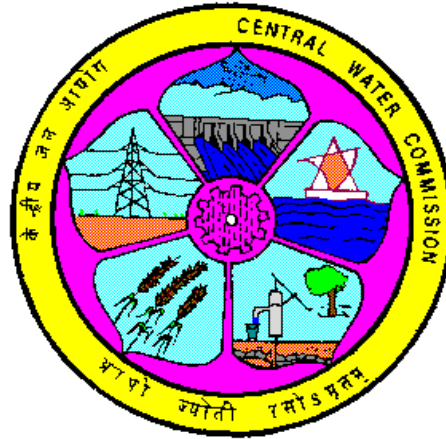


FOR OFFICIAL USE ONLY

**GOVERNMENT OF INDIA
CENTRAL WATER COMMISSION**



**GODAVARI BASIN
WATER QUALITY YEAR BOOK (Vol. III)
(JUNE 2016– MAY 2017)**

**GODAVARI CIRCLE
HYDERABAD
January 2018**

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 analysed 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
January 2018

(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.	5
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	10
2.9.2	Godavari at Bhadrachalam	20
2.9.3	Sabari at Konta	28
2.9.4	Murredu at Sangam	38
2.9.5	Godavari at Perur	44
2.9.6	Indravati at Pathagudem	54
2.9.7	Indravati at Jagdalpur	64
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	205
2.9.23	Wainganga at Keolari	211
2.9.24	Godavari at Mancherial	217
2.9.25	Peddavagu at Gandlapet	227
2.9.26	Godavari at Nanded	235
2.9.27	Manjira at Saigaon	240
2.9.28	Purna at Purna	249
2.9.29	Godavari at Dhalegaon	258
2.9.30	Godavari at Kopergaon	267
2.9.31	Pravara at Pachegaon	271

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, Chhattisgarh, 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 in the Godavari basin since 1978. This volume contains data on water quality monitored at 31 hydrological observation stations being operated by the Central water commission during the Water Year 2016-17. Out of these 31 water quality stations, 15 are monitored by the Wainganga Division, Nagpur and the remaining 16 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.

For the analysis of river water samples in the Godavari Basin, two laboratories – Krishna & Godavari River Water Quality Laboratory, Level III at Hyderabad (attached to Upper Godavari Division) and 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 Station

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 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 are 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 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 amber colored 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 to ensure leak-proof.

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 Fecal and Total) and Ammonical Nitrogen are analyzed 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 within the prescribed time periods.

2.3 Frequency of Sample collection

For baseline and trend stations samples are collected once in a month and samples are collected thrice per month for flux stations.

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 2016-17

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 All Stations under Level-III Laboratory, Hyderabad
Trace & Toxic elements	Once in a year	All Stations under Level-II Laboratory, Nagpur
	Twice in a year	All Stations under Level-III Laboratory, Hyderabad

2.4 Analysis Techniques:

The Water samples, received from different water quality monitoring stations, has analyzed for different parameters by following the “STANDARD METHODS FOR THE EXAMINATION OF WATER AND WASTE WATER” – APHA, AWWA & WEF, and 22nd 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 has 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 in the sample has evaluated.

2.4.2. Instrumental methods:

The instrumental methods, the relevant parameters analyzed and instruments used are given here under.

S.No.	Method	Parameter analyzed	Instrument used
1	Potentiometric method	pH	Digital pH meter
2	Conductometric method	Electrical Conductance	Digital Conductivity meter
3	Nephelometric method	Sulfate & Turbidity	Nephelo-Turbidity Meter
4	Flame Emission Photometric method	Sodium & Potassium	Flame Photometer
5	Colorimetric method	Ammonical Nitrogen, Nitrite-Nitrogen, Phosphate-Phosphorous, Silicon, Boron	UV-VIS Spectrophotometer
6	Gravimetric method	Total dissolved solids	Hot Air oven for total dryness at 180°C
7	Chromatographic method	Aldrin, BHC, DDT, Dieldrin and Endosulphan	Gas Chromatograph
8	Atomic Absorption method	Arsenic, Cadmium, Chromium, Mercury, Iron Nickel, Lead, Zinc and copper	Atomic Absorption Spectrometer
9	Oxidative Combustion Infrared Analysis method	Total Organic Carbon	Total Organic Carbon Analyzer
10	Ion selective electrode method	Nitrate-Nitrogen & Fluoride	Ion meter

2.5 Parameters analyzed in the Water Quality Laboratory:

The Krishna & Godavari River Water Quality Laboratory, Level III, at Upper Godavari Division, Hyderabad analyses 45 parameters including Pesticides, Trace & Toxic elements, Total Organic Carbon along with 32 Level-II 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 analyzed at Level -II Laboratory

a) Physico – chemical Parameters:

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

b) Biological Parameters:

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

c) Bacteriological Parameters:

ii) Total Coli form count and ii) Fecal Coli form count

2.5.2 Parameters analyzed at Level –III Laboratory

In addition to the above mentioned 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) Mercury v) Nickel vi) Lead and vii) Zinc

c) Total Organic Carbon

2.5.3 Details of Samples:

Total number of samples collected and number of parameters analyzed during the water year 2016-17 in the Godavari Basin are given below

Divisional Laboratory	No of samples		No.of parameters analysed
	Collected	Analysed	
Wainganga (Level II)	163	163	4075
Upper Godavari (Level III)	119	119	3497
Samples received from other Divisions and sub-divisions for Trace & Toxic metal analysis	66	66	462
Total	348	348	8034

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^{2-} 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

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

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

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

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

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

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

(Ionic concentrations are in meq/L)

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

(Ionic concentrations are in meq/L)

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

(Ionic concentrations are in meq/L)

2.7 Method of presentation:

Station-wise water quality data, as presented in this volume, comprises history sheet, water quality data sheet and water quality summery for the current year and water quality data seasonal average from 1996-97. The serial order of the water quality stations 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 has 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 fecal coliform should not be more than 40% of the total coliform.



HISTORY SHEET

		Water Year	: 2016-2017
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°14'45"	Longitude	: 81°39'35"
	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 : 2016-2017

Station Name : Polavaram (AG000C3)

Local River : Godavari

River Water Analysis

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	151.4	2772	5780	6368	11527	1237	464.6	315.2	268.0	264.7	279.6	261.8
2	Colour_Cod (-)	Clear	Brown	Brown	Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)							319			172		159
4	EC_GEN (µmho/cm)	167	145	198	160	210	243	241	529	201	190	186	123
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)			8.1	7.7	7.9		8.5			8.7		8.3
7	pH_GEN (pH units)	8.2	8.3	8.2	8.2	8.1	8.6	8.3	8.4	8.2	8.2	7.7	8.1
8	TDS (mg/L)	103	100	175	144	115	133	164	92	152	107	150	71
9	Temp (deg C)	35.0	28.0	29.0	31.0	29.0	30.0	27.0	26.0	25.0	28.0	32.0	34.0
10	Turb (NTU)	2.0	887.0	188.0	146.0	14.0	0.1	1.0	1.0	6.0	5.0	4.0	8.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	4.0	0.0	0.0	0.0	5.0	1.3	1.3	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	88	71	95	77	115	128	105	105	108	76	94	56
3	Ca (mg/L)	18	14	21	14	20	23	24	22	22	28	29	12
4	Cl (mg/L)	5.6	5.7	7.9	1.6	11.3	7.2	9.1	5.6	8.2	8.8	7.9	17.3
5	CO3 (mg/L)	0.0	4.8	0.0	0.0	0.0	6.0	1.6	1.6	0.0	0.0	0.0	0.0
6	F (mg/L)	0.10	0.02	0.03	0.01	0.00	0.00	0.20	0.14	0.87	0.07	0.39	0.14
7	Fe (mg/L)	0.0	0.0	0.1	0.1	0.1	0.2	0.3	0.0	0.1	0.0	0.0	0.0
8	HCO3 (mg/L)	107	77	116	94	140	145	125	125	132	93	114	69
9	K (mg/L)	2.0	2.6	2.5	1.5	2.2	2.1	2.0	3.2	4.1	2.2	2.0	2.0
10	Mg (mg/L)	8.7	7.6	12.8	7.6	10.9	12.8	12.9	12.2	6.9	4.2	11.9	5.4
11	Na (mg/L)	10.8	10.2	12.5	8.2	12.6	16.4	14.5	10.7	25.4	13.4	12.3	6.7
12	NH3-N (mg N/L)	0.01	0.03	0.01	0.01	0.01	0.01		0.01	1.11	0.69	0.01	0.57
13	NO2+NO3 (mg N/L)	0.37	0.16	1.83	0.75	0.98	0.26	0.06	0.09	0.78	1.06	0.47	0.61
14	NO2-N (mgN/L)	0.00	0.00	1.78	0.01	0.00	0.00	0.02	0.00	0.00	0.05	0.00	0.02
15	NO3-N (mgN/L)	0.37	0.16	0.05	0.74	0.98	0.26	0.04	0.09	0.78	1.01	0.47	0.58
16	o-PO4-P (mg P/L)	0.031	0.153		0.003	0.011	0.029	0.027	0.095	0.060	0.220	0.020	0.040
17	SiO2 (mg/L)	12.9	18.7	14.7	11.8	20.0	18.1	14.7	8.3	11.3	11.9	14.3	11.0
18	SO4 (mg/L)	0.4	18.0	10.7	15.5	4.6	6.7	12.5	0.0	13.7	10.7	19.5	1.8

Water Quality Datasheet for the period : 2016-2017

Station Name : Polavaram (AG000C3)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Lower Godavari 2, Rajahmundry

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.4	0.7	0.7	0.6	1.5	1.0	1.2	0.9	1.2	1.0	0.5	0.4
2	COD (mg/L)	0.8	8.3	2.6	3.7	8.8	1.3	2.1	8.0	1.6	5.0	7.1	4.6
3	DO (mg/L)	6.7	5.8	6.5	6.4	6.2	6.8	6.9	7.7	7.2	7.5	6.6	5.9
4	DO_SAT% (%)	96	74	85	86	81	90	87	95	87	96	90	84
5	FCol-MPN (MPN/100mL)	2	16000	9000	1400	16000	9000	130	2	500	16000	500	80
6	Tcol-MPN (MPN/100mL)	300	16000	9000	2200	16000	9000	2400	5000	500	16000	500	80
	TRACE & TOXIC												
1	As (µg/L)											0.4	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Cu (µg/L)							1.0	1.0	1.0	1.0	1.7	1.0
5	Hg (µg/L)											0.4	
6	Ni (µg/L)											2.7	
7	Pb (µg/L)											0.0	
8	Zn (µg/L)							0.1	0.1	0.1	0.1	29.2	0.1
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	44	34	52	35	50	59	59	56	55	71	73	31
2	HAR_Total (mgCaCO3/L)	80	66	106	66	95	112	113	107	83	88	122	53
3	Na% (%)	22	25	20	21	22	24	22	17	39	24	18	21
4	RSC (-)	0.2	0.1	0.0	0.2	0.4	0.3	0.0	0.0	0.5	0.0	0.0	0.1
5	SAR (-)	0.5	0.6	0.5	0.4	0.6	0.7	0.6	0.5	1.2	0.6	0.5	0.4
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	373	32116	127.6	2735
2	EC_FLD (µmho/cm)	3	319	159	216
3	EC_GEN (µmho/cm)	12	529	123	216
4	pH_FLD (pH units)	6	8.7	7.7	8.2
5	pH_GEN (pH units)	12	8.6	7.7	8.2
6	TDS (mg/L)	12	175	71	126
7	Temp (deg C)	12	35.0	25.0	29.5
8	Turb (NTU)	12	887.0	0.1	105.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	5.0	0.0	1
2	ALK-TOT (mgCaCO3/L)	12	128	56	93
3	Ca (mg/L)	12	29	12	21
4	Cl (mg/L)	12	17.3	1.6	8
5	CO3 (mg/L)	12	6.0	0.0	1.2
6	F (mg/L)	12	0.87	0.00	0.16
7	Fe (mg/L)	12	0.3	0.0	0.1
8	HCO3 (mg/L)	12	145	69	111
9	K (mg/L)	12	4.1	1.5	2.4
10	Mg (mg/L)	12	12.9	4.2	9.5
11	Na (mg/L)	12	25.4	6.7	12.8
12	NH3-N (mg N/L)	11	1.11	0.01	0.22
13	NO2+NO3 (mg N/L)	12	1.83	0.06	0.62
14	NO2-N (mgN/L)	12	1.78	0.00	0.16
15	NO3-N (mgN/L)	12	1.01	0.04	0.46
16	o-PO4-P (mg P/L)	11	0.220	0.003	0.063
17	SiO2 (mg/L)	12	20.0	8.3	14
18	SO4 (mg/L)	12	19.5	0.0	9.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.5	0.4	0.8
2	COD (mg/L)	12	8.8	0.8	4.5
3	DO (mg/L)	12	7.7	5.8	6.7
4	DO_SAT% (%)	12	96	74	87
5	FCol-MPN (MPN/100mL)	12	16000	2	5718
6	Tcol-MPN (MPN/100mL)	12	16000	80	6415
	TRACE & TOXIC				
1	As (µg/L)	1	0.4	0.4	0.4
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.0	0.0	0
4	Cu (µg/L)	6	1.7	1.0	1.1
5	Hg (µg/L)	1	0.4	0.4	0.4
6	Ni (µg/L)	1	2.7	2.7	2.7
7	Pb (µg/L)	1	0.0	0.0	0
8	Zn (µg/L)	6	29.2	0.1	5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	73	31	51
2	HAR_Total (mgCaCO3/L)	12	122	53	91
3	Na% (%)	12	39	17	23
4	RSC (-)	12	0.5	0.0	0.2
5	SAR (-)	12	1.2	0.4	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	3000	5753	2122	6818	4584	4090	3769	2687	8445	3623	4813	6418	3501	3163	5320
2	EC_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	166	186	148	186	172	215	184	161	191	195	186	242	163	177	176
4	pH_FLD (pH units)															7.9
5	pH_GEN (pH units)	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	8.2
6	TDS (mg/L)							125	102	138	126	152	152	132	170	127
7	Temp (deg C)	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	30.4
8	Turb (NTU)							54.2	8.9	40.9	5.3	25.4	5.3	103.2	159.0	247.4
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	0.8
2	ALK-TOT (mgCaCO3/L)	65	76	66	78	71	72	65	60	77	76	70	87	65	77	89
3	B (mg/L)	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)	22	24	17	18	18	15	15	14	18	17	15	20	14	15	17
5	Cl (mg/L)	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	6.4
6	CO3 (mg/L)	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	1.0
7	F (mg/L)	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	0.03
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	76	91	80	93	80	81	80	71	92	89	85	107	80	94	107
10	K (mg/L)	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	2.2
11	Mg (mg/L)	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	9.5
12	Na (mg/L)	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	10.9
13	NH3-N (mg N/L)	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	0.01
14	NO2+NO3 (mg N/L)	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	0.82
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	0.36
16	NO3-N (mgN/L)	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	0.46
17	o-PO4-P (mg P/L)	0.055	0.019	0.042	0.028			0.018	0.009	0.012	0.018	0.162	0.125	0.209	0.150	0.049
18	P-Tot (mgP/L)					0.032	0.009									
19	SiO2 (mg/L)	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	15.6
20	SO4 (mg/L)	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	9.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.5	0.5	0.5	0.7	0.9	0.5	0.9	0.7	0.9	1.2	0.7	0.7	0.8	1.4	0.8
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	4.8
3	DO (mg/L)	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		6.3
4	DO_SAT% (%)	82	76	83	84	79	78	76	74	81	79	77	77	81		84
5	FCol-MPN (MPN/100mL)	170	1215	163	833	6266	8754	6924	7184	7168	8446	3946	4426	6952	6040	8480
6	Tcol-MPN (MPN/100mL)	2177	2315	1887	1185	7940	10684	7224	8080	8436	11460	7100	10860	8406	11446	8700
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)	54	61	43	45	46	38	38	35	44	42	38	50	35	38	43
2	HAR_Total (mgCaCO3/L)	69	77	65	67	63	69	72	63	74	71	78	94	66	72	83
3	Na% (%)	24	20	22	25	25	33	22	20	23	30	26	22	32	30	22
4	RSC (-)	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	0.2
5	SAR (-)	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	0.5
	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	571.2
2	EC_FLD (µmho/cm)															319
3	EC_GEN (µmho/cm)	274	196	138	259	259	238	214	261	256	291	257	261	188	438	304
4	pH_FLD (pH units)														8.2	8.5
5	pH_GEN (pH units)	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	8.4
6	TDS (mg/L)							145	153	193	176	176	166	145	104	135
7	Temp (deg C)	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	27.0
8	Turb (NTU)							6.9	1.1	4.5	0.5	1.5	18.8	3.1	5.0	2.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	1.9
2	ALK-TOT (mgCaCO3/L)	106	98	70	104	103	90	82	117	103	117	112	103	84	86	112
3	B (mg/L)	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)	34	32	19	23	25	17	18	24	23	23	21	22	18	17	23
5	Cl (mg/L)	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	7.5
6	CO3 (mg/L)	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	2.3
7	F (mg/L)	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	0.30
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	116	118	76	107	108	106	91	130	105	128	135	126	102	101	132
10	K (mg/L)	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	2.9
11	Mg (mg/L)	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	11.2
12	Na (mg/L)	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	16.8
13	NH3-N (mg N/L)	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	0.38
14	NO2+NO3 (mg N/L)	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	0.30
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	0.01
16	NO3-N (mgN/L)	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	0.29
17	o-PO4-P (mg P/L)	0.005	0.011	0.011	0.013			0.006	0.021	0.019	0.032	0.019	0.053	0.082	0.065	0.053
18	P-Tot (mgP/L)					0.010	0.099									
19	SiO2 (mg/L)	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	13.1
20	SO4 (mg/L)	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	8.2

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.1
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	3.3
3	DO (mg/L)	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	7.1
4	DO_SAT% (%)	87	86	76	92	78	83	85	86	84	86	90	86	90	93	90
5	FCol-MPN (MPN/100mL)	120	40	85	1840	11433	660	1215	6918	16000	4358	4078	4110	1040	1208	2408
6	Tcol-MPN (MPN/100mL)	5605	65	155	4027	16000	935	1223	12085	16000	4983	4408	4290	7100	9950	4225
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		1.0
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		0.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	85	79	47	56	63	44	46	59	56	58	53	54	45	42	57
2	HAR_Total (mgCaCO3/L)	110	85	56	91	101	84	84	117	100	109	101	103	82	77	104
3	Na% (%)	25	23	29	24	22	21	22	17	23	26	28	30	28	27	25
4	RSC (-)	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	0.2
5	SAR (-)	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	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	268.7
2	EC_FLD (µmho/cm)															165
3	EC_GEN (µmho/cm)	174	147	134	230	266	236	152	161	166	185	219	262	182	229	166
4	pH_FLD (pH units)														8.5	8.5
5	pH_GEN (pH units)	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	8.0
6	TDS (mg/L)							103	103	129	129	185	188	122	94	109
7	Temp (deg C)	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	31.3
8	Turb (NTU)							0.4	0.6	0.9	0.3	0.7	3.7	3.3	6.3	5.7
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	0.0
2	ALK-TOT (mgCaCO3/L)	69	56	64	82	110	84	58	70	63	68	72	90	68	56	75
3	B (mg/L)	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)	22	14	16	16	18	14	13	13	13	12	15	20	13	11	23
5	Cl (mg/L)	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	11.3
6	CO3 (mg/L)	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	0.0
7	F (mg/L)	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	0.20
8	Fe (mg/L)	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	0.0
9	HCO3 (mg/L)	80	57	78	84	131	103	71	77	70	79	87	107	83	62	92
10	K (mg/L)	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	2.1
11	Mg (mg/L)	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	7.2
12	Na (mg/L)	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	10.8
13	NH3-N (mg N/L)	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	0.42
14	NO2+NO3 (mg N/L)	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	0.71
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	0.03
16	NO3-N (mgN/L)	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	0.69
17	o-PO4-P (mg P/L)	0.010	0.005	0.008	0.025			0.016	0.007	0.048	0.004	0.063	0.001	0.148	0.108	0.093
18	P-Tot (mgP/L)					0.122	0.228									
19	SiO2 (mg/L)	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	12.4
20	SO4 (mg/L)	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	10.7

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	0.6
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	5.6
3	DO (mg/L)	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	6.7
4	DO_SAT% (%)	86	88	84	77	79	72	79	85	81	81	72	88	75	87	90
5	FCol-MPN (MPN/100mL)	2100	0	30	9500	5403	6567	1780	10787	8380	317	827	5335	8	3843	5527
6	Tcol-MPN (MPN/100mL)	11000	40	30	12333	5417	6700	3123	10800	10723	557	3077	5335	367	11133	5527
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	0.4
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	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	0.0
4	Cu (µg/L)		2.3	0.0							1.0	4.8	2.1			1.2
5	Hg (µg/L)	0.2				0.1	0.8				0.0	0.9	0.0	0.1	0.0	0.4
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	2.7
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	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	9.8
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	55	35	39	39	44	34	33	34	33	30	36	51	33	28	58
2	HAR_Total (mgCaCO3/L)	69	49	51	69	107	75	58	72	67	58	70	95	63	49	88
3	Na% (%)	25	22	26	28	23	29	22	21	25	28	33	34	32	28	21
4	RSC (-)	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	0.0
5	SAR (-)	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	0.5
	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	: 2016-2017
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 : 2016-2017

Station Name : Bhadrachalam (AG000E7)

Local River : Godavari

River Water Analysis

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	5.667	1791	5791	6842	11379	919.8	285.5	101.2	175.2	106.2	68.59	19.64
2	Colour_Cod (-)	Clear	Light Brown	Brown	Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	868	267	617	562	590	751	781	733	391	734	493	435
4	EC_GEN (µmho/cm)	420	158	205	125	184	264	291	294	226	229	330	360
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)	6.9	5.9	6.0	5.4	5.6	6.1	6.5	7.2	5.3	6.9	6.5	7.1
7	pH_GEN (pH units)	8.8	8.2	8.2	8.0	8.2	8.7	8.5	8.6	8.1	8.4	8.4	8.3
8	TDS (mg/L)	264	96	169	109	110	148	170	159	196	189	220	227
9	Temp (deg C)	32.0	25.0	29.0	28.0	26.5	28.0	27.5	25.0	26.0	26.0	29.0	30.0
10	Turb (NTU)	3.0	411.0	167.0	138.0	14.0	0.1	0.1	0.1	7.0	4.0	7.0	10.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	3.0	0.0	0.0	0.0	0.0	4.0	4.1	4.1	0.0	9.5	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	144	128	95	107	102	116	118	118	120	95	137	155
3	Ca (mg/L)	30	22	21	16	27	27	27	27	28	32	40	29
4	Cl (mg/L)	36.9	8.9	6.2	1.4	7.0	10.9	12.8	13.5	14.8	15.2	19.4	42.1
5	CO3 (mg/L)	3.6	0.0	0.0	0.0	0.0	4.8	4.9	4.9	0.0	11.4	0.0	0.0
6	F (mg/L)	0.42	0.34	0.00	0.02	0.01	0.01	0.18	0.24	0.97	0.29	0.52	0.39
7	Fe (mg/L)	0.0	0.0	0.1	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0
8	HCO3 (mg/L)	168	156	116	131	125	132	134	134	147	93	167	190
9	K (mg/L)	4.4	2.8	2.2	1.5	1.9	2.1	2.2	3.5	5.0	2.6	2.8	3.4
10	Mg (mg/L)	16.0	13.1	12.1	8.5	12.7	14.8	14.9	14.7	8.7	16.9	18.1	21.6
11	Na (mg/L)	44.2	11.6	11.5	7.1	6.7	17.7	8.7	20.0	43.9	23.3	26.5	28.5
12	NH3-N (mg N/L)	0.01	0.04	0.01	0.02	0.01	0.01		0.01	0.01	0.01	2.70	0.20
13	NO2+NO3 (mg N/L)	0.38	0.94	1.71	0.64	0.55	0.29	0.08	0.03	0.48	0.46	0.90	0.81
14	NO2-N (mgN/L)	0.00	0.00	1.66	0.01	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.01
15	NO3-N (mgN/L)	0.38	0.94	0.05	0.64	0.55	0.29	0.04	0.03	0.48	0.46	0.90	0.80
16	o-PO4-P (mg P/L)	0.119	0.145		0.005	0.024	0.038	0.052	0.100	0.070	0.240	0.030	0.130
17	SiO2 (mg/L)	22.1	20.0	22.5	12.0	15.0	16.4	15.8	9.0	15.7	13.0	20.2	22.5
18	SO4 (mg/L)	16.7	8.8	3.8	0.0	5.4	10.4	19.8	20.1	30.6	50.2	47.8	30.8

Water Quality Datasheet for the period : 2016-2017

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.0	0.7	1.7	0.6	0.4	1.2	1.2	1.9	2.2	2.2	0.6	0.5
2	COD (mg/L)	6.3	13.6	7.8	15.7	1.4	1.3	5.4	14.3	3.2	10.9	9.2	0.8
3	DO (mg/L)	5.6	6.3	5.9	6.1	6.2	6.9	7.4	7.6	7.0	8.5	6.6	6.3
4	DO_SAT% (%)	77	76	77	78	76	89	93	92	86	105	86	83
5	FCol-MPN (MPN/100mL)	5000	80	16000	9000	16000	800	2400	3400	500	220	500	1300
6	Tcol-MPN (MPN/100mL)	5000	16000	16000	9000	16000	1100	2400	9000	2400	16000	500	1300
	TRACE & TOXIC												
1	As (µg/L)											0.5	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Cu (µg/L)							1.0	1.0	1.0	1.0	5.2	1.0
5	Hg (µg/L)											0.3	
6	Ni (µg/L)											3.1	
7	Pb (µg/L)											0.0	
8	Zn (µg/L)							0.1	0.1	0.1	0.1	12.8	0.1
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	76	56	52	39	69	68	69	68	69	79	99	72
2	HAR_Total (mgCaCO3/L)	143	111	103	75	121	129	131	129	105	150	174	162
3	Na% (%)	39	18	19	17	11	23	13	25	46	25	25	27
4	RSC (-)	0.0	0.4	0.0	0.7	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0
5	SAR (-)	1.6	0.5	0.5	0.4	0.3	0.7	0.3	0.8	1.9	0.8	0.9	1.0
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	365	40088	5.667	2563
2	EC_FLD (µmho/cm)	12	868	267	602
3	EC_GEN (µmho/cm)	12	420	125	257
4	pH_FLD (pH units)	12	7.2	5.3	6.3
5	pH_GEN (pH units)	12	8.8	8.0	8.4
6	TDS (mg/L)	12	264	96	171
7	Temp (deg C)	12	32.0	25.0	27.7
8	Turb (NTU)	12	411.0	0.1	63.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	9.5	0.0	2
2	ALK-TOT (mgCaCO3/L)	12	155	95	120
3	Ca (mg/L)	12	40	16	27
4	Cl (mg/L)	12	42.1	1.4	15.8
5	CO3 (mg/L)	12	11.4	0.0	2.5
6	F (mg/L)	12	0.97	0.00	0.28
7	Fe (mg/L)	12	0.2	0.0	0
8	HCO3 (mg/L)	12	190	93	141
9	K (mg/L)	12	5.0	1.5	2.9
10	Mg (mg/L)	12	21.6	8.5	14.3
11	Na (mg/L)	12	44.2	6.7	20.8
12	NH3-N (mg N/L)	11	2.70	0.01	0.27
13	NO2+NO3 (mg N/L)	12	1.71	0.03	0.61
14	NO2-N (mgN/L)	12	1.66	0.00	0.14
15	NO3-N (mgN/L)	12	0.94	0.03	0.46
16	o-PO4-P (mg P/L)	11	0.240	0.005	0.087
17	SiO2 (mg/L)	12	22.5	9.0	17
18	SO4 (mg/L)	12	50.2	0.0	20.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	2.2	0.4	1.2
2	COD (mg/L)	12	15.7	0.8	7.5
3	DO (mg/L)	12	8.5	5.6	6.7
4	DO_SAT% (%)	12	105	76	85
5	Fcol-MPN (MPN/100mL)	12	16000	80	4600
6	Tcol-MPN (MPN/100mL)	12	16000	500	7892
	TRACE & TOXIC				
1	As (µg/L)	1	0.5	0.5	0.5
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.0	0.0	0
4	Cu (µg/L)	6	5.2	1.0	1.7
5	Hg (µg/L)	1	0.3	0.3	0.3
6	Ni (µg/L)	1	3.1	3.1	3.1
7	Pb (µg/L)	1	0.0	0.0	0
8	Zn (µg/L)	6	12.8	0.1	2.2
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	99	39	68
2	HAR_Total (mgCaCO3/L)	12	174	75	128
3	Na% (%)	12	46	11	24
4	RSC (-)	12	0.7	0.0	0.1
5	SAR (-)	12	1.9	0.3	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2006-2017

