368	10600
7	TOC (mg/L)				5.1			2.1	4.5	2.6	2.1	2.7	3.1	4.1	20.6	15.6
	TRACE & TOXIC															
1	As (µg/L)				1.0								10.9	7.6		
2	Cd (µg/L)		8.0	1.5	0.3			1.7					1.0	0.4		
3	Cr (µg/L)		43.8	2.0	5.3			22.4					1.4	1.4		
4	Cu (µg/L)			3.0	2.7								11.3	3.3		
5	Hg (µg/L)							1.0						0.5		
6	Mn (mg/L)				0.00											
7	Ni (µg/L)							7.7					6.3	12.6		
8	Pb (µg/L)		1.0	12.4	4.0			17.9					0.0	1.6		
9	Se (µg/L)															
10	Zn (µg/L)				48.5			135.8					1.0	0.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	108	97	125	96	77	96	53	71	73	63	74	92	83	87	80
2	HAR_Total (mgCaCO3/L)	148	141	195	132	117	143	145	175	152	107	159	170	161	169	154
3	Na% (%)	38	37	30	45	25	38	40	29	30	22	34	28	27	44	42
4	RSC (-)	0.8	0.4	0.1	1.0	0.5	0.8	0.5	0.1	0.1	0.1	0.4	0.5	0.0	0.7	0.5
5	SAR (-)	1.5	1.4	1.2	2.0	0.8	1.6	1.6	1.1	1.1	0.6	1.3	1.1	1.0	2.1	1.8
	PESTICIDES															
1	Aldrin (µg/L)							0.0								
2	BHC (µg/L)			0.0	0.1			0.1								
3	DDT (µg/L)			0.1	0.1			0.1								
4	Dieldrin (µg/L)			0.1	0.1			0.0								
5	Endos (µg/L)			0.1	0.1			0.1								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Mancherla (AG000J3)

Local River : Godavari

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	45.25	30.52	51.46	13.96	51.93	40.73	16.49	17.99	7.149	87.80	30.41	29.22	66.33	21.57	24.11
2	EC_FLD (µmho/cm)							917								
3	EC_GEN (µmho/cm)	491	498	497	411	583	605	590	537	551	493	512	547	618	415	728
4	pH_FLD (pH units)							8.6								
5	pH_GEN (pH units)	8.5	8.4	8.5	8.4	8.5	8.7	8.4	8.4	8.5	8.4	8.4	7.9	7.4	7.6	8.1
6	TDS (mg/L)								340	319	306	344	352	365	307	237
7	Temp (deg C)	24.2	25.1	22.4	19.5	22.0	26.1	20.8	19.1	23.1	26.3	21.1	23.3	17.5	16.1	20.3
8	Turb (NTU)								0.5	1.2	3.4	0.0	2.3	5.8	0.8	3.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	9.3	4.6	11.5	5.9	9.9	9.6	13.4	9.4	15.7	12.3	6.2	0.0	0.0	0.0	0.9
2	ALK-TOT (mgCaCO3/L)	222	249	221	196	232	204	233	204	225	180	216	191	222	193	167
3	B (mg/L)	0.00	0.00	0.07	0.18	0.13	0.07	0.24	0.03	0.20	0.19	0.17	0.13	0.09	0.18	0.00
4	Ca (mg/L)	46	51	58	30	56	35	28	33	39	32	35	49	41	38	31
5	Cl (mg/L)	21.4	21.8	21.5	25.3	26.3	44.5	37.3	47.5	48.0	40.0	32.3	35.8	31.3	38.9	20.3
6	CO3 (mg/L)	11.2	5.5	13.8	7.1	11.9	11.6	16.1	11.3	19.0	14.8	7.5	0.0	0.0	0.0	1.0
7	F (mg/L)	1.19	0.86	1.01	0.94	1.00	0.31	1.23	0.94	0.96	0.60	0.89	0.74	0.77	0.74	0.51
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.3	0.4	0.3	0.2	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	248	220	241	225	259	226	252	226	236	189	248	233	270	236	202
10	K (mg/L)	1.8	1.2	2.0	2.7	2.7	2.4	2.2	2.7	2.3	3.0	2.4	2.4	3.0	3.2	3.2
11	Mg (mg/L)	14.3	12.2	11.0	14.1	10.6	23.5	28.4	24.8	28.9	21.1	21.4	20.3	23.7	18.0	16.2
12	Na (mg/L)	44.9	44.3	43.3	47.3	41.8	53.3	50.7	36.8	37.0	35.1	44.1	46.1	50.7	57.7	33.4
13	NH3-N (mg N/L)	0.03	0.04	0.12	0.04	0.06	0.05	0.11	0.13	0.05	0.13	0.16	0.01	0.07	0.06	0.01
14	NO2+NO3 (mg N/L)	0.05	0.08	0.10	0.64	0.33	2.54	0.65	0.31	0.06	0.19	0.28	1.00	0.46	0.18	0.52
15	NO2-N (mgN/L)				0.01	0.01	0.00	0.08	0.03	0.01	0.02	0.03	0.00	0.00	0.04	0.01
16	NO3-N (mgN/L)	0.05	0.07	0.10	0.63	0.33	2.54	0.57	0.27	0.05	0.18	0.25	1.00	0.46	0.14	0.52
17	o-PO4-P (mg P/L)	0.003	0.010	0.017	0.019	0.018			0.006	0.027	0.023	0.025	0.066	0.053	0.087	0.061
18	P-Tot (mgP/L)						0.011	0.102								
19	SiO2 (mg/L)	15.2	31.5	17.3	12.5	21.8	20.8	16.9	16.3	17.0	34.3	11.2	21.2	18.6	17.2	15.2
20	SO4 (mg/L)	22.5	21.7	15.3	17.3	21.8	23.8	25.5	18.5	21.4	20.8	22.6	26.6	31.8	44.4	23.2

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Mancherial (AG000J3)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.5	1.1	0.7	0.9	0.8	0.4	0.7	0.6	0.8	0.9	0.3	1.5	0.9	1.7	0.8
2	COD (mg/L)			39.3	40.6	21.5	53.1	43.0	2.7	4.7	5.9	9.8	11.6	5.7	11.4	7.8
3	DO (mg/L)	6.9	6.8	7.1	6.0	7.4	6.9	6.9	6.3	6.6	6.8	6.4	6.3	6.5	6.2	
4	DO_SAT% (%)	82	83	81	65	85	85	76	68	77	84	71	73	68	63	
5	FCol-MPN (MPN/100mL)	60	185	390	5515	6273	6210	868	4138	13250	16000	4420	716	63	773	2968
6	Tcol-MPN (MPN/100mL)	5875	2515	390	12115	10680	10833	1018	4205	16000	16000	5258	4700	111	2800	9050
7	TOC (mg/L)				14.9			1.0	2.8	2.5	2.2	2.0	1.3	4.3	28.1	4.5
	TRACE & TOXIC															
1	As (µg/L)		13.3							0.2		0.2				
2	Cd (µg/L)		2.4	3.3	0.0		88.0		1.0	0.7	0.0	0.0			0.6	
3	Cr (µg/L)		10.3	2.0	0.0		12.0		0.0	0.0	0.3	0.7			4.8	
4	Cu (µg/L)			3.8	0.0							9.0			1.5	
5	Hg (µg/L)		4.7				0.3									
6	Mn (mg/L)				3.75											
7	Ni (µg/L)						9.0		1.9	1.4	2.4	1.4			0.3	
8	Pb (µg/L)		35.8	38.3	1.0		130.0		8.0	10.9	0.0	0.8			4.6	
9	Se (µg/L)		2.0													
10	Zn (µg/L)				0.1		439.0		17.4	12.5	23.0	11.0			4.0	
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	115	129	145	75	139	89	71	83	98	81	88	122	102	96	77
2	HAR_Total (mgCaCO3/L)	174	179	190	133	183	186	189	187	218	169	177	206	200	171	144
3	Na% (%)	36	35	33	43	33	38	36	30	27	31	35	34	35	41	33
4	RSC (-)	1.0	0.2	0.6	1.3	1.0	0.4	0.9	0.4	0.2	0.3	0.8	0.2	0.5	0.6	0.5
5	SAR (-)	1.5	1.4	1.4	1.8	1.3	1.7	1.6	1.2	1.1	1.2	1.4	1.5	1.6	1.9	1.2
	PESTICIDES															
1	Aldrin (µg/L)						0.0		0.0	0.1	0.0	0.0				
2	BHC (µg/L)		0.0	0.0	0.1		0.1		0.0	0.3	0.0	0.0				
3	DDT (µg/L)		0.0	0.1	0.1		0.1		0.0	0.0	0.0	0.0				
4	Dieldrin (µg/L)		0.0	0.1	0.1		0.0		0.0	0.1	0.0	0.0				
5	Endos (µg/L)		0.0	0.1	0.1		0.1		0.1	0.0	0.0	0.0				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Mancherla (AG000J3)