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters																				
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	PHYSICAL																				
1	Q (cumec)	5945	2847	2220	8385	3641	4483	7440	2994	2383	5162	409.6	208.8	195.5	677.4	233.5	345.5	1165	276.2	180.4	370.4
2	EC_FLD (µmho/cm)										581									520	664
3	EC_GEN (µmho/cm)	334	301	289	231	324	260	232	753	210	218	355	358	309	334	351	339	328	253	548	269
4	pH_FLD (pH units)										6.0									6.6	6.3
5	pH_GEN (pH units)	8.3	8.3	8.3	7.9	8.3	8.0	8.0	7.8	7.7	8.3	8.3	8.4	8.4	8.4	8.4	8.2	8.1	8.1	8.4	8.5
6	TDS (mg/L)		194	176	157	284	188	159	455	168	150		232	186	226	222	222	207	201	170	168
7	Temp (deg C)	28.6	29.0	29.3	30.3	30.0	28.6	28.6	30.2	26.9	28.1	23.1	27.3	25.6	26.4	26.8	25.3	27.5	26.3	26.1	26.6
8	Turb (NTU)		20.9	13.6	32.0	4.0	22.8	14.4	85.2	132.6	146.6		0.9	1.6	4.3	0.0	1.3	19.8	1.8	7.8	1.8
	CHEMICAL																				
1	Alk-Phen (mgCaCO3/L)	4.6	5.4	6.5	4.7	5.0	0.0	0.9	0.0	0.0	0.6	5.4	8.5	8.8	10.2	4.0	1.1	0.0	0.0	2.9	3.0
2	ALK-TOT (mgCaCO3/L)	117	99	92	90	109	93	96	198	86	115	137	133	129	136	152	135	136	120	132	118
3	B (mg/L)	0.09	0.18	0.12	0.11	0.13	0.19	0.09	0.18	0.05		0.20	0.02	0.15	0.15	0.19	0.15	0.01	0.16	0.00	
4	Ca (mg/L)	21	21	21	18	21	19	23	38	17	23	26	27	29	19	27	27	28	29	25	27
5	Cl (mg/L)	25.7	26.6	23.6	19.2	29.2	17.9	17.3	33.0	9.7	12.1	27.5	26.3	21.5	27.1	18.8	16.3	14.9	12.6	10.7	13.0
6	CO3 (mg/L)	5.6	6.5	7.8	5.7	6.0	0.0	1.0	0.0	0.0	0.7	6.5	10.2	10.7	12.3	4.8	1.3	0.0	0.0	3.5	3.7
7	F (mg/L)	0.45	0.39	0.42	0.28	0.33	0.16	0.52	0.42	0.22	0.16	0.45	0.45	0.38	0.34	0.61	0.57	0.28	0.28	0.20	0.35
8	Fe (mg/L)	0.1	0.2	0.2	0.3	0.2	0.3	0.1	0.1	0.0	0.0	0.2	0.3	0.2	0.2	0.2	0.0	0.1	0.1	0.0	0.1
9	HCO3 (mg/L)	132	107	96	98	121	114	115	241	105	139	155	141	136	141	175	162	166	146	154	137
10	K (mg/L)	2.7	2.5	2.9	2.7	3.0	2.7	3.0	3.0	2.6	2.6	2.0	2.9	2.6	2.6	2.6	2.0	2.9	2.4	2.3	3.2
11	Mg (mg/L)	12.1	12.1	11.4	9.7	12.6	11.5	13.0	23.7	9.2	12.5	14.3	17.1	14.8	21.2	15.5	14.8	15.9	13.1	13.2	13.3
12	Na (mg/L)	25.3	19.7	18.2	15.8	22.6	18.3	24.1	81.0	16.4	16.2	24.4	20.4	16.7	21.1	24.5	25.6	26.3	22.6	20.9	22.6
13	NH3-N (mg N/L)	0.25	0.07	0.18	0.07	0.30	0.01	0.07	0.02	0.01	0.01	0.16	0.13	0.06	0.15	0.18	0.04	0.00	0.19	0.01	0.00
14	NO2+NO3 (mg N/L)	1.33	0.63	0.47	0.47	0.45	0.54	0.77	0.98	0.55	0.85	0.56	0.12	0.13	0.26	0.17	0.76	0.47	0.08	0.27	0.22
15	NO2-N (mgN/L)	0.03	0.10	0.03	0.02	0.01	0.00	0.00	0.01	0.01	0.33	0.05	0.03	0.01	0.02	0.02	0.00	0.00	0.02	0.00	0.01
16	NO3-N (mgN/L)	1.29	0.53	0.44	0.45	0.44	0.54	0.77	0.97	0.54	0.51	0.51	0.09	0.12	0.25	0.15	0.76	0.47	0.06	0.26	0.21
17	o-PO4-P (mg P/L)		0.009	0.015	0.007	0.079	0.157	0.043	0.202	0.146	0.073		0.005	0.040	0.013	0.038	0.067	0.208	0.112	0.061	0.065
18	P-Tot (mgP/L)	0.020										0.117									
19	SiO2 (mg/L)	17.6	16.8	17.2	14.3	24.2	13.7	15.9	18.7	15.4	18.3	16.3	17.6	13.9	34.3	13.0	18.5	17.2	17.5	14.7	14.2
20	SO4 (mg/L)	12.2	12.2	13.9	10.1	17.2	15.4	22.7	24.9	19.8	6.9	14.3	14.5	13.7	15.0	13.6	19.3	25.5	23.3	17.6	20.2

Water Quality Seasonal Average for the period: 2006-2017

Station Name : Bhadrachalam (AG000E7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters																				
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2007-2008	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL																				
1	BOD3-27 (mg/L)	0.5	0.5	0.8	0.9	1.0	0.7	0.6	0.9	1.0	0.9	0.6	0.8	0.7	1.1	0.7	0.4	1.0	0.8	0.7	1.6
2	COD (mg/L)	28.9	3.8	5.1	4.7	7.1	9.4	6.8	8.7	10.1	8.9	16.8	2.9	4.9	3.9	5.7	17.7	5.9	5.0	3.9	6.1
3	DO (mg/L)	5.8	5.8	5.5	5.4	5.8	6.2	6.4	6.1		6.0	6.4	6.1	6.8	7.1	6.8	6.9	7.1	7.7	7.1	7.2
4	DO_SAT% (%)	75	75	72	72	76	80	83	81		77	74	77	82	88	84	83	90	95	87	90
5	FCol-MPN (MPN/100mL)	12900	7264	10140	9700	12058	7400	4306	7156	7284	9216	9350	12750	13250	16000	8628	4295	703	8065	717	1775
6	Tcol-MPN (MPN/100mL)	13060	7748	10460	9726	12075	8480	9906	8046	13500	12400	9850	13250	14250	16000	9325	8658	1265	8133	7667	3725
7	TOC (mg/L)	0.9	3.0	1.7	3.0	2.1	1.7	0.4	18.2	2.0		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					1.3	0.0	0.0	0.0			0.4		
3	Cr (µg/L)	21.8					2.1	2.1					0.0	0.0	0.4	1.2			21.5		
4	Cu (µg/L)						0.7	2.5								10.5			2.0		1.0
5	Hg (µg/L)	0.0						0.4													
6	Ni (µg/L)	8.5					4.7	13.6					2.9	0.4	0.6	2.0			0.5		
7	Pb (µg/L)	13.0					0.0	0.4					16.0	2.0	12.8	0.6			16.7		
8	Zn (µg/L)	118.7					13.7	2.0					100.2	0.0	22.1	19.8			27.0		0.1
	CHEMICAL INDICES																				
1	HAR_Ca (mgCaCO3/L)	53	53	51	44	52	46	57	94	43	58	65	66	72	48	69	67	71	72	63	68
2	HAR_Total (mgCaCO3/L)	103	104	99	85	104	94	111	193	82	110	124	137	133	136	133	129	137	126	118	123
3	Na% (%)	33	26	24	24	29	27	29	34	29	21	29	24	21	25	28	30	29	27	27	27
4	RSC (-)	0.3	0.1	0.0	0.1	0.1	0.3	0.0	0.2	0.1	0.2	0.3	0.0	0.0	0.1	0.4	0.2	0.1	0.1	0.3	0.1
5	SAR (-)	1.1	0.8	0.7	0.7	0.9	0.8	1.0	1.8	0.8	0.6	0.9	0.8	0.6	0.8	0.9	1.0	1.0	0.9	0.8	0.9
	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	0.0	0.0	0.0					
5	Endos (µg/L)												0.1	0.1	0.0	0.0					

Water Quality Seasonal Average for the period: 2006-2017

Station Name : Bhadrachalam (AG000E7)

Local River : Godavari

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Summer										
		Mar - May										
		2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL											
1	Q (cumec)		138.6	30.02	22.85	95.23	35.22	79.40	107.6	65.03	7.691	64.81
2	EC_FLD (µmho/cm)										924	554
3	EC_GEN (µmho/cm)	506	466	404	393	397	381	436	416	357	494	306
4	pH_FLD (pH units)										7.0	6.8
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	8.4
6	TDS (mg/L)			300	231	278	227	263	269	242	246	212
7	Temp (deg C)	27.7	26.2	30.0	30.0	29.3	29.3	29.7	29.3	29.3	28.0	28.3
8	Turb (NTU)			0.4	0.4	1.4	0.0	0.8	4.7	5.0	15.3	7.0
	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	3.2
2	ALK-TOT (mgCaCO3/L)	168	168	135	143	152	151	162	158	146	138	129
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	33
5	Cl (mg/L)	36.3	31.7	39.5	39.9	37.5	30.6	25.7	22.4	18.6	24.2	25.6
6	CO3 (mg/L)	6.3	7.3	12.1	15.6	12.9	5.1	3.4	0.0	1.4	5.9	3.8
7	F (mg/L)	0.18	0.39	0.73	0.44	0.44	1.19	0.95	0.33	0.39	0.29	0.40
8	Fe (mg/L)	0.1	0.3	0.2	0.2	0.5	0.2	0.1	0.3	0.1	0.0	0.0
9	HCO3 (mg/L)	192	190	140	142	160	174	190	193	175	157	150
10	K (mg/L)	2.5	3.8	3.9	3.7	3.6	3.4	3.4	3.0	3.0	3.2	3.0
11	Mg (mg/L)	21.4	21.2	19.5	17.8	21.7	15.1	18.2	17.2	17.5	16.0	18.9
12	Na (mg/L)	42.6	40.0	26.7	35.4	33.8	32.6	36.4	33.7	28.1	34.1	26.1
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	0.97
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	0.72
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	0.00
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	0.72
17	o-PO4-P (mg P/L)			0.000	0.013	0.015	0.019	0.070	0.001	0.100	0.077	0.133
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	18.6
20	SO4 (mg/L)	23.7	19.7	22.7	24.5	26.0	25.2	22.9	28.5	25.9	23.8	42.9

Water Quality Seasonal Average for the period: 2006-2017

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	2017
	BIOLOGICAL/BACTERIOLOGIC											
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	1.1
2	COD (mg/L)	20.0	6.3	2.3	10.5	5.8	7.0	3.6	5.7	4.1	2.3	7.0
3	DO (mg/L)	6.1	5.7	6.1	6.0	6.2	6.2	6.6	6.3	5.8	6.4	7.1
4	DO_SAT% (%)	78	70	75	79	80	81	86	82	75	81	91
5	FCol-MPN (MPN/100mL)	510	1667	2167	10933	7433	1667	990	180	14	7233	673
6	Tcol-MPN (MPN/100mL)	610	2133	2933	11100	9133	4133	7100	390	1070	11600	5933
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	0.5
2	Cd (µg/L)	3.0	0.7	1.5	0.0	0.0	0.1	1.1	0.0	1.0	0.0	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	0.0
4	Cu (µg/L)						5.0	0.6	3.0			2.4
5	Hg (µg/L)	4.5	0.2				1.8	0.5	0.4	0.2	0.0	0.3
6	Ni (µg/L)	1.0	6.7	0.0	0.3	1.3	2.4	9.6	4.5	4.9	0.0	3.1
7	Pb (µg/L)	54.0	19.1	15.0	0.0	14.8	8.9	4.1	0.0	12.0	0.0	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	4.3
	CHEMICAL INDICES											
1	HAR_Ca (mgCaCO3/L)	76	49	68	62	58	68	80	74	77	68	83
2	HAR_Total (mgCaCO3/L)	165	138	150	136	148	131	155	146	150	134	162
3	Na% (%)	35	38	27	35	33	35	33	33	29	35	26
4	RSC (-)	0.1	0.6	0.1	0.2	0.1	0.4	0.2	0.3	0.2	0.1	0.0
5	SAR (-)	1.4	1.5	1.0	1.3	1.2	1.2	1.3	1.2	1.0	1.3	0.9
	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	: 2016-2017
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°48'00"	Longitude	: 81°23'00"
	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 : 2016-2017

Station Name : Konta (AGC00C5)

Local River : Sabari

River Water Analysis

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	115.1	816.5	359.8	797.9	558.4	377.6	180.2	249.1	153.0	117.7	248.3	243.4
2	Colour_Cod (-)	Clear	Light Brown	Brown	Brown	Brown	Light Brown	Light Brown	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (μmho/cm)	399	399	98	67	113	134	115	93		140	93	103
4	EC_GEN (μmho/cm)	108	67	125	69	134	166	125	137	178	135	198	81
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)	5.5	5.0	5.7	4.9	5.4	5.9	7.0	6.9		6.5	6.7	6.1
7	pH_GEN (pH units)	8.2	8.5	8.0	7.9	8.2	8.2	8.2	7.5	8.2	8.2	7.4	7.7
8	TDS (mg/L)	57	45	110	58	75	91	81	74	112	79	68	54
9	Temp (deg C)	30.0	27.0	29.0	32.0	30.0	27.9	25.0	25.3	20.0	29.6	31.0	31.0
10	Turb (NTU)	1.0	421.0	222.0	94.0	11.0	0.1	0.1	0.1	18.0	14.0	22.0	22.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	52	42	48	81	81	91	69	58	83	93	71	36
3	Ca (mg/L)	10	12	10	15	14	20	15	9	17	31	21	10
4	Cl (mg/L)	1.7	4.2	1.3	1.2	3.2	1.8	1.8	1.7	3.2	3.9	4.0	20.3
5	CO3 (mg/L)	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	F (mg/L)	0.05	0.04	0.00	0.00	0.00	0.00	0.10	0.01	0.74	0.00	0.14	0.11
7	Fe (mg/L)	0.0	0.0	0.1	0.2	0.4	0.1	0.1	0.0	0.2	0.0	0.0	0.0
8	HCO3 (mg/L)	63	41	58	99	99	111	84	71	101	114	87	44
9	K (mg/L)	1.5	1.9	2.0	1.3	1.3	1.6	1.2	2.9	2.8	1.7	1.3	1.5
10	Mg (mg/L)	4.1	6.7	5.3	8.1	7.4	10.8	8.3	5.1	5.4	5.8	7.5	5.4
11	Na (mg/L)	5.4	3.7	6.3	4.0	6.8	7.4	6.3	6.7	9.7	6.0	3.5	3.4
12	NH3-N (mg N/L)	0.01	0.05	0.05	0.01	0.01	0.01		0.54	0.01	1.28	0.01	0.18
13	NO2+NO3 (mg N/L)	0.22	0.06	0.63	0.26	0.29	0.16	0.04	0.13	0.26	0.29	0.11	0.74
14	NO2-N (mgN/L)	0.00	0.00	0.49	0.00	0.00	0.01	0.03	0.03	0.00	0.00	0.00	0.01
15	NO3-N (mgN/L)	0.22	0.06	0.14	0.26	0.29	0.15	0.01	0.11	0.26	0.29	0.11	0.73
16	o-PO4-P (mg P/L)	0.014	0.111		0.006	0.001	0.043	0.049	0.040	0.030	0.200	0.030	0.010
17	SiO2 (mg/L)	10.8	22.1	21.4	21.8	17.5	13.9	11.2	10.3	12.3	9.3	12.3	12.6
18	SO4 (mg/L)	0.0	19.5	15.2	0.1	8.5	1.8	17.3	0.0	8.1	0.9	3.7	2.8

Water Quality Datasheet for the period : 2016-2017

Station Name : Konta (AGC00C5)

Division : Lower Godavari Div., Hyderabad

Local River : Sabari

River Water Analysis

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.7	0.7	0.4	0.6	0.4	0.9	0.8	2.8	1.9	0.7	1.0	0.6
2	COD (mg/L)	1.3	1.5	6.0	2.8	3.3	2.6	5.8	11.3	2.0	7.1	7.1	4.2
3	DO (mg/L)	6.0	7.1	6.7	6.8	6.7	7.1	7.8	6.9	7.4	7.5	6.6	6.3
4	DO_SAT% (%)	79	89	87	93	89	90	94	84	81	98	89	85
5	FCol-MPN (MPN/100mL)	2	2	5000	5000	500	1700	300	800	170	20	40	130
6	Tcol-MPN (MPN/100mL)	300	16000	9000	5000	9000	1700	300	5000	170	1300	40	230
	TRACE & TOXIC												
1	As (µg/L)											0.5	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Cu (µg/L)							1.0	1.0	1.0	1.0	2.1	1.0
5	Hg (µg/L)											0.2	
6	Ni (µg/L)											3.3	
7	Pb (µg/L)											0.0	
8	Zn (µg/L)							0.1	0.1	0.1	0.1	40.0	0.1
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	25	31	26	37	34	49	38	23	43	77	52	26
2	HAR_Total (mgCaCO3/L)	42	58	48	70	65	94	73	45	65	101	83	49
3	Na% (%)	21	12	21	11	18	14	16	23	23	11	8	13
4	RSC (-)	0.2	0.0	0.0	0.2	0.3	0.0	0.0	0.3	0.4	0.0	0.0	0.0
5	SAR (-)	0.4	0.2	0.4	0.2	0.4	0.3	0.3	0.4	0.5	0.3	0.2	0.2
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	372	4638	66.51	457.5
2	EC_FLD (µmho/cm)	11	399	67	159
3	EC_GEN (µmho/cm)	12	198	67	127
4	pH_FLD (pH units)	11	7.0	4.9	6
5	pH_GEN (pH units)	12	8.5	7.4	8
6	TDS (mg/L)	12	112	45	75
7	Temp (deg C)	12	32.0	20.0	28.1
8	Turb (NTU)	12	421.0	0.1	68.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	4.0	0.0	0.3
2	ALK-TOT (mgCaCO3/L)	12	93	36	67
3	Ca (mg/L)	12	31	9	15
4	Cl (mg/L)	12	20.3	1.2	4
5	CO3 (mg/L)	12	4.8	0.0	0.4
6	F (mg/L)	12	0.74	0.00	0.1
7	Fe (mg/L)	12	0.4	0.0	0.1
8	HCO3 (mg/L)	12	114	41	81
9	K (mg/L)	12	2.9	1.2	1.7
10	Mg (mg/L)	12	10.8	4.1	6.7
11	Na (mg/L)	12	9.7	3.4	5.8
12	NH3-N (mg N/L)	11	1.28	0.01	0.19
13	NO2+NO3 (mg N/L)	12	0.74	0.04	0.27
14	NO2-N (mgN/L)	12	0.49	0.00	0.05
15	NO3-N (mgN/L)	12	0.73	0.01	0.22
16	o-PO4-P (mg P/L)	11	0.200	0.001	0.049
17	SiO2 (mg/L)	12	22.1	9.3	14.6
18	SO4 (mg/L)	12	19.5	0.0	6.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	2.8	0.4	1
2	COD (mg/L)	12	11.3	1.3	4.6
3	DO (mg/L)	12	7.8	6.0	6.9
4	DO_SAT% (%)	12	98	79	88
5	FCol-MPN (MPN/100mL)	12	5000	2	1139
6	Tcol-MPN (MPN/100mL)	12	16000	40	4003
	TRACE & TOXIC				
1	As (µg/L)	1	0.5	0.5	0.5
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.0	0.0	0
4	Cu (µg/L)	6	2.1	1.0	1.2
5	Hg (µg/L)	1	0.2	0.2	0.2
6	Ni (µg/L)	1	3.3	3.3	3.3
7	Pb (µg/L)	1	0.0	0.0	0
8	Zn (µg/L)	6	40.0	0.1	6.8
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	77	23	38
2	HAR_Total (mgCaCO3/L)	12	101	42	66
3	Na% (%)	12	23	8	16
4	RSC (-)	12	0.4	0.0	0.1
5	SAR (-)	12	0.5	0.2	0.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	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	529.5
2	EC_FLD (µmho/cm)															215
3	EC_GEN (µmho/cm)	100	86	91	107	87	165	137	107	88	94	103	102	89	106	101
4	pH_FLD (pH units)															5.3
5	pH_GEN (pH units)	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	8.2
6	TDS (mg/L)							90	72	68	70	89	72	69	100	69
7	Temp (deg C)	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	29.6
8	Turb (NTU)							389.9	32.3	65.0	11.0	28.8	15.6	123.0	118.6	149.8
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	0.8
2	ALK-TOT (mgCaCO3/L)	38	39	44	37	39	48	51	43	44	39	45	44	40	52	61
3	B (mg/L)	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)	11	13	12	11	9	7	11	9	10	10	10	11	9	10	12
5	Cl (mg/L)	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	2.3
6	CO3 (mg/L)	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	1.0
7	F (mg/L)	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	0.02
8	Fe (mg/L)	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	0.2
9	HCO3 (mg/L)	46	47	54	45	47	59	62	50	54	48	55	54	49	64	72
10	K (mg/L)	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	1.6
11	Mg (mg/L)	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	6.3
12	Na (mg/L)	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	5.2
13	NH3-N (mg N/L)	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	0.03
14	NO2+NO3 (mg N/L)	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	0.29
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	0.10
16	NO3-N (mgN/L)	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	0.19
17	o-PO4-P (mg P/L)	0.046	0.040	0.030	0.014			0.019	0.015	0.004	0.025	0.151	0.032	0.217	0.213	0.033
18	P-Tot (mgP/L)					0.042	0.021									
19	SiO2 (mg/L)	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	18.7
20	SO4 (mg/L)	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	8.7

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.5	0.4	0.7	1.1	0.3	0.5	0.5	0.5	0.8	0.9	0.5	0.6	0.8	0.6	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	3.0
3	DO (mg/L)	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		6.7
4	DO_SAT% (%)	78	85	81	86	84	72	78	75	75	79	80	81	82		87
5	FCol-MPN (MPN/100mL)	547	2315	65	584	10060	7240	6586	7540	10634	8658	2040	798	7026	2840	2101
6	Tcol-MPN (MPN/100mL)	8943	5965	110	598	12900	7760	6634	8260	11440	8825	7600	8640	7960	11660	7860
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)	28	33	30	27	23	17	28	23	24	24	25	28	24	25	30
2	HAR_Total (mgCaCO3/L)	38	44	46	39	39	42	52	46	42	40	50	53	43	45	57
3	Na% (%)	33	13	43	23	22	37	21	14	18	17	28	22	26	27	17
4	RSC (-)	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	0.2
5	SAR (-)	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	0.3
	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	240.0
2	EC_FLD (µmho/cm)														630	114
3	EC_GEN (µmho/cm)	113	92	88	103	291	151	136	181	119	166	150	144	128	383	152
4	pH_FLD (pH units)														5.8	6.6
5	pH_GEN (pH units)	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	8.0
6	TDS (mg/L)							98	113	98	125	124	117	90	84	90
7	Temp (deg C)	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	24.5
8	Turb (NTU)							3.6	2.6	6.1	0.0	2.3	24.8	5.0	7.0	4.6
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	0.0
2	ALK-TOT (mgCaCO3/L)	47	40	45	40	111	52	62	90	56	82	73	63	61	82	75
3	B (mg/L)	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	13	9	11	32	11	15	21	11	18	14	15	16	16	15
5	Cl (mg/L)	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	2.1
6	CO3 (mg/L)	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	0.0
7	F (mg/L)	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	0.21
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	57	49	54	49	124	63	75	107	69	100	87	76	75	94	92
10	K (mg/L)	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	2.1
11	Mg (mg/L)	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	7.4
12	Na (mg/L)	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	7.5
13	NH3-N (mg N/L)	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	0.18
14	NO2+NO3 (mg N/L)	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	0.15
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	0.02
16	NO3-N (mgN/L)	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	0.13
17	o-PO4-P (mg P/L)	0.010	0.011	0.010	0.003			0.004	0.014	0.019	0.346	0.090	0.046	0.046	0.051	0.040
18	P-Tot (mgP/L)					0.015	0.168									
19	SiO2 (mg/L)	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	11.9
20	SO4 (mg/L)	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	6.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.6
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	5.4
3	DO (mg/L)	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	7.3
4	DO_SAT% (%)	87	84	79	90	76	84	85	83	85	85	92	87	88	80	87
5	FCol-MPN (MPN/100mL)	5570	130	40	8115	6200	3300	2775	10500	8838	1725	425	408	295	600	743
6	Tcol-MPN (MPN/100mL)	17500	205	70	8150	10833	3625	3925	16000	11750	5700	1208	1475	1065	4950	1793
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		1.0
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		0.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	37	32	21	26	79	27	38	52	27	44	35	39	40	41	38
2	HAR_Total (mgCaCO3/L)	51	43	30	39	114	57	60	89	56	77	70	72	67	74	69
3	Na% (%)	12	15	56	16	16	21	15	13	16	17	22	21	19	18	19
4	RSC (-)	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	0.2
5	SAR (-)	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	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	203.1
2	EC_FLD (µmho/cm)														515	112
3	EC_GEN (µmho/cm)	66	88	178	113	110	143	134	128	106	153	125	125	136	188	138
4	pH_FLD (pH units)														5.7	6.4
5	pH_GEN (pH units)	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	7.8
6	TDS (mg/L)							93	97	95	110	95	93	111	98	67
7	Temp (deg C)	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	30.5
8	Turb (NTU)							8.4	0.8	3.6	0.0	3.7	2.4	9.7	19.0	19.3
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	0.0
2	ALK-TOT (mgCaCO3/L)	33	39	72	44	49	55	53	67	45	72	54	58	72	61	67
3	B (mg/L)	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	11	16	13	11	10	13	13	11	14	12	14	13	13	21
5	Cl (mg/L)	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	9.4
6	CO3 (mg/L)	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	0.0
7	F (mg/L)	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	0.08
8	Fe (mg/L)	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	0.0
9	HCO3 (mg/L)	40	47	73	54	59	68	65	82	55	88	65	70	88	68	81
10	K (mg/L)	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	1.5
11	Mg (mg/L)	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	6.2
12	Na (mg/L)	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	4.3
13	NH3-N (mg N/L)	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	0.49
14	NO2+NO3 (mg N/L)	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	0.38
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	0.00
16	NO3-N (mgN/L)	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	0.38
17	o-PO4-P (mg P/L)	0.023	0.004	0.010	0.008			0.000	0.007	0.023	0.013	0.061	0.001	0.107	0.076	0.080
18	P-Tot (mgP/L)					0.151	0.194									
19	SiO2 (mg/L)	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	11.4
20	SO4 (mg/L)	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	2.5

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	0.8
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	6.2
3	DO (mg/L)	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	6.8
4	DO_SAT% (%)	80	82	85	84	78	80	82	85	82	84	78	81	76	80	90
5	FCol-MPN (MPN/100mL)	2100	750		5000	5607	1843	3857	6323	6233	1643	933	887	2	5913	63
6	Tcol-MPN (MPN/100mL)	11000	2100		6333	5673	3843	6207	6573	7233	4723	3267	3153	5513	6467	523
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	0.5
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	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	0.0
4	Cu (µg/L)										2.7	0.2	2.2			1.4
5	Hg (µg/L)					0.0	0.3				0.0	0.5	0.2	0.1	0.0	0.2
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	3.3
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	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	13.4
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	24	27	40	32	27	24	33	32	28	35	30	35	32	33	52
2	HAR_Total (mgCaCO3/L)	31	35	63	44	58	56	55	61	48	62	54	61	60	60	78
3	Na% (%)	16	14	48	14	11	17	17	16	17	17	22	20	21	16	11
4	RSC (-)	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	0.0
5	SAR (-)	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	0.2
	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	: 2016-2017
Site	: Sangam	Code	: Sangam
State	: Andhra Pradesh	District	Khammam
Basin	: Godavari	Independent River	: Godavari
Tributary	: Kinnerasani	Sub Tributary	: Mureru
Sub-Sub Tributary	: -	Local River	: Mureru
Division	: Lower Godavari Div., Hyderabad	Sub-Division	: Lower Godavari 1, Bhadrachalam
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 : 2016-2017

Station Name : Sangam (Sangam)

Local River : Mureru

River Water Analysis

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	51.56	10.92	33.02	57.57	5.190	3.133	1.031	0.183	0.000	0.000	0.000
2	Colour_Cod (-)	Clear	Brown	Brown	Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	701	804	580	590	802	1315	1248	1319	796	860	702	701
4	EC_GEN (µmho/cm)	461	349	269	359	188	837	447	411	1020	289	467	398
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	5.4	5.8	5.7	5.7	6.9	6.8	6.9	6.0	6.0	6.5	6.3
7	pH_GEN (pH units)	8.4	8.0	7.8	8.0	8.2	8.4	8.2	8.2	8.1	8.3	8.3	8.0
8	TDS (mg/L)	284	196	242	308	170	526	250	291	300	185	291	250
9	Temp (deg C)	28.0	25.0	28.0	28.0	29.0	29.0	27.0	28.0	28.0	28.0	28.0	28.0
10	Turb (NTU)	4.0	286.0	61.0	34.0	68.0	0.1	0.1	0.1	81.0	149.0	56.0	27.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	2.5	6.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	5.6	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	150	164	133	149	88	318	157	156	163	115	143	117
3	Ca (mg/L)	34	27	30	30	39	63	36	33	38	54	66	33
4	Cl (mg/L)	28.5	25.1	24.7	20.0	12.6	72.1	27.4	25.5	29.5	27.7	34.2	34.5
5	CO3 (mg/L)	3.0	7.2	0.0	0.0	0.0	2.4	0.0	0.0	0.0	6.8	0.0	0.0
6	F (mg/L)	1.01	1.04	0.04	0.44	0.22	0.18	0.76	0.66	1.08	1.20	1.14	1.07
7	Fe (mg/L)	0.0	0.1	0.0	0.1	0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0
8	HCO3 (mg/L)	177	185	162	182	108	383	191	191	199	126	174	143
9	K (mg/L)	7.3	4.7	4.4	4.1	3.3	15.6	4.6	3.9	11.1	5.4	6.1	6.2
10	Mg (mg/L)	19.0	15.5	17.2	16.1	9.4	34.5	19.8	17.7	11.9	11.6	11.9	19.3
11	Na (mg/L)	34.8	26.1	28.8	24.8	13.8	62.2	31.5	84.0	65.9	35.5	40.7	29.8
12	NH3-N (mg N/L)	0.01	0.01	0.01	0.02	0.01	0.01		0.35	0.01	0.01	0.66	0.01
13	NO2+NO3 (mg N/L)	0.25	0.75	1.47	1.04	1.32	0.56	0.15	0.25	0.41	0.20	1.21	0.89
14	NO2-N (mgN/L)	0.00	0.00	1.28	0.00	0.00	0.05	0.03	0.17	0.09	0.00	0.01	0.01
15	NO3-N (mgN/L)	0.25	0.75	0.19	1.04	1.32	0.51	0.12	0.08	0.32	0.20	1.20	0.88
16	o-PO4-P (mg P/L)	0.299	0.038		0.060	0.011	0.025	0.048	0.080	0.110	0.320	0.040	0.010
17	SiO2 (mg/L)	15.1	13.6	12.6	11.2	10.4	21.8	14.7	13.8	16.9	12.9	21.4	20.3
18	SO4 (mg/L)	19.8	11.3	11.0	19.8	27.4	28.8	21.5	116.4	40.6	65.0	146.3	61.0

Water Quality Datasheet for the period : 2016-2017

Station Name : Sangam (Sangam)

Division : Lower Godavari Div., Hyderabad

Local River : Mureru

River Water Analysis

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.5	1.1	1.0	1.3	0.3	0.9	1.3	1.5	2.2	3.1	0.4	1.0
2	COD (mg/L)	6.3	22.4	5.6	11.1	2.9	2.9	8.3	7.1	7.3	10.1	12.6	2.9
3	DO (mg/L)	6.0	6.5	5.9	6.0	6.7	7.1	7.1	8.3	6.0	9.4	6.4	6.4
4	DO_SAT% (%)	77	79	75	77	87	93	89	106	77	120	82	82
5	FCol-MPN (MPN/100mL)	9000	40	16000	16000	3000	5000	16000	20	220	1400	2	80
6	Tcol-MPN (MPN/100mL)	9000	16000	16000	16000	16000	5000	16000	3000	300	1400	40	80
	TRACE & TOXIC												
1	As (µg/L)											5.5	
2	Cd (µg/L)											0.4	
3	Cr (µg/L)											0.0	
4	Cu (µg/L)							1.0	1.0	1.0	1.0	6.2	1.0
5	Hg (µg/L)											0.5	
6	Ni (µg/L)											5.2	
7	Pb (µg/L)											1.0	
8	Zn (µg/L)							0.1	0.1	0.1	0.1	14.2	0.1
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	84	68	74	74	97	158	91	81	94	134	164	82
2	HAR_Total (mgCaCO3/L)	163	133	146	141	136	302	173	155	144	183	213	162
3	Na% (%)	31	29	29	27	18	30	28	53	48	29	29	28
4	RSC (-)	0.0	0.6	0.0	0.2	0.0	0.4	0.0	0.1	0.4	0.0	0.0	0.0
5	SAR (-)	1.2	1.0	1.0	0.9	0.5	1.6	1.0	2.9	2.4	1.1	1.2	1.0
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

Station Name : Sangam (Sangam)

Division : Lower Godavari Div., Hyderabad

Local River : Mureru

Sub-Division : Lower Godavari 1, Bhadrachalam

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	183.3	0.000	8.852
2	EC_FLD (µmho/cm)	12	1319	580	868
3	EC_GEN (µmho/cm)	12	1020	188	458
4	pH_FLD (pH units)	12	6.9	5.4	6.2
5	pH_GEN (pH units)	12	8.4	7.8	8.2
6	TDS (mg/L)	12	526	170	274
7	Temp (deg C)	12	29.0	25.0	27.8
8	Turb (NTU)	12	286.0	0.1	63.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	6.0	0.0	1.3
2	ALK-TOT (mgCaCO3/L)	12	318	88	154
3	Ca (mg/L)	12	66	27	40
4	Cl (mg/L)	12	72.1	12.6	30.2
5	CO3 (mg/L)	12	7.2	0.0	1.6
6	F (mg/L)	12	1.20	0.04	0.74
7	Fe (mg/L)	12	0.5	0.0	0.1
8	HCO3 (mg/L)	12	383	108	185
9	K (mg/L)	12	15.6	3.3	6.4
10	Mg (mg/L)	12	34.5	9.4	17
11	Na (mg/L)	12	84.0	13.8	39.8
12	NH3-N (mg N/L)	11	0.66	0.01	0.1
13	NO2+NO3 (mg N/L)	12	1.47	0.15	0.71
14	NO2-N (mgN/L)	12	1.28	0.00	0.14
15	NO3-N (mgN/L)	12	1.32	0.08	0.57
16	o-PO4-P (mg P/L)	11	0.320	0.010	0.095
17	SiO2 (mg/L)	12	21.8	10.4	15.4
18	SO4 (mg/L)	12	146.3	11.0	47.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	3.1	0.3	1.2
2	COD (mg/L)	12	22.4	2.9	8.3
3	DO (mg/L)	12	9.4	5.9	6.8
4	DO_SAT% (%)	12	120	75	87
5	Fcol-MPN (MPN/100mL)	12	16000	2	5564
6	Tcol-MPN (MPN/100mL)	12	16000	40	8235
	TRACE & TOXIC				
1	As (µg/L)	1	5.5	5.5	5.5
2	Cd (µg/L)	1	0.4	0.4	0.4
3	Cr (µg/L)	1	0.0	0.0	0
4	Cu (µg/L)	6	6.2	1.0	1.9
5	Hg (µg/L)	1	0.5	0.5	0.5
6	Ni (µg/L)	1	5.2	5.2	5.2
7	Pb (µg/L)	1	1.0	1.0	1
8	Zn (µg/L)	6	14.2	0.1	2.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	164	68	100
2	HAR_Total (mgCaCO3/L)	12	302	133	171
3	Na% (%)	12	53	18	32
4	RSC (-)	12	0.6	0.0	0.1
5	SAR (-)	12	2.9	0.5	1.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2013-2017

Station Name : Sangam (Sangam)

Local River : Mureru

River Water

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Flood				Winter				Summer			
		Jun - Oct				Nov - Feb				Mar - May			
		2013	2014	2015	2016	2013-2014	2014-2015	2015-2016	2016-2017	2014	2015	2016	2017
	PHYSICAL												
1	Q (cumec)	27.55	21.24	13.47	30.61	6.551	2.364	1.510	2.384	0.000	0.425	0.000	0.000
2	EC_FLD (µmho/cm)				695			743	1170			667	754
3	EC_GEN (µmho/cm)	382	522	421	325	460	419	704	679	487	535	603	385
4	pH_FLD (pH units)				5.8			6.3	6.6			6.4	6.3
5	pH_GEN (pH units)	8.0	8.1	7.7	8.1	8.0	8.0	8.3	8.2	8.0	8.1	8.2	8.2
6	TDS (mg/L)	209	330	306	240	296	300	267	342	290	379	296	242
7	Temp (deg C)	26.0	27.2	28.8	27.6	25.8	25.5	26.8	28.0	25.7	28.7	27.0	28.0
8	Turb (NTU)	14.2	22.8	149.6	90.6	38.0	10.0	25.8	20.3	24.3	13.7	85.3	77.3
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.0	0.8	0.0	1.7	0.0	0.0	1.7	0.5	0.0	1.2	2.7	1.9
2	ALK-TOT (mgCaCO3/L)	126	156	148	137	152	170	154	198	146	147	151	125
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	32	35	41	34	42	34	34	35	51
5	Cl (mg/L)	23.9	31.8	33.7	22.2	22.1	37.0	29.2	38.6	23.0	37.8	29.5	32.1
6	CO3 (mg/L)	0.0	1.0	0.0	2.0	0.0	0.0	2.0	0.6	0.0	1.4	3.2	2.3
7	F (mg/L)	0.68	1.02	0.91	0.55	0.95	1.16	0.78	0.67	0.85	0.66	0.65	1.14
8	Fe (mg/L)	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.6	0.0	0.0	0.0
9	HCO3 (mg/L)	153	188	181	163	186	208	183	241	178	177	178	148
10	K (mg/L)	3.8	5.1	5.2	4.7	3.6	5.3	5.4	8.8	4.8	6.2	6.2	5.9
11	Mg (mg/L)	16.0	20.0	18.7	15.4	20.8	21.4	19.3	21.0	19.4	19.2	19.3	14.3
12	Na (mg/L)	30.2	39.9	38.1	25.7	36.6	41.8	33.4	60.9	34.7	40.4	34.8	35.3
13	NH3-N (mg N/L)	0.07	0.05	0.02	0.01	0.00	0.05	0.00	0.12	0.03	0.01	0.01	0.22
14	NO2+NO3 (mg N/L)	0.73	0.88	0.68	0.97	0.65	0.32	0.45	0.34	1.46	0.36	0.60	0.76
15	NO2-N (mgN/L)	0.00	0.02	0.01	0.26	0.00	0.03	0.00	0.09	0.00	0.02	0.01	0.01
16	NO3-N (mgN/L)	0.73	0.86	0.67	0.71	0.65	0.30	0.45	0.25	1.46	0.34	0.58	0.76
17	o-PO4-P (mg P/L)	0.065	0.244	0.176	0.102	0.168	0.136	0.074	0.066	0.044	0.090	0.119	0.123

Water Quality Seasonal Average for the period: 2013-2017

Station Name : Sangam (Sangam)

Division : Lower Godavari Div., Hyderabad

Local River : Mureru

River Water

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	Flood				Winter				Summer			
		Jun - Oct				Nov - Feb				Mar - May			
		2013	2014	2015	2016	2013-2014	2014-2015	2015-2016	2016-2017	2014	2015	2016	2017
18	SiO ₂ (mg/L)	14.3	16.0	16.5	12.6	16.8	18.1	14.9	16.8	16.9	18.4	18.5	18.2
19	SO ₄ (mg/L)	27.1	43.4	44.1	17.8	42.5	44.9	48.7	51.8	49.1	60.5	54.8	90.8
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD ₃₋₂₇ (mg/L)	0.6	0.8	0.5	0.8	1.1	1.1	0.6	1.5	0.4	0.6	0.7	1.5
2	COD (mg/L)	7.3	15.5	5.4	9.6	5.3	5.4	6.2	6.4	4.8	7.6	2.9	8.5
3	DO (mg/L)	5.8	6.3		6.2	6.6	7.4	6.7	7.1	6.3	6.2	5.8	7.4
4	DO_SAT% (%)	71	80		79	81	90	84	91	77	80	73	95
5	FCol-MPN (MPN/100mL)	3877	6934	6022	8808	348	1108	2875	5310	1613	2	2767	494
6	Tcol-MPN (MPN/100mL)	10767	7506	13140	14600	733	2450	9750	6075	10710	1890	16000	507
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	5.5
2	Cd (µg/L)						0.4			0.0	3.0	0.0	0.4
3	Cr (µg/L)						0.9			0.2	0.0	0.0	0.0
4	Cu (µg/L)						1.6		1.0	4.0			2.7
5	Hg (µg/L)									0.2	0.1	0.0	0.5
6	Ni (µg/L)						0.5			9.1	10.6	0.0	5.2
7	Pb (µg/L)						2.6			0.0	19.0	0.0	1.0
8	Zn (µg/L)						5.0		0.1	6.2	19.0	2.1	4.8
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO ₃ /L)	71	87	83	79	88	103	85	106	85	85	87	127
2	HAR_Total (mgCaCO ₃ /L)	138	171	161	144	174	193	166	193	166	165	167	186
3	Na% (%)	31	33	33	27	31	31	30	40	30	34	30	28
4	RSC (-)	0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.2	0.0	0.1	0.0	0.0
5	SAR (-)	1.1	1.3	1.3	0.9	1.2	1.3	1.1	2.0	1.2	1.4	1.2	1.1
	PESTICIDES												

HISTORY SHEET

		Water Year	: 2016-2017
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 : 2016-2017

Station Name : Perur (AG000G7)

Local River : Godavari

River Water Analysis

Division : Lower Godavari Div., Hyderabad

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	7.916	1932	5971	7117	10854	650.9	235.5	142.9	126.8	130.6	47.40	8.095
2	Colour_Cod (-)	Clear	Brown	Brown	Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)	741	390	527	637	598	684		803	588	891	889	906
4	EC_GEN (µmho/cm)	452	182	208	199	88	296	306	330	263	322	356	359
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	6.9	6.3	5.7	5.7	6.3		6.7	6.2	6.7	6.5	7.8
7	pH_GEN (pH units)	8.6	8.0	8.2	8.2	8.0	8.6	8.3	8.4	8.0	8.3	8.1	8.2
8	TDS (mg/L)	250	161	184	162	48	172	175	171	215	197	212	223
9	Temp (deg C)	32.0	27.0	28.0	30.5	29.0	30.5	25.0	23.5	24.5	26.0	29.0	29.5
10	Turb (NTU)	2.0	420.0	150.0	91.0	26.0	0.1	0.1	0.1	14.0	17.0	8.0	6.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	3.0	0.0	0.0	0.0	0.0	6.0	3.0	3.0	0.0	7.6	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	180	80	101	74	50	137	113	131	143	137	163	167
3	Ca (mg/L)	27	12	20	16	8	29	27	27	31	38	44	32
4	Cl (mg/L)	22.3	6.3	6.0	2.0	3.9	8.2	11.8	10.7	16.0	15.0	18.7	38.4
5	CO3 (mg/L)	3.6	0.0	0.0	0.0	0.0	7.2	3.6	3.6	0.0	9.1	0.0	0.0
6	F (mg/L)	0.38	0.13	0.01	0.01	0.00	0.06	0.17	0.26	0.97	0.29	0.53	0.39
7	Fe (mg/L)	0.0	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
8	HCO3 (mg/L)	212	97	123	91	61	153	131	152	174	148	199	204
9	K (mg/L)	3.8	2.6	2.3	1.7	1.3	2.1	1.9	3.5	4.7	2.7	2.9	3.3
10	Mg (mg/L)	14.7	6.7	11.2	9.0	4.4	15.9	14.8	15.0	9.8	15.3	19.3	15.8
11	Na (mg/L)	39.7	11.7	12.9	8.1	5.4	18.1	17.8	19.9	47.1	24.9	30.0	25.9
12	NH3-N (mg N/L)	0.01	0.01	0.01	0.01	0.01	0.02		0.01	0.78	0.63	0.01	0.31
13	NO2+NO3 (mg N/L)	0.15	0.28	1.59	0.79	0.54	0.40	0.07	0.08	1.56	1.84	0.75	0.86
14	NO2-N (mgN/L)	0.00	0.06	1.53	0.01	0.00	0.15	0.01	0.01	0.00	0.00	0.11	0.01
15	NO3-N (mgN/L)	0.15	0.22	0.06	0.78	0.54	0.24	0.05	0.08	1.56	1.84	0.64	0.85
16	o-PO4-P (mg P/L)	0.300	0.040		0.013	0.010	0.047	0.078	0.060	0.080	0.180	0.040	0.270
17	SiO2 (mg/L)	23.4	12.7	16.2	12.3	12.4	18.8	16.6	7.0	16.1	13.3	18.4	21.9
18	SO4 (mg/L)	12.0	9.0	10.4	2.8	2.5	5.8	14.4	3.2	33.7	19.5	55.7	26.2

Water Quality Datasheet for the period : 2016-2017

Station Name : Perur (AG000G7)

Division : Lower Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Lower Godavari 1, Bhadrachalam

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.3	1.0	0.7	1.0	0.9	1.0	1.0	1.1	1.1	1.5	0.9	0.1
2	COD (mg/L)	4.2	8.3	4.7	3.7	3.2	1.6	7.3	10.9	1.2	8.0	2.9	8.4
3	DO (mg/L)	6.1	6.8	6.7	5.8	6.6	6.4	7.9	7.5	7.0	6.6	5.9	6.1
4	DO_SAT% (%)	83	85	86	77	86	84	96	88	83	81	77	79
5	FCol-MPN (MPN/100mL)	2	2	3000	800	16000	2400	16000	20	2	2	2	500
6	Tcol-MPN (MPN/100mL)	500	16000	16000	9000	16000	2400	16000	5000	700	40	40	500
	TRACE & TOXIC												
1	As (µg/L)											0.6	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											6.0	
4	Cu (µg/L)							1.0	1.0	1.0	1.0	2.1	1.0
5	Hg (µg/L)											0.7	
6	Ni (µg/L)											3.7	
7	Pb (µg/L)											0.0	
8	Zn (µg/L)							0.1	0.1	0.1	0.1	14.3	0.1
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	69	30	50	41	20	73	68	69	78	95	109	81
2	HAR_Total (mgCaCO3/L)	130	58	97	79	38	139	130	131	118	158	190	146
3	Na% (%)	39	30	22	18	23	22	23	24	45	25	25	27
4	RSC (-)	1.0	0.4	0.1	0.0	0.2	0.0	0.0	0.0	0.5	0.0	0.0	0.4
5	SAR (-)	1.5	0.7	0.6	0.4	0.4	0.7	0.7	0.8	1.9	0.9	1.0	0.9
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	365	35393	6.534	2625
2	EC_FLD (μmho/cm)	11	906	390	696
3	EC_GEN (μmho/cm)	12	452	88	280
4	pH_FLD (pH units)	11	7.8	5.7	6.5
5	pH_GEN (pH units)	12	8.6	8.0	8.2
6	TDS (mg/L)	12	250	48	181
7	Temp (deg C)	12	32.0	23.5	27.9
8	Turb (NTU)	12	420.0	0.1	61.2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	7.6	0.0	1.9
2	ALK-TOT (mgCaCO3/L)	12	180	50	123
3	Ca (mg/L)	12	44	8	26
4	Cl (mg/L)	12	38.4	2.0	13.3
5	CO3 (mg/L)	12	9.1	0.0	2.3
6	F (mg/L)	12	0.97	0.00	0.27
7	Fe (mg/L)	12	0.2	0.0	0
8	HCO3 (mg/L)	12	212	61	145
9	K (mg/L)	12	4.7	1.3	2.7
10	Mg (mg/L)	12	19.3	4.4	12.7
11	Na (mg/L)	12	47.1	5.4	21.8
12	NH3-N (mg N/L)	11	0.78	0.01	0.16
13	NO2+NO3 (mg N/L)	12	1.84	0.07	0.74
14	NO2-N (mgN/L)	12	1.53	0.00	0.16
15	NO3-N (mgN/L)	12	1.84	0.05	0.58
16	o-PO4-P (mg P/L)	11	0.300	0.010	0.102
17	SiO2 (mg/L)	12	23.4	7.0	15.8
18	SO4 (mg/L)	12	55.7	2.5	16.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.5	0.1	0.9
2	COD (mg/L)	12	10.9	1.2	5.4
3	DO (mg/L)	12	7.9	5.8	6.6
4	DO_SAT% (%)	12	96	77	84
5	Fcol-MPN (MPN/100mL)	12	16000	2	3228
6	Tcol-MPN (MPN/100mL)	12	16000	40	6848
	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	6.0	6.0	6
4	Cu (μg/L)	6	2.1	1.0	1.2
5	Hg (μg/L)	1	0.7	0.7	0.7
6	Ni (μg/L)	1	3.7	3.7	3.7
7	Pb (μg/L)	1	0.0	0.0	0
8	Zn (μg/L)	6	14.3	0.1	2.5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	109	20	65
2	HAR_Total (mgCaCO3/L)	12	190	38	118
3	Na% (%)	12	45	18	27
4	RSC (-)	12	1.0	0.0	0.2
5	SAR (-)	12	1.9	0.4	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	2486	3369	1894	3955	7563	5924	2914	1847	7256	4446	5004	3694	2913	2237	5176
2	EC_FLD (µmho/cm)															579
3	EC_GEN (µmho/cm)	241	229	224	244	214	247	283	289	210	260	237	255	289	219	226
4	pH_FLD (pH units)															6.2
5	pH_GEN (pH units)	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	8.2
6	TDS (mg/L)							191	182	146	192	181	180	217	166	161
7	Temp (deg C)	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	29.3
8	Turb (NTU)							35.1	7.6	58.6	4.7	21.8	8.2	49.6	67.0	137.8
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	0.6
2	ALK-TOT (mgCaCO3/L)	93	97	95	93	92	71	87	98	77	100	86	96	100	88	97
3	B (mg/L)	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)	26	27	28	24	21	16	22	18	17	18	21	22	21	19	17
5	Cl (mg/L)	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	8.1
6	CO3 (mg/L)	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	0.7
7	F (mg/L)	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	0.11
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	104	112	113	99	109	81	102	105	87	114	105	117	122	108	117
10	K (mg/L)	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	2.3
11	Mg (mg/L)	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	9.2
12	Na (mg/L)	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	15.6
13	NH3-N (mg N/L)	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	0.00
14	NO2+NO3 (mg N/L)	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	0.67
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	0.32
16	NO3-N (mgN/L)	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	0.35
17	o-PO4-P (mg P/L)	0.012	0.023	0.035	0.019			0.017	0.011	0.017	0.023	0.166	0.065	0.125	0.134	0.091
18	P-Tot (mgP/L)					0.036	0.010									
19	SiO2 (mg/L)	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	15.4
20	SO4 (mg/L)	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	7.3

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	0.8
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	4.8
3	DO (mg/L)	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		6.4
4	DO_SAT% (%)	73	78	78	74	76	71	73	69	74	80	79	81	80		83
5	FCol-MPN (MPN/100mL)				648	7480	9714	9662	2762	7420	13250	870	468	3727	2706	3961
6	Tcol-MPN (MPN/100mL)				648	10800	9742	9674	4396	8230	14250	3938	5000	5488	11434	11500
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)	66	67	70	61	52	40	55	45	43	44	52	55	53	46	42
2	HAR_Total (mgCaCO3/L)	96	89	97	84	79	74	91	97	79	95	93	104	95	86	80
3	Na% (%)	25	28	16	27	23	31	32	25	25	25	25	23	33	29	26
4	RSC (-)	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	0.4
5	SAR (-)	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	0.7
	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	289.0
2	EC_FLD (µmho/cm)														976	692
3	EC_GEN (µmho/cm)	342	277	243	379	398	312	369	298	340	342	345	358	259	607	299
4	pH_FLD (pH units)														6.7	6.4
5	pH_GEN (pH units)	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	8.3
6	TDS (mg/L)							241	180	230	243	210	230	194	172	183
7	Temp (deg C)	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	25.9
8	Turb (NTU)							1.6	1.6	2.2	0.0	1.8	11.0	2.8	5.5	3.6
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	3.0
2	ALK-TOT (mgCaCO3/L)	123	115	115	152	158	123	139	134	135	153	147	127	122	129	131
3	B (mg/L)	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)	34	39	29	38	26	24	29	32	26	28	26	26	27	25	29
5	Cl (mg/L)	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	11.7
6	CO3 (mg/L)	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	3.6
7	F (mg/L)	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	0.37
8	Fe (mg/L)	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	0.0
9	HCO3 (mg/L)	145	132	121	167	176	143	152	142	136	177	177	155	149	156	152
10	K (mg/L)	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	3.0
11	Mg (mg/L)	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	13.9
12	Na (mg/L)	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	25.7
13	NH3-N (mg N/L)	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	0.27
14	NO2+NO3 (mg N/L)	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	0.53
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	0.04
16	NO3-N (mgN/L)	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	0.48
17	o-PO4-P (mg P/L)	0.040	0.022	0.017	0.017			0.007	0.016	0.022	0.009	0.096	0.023	0.061	0.061	0.066
18	P-Tot (mgP/L)					0.017	0.108									
19	SiO2 (mg/L)	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	14.6
20	SO4 (mg/L)	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	14.3

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.1
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	5.2
3	DO (mg/L)	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	7.2
4	DO_SAT% (%)	83	84	78	88	87	80	80	81	84	79	87	90	92	76	88
5	FCol-MPN (MPN/100mL)				5363	3000	1275	4165	13250	16000	5383	79	634	976	4311	4606
6	Tcol-MPN (MPN/100mL)				5707	7733	2050	4233	16000	16000	8808	525	813	2551	8770	6025
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		1.0
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		0.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	85	97	73	96	65	60	73	79	65	69	64	66	66	63	72
2	HAR_Total (mgCaCO3/L)	126	111	94	125	140	106	141	137	129	132	134	136	119	114	129
3	Na% (%)	28	28	30	28	29	28	25	17	26	29	28	26	28	30	29
4	RSC (-)	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	0.1
5	SAR (-)	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	1.0
	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	62.03
2	EC_FLD (µmho/cm)														947	895
3	EC_GEN (µmho/cm)	398	397	327	456	445	466	498	379	396	462	443	429	379	493	346
4	pH_FLD (pH units)														6.6	7.0
5	pH_GEN (pH units)	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	8.2
6	TDS (mg/L)							291	233	293	311	338	254	229	223	211
7	Temp (deg C)	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	28.2
8	Turb (NTU)							0.4	0.9	0.9	0.0	0.8	4.0	5.0	6.0	10.3
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	2.5
2	ALK-TOT (mgCaCO3/L)	147	151	137	170	170	166	158	145	152	170	165	167	140	361	156
3	B (mg/L)	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)	33	36	37	31	25	20	30	26	24	26	30	30	27	27	38
5	Cl (mg/L)	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	24.0
6	CO3 (mg/L)	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	3.0
7	F (mg/L)	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	0.40
8	Fe (mg/L)	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	0.0
9	HCO3 (mg/L)	155	156	158	191	191	184	175	152	161	200	198	204	171	433	184
10	K (mg/L)	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	3.0
11	Mg (mg/L)	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	16.8
12	Na (mg/L)	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	27.0
13	NH3-N (mg N/L)	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	0.31
14	NO2+NO3 (mg N/L)	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	1.15
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	0.04
16	NO3-N (mgN/L)	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	1.11
17	o-PO4-P (mg P/L)	0.017	0.000	0.017	0.020			0.000	0.008	0.028	0.074	0.062	0.007	0.123	0.086	0.163
18	P-Tot (mgP/L)					0.109	0.309									
19	SiO2 (mg/L)	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	17.9
20	SO4 (mg/L)	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	33.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	0.8
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	6.4
3	DO (mg/L)	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	6.2
4	DO_SAT% (%)	83	78	74	71	73	79	75	73	78	80	75	78	76	76	79
5	FCol-MPN (MPN/100mL)				225	533	2400	2473	8390	907	827	5411	177	28	2367	168
6	Tcol-MPN (MPN/100mL)				1400	913	2400	3807	10740	1107	1730	5667	373	5403	8900	193
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	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	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	6.0
4	Cu (µg/L)										3.9	0.6	1.7			1.4
5	Hg (µg/L)					0.3	1.1				0.0	0.7	0.2	0.1	0.0	0.7
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	3.7
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	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	4.8
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	82	90	92	77	63	49	75	66	60	64	76	75	68	67	95
2	HAR_Total (mgCaCO3/L)	144	120	110	137	164	136	161	127	141	123	148	147	133	124	165
3	Na% (%)	39	28	33	31	34	36	30	32	34	36	31	33	33	35	26
4	RSC (-)	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	0.1
5	SAR (-)	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	0.9
	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	: 2016-2017
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 : 2016-2017

Station Name : Pathagudem (AGG00B5)

Local River : Indravathi

Division : Lower Godavari Div., Hyderabad

Sub-Division : Indravati SD, Jagdalpur

River Water Analysis

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	11.92	517.5	425.3	997.9	1076	120.1	99.05	38.79	20.46	9.710	4.649	1.429
2	Colour_Cod (-)	Clear	Brown	Brown	Brown		Clear	Clear		Clear	Clear	Clear	Clear
3	EC_FLD (µmho/cm)		261										668
4	EC_GEN (µmho/cm)	197	97	103	81	99	134	142	93	172	155	167	189
5	Odour_Code (-)	odour free	odour free	odour free	odour free		odour free	odour free		odour free	odour free	odour free	odour free
6	pH_FLD (pH units)		9.9										
7	pH_GEN (pH units)	8.7	7.5	7.8	7.8	8.2	8.2	8.2	8.1	8.0	8.3	7.5	7.8
8	TDS (mg/L)	125	62	90	72	81	76	100	79	110	80	92	118
9	Temp (deg C)	32.0	29.0	25.0	26.0	28.0	28.0	25.0	26.0	27.0	24.0	26.0	28.0
10	Turb (NTU)	1.0	185.0	165.0	134.0	20.0	0.1	0.1	0.1	9.0	14.0	2.0	7.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	94	60	54	70	67	89	89	89	74	80	108	106
3	Ca (mg/L)	20	10	10	13	18	20	17	15	16	22	34	21
4	Cl (mg/L)	6.0	4.8	2.1	1.0	3.1	2.5	2.9	3.9	3.8	3.5	4.8	14.7
5	CO3 (mg/L)	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0
6	F (mg/L)	0.04	0.16	0.00	0.00	0.00	0.00	0.07	0.07	0.75	0.00	0.04	0.15
7	Fe (mg/L)	0.0	0.1	0.0	0.2	0.4	0.2	0.2	0.3	0.1	0.0	0.0	0.0
8	HCO3 (mg/L)	112	73	66	85	82	109	108	108	91	88	132	130
9	K (mg/L)	2.1	2.6	1.8	1.3	1.2	1.6	1.0	3.6	2.4	1.3	1.5	2.0
10	Mg (mg/L)	11.2	4.8	4.7	7.1	9.9	11.0	9.4	8.3	5.0	7.4	7.5	11.1
11	Na (mg/L)	11.3	7.2	7.7	3.6	6.1	7.8	8.1	4.4	14.9	7.9	9.2	9.1
12	NH3-N (mg N/L)	0.01	0.01	0.02	0.01	0.01	0.01		0.20	1.07	0.01	0.01	0.87
13	NO2+NO3 (mg N/L)	0.15	0.28	0.85	0.35	0.30	0.16	0.01	0.24	0.73	0.86	1.92	0.61
14	NO2-N (mgN/L)	0.06	0.00	0.33	0.00	0.01	0.01	0.00	0.15	0.00	0.00	0.00	0.01
15	NO3-N (mgN/L)	0.09	0.28	0.51	0.35	0.30	0.15	0.01	0.08	0.73	0.86	1.92	0.60
16	o-PO4-P (mg P/L)	0.074	0.053		0.042	0.010	0.024	0.072	0.060	0.040	0.020	0.700	0.020
17	SiO2 (mg/L)	20.0	13.6	11.9	23.7	18.4	16.3	13.1	8.5	16.0	12.8	14.1	21.4
18	SO4 (mg/L)	1.3	3.1	14.9	1.0	16.7	2.1	16.8	0.0	8.1	0.9	18.6	2.8

Water Quality Datasheet for the period : 2016-2017

Station Name : Pathagudem (AGG00B5)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water Analysis