Local River : Godavari

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	15.53	4.074	2.919	0.697	11.72	18.19	16.34	9.919		24.05	4.200	15.99	23.09	3.391	8.454
2	EC_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	490	507	505	431	548	551	644	609		488	591	599	596	516	642
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	8.6	8.6	8.6	8.2	8.5	8.6	8.7	8.3		8.3	8.6	8.1	7.8	7.6	8.0
6	TDS (mg/L)								379		362	420	367	377	283	266
7	Temp (deg C)	27.2	27.3	22.0	24.5	25.7	27.7	22.7	24.2		28.0	28.3	25.3	22.0	20.3	23.0
8	Turb (NTU)								0.2		1.1	0.3	0.7	5.0	2.0	12.5
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	14.5	13.3	14.6	0.0	5.3	5.3	11.4	13.8		14.7	4.2	1.4	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	218	203	310	191	231	187	225	198		199	210	218	215	173	172
3	B (mg/L)	0.00	0.00	0.08	0.44	0.12	0.10	0.13	0.52		0.15	0.03	0.21	0.15	0.06	
4	Ca (mg/L)	40	42	50	28	57	26	20	29		26	30	37	38	33	31
5	Cl (mg/L)	26.4	53.0	47.0	28.6	33.3	42.0	50.3	60.6		45.4	45.6	39.6	36.6	24.5	21.7
6	CO3 (mg/L)	17.4	16.0	17.5	0.0	6.3	6.3	13.8	16.7		17.7	5.1	1.7	0.0	0.0	0.0
7	F (mg/L)	1.32	1.36	0.96	1.02	0.87	0.42	1.05	0.96		0.77	0.72	0.88	0.82	0.81	0.47
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.2		0.6	0.1	0.2	0.0	0.0	0.0
9	HCO3 (mg/L)	231	215	236	233	268	215	246	208		207	246	262	262	211	210
10	K (mg/L)	2.1	2.1	2.2	2.4	2.4	1.9	2.9	3.5		3.0	3.4	3.1	3.4	3.1	3.6
11	Mg (mg/L)	15.6	12.2	18.7	13.2	11.8	28.7	29.7	26.9		27.0	18.1	20.8	21.4	18.9	17.0
12	Na (mg/L)	62.7	67.7	43.0	51.0	45.3	49.1	66.2	48.0		48.7	54.7	55.8	50.9	44.5	35.9
13	NH3-N (mg N/L)	0.04	0.04	0.34	0.07	0.06	0.05	0.31	0.24		0.17	0.04	0.03	0.05	0.02	0.03
14	NO2+NO3 (mg N/L)	0.12	0.17	0.00	0.56	0.21	0.59	0.43	0.29		0.18	0.20	0.84	0.47	0.04	0.89
15	NO2-N (mgN/L)				0.00	0.00	0.02	0.06	0.02		0.01	0.02	0.00	0.00	0.00	0.02
16	NO3-N (mgN/L)	0.12	0.17	0.00	0.56	0.21	0.57	0.37	0.27		0.17	0.18	0.84	0.47	0.03	0.87
17	o-PO4-P (mg P/L)	0.001	0.030	0.057	0.007	0.012			0.000		0.040	0.053	0.054	0.031	0.170	0.119
18	P-Tot (mgP/L)						0.134	0.241								
19	SiO2 (mg/L)	18.2	42.0	16.0	5.0	17.3	20.3	16.7	18.0		36.6	15.4	20.8	18.4	17.1	20.9
20	SO4 (mg/L)	22.1	24.0	28.5	17.0	26.7	24.7	32.0	22.3		27.3	29.0	20.7	30.5	23.0	19.8

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Mancherial (AG000J3)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.4	0.7	0.5	2.3	0.4	0.4	0.8	1.1		1.1	0.8	1.8	1.2	0.8	1.4
2	COD (mg/L)			38.0	65.8	23.5	21.0	7.3	8.6		4.7	7.4	6.2	4.9	6.2	6.8
3	DO (mg/L)	6.0	6.3	5.8	4.8	5.5	6.0	5.9	5.3		6.4	7.0	7.3	5.3	6.2	
4	DO_SAT% (%)	75	79	66	57	68	75	67	62		82	90	89	61	67	
5	FCol-MPN (MPN/100mL)	30	4600	70		5907	1467	2900	1857		8370	5437	84	5423	30	2250
6	Tcol-MPN (MPN/100mL)	30	24000	110		6580	1567	5050	2723		10720	5643	511	5523	8070	9100
7	TOC (mg/L)				3.3			2.7	3.2		3.2	3.0	3.2	14.7	24.6	
	TRACE & TOXIC															
1	As (µg/L)		1.9									0.6	2.6	3.0	0.7	0.8
2	Cd (µg/L)		4.5	4.0	0.0	1.0	3.0	0.8	1.7		0.0	0.0	0.9	0.0	14.8	0.0
3	Cr (µg/L)		16.6	2.0	0.0	6.0	2.0	7.1	0.0		0.0	0.8	0.6	0.5	0.0	0.0
4	Cu (µg/L)			2.5	0.0							5.7	0.5	2.4		
5	Hg (µg/L)		0.6				1.3	0.7				0.0	0.6	0.5	0.0	0.0
6	Mn (mg/L)				0.01											
7	Ni (µg/L)					8.0	13.0	5.5	0.9		2.0	4.2	4.1	4.1	6.3	0.0
8	Pb (µg/L)		51.7	43.8	1.0	45.0	43.0	19.9	23.0		22.8	4.2	0.7	3.4	11.0	0.0
9	Se (µg/L)		2.0													
10	Zn (µg/L)		19.8		7.0	79.0	54.0	66.6	9.1		11.4	6.3	0.3	5.5	6.0	2.3
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	101	105	125	70	143	64	49	73		66	76	92	94	83	78
2	HAR_Total (mgCaCO3/L)	165	155	202	124	192	184	173	184		178	152	178	183	162	148
3	Na% (%)	45	48	32	47	33	37	45	36		37	44	40	37	37	34
4	RSC (-)	1.1	1.0	0.4	1.3	0.8	0.1	1.1	0.3		0.5	1.2	0.8	0.7	0.3	0.5
5	SAR (-)	2.1	2.4	1.3	2.0	1.4	1.6	2.2	1.5		1.6	2.0	1.8	1.6	1.5	1.3
	PESTICIDES															
1	Aldrin (µg/L)					0.0	0.0	0.0	0.0		0.0	0.0				
2	BHC (µg/L)		0.0	0.1	0.1	0.0	0.1	0.0	0.0		0.1	0.0				
3	DDT (µg/L)		0.0	0.1	0.1	0.0	0.1	0.0	0.0		0.0	0.0				
4	Dieldrin (µg/L)		0.0	0.1	0.1	0.1	0.0	0.0	0.0		0.0	0.0				
5	Endos (µg/L)		0.0	0.1	0.1	0.0	0.1	0.0	0.0		0.1	0.0				

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Gandlapet	Code	: AGM00G6
State	: Telangana	District	Nizamabad
Basin	: Godavari	Independent River	: Godavari
Tributary	: Peddavagu	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Peddavagu
Division	: U Godavari Div., Hyderabad	Sub-Division	: Manjira SD, Nizamabad
Drainage Area	: 1360 Sq. Km.	Bank	:
Latitude	: 18°49'16"	Longitude	: 78°26'12"
	Opening Date	Closing Date	
Gauge	: 18.07.1986		
Discharge	: 10.09.1986		
Sediment	:		
Water Quality	: 31.07.1988		

Water Quality Datasheet for the period : 2015-2016

Station Name : Gandlapet (AGM00G6)

Division : U Godavari Div., Hyderabad

Local River : Peddavagu

River Water Analysis

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	
	PHYSICAL	
1	Q (cumec)	No Flow / Insufficient depth during sampling days
2	EC_GEN (µmho/cm)	
3	pH_GEN (pH units)	
4	TDS (mg/L)	
5	Temp (deg C)	
6	Turb (NTU)	
	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	NH3-N (mg N/L)	
14	NO2+NO3 (mg N/L)	
15	NO2-N (mgN/L)	
16	NO3-N (mgN/L)	
17	o-PO4-P (mg P/L)	
18	SiO2 (mg/L)	
19	SO4 (mg/L)	
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	
2	COD (mg/L)	
3	DO (mg/L)	
4	DO_SAT% (%)	
5	FCol-MPN (MPN/100mL)	
6	Tcol-MPN (MPN/100mL)	
7	TOC (mg/L)	
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	
2	HAR_Total (mgCaCO3/L)	
3	Na% (%)	
4	RSC (-)	
5	SAR (-)	
	PESTICIDES	

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Gandlapet (AGM00G6)

Local River : Peddavagu

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	0.602	7.856			0.616	10.40									
2	EC_GEN (µmho/cm)	461	270			380	294									
3	pH_GEN (pH units)	8.3	8.1			8.2	8.3									
4	Temp (deg C)	27.6	25.8			28.5	28.6									
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	3.9	0.0			0.0	0.0									
2	ALK-TOT (mgCaCO3/L)	201	93			322	131									
3	B (mg/L)	0.00	0.13			0.11	0.04									
4	Ca (mg/L)	45	26			22	32									
5	Cl (mg/L)	22.0	13.0			16.0	14.0									
6	CO3 (mg/L)	4.7	0.0			0.0	0.0									
7	F (mg/L)	1.02	1.14			0.74	0.21									
8	Fe (mg/L)	0.0				0.2	0.1									
9	HCO3 (mg/L)	236	114			196	160									
10	K (mg/L)	1.2	1.3			2.0	0.3									
11	Mg (mg/L)	9.9	4.9			13.1	10.2									
12	Na (mg/L)	43.0	24.0			26.0	10.0									
13	NH3-N (mg N/L)	0.00	0.05			0.17	0.05									
14	NO2+NO3 (mg N/L)	1.21	0.90			0.56	1.45									
15	NO2-N (mgN/L)					0.01	0.00									
16	NO3-N (mgN/L)	1.21	0.90			0.55	1.45									
17	o-PO4-P (mg P/L)	0.000	0.300			0.030										
18	P-Tot (mgP/L)						0.060									
19	SiO2 (mg/L)	12.6	18.0			24.0	15.4									
20	SO4 (mg/L)	17.0	12.0			5.0	5.0									