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.6	1.5	1.2	0.4	0.7	0.8	0.6	1.2	1.3	1.3	0.8	0.7
2	COD (mg/L)	5.0	18.0	6.9	27.3	10.7	1.2	2.1	8.4	3.6	2.9	5.0	8.4
3	DO (mg/L)	6.3	5.8	6.7	6.3	6.8	7.0	7.4	8.0	7.4	7.5	6.1	6.1
4	DO_SAT% (%)	86	75	81	78	87	90	90	99	93	89	75	78
5	FCol-MPN (MPN/100mL)	2	2	2400	170	16000	170	20	20	1400	20	20	500
6	Tcol-MPN (MPN/100mL)	1700	16000	2400	1100	16000	170	130	1700	5000	9000	20	500
	TRACE & TOXIC												
1	As (µg/L)											0.3	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Cu (µg/L)							1.0	1.0	1.0	1.0	2.0	1.0
5	Hg (µg/L)											0.3	
6	Ni (µg/L)											2.8	
7	Pb (µg/L)											0.0	
8	Zn (µg/L)							0.1	0.1	0.1	0.1	25.8	0.1
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	50	24	24	33	45	50	43	38	39	55	86	53
2	HAR_Total (mgCaCO3/L)	97	44	43	62	87	96	82	73	60	86	117	99
3	Na% (%)	20	25	27	11	13	15	17	11	34	17	14	16
4	RSC (-)	0.0	0.3	0.2	0.2	0.0	0.0	0.1	0.3	0.3	0.0	0.0	0.2
5	SAR (-)	0.5	0.5	0.5	0.2	0.3	0.3	0.4	0.2	0.8	0.4	0.4	0.4
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	365	6245	1.429	333.9
2	EC_FLD (µmho/cm)	2	668	261	464
3	EC_GEN (µmho/cm)	12	197	81	136
4	pH_FLD (pH units)	1	9.9	9.9	9.9
5	pH_GEN (pH units)	12	8.7	7.5	8
6	TDS (mg/L)	12	125	62	90
7	Temp (deg C)	12	32.0	24.0	27
8	Turb (NTU)	12	185.0	0.1	44.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	3.8	0.0	0.4
2	ALK-TOT (mgCaCO3/L)	12	108	54	82
3	Ca (mg/L)	12	34	10	18
4	Cl (mg/L)	12	14.7	1.0	4.4
5	CO3 (mg/L)	12	4.6	0.0	0.5
6	F (mg/L)	12	0.75	0.00	0.11
7	Fe (mg/L)	12	0.4	0.0	0.1
8	HCO3 (mg/L)	12	132	66	99
9	K (mg/L)	12	3.6	1.0	1.9
10	Mg (mg/L)	12	11.2	4.7	8.1
11	Na (mg/L)	12	14.9	3.6	8.1
12	NH3-N (mg N/L)	11	1.07	0.01	0.2
13	NO2+NO3 (mg N/L)	12	1.92	0.01	0.54
14	NO2-N (mgN/L)	12	0.33	0.00	0.05
15	NO3-N (mgN/L)	12	1.92	0.01	0.49
16	o-PO4-P (mg P/L)	11	0.700	0.010	0.101
17	SiO2 (mg/L)	12	23.7	8.5	15.8
18	SO4 (mg/L)	12	18.6	0.0	7.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.5	0.4	0.9
2	COD (mg/L)	12	27.3	1.2	8.3
3	DO (mg/L)	12	8.0	5.8	6.8
4	DO_SAT% (%)	12	99	75	85
5	FCol-MPN (MPN/100mL)	12	16000	2	1727
6	Tcol-MPN (MPN/100mL)	12	16000	20	4477
	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	Cu (µg/L)	6	2.0	1.0	1.2
5	Hg (µg/L)	1	0.3	0.3	0.3
6	Ni (µg/L)	1	2.8	2.8	2.8
7	Pb (µg/L)	1	0.0	0.0	0
8	Zn (µg/L)	6	25.8	0.1	4.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	86	24	45
2	HAR_Total (mgCaCO3/L)	12	117	43	79
3	Na% (%)	12	34	11	18
4	RSC (-)	12	0.3	0.0	0.1
5	SAR (-)	12	0.8	0.2	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	533.3	2347	1176	627.6	3530	2258	1017	1608	1483	2300	1876	723.3	1570	1354	605.7
2	EC_FLD (µmho/cm)															261
3	EC_GEN (µmho/cm)	127	79	105	162	127	128	113	146	112	132	127	134	129	108	115
4	pH_FLD (pH units)															9.9
5	pH_GEN (pH units)	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	8.0
6	TDS (mg/L)							79	96	83	97	104	81	103	107	86
7	Temp (deg C)	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	28.0
8	Turb (NTU)							25.4	14.1	12.4	0.2	21.5	17.0	86.2	146.3	101.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	0.2
2	ALK-TOT (mgCaCO3/L)	58	37	50	116	58	50	49	65	53	60	54	70	63	53	69
3	B (mg/L)	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)	14	11	14	20	15	9	10	15	11	12	10	15	13	11	14
5	Cl (mg/L)	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	3.4
6	CO3 (mg/L)	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	0.2
7	F (mg/L)	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	0.04
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	68	45	61	67	71	52	60	73	53	64	65	86	77	65	84
10	K (mg/L)	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	1.8
11	Mg (mg/L)	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	7.5
12	Na (mg/L)	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	7.2
13	NH3-N (mg N/L)	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	0.01
14	NO2+NO3 (mg N/L)	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	0.39
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	0.08
16	NO3-N (mgN/L)	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	0.30
17	o-PO4-P (mg P/L)	0.052	0.093	0.058	0.024			0.006	0.023	0.009	0.013	0.160	0.175	0.215	0.101	0.045
18	P-Tot (mgP/L)					0.027	0.207									
19	SiO2 (mg/L)	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	17.5
20	SO4 (mg/L)	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	7.4

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.9	0.4	0.9	0.5	0.5	0.7	0.6	0.4	0.6	0.8	0.9	0.6	1.1	0.4	0.9
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	13.6
3	DO (mg/L)	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		6.4
4	DO_SAT% (%)	76	86	82	77	74	80	75	73	72	75	88	77	77		81
5	FCol-MPN (MPN/100mL)	537	2300	290	613	5867	4026	8010	6233	6140	7433	495	248	4214	1318	3715
6	Tcol-MPN (MPN/100mL)	8090	2300	570	613	6133	4686	8010	6600	8340	11467	1013	4308	7082	4833	7440
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)	36	27	35	51	38	24	25	37	26	30	26	36	33	28	35
2	HAR_Total (mgCaCO3/L)	47	39	51	59	58	47	47	62	52	63	56	68	62	51	67
3	Na% (%)	37	15	25	24	14	24	19	11	18	14	23	25	25	25	19
4	RSC (-)	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	0.1
5	SAR (-)	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	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	69.61
2	EC_FLD (µmho/cm)														193	
3	EC_GEN (µmho/cm)	139	131	136	165	184	163	152	145	142	319	219	132	134	334	135
4	pH_FLD (pH units)														7.1	
5	pH_GEN (pH units)	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	8.1
6	TDS (mg/L)							107	99	103	233	131	96	89	83	91
7	Temp (deg C)	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	26.5
8	Turb (NTU)							1.9	1.1	6.3	0.0	1.0	10.0	2.8	1.1	2.3
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	0.0
2	ALK-TOT (mgCaCO3/L)	65	67	64	135	94	70	71	74	68	185	108	69	67	79	85
3	B (mg/L)	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)	20	21	17	15	27	16	18	15	15	31	19	14	16	14	17
5	Cl (mg/L)	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	3.3
6	CO3 (mg/L)	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	0.0
7	F (mg/L)	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	0.22
8	Fe (mg/L)	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	0.2
9	HCO3 (mg/L)	79	82	74	76	111	81	83	83	80	219	132	84	82	90	104
10	K (mg/L)	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	2.1
11	Mg (mg/L)	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	8.4
12	Na (mg/L)	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	8.8
13	NH3-N (mg N/L)	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	0.43
14	NO2+NO3 (mg N/L)	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	0.28
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	0.04
16	NO3-N (mgN/L)	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	0.24
17	o-PO4-P (mg P/L)	0.010	0.100	0.013	0.015			0.004	0.017	0.017	0.000	0.072	0.046	0.088	0.055	0.049
18	P-Tot (mgP/L)					0.003	0.241									
19	SiO2 (mg/L)	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	13.5
20	SO4 (mg/L)	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	6.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.0
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	3.8
3	DO (mg/L)	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	7.5
4	DO_SAT% (%)	81	91	78	91	81	84	78	82	79	78	91	85	91	79	93
5	FCol-MPN (MPN/100mL)	30	90	30	587	315	3425	1360	11233	8667	1310	69	765	193	720	403
6	Tcol-MPN (MPN/100mL)	30	230	430	1040	465	5575	2388	11600	11333	1900	168	1700	303	11125	1750
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		1.0
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		0.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	50	53	42	38	68	39	44	39	37	76	48	35	40	36	43
2	HAR_Total (mgCaCO3/L)	66	66	54	65	89	65	70	74	70	142	92	66	72	64	78
3	Na% (%)	12	14	33	16	12	16	15	12	9	18	29	25	21	22	19
4	RSC (-)	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	0.2
5	SAR (-)	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	0.4
	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	5.263
2	EC_FLD (µmho/cm)														293	668
3	EC_GEN (µmho/cm)	170	180	157	201	193	205	181	168	146	176	260	165	156	236	170
4	pH_FLD (pH units)														6.8	
5	pH_GEN (pH units)	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	7.9
6	TDS (mg/L)							123	116	125	135	202	108	108	122	97
7	Temp (deg C)	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	26.0
8	Turb (NTU)							0.1	0.6	1.0	0.0	0.6	2.0	2.7	1.4	7.7
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	1.3
2	ALK-TOT (mgCaCO3/L)	83	96	84	169	95	83	85	89	71	84	122	74	62	81	98
3	B (mg/L)	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	29	16	18	22	16	20	16	16	15	20	17	15	17	26
5	Cl (mg/L)	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	7.7
6	CO3 (mg/L)	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	1.5
7	F (mg/L)	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	0.06
8	Fe (mg/L)		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	0.0
9	HCO3 (mg/L)	94	112	93	98	114	101	81	87	72	103	146	90	76	88	117
10	K (mg/L)	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	1.6
11	Mg (mg/L)	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	8.7
12	Na (mg/L)	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	8.7
13	NH3-N (mg N/L)	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	0.29
14	NO2+NO3 (mg N/L)	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	1.13
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	0.00
16	NO3-N (mgN/L)	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	1.13
17	o-PO4-P (mg P/L)	0.010	0.004	0.012	0.013			0.012	0.082	0.012	0.006	0.058	0.001	0.163	0.101	0.247
18	P-Tot (mgP/L)					0.128	0.284									
19	SiO2 (mg/L)	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	16.1
20	SO4 (mg/L)	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	7.4

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	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	5.5
3	DO (mg/L)	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	6.6
4	DO_SAT% (%)	80	76	83	82	67		79	85	79	69	72	75	71	69	81
5	FCol-MPN (MPN/100mL)		40	30	8400	813	510	457	8020	5420	287	268	45	15	5823	180
6	Tcol-MPN (MPN/100mL)		70	30	8700	813	777	557	8020	5483	407	468	91	5910	6900	3173
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	0.3
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	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	0.0
4	Cu (µg/L)		1.6	0.0							6.0	0.3	3.5			1.3
5	Hg (µg/L)	0.3				0.0	1.0				0.0	0.5	0.2	0.0	0.0	0.3
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	2.8
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	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	8.7
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	56	71	39	46	55	39	50	41	41	37	51	41	39	42	65
2	HAR_Total (mgCaCO3/L)	85	91	61	80	95	74	83	78	67	71	97	77	72	76	101
3	Na% (%)	15	17	26	13	14	23	14	18	14	21	26	21	25	20	16
4	RSC (-)	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	0.1
5	SAR (-)	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	0.4
	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	: 2016-2017
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 : 2016-2017

Station Name : Jagdalpur (AGG00R9)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water Analysis

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016
		A	A	A	A	A
	PHYSICAL					
1	Q (cumec)	657.2	233.9	94.81	131.8	27.27
2	Colour_Cod (-)	Brown	Brown	Light Brown	Light Brown	Clear
3	EC_FLD (µmho/cm)	61	139	301	342	
4	EC_GEN (µmho/cm)	53	100	126	119	183
5	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free
6	pH_FLD (pH units)	7.1	6.9	6.6		
7	pH_GEN (pH units)	7.5	7.4	7.7	8.0	8.2
8	TDS (mg/L)	32	86	113	67	109
9	Temp (deg C)	32.9	32.0	27.0	24.0	23.0
10	Turb (NTU)	788.0	525.0	15.0	11.0	0.1
	CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	22	46	71	70	95
3	Ca (mg/L)	6	13	12	17	22
4	Cl (mg/L)	4.5	1.0	1.5	4.6	3.6
5	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0
6	F (mg/L)	0.00	0.00	0.00	0.00	0.00
7	Fe (mg/L)	0.0	0.0	0.3	0.3	0.2
8	HCO3 (mg/L)	27	56	87	86	115
9	K (mg/L)	2.4	2.4	1.4	1.6	1.5
10	Mg (mg/L)	2.9	6.3	6.7	9.4	11.9
11	Na (mg/L)	9.0	6.4	5.7	5.6	8.5
12	NH3-N (mg N/L)	0.74	0.08	0.01	0.01	0.01
13	NO2+NO3 (mg N/L)	0.91	0.91	0.61	0.46	0.25
14	NO2-N (mgN/L)	0.00	0.67	0.01	0.00	0.00
15	NO3-N (mgN/L)	0.91	0.24	0.61	0.46	0.24
16	o-PO4-P (mg P/L)	0.266		0.236	0.015	0.031
17	SiO2 (mg/L)	30.0	19.1	4.1	12.0	14.0
18	SO4 (mg/L)	12.5	41.8	0.0	11.8	1.8
	BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	1.2	1.2	0.9	0.5	0.8
2	COD (mg/L)	7.5	12.1	5.1	7.2	0.9
3	DO (mg/L)	6.0	6.2	6.4	7.0	7.0
4	DO_SAT% (%)	82	85	80	83	82
5	FCol-MPN (MPN/100mL)	2	9000	3400	16000	5000
6	Tcol-MPN (MPN/100mL)	16000	9000	16000	16000	5000
	TRACE & TOXIC					
	CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	16	33	31	43	55
2	HAR_Total (mgCaCO3/L)	28	59	58	82	104
3	Na% (%)	39	18	17	13	15
4	RSC (-)	0.0	0.0	0.3	0.0	0.0
5	SAR (-)	0.7	0.4	0.3	0.3	0.4
	PESTICIDES					

Water Quality Summary for the period : 2016-2017

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)	365	1475	8.214	93.49
2	EC_FLD (µmho/cm)	4	342	61	211
3	EC_GEN (µmho/cm)	5	183	53	116
4	pH_FLD (pH units)	3	7.1	6.6	6.9
5	pH_GEN (pH units)	5	8.2	7.4	7.8
6	TDS (mg/L)	5	113	32	81
7	Temp (deg C)	5	32.9	23.0	27.8
8	Turb (NTU)	5	788.0	0.1	267.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	5	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	5	95	22	61
3	Ca (mg/L)	5	22	6	14
4	Cl (mg/L)	5	4.6	1.0	3
5	CO3 (mg/L)	5	0.0	0.0	0
6	F (mg/L)	5	0.00	0.00	0
7	Fe (mg/L)	5	0.3	0.0	0.2
8	HCO3 (mg/L)	5	115	27	74
9	K (mg/L)	5	2.4	1.4	1.8
10	Mg (mg/L)	5	11.9	2.9	7.4
11	Na (mg/L)	5	9.0	5.6	7
12	NH3-N (mg N/L)	5	0.74	0.01	0.17
13	NO2+NO3 (mg N/L)	5	0.91	0.25	0.63
14	NO2-N (mgN/L)	5	0.67	0.00	0.14
15	NO3-N (mgN/L)	5	0.91	0.24	0.49
16	o-PO4-P (mg P/L)	4	0.266	0.015	0.137
17	SiO2 (mg/L)	5	30.0	4.1	15.8
18	SO4 (mg/L)	5	41.8	0.0	13.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	5	1.2	0.5	0.9
2	COD (mg/L)	5	12.1	0.9	6.5
3	DO (mg/L)	5	7.0	6.0	6.5
4	DO_SAT% (%)	5	85	80	82
5	FCol-MPN (MPN/100mL)	5	16000	2	6680
6	Tcol-MPN (MPN/100mL)	5	16000	5000	12400
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	5	55	16	36
2	HAR_Total (mgCaCO3/L)	5	104	28	66
3	Na% (%)	5	39	13	20
4	RSC (-)	5	0.3	0.0	0.1
5	SAR (-)	5	0.7	0.3	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	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	279.4
2	EC_FLD (µmho/cm)															211
3	EC_GEN (µmho/cm)	144	147	152	181	159	157	149	147	146	195	335	113	97	109	100
4	pH_FLD (pH units)															6.9
5	pH_GEN (pH units)	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	7.6
6	TDS (mg/L)							95	92	112	116	272	71	73	110	75
7	Temp (deg C)	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	29.0
8	Turb (NTU)							34.9	77.6	52.7	0.3	28.0	42.6	257.5	304.0	334.8
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	0.0
2	ALK-TOT (mgCaCO3/L)	68	76	65	74	73	60	63	57	66	89	57	53	46	62	52
3	B (mg/L)	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	21	19	21	19	14	13	13	16	20	14	14	11	14	12
5	Cl (mg/L)	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	2.9
6	CO3 (mg/L)	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	0.0
7	F (mg/L)	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	0.00
8	Fe (mg/L)	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	0.2
9	HCO3 (mg/L)	82	93	79	83	89	71	77	69	81	101	70	65	57	75	64
10	K (mg/L)	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	1.9
11	Mg (mg/L)	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	6.3
12	Na (mg/L)	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	6.7
13	NH3-N (mg N/L)	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	0.21
14	NO2+NO3 (mg N/L)	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	0.72
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	0.17
16	NO3-N (mgN/L)	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	0.55
17	o-PO4-P (mg P/L)	0.006	0.026	0.036	0.025			0.004	0.018	0.019	0.016	0.210	0.108	0.207	0.160	0.172
18	P-Tot (mgP/L)					0.040	0.022									
19	SiO2 (mg/L)	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	16.3
20	SO4 (mg/L)	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	16.5

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.0
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	8.0
3	DO (mg/L)	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		6.4
4	DO_SAT% (%)	68	69	78	77	72	74	68	68	67	75	74	76	78		82
5	FCol-MPN (MPN/100mL)	1187	2400	1500	1010	6575	7740	8650	7526	7660	11467	5250	6800	5000	3767	7101
6	Tcol-MPN (MPN/100mL)	5167	4600	4600	1600	8800	8360	8850	11200	8580	11667	9350	12550	6450	11400	14250
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)	48	53	46	52	48	35	33	33	41	49	34	35	28	36	31
2	HAR_Total (mgCaCO3/L)	65	82	65	66	69	60	64	67	67	90	68	61	53	61	57
3	Na% (%)	29	13	13	24	14	28	15	14	15	13	20	23	27	20	22
4	RSC (-)	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	0.1
5	SAR (-)	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	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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		27.27
2	EC_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	293	207	237	275	283	299	298	276	269	283	290	199	199		183
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	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		8.2
6	TDS (mg/L)							191	162	157	182	184	120	170		109
7	Temp (deg C)	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		23.0
8	Turb (NTU)							1.7	1.2	13.5	0.0	2.5	5.5	3.6		0.1
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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		0.0
2	ALK-TOT (mgCaCO3/L)	122	108	141	121	131	133	147	147	120	155	158	123	140		95
3	B (mg/L)	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)	40	32	34	36	34	31	38	35	24	31	33	27	28		22
5	Cl (mg/L)	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		3.6
6	CO3 (mg/L)	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		0.0
7	F (mg/L)	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		0.00
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.0	0.2	0.1		0.2
9	HCO3 (mg/L)	145	129	150	138	148	160	175	154	129	190	193	150	171		115
10	K (mg/L)	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		1.5
11	Mg (mg/L)	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		11.9
12	Na (mg/L)	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		8.4
13	NH3-N (mg N/L)	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		0.00
14	NO2+NO3 (mg N/L)	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		0.25
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		0.00
16	NO3-N (mgN/L)	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		0.24
17	o-PO4-P (mg P/L)	0.000	0.022	0.010	0.009			0.004	0.032	0.020	0.071	0.076	0.078	0.069		0.031
18	P-Tot (mgP/L)					0.003	0.154									
19	SiO2 (mg/L)	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		14.0
20	SO4 (mg/L)	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		1.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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		0.8
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		0.9
3	DO (mg/L)	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		7.0
4	DO_SAT% (%)	76	77	78	85	80	76	69	84	77	80	84	78	90		82
5	FCol-MPN (MPN/100mL)	930	150	160	7177	3700	2110	1095	12500	16000	5810	716	4178	155		5000
6	Tcol-MPN (MPN/100mL)	1500	200	2335	13667	4000	2768	1230	16000	16000	6210	2793	4290	4650		5000
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)	100	79	86	89	86	77	94	86	59	78	82	67	70		55
2	HAR_Total (mgCaCO3/L)	152	101	117	127	136	134	150	142	114	142	159	130	122		104
3	Na% (%)	5	12	16	8	9	9	8	7	10	11	12	16	13		15
4	RSC (-)	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		0.0
5	SAR (-)	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		0.4
	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	255	228	269	333	293	288	284	258	216	299	320	324			
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	8.3	8.3	8.1	8.1	8.4	8.0	8.3	8.1	8.1	8.1	8.1	8.1			
6	TDS (mg/L)							181	159	162	220	212	204			
7	Temp (deg C)	24.5	25.8	24.3	27.0	23.7	21.8	24.5	25.0	23.3	24.3	25.0	19.0			
8	Turb (NTU)							0.3	0.6	1.0	0.0	0.9	0.1			
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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)	130	113	143	163	144	136	140	133	108	139	172	157			
3	B (mg/L)	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)	33	27	43	30	34	25	33	30	25	26	35	35			
5	Cl (mg/L)	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)	4.4	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)	0.36	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	0.1	0.1	0.0	0.3	0.3	0.2	0.2	0.6	0.2	0.2	0.1			
9	HCO3 (mg/L)	150	124	174	199	169	166	153	155	132	169	210	192			
10	K (mg/L)	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)	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)	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)	0.04	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)	0.11	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)	0.11	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)	0.010	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)	10.0	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	0.8	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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)	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% (%)	85	76	74	63	73	70	75	69	69	69	77	79			
5	FCol-MPN (MPN/100mL)	11000	11000	24000	5700	8410	3267	3843	16000	7800	920	230	800			
6	Tcol-MPN (MPN/100mL)	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)	81	67	107	75	86	62	82	75	63	64	88	88			
2	HAR_Total (mgCaCO3/L)	135	106	130	138	155	121	144	132	106	124	171	173			
3	Na% (%)	7	9	9	8	7	11	7	8	13	10	15	14			
4	RSC (-)	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 (-)	0.2	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	: 2016-2017
Site	: Nowrangpur	Code	: AGG00U7
State	: Orissa	District	Nowrangpur
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	: 3545 Sq. Km.	Bank	:
Latitude	: 19°12'00"	Longitude	: 82°31'00"
	Opening Date	Closing Date	
Gauge	: 24.06.1965		
Discharge	: 20.06.1971		
Sediment	: 21.06.1971	31.05.2006	
Water Quality	: 01.01.1972	31.05.2006	

Water Quality Datasheet for the period : 2016-2017

Station Name : Nowrangpur (AGG00U7)

Local River : Indravathi

River Water Analysis

Division : Lower Godavari Div., Hyderabad

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	2.510	224.8	49.90	47.10	62.13	7.522	6.484	4.008	3.283	2.455	1.598	3.425
2	Colour_Cod (-)	Clear	Brown	Brown	Light Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	
3	EC_FLD (μmho/cm)	137	67	95	96	74	104	83	88	90			
4	EC_GEN (μmho/cm)	108	61	171	108	77	110	101	116	133	115	104	110
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)	6.8	7.0	6.8	6.6	6.5							
7	pH_GEN (pH units)	9.1	7.8	6.5	8.2	7.9	7.8	8.1	7.7	7.9	7.9	7.3	7.8
8	TDS (mg/L)	73	46	154	97	47	69	72	43	92	57	74	66
9	Temp (deg C)	30.0	27.0	27.0	28.0	27.0	24.0	19.0	19.0	20.0	22.0	28.0	28.0
10	Turb (NTU)	5.0	437.0	342.0	52.0	40.0	0.1	1.0	2.0	19.0	20.0	20.0	13.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	58	29	60	70	101	130	70	70	88	51	76	67
3	Ca (mg/L)	12	8	12	11	19	23	13	10	18	19	17	19
4	Cl (mg/L)	2.2	5.0	3.0	1.2	4.5	2.6	3.0	3.7	2.6	3.9	3.3	0.5
5	CO3 (mg/L)	3.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
6	F (mg/L)	0.01	0.00	0.00	0.00	0.00	0.00	0.12	0.00	0.76	0.00	0.15	0.11
7	Fe (mg/L)	0.1	0.2	0.0	0.4	0.3	0.1	0.0	0.2	0.1	0.0	0.0	0.0
8	HCO3 (mg/L)	63	36	73	85	123	159	85	85	107	63	93	82
9	K (mg/L)	2.1	2.2	2.6	1.3	3.1	1.8	1.4	3.2	3.6	1.7	1.6	1.8
10	Mg (mg/L)	5.4	4.5	6.8	5.8	10.4	12.4	7.2	5.5	4.1	2.1	11.9	5.7
11	Na (mg/L)	6.9	6.0	7.0	4.5	24.6	6.9	6.2	4.9	11.2	5.8	4.1	3.9
12	NH3-N (mg N/L)	0.01	0.23	0.03	0.01	0.01	0.01		0.01	0.01	0.13	0.02	0.39
13	NO2+NO3 (mg N/L)	0.35	0.16	0.69	0.46	3.38	0.23	0.06	0.12	1.60	0.19	0.02	0.47
14	NO2-N (mgN/L)	0.00	0.00	0.47	0.01	0.01	0.00	0.05	0.02	0.00	0.00	0.01	0.01
15	NO3-N (mgN/L)	0.35	0.16	0.22	0.45	3.38	0.23	0.02	0.09	1.60	0.19	0.01	0.46
16	o-PO4-P (mg P/L)	0.046	0.268		0.031	0.005	0.040	0.061	0.040	0.100	0.320	0.030	0.120
17	SiO2 (mg/L)	14.4	20.5	45.2	9.1	18.9	14.0	14.4	5.9	15.4	11.1	14.3	15.3
18	SO4 (mg/L)	0.0	21.1	22.2	0.2	19.8	1.5	4.6	0.0	3.7	0.9	3.3	2.5

Water Quality Datasheet for the period : 2016-2017

Station Name : Nowrangpur (AGG00U7)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water Analysis

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	01.06.2016	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	0.9	0.9	1.7	0.8	0.6	1.1	0.8	0.7	1.1	1.1	0.9	1.4
2	COD (mg/L)	2.9	7.0	21.1	1.4	7.2	1.8	2.1	7.1	2.4	2.9	8.0	6.7
3	DO (mg/L)	7.2	6.2	6.9	5.8	6.0	6.7	7.0	7.3	6.9	7.2	6.2	6.7
4	DO_SAT% (%)	95	78	87	73	75	79	75	79	76	82	79	86
5	FCol-MPN (MPN/100mL)	2	2	16000	2	16000	500	140	40	170	2400	500	40
6	Tcol-MPN (MPN/100mL)	170	16000	16000	2200	16000	500	1400	800	300	16000	500	40
	TRACE & TOXIC												
1	As (µg/L)											0.3	
2	Cd (µg/L)											0.0	
3	Cr (µg/L)											0.0	
4	Cu (µg/L)							1.0	1.0	1.0	1.0	1.6	1.0
5	Hg (µg/L)											0.8	
6	Ni (µg/L)											3.5	
7	Pb (µg/L)											0.0	
8	Zn (µg/L)							0.1	0.1	0.1	0.1	38.6	0.1
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	30	20	31	26	48	57	33	25	45	46	42	47
2	HAR_Total (mgCaCO3/L)	53	39	59	50	91	109	63	48	62	55	91	71
3	Na% (%)	21	24	20	16	36	12	17	17	27	18	9	10
4	RSC (-)	0.1	0.0	0.0	0.4	0.2	0.4	0.2	0.4	0.5	0.0	0.0	0.0
5	SAR (-)	0.4	0.4	0.4	0.3	1.1	0.3	0.3	0.3	0.6	0.3	0.2	0.2
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

Station Name : Nowrangpur (AGG00U7)

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)	365	271.4	1.168	23.67
2	EC_FLD (µmho/cm)	9	137	67	93
3	EC_GEN (µmho/cm)	12	171	61	109
4	pH_FLD (pH units)	5	7.0	6.5	6.7
5	pH_GEN (pH units)	12	9.1	6.5	7.8
6	TDS (mg/L)	12	154	43	74
7	Temp (deg C)	12	30.0	19.0	24.9
8	Turb (NTU)	12	437.0	0.1	79.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	3.0	0.0	0.2
2	ALK-TOT (mgCaCO3/L)	12	130	29	72
3	Ca (mg/L)	12	23	8	15
4	Cl (mg/L)	12	5.0	0.5	3
5	CO3 (mg/L)	12	3.6	0.0	0.3
6	F (mg/L)	12	0.76	0.00	0.1
7	Fe (mg/L)	12	0.4	0.0	0.1
8	HCO3 (mg/L)	12	159	36	88
9	K (mg/L)	12	3.6	1.3	2.2
10	Mg (mg/L)	12	12.4	2.1	6.8
11	Na (mg/L)	12	24.6	3.9	7.7
12	NH3-N (mg N/L)	11	0.39	0.01	0.08
13	NO2+NO3 (mg N/L)	12	3.38	0.02	0.64
14	NO2-N (mgN/L)	12	0.47	0.00	0.05
15	NO3-N (mgN/L)	12	3.38	0.01	0.6
16	o-PO4-P (mg P/L)	11	0.320	0.005	0.096
17	SiO2 (mg/L)	12	45.2	5.9	16.5
18	SO4 (mg/L)	12	22.2	0.0	6.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	1.7	0.6	1
2	COD (mg/L)	12	21.1	1.4	5.9
3	DO (mg/L)	12	7.3	5.8	6.7
4	DO_SAT% (%)	12	95	73	80
5	FCol-MPN (MPN/100mL)	12	16000	2	2983
6	Tcol-MPN (MPN/100mL)	12	16000	40	5826
	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	Cu (µg/L)	6	1.6	1.0	1.1
5	Hg (µg/L)	1	0.8	0.8	0.8
6	Ni (µg/L)	1	3.5	3.5	3.5
7	Pb (µg/L)	1	0.0	0.0	0
8	Zn (µg/L)	6	38.6	0.1	6.5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	57	20	38
2	HAR_Total (mgCaCO3/L)	12	109	39	66
3	Na% (%)	12	36	9	19
4	RSC (-)	12	0.5	0.0	0.2
5	SAR (-)	12	1.1	0.2	0.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Nowrangpur (AGG00U7)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Flood Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	26.25	64.76	34.23	17.49								184.6	59.43	42.21	77.29
2	EC_FLD (µmho/cm)														140	94
3	EC_GEN (µmho/cm)	129	73	131	117								111	97	114	105
4	pH_FLD (pH units)															6.7
5	pH_GEN (pH units)	7.8	7.9	7.5	7.9								7.7	7.7	7.5	7.9
6	TDS (mg/L)												93	68	112	83
7	Temp (deg C)	28.8	26.0	27.0	27.6								27.0	25.2	28.5	27.8
8	Turb (NTU)												38.0	184.4	246.4	175.2
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0								0.0	0.0	0.0	0.6
2	ALK-TOT (mgCaCO3/L)	54	31	57	47								39	47	47	63
3	B (mg/L)	0.08	0.05	0.12	0.03								0.04	0.21	0.11	
4	Ca (mg/L)	16	12	15	14								11	10	9	12
5	Cl (mg/L)	12.5	12.0	16.2	8.7								3.5	7.6	2.1	3.2
6	CO3 (mg/L)	0.0	0.0	0.0	0.0								0.0	0.0	0.0	0.7
7	F (mg/L)	0.38	0.33	0.25	0.26								0.16	0.11	0.09	0.00
8	Fe (mg/L)	0.0	0.0	0.1	0.1								0.2	0.1	0.2	0.2
9	HCO3 (mg/L)	66	37	69	58								47	57	57	76
10	K (mg/L)	1.0	1.3	1.7	1.8								1.7	2.1	2.1	2.3
11	Mg (mg/L)	2.4	1.6	2.6	2.4								6.0	5.1	4.0	6.6
12	Na (mg/L)	9.3	6.3	13.2	5.8								7.2	8.9	9.8	9.8
13	NH3-N (mg N/L)	0.08	0.00	0.04	0.05								0.08	0.08	0.01	0.06
14	NO2+NO3 (mg N/L)	1.20	0.51	0.68	0.61								1.41	0.88	0.41	1.01
15	NO2-N (mgN/L)			0.01	0.01								0.00	0.02	0.01	0.10
16	NO3-N (mgN/L)	1.20	0.51	0.67	0.60								1.41	0.86	0.40	0.91
17	o-PO4-P (mg P/L)	0.010	0.040	0.072	0.022								0.080	0.258	0.222	0.088
18	SiO2 (mg/L)	11.8	16.0	12.5	19.2								19.1	18.6	14.7	21.6
19	SO4 (mg/L)	3.0	3.7	2.8	0.8								17.1	14.0	8.5	12.6