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Gandlapet (AGM00G6)

Division : U Godavari Div., Hyderabad

Local River : Peddavagu

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.9	3.6			0.9	1.4									
2	COD (mg/L)					1.0	2.0									
3	DO (mg/L)	7.1	6.1			5.7	6.4									
4	DO_SAT% (%)	89	74			73	82									
5	FCol-MPN (MPN/100mL)					40	16000									
6	Tcol-MPN (MPN/100mL)					40	16000									
	TRACE & TOXIC															
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	111	65			55	80									
2	HAR_Total (mgCaCO3/L)	152	85			110	123									
3	Na% (%)	38	38			34	15									
4	RSC (-)	1.0	0.2			1.0	0.2									
5	SAR (-)	1.5	1.1			1.1	0.4									
	PESTICIDES															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Gandlapet (AGM00G6)

Local River : Peddavagu

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)															
2	EC_GEN (µmho/cm)															
3	pH_GEN (pH units)															
4	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	NH3-N (mg N/L)															
14	NO2+NO3 (mg N/L)															
15	NO2-N (mgN/L)															
16	NO3-N (mgN/L)															
17	o-PO4-P (mg P/L)															
18	P-Tot (mgP/L)															
19	SiO2 (mg/L)															
20	SO4 (mg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Gandlapet (AGM00G6)

Division : U Godavari Div., Hyderabad

Local River : Peddavagu

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)															
2	COD (mg/L)															
3	DO (mg/L)															
4	DO_SAT% (%)															
5	FCol-MPN (MPN/100mL)															
6	Tcol-MPN (MPN/100mL)															
	TRACE & TOXIC															
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)															
2	HAR_Total (mgCaCO3/L)															
3	Na% (%)															
4	RSC (-)															
5	SAR (-)															
	PESTICIDES															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Gandlapet (AGM00G6)

Local River : Peddavagu

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)															
2	EC_GEN (µmho/cm)															
3	pH_GEN (pH units)															
4	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	NH3-N (mg N/L)															
14	NO2+NO3 (mg N/L)															
15	NO2-N (mgN/L)															
16	NO3-N (mgN/L)															
17	o-PO4-P (mg P/L)															
18	P-Tot (mgP/L)															
19	SiO2 (mg/L)															
20	SO4 (mg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Gandlapet (AGM00G6)

Division : U Godavari Div., Hyderabad

Local River : Peddavagu

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)															
2	COD (mg/L)															
3	DO (mg/L)															
4	DO_SAT% (%)															
5	FCol-MPN (MPN/100mL)															
6	Tcol-MPN (MPN/100mL)															
	TRACE & TOXIC															
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)															
2	HAR_Total (mgCaCO3/L)															
3	Na% (%)															
4	RSC (-)															
5	SAR (-)															
	PESTICIDES															

HISTORY SHEET

		Water Year	: 2015-2016
Site	: NANDED	Code	: NANDED
State	: Maharashtra	District	Nanded
Basin	: Godavari	Independent River	: Godavari
Tributary	:	Sub Tributary	:
Sub-Sub Tributary	:	Local River	:
Division	: Upper Godavari Div., Hyderabad	Sub-Division	: Purna SD, Nanded
Drainage Area	: 4580 Sq. Km.	Bank	: Right
Latitude	: 19°04'00"	Longitude	: 77°30'00"
	Opening Date	Closing Date	
Gauge	: 01.04.2014		
Discharge	: 01.04.2014		
Sediment	:		
Water Quality	: 01.04.2014		

Water Quality Datasheet for the period : 2015-2016

Station Name : NANDED (NANDED)

Division : Upper Godavari Div., Hyderabad

Local River :

River Water Analysis

Sub-Division : Purna SD, Nanded

S.No	Parameters	
	PHYSICAL	
1	Q (cumec)	No Flow / Insufficient depth during sampling days
2	EC_GEN (µmho/cm)	
3	pH_GEN (pH units)	
4	TDS (mg/L)	
5	Temp (deg C)	
6	Turb (NTU)	
	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	NH3-N (mg N/L)	
14	NO2+NO3 (mg N/L)	
15	NO2-N (mgN/L)	
16	NO3-N (mgN/L)	
17	o-PO4-P (mg P/L)	
18	SiO2 (mg/L)	
19	SO4 (mg/L)	
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	
2	COD (mg/L)	
3	DO (mg/L)	
4	DO_SAT% (%)	
5	FCoI-MPN (MPN/100mL)	
6	TcoI-MPN (MPN/100mL)	
7	TOC (mg/L)	
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	
2	HAR_Total (mgCaCO3/L)	
3	Na% (%)	
4	RSC (-)	
5	SAR (-)	
	PESTICIDES	

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Saigaon	Code	: AGP00N8
State	: Karnataka	District	Bidar
Basin	: Ganga-Brahm-Meghna Basin	Independent River	: Godavari
Tributary	: Manjera	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Manjera/Godavari
Division	: U Godavari Div., Hyderabad	Sub-Division	: Manjira SD, Nizamabad
Drainage Area	: 9960 Sq. Km.	Bank	:
Latitude	: 18°04'33"	Longitude	: 77°03'09"
	Opening Date	Closing Date	
Gauge	: 01.08.1964		
Discharge	: 10.11.1967		
Sediment	: 19.07.1973		
Water Quality	: 16.08.1973		

Water Quality Datasheet for the period : 2015-2016

Station Name : Saigaon (AGP00N8)

Division : U Godavari Div., Hyderabad

Local River : Manjera/Godavari

River Water Analysis

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	
	PHYSICAL	
1	Q (cumec)	No Flow / Insufficient depth during sampling days
2	EC_GEN (µmho/cm)	
3	pH_GEN (pH units)	
4	TDS (mg/L)	
5	Temp (deg C)	
6	Turb (NTU)	
	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	NH3-N (mg N/L)	
14	NO2+NO3 (mg N/L)	
15	NO2-N (mgN/L)	
16	NO3-N (mgN/L)	
17	o-PO4-P (mg P/L)	
18	SiO2 (mg/L)	
19	SO4 (mg/L)	
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	
2	COD (mg/L)	
3	DO (mg/L)	
4	DO_SAT% (%)	
5	FCoI-MPN (MPN/100mL)	
6	TcoI-MPN (MPN/100mL)	
7	TOC (mg/L)	
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	
2	HAR_Total (mgCaCO3/L)	
3	Na% (%)	
4	RSC (-)	
5	SAR (-)	
	PESTICIDES	

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Saigaon (AGP00N8)

Local River : Manjira/Godavari

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	13.00	0.741	1.122	18.95	20.43	83.49	36.17	33.47	1.229	171.6	96.65	0.394	19.48		
2	EC_GEN (µmho/cm)	341	289	323	289	437	380	291	316	254	436	415	322	541		
3	pH_GEN (pH units)	8.2	8.2	8.8	7.9	8.2	8.2	8.4	8.2	8.2	8.0	7.9	8.7	8.1		
4	TDS (mg/L)								192	153	274	310	300	321		
5	Temp (deg C)	23.3	23.5	25.0	23.0	25.0	25.3	25.3	24.5	26.0	27.0	26.3	26.0	30.3		
6	Turb (NTU)								28.4	8.4	5.0	0.8	4.0	1.8		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.0	0.0	11.0	0.0	2.8	5.0	6.8	0.0	5.9	2.7	4.1	0.1	0.0		
2	ALK-TOT (mgCaCO3/L)	148	102	145	105	160	146	87	98	77	169	148	104	194		
3	B (mg/L)	0.00	0.14	0.05	0.30	0.11	0.07	0.15	0.10	0.23	0.15	0.10	0.26	0.04		
4	Ca (mg/L)	40	35	41	26	44	37	25	27	20	40	37	28	42		
5	Cl (mg/L)	19.5	14.0	17.0	15.7	31.5	20.0	28.0	25.9	22.7	30.9	18.3	22.5	35.9		
6	CO3 (mg/L)	2.4	0.0	13.2	0.0	3.4	6.0	8.2	0.0	7.1	3.3	4.9	0.2	0.0		
7	F (mg/L)	0.57	0.45	0.45	0.45	0.34	0.20	0.38	0.35	0.27	0.39	0.38	0.30	0.45		
8	Fe (mg/L)	0.0			0.3	0.1	0.1	0.1	0.3	0.2	0.2	0.3	0.1	0.1		
9	HCO3 (mg/L)	176	124	150	128	188	167	90	120	80	199	171	127	237		
10	K (mg/L)	3.8	3.3	7.5	3.8	4.5	5.7	2.7	4.1	3.1	4.3	3.4	3.0	4.5		
11	Mg (mg/L)	5.6	5.8	9.8	4.4	11.2	10.7	10.5	13.5	8.9	17.5	14.4	15.5	29.7		
12	Na (mg/L)	24.5	16.0	19.5	17.0	24.0	22.0	18.3	17.5	14.3	21.8	16.4	21.0	31.7		
13	NH3-N (mg N/L)	0.00	0.05	0.05	0.05	0.04	0.05	0.05	0.10	0.03	0.07	0.10	0.01	0.10		
14	NO2+NO3 (mg N/L)	0.57	1.30	0.90	0.88	1.08	1.05	1.14	1.25	0.55	1.83	1.73	1.49	1.44		
15	NO2-N (mgN/L)					0.02	0.00	0.02	0.17	0.07	0.06	0.02	0.00	0.00		
16	NO3-N (mgN/L)	0.57	1.30	3.90	0.88	1.06	1.04	1.12	1.08	0.48	1.77	1.71	1.49	1.44		
17	o-PO4-P (mg P/L)	0.000	0.010	0.035	0.010	0.020			0.006	0.012	0.019	0.022	0.010	0.049		
18	P-Tot (mgP/L)						0.025	0.046								
19	SiO2 (mg/L)	16.4	18.0	13.0	17.0	20.3	14.8	13.3	11.2	11.1	20.9	13.4	12.8	15.7		
20	SO4 (mg/L)	22.5	18.0	14.5	6.0	9.7	2.5	15.8	16.5	15.6	21.0	15.0	16.2	38.0		