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Nowrangpur (AGG00U7)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Flood Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.0	0.7	0.6	0.5								1.2	0.8	1.0	1.0
2	COD (mg/L)		7.5	18.8	29.9								13.0	8.1	5.3	7.9
3	DO (mg/L)	5.8	6.7	5.9	6.2								6.0	5.8		6.4
4	DO_SAT% (%)	75	82	74	79								75	69		82
5	FCol-MPN (MPN/100mL)				471								6167	9672	2426	6401
6	Tcol-MPN (MPN/100mL)				511								11400	10140	5644	10074
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)	41	30	37	34								29	26	22	31
2	HAR_Total (mgCaCO3/L)	51	36	48	44								54	47	39	58
3	Na% (%)	23	26	38	22								21	28	35	23
4	RSC (-)	0.1	0.0	0.3	0.1								0.0	0.2	0.2	0.1
5	SAR (-)	0.6	0.5	0.9	0.4								0.4	0.6	0.7	0.5
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	Dieldrin (µg/L)															
4	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Nowrangpur (AGG00U7)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	3.316	13.66	4.662	12.67								17.32	8.065	5.621	5.324
2	EC_FLD (µmho/cm)														126	92
3	EC_GEN (µmho/cm)	139	136	124	158								166	118	305	115
4	pH_FLD (pH units)														6.3	
5	pH_GEN (pH units)	7.7	7.8	7.7	7.8								7.8	7.7	7.7	7.9
6	TDS (mg/L)												114	85	85	69
7	Temp (deg C)	22.5	22.5	21.0	19.5								23.5	22.3	21.0	20.5
8	Turb (NTU)												8.5	7.8	10.5	5.5
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	1.0	0.0	0.0								0.0	0.0	1.2	0.0
2	ALK-TOT (mgCaCO3/L)	58	68	70	64								71	55	63	89
3	B (mg/L)	0.00	0.03	0.08	0.10								0.02	0.16	0.00	
4	Ca (mg/L)	18	21	15	16								16	13	12	16
5	Cl (mg/L)	5.5	5.1	12.5	9.0								3.0	5.6	4.4	3.0
6	CO3 (mg/L)	0.0	1.2	0.0	0.0								0.0	0.0	1.4	0.0
7	F (mg/L)	0.23	0.28	0.14	0.23								0.09	0.12	0.02	0.22
8	Fe (mg/L)	0.0	0.0	0.0	0.1								0.3	0.1	0.0	0.1
9	HCO3 (mg/L)	71	80	85	78								87	67	75	109
10	K (mg/L)	0.9	1.6	1.9	2.0								1.8	1.8	1.4	2.5
11	Mg (mg/L)	3.4	5.8	2.7	4.7								8.5	5.5	5.4	7.3
12	Na (mg/L)	3.5	4.5	17.3	6.8								9.8	9.3	9.2	7.3
13	NH3-N (mg N/L)	0.06	0.10	0.04	0.03								0.00	0.04	0.03	0.01
14	NO2+NO3 (mg N/L)	0.15	0.48	0.68	0.26								0.33	0.18	0.53	0.50
15	NO2-N (mgN/L)			0.01	0.00								0.00	0.03	0.00	0.02
16	NO3-N (mgN/L)	0.15	0.48	0.67	0.26								0.33	0.15	0.53	0.48
17	o-PO4-P (mg P/L)	0.010	0.027	0.014	0.012								0.061	0.059	0.074	0.060
18	SiO2 (mg/L)	17.0	16.8	18.0	20.5								16.4	18.8	15.4	12.4
19	SO4 (mg/L)	1.0	9.8	0.0	0.0								6.7	5.9	5.0	2.5

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Nowrangpur (AGG00U7)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.4	0.4	0.5	0.9								0.5	0.6	0.6	0.9
2	COD (mg/L)		40.5	29.8	36.7								3.1	3.0	3.7	3.4
3	DO (mg/L)	6.5	6.8	6.4	7.8								7.4	7.6	8.2	7.0
4	DO_SAT% (%)	76	78	72	85								87	87	92	77
5	FCol-MPN (MPN/100mL)				327								978	710	1125	213
6	Tcol-MPN (MPN/100mL)				1300								2090	5418	7925	750
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		1.0
5	Hg (µg/L)															
6	Ni (µg/L)													0.2		
7	Pb (µg/L)													2.8		
8	Zn (µg/L)													4.0		0.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	45	51	38	39								40	32	30	40
2	HAR_Total (mgCaCO3/L)	59	75	50	58								75	55	52	70
3	Na% (%)	11	13	42	20								21	26	26	18
4	RSC (-)	0.0	0.0	0.4	0.2								0.0	0.1	0.2	0.4
5	SAR (-)	0.2	0.2	1.1	0.4								0.5	0.5	0.6	0.4
	PESTICIDES															
1	Aldrin (µg/L)															
2	BHC (µg/L)															
3	Dieldrin (µg/L)															
4	Endos (µg/L)															

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Nowrangpur (AGG00U7)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	2.061	3.685	2.679	2.157								3.445	2.220	2.424	2.493
2	EC_FLD (µmho/cm)														141	
3	EC_GEN (µmho/cm)	135	120	175	175								118	113	170	110
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	7.7
6	TDS (mg/L)												76	75	78	66
7	Temp (deg C)	28.3	26.3	25.7	25.0								24.3	27.3	28.3	26.0
8	Turb (NTU)												3.0	22.0	13.3	17.7
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	4.2	0.0								0.0	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	58	64	97	73								52	57	49	65
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	18
5	Cl (mg/L)	8.3	5.8	9.8	9.7								2.6	1.9	2.2	2.6
6	CO3 (mg/L)	0.0	0.0	5.0	0.0								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	0.09
8	Fe (mg/L)	0.0	0.0	0.1	0.1								0.3	0.4	0.0	0.0
9	HCO3 (mg/L)	71	78	109	89								64	69	60	79
10	K (mg/L)	1.0	1.9	2.1	2.0								1.7	2.0	1.4	1.7
11	Mg (mg/L)	3.2	3.1	2.1	5.0								6.0	5.2	5.0	6.6
12	Na (mg/L)	4.7	6.4	9.3	4.7								7.3	8.4	4.9	4.6
13	NH3-N (mg N/L)	0.07	0.18	0.10	0.06								0.02	0.02	0.02	0.18
14	NO2+NO3 (mg N/L)	0.37	0.22	0.14	0.30								0.76	0.15	0.66	0.22
15	NO2-N (mgN/L)			0.01	0.00								0.00	0.04	0.04	0.00
16	NO3-N (mgN/L)	0.37	0.22	0.13	0.30								0.76	0.11	0.62	0.22
17	o-PO4-P (mg P/L)	0.010	0.006	0.013	0.030								0.001	0.110	0.311	0.157
18	SiO2 (mg/L)	14.3	20.3	10.7	16.7								15.0	18.4	17.0	13.5
19	SO4 (mg/L)	1.0	4.3	0.3	0.0								4.0	7.2	4.0	2.2

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Nowrangpur (AGG00U7)

Division : Lower Godavari Div., Hyderabad

Local River : Indravathi

River Water

Sub-Division : Indravati SD, Jagdalpur

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.2	0.8	0.4	0.6								1.1	0.7	0.9	1.1
2	COD (mg/L)		31.3	5.9	32.7								5.3	2.1	2.3	5.9
3	DO (mg/L)	6.6	6.1	5.3	5.9								7.1	5.8	8.0	6.7
4	DO_SAT% (%)	85	75	65	71								85	73	103	82
5	FCol-MPN (MPN/100mL)				1665								5335	14	3653	980
6	Tcol-MPN (MPN/100mL)				12500								5353	270	11600	5513
7	TOC (mg/L)			6.8									0.5	1.1		
	TRACE & TOXIC															
1	As (µg/L)												1.1	0.2		0.3
2	Cd (µg/L)				0.0								0.0	0.0		0.0
3	Cr (µg/L)				7.0								1.0	0.0		0.0
4	Cu (µg/L)												3.0			1.2
5	Hg (µg/L)												0.5	0.0		0.8
6	Ni (µg/L)				1.0								6.3	2.4		3.5
7	Pb (µg/L)				48.0								0.2	7.8		0.0
8	Zn (µg/L)				135.0								23.6	7.8		12.9
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	41	39	72	53								28	26	25	45
2	HAR_Total (mgCaCO3/L)	54	52	81	74								53	47	46	72
3	Na% (%)	16	21	22	12								23	26	18	12
4	RSC (-)	0.1	0.2	0.3	0.1								0.1	0.2	0.1	0.0
5	SAR (-)	0.3	0.4	0.5	0.2								0.5	0.5	0.3	0.2
	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	: 2016-2017
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 : 2016-2017

Station Name : TEKRA (AGH00C4)

Local River : Pranhita

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	11.48	2052	3250	2084	3877	429.3	119.1	111.6	122.0	121.7	73.16	44.26
2	Colour_Cod (-)	Clear	Brown	Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	493	253	385	239	222	400	408	429	390	368	365	405
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	8.1	7.1	7.4	8.1	8.5	8.2	8.5	8.7	8.8	8.9	8.5
6	Temp (deg C)	24.0	22.5	23.5	23.0	21.0	22.0	19.0	19.0	20.0	22.0	23.0	25.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	20.9	0.0	0.0	0.0	0.0	6.0	0.0	6.0	24.9	19.9	17.4	14.9
2	ALK-TOT (mgCaCO3/L)	201	108	111	105	108	180	216	198	193	178	150	203
3	B (mg/L)	0.28	0.59	1.06	1.63	2.11	0.13	0.53	0.66	0.63	0.81	0.07	1.48
4	Ca (mg/L)	22	25	28	27	37	32	52	40	41	32	25	29
5	Cl (mg/L)	25.8	19.9	8.0	17.9	11.9	17.9	13.9	27.8	15.9	27.8	27.8	31.8
6	CO3 (mg/L)	25.2	0.0	0.0	0.0	0.0	7.2	0.0	7.2	30.0	24.0	21.0	18.0
7	F (mg/L)	0.31	0.51	0.05	0.00	0.04	0.00	0.10	0.45	0.19	0.59	0.58	1.01
8	Fe (mg/L)	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.1	0.3	0.0	0.2
9	HCO3 (mg/L)	194	132	135	128	132	205	263	227	174	168	140	211
10	K (mg/L)	3.4	3.3	2.5	1.9	1.9	2.4	2.7	2.1	2.2	2.5	2.9	2.1
11	Mg (mg/L)	21.4	7.9	10.1	7.0	3.9	22.9	16.2	24.3	12.9	16.8	2.7	21.5
12	Na (mg/L)	46.6	23.9	20.7	18.7	15.6	29.8	36.8	31.9	30.3	32.1	51.5	33.0
13	NH3-N (mg N/L)	0.00	0.12	0.12	0.15	0.74	0.39	0.40	0.84	0.38	0.10	1.71	1.09
14	NO2+NO3 (mg N/L)	1.34	2.33	2.36	1.91	1.44	2.67	2.35	1.32	1.05	1.27	1.10	1.44
15	NO2-N (mgN/L)	0.01	0.04	0.00	0.00	0.01	0.00	0.03	0.01	0.01	0.01	0.01	0.03
16	NO3-N (mgN/L)	1.32	2.29	2.36	1.91	1.43	2.67	2.32	1.31	1.04	1.26	1.09	1.41
17	o-PO4-P (mg P/L)	0.113	0.188	0.319	0.068	0.112	0.316	0.452	0.703	1.629	0.131	0.138	1.162
18	SiO2 (mg/L)	27.9	11.5	17.2	15.2	15.9	39.1	19.3	25.4	11.2	20.6	18.7	22.7
19	SO4 (mg/L)	34.8	16.9	1.6	8.6	3.2	23.3	14.3	35.0	20.0	20.6	32.5	31.0

Water Quality Datasheet for the period : 2016-2017

Station Name : TEKRA (AGH00C4)

Division : Wainganga Div., Nagpur

Local River : Pranhita

River Water Analysis

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.4	35.0	2.0	2.0	1.5	1.2	2.0	1.5	3.1	1.0	3.5	1.0
2	COD (mg/L)	27.2	53.0	11.6	26.0	41.8	105.6	111.7	136.3	126.4	98.3	153.1	67.6
3	DO (mg/L)	6.7	4.7	6.8	5.9	7.4	7.3	9.2	8.0	10.2	7.8	8.0	6.2
4	DO_SAT% (%)	80	54	79	69	83	83	99	86	112	89	93	75
5	FCol-MPN (MPN/100mL)	70	1300	40	1700	80	20	20	270	20	300	130	40
6	Tcol-MPN (MPN/100mL)	1100	16000	260	9000	300	40	20	340	230	500	210	40
	TRACE & TOXIC												
1	As (µg/L)			0.8				1.9				0.0	
2	Cd (µg/L)			0.2				0.0				0.0	
3	Cr (µg/L)			5.0				0.5				3.0	
4	Cu (µg/L)			2.3				1.0				7.6	
5	Ni (µg/L)			3.6				2.7				19.0	
6	Pb (µg/L)			0.7				5.2				1.0	
7	Zn (µg/L)			3.6				0.2				7.0	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	54	63	70	68	92	81	131	99	104	81	62	71
2	HAR_Total (mgCaCO3/L)	143	96	112	97	108	176	199	200	157	151	73	161
3	Na% (%)	41	34	28	29	24	27	28	26	29	31	59	31
4	RSC (-)	1.2	0.3	0.0	0.2	0.0	0.1	0.4	0.0	0.7	0.6	1.5	0.9
5	SAR (-)	1.7	1.1	0.9	0.8	0.7	1.0	1.1	1.0	1.1	1.1	2.6	1.1
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	365	11999	10.51	1038
2	EC_GEN (µmho/cm)	12	493	222	363
3	pH_GEN (pH units)	12	8.9	7.1	8.3
4	Temp (deg C)	12	25.0	19.0	22
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	24.9	0.0	9.2
2	ALK-TOT (mgCaCO3/L)	12	216	105	162
3	B (mg/L)	12	2.11	0.07	0.83
4	Ca (mg/L)	12	52	22	33
5	Cl (mg/L)	12	31.8	8.0	20.5
6	CO3 (mg/L)	12	30.0	0.0	11.1
7	F (mg/L)	12	1.01	0.00	0.32
8	Fe (mg/L)	12	0.3	0.0	0.1
9	HCO3 (mg/L)	12	263	128	176
10	K (mg/L)	12	3.4	1.9	2.5
11	Mg (mg/L)	12	24.3	2.7	14
12	Na (mg/L)	12	51.5	15.6	30.9
13	NH3-N (mg N/L)	12	1.71	0.00	0.5
14	NO2+NO3 (mg N/L)	12	2.67	1.05	1.71
15	NO2-N (mgN/L)	12	0.04	0.00	0.01
16	NO3-N (mgN/L)	12	2.67	1.04	1.7
17	o-PO4-P (mg P/L)	12	1.629	0.068	0.444
18	SiO2 (mg/L)	12	39.1	11.2	20.4
19	SO4 (mg/L)	12	35.0	1.6	20.1
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	35.0	1.0	4.6
2	COD (mg/L)	12	153.1	11.6	79.9
3	DO (mg/L)	12	10.2	4.7	7.3
4	DO_SAT% (%)	12	112	54	84
5	FCol-MPN (MPN/100mL)	12	1700	20	333
6	Tcol-MPN (MPN/100mL)	12	16000	20	2337
	TRACE & TOXIC				
1	As (µg/L)	3	1.9	0.0	0.9
2	Cd (µg/L)	3	0.2	0.0	0.1
3	Cr (µg/L)	3	5.0	0.5	2.8
4	Cu (µg/L)	3	7.6	1.0	3.6
5	Ni (µg/L)	3	19.0	2.7	8.4
6	Pb (µg/L)	3	5.2	0.7	2.3
7	Zn (µg/L)	3	7.0	0.2	3.6
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	131	54	81
2	HAR_Total (mgCaCO3/L)	12	200	73	139
3	Na% (%)	12	59	24	32
4	RSC (-)	12	1.5	0.0	0.5
5	SAR (-)	12	2.6	0.7	1.2
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	1162	1871	1100	1794	2954	4596	1385	683.2	3227	2551	1764	2512	1215	942.1	2255
2	EC_GEN (µmho/cm)	344	291	265	223	245	268	315	385	325	329	327	328	375	294	318
3	pH_GEN (pH units)	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	7.9
4	Temp (deg C)	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	22.8
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)	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	4.2
2	ALK-TOT (mgCaCO3/L)	139	118	118	98	97	112	125	137	117	146	197	146	168	106	127
3	B (mg/L)	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	1.13
4	Ca (mg/L)	30	27	25	27	23	28	29	25	26	30	36	32	33	29	28
5	Cl (mg/L)	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	16.7
6	CO3 (mg/L)	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	5.0
7	F (mg/L)	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	0.18
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	160	143	131	105	109	127	145	158	126	168	229	171	205	113	144
10	K (mg/L)	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	2.6
11	Mg (mg/L)	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	10.1
12	Na (mg/L)	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	25.1
13	NH3-N (mg N/L)	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	0.23
14	NO2+NO3 (mg N/L)	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	1.88
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	1.86
17	o-PO4-P (mg P/L)	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	0.160
18	SiO2 (mg/L)	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	17.6
19	SO4 (mg/L)	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	13.0
	BIOLOGICAL/BACTERIOLOGICAL															

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1	BOD3-27 (mg/L)	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	8.4
2	COD (mg/L)						39.4	37.6	38.3	50.3	41.4	39.2	55.1	31.8	86.9	31.9
3	DO (mg/L)	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	6.3
4	DO_SAT% (%)	83	86	83	82	81	79	69	80	88	93	82	72	77	76	73
5	FCol-MPN (MPN/100mL)	1420	3010	680	351	460	1200	130	220	150	190	5560	160	190	62	638
6	Tcol-MPN (MPN/100mL)	2020	33770	1540	2113	980	5700	390	490	230	4230	26880	5360	436	564	5332
	TRACE & TOXIC															
1	As (µg/L)											13.1	2.2			0.8
2	Cd (µg/L)											1.2	0.7			0.2
3	Cr (µg/L)											4.6	6.1			5.0
4	Cu (µg/L)											9.2	7.5			2.3
5	Hg (µg/L)												0.2			
6	Ni (µg/L)											8.9	10.4			3.6
7	Pb (µg/L)				47.0							2.5	0.2			0.7
8	Zn (µg/L)											2.7	1.6			3.6
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	75	69	62	68	58	71	73	62	64	76	90	80	82	72	69
2	HAR_Total (mgCaCO3/L)	126	107	102	98	94	109	118	132	112	145	177	142	148	114	111
3	Na% (%)	25	26	27	20	22	17	23	27	22	31	18	23	30	25	31
4	RSC (-)	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	0.3
5	SAR (-)	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	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	89.92	195.5
2	EC_GEN (µmho/cm)	389	367	350	376	362	386	400	371	433	444	487	508	403	404	407
3	pH_GEN (pH units)	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	8.5
4	Temp (deg C)	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	20.0
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)	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	9.2
2	ALK-TOT (mgCaCO3/L)	178	160	145	168	147	163	166	131	167	167	240	259	181	177	197
3	B (mg/L)	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	0.49
4	Ca (mg/L)	34	34	25	34	30	34	34	32	32	33	39	57	37	33	41
5	Cl (mg/L)	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	18.9
6	CO3 (mg/L)	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	11.1
7	F (mg/L)	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	0.18
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	210	173	157	188	161	188	192	155	189	191	277	303	218	197	217
10	K (mg/L)	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	2.3
11	Mg (mg/L)	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	19.1
12	Na (mg/L)	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	32.2
13	NH3-N (mg N/L)	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	0.50
14	NO2+NO3 (mg N/L)	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	1.84
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	1.83
17	o-PO4-P (mg P/L)	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	0.775
18	SiO2 (mg/L)	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	23.7
19	SO4 (mg/L)	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	23.1
	BIOLOGICAL/BACTERIOLOGICAL															

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
1	BOD3-27 (mg/L)	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	1.9
2	COD (mg/L)						38.8	53.1	42.9	48.6	63.3	31.5	27.0	26.3	35.3	120.0
3	DO (mg/L)	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	8.7
4	DO_SAT% (%)	82	90	86	95	88	86	81	91	98	90	94	85	85	78	95
5	FCol-MPN (MPN/100mL)	550	633	175	100	138	525	100	100	100	100	100	100	36	20	83
6	Tcol-MPN (MPN/100mL)	1000	867	275	138	275	100	100	100	100	138	350	238	123	40	158
	TRACE & TOXIC															
1	As (µg/L)										0.4				0.5	1.9
2	Cd (µg/L)										0.2			0.3	0.2	0.0
3	Cr (µg/L)										72.5			0.6	0.3	0.5
4	Cu (µg/L)										127.2			6.0	0.7	1.0
5	Hg (µg/L)															
6	Ni (µg/L)										71.5			1.2	0.2	2.7
7	Pb (µg/L)										0.9			0.8	0.3	5.2
8	Zn (µg/L)										36.2			6.0	5.5	0.2
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	84	84	63	84	75	85	86	81	81	83	98	143	92	83	104
2	HAR_Total (mgCaCO3/L)	143	142	132	145	128	152	152	146	155	181	191	298	166	144	183
3	Na% (%)	30	31	30	30	29	31	28	22	26	26	33	20	27	31	28
4	RSC (-)	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	0.3
5	SAR (-)	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	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	22.29	79.70
2	EC_GEN (µmho/cm)	413	432	416	404	412	443	570	426	473	481	505	456	462	455	379
3	pH_GEN (pH units)	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	8.7
4	Temp (deg C)	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	23.3
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)	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	17.4
2	ALK-TOT (mgCaCO3/L)	182	182	159	141	155	155	212	193	165	229	223	183	180	185	177
3	B (mg/L)	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	0.79
4	Ca (mg/L)	29	30	29	30	28	30	33	28	36	35	36	49	33	48	29
5	Cl (mg/L)	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	29.2
6	CO3 (mg/L)	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	21.0
7	F (mg/L)	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	0.73
8	Fe (mg/L)	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	0.2
9	HCO3 (mg/L)	214	190	176	157	172	178	250	219	187	265	251	214	200	204	173
10	K (mg/L)	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	2.5
11	Mg (mg/L)	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	13.7
12	Na (mg/L)	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	38.9
13	NH3-N (mg N/L)	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	0.97
14	NO2+NO3 (mg N/L)	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	1.27
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	1.25
17	o-PO4-P (mg P/L)	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	0.477
18	SiO2 (mg/L)	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	20.7
19	SO4 (mg/L)	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	28.0
	BIOLOGICAL/BACTERIOLOGICAL															

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1	BOD3-27 (mg/L)	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	1.8
2	COD (mg/L)						65.1	44.4	27.9	25.8	57.6	76.5	53.0	29.7	44.5	106.3
3	DO (mg/L)	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	7.3
4	DO_SAT% (%)	93	79	79	81	86	78	80	81	92	88	77	79	73	85	86
5	FCol-MPN (MPN/100mL)	100	100	100	100	100	100	100	100	100	200	100	167	43	57	157
6	Tcol-MPN (MPN/100mL)	150	183	150	100	150	183	100	100	100	483	183	650	130	143	250
	TRACE & TOXIC															
1	As (µg/L)										0.7	2.5	4.4	0.8	3.3	0.0
2	Cd (µg/L)					8.0					0.8	1.7	0.0	1.0	0.3	0.0
3	Cr (µg/L)					17.0					0.0	1.2	0.7	5.9	1.5	3.0
4	Cu (µg/L)											0.8	4.9		2.2	7.6
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	19.0
7	Pb (µg/L)					127.0					23.8	0.7	0.8	14.0	1.4	1.0
8	Zn (µg/L)					31.0					19.3	19.0	12.6	28.0	3.6	7.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	72	74	72	75	70	75	83	71	89	89	89	121	84	121	71
2	HAR_Total (mgCaCO3/L)	150	153	150	132	134	137	178	163	211	225	205	179	151	193	128
3	Na% (%)	37	35	35	36	34	40	41	35	27	28	33	33	36	32	40
4	RSC (-)	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	1.0
5	SAR (-)	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	1.6
	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	: 2016-2017
Site	: BHATPALLI	Code	: AGH10L0
State	: Andhra Pradesh	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 : 2016-2017

Station Name : BHATPALLI (AGH10L0)

Local River : Peddavagu

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	02.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	1.227	44.24	124.7	81.56	54.39	13.40	10.00	7.207	4.957	4.278	3.826	1.860
2	Colour_Cod (-)	Clear	Clear	Light Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	590	331	490	326	360	505	476	488	533	505	488	533
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	8.2	8.4	8.4	8.3	8.4	8.2	8.5	8.8	8.2	8.5	8.4
6	Temp (deg C)	29.0	27.0	26.0	26.0	23.0	22.0	19.0	19.0	20.0	23.0	24.0	25.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	20.9	0.0	9.0	0.0	6.0	6.0	0.0	12.0	37.4	6.0	12.0	6.0
2	ALK-TOT (mgCaCO3/L)	201	156	156	141	189	258	240	270	295	209	302	250
3	B (mg/L)	0.43	1.26	0.31	0.28	0.62	0.31	0.63	0.95	0.83	1.02	0.22	1.12
4	Ca (mg/L)	28	33	33	32	39	39	45	49	37	38	36	29
5	Cl (mg/L)	17.9	13.9	6.0	6.0	11.9	15.9	21.9	13.9	11.9	25.8	15.9	27.8
6	CO3 (mg/L)	25.2	0.0	10.8	0.0	7.2	7.2	0.0	14.4	45.0	7.2	14.4	7.2
7	F (mg/L)	0.54	0.80	0.03	0.26	0.00	0.39	0.59	0.76	0.13	0.90	1.62	1.98
8	Fe (mg/L)	0.0	0.0	0.1	0.2	0.0	0.0	0.1	0.1	0.1	0.7	0.1	0.3
9	HCO3 (mg/L)	194	190	168	172	216	300	293	300	268	241	339	290
10	K (mg/L)	2.5	3.4	2.1	1.8	2.0	2.5	2.7	2.6	1.9	2.1	2.2	2.6
11	Mg (mg/L)	20.0	10.9	17.5	14.9	17.5	20.1	22.9	15.9	30.8	10.6	23.0	29.3
12	Na (mg/L)	55.4	30.1	23.3	21.8	24.8	39.1	36.8	34.2	40.3	46.7	105.6	41.2
13	NH3-N (mg N/L)	0.02	0.40	0.40	0.27	0.32	0.28	0.29	0.99	0.36	0.28	1.39	1.05
14	NO2+NO3 (mg N/L)	1.14	3.09	2.29	1.82	2.20	3.27	2.50	1.64	1.81	2.19	1.93	1.98
15	NO2-N (mgN/L)	0.02	0.08	0.00	0.00	0.01	0.01	0.03	0.04	0.01	0.01	0.01	0.65
16	NO3-N (mgN/L)	1.12	3.02	2.29	1.82	2.19	3.26	2.47	1.60	1.80	2.18	1.92	1.33
17	o-PO4-P (mg P/L)	0.119	0.111	0.199	0.049	0.108	0.276	0.352	1.282	3.781	1.410	1.275	0.326
18	SiO2 (mg/L)	35.8	22.9	32.3	27.0	31.8	29.4	28.7	41.4	22.3	39.6	28.0	22.0
19	SO4 (mg/L)	42.8	10.1	1.1	5.2	5.3	21.0	2.3	18.3	16.0	34.8	27.3	31.5

Water Quality Datasheet for the period : 2016-2017

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River : Peddavagu

River Water Analysis

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	02.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	1.7	40.0	2.9	3.7	1.4	2.4	2.4	2.4	1.7	1.0	3.7	1.5
2	COD (mg/L)	42.2	73.0	3.4	68.7	18.1	76.4	87.7	104.7	187.3	98.8	156.4	68.6
3	DO (mg/L)	5.4	1.2	6.9	6.6	6.7	7.0	8.9	7.8	8.8	7.7	7.1	7.5
4	DO_SAT% (%)	70	15	85	81	78	80	96	84	97	90	84	91
5	FCol-MPN (MPN/100mL)	300	340	70	130	220	270	1700	2200	300	5000	130	300
6	Tcol-MPN (MPN/100mL)	300	1700	130	1300	5000	16000	5000	16000	300	9000	700	3000
	TRACE & TOXIC												
1	As (µg/L)			4.2				2.7				2.0	
2	Cd (µg/L)			0.2				0.2				0.0	
3	Cr (µg/L)			7.7				1.2				2.0	
4	Cu (µg/L)			11.7				0.9				2.0	
5	Ni (µg/L)			2.8				0.7				11.0	
6	Pb (µg/L)			0.6				13.1				0.0	
7	Zn (µg/L)			2.8				1.7				6.0	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	70	83	83	80	97	97	113	122	92	94	90	74
2	HAR_Total (mgCaCO3/L)	154	129	156	142	170	181	208	188	220	139	185	196
3	Na% (%)	44	33	24	25	24	32	28	28	28	42	55	31
4	RSC (-)	1.0	0.6	0.0	0.0	0.4	1.6	0.7	1.7	1.5	1.4	2.4	1.1
5	SAR (-)	2.0	1.2	0.8	0.8	0.8	1.3	1.1	1.1	1.2	1.7	3.4	1.3
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River : Peddavagu