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Saigaon (AGP00N8)

Division : U Godavari Div., Hyderabad

Local River : Manjira/Godavari

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.4	1.0	1.6	0.3	1.9	1.3	1.2	1.0	0.5	1.1	0.7	0.9	1.9		
2	COD (mg/L)				1.0	63.7	90.9	31.0	5.9	2.2	6.2	8.3	2.0	10.3		
3	DO (mg/L)	5.9	5.2	6.3	5.6	5.7	5.8	5.3	5.6	5.7	5.8	5.7	6.1	5.9		
4	DO_SAT% (%)	69	61	76	65	69	70	64	67	70	73	71	75	79		
5	FCol-MPN (MPN/100mL)					567	9200	1283	8010	16000	12333	11467	40	5767		
6	Tcol-MPN (MPN/100mL)					567	10500	2008	8010	16000	16000	16000	80	6700		
7	TOC (mg/L)							3.2	2.5	2.3	3.1	2.0	2.3	2.8		
	TRACE & TOXIC															
1	As (µg/L)													3.7		
2	Cd (µg/L)													0.7		
3	Cr (µg/L)													1.2		
4	Cu (µg/L)													1.8		
5	Hg (µg/L)													0.0		
6	Ni (µg/L)													15.7		
7	Pb (µg/L)													4.2		
8	Zn (µg/L)													2.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	100	87	102	65	111	91	63	66	50	101	91	70	106		
2	HAR_Total (mgCaCO3/L)	123	111	142	83	157	136	107	123	87	174	151	135	230		
3	Na% (%)	28	23	22	30	24	25	26	22	24	21	19	25	23		
4	RSC (-)	0.5	0.0	0.1	0.4	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
5	SAR (-)	1.0	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.6	0.7	0.6	0.8	0.9		
	PESTICIDES															
1	Aldrin (µg/L)							0.0								
2	BHC (µg/L)							0.1								
3	DDT (µg/L)							0.1								
4	Dieldrin (µg/L)							0.0								
5	Endos (µg/L)							0.1								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Saigaon (AGP00N8)
Local River : Manjera/Godavari

River Water

Division : U Godavari Div., Hyderabad
Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)			0.229		18.66					14.58			0.000		
2	EC_GEN (µmho/cm)			375		500					479			561		
3	pH_GEN (pH units)			8.4		8.0					8.2			8.2		
4	TDS (mg/L)										302			322		
5	Temp (deg C)			26.0		23.0					25.5			24.0		
6	Turb (NTU)										3.3			4.0		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)			8.0		0.0					6.1			0.0		
2	ALK-TOT (mgCaCO3/L)			158		197					192			211		
3	B (mg/L)			0.00		0.63					0.19			0.04		
4	Ca (mg/L)			43		56					30			47		
5	Cl (mg/L)			25.0		33.5					40.2			37.2		
6	CO3 (mg/L)			9.6		0.0					7.3			0.0		
7	F (mg/L)			0.89		0.29					0.31			0.37		
8	Fe (mg/L)					0.2					0.2			0.0		
9	HCO3 (mg/L)			173		240					219			257		
10	K (mg/L)			4.8		3.6					4.2			5.1		
11	Mg (mg/L)			13.1		6.8					27.6			27.7		
12	Na (mg/L)			29.0		23.0					30.4			37.5		
13	NH3-N (mg N/L)			0.19		0.01					0.16			0.02		
14	NO2+NO3 (mg N/L)			0.10		0.23					0.58			0.73		
15	NO2-N (mgN/L)					0.01					0.03			0.00		
16	NO3-N (mgN/L)			0.48		0.22					0.56			0.73		
17	o-PO4-P (mg P/L)			0.010		0.000					0.021			0.001		
18	P-Tot (mgP/L)															
19	SiO2 (mg/L)			9.0		23.0					44.6			19.9		
20	SO4 (mg/L)			4.0		17.0					21.6			29.0		

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Saigaon (AGP00N8)

Division : U Godavari Div., Hyderabad

Local River : Manjera/Godavari

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)			0.2		0.7					1.9			2.5		
2	COD (mg/L)					16.7					4.8			8.1		
3	DO (mg/L)			5.8		6.7					6.5			7.3		
4	DO_SAT% (%)			71		78					79			87		
5	FCol-MPN (MPN/100mL)										16000			16000		
6	Tcol-MPN (MPN/100mL)										16000			16000		
7	TOC (mg/L)										2.3			0.6		
	TRACE & TOXIC															
1	As (µg/L)															
2	Cd (µg/L)										0.4					
3	Cr (µg/L)										0.0					
4	Cu (µg/L)															
5	Hg (µg/L)															
6	Ni (µg/L)										2.9					
7	Pb (µg/L)										13.0					
8	Zn (µg/L)										10.5					
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)			107		140					76			118		
2	HAR_Total (mgCaCO3/L)			161		168					191			234		
3	Na% (%)			27		22					25			25		
4	RSC (-)			0.0		0.6					0.1			0.0		
5	SAR (-)			1.0		0.8					1.0			1.1		
	PESTICIDES															
1	Aldrin (µg/L)										0.0					
2	BHC (µg/L)										0.0					
3	DDT (µg/L)										0.0					
4	Dieldrin (µg/L)										0.0					
5	Endos (µg/L)										0.0					

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Saigaon (AGP00N8)

Local River : Manjera/Godavari

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)															
2	EC_GEN (µmho/cm)															
3	pH_GEN (pH units)															
4	TDS (mg/L)															
5	Temp (deg C)															
6	Turb (NTU)															
	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	NH3-N (mg N/L)															
14	NO2+NO3 (mg N/L)															
15	NO2-N (mgN/L)															
16	NO3-N (mgN/L)															
17	o-PO4-P (mg P/L)															
18	P-Tot (mgP/L)															
19	SiO2 (mg/L)															
20	SO4 (mg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Saigaon (AGP00N8)

Division : U Godavari Div., Hyderabad

Local River : Manjera/Godavari

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)															
2	COD (mg/L)															
3	DO (mg/L)															
4	DO_SAT% (%)															
5	FCol-MPN (MPN/100mL)															
6	Tcol-MPN (MPN/100mL)															
7	TOC (mg/L)															
	TRACE & TOXIC															
1	As (µg/L)															
2	Cd (µg/L)															
3	Cr (µg/L)															
4	Cu (µg/L)															
5	Hg (µg/L)															
6	Ni (µg/L)															
7	Pb (µg/L)															
8	Zn (µg/L)															
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)															
2	HAR_Total (mgCaCO3/L)															
3	Na% (%)															
4	RSC (-)															
5	SAR (-)															
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Purna	Code	: AGR00A5
State	: Maharashtra	District	Parbhani
Basin	: Godavari	Independent River	: Godavari
Tributary	: Purna	Sub Tributary	: ---
Sub-Sub Tributary	: ---	Local River	: Purna
Division	: U Godavari Div., Hyderabad	Sub-Division	: Purna SD, Nanded
Drainage Area	: 15000 Sq. Km.	Bank	: Left
Latitude	: 19°11'00"	Longitude	: 77°02'00"
	Opening Date	Closing Date	
Gauge	: 23.06.1968		
Discharge	: 02.09.1969		
Sediment	: 10.10.1972		
Water Quality	: 01.11.1972		

Water Quality Datasheet for the period : 2015-2016

Station Name : Purna (AGR00A5)

Division : U Godavari Div., Hyderabad

Local River : Purna

River Water Analysis

Sub-Division : Purna SD, Nanded

S.No	Parameters	
	PHYSICAL	
1	Q (cumec)	No Flow / Insufficient depth during sampling days
2	EC_GEN (µmho/cm)	
3	pH_GEN (pH units)	
4	TDS (mg/L)	
5	Temp (deg C)	
6	Turb (NTU)	
	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	NH3-N (mg N/L)	
14	NO2+NO3 (mg N/L)	
15	NO2-N (mgN/L)	
16	NO3-N (mgN/L)	
17	o-PO4-P (mg P/L)	
18	SiO2 (mg/L)	
19	SO4 (mg/L)	
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	
2	COD (mg/L)	
3	DO (mg/L)	
4	DO_SAT% (%)	
5	FCol-MPN (MPN/100mL)	
6	Tcol-MPN (MPN/100mL)	
7	TOC (mg/L)	
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	
2	HAR_Total (mgCaCO3/L)	
3	Na% (%)	
4	RSC (-)	
5	SAR (-)	
	PESTICIDES	