Sub-Division : Wardha SD, Chandrapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	2164	0.933	47.26
2	EC_GEN (µmho/cm)	12	590	326	469
3	pH_GEN (pH units)	12	8.8	8.2	8.4
4	Temp (deg C)	12	29.0	19.0	23.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	37.4	0.0	9.6
2	ALK-TOT (mgCaCO3/L)	12	302	141	222
3	B (mg/L)	12	1.26	0.22	0.66
4	Ca (mg/L)	12	49	28	37
5	Cl (mg/L)	12	27.8	6.0	15.7
6	CO3 (mg/L)	12	45.0	0.0	11.5
7	F (mg/L)	12	1.98	0.00	0.67
8	Fe (mg/L)	12	0.7	0.0	0.1
9	HCO3 (mg/L)	12	339	168	248
10	K (mg/L)	12	3.4	1.8	2.4
11	Mg (mg/L)	12	30.8	10.6	19.4
12	Na (mg/L)	12	105.6	21.8	41.6
13	NH3-N (mg N/L)	12	1.39	0.02	0.5
14	NO2+NO3 (mg N/L)	12	3.27	1.14	2.15
15	NO2-N (mgN/L)	12	0.65	0.00	0.07
16	NO3-N (mgN/L)	12	3.26	1.12	2.08
17	o-PO4-P (mg P/L)	12	3.781	0.049	0.774
18	SiO2 (mg/L)	12	41.4	22.0	30.1
19	SO4 (mg/L)	12	42.8	1.1	18
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	40.0	1.0	5.4
2	COD (mg/L)	12	187.3	3.4	82.1
3	DO (mg/L)	12	8.9	1.2	6.8
4	DO_SAT% (%)	12	97	15	79
5	Fcol-MPN (MPN/100mL)	12	5000	70	913
6	Tcol-MPN (MPN/100mL)	12	16000	130	4869
	TRACE & TOXIC				
1	As (µg/L)	3	4.2	2.0	3
2	Cd (µg/L)	3	0.2	0.0	0.1
3	Cr (µg/L)	3	7.7	1.2	3.7
4	Cu (µg/L)	3	11.7	0.9	4.9
5	Ni (µg/L)	3	11.0	0.7	4.8
6	Pb (µg/L)	3	13.1	0.0	4.6
7	Zn (µg/L)	3	6.0	1.7	3.5
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	122	70	91
2	HAR_Total (mgCaCO3/L)	12	220	129	172
3	Na% (%)	12	55	24	33
4	RSC (-)	12	2.4	0.0	1
5	SAR (-)	12	3.4	0.8	1.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BHATPALLI (AGH10L0)

Local River : Peddavagu

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	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	15.36	61.22
2	EC_GEN (µmho/cm)	430	407	406	416	410	416	465	451	393	418	432	433	517	464	419
3	pH_GEN (pH units)	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	8.3
4	Temp (deg C)	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	26.2
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)	2.4	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	7.2
2	ALK-TOT (mgCaCO3/L)	213	192	204	190	175	180	221	206	186	193	250	182	238	223	169
3	B (mg/L)	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	0.58
4	Ca (mg/L)	30	33	32	33	30	35	35	32	37	36	43	44	34	30	33
5	Cl (mg/L)	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	11.1
6	CO3 (mg/L)	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	8.6
7	F (mg/L)	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	0.33
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	254	218	228	217	199	207	262	244	214	226	297	208	288	263	188
10	K (mg/L)	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	2.4
11	Mg (mg/L)	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	16.2
12	Na (mg/L)	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	31.1
13	NH3-N (mg N/L)	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	0.28
14	NO2+NO3 (mg N/L)	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	2.11
15	NO2-N (mgN/L)	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	0.02
16	NO3-N (mgN/L)	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	2.09
17	o-PO4-P (mg P/L)	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	0.117
18	SiO2 (mg/L)	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	30.0
19	SO4 (mg/L)	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	12.9

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River : Peddavagu

River Water

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	9.9
2	COD (mg/L)						50.7	51.9	50.0	96.0	31.3	45.5	36.3	23.0	106.2	41.1
3	DO (mg/L)	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	5.4
4	DO_SAT% (%)	89	88	90	92	91	91	84	85	77	92	81	81	87	80	66
5	FCol-MPN (MPN/100mL)	5697	1583	1143	785	2690	880	660	380	250	200	1530	4100	758	340	212
6	Tcol-MPN (MPN/100mL)	8670	9957	5133	2100	25180	2350	2630	1940	4475	1770	12230	49290	4386	2514	1686
	TRACE & TOXIC															
1	As (µg/L)											6.3	5.0			4.2
2	Cd (µg/L)											0.8	0.4			0.2
3	Cr (µg/L)											0.8	4.7			7.7
4	Cu (µg/L)											25.6	5.7			11.7
5	Hg (µg/L)												0.4			
6	Ni (µg/L)											0.6	10.3			2.8
7	Pb (µg/L)				62.0							1.6	0.6			0.6
8	Zn (µg/L)				24.0							2.5	9.0			2.8
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	76	84	80	81	74	88	87	81	91	89	107	111	85	75	83
2	HAR_Total (mgCaCO3/L)	157	154	162	157	148	171	175	154	160	178	218	213	206	172	150
3	Na% (%)	31	28	30	30	27	21	31	35	17	33	22	23	33	31	30
4	RSC (-)	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	0.4
5	SAR (-)	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	1.1
	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: 2002-2017

Station Name : BHATPALLI (AGH10L0)

Local River : Peddavagu

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	5.385	8.892
2	EC_GEN (μmho/cm)	554	549	501	489	503	514	569	627	539	510	539	653	529	516	501
3	pH_GEN (pH units)	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	8.5
4	Temp (deg C)	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	20.0
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)	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	13.8
2	ALK-TOT (mgCaCO3/L)	292	277	268	253	225	228	265	267	249	238	282	309	269	242	266
3	B (mg/L)	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	0.68
4	Ca (mg/L)	33	15	30	35	34	30	33	42	39	30	41	67	38	35	42
5	Cl (mg/L)	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	15.9
6	CO3 (mg/L)	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	16.6
7	F (mg/L)	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	0.47
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	350	318	304	287	258	266	315	310	289	274	332	362	319	282	290
10	K (mg/L)	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	2.4
11	Mg (mg/L)	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	22.4
12	Na (mg/L)	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	37.6
13	NH3-N (mg N/L)	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	0.48
14	NO2+NO3 (mg N/L)	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	2.30
15	NO2-N (mgN/L)	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	0.02
16	NO3-N (mgN/L)	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	2.28
17	o-PO4-P (mg P/L)	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	1.423
18	SiO2 (mg/L)	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	30.4
19	SO4 (mg/L)	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	14.4

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River : Peddavagu

River Water

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	2.2
2	COD (mg/L)						72.8	66.6	67.7	55.5	71.6	27.2	43.3	27.0	39.8	114.0
3	DO (mg/L)	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	8.1
4	DO_SAT% (%)	98	97	96	93	92	98	93	88	91	108	91	99	92	83	89
5	FCol-MPN (MPN/100mL)	6808	992	296	275	788	313	125	750	138	588	250	588	113	328	1118
6	Tcol-MPN (MPN/100mL)	10592	12213	592	675	2225	340	263	3238	400	3063	6925	11263	530	1825	9325
	TRACE & TOXIC															
1	As (µg/L)										0.2				1.3	2.7
2	Cd (µg/L)										0.0			0.2	0.2	0.2
3	Cr (µg/L)										6.3			4.6	1.6	1.2
4	Cu (µg/L)										197.0			9.9	0.4	0.9
5	Hg (µg/L)															
6	Ni (µg/L)										40.3			0.0	0.3	0.7
7	Pb (µg/L)										0.6			0.7	0.6	13.1
8	Zn (µg/L)										22.7			3.0	3.0	1.7
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	84	36	76	89	84	75	84	105	98	75	104	168	94	89	106
2	HAR_Total (mgCaCO3/L)	190	140	202	195	175	182	185	220	200	217	222	306	213	176	199
3	Na% (%)	36	45	33	31	32	35	33	32	29	33	31	25	31	34	29
4	RSC (-)	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	1.4
5	SAR (-)	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	1.2
	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: 2002-2017

Station Name : BHATPALLI (AGH10L0)

Local River : Peddavagu

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	3.770	3.321
2	EC_GEN (μmho/cm)	507	540	491	580	538	471	579	634	565	542	515	556	585	532	509
3	pH_GEN (pH units)	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	8.4
4	Temp (deg C)	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	24.0
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)	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	8.0
2	ALK-TOT (mgCaCO3/L)	266	274	256	240	221	214	236	278	227	287	273	251	229	209	254
3	B (mg/L)	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	0.79
4	Ca (mg/L)	28	29	29	32	28	31	28	37	34	31	35	51	33	41	34
5	Cl (mg/L)	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	23.2
6	CO3 (mg/L)	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	9.6
7	F (mg/L)	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	1.50
8	Fe (mg/L)	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	0.4
9	HCO3 (mg/L)	310	298	294	280	253	252	277	331	268	334	318	294	276	245	290
10	K (mg/L)	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	2.3
11	Mg (mg/L)	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	21.0
12	Na (mg/L)	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	64.5
13	NH3-N (mg N/L)	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	0.91
14	NO2+NO3 (mg N/L)	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	2.03
15	NO2-N (mgN/L)	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	0.22
16	NO3-N (mgN/L)	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	1.81
17	o-PO4-P (mg P/L)	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	1.004
18	SiO2 (mg/L)	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	29.9
19	SO4 (mg/L)	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	31.2

Water Quality Seasonal Average for the period: 2002-2017

Station Name : BHATPALLI (AGH10L0)

Division : Wainganga Div., Nagpur

Local River : Peddavagu

River Water

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	2.1
2	COD (mg/L)						94.4	70.3	55.7	36.0	49.5	83.3	48.7	32.7	39.9	107.9
3	DO (mg/L)	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	7.4
4	DO_SAT% (%)	102	96	98	87	92	84	93	100	89	101	57	83	85	79	88
5	FCol-MPN (MPN/100mL)	1166	294	406	283	250	300	200	433	300	400	150	317	173	113	1810
6	Tcol-MPN (MPN/100mL)	30333	1194	878	500	567	967	250	600	400	2683	3567	11083	363	210	4233
	TRACE & TOXIC															
1	As (µg/L)										0.9	2.1	3.0	1.2	1.6	2.0
2	Cd (µg/L)					8.0					0.5	1.4	0.0	1.0	0.3	0.0
3	Cr (µg/L)					48.0					0.0	1.6	2.4	5.7	1.4	2.0
4	Cu (µg/L)											0.1	2.9		2.8	2.0
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	11.0
7	Pb (µg/L)					70.0					22.0	0.9	0.5	13.0	1.7	0.0
8	Zn (µg/L)					49.0					18.9	11.1	23.4	0.0	4.1	6.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	69	71	72	80	69	78	71	92	84	78	87	127	81	102	86
2	HAR_Total (mgCaCO3/L)	173	181	179	168	157	148	180	220	211	254	224	226	197	177	173
3	Na% (%)	40	39	37	41	40	40	41	34	40	32	34	32	36	37	43
4	RSC (-)	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	1.6
5	SAR (-)	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	2.1
	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)					0.1					0.0					
5	Endos (µg/L)					0.1					0.0					

HISTORY SHEET

		Water Year	: 2016-2017
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 : 2016-2017

Station Name : BAMNI (AGH30E2)

Local River : Wardha

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Wardha Sub-division,Chandrapur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	7.681	1772	2518	246.3	910.2	51.22	42.17	25.17	21.88	18.19	3.623	0.810
2	Colour_Cod (-)	Clear	Brown	Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	628	188	403	459	432	608	586	505	495	530	920	1906
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	7.7	8.0	7.9	8.1	8.5	8.2	8.3	8.8	8.5	8.0	7.9
6	Temp (deg C)	30.0	29.0	28.0	27.0	28.0	27.0	24.0	26.0	24.0	28.0	30.0	29.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	20.6	0.0	0.0	0.0	0.0	6.0	0.0	9.0	32.4	5.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	131	165	96	166	189	234	139	213	235	195	228	385
3	B (mg/L)	0.03	0.04	0.46	0.52	0.92	0.44	0.18	0.22	0.20	0.42	0.15	1.04
4	Ca (mg/L)	86	45	32	38	52	48	53	43	41	42	53	139
5	Cl (mg/L)	334.0	9.9	17.9	27.8	21.9	27.8	35.8	27.8	27.8	41.8	33.8	304.2
6	CO3 (mg/L)	24.8	0.0	0.0	0.0	0.0	7.2	0.0	10.8	39.0	6.0	0.0	0.0
7	F (mg/L)	0.26	0.58	0.00	0.19	0.09	0.11	0.22	0.51	0.18	0.62	0.97	0.94
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.1	0.0	0.3	0.0	0.3
9	HCO3 (mg/L)	110	201	117	202	231	271	170	238	207	226	278	470
10	K (mg/L)	5.2	3.0	2.3	2.8	2.6	4.6	4.6	2.6	2.8	3.5	8.2	14.0
11	Mg (mg/L)	24.0	4.4	13.1	21.0	19.7	34.7	26.3	29.6	25.7	21.2	33.0	48.6
12	Na (mg/L)	72.5	14.2	18.2	30.5	25.7	40.7	8.4	35.7	36.8	42.1	70.6	273.3
13	NH3-N (mg N/L)	0.00	0.43	0.43	0.23	0.75	0.40	0.34	0.94	0.46	0.27	1.62	0.76
14	NO2+NO3 (mg N/L)	5.27	1.62	2.52	2.70	2.40	4.95	2.96	2.03	1.67	2.17	2.55	8.11
15	NO2-N (mgN/L)	0.02	0.02	0.00	0.01	0.02	0.15	0.03	0.04	0.17	0.01	0.27	0.03
16	NO3-N (mgN/L)	5.25	1.61	2.52	2.69	2.38	4.80	2.93	2.00	1.50	2.16	2.28	8.08
17	o-PO4-P (mg P/L)	0.447	0.093	0.155	0.060	0.076	0.328	0.456	0.914	2.968	0.522	0.168	1.183
18	SiO2 (mg/L)	33.2	12.2	17.6	27.5	31.1	32.4	22.0	29.6	10.8	25.5	23.7	5.5
19	SO4 (mg/L)	55.0	10.6	15.0	87.7	19.5	51.8	41.1	37.7	18.0	62.4	65.2	96.8
	BIOLOGICAL/BACTERIOLOGICAL												

Water Quality Datasheet for the period : 2016-2017

Station Name : BAMNI (AGH30E2)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water Analysis

Sub-Division : Wardha Sub-division, Chandrapur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
1	BOD3-27 (mg/L)	3.4	4.0	15.0	3.7	3.6	2.4	3.6	1.5	1.3	1.8	2.5	15.0
2	COD (mg/L)	27.2	52.0	26.0	90.4	39.5	127.1	77.6	77.2	110.4	119.8	283.9	87.5
3	DO (mg/L)	5.7	5.8	4.5	6.0	6.2	6.0	6.0	6.6	7.6	5.5	5.9	4.0
4	DO_SAT% (%)	75	75	57	75	79	75	71	81	90	70	78	52
5	FCol-MPN (MPN/100mL)	16000	800	20	9000	5000	140	2400	340	220	500	20	20
6	Tcol-MPN (MPN/100mL)	16000	800	80	9000	16000	2400	2400	1300	500	700	20	500
	TRACE & TOXIC												
1	As (µg/L)			0.0				1.5				2.0	
2	Cd (µg/L)			0.2				0.0				0.0	
3	Cr (µg/L)			20.0				1.0				4.0	
4	Cu (µg/L)			10.9				1.7				7.8	
5	Ni (µg/L)			2.9				0.1				12.0	
6	Pb (µg/L)			2.0				0.7				1.0	
7	Zn (µg/L)			2.9				4.2				9.0	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	216	112	81	95	130	120	134	108	104	106	131	347
2	HAR_Total (mgCaCO3/L)	316	130	136	183	212	264	243	232	211	194	269	550
3	Na% (%)	33	19	22	26	21	25	7	25	27	32	36	51
4	RSC (-)	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0
5	SAR (-)	1.8	0.5	0.7	1.0	0.8	1.1	0.2	1.0	1.1	1.3	1.9	5.1
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	365	9727	0.665	291.9
2	EC_GEN (µmho/cm)	12	1906	188	638
3	pH_GEN (pH units)	12	8.8	7.7	8.2
4	Temp (deg C)	12	30.0	24.0	27.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	32.4	0.0	6.1
2	ALK-TOT (mgCaCO3/L)	12	385	96	198
3	B (mg/L)	12	1.04	0.03	0.38
4	Ca (mg/L)	12	139	32	56
5	Cl (mg/L)	12	334.0	9.9	75.9
6	CO3 (mg/L)	12	39.0	0.0	7.3
7	F (mg/L)	12	0.97	0.00	0.39
8	Fe (mg/L)	12	0.3	0.0	0.1
9	HCO3 (mg/L)	12	470	110	227
10	K (mg/L)	12	14.0	2.3	4.7
11	Mg (mg/L)	12	48.6	4.4	25.1
12	Na (mg/L)	12	273.3	8.4	55.7
13	NH3-N (mg N/L)	12	1.62	0.00	0.55
14	NO2+NO3 (mg N/L)	12	8.11	1.62	3.25
15	NO2-N (mgN/L)	12	0.27	0.00	0.06
16	NO3-N (mgN/L)	12	8.08	1.50	3.18
17	o-PO4-P (mg P/L)	12	2.968	0.060	0.614
18	SiO2 (mg/L)	12	33.2	5.5	22.6
19	SO4 (mg/L)	12	96.8	10.6	46.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	15.0	1.3	4.8
2	COD (mg/L)	12	283.9	26.0	93.2
3	DO (mg/L)	12	7.6	4.0	5.8
4	DO_SAT% (%)	12	90	52	73
5	FCol-MPN (MPN/100mL)	12	16000	20	2872
6	Tcol-MPN (MPN/100mL)	12	16000	20	4142
	TRACE & TOXIC				
1	As (µg/L)	3	2.0	0.0	1.2
2	Cd (µg/L)	3	0.2	0.0	0.1
3	Cr (µg/L)	3	20.0	1.0	8.3
4	Cu (µg/L)	3	10.9	1.7	6.8
5	Ni (µg/L)	3	12.0	0.1	5
6	Pb (µg/L)	3	2.0	0.7	1.2
7	Zn (µg/L)	3	9.0	2.9	5.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	347	81	140
2	HAR_Total (mgCaCO3/L)	12	550	130	245
3	Na% (%)	12	51	7	27
4	RSC (-)	12	0.7	0.0	0.1
5	SAR (-)	12	5.1	0.2	1.4
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	419.1	578.2	60.24	335.2	539.5	1220	106.5	54.99	1243	1272	545.0	1046	767.2	98.64	1091
2	EC_GEN (µmho/cm)	479	529	573	855	378	449	649	687	338	405	910	627	538	518	422
3	pH_GEN (pH units)	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	8.0
4	Temp (deg C)	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	28.4
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)	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	4.1
2	ALK-TOT (mgCaCO3/L)	167	158	155	140	132	145	203	157	149	149	255	243	243	165	149
3	B (mg/L)	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	0.39
4	Ca (mg/L)	38	43	43	77	30	37	53	53	33	38	89	62	41	44	51
5	Cl (mg/L)	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	82.3
6	CO3 (mg/L)	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	5.0
7	F (mg/L)	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	0.22
8	Fe (mg/L)	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	0.0
9	HCO3 (mg/L)	200	184	186	159	154	169	242	188	170	175	297	288	294	197	172
10	K (mg/L)	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	3.2
11	Mg (mg/L)	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	16.4
12	Na (mg/L)	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	32.2
13	NH3-N (mg N/L)	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	0.37
14	NO2+NO3 (mg N/L)	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	2.90
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	2.89
17	o-PO4-P (mg P/L)	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	0.166
18	SiO2 (mg/L)	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	24.3
19	SO4 (mg/L)	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	37.6

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	5.9
2	COD (mg/L)						30.5	73.0	71.5	69.2	46.4	85.1	56.1	125.4	110.8	47.0
3	DO (mg/L)	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	5.6
4	DO_SAT% (%)	81	83	78	83	93	74	51	76	90	88	64	54	70	67	73
5	FCol-MPN (MPN/100mL)	2693	1073	633	388	490	1580	910	1140	163	190	2150	770	2418	92	6164
6	Tcol-MPN (MPN/100mL)	5850	11210	1580	1760	1450	3990	5320	4230	813	850	12050	49860	4380	1112	8376
	TRACE & TOXIC															
1	As (µg/L)											6.8	4.2			0.0
2	Cd (µg/L)											1.0	1.3			0.2
3	Cr (µg/L)											6.7	6.5			20.0
4	Cu (µg/L)											20.4	7.3			10.9
5	Hg (µg/L)												0.1			
6	Ni (µg/L)											4.7	16.2			2.9
7	Pb (µg/L)				67.0							4.3	1.1			2.0
8	Zn (µg/L)				64.0							4.2	5.5			2.9
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	94	107	107	193	76	92	134	134	82	95	221	155	102	110	127
2	HAR_Total (mgCaCO3/L)	170	188	188	274	130	151	203	230	134	170	341	263	209	179	195
3	Na% (%)	27	27	32	26	23	18	28	37	16	23	16	27	32	30	24
4	RSC (-)	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	0.1
5	SAR (-)	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	1.0
	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	23.64	35.11
2	EC_GEN (µmho/cm)	474	581	666	569	539	545	760	1137	554	534	643	692	586	591	549
3	pH_GEN (pH units)	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	8.5
4	Temp (deg C)	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	25.3
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)	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	11.8
2	ALK-TOT (mgCaCO3/L)	207	202	160	226	190	209	183	250	203	206	254	264	214	216	205
3	B (mg/L)	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	0.26
4	Ca (mg/L)	37	47	51	50	38	43	58	92	38	49	52	73	45	45	47
5	Cl (mg/L)	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	29.8
6	CO3 (mg/L)	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	14.3
7	F (mg/L)	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	0.25
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	251	232	191	252	214	242	224	305	242	237	300	318	256	258	221
10	K (mg/L)	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	3.6
11	Mg (mg/L)	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	29.1
12	Na (mg/L)	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	30.4
13	NH3-N (mg N/L)	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	0.53
14	NO2+NO3 (mg N/L)	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	2.90
15	NO2-N (mgN/L)	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	0.09
16	NO3-N (mgN/L)	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	2.81
17	o-PO4-P (mg P/L)	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	1.166
18	SiO2 (mg/L)	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	23.7
19	SO4 (mg/L)	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	37.1

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	2.2
2	COD (mg/L)						41.6	80.3	90.3	45.7	67.4	43.9	45.8	32.0	32.6	98.1
3	DO (mg/L)	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	6.5
4	DO_SAT% (%)	87	82	69	82	87	70	67	23	92	79	86	77	83	66	80
5	FCol-MPN (MPN/100mL)	571	546	1355	175	375	238	175	1888	100	1213	288	713	108	138	775
6	Tcol-MPN (MPN/100mL)	867	1408	3677	400	825	250	513	5300	638	3125	9263	10188	400	955	1650
	TRACE & TOXIC															
1	As (µg/L)										0.9				1.2	1.5
2	Cd (µg/L)										0.2			0.6	0.5	0.0
3	Cr (µg/L)										5.8			2.0	0.4	1.0
4	Cu (µg/L)										135.4			6.0	0.9	1.7
5	Hg (µg/L)															
6	Ni (µg/L)										18.0			0.3	0.9	0.1
7	Pb (µg/L)										0.4			1.2	3.0	0.7
8	Zn (µg/L)										18.9			5.0	4.6	4.2
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	93	118	128	124	96	106	146	229	95	122	131	182	113	112	116
2	HAR_Total (mgCaCO3/L)	180	211	218	226	181	215	251	383	201	238	272	310	223	208	237
3	Na% (%)	30	31	34	29	31	31	28	34	27	30	28	24	31	34	21
4	RSC (-)	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	0.1
5	SAR (-)	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	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	5.761	7.542
2	EC_GEN (μmho/cm)	688	934	1562	590	600	694	1658	1386	614	620	981	645	885	1053	1119
3	pH_GEN (pH units)	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	8.1
4	Temp (deg C)	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	29.0
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)	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	1.7
2	ALK-TOT (mgCaCO3/L)	194	204	239	141	178	218	270	222	204	218	294	194	228	267	269
3	B (mg/L)	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	0.54
4	Ca (mg/L)	48	65	115	49	44	45	107	86	47	39	63	56	51	78	78
5	Cl (mg/L)	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	126.6
6	CO3 (mg/L)	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	2.0
7	F (mg/L)	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	0.84
8	Fe (mg/L)	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	0.2
9	HCO3 (mg/L)	234	243	290	164	208	259	329	270	248	258	347	232	276	325	325
10	K (mg/L)	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	8.6
11	Mg (mg/L)	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	34.3
12	Na (mg/L)	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	128.7
13	NH3-N (mg N/L)	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	0.88
14	NO2+NO3 (mg N/L)	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	4.28
15	NO2-N (mgN/L)	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	0.10
16	NO3-N (mgN/L)	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	4.18
17	o-PO4-P (mg P/L)	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	0.624
18	SiO2 (mg/L)	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	18.2
19	SO4 (mg/L)	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	74.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	6.4
2	COD (mg/L)						78.9	150.8	134.3	89.5	125.1	93.1	43.3	36.0	57.1	163.7
3	DO (mg/L)	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	5.1
4	DO_SAT% (%)	77	62	45	56	75	60	34	40	81	52	52	85	83	54	67
5	FCol-MPN (MPN/100mL)	1699	444	2450	450	100	100	100	283	883	3467	533	643	80	107	180
6	Tcol-MPN (MPN/100mL)	2042	1028	27600	1283	150	267	300	550	2250	57833	9850	25350	1147	277	407
	TRACE & TOXIC															
1	As (µg/L)										1.2	2.6	0.9	1.3	3.2	2.0
2	Cd (µg/L)					8.0					0.0	1.8	0.0	1.0	0.6	0.0
3	Cr (µg/L)					102.0					0.0	1.6	0.6	6.3	1.7	4.0
4	Cu (µg/L)											1.7	13.2		6.2	7.8
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	12.0
7	Pb (µg/L)					54.0					21.8	1.2	0.1	15.0	2.5	1.0
8	Zn (µg/L)					69.0					6.9	12.7	17.2	0.0	9.7	9.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	119	162	288	122	111	111	268	215	119	98	158	139	128	196	195
2	HAR_Total (mgCaCO3/L)	230	271	448	191	182	188	524	448	228	279	312	213	237	308	338
3	Na% (%)	38	43	43	40	35	42	41	28	45	30	41	36	45	42	40
4	RSC (-)	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	0.0
5	SAR (-)	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	2.8
	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	: 2016-2017
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 : 2016-2017

Station Name : P.G.BRIDGE (AGH32D5)

Local River : Penganga

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL											
1	Q (cumec)	989.5	1075	412.7	796.5	17.13	6.997	7.636	0.737	2.199	0.260	0.000
2	Colour_Cod (-)	Light Brown	Light Brown	Light Brown	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	157	380	479	377	517	423	425	446	453	406	520
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	8.3	8.2	8.3	8.4	8.2	8.2	8.7	8.9	8.7	8.8
6	Temp (deg C)	25.5	26.5	26.0	25.5	25.5	23.0	20.0	21.0	22.0	27.5	25.5
	CHEMICAL											
1	Alk-Phen (mgCaCO3/L)	0.0	6.0	0.0	14.9	14.9	0.0	0.0	47.3	7.5	10.0	24.9
2	ALK-TOT (mgCaCO3/L)	119	139	164	198	237	206	195	262	188	193	235
3	B (mg/L)	0.07	0.87	1.13	1.71	1.21	0.79	0.20	0.11	0.13	0.08	0.60
4	Ca (mg/L)	32	30	39	42	58	38	48	45	32	40	41
5	Cl (mg/L)	4.0	11.9	15.9	13.9	33.8	17.9	19.9	23.9	41.8	33.8	53.7
6	CO3 (mg/L)	0.0	7.2	0.0	18.0	18.0	0.0	0.0	57.0	9.0	12.0	30.0
7	F (mg/L)	0.50	0.08	0.15	0.00	0.02	0.12	0.46	0.19	0.64	0.61	1.11
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.2	0.3	0.0	0.5
9	HCO3 (mg/L)	145	155	200	205	253	252	238	204	211	210	225
10	K (mg/L)	2.4	2.5	2.6	2.3	2.6	2.6	2.1	2.2	2.9	3.2	2.5
11	Mg (mg/L)	14.0	20.1	22.8	28.0	44.2	31.3	28.0	22.4	21.8	30.2	34.2
12	Na (mg/L)	10.7	18.9	33.3	21.8	34.1	34.0	29.4	30.5	43.4	39.1	38.8
13	NH3-N (mg N/L)	0.06	0.06	0.07	0.14	0.24	0.50	0.85	0.56	0.23	2.14	1.22
14	NO2+NO3 (mg N/L)	2.95	2.01	2.86	3.20	6.53	2.93	2.36	2.13	1.88	1.57	1.41
15	NO2-N (mgN/L)	0.02	0.00	0.00	0.02	0.01	0.03	0.01	0.00	0.01	0.01	0.03
16	NO3-N (mgN/L)	2.93	2.01	2.86	3.18	6.53	2.91	2.36	2.13	1.87	1.56	1.38
17	o-PO4-P (mg P/L)	0.129	0.106	0.071	0.088	0.324	0.464	1.198	2.758	1.260	0.146	0.347
18	SiO2 (mg/L)	14.0	21.6	32.1	32.3	40.9	26.6	40.3	21.8	44.2	35.7	32.1
19	SO4 (mg/L)	1.0	1.3	20.7	4.3	25.1	9.1	18.9	28.2	66.0	26.3	23.5

Water Quality Datasheet for the period : 2016-2017

Station Name : P.G.BRIDGE (AGH32D5)

Division : Wainganga Div., Nagpur

Local River : Penganga

River Water Analysis

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL											
1	BOD3-27 (mg/L)	3.2	2.8	4.3	2.5	2.3	3.4	2.2	3.1	1.7	3.0	2.1
2	COD (mg/L)	46.0	19.5	43.1	41.3	63.5	107.4	61.6	98.0	113.7	155.3	85.5
3	DO (mg/L)	6.2	6.4	6.4	6.8	8.6	9.3	9.2	8.3	6.2	7.5	8.6
4	DO_SAT% (%)	75	79	79	82	104	108	101	93	71	94	104
5	FCol-MPN (MPN/100mL)	340	40	80	140	20	170	260	110	2800	130	5000
6	Tcol-MPN (MPN/100mL)	5000	70	3000	2400	40	170	1700	300	3500	230	16000
	TRACE & TOXIC											
1	As (µg/L)		16.9				1.1				1.0	
2	Cd (µg/L)		0.1				0.3				0.0	
3	Cr (µg/L)		6.9				0.6				4.0	
4	Cu (µg/L)		21.0				1.3				3.0	
5	Ni (µg/L)		2.5				1.2				7.0	
6	Pb (µg/L)		0.2				0.5				1.0	
7	Zn (µg/L)		2.5				1.2				10.0	
	CHEMICAL INDICES											
1	HAR_Ca (mgCaCO3/L)	79	74	98	105	144	94	120	113	81	101	103
2	HAR_Total (mgCaCO3/L)	138	158	193	221	328	225	236	206	171	227	245
3	Na% (%)	14	20	27	18	18	25	21	24	35	27	26
4	RSC (-)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.4	0.0	0.0
5	SAR (-)	0.4	0.7	1.0	0.6	0.8	1.0	0.8	0.9	1.4	1.1	1.1
	PESTICIDES											