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Purna (AGR00A5)

Local River : Purna

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Purna SD, Nanded

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	102.4	147.9	5.785	20.31	32.24								131.9	470.3	
2	EC_GEN (µmho/cm)	424	386	421	261	423								397	449	
3	pH_GEN (pH units)	8.2	8.1	8.4	7.9	8.2								7.9	8.1	
4	TDS (mg/L)													247	252	
5	Temp (deg C)	25.8	25.5	23.3	23.0	24.3								24.0	18.0	
6	Turb (NTU)													22.1	72.0	
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.0	2.5	3.0	0.0	4.9								0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	197	142	191	108	153								192	105	
3	B (mg/L)	0.00	0.14	0.01	0.25	0.09								0.04	0.43	
4	Ca (mg/L)	55	41	55	25	33								39	33	
5	Cl (mg/L)	19.0	29.0	38.5	17.7	23.8								16.3	25.5	
6	CO3 (mg/L)	4.8	3.0	3.6	0.0	5.9								0.0	0.0	
7	F (mg/L)	0.58	0.78	0.59	0.50	0.42								0.49	0.33	
8	Fe (mg/L)	0.0	0.0		0.1	0.1								0.1	0.1	
9	HCO3 (mg/L)	231	167	226	131	174								234	128	
10	K (mg/L)	2.8	2.1	3.5	2.8	3.2								3.4	4.4	
11	Mg (mg/L)	7.6	6.7	17.0	4.7	11.6								22.9	18.0	
12	Na (mg/L)	33.5	32.0	52.0	19.3	27.0								34.6	42.4	
13	NH3-N (mg N/L)	0.00	0.08	0.05	0.05	0.03								0.07	0.00	
14	NO2+NO3 (mg N/L)	1.54	1.50	1.75	0.87	1.45								4.60	3.90	
15	NO2-N (mgN/L)				0.01	0.06								0.00	0.13	
16	NO3-N (mgN/L)	1.54	1.50	7.72	0.87	1.38								4.60	3.76	
17	o-PO4-P (mg P/L)	0.000	0.010	0.062	0.090	0.021								0.101	0.167	
18	SiO2 (mg/L)	22.4	16.0	18.0	14.0	23.7								22.1	19.1	
19	SO4 (mg/L)	23.5	18.8	31.5	14.7	19.3								27.6	136.0	

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Purna (AGR00A5)

Division : U Godavari Div., Hyderabad

Local River : Purna

River Water

Sub-Division : Purna SD, Nanded

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	2.3	1.1	0.9	1.1	1.6								2.3	0.9	
2	COD (mg/L)			23.7	1.0	25.4								13.1	19.4	
3	DO (mg/L)	6.0	5.5	5.2	5.5	6.4								5.9	5.1	
4	DO_SAT% (%)	74	67	60	64	77								70	54	
5	FCol-MPN (MPN/100mL)													6300	16000	
6	Tcol-MPN (MPN/100mL)													11033	16000	
7	TOC (mg/L)				5.5									1.7	7.1	
	TRACE & TOXIC															
1	Al (mg/L)			0.01												
2	As (µg/L)													6.3		
3	Cd (µg/L)													0.3		
4	Cr (µg/L)													0.5		
5	Cu (µg/L)													2.3		
6	Hg (µg/L)													0.3		
7	Ni (µg/L)													7.6		
8	Pb (µg/L)													1.9		
9	Zn (µg/L)													2.0		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	137	102	137	63	82								98	82	
2	HAR_Total (mgCaCO3/L)	168	129	207	83	130								193	157	
3	Na% (%)	29	33	36	33	31								27	36	
4	RSC (-)	0.6	0.3	0.1	0.5	0.5								0.2	0.0	
5	SAR (-)	1.1	1.2	1.6	0.9	1.0								1.1	1.5	
	PESTICIDES															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Purna (AGR00A5)

Local River : Purna

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Purna SD, Nanded

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	6.004	2.468			4.332								21.54		
2	EC_GEN (µmho/cm)	558	509			525								465		
3	pH_GEN (pH units)	8.4	8.3			8.3								8.1		
4	TDS (mg/L)													284		
5	Temp (deg C)	23.0	20.3			20.0								23.0		
6	Turb (NTU)													5.0		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.0	3.4			4.3								0.0		
2	ALK-TOT (mgCaCO3/L)	215	172			201								193		
3	B (mg/L)	0.31	0.00			0.24								0.03		
4	Ca (mg/L)	64	39			50								42		
5	Cl (mg/L)	27.0	23.5			24.0								24.5		
6	CO3 (mg/L)	4.7	4.0			5.1								0.0		
7	F (mg/L)	0.67	0.49			0.55								0.39		
8	Fe (mg/L)	0.0	0.0			0.0								0.0		
9	HCO3 (mg/L)	253	202			235								235		
10	K (mg/L)	3.2	2.3			3.2								3.4		
11	Mg (mg/L)	19.4	16.5			10.9								24.3		
12	Na (mg/L)	55.0	50.5			32.5								34.6		
13	NH3-N (mg N/L)	0.00	0.23			0.05								0.04		
14	NO2+NO3 (mg N/L)	21.76	0.70			1.03								2.03		
15	NO2-N (mgN/L)					0.00								0.00		
16	NO3-N (mgN/L)	21.76	0.70			1.02								2.03		
17	o-PO4-P (mg P/L)	0.010	0.010			0.064								0.001		
18	SiO2 (mg/L)	29.9	12.5			25.0								26.1		
19	SO4 (mg/L)	64.0	43.5			22.5								25.6		

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Purna (AGR00A5)

Division : U Godavari Div., Hyderabad

Local River : Purna

River Water

Sub-Division : Purna SD, Nanded

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.6	1.0			0.8								0.5		
2	COD (mg/L)					17.9								4.1		
3	DO (mg/L)	6.6	6.4			7.1								6.4		
4	DO_SAT% (%)	77	70			79								75		
5	FCol-MPN (MPN/100mL)					660								16000		
6	Tcol-MPN (MPN/100mL)					930								16000		
7	TOC (mg/L)													0.5		
	TRACE & TOXIC															
1	Al (mg/L)															
2	As (µg/L)															
3	Cd (µg/L)															
4	Cr (µg/L)															
5	Cu (µg/L)															
6	Hg (µg/L)															
7	Ni (µg/L)															
8	Pb (µg/L)															
9	Zn (µg/L)															
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	160	99			125								104		
2	HAR_Total (mgCaCO3/L)	240	167			170								205		
3	Na% (%)	33	38			29								27		
4	RSC (-)	0.0	0.1			0.6								0.0		
5	SAR (-)	1.5	1.7			1.1								1.1		
	PESTICIDES															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Purna (AGR00A5)

Local River : Purna

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : Purna SD, Nanded

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)		1.854			0.910								5.128		
2	EC_GEN (µmho/cm)		435			520								464		
3	pH_GEN (pH units)		8.2			8.1								7.7		
4	TDS (mg/L)													319		
5	Temp (deg C)		24.7			21.0								23.5		
6	Turb (NTU)													19.5		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)		2.0			0.0								0.0		
2	ALK-TOT (mgCaCO3/L)		186			207								179		
3	B (mg/L)		0.00			0.20								0.02		
4	Ca (mg/L)		37			62								34		
5	Cl (mg/L)		31.3			27.5								24.1		
6	CO3 (mg/L)		2.4			0.0								0.0		
7	F (mg/L)		0.60			0.71								0.73		
8	Fe (mg/L)		0.0			0.2								0.0		
9	HCO3 (mg/L)		222			252								219		
10	K (mg/L)		1.7			3.0								4.1		
11	Mg (mg/L)		18.2			6.3								19.4		
12	Na (mg/L)		48.7			26.0								31.0		
13	NH3-N (mg N/L)		0.09			0.05								0.07		
14	NO2+NO3 (mg N/L)		0.37			1.70								2.28		
15	NO2-N (mgN/L)					0.02								0.00		
16	NO3-N (mgN/L)		0.37			1.68								2.28		
17	o-PO4-P (mg P/L)		0.067			0.049								0.001		
18	SiO2 (mg/L)		12.3			21.0								24.5		
19	SO4 (mg/L)		28.0			18.0								25.8		

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Purna (AGR00A5)

Division : U Godavari Div., Hyderabad

Local River : Purna

River Water

Sub-Division : Purna SD, Nanded

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)		0.9			0.8								0.8		
2	COD (mg/L)					17.5								4.1		
3	DO (mg/L)		5.2			5.2								3.9		
4	DO_SAT% (%)		62			58								46		
5	FCol-MPN (MPN/100mL)					16000								8020		
6	Tcol-MPN (MPN/100mL)					16000								8060		
7	TOC (mg/L)													7.1		
	TRACE & TOXIC															
1	Al (mg/L)															
2	As (µg/L)													1.1		
3	Cd (µg/L)													0.0		
4	Cr (µg/L)													0.2		
5	Cu (µg/L)													1.6		
6	Hg (µg/L)													0.1		
7	Ni (µg/L)													3.7		
8	Pb (µg/L)													17.6		
9	Zn (µg/L)													24.5		
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)		91			155								86		
2	HAR_Total (mgCaCO3/L)		166			181								167		
3	Na% (%)		38			23								28		
4	RSC (-)		0.4			0.5								0.3		
5	SAR (-)		1.6			0.8								1.0		
	PESTICIDES															