Water Quality Summary for the period : 2016-2017

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)	365	6125	0.000	151.3
2	EC_GEN (µmho/cm)	11	520	157	417
3	pH_GEN (pH units)	11	8.9	8.2	8.4
4	Temp (deg C)	11	27.5	20.0	24.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	47.3	0.0	11.4
2	ALK-TOT (mgCaCO3/L)	11	262	119	194
3	B (mg/L)	11	1.71	0.07	0.63
4	Ca (mg/L)	11	58	30	40
5	Cl (mg/L)	11	53.7	4.0	24.6
6	CO3 (mg/L)	11	57.0	0.0	13.7
7	F (mg/L)	11	1.11	0.00	0.35
8	Fe (mg/L)	11	0.5	0.0	0.1
9	HCO3 (mg/L)	11	253	145	209
10	K (mg/L)	11	3.2	2.1	2.5
11	Mg (mg/L)	11	44.2	14.0	27
12	Na (mg/L)	11	43.4	10.7	30.4
13	NH3-N (mg N/L)	11	2.14	0.06	0.55
14	NO2+NO3 (mg N/L)	11	6.53	1.41	2.71
15	NO2-N (mgN/L)	11	0.03	0.00	0.01
16	NO3-N (mgN/L)	11	6.53	1.38	2.7
17	o-PO4-P (mg P/L)	11	2.758	0.071	0.626
18	SiO2 (mg/L)	11	44.2	14.0	31.1
19	SO4 (mg/L)	11	66.0	1.0	20.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	4.3	1.7	2.8
2	COD (mg/L)	11	155.3	19.5	75.9
3	DO (mg/L)	11	9.3	6.2	7.6
4	DO_SAT% (%)	11	108	71	90
5	FCol-MPN (MPN/100mL)	11	5000	20	826
6	Tcol-MPN (MPN/100mL)	11	16000	40	2946
	TRACE & TOXIC				
1	As (µg/L)	3	16.9	1.0	6.3
2	Cd (µg/L)	3	0.3	0.0	0.1
3	Cr (µg/L)	3	6.9	0.6	3.8
4	Cu (µg/L)	3	21.0	1.3	8.4
5	Ni (µg/L)	3	7.0	1.2	3.6
6	Pb (µg/L)	3	1.0	0.2	0.6
7	Zn (µg/L)	3	10.0	1.2	4.6
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	144	74	101
2	HAR_Total (mgCaCO3/L)	11	328	138	214
3	Na% (%)	11	35	14	23
4	RSC (-)	11	1.1	0.0	0.1
5	SAR (-)	11	1.4	0.4	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	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	25.17	818.4
2	EC_GEN (µmho/cm)	317	350	309	298	327	326	382	253	304	379	423	383	409	391	348
3	pH_GEN (pH units)	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	8.3
4	Temp (deg C)	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	25.9
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)	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	5.2
2	ALK-TOT (mgCaCO3/L)	165	172	150	130	130	140	156	106	122	149	253	197	170	163	155
3	B (mg/L)	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	0.95
4	Ca (mg/L)	29	29	26	33	30	33	32	24	31	34	43	38	34	33	36
5	Cl (mg/L)	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	11.4
6	CO3 (mg/L)	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	6.3
7	F (mg/L)	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	0.18
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	196	194	167	149	148	159	179	124	140	170	298	228	206	189	176
10	K (mg/L)	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	2.5
11	Mg (mg/L)	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	21.2
12	Na (mg/L)	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	21.2
13	NH3-N (mg N/L)	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	0.08
14	NO2+NO3 (mg N/L)	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	2.76
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	2.75
17	o-PO4-P (mg P/L)	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	0.098
18	SiO2 (mg/L)	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	25.0
19	SO4 (mg/L)	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	6.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	3.1	3.1	2.3	1.9	2.0	2.1	1.5	2.6	1.7	1.4	2.9	12.1	3.2
2	COD (mg/L)						39.5	47.4	82.2	72.1	41.5	48.2	35.8	34.0	103.2	37.5
3	DO (mg/L)	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	6.5
4	DO_SAT% (%)	89	88	96	89	95	86	83	85	82	90	84	85	88	91	79
5	FCoI-MPN (MPN/100mL)	4125	490	2950	1178	240	780	100	350	325	130	610	15440	326	54	150
6	TcoI-MPN (MPN/100mL)	5000	1080	30338	4838	390	1750	213	913	7163	780	6730	49020	832	272	2618
	TRACE & TOXIC															
1	As (µg/L)											13.4	3.1			16.9
2	Cd (µg/L)											1.6	0.4			0.1
3	Cr (µg/L)											0.3	0.8			6.9
4	Cu (µg/L)											38.7	5.5			21.0
5	Hg (µg/L)												0.1			
6	Ni (µg/L)											1.5	8.7			2.5
7	Pb (µg/L)				43.0							1.3	1.4			0.2
8	Zn (µg/L)				2.0							3.8	3.3			2.5
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	73	73	66	84	74	83	80	60	76	84	108	95	85	83	89
2	HAR_Total (mgCaCO3/L)	138	143	120	129	130	140	147	103	126	166	230	197	173	160	177
3	Na% (%)	19	25	28	19	18	16	22	21	11	30	17	20	28	24	20
4	RSC (-)	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	0.0
5	SAR (-)	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	0.7
	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	0.150	8.124
2	EC_GEN (µmho/cm)	436	465	336	455	448	435	477	487	459	474	480	572	490	468	453
3	pH_GEN (pH units)	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	8.4
4	Temp (deg C)	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	22.4
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)	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	6.0	15.6
2	ALK-TOT (mgCaCO3/L)	210	223	175	198	185	186	190	190	189	191	253	246	239	164	225
3	B (mg/L)	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	0.58
4	Ca (mg/L)	33	34	25	40	32	32	39	42	32	36	43	64	35	24	47
5	Cl (mg/L)	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	23.9
6	CO3 (mg/L)	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	7.3	18.8
7	F (mg/L)	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	0.20
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	0.1
9	HCO3 (mg/L)	245	255	195	217	202	216	218	214	212	216	296	280	281	185	236
10	K (mg/L)	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	2.4
11	Mg (mg/L)	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	31.4
12	Na (mg/L)	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	32.0
13	NH3-N (mg N/L)	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	0.54
14	NO2+NO3 (mg N/L)	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	3.49
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	3.48
17	o-PO4-P (mg P/L)	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	1.186
18	SiO2 (mg/L)	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	32.4
19	SO4 (mg/L)	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	20.3

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	2.8
2	COD (mg/L)						53.7	38.8	10.1	46.7	51.7	28.5	122.5	31.8	39.8	82.6
3	DO (mg/L)	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	8.9
4	DO_SAT% (%)	102	92	97	102	98	79	87	96	106	106	93	96	95	99	102
5	FCol-MPN (MPN/100mL)	738	288	1383	100	238	100	100	100	100	238	363	238	73	153	140
6	Tcol-MPN (MPN/100mL)	900	575	9133	138	763	100	100	400	100	500	863	2388	133	667	553
	TRACE & TOXIC															
1	As (µg/L)										0.2				0.6	1.1
2	Cd (µg/L)										0.2			1.2	0.3	0.3
3	Cr (µg/L)										3.3			1.1	1.5	0.6
4	Cu (µg/L)										101.9			3.5	0.6	1.3
5	Hg (µg/L)															
6	Ni (µg/L)										35.0			0.0	0.3	1.2
7	Pb (µg/L)										0.4			0.8	0.8	0.5
8	Zn (µg/L)										31.8			4.0	3.4	1.2
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	81	85	63	99	79	79	97	105	79	89	107	159	86	61	118
2	HAR_Total (mgCaCO3/L)	178	178	142	176	168	178	169	190	180	209	241	287	203	166	249
3	Na% (%)	25	31	26	27	25	26	25	19	24	25	22	21	28	33	22
4	RSC (-)	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	0.3
5	SAR (-)	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	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	3.024	0.459	0.016	3.161	3.676	2.781			1.587	0.871	3.158	9.421	0.000	0.276	0.820
2	EC_GEN (µmho/cm)	368	458		373	391	414			412	433	491	444	491	387	460
3	pH_GEN (pH units)	8.3	8.4		8.7	8.6	8.6			8.4	8.5	8.7	8.3	8.4	8.6	8.8
4	Temp (deg C)	30.2	27.0		29.0	26.5	23.5			22.7	27.8	27.0	26.7	26.2	25.0	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)	2.9	13.8		5.6	5.6	2.9			3.7	6.7	7.3	9.9	5.6	6.0	14.1
2	ALK-TOT (mgCaCO3/L)	197	226		146	171	181			194	209	245	201	203	201	205
3	B (mg/L)	0.32	0.30		0.18	0.61	0.98			0.23	0.16	0.24	0.15	0.25	0.09	0.27
4	Ca (mg/L)	23	26		28	25	27			33	28	35	37	34	56	38
5	Cl (mg/L)	13.7	20.5		16.3	14.7	19.9			22.2	26.5	31.1	22.8	25.9	28.8	43.1
6	CO3 (mg/L)	3.5	16.7		6.7	6.8	3.5			4.4	8.0	8.7	11.9	6.8	7.2	17.0
7	F (mg/L)	0.40	0.42		0.43	0.42	0.44			0.27	0.56	0.48	0.58	0.38	0.21	0.79
8	Fe (mg/L)	0.1	0.0		0.0	0.0	0.0			0.0	0.2	0.0	0.2	0.1	0.0	0.3
9	HCO3 (mg/L)	233	242		165	195	213			227	238	281	222	234	231	216
10	K (mg/L)	2.2	2.2		2.0	2.5	3.1			1.9	2.9	4.1	3.2	2.6	2.9	2.9
11	Mg (mg/L)	23.7	24.8		15.5	17.8	19.6			23.7	36.5	34.4	22.3	19.9	11.2	28.7
12	Na (mg/L)	26.0	39.0		29.1	26.8	37.0			32.1	37.4	41.0	35.8	34.7	29.3	40.4
13	NH3-N (mg N/L)	0.27	0.29		0.12	0.45	0.26			0.56	0.38	0.02	0.45	0.11	0.20	1.20
14	NO2+NO3 (mg N/L)	0.21	0.55		0.49	1.24	0.23			1.26	0.31	0.31	5.68	7.10	7.01	1.62
15	NO2-N (mgN/L)	0.02	0.05		0.03	0.03	0.04			0.04	0.01	0.01	0.00	0.01	0.09	0.02
16	NO3-N (mgN/L)	0.18	0.50		0.47	1.21	0.19			1.22	0.29	0.30	5.68	7.10	6.93	1.60
17	o-PO4-P (mg P/L)	0.017	0.020		0.031	0.062	0.041			0.060	0.008	0.037	0.594	0.243	0.178	0.584
18	SiO2 (mg/L)	49.3	45.5		87.8	45.6	34.2			77.6	26.2	25.9	31.2	52.7	56.5	37.3
19	SO4 (mg/L)	8.3	13.0		11.5	7.2	15.2			11.3	23.4	13.5	10.3	20.1	14.9	38.6

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.7	1.6		1.6	1.7	2.1			2.5	2.8	1.5	3.8	2.9	3.5	2.3
2	COD (mg/L)						64.5			38.5	49.8	40.7	39.7	28.3	81.2	118.2
3	DO (mg/L)	7.3	5.8		7.4	7.9	7.1			7.9	7.6	6.5	7.5	7.3	5.9	7.4
4	DO_SAT% (%)	97	71		95	98	83			91	96	81	93	90	71	90
5	FCol-MPN (MPN/100mL)	600	1550		200	100	100			100	200	150	273	103	90	2643
6	Tcol-MPN (MPN/100mL)	1750	4475		450	300	133			100	517	567	3100	593	1100	6577
	TRACE & TOXIC															
1	As (µg/L)										0.7	2.3	3.2	0.0		1.0
2	Cd (µg/L)					8.0					0.0	1.6	0.1	1.0		0.0
3	Cr (µg/L)					34.0					0.0	1.7	0.6	0.0		4.0
4	Cu (µg/L)											2.7	5.3			3.0
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		7.0
7	Pb (µg/L)					72.0					16.7	3.7	0.1	6.0		1.0
8	Zn (µg/L)					66.0					16.5	1.9	13.6	5.0		10.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	57	65		70	62	68			83	70	87	94	85	139	95
2	HAR_Total (mgCaCO3/L)	155	169		134	137	149			182	222	230	187	168	186	215
3	Na% (%)	26	33		32	30	33			32	26	28	29	30	25	29
4	RSC (-)	0.9	1.2		0.3	0.7	0.7			0.5	0.2	0.6	0.4	0.7	0.3	0.1
5	SAR (-)	0.9	1.3		1.1	1.0	1.3			1.2	1.1	1.2	1.2	1.2	0.9	1.2
	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	: 2016-2017
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 : 2016-2017

Station Name : NANDGAON (AGH3AF4)

Local River : Wunna

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017
		A	A	A	A	A	A	A	A	A
	PHYSICAL									
1	Q (cumec)	0.287	216.4	12.42	25.63	1.368	9.966	4.660	5.410	8.541
2	Colour_Cod (-)	Light Brown	Brown	Brown	Brown	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	246	431	499	510	626	428	471	476	443
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)	7.9	8.1	8.2	8.4	8.5	8.2	8.4	8.8	8.4
6	Temp (deg C)	25.0	24.0	25.5	25.5	19.5	19.0	26.5	20.5	21.5
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	9.0	9.0	0.0	6.0	22.4	5.0
2	ALK-TOT (mgCaCO3/L)	90	125	186	228	245	189	207	223	188
3	B (mg/L)	0.04	0.73	0.91	1.45	1.83	0.95	0.86	0.17	0.42
4	Ca (mg/L)	27	34	40	69	40	45	37	49	37
5	Cl (mg/L)	13.9	17.9	33.8	25.8	41.8	25.8	39.8	31.8	39.8
6	CO3 (mg/L)	0.0	0.0	0.0	10.8	10.8	0.0	7.2	27.0	6.0
7	F (mg/L)	0.53	0.00	0.10	0.00	0.02	0.06	0.53	0.19	0.61
8	Fe (mg/L)	0.0	0.0	0.1	0.1	0.0	0.0	0.2	0.1	0.4
9	HCO3 (mg/L)	110	153	227	256	277	230	238	217	217
10	K (mg/L)	3.2	2.5	2.4	2.6	3.3	2.4	2.1	2.2	2.4
11	Mg (mg/L)	9.6	13.6	22.3	6.1	12.3	20.1	29.6	23.5	22.4
12	Na (mg/L)	23.5	20.6	26.9	31.7	61.9	34.5	33.8	31.1	33.5
13	NH3-N (mg N/L)	0.06	0.06	0.07	0.73	0.48	0.39	0.57	0.41	0.13
14	NO2+NO3 (mg N/L)	2.44	2.33	2.75	2.52	3.05	1.98	1.28	1.60	1.48
15	NO2-N (mgN/L)	0.06	0.00	0.00	0.01	0.03	0.03	0.07	0.01	0.01
16	NO3-N (mgN/L)	2.38	2.33	2.75	2.51	3.03	1.95	1.22	1.59	1.47
17	o-PO4-P (mg P/L)	0.343	0.193	0.128	0.084	0.356	0.460	1.038	2.743	0.116
18	SiO2 (mg/L)	13.7	21.1	28.0	37.8	51.1	18.0	27.8	13.1	30.3
19	SO4 (mg/L)	14.9	1.2	21.6	23.0	29.9	5.1	2.4	17.2	29.0
	BIOLOGICAL/BACTERIOLOGICAL									

Water Quality Datasheet for the period : 2016-2017

Station Name : NANDGAON (AGH3AF4)

Division : Wainganga Div., Nagpur

Local River : Wunna

River Water Analysis

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017
		A	A	A	A	A	A	A	A	A
1	BOD3-27 (mg/L)	50.0	20.0	2.4	1.3	2.7	1.8	1.9	2.2	1.4
2	COD (mg/L)	67.0	28.2	52.4	44.5	26.1	101.6	50.2	192.8	83.3
3	DO (mg/L)	1.1	5.2	6.0	6.5	5.8	7.6	7.2	7.2	6.8
4	DO_SAT% (%)	13	62	73	79	63	82	89	79	76
5	FCol-MPN (MPN/100mL)	1400	170	20	260	20	16000	130	16000	2200
6	Tcol-MPN (MPN/100mL)	9000	270	3000	5000	40	16000	260	16000	3500
	TRACE & TOXIC									
1	As (µg/L)		207.7				1.9			
2	Cd (µg/L)		0.2				0.5			
3	Cr (µg/L)		6.3				0.7			
4	Cu (µg/L)		8.5				2.3			
5	Ni (µg/L)		2.4				0.3			
6	Pb (µg/L)		0.3				0.4			
7	Zn (µg/L)		2.4				0.3			
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	69	85	100	173	99	113	92	122	92
2	HAR_Total (mgCaCO3/L)	109	141	193	199	150	197	216	220	185
3	Na% (%)	31	24	23	26	47	27	25	23	28
4	RSC (-)	0.0	0.0	0.0	0.6	1.9	0.0	0.0	0.1	0.1
5	SAR (-)	1.0	0.8	0.8	1.0	2.2	1.1	1.0	0.9	1.1
	PESTICIDES									

Water Quality Summary for the period : 2016-2017

Station Name : NANDGAON (AGH3AF4)

Local River : Wunna

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)	365	550.9	0.000	14.85
2	EC_GEN (µmho/cm)	9	626	246	459
3	pH_GEN (pH units)	9	8.8	7.9	8.3
4	Temp (deg C)	9	26.5	19.0	23
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	9	22.4	0.0	5.7
2	ALK-TOT (mgCaCO3/L)	9	245	90	187
3	B (mg/L)	9	1.83	0.04	0.82
4	Ca (mg/L)	9	69	27	42
5	Cl (mg/L)	9	41.8	13.9	30
6	CO3 (mg/L)	9	27.0	0.0	6.9
7	F (mg/L)	9	0.61	0.00	0.23
8	Fe (mg/L)	9	0.4	0.0	0.1
9	HCO3 (mg/L)	9	277	110	214
10	K (mg/L)	9	3.3	2.1	2.6
11	Mg (mg/L)	9	29.6	6.1	17.7
12	Na (mg/L)	9	61.9	20.6	33.1
13	NH3-N (mg N/L)	9	0.73	0.06	0.32
14	NO2+NO3 (mg N/L)	9	3.05	1.28	2.16
15	NO2-N (mgN/L)	9	0.07	0.00	0.02
16	NO3-N (mgN/L)	9	3.03	1.22	2.14
17	o-PO4-P (mg P/L)	9	2.743	0.084	0.607
18	SiO2 (mg/L)	9	51.1	13.1	26.8
19	SO4 (mg/L)	9	29.9	1.2	16
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	9	50.0	1.3	9.3
2	COD (mg/L)	9	192.8	26.1	71.8
3	DO (mg/L)	9	7.6	1.1	5.9
4	DO_SAT% (%)	9	89	13	68
5	Fcol-MPN (MPN/100mL)	9	16000	20	4022
6	Tcol-MPN (MPN/100mL)	9	16000	40	5897
	TRACE & TOXIC				
1	As (µg/L)	2	207.7	1.9	104.8
2	Cd (µg/L)	2	0.5	0.2	0.4
3	Cr (µg/L)	2	6.3	0.7	3.5
4	Cu (µg/L)	2	8.5	2.3	5.4
5	Ni (µg/L)	2	2.4	0.3	1.4
6	Pb (µg/L)	2	0.4	0.3	0.4
7	Zn (µg/L)	2	2.4	0.3	1.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	9	173	69	105
2	HAR_Total (mgCaCO3/L)	9	220	109	179
3	Na% (%)	9	47	23	28
4	RSC (-)	9	1.9	0.0	0.3
5	SAR (-)	9	2.2	0.8	1.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : NANDGAON (AGH3AF4)

Local River : Wunna

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	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	45.83	63.68
2	EC_GEN (µmho/cm)	351	394	377	466	380	362	459	454	418	502	523	395	542	495	422
3	pH_GEN (pH units)	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	8.1
4	Temp (deg C)	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	25.0
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)	3.4	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	2.2
2	ALK-TOT (mgCaCO3/L)	159	163	169	185	133	139	185	161	161	184	252	167	202	199	157
3	B (mg/L)	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	0.78
4	Ca (mg/L)	28	30	25	37	31	34	40	35	38	38	42	33	42	50	43
5	Cl (mg/L)	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	22.9
6	CO3 (mg/L)	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	2.7
7	F (mg/L)	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	0.16
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	185	186	190	211	149	157	216	196	189	215	294	193	244	235	186
10	K (mg/L)	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	2.7
11	Mg (mg/L)	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	12.9
12	Na (mg/L)	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	25.7
13	NH3-N (mg N/L)	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	0.23
14	NO2+NO3 (mg N/L)	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	2.51
15	NO2-N (mgN/L)	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	0.02
16	NO3-N (mgN/L)	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	2.49
17	o-PO4-P (mg P/L)	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	0.187
18	SiO2 (mg/L)	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	25.1
19	SO4 (mg/L)	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	15.2

Water Quality Seasonal Average for the period: 2002-2017

Station Name : NANDGAON (AGH3AF4)

Division : Wainganga Div., Nagpur

Local River : Wunna

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	18.4
2	COD (mg/L)						96.9	25.6	45.9	56.8	38.7	108.4	55.7	48.2	125.9	48.0
3	DO (mg/L)	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	4.7
4	DO_SAT% (%)	77	71	73	60	86	65	70	74	72	64	55	81	80	67	57
5	FCol-MPN (MPN/100mL)	43500	1990	1130	1048	930	640	1575	633	300	400	880	12375	582	433	463
6	Tcol-MPN (MPN/100mL)	45620	5850	2920	5350	2460	1340	12488	10233	3638	3938	20450	64975	2762	5373	4318
	TRACE & TOXIC															
1	As (µg/L)											9.3	5.1			207.7
2	Cd (µg/L)											1.1	0.7			0.2
3	Cr (µg/L)											1.2	1.1			6.3
4	Cu (µg/L)											31.4	8.4			8.5
5	Hg (µg/L)												0.1			
6	Ni (µg/L)											2.0	11.3			2.4
7	Pb (µg/L)				49.0							2.2	0.5			0.3
8	Zn (µg/L)											2.9	15.9			2.4
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	71	75	62	92	76	86	101	87	96	96	106	83	104	126	107
2	HAR_Total (mgCaCO3/L)	133	151	143	166	132	149	174	161	160	199	202	164	212	209	160
3	Na% (%)	29	25	32	28	25	18	25	26	18	30	29	24	30	24	26
4	RSC (-)	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	0.1
5	SAR (-)	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	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: 2002-2017

Station Name : NANDGAON (AGH3AF4)

Local River : Wunna

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	7.071	5.351
2	EC_GEN (µmho/cm)	392	406	399	447	433	438	526	516	524	505	470	578	470	430	500
3	pH_GEN (pH units)	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	8.5
4	Temp (deg C)	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	21.4
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)	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	9.3
2	ALK-TOT (mgCaCO3/L)	185	188	171	178	169	177	184	171	213	199	241	249	195	195	216
3	B (mg/L)	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	0.95
4	Ca (mg/L)	32	32	29	35	32	38	37	41	39	42	46	69	41	40	43
5	Cl (mg/L)	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	34.8
6	CO3 (mg/L)	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	11.3
7	F (mg/L)	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	0.20
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	0.1
9	HCO3 (mg/L)	223	207	195	194	187	206	221	203	249	228	278	290	236	234	241
10	K (mg/L)	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	2.5
11	Mg (mg/L)	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	21.4
12	Na (mg/L)	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	40.3
13	NH3-N (mg N/L)	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	0.46
14	NO2+NO3 (mg N/L)	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	1.98
15	NO2-N (mgN/L)	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	0.03
16	NO3-N (mgN/L)	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	1.95
17	o-PO4-P (mg P/L)	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	1.149
18	SiO2 (mg/L)	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	27.5
19	SO4 (mg/L)	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	13.6

Water Quality Seasonal Average for the period: 2002-2017

Station Name : NANDGAON (AGH3AF4)

Division : Wainganga Div., Nagpur

Local River : Wunna

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	2.2
2	COD (mg/L)						21.9	34.8	83.8	43.5	74.9	33.7	42.0	31.3	35.5	92.7
3	DO (mg/L)	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	6.9
4	DO_SAT% (%)	68	77	74	83	77	75	82	59	93	67	70	79	83	71	78
5	FCol-MPN (MPN/100mL)	1325	1313	2450	913	250	421	175	1363	400	1938	2800	313	40	260	8038
6	Tcol-MPN (MPN/100mL)	2388	3388	7325	2725	613	2136	325	5613	13125	7438	8713	16275	223	1758	8075
	TRACE & TOXIC															
1	As (µg/L)										0.0				0.7	1.9
2	Cd (µg/L)										0.0			0.9	0.4	0.5
3	Cr (µg/L)										5.1			2.6	0.3	0.7
4	Cu (µg/L)										84.6			4.1	0.9	2.3
5	Hg (µg/L)															
6	Ni (µg/L)										58.0			0.1	1.0	0.3
7	Pb (µg/L)										0.4			0.8	1.1	0.4
8	Zn (µg/L)										29.9			3.0	5.1	0.3
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	81	80	73	88	79	96	93	102	98	105	115	173	102	100	107
2	HAR_Total (mgCaCO3/L)	153	148	156	165	160	168	173	185	199	220	225	288	185	173	196
3	Na% (%)	28	32	30	27	27	27	31	28	26	24	24	21	23	27	31
4	RSC (-)	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	0.5
5	SAR (-)	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	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: 2002-2017

Station Name : NANDGAON (AGH3AF4)

Local River : Wunna

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	1.552	8.541
2	EC_GEN (µmho/cm)	364	416	489	408	403	436	562	456	426	451	488	512	555	476	443
3	pH_GEN (pH units)	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	8.4
4	Temp (deg C)	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	21.5
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)	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	5.0
2	ALK-TOT (mgCaCO3/L)	164	231	196	144	136	164	172	165	168	220	261	195	154	195	188
3	B (mg/L)	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	0.42
4	Ca (mg/L)	26	25	27	30	31	34	27	35	36	36	47	46	31	56	37
5	Cl (mg/L)	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	39.8
6	CO3 (mg/L)	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	6.0
7	F (mg/L)	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	0.61
8	Fe (mg/L)	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	0.4
9	HCO3 (mg/L)	200	205	223	169	150	191	205	192	202	254	310	238	181	231	217
10	K (mg/L)	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	2.4
11	Mg (mg/L)	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	22.4
12	Na (mg/L)	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	33.5
13	NH3-N (mg N/L)	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	0.13
14	NO2+NO3 (mg N/L)	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	1.48
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	1.47
17	o-PO4-P (mg P/L)	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	0.116
18	SiO2 (mg/L)	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	30.3
19	SO4 (mg/L)	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	29.0

Water Quality Seasonal Average for the period: 2002-2017

Station Name : NANDGAON (AGH3AF4)

Division : Wainganga Div., Nagpur

Local River : Wunna

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.4
2	COD (mg/L)						37.2	40.2	22.7	39.2	40.9	52.4	51.5	25.7	55.3	83.3
3	DO (mg/L)	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	6.8
4	DO_SAT% (%)	70	59	60	78	56	81	48	82	67	86	47	74	78	58	76
5	FCol-MPN (MPN/100mL)	1275	650	400	100	200	100	100	700	583	300	200	600	137	50	2200
6	Tcol-MPN (MPN/100mL)	3375	1900	1567	175	500	250	317	1350	2217	9217	850	7500	650	175	3500
	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)	64	63	67	76	77	85	69	89	90	89	117	116	78	141	92
2	HAR_Total (mgCaCO3/L)	149	152	143	127	136	146	167	170	189	221	249	207	131	218	185
3	Na% (%)	30	33	47	36	31	34	41	24	23	29	22	27	43	34	28
4	RSC (-)	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	0.1
5	SAR (-)	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	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	: 2016-2017
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 : 2016-2017

Station Name : HIVRA (AGH30Q1)

Local River : Wardha

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	5.265	22.20	43.26	28.98	89.24	5.596	4.818	2.765	4.624	4.981	1.096	
2	Colour_Cod (-)	Clear	Light Brown	Light Brown	Light Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	512	230	527	376	377	490	455	457	492	458	472	545
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	8.0	8.3	8.3	8.3	8.6	8.5	7.7	8.8	8.6	8.3	8.4
6	Temp (deg C)	28.0	28.0	27.0	29.0	29.0	30.0	24.0	22.0	22.0	24.0	25.0	30.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	20.9	0.0	9.0	6.0	12.0	12.0	12.0	0.0	22.4	24.9	12.5	19.9
2	ALK-TOT (mgCaCO3/L)	108	107	165	166	189	246	264	192	250	243	205	242
3	B (mg/L)	0.08	0.11	0.75	1.09	1.48	0.39	0.69	0.58	0.42	0.72	0.13	0.94
4	Ca (mg/L)	17	25	32	32	35	30	31	32	44	25	22	36
5	Cl (mg/L)	19.9	9.9	13.9	17.9	17.9	21.9	23.9	31.8	17.9	25.8	33.8	43.7
6	CO3 (mg/L)	25.2	0.0	10.8	7.2	14.4	14.4	14.4	0.0	27.0	30.0	15.0	24.0
7	F (mg/L)	0.14	0.49	0.00	0.00	0.00	0.00	0.05	0.44	0.19	0.57	0.61	0.84
8	Fe (mg/L)	0.0	0.1	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.0	0.4
9	HCO3 (mg/L)	81	131	179	188	201	271	293	234	250	235	220	247
10	K (mg/L)	2.6	3.1	2.6	1.6	2.8	2.7	2.8	2.3	2.6	2.7	3.0	2.2
11	Mg (mg/L)	15.8	9.6	21.0	15.3	21.4	24.6	25.2	28.5	17.9	24.0	17.8	29.3
12	Na (mg/L)	39.6	28.2	25.4	12.6	27.8	45.7	56.4	38.9	47.4	46.2	69.0	49.8
13	NH3-N (mg N/L)	0.00	0.15	0.15	0.03	0.84	0.30	0.18	0.49	0.25	0.15	1.79	0.68
14	NO2+NO3 (mg N/L)	2.74	3.05	2.36	1.25	1.46	2.62	1.82	1.43	1.46	1.48	1.42	1.76
15	NO2-N (mgN/L)	0.01	0.06	0.00	0.00	0.01	0.00	0.03	0.01	0.07	0.01	0.01	0.03
16	NO3-N (mgN/L)	2.72	2.99	2.36	1.25	1.45	2.62	1.80	1.42	1.40	1.47	1.41	1.73
17	o-PO4-P (mg P/L)	0.113	0.177	0.191	0.044	0.080	0.276	0.304	0.651	2.065	0.153	0.259	1.206
18	SiO2 (mg/L)	20.5	14.1	26.3	23.8	32.3	38.2	17.6	23.0	10.0	35.4	21.2	21.3
19	SO4 (mg/L)	19.5	7.9	1.5	11.7	10.7	21.8	3.1	16.4	17.0	27.2	13.3	15.5
	BIOLOGICAL/BACTERIOLOGICAL												