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Dhalegaon	Code	: AG000S9
State	: Maharashtra	District	Parbhani
Basin	: Godavari	Independent River	: Godavari
Tributary	: -	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Godavari
Division	: U Godavari Div., Hyderabad	Sub-Division	: U Godavari SD, Aurangabad
Drainage Area	: 30840 Sq. Km.	Bank	: Left
Latitude	: 19°12'00"	Longitude	: 76°22'00"
	Opening Date	Closing Date	
Gauge	: 04.01.1964		
Discharge	: 16.08.1964		
Sediment	: 11.07.1971		
Water Quality	: 01.07.1972		

Water Quality Datasheet for the period : 2015-2016

Station Name : Dhalegaon (AG000S9)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	
	PHYSICAL	
1	Q (cumec)	No Flow / Insufficient depth during sampling days
2	EC_GEN (µmho/cm)	
3	pH_GEN (pH units)	
4	TDS (mg/L)	
5	Temp (deg C)	
6	Turb (NTU)	
	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	NH3-N (mg N/L)	
14	NO2+NO3 (mg N/L)	
15	NO2-N (mgN/L)	
16	NO3-N (mgN/L)	
17	o-PO4-P (mg P/L)	
18	SiO2 (mg/L)	
19	SO4 (mg/L)	
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	
2	COD (mg/L)	
3	DO (mg/L)	
4	DO_SAT% (%)	
5	FCoI-MPN (MPN/100mL)	
6	TcoI-MPN (MPN/100mL)	
7	TOC (mg/L)	
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	
2	HAR_Total (mgCaCO3/L)	
3	Na% (%)	
4	RSC (-)	
5	SAR (-)	
	PESTICIDES	

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Dhalegaon (AG000S9)

Local River : Godavari

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	Flood														
		Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	PHYSICAL															
1	Q (cumec)	24.22	11.72	0.513	18.78	109.0	296.0	45.26			114.6	125.9				
2	EC_GEN (µmho/cm)	625	504	452	344	322	440	635			389	421				
3	pH_GEN (pH units)	8.2	8.2	8.8	8.3	7.6	8.4	8.6			8.1	8.3				
4	TDS (mg/L)										241	312				
5	Temp (deg C)	25.0	27.0	26.5	26.0	26.0	27.0	28.5			28.0	27.0				
6	Turb (NTU)										2.3	0.0				
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	5.0	2.6	9.0	19.8	1.4	12.3	15.7			4.1	8.1				
2	ALK-TOT (mgCaCO3/L)	187	144	146	148	93	137	130			143	147				
3	B (mg/L)	0.22	0.22	0.11	0.16	0.16	0.19	0.09			0.18	0.17				
4	Ca (mg/L)	59	41	33	28	31	33	26			30	28				
5	Cl (mg/L)	43.5	29.0	26.0	26.5	21.2	38.7	62.0			31.5	24.3				
6	CO3 (mg/L)	6.0	3.2	10.8	23.8	1.7	14.8	18.9			4.9	9.8				
7	F (mg/L)	0.52	0.59	0.46	0.44	0.24	0.30	0.44			0.28	0.39				
8	Fe (mg/L)	0.0	0.0		0.1	0.1	0.2	0.1			0.2	0.2				
9	HCO3 (mg/L)	216	170	156	132	110	137	120			165	159				
10	K (mg/L)	3.4	3.2	0.9	3.3	2.5	3.2	2.8			3.6	3.5				
11	Mg (mg/L)	12.8	8.9	7.7	5.6	7.8	12.5	24.7			14.7	21.3				
12	Na (mg/L)	55.0	45.7	34.0	45.5	22.3	46.7	55.3			28.5	27.0				
13	NH3-N (mg N/L)	0.01	0.09	0.05	0.05	0.82	0.05	0.11			0.13	0.11				
14	NO2+NO3 (mg N/L)	0.80	1.03	0.15	0.95	0.77	0.98	0.80			0.99	1.01				
15	NO2-N (mgN/L)				0.01	0.05	0.01	0.02			0.05	0.01				
16	NO3-N (mgN/L)	0.80	1.03	0.80	0.95	0.77	0.97	0.78			0.93	1.00				
17	o-PO4-P (mg P/L)	0.000	0.030	0.040	0.060	0.009					0.022	0.013				
18	P-Tot (mgP/L)						0.013	0.043								
19	SiO2 (mg/L)	21.3	27.7	11.0	25.0	25.0	12.5	22.0			24.8	19.8				
20	SO4 (mg/L)	80.0	64.0	23.5	21.0	18.7	17.3	70.3			27.0	29.5				

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Dhalegaon (AG000S9)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	Flood Jun - Oct														
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.0	0.6	1.7	0.8	1.5	1.0	0.8			0.8	1.0				
2	COD (mg/L)			7.9	31.8	25.0	29.8	24.1			4.9	6.7				
3	DO (mg/L)	5.1	5.2	5.2	4.8	5.7	6.2	5.6			5.7	6.8				
4	DO_SAT% (%)	62	66	65	59	70	78	72			72	85				
5	FCol-MPN (MPN/100mL)					2050	12333	293			260	16000				
6	Tcol-MPN (MPN/100mL)					3000	13667	403			8010	16000				
7	TOC (mg/L)				5.2			1.1			2.4	4.6				
	TRACE & TOXIC															
1	Cd (µg/L)							8.4								
2	Cr (µg/L)							15.2								
3	Hg (µg/L)							2.0								
4	Ni (µg/L)							8.0								
5	Pb (µg/L)							14.3								
6	Zn (µg/L)							248.8								
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	146	102	84	70	77	83	66			74	70				
2	HAR_Total (mgCaCO3/L)	199	139	115	93	110	134	169			135	159				
3	Na% (%)	38	41	39	50	30	41	41			31	27				
4	RSC (-)	0.3	0.2	0.6	1.1	0.0	0.2	0.0			0.2	0.0				
5	SAR (-)	1.7	1.7	1.4	2.1	0.9	1.7	1.9			1.1	0.9				
	PESTICIDES															
1	Aldrin (µg/L)							0.0								
2	BHC (µg/L)							0.1								
3	DDT (µg/L)							0.1								
4	Dieldrin (µg/L)							0.0								
5	Endos (µg/L)							0.1								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Dhalegaon (AG000S9)

Local River : Godavari

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	PHYSICAL															
1	Q (cumec)	2.440	0.196			11.25	3.114	1.478								
2	EC_GEN (µmho/cm)	1014	739			599	840	780								
3	pH_GEN (pH units)	8.3	8.2			8.3	8.6	8.2								
4	TDS (mg/L)															
5	Temp (deg C)	24.0	20.0			23.3	22.0	25.0								
6	Turb (NTU)															
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	7.8	0.0			4.4	6.5	0.0								
2	ALK-TOT (mgCaCO3/L)	244	192			167	180	219								
3	B (mg/L)	0.00	0.02			0.21	0.12	0.18								
4	Ca (mg/L)	62	44			62	48	64								
5	Cl (mg/L)	75.0	43.0			53.2	72.3	65.0								
6	CO3 (mg/L)	9.3	0.0			5.3	7.8	0.0								
7	F (mg/L)	0.77	0.66			0.51	0.17	0.60								
8	Fe (mg/L)	0.0				0.1	0.1	0.3								
9	HCO3 (mg/L)	279	234			193	204	267								
10	K (mg/L)	4.6	3.1			4.2	3.3	0.6								
11	Mg (mg/L)	26.7	16.5			7.9	22.8	17.0								
12	Na (mg/L)	128.0	88.0			47.3	88.0	73.6								
13	NH3-N (mg N/L)	0.00	0.37			0.05	0.05	0.05								
14	NO2+NO3 (mg N/L)	1.58	0.10			0.81	1.54	1.83								
15	NO2-N (mgN/L)					0.01	0.00	0.15								
16	NO3-N (mgN/L)	1.58	0.10			0.81	1.54	1.68								
17	o-PO4-P (mg P/L)	0.020	0.010			0.004										
18	P-Tot (mgP/L)						0.030	0.037								
19	SiO2 (mg/L)	32.5	33.0			25.0	24.1	25.0								
20	SO4 (mg/L)	183.0	143.0			28.0	98.0	98.0								

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Dhalegaon (AG000S9)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	Winter														
		Nov - Feb														
		2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.6	1.8			0.8	0.8	1.2								
2	COD (mg/L)					0.0	6.8	65.0								
3	DO (mg/L)	5.7	6.3			7.3	6.7	6.9								
4	DO_SAT% (%)	68	69			85	75	84								
5	FCol-MPN (MPN/100mL)					1760	1260	800								
6	Tcol-MPN (MPN/100mL)					8020	9500	1300								
7	TOC (mg/L)							1.4								
	TRACE & TOXIC															
1	Cd (µg/L)						131.0									
2	Cr (µg/L)						27.0									
3	Hg (µg/L)						0.2									
4	Ni (µg/L)						24.0									
5	Pb (µg/L)						180.0									
6	Zn (µg/L)						170.0									
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	155	110			154	120	160								
2	HAR_Total (mgCaCO3/L)	265	178			187	215	231								
3	Na% (%)	51	51			35	46	41								
4	RSC (-)	0.0	0.3			0.0	0.4	0.0								
5	SAR (-)	3.4	2.9			1.5	2.7	2.1								
	PESTICIDES															
1	Aldrin (µg/L)						0.0									
2	BHC (µg/L)						0.1									
3	DDT (µg/L)						0.1									
4	Dieldrin (µg/L)						0.0									
5	Endos (µg/L)						0.1									

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Dhalegaon (AG000S9)

Local River : Godavari

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)															
2	EC_GEN (µmho/cm)															
3	pH_GEN (pH units)															
4	TDS (mg/L)															
5	Temp (deg C)															
6	Turb (NTU)															
	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	NH3-N (mg N/L)															
14	NO2+NO3 (mg N/L)															
15	NO2-N (mgN/L)															
16	NO3-N (mgN/L)															
17	o-PO4-P (mg P/L)															
18	P-Tot (mgP/L)															
19	SiO2 (mg/L)															
20	SO4 (mg/L)															

Water Quality Seasonal Average for the period: 2001-2016

Station Name : Dhalegaon (AG000S9)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	Summer														
		Mar - May														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)															
2	COD (mg/L)															
3	DO (mg/L)															
4	DO_SAT% (%)															
5	FCol-MPN (MPN/100mL)															
6	Tcol-MPN (MPN/100mL)															
7	TOC (mg/L)															
	TRACE & TOXIC															
1	Cd (µg/L)															
2	Cr (µg/L)															
3	Hg (µg/L)															
4	Ni (µg/L)															
5	Pb (µg/L)															
6	Zn (µg/L)															
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)															
2	HAR_Total (mgCaCO3/L)															
3	Na% (%)															
4	RSC (-)															
5	SAR (-)															
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	DDT (µg/L)															
4	Dieldrin (µg/L)															
5	Endos (µg/L)															

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Kopergaon gauge,Rainfal,W/L	Code	: KOPERGAON
State	: Maharashtra	District	Ahmednagar
Basin	: Godavari	Independent River	: Godavari
Tributary	:	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Godavari
Division	: Upper Godavari Div., Hyderabad	Sub-Division	: Upper Godavari SD, Aurangabad
Drainage Area	: 6840 Sq. Km.	Bank	: Left
Latitude	: 19°52'00"	Longitude	: 74°28'28"
	Opening Date	Closing Date	
Gauge	:		
Discharge	: 31.07.2014		
Sediment	:		
Water Quality	:		

Water Quality Datasheet for the period : 2015-2016

Station Name : Kopergaon gauge,Rainfal,W/L (KOPERGAON)

Local River : Godavari

River Water Analysis

Division : Upper Godavari Div., Hyderabad

Sub-Division : Upper Godavari SD, Aurangabad

S.No	Parameters	24.07.2015	01.08.2015	19.09.2015	03.11.2015
		A	A	A	A
	PHYSICAL				
1	Q (cumec)	30.79	19.84	813.3	447.3
2	Colour_Cod (-)	Brown	Brown	Brown	Clear
3	EC_FLD (μmho/cm)			437	
4	EC_GEN (μmho/cm)	1736	177	437	550
5	Odour_Code (-)	fishy	fishy	fishy	odour free
6	pH_FLD (pH units)			7.1	
7	pH_GEN (pH units)	7.0	7.5	7.1	8.2
8	TDS (mg/L)	258	124	254	245
9	Temp (deg C)			27.0	26.0
10	Turb (NTU)	136.0	49.0	45.0	14.0
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	198	72	118	103
3	B (mg/L)	0.82	0.39	0.28	0.00
4	Ca (mg/L)	83	18	26	30
5	Cl (mg/L)	229.6	10.6	31.2	54.7
6	CO3 (mg/L)	0.0	0.0	0.0	0.0
7	F (mg/L)	0.68	0.16	0.36	0.24
8	Fe (mg/L)	0.0	0.0	0.0	0.0
9	HCO3 (mg/L)	241	88	144	126
10	K (mg/L)	6.4	1.7	4.4	3.9
11	Mg (mg/L)	48.1	9.7	14.0	17.0
12	Na (mg/L)	229.0	16.6	38.6	49.1
13	NH3-N (mg N/L)	0.01	0.01	0.01	0.01
14	NO2+NO3 (mg N/L)	1.15	1.20	2.81	0.95
15	NO2-N (mgN/L)	0.00	0.00	0.01	0.00
16	NO3-N (mgN/L)	1.15	1.20	2.79	0.95
17	o-PO4-P (mg P/L)	0.400	0.321	0.495	0.108
18	SiO2 (mg/L)	21.8	12.7	17.5	11.1
19	SO4 (mg/L)	446.0	16.0	24.8	65.5

Water Quality Datasheet for the period : 2015-2016

Station Name : Kopergaon gauge,Rainfal,W/L (KOPERGAON)

Local River : Godavari

Division : Upper Godavari Div., Hyderabad

Sub-Division : Upper Godavari SD, Aurangabad

River Water Analysis

S.No	Parameters	24.07.2015	01.08.2015	19.09.2015	03.11.2015
		A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	0.3	0.4	0.9	0.5
2	COD (mg/L)	33.0	8.0	11.0	11.7
3	FCol-MPN (MPN/100mL)	500	2800	3000	16000
4	Tcol-MPN (MPN/100mL)	16000	16000	16000	16000
5	TOC (mg/L)	21.1	1.6	8.8	4.6
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	207	44	66	76
2	HAR_Total (mgCaCO3/L)	407	84	124	147
3	Na% (%)	55	30	39	41
4	RSC (-)	0.0	0.0	0.0	0.0
5	SAR (-)	5.0	0.8	1.5	1.8
	PESTICIDES				

Water Quality Summary for the period : 2015-2016

Station Name : Kopergaon gauge,Rainfal,W/L (KOPERGAON)

Division : Upper Godavari Div., Hyderabad

Local River : Godavari

Sub-Division : Upper Godavari SD, Aurangabad

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	367	813.3	0.000	17.62
2	EC_FLD (µmho/cm)	1	437	437	437
3	EC_GEN (µmho/cm)	4	1736	177	725
4	pH_FLD (pH units)	1	7.1	7.1	7.1
5	pH_GEN (pH units)	4	8.2	7.0	7.4
6	TDS (mg/L)	4	258	124	220
7	Temp (deg C)	2	27.0	26.0	26.5
8	Turb (NTU)	4	136.0	14.0	61
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	4	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	4	198	72	123
3	B (mg/L)	4	0.82	0.00	0.37
4	Ca (mg/L)	4	83	18	39
5	Cl (mg/L)	4	229.6	10.6	81.5
6	CO3 (mg/L)	4	0.0	0.0	0
7	F (mg/L)	4	0.68	0.16	0.36
8	Fe (mg/L)	4	0.0	0.0	0
9	HCO3 (mg/L)	4	241	88	150
10	K (mg/L)	4	6.4	1.7	4.1
11	Mg (mg/L)	4	48.1	9.7	22.2
12	Na (mg/L)	4	229.0	16.6	83.3
13	NH3-N (mg N/L)	4	0.01	0.01	0
14	NO2+NO3 (mg N/L)	4	2.81	0.95	1.53
15	NO2-N (mgN/L)	4	0.01	0.00	0
16	NO3-N (mgN/L)	4	2.79	0.95	1.52
17	o-PO4-P (mg P/L)	4	0.495	0.108	0.331
18	SiO2 (mg/L)	4	21.8	11.1	15.8
19	SO4 (mg/L)	4	446.0	16.0	138.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	4	0.9	0.3	0.5
2	COD (mg/L)	4	33.0	8.0	15.9
3	FCol-MPN (MPN/100mL)	4	16000	500	5575
4	Tcol-MPN (MPN/100mL)	4	16000	16000	16000
5	TOC (mg/L)	4	21.1	1.6	9
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	4	207	44	98
2	HAR_Total (mgCaCO3/L)	4	407	84	191
3	Na% (%)	4	55	30	41
4	RSC (-)	4	0.0	0.0	0
5	SAR (-)	4	5.0	0.8	2.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2016

Station Name : Kopergaon gauge,Rainfal,W/L (KOPERGAON)

Local River : Godavari

River Water

Division : Upper Godavari Div., Hyderabad

Sub-Division : Upper Godavari SD, Aurangabad

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	PHYSICAL						
1	Q (cumec)	447.2	288.0		447.3		
2	EC_FLD (µmho/cm)		437				
3	EC_GEN (µmho/cm)	411	783		550		
4	pH_FLD (pH units)		7.1				
5	pH_GEN (pH units)	7.4	7.2		8.2		
6	TDS (mg/L)	270	212		245		
7	Temp (deg C)	26.0	27.0		26.0		
8	Turb (NTU)	103.0	76.7		14.0		
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)	109	129		103		
2	B (mg/L)	0.26	0.50		0.00		
3	Ca (mg/L)	31	42		30		
4	Cl (mg/L)	3.9	90.5		54.7		
5	F (mg/L)	0.20	0.40		0.24		
6	Fe (mg/L)	0.1	0.0		0.0		
7	HCO3 (mg/L)	133	158		126		
8	K (mg/L)	2.8	4.2		3.9		
9	Mg (mg/L)	17.7	23.9		17.0		
10	Na (mg/L)	22.3	94.7		49.0		
11	NH3-N (mg N/L)	0.03	0.00		0.00		
12	NO2+NO3 (mg N/L)	3.23	1.72		0.95		
13	NO2-N (mgN/L)	0.04	0.00		0.00		
14	NO3-N (mgN/L)	3.19	1.71		0.95		
15	o-PO4-P (mg P/L)	0.137	0.405		0.108		
16	SiO2 (mg/L)	20.9	17.3		11.1		
17	SO4 (mg/L)	65.0	162.3		65.5		

Water Quality Seasonal Average for the period: 2014-2016

Station Name : Kopergaon gauge,Rainfal,W/L (KOPERGAON)

Local River : Godavari

Division : Upper Godavari Div., Hyderabad

Sub-Division : Upper Godavari SD, Aurangabad

River Water

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)	1.9	0.5		0.5		
2	COD (mg/L)	16.8	17.3		11.7		
3	DO (mg/L)	6.0					
4	DO_SAT% (%)	73					
5	FCol-MPN (MPN/100mL)	9200	2100		16000		
6	Tcol-MPN (MPN/100mL)	16000	16000		16000		
7	TOC (mg/L)	6.1	10.5		4.6		
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)	77	106		76		
2	HAR_Total (mgCaCO3/L)	151	205		147		
3	Na% (%)	23	41		41		
4	SAR (-)	0.8	2.4		1.8		
	PESTICIDES						

HISTORY SHEET

		Water Year	: 2015-2016
Site	: Pachegaon	Code	: AGU00D3
State	: Maharashtra	District	Ahmednagar
Basin	: Godavari	Independent River	: Godavari
Tributary	: Pravara	Sub Tributary	:
Sub-Sub Tributary	:	Local River	: Pravara
Division	: U Godavari Div., Hyderabad	Sub-Division	: U Godavari SD, Aurangabad
Drainage Area	: 5800 Sq. Km.	Bank	:
Latitude	: 19°32'00"	Longitude	: 74°52'00"
	Opening Date	Closing Date	
Gauge	: 07.12.1978		
Discharge	: 23.07.1983		
Sediment	: 01.04.2014		
Water Quality	: 01.04.2014		

Water Quality Datasheet for the period : 2015-2016

Station Name : Pachegaon (AGU00D3)
Local River : Pravara

River Water Analysis

Division : U Godavari Div., Hyderabad
Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	03.11.2015	02.12.2015
		A	A
	PHYSICAL		
1	Q (cumec)	150.6	20.66
2	Colour_Cod (-)	Clear	Clear
3	EC_GEN (µmho/cm)	244	212
4	Odour_Code (-)	odour free	odour free
5	pH_GEN (pH units)	7.9	6.3
6	TDS (mg/L)	9	129
7	Temp (deg C)	24.0	23.0
8	Turb (NTU)	56.0	1.0
	CHEMICAL		
1	Alk-Phen (mgCaCO3/L)	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	96	84
3	B (mg/L)	0.00	0.00
4	Ca (mg/L)	18	28
5	Cl (mg/L)	9.7	4.8
6	CO3 (mg/L)	0.0	0.0
7	F (mg/L)	0.01	0.01
8	Fe (mg/L)	0.0	0.0
9	HCO3 (mg/L)	117	103
10	K (mg/L)	1.4	0.8
11	Mg (mg/L)	9.5	12.0
12	Na (mg/L)	8.3	11.1
13	NH3-N (mg N/L)	0.01	0.07
14	NO2+NO3 (mg N/L)	0.55	0.22
15	NO2-N (mgN/L)	0.00	0.00
16	NO3-N (mgN/L)	0.55	0.22
17	o-PO4-P (mg P/L)	0.072	0.020
18	SiO2 (mg/L)	13.7	13.1
19	SO4 (mg/L)	5.0	4.5

Water Quality Datasheet for the period : 2015-2016**Station Name : Pachegaon (AGU00D3)****Local River : Pravara****Division : U Godavari Div., Hyderabad**
Sub-Division : U Godavari SD, Aurangabad**River Water Analysis**

S.No	Parameters	03.11.2015	02.12.2015
		A	A
	BIOLOGICAL/BACTERIOLOGICAL		
1	BOD3-27 (mg/L)	1.8	0.3
2	COD (mg/L)	2.8	2.0
3	FCol-MPN (MPN/100mL)	16000	9000
4	Tcol-MPN (MPN/100mL)	16000	16000
5	TOC (mg/L)	1.3	2.2
	TRACE & TOXIC		
	CHEMICAL INDICES		
1	HAR_Ca (mgCaCO3/L)	46	70
2	HAR_Total (mgCaCO3/L)	86	120
3	Na% (%)	17	17
4	RSC (-)	0.2	0.0
5	SAR (-)	0.4	0.4
	PESTICIDES		

Water Quality Summary for the period : 2015-2016

Station Name : Pachegaon (AGU00D3)

Division : U Godavari Div., Hyderabad

Local River : Pravara

Sub-Division : U Godavari SD, Aurangabad

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	366	150.6	0.000	4.263
2	EC_GEN (µmho/cm)	2	244	212	228
3	pH_GEN (pH units)	2	7.9	6.3	7.1
4	TDS (mg/L)	2	129	9	69
5	Temp (deg C)	2	24.0	23.0	23.5
6	Turb (NTU)	2	56.0	1.0	28.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	2	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	2	96	84	90
3	B (mg/L)	2	0.00	0.00	0
4	Ca (mg/L)	2	28	18	23
5	Cl (mg/L)	2	9.7	4.8	7.3
6	CO3 (mg/L)	2	0.0	0.0	0
7	F (mg/L)	2	0.01	0.01	0.01
8	Fe (mg/L)	2	0.0	0.0	0
9	HCO3 (mg/L)	2	117	103	110
10	K (mg/L)	2	1.4	0.8	1.1
11	Mg (mg/L)	2	12.0	9.5	10.8
12	Na (mg/L)	2	11.1	8.3	9.7
13	NH3-N (mg N/L)	2	0.07	0.01	0.04
14	NO2+NO3 (mg N/L)	2	0.55	0.22	0.39
15	NO2-N (mgN/L)	2	0.00	0.00	0
16	NO3-N (mgN/L)	2	0.55	0.22	0.38
17	o-PO4-P (mg P/L)	2	0.072	0.020	0.046
18	SiO2 (mg/L)	2	13.7	13.1	13.4
19	SO4 (mg/L)	2	5.0	4.5	4.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	2	1.8	0.3	1
2	COD (mg/L)	2	2.8	2.0	2.4
3	FCol-MPN (MPN/100mL)	2	16000	9000	12500
4	Tcol-MPN (MPN/100mL)	2	16000	16000	16000
5	TOC (mg/L)	2	2.2	1.3	1.7
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	2	70	46	58
2	HAR_Total (mgCaCO3/L)	2	120	86	103
3	Na% (%)	2	17	17	17
4	RSC (-)	2	0.2	0.0	0.1
5	SAR (-)	2	0.4	0.4	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2016

Station Name : Pachegaon (AGU00D3)

Local River : Pravara

River Water

Division : U Godavari Div., Hyderabad

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	PHYSICAL						
1	Q (cumec)				85.61	66.51	
2	EC_GEN (µmho/cm)				228	474	
3	pH_GEN (pH units)				7.1	7.5	
4	TDS (mg/L)				69	306	
5	Temp (deg C)				23.5	23.0	
6	Turb (NTU)				28.5	5.0	
	CHEMICAL						
1	ALK-TOT (mgCaCO3/L)				90	112	
2	B (mg/L)				0.00	0.16	
3	Ca (mg/L)				23	24	
4	Cl (mg/L)				7.3	45.5	
5	F (mg/L)				0.01	0.93	
6	Fe (mg/L)				0.0	0.3	
7	HCO3 (mg/L)				110	137	
8	K (mg/L)				1.1	2.3	
9	Mg (mg/L)				10.8	13.6	
10	Na (mg/L)				9.7	45.9	
11	NH3-N (mg N/L)				0.04	0.00	
12	NO2+NO3 (mg N/L)				0.39	1.40	
13	NO2-N (mgN/L)				0.00	0.00	
14	NO3-N (mgN/L)				0.38	1.40	
15	o-PO4-P (mg P/L)				0.046	0.200	
16	SiO2 (mg/L)				13.4	36.8	
17	SO4 (mg/L)				4.8	33.0	

Water Quality Seasonal Average for the period: 2014-2016

Station Name : Pachegaon (AGU00D3)

Local River : Pravara

Division : U Godavari Div., Hyderabad

Sub-Division : U Godavari SD, Aurangabad

River Water

S.No	Parameters	Flood		Winter		Summer	
		Jun - Oct		Nov - Feb		Mar - May	
		2014	2015	2014-2015	2015-2016	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL						
1	BOD3-27 (mg/L)				1.0	1.7	
2	COD (mg/L)				2.4	13.7	
3	DO (mg/L)					5.8	
4	DO_SAT% (%)					68	
5	FCol-MPN (MPN/100mL)				12500	40	
6	Tcol-MPN (MPN/100mL)				16000	3500	
7	TOC (mg/L)				1.7	3.7	
	TRACE & TOXIC						
	CHEMICAL INDICES						
1	HAR_Ca (mgCaCO3/L)				58	60	
2	HAR_Total (mgCaCO3/L)				103	117	
3	Na% (%)				17	46	
4	RSC (-)				0.1	0.0	
5	SAR (-)				0.4	1.9	
	PESTICIDES						