Water Quality Datasheet for the period : 2016-2017

Station Name : HIVRA (AGH30Q1)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water Analysis

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
1	BOD3-27 (mg/L)	1.8	3.0	1.4	1.2	2.1	2.9	1.8	1.3	1.5	1.3	3.8	10.0
2	COD (mg/L)	58.3	37.0	19.0	32.6	28.6	69.1	131.7	62.4	129.3	141.9	155.3	78.0
3	DO (mg/L)	6.9	6.0	6.1	6.2	6.7	8.0	7.9	7.3	6.6	7.4	7.3	4.2
4	DO_SAT% (%)	88	77	77	81	87	106	94	83	75	88	88	56
5	FCol-MPN (MPN/100mL)	40	340	90	40	110	20	220	40	270	230	1300	40
6	Tcol-MPN (MPN/100mL)	2800	16000	260	300	330	80	500	80	2400	300	2400	300
	TRACE & TOXIC												
1	As (µg/L)			0.6				1.9				1.0	
2	Cd (µg/L)			0.2				0.3				0.0	
3	Cr (µg/L)			9.1				0.6				3.0	
4	Cu (µg/L)			7.5				2.7				8.0	
5	Ni (µg/L)			1.7				0.2				9.0	
6	Pb (µg/L)			0.4				0.1				0.0	
7	Zn (µg/L)			1.7				1.6				7.0	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	43	61	79	80	87	76	78	81	111	62	55	89
2	HAR_Total (mgCaCO3/L)	109	101	167	144	176	179	183	199	185	162	129	211
3	Na% (%)	44	37	25	16	25	36	40	30	35	38	53	34
4	RSC (-)	0.0	0.1	0.0	0.5	0.3	1.4	1.6	0.0	1.3	1.6	1.5	0.7
5	SAR (-)	1.7	1.2	0.9	0.5	0.9	1.5	1.8	1.2	1.5	1.6	2.6	1.5
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	348	777.0	0.178	37.25
2	EC_GEN (µmho/cm)	12	545	230	449
3	pH_GEN (pH units)	12	8.8	7.7	8.4
4	Temp (deg C)	12	30.0	22.0	26.5
CHEMICAL					
1	Alk-Phen (mgCaCO3/L)	12	24.9	0.0	12.6
2	ALK-TOT (mgCaCO3/L)	12	264	107	198
3	B (mg/L)	12	1.48	0.08	0.62
4	Ca (mg/L)	12	44	17	30
5	Cl (mg/L)	12	43.7	9.9	23.2
6	CO3 (mg/L)	12	30.0	0.0	15.2
7	F (mg/L)	12	0.84	0.00	0.28
8	Fe (mg/L)	12	0.4	0.0	0.1
9	HCO3 (mg/L)	12	293	81	211
10	K (mg/L)	12	3.1	1.6	2.6
11	Mg (mg/L)	12	29.3	9.6	20.9
12	Na (mg/L)	12	69.0	12.6	40.6
13	NH3-N (mg N/L)	12	1.79	0.00	0.42
14	NO2+NO3 (mg N/L)	12	3.05	1.25	1.9
15	NO2-N (mgN/L)	12	0.07	0.00	0.02
16	NO3-N (mgN/L)	12	2.99	1.25	1.88
17	o-PO4-P (mg P/L)	12	2.065	0.044	0.46
18	SiO2 (mg/L)	12	38.2	10.0	23.6
19	SO4 (mg/L)	12	27.2	1.5	13.8
BIOLOGICAL/BACTERIOLOGICAL					
1	BOD3-27 (mg/L)	12	10.0	1.2	2.7
2	COD (mg/L)	12	155.3	19.0	78.6
3	DO (mg/L)	12	8.0	4.2	6.7
4	DO_SAT% (%)	12	106	56	83
5	FCol-MPN (MPN/100mL)	12	1300	20	228
6	Tcol-MPN (MPN/100mL)	12	16000	80	2146
TRACE & TOXIC					
1	As (µg/L)	3	1.9	0.6	1.1
2	Cd (µg/L)	3	0.3	0.0	0.1
3	Cr (µg/L)	3	9.1	0.6	4.2
4	Cu (µg/L)	3	8.0	2.7	6
5	Ni (µg/L)	3	9.0	0.2	3.6
6	Pb (µg/L)	3	0.4	0.0	0.2
7	Zn (µg/L)	3	7.0	1.6	3.4
CHEMICAL INDICES					
1	HAR_Ca (mgCaCO3/L)	12	111	43	75
2	HAR_Total (mgCaCO3/L)	12	211	101	162
3	Na% (%)	12	53	16	34
4	RSC (-)	12	1.6	0.0	0.8
5	SAR (-)	12	2.6	0.5	1.4
PESTICIDES					

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HIVRA (AGH30Q1)
Local River : Wardha

River Water

Division : Wainganga Div., Nagpur
Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	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	12.27	37.79
2	EC_GEN (μmho/cm)	386	388	329	385	358	304	435	352	384	394	353	402	512	427	404
3	pH_GEN (pH units)	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	8.3
4	Temp (deg C)	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	28.2
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)	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	9.6
2	ALK-TOT (mgCaCO3/L)	172	192	167	162	144	133	188	132	161	169	205	213	228	183	147
3	B (mg/L)	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	0.70
4	Ca (mg/L)	29	24	26	28	31	36	25	25	32	34	33	33	29	30	28
5	Cl (mg/L)	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	15.9
6	CO3 (mg/L)	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	11.5
7	F (mg/L)	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	0.13
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	211	215	193	183	170	150	220	158	187	194	237	245	275	211	156
10	K (mg/L)	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	2.5
11	Mg (mg/L)	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	16.6
12	Na (mg/L)	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	26.7
13	NH3-N (mg N/L)	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	0.23
14	NO2+NO3 (mg N/L)	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	2.17
15	NO2-N (mgN/L)	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	0.02
16	NO3-N (mgN/L)	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	2.16
17	o-PO4-P (mg P/L)	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	0.121
18	SiO2 (mg/L)	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	23.4
19	SO4 (mg/L)	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	10.3

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HIVRA (AGH30Q1)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Flood														
		Jun - Oct														
		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	3.5	1.7	1.6	1.3	15.6	5.8	2.6	2.1	1.8	1.8	6.9	1.9	1.9
2	COD (mg/L)						31.2	118.6	107.2	67.9	52.1	73.5	46.0	30.8	90.6	35.1
3	DO (mg/L)	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	6.4
4	DO_SAT% (%)	80	80	72	76	76	84	78	55	90	87	84	81	81	82	82
5	FCoI-MPN (MPN/100mL)	4430	1490	2650	1063	3438	425	160	850	100	350	890	3770	324	76	124
6	TcoI-MPN (MPN/100mL)	4640	2650	8663	249	11563	1175	440	3675	700	850	27640	39510	842	3546	3938
	TRACE & TOXIC															
1	As (µg/L)											8.1	4.7			0.6
2	Cd (µg/L)											1.1	0.3			0.2
3	Cr (µg/L)											0.4	2.3			9.1
4	Cu (µg/L)											40.8	10.9			7.4
5	Hg (µg/L)												0.6			
6	Ni (µg/L)											2.9	7.7			1.7
7	Pb (µg/L)				54.0							2.8	0.8			0.4
8	Zn (µg/L)				19.0							3.6	2.8			1.7
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	72	61	66	70	78	90	63	62	80	84	81	81	73	74	70
2	HAR_Total (mgCaCO3/L)	140	138	133	136	125	138	132	113	142	163	159	183	169	154	139
3	Na% (%)	32	33	31	32	27	14	38	40	20	28	27	31	39	33	29
4	RSC (-)	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	0.2
5	SAR (-)	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	1.0
	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: 2002-2017

Station Name : HIVRA (AGH30Q1)
Local River : Wardha

River Water

Division : Wainganga Div., Nagpur
Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	3.267	3.169	3.472	10.26	13.30	13.22			0.000	0.279	2.600	14.25	1.640	3.825	4.451
2	EC_GEN (µmho/cm)	469	432	424	446	484	468	494		481	444	464	566	448	458	474
3	pH_GEN (pH units)	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	8.4
4	Temp (deg C)	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	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)	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	11.6
2	ALK-TOT (mgCaCO3/L)	222	204	219	208	196	219	209		192	229	257	231	236	220	238
3	B (mg/L)	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	0.52
4	Ca (mg/L)	23	24	21	30	33	35	23		31	35	42	55	34	28	35
5	Cl (mg/L)	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	23.9
6	CO3 (mg/L)	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	13.9
7	F (mg/L)	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	0.17
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	0.0
9	HCO3 (mg/L)	244	227	250	241	216	256	243		226	266	298	267	279	248	262
10	K (mg/L)	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	2.6
11	Mg (mg/L)	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	24.0
12	Na (mg/L)	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	47.1
13	NH3-N (mg N/L)	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	0.30
14	NO2+NO3 (mg N/L)	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	1.83
15	NO2-N (mgN/L)	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	0.03
16	NO3-N (mgN/L)	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	1.81
17	o-PO4-P (mg P/L)	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	0.824
18	SiO2 (mg/L)	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	22.2
19	SO4 (mg/L)	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	14.6

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HIVRA (AGH30Q1)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.9
2	COD (mg/L)						74.7	45.9		39.6	86.2	32.9	32.8	32.8	37.2	98.1
3	DO (mg/L)	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	7.5
4	DO_SAT% (%)	81	74	78	88	92	85	82		109	79	90	90	98	86	90
5	FCol-MPN (MPN/100mL)	588	213	238	100	100	115	100		100	100	200	175	48	85	138
6	Tcol-MPN (MPN/100mL)	663	425	475	100	238	428	100		400	100	750	613	108	245	765
	TRACE & TOXIC															
1	As (µg/L)										0.6				1.1	1.9
2	Cd (µg/L)										0.3			0.5	0.4	0.3
3	Cr (µg/L)										6.1			3.7	2.5	0.6
4	Cu (µg/L)										171.8			6.3	1.1	2.7
5	Hg (µg/L)															
6	Ni (µg/L)										54.0			0.2	0.3	0.2
7	Pb (µg/L)										0.4			1.1	1.6	0.1
8	Zn (µg/L)										8.8			5.0	4.4	1.6
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	58	59	53	74	83	87	58		78	88	105	138	86	69	86
2	HAR_Total (mgCaCO3/L)	155	128	153	170	163	185	149		166	234	200	235	183	155	187
3	Na% (%)	39	46	38	31	33	32	40		25	23	32	27	33	39	35
4	RSC (-)	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	1.1
5	SAR (-)	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	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: 2002-2017

Station Name : HIVRA (AGH30Q1)

Local River : Wardha

River Water

Division : Wainganga Div., Nagpur

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	1.271	3.552	1.367	3.132	6.111	10.91			0.000	0.000	5.082	2.302	10.72	3.276	3.038
2	EC_GEN (µmho/cm)	401	476	404	421	414	482				469	460	583	552	474	492
3	pH_GEN (pH units)	8.3	8.4	8.6	8.5	8.4	8.6				8.3	8.7	8.2	8.3	8.4	8.4
4	Temp (deg C)	23.0	24.2	24.4	26.5	23.3	25.3				27.3	26.7	26.7	26.0	25.5	26.3
5	Turb (NTU)					1.4	3.9				0.7	0.5	1.1	1.6		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	12.2	13.9	9.3	8.7	6.5	3.7				4.8	6.7	0.0	4.0	7.5	19.1
2	ALK-TOT (mgCaCO3/L)	205	234	217	172	171	211				184	237	214	245	230	230
3	B (mg/L)	0.20	0.57	0.17	0.26	0.75	0.92				0.16	0.18	0.17	0.39	0.14	0.60
4	Ca (mg/L)	18	18	25	25	24	26				33	34	45	27	54	28
5	Cl (mg/L)	17.0	14.7	13.8	18.2	11.0	19.9				22.0	22.0	36.3	22.9	23.6	34.5
6	CO3 (mg/L)	14.7	16.7	11.3	10.5	7.8	4.5				5.8	8.0	0.0	4.8	9.0	23.0
7	F (mg/L)	0.46	0.31	0.47	0.36	0.34	0.32				0.44	0.24	0.54	0.44	0.15	0.67
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0				0.2	0.0	0.3	0.1	0.0	0.2
9	HCO3 (mg/L)	220	252	242	189	193	248				213	272	261	290	262	234
10	K (mg/L)	1.6	3.1	3.3	2.6	2.3	1.4				2.6	3.9	3.2	2.4	3.0	2.6
11	Mg (mg/L)	21.6	27.0	18.2	15.7	19.0	20.5				32.1	22.1	20.9	25.7	21.1	23.7
12	Na (mg/L)	41.0	46.3	44.1	43.5	30.1	51.9				42.6	46.5	64.8	52.4	57.5	55.0
13	NH3-N (mg N/L)	0.21	0.25	0.07	0.12	0.26	0.21				0.15	0.01	0.87	0.10	0.17	0.87
14	NO2+NO3 (mg N/L)	0.27	0.43	1.04	0.38	1.16	0.18				0.42	0.43	5.34	6.78	5.34	1.55
15	NO2-N (mgN/L)	0.00	0.01	0.07	0.00	0.03	0.04				0.02	0.02	0.01	0.01	0.14	0.01
16	NO3-N (mgN/L)	0.27	0.42	0.96	0.37	1.12	0.14				0.41	0.41	5.33	6.78	5.20	1.54
17	o-PO4-P (mg P/L)	0.010	0.010	0.086	0.065	0.041	0.034				0.003	0.034	0.762	0.249	0.062	0.539
18	SiO2 (mg/L)	26.0	31.7	29.3	80.1	37.5	39.2				33.8	22.1	28.7	45.7	25.1	26.0
19	SO4 (mg/L)	11.0	10.3	10.1	14.7	9.6	19.5				25.0	11.6	16.0	22.9	7.1	18.7

Water Quality Seasonal Average for the period: 2002-2017

Station Name : HIVRA (AGH30Q1)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Penganga Sd, Yeotmal

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.0	0.7	3.1	1.3	1.1	2.2				2.3	2.9	3.0	3.0	8.9	5.0
2	COD (mg/L)						61.2				104.2	46.7	47.3	30.3	58.2	125.1
3	DO (mg/L)	6.8	4.5	5.3	6.9	6.8	7.4				6.9	8.0	6.8	7.3	5.2	6.3
4	DO_SAT% (%)	79	54	63	85	80	90				87	100	84	90	63	77
5	FCol-MPN (MPN/100mL)	250	917	600	150	100	400				450	183	517	103	55	523
6	Tcol-MPN (MPN/100mL)	350	1900	1800	233	100	1467				5067	1400	1033	947	150	1000
	TRACE & TOXIC															
1	As (µg/L)										1.3	3.0	4.0	0.0	1.9	1.0
2	Cd (µg/L)					7.0					0.0	1.6	0.0	1.0	0.4	0.0
3	Cr (µg/L)					66.0					0.0	1.6	0.7	0.0	4.7	3.0
4	Cu (µg/L)											4.0	2.8		1.2	8.0
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	9.0
7	Pb (µg/L)					37.0					17.5	1.4	4.1	14.0	0.9	0.0
8	Zn (µg/L)					33.0					18.2	11.5	5.6	19.0	3.5	7.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	45	46	64	63	60	65				83	86	114	68	134	69
2	HAR_Total (mgCaCO3/L)	135	158	140	128	139	151				216	177	201	176	222	168
3	Na% (%)	40	38	40	42	32	41				29	35	40	38	35	42
4	RSC (-)	1.4	1.5	1.6	0.9	0.7	1.2				0.0	1.2	0.7	1.4	0.4	1.3
5	SAR (-)	1.5	1.6	1.6	1.7	1.1	1.9				1.3	1.5	2.0	1.7	1.7	1.9
	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	: 2016-2017
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 : 2016-2017

Station Name : ASHTI (AGH40A4)

Local River : Wainganga

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	4.044	768.9	1550	2476	2439	330.1	20.69	52.84	105.6	99.65	19.24	0.875
2	Colour_Cod (-)	Clear	Light Brown	Brown	Light Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (μmho/cm)	334	193	311	164	183	275	274	274	316	310	297	280
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)	9.3	8.1	8.1	8.1	8.1	8.4	8.2	8.5	8.7	8.6	8.1	8.9
6	Temp (deg C)	31.0	29.0	30.0	31.0	29.0	29.0	24.5	23.5	24.0	25.5	30.5	27.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	18.6	0.0	0.0	0.0	0.0	6.0	0.0	9.0	19.9	10.0	0.0	7.5
2	ALK-TOT (mgCaCO3/L)	106	81	93	69	105	150	144	150	154	150	150	128
3	B (mg/L)	0.05	0.07	0.23	0.32	0.45	0.40	0.39	1.12	0.42	0.75	0.02	0.31
4	Ca (mg/L)	20	22	24	20	24	28	35	36	44	32	26	17
5	Cl (mg/L)	21.9	9.9	13.9	6.0	8.0	9.9	9.9	21.9	11.9	17.9	29.8	27.8
6	CO3 (mg/L)	22.4	0.0	0.0	0.0	0.0	7.2	0.0	10.8	24.0	12.0	0.0	9.0
7	F (mg/L)	0.22	0.49	0.15	0.00	0.00	0.00	0.01	2.65	0.20	0.52	0.22	1.08
8	Fe (mg/L)	0.5	0.0	0.0	0.5	0.1	0.0	0.0	0.1	0.0	0.3	0.1	0.2
9	HCO3 (mg/L)	84	99	113	84	128	168	176	161	139	159	183	137
10	K (mg/L)	3.8	3.2	2.2	1.6	1.6	1.8	1.7	1.5	1.8	2.1	2.7	2.2
11	Mg (mg/L)	11.8	6.6	7.4	2.2	10.5	8.4	13.3	10.1	9.5	11.7	22.4	15.5
12	Na (mg/L)	38.3	21.0	16.9	13.0	14.6	21.6	24.6	20.4	22.6	28.1	30.1	26.3
13	NH3-N (mg N/L)	0.00	0.20	0.20	0.02	0.72	0.29	0.47	0.99	0.46	0.19	2.45	0.77
14	NO2+NO3 (mg N/L)	1.63	2.14	1.23	1.72	1.46	1.57	1.11	0.83	0.99	1.28	1.19	1.04
15	NO2-N (mgN/L)	0.01	0.01	0.00	0.00	0.01	0.00	0.03	0.01	0.00	0.01	0.02	0.03
16	NO3-N (mgN/L)	1.62	2.13	1.23	1.72	1.45	1.57	1.09	0.83	0.99	1.28	1.17	1.02
17	o-PO4-P (mg P/L)	0.094	0.093	0.210	0.069	0.064	0.316	0.479	0.607	1.358	0.853	0.138	0.311
18	SiO2 (mg/L)	23.7	8.1	14.3	12.3	18.6	21.7	10.8	15.6	7.0	18.6	13.0	18.0
19	SO4 (mg/L)	26.0	8.6	1.4	5.0	0.4	4.4	0.6	11.2	67.2	32.4	10.7	18.8
	BIOLOGICAL/BACTERIOLOGICAL												

Water Quality Datasheet for the period : 2016-2017

Station Name : ASHTI (AGH40A4)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water Analysis

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
1	BOD3-27 (mg/L)	3.7	1.6	1.7	1.4	1.0	2.4	1.2	1.3	1.3	1.9	1.2	1.5
2	COD (mg/L)	48.0	41.0	28.2	15.3	13.0	30.4	75.5	58.0	194.0	66.7	144.4	94.6
3	DO (mg/L)	8.8	5.9	6.9	6.5	6.1	6.9	8.4	7.5	7.9	7.2	6.8	5.5
4	DO_SAT% (%)	118	77	91	87	79	90	100	88	94	87	90	69
5	FCol-MPN (MPN/100mL)	20	330	140	80	170	130	40	170	40	170	130	20
6	Tcol-MPN (MPN/100mL)	330	5000	800	2200	1100	170	170	300	230	220	230	20
	TRACE & TOXIC												
1	As (µg/L)			0.6				2.6				1.0	
2	Cd (µg/L)			0.1				0.1				0.0	
3	Cr (µg/L)			3.0				0.7				4.0	
4	Cu (µg/L)			7.3				0.7				3.0	
5	Ni (µg/L)			2.5				0.8				8.0	
6	Pb (µg/L)			0.8				0.1				1.0	
7	Zn (µg/L)			2.5				5.7				5.0	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	50	54	60	50	60	69	88	90	111	81	65	41
2	HAR_Total (mgCaCO3/L)	99	81	91	59	103	104	143	132	150	130	158	106
3	Na% (%)	45	35	28	32	23	31	27	25	24	32	29	35
4	RSC (-)	0.2	0.0	0.1	0.2	0.0	0.9	0.0	0.4	0.1	0.4	0.0	0.4
5	SAR (-)	1.7	1.0	0.8	0.7	0.6	0.9	0.9	0.8	0.8	1.1	1.0	1.1
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	365	12476	0.276	800.7
2	EC_GEN (µmho/cm)	12	334	164	268
3	pH_GEN (pH units)	12	9.3	8.1	8.4
4	Temp (deg C)	12	31.0	23.5	27.8
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	19.9	0.0	5.9
2	ALK-TOT (mgCaCO3/L)	12	154	69	123
3	B (mg/L)	12	1.12	0.02	0.38
4	Ca (mg/L)	12	44	17	27
5	Cl (mg/L)	12	29.8	6.0	15.7
6	CO3 (mg/L)	12	24.0	0.0	7.1
7	F (mg/L)	12	2.65	0.00	0.46
8	Fe (mg/L)	12	0.5	0.0	0.2
9	HCO3 (mg/L)	12	183	84	136
10	K (mg/L)	12	3.8	1.5	2.2
11	Mg (mg/L)	12	22.4	2.2	10.8
12	Na (mg/L)	12	38.3	13.0	23.1
13	NH3-N (mg N/L)	12	2.45	0.00	0.56
14	NO2+NO3 (mg N/L)	12	2.14	0.83	1.35
15	NO2-N (mgN/L)	12	0.03	0.00	0.01
16	NO3-N (mgN/L)	12	2.13	0.83	1.34
17	o-PO4-P (mg P/L)	12	1.358	0.064	0.383
18	SiO2 (mg/L)	12	23.7	7.0	15.1
19	SO4 (mg/L)	12	67.2	0.4	15.6
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	3.7	1.0	1.7
2	COD (mg/L)	12	194.0	13.0	67.4
3	DO (mg/L)	12	8.8	5.5	7
4	DO_SAT% (%)	12	118	69	89
5	Fcol-MPN (MPN/100mL)	12	330	20	120
6	Tcol-MPN (MPN/100mL)	12	5000	20	898
	TRACE & TOXIC				
1	As (µg/L)	3	2.6	0.6	1.4
2	Cd (µg/L)	3	0.1	0.0	0.1
3	Cr (µg/L)	3	4.0	0.7	2.6
4	Cu (µg/L)	3	7.3	0.7	3.7
5	Ni (µg/L)	3	8.0	0.8	3.8
6	Pb (µg/L)	3	1.0	0.1	0.6
7	Zn (µg/L)	3	5.7	2.5	4.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	111	41	68
2	HAR_Total (mgCaCO3/L)	12	158	59	113
3	Na% (%)	12	45	23	30
4	RSC (-)	12	0.9	0.0	0.2
5	SAR (-)	12	1.7	0.6	1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	734.2	1522	599.0	778.8	1684	2782	2525	471.9	1302	1431	1338	2214	946.6	850.8	1448
2	EC_GEN (µmho/cm)	215	215	208	185	164	195	208	290	261	278	257	303	411	231	237
3	pH_GEN (pH units)	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	8.3
4	Temp (deg C)	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	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	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	3.7
2	ALK-TOT (mgCaCO3/L)	101	90	97	80	69	82	79	106	98	119	163	114	115	102	91
3	B (mg/L)	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	0.22
4	Ca (mg/L)	21	18	21	25	17	25	21	21	22	24	27	29	24	29	22
5	Cl (mg/L)	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	11.9
6	CO3 (mg/L)	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	4.5
7	F (mg/L)	0.31	0.71	0.30	0.98	0.00	0.23	0.22	0.43	0.30	0.31	0.50	0.31	0.59	0.10	0.17
8	Fe (mg/L)	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	0.2
9	HCO3 (mg/L)	119	102	112	87	76	92	93	110	111	132	188	131	141	117	102
10	K (mg/L)	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	2.5
11	Mg (mg/L)	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	7.7
12	Na (mg/L)	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	20.8
13	NH3-N (mg N/L)	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	0.23
14	NO2+NO3 (mg N/L)	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	1.64
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	1.63
17	o-PO4-P (mg P/L)	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	0.106
18	SiO2 (mg/L)	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	15.4
19	SO4 (mg/L)	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	8.3

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.9
2	COD (mg/L)						35.9	54.8	69.5	50.9	36.1	64.7	37.1	26.2	66.6	29.1
3	DO (mg/L)	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	6.8
4	DO_SAT% (%)	87	86	80	90	87	85	80	85	91	89	81	80	83	84	91
5	FCol-MPN (MPN/100mL)	1480	690	980	275	240	360	380	190	120	220	540	7210	400	192	148
6	Tcol-MPN (MPN/100mL)	2110	1730	2720	648	330	750	890	520	670	580	7500	39660	944	1644	1886
	TRACE & TOXIC															
1	As (µg/L)											3.4	4.7			0.6
2	Cd (µg/L)											0.2	1.0			0.1
3	Cr (µg/L)											6.1	5.6			3.0
4	Cu (µg/L)											36.5	2.8			7.3
5	Hg (µg/L)												0.2			
6	Ni (µg/L)											1.4	13.9			2.5
7	Pb (µg/L)				44.0							1.0	0.5			0.8
8	Zn (µg/L)				8.0							2.6	1.3			2.5
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	53	46	53	63	42	63	54	52	56	59	68	72	61	72	55
2	HAR_Total (mgCaCO3/L)	80	81	90	83	60	82	69	96	93	118	128	112	121	110	87
3	Na% (%)	25	22	21	15	20	15	27	31	22	28	23	23	28	23	33
4	RSC (-)	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	0.1
5	SAR (-)	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	1.0
	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	77.89	127.3
2	EC_GEN (µmho/cm)	287	292	284	300	303	314	353	303	337	393	312	397	350	280	285
3	pH_GEN (pH units)	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	8.4
4	Temp (deg C)	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	25.3
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)	6.8	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	8.7
2	ALK-TOT (mgCaCO3/L)	142	140	129	144	126	130	143	121	154	158	204	156	152	148	149
3	B (mg/L)	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	0.58
4	Ca (mg/L)	29	33	23	29	30	29	33	29	30	33	41	48	34	29	36
5	Cl (mg/L)	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	13.4
6	CO3 (mg/L)	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	10.5
7	F (mg/L)	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	0.72
8	Fe (mg/L)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.3	0.4	0.0	0.0	0.1
9	HCO3 (mg/L)	157	151	143	161	140	146	160	134	171	178	233	183	181	162	161
10	K (mg/L)	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	1.7
11	Mg (mg/L)	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	10.3
12	Na (mg/L)	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	22.3
13	NH3-N (mg N/L)	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	0.55
14	NO2+NO3 (mg N/L)	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	1.13
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	1.12
17	o-PO4-P (mg P/L)	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	0.690
18	SiO2 (mg/L)	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	13.8
19	SO4 (mg/L)	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	20.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.6
2	COD (mg/L)						35.0	33.5	39.5	43.8	49.6	99.7	41.0	29.3	33.7	89.5
3	DO (mg/L)	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	7.7
4	DO_SAT% (%)	87	93	93	102	89	88	86	92	99	96	89	83	88	90	93
5	FCol-MPN (MPN/100mL)	738	100	400	100	100	78	100	100	100	100	1313	125	30	45	95
6	Tcol-MPN (MPN/100mL)	838	138	600	100	100	78	163	100	138	163	12238	463	120	160	218
	TRACE & TOXIC															
1	As (µg/L)										0.6				1.1	2.6
2	Cd (µg/L)										0.0			0.7	0.1	0.1
3	Cr (µg/L)										9.3			2.4	4.3	0.6
4	Cu (µg/L)										111.5			7.4	0.6	0.7
5	Hg (µg/L)															
6	Ni (µg/L)										16.8			0.9	0.3	0.8
7	Pb (µg/L)										0.6			4.5	0.2	0.1
8	Zn (µg/L)										18.8			4.0	5.4	5.7
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	72	81	57	73	75	73	81	73	76	83	104	120	85	73	89
2	HAR_Total (mgCaCO3/L)	118	125	122	125	113	120	129	119	135	157	178	182	141	125	132
3	Na% (%)	24	24	25	24	25	28	28	21	23	22	23	23	24	28	27
4	RSC (-)	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	0.4
5	SAR (-)	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	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	4.542	39.92
2	EC_GEN (µmho/cm)	287	330	293	293	305	305	334	338	347	315	336	318	323	296	296
3	pH_GEN (pH units)	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	8.5
4	Temp (deg C)	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	27.7
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)	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	5.8
2	ALK-TOT (mgCaCO3/L)	130	181	133	117	128	125	139	121	144	176	170	142	136	148	143
3	B (mg/L)	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	0.36
4	Ca (mg/L)	22	24	21	30	29	23	20	23	29	27	26	31	25	36	25
5	Cl (mg/L)	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	25.2
6	CO3 (mg/L)	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	7.0
7	F (mg/L)	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	0.60
8	Fe (mg/L)	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	0.2
9	HCO3 (mg/L)	151	148	135	130	141	141	158	137	160	202	190	173	157	144	160
10	K (mg/L)	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	2.3
11	Mg (mg/L)	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	16.5
12	Na (mg/L)	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	28.2
13	NH3-N (mg N/L)	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	1.14
14	NO2+NO3 (mg N/L)	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	1.17
15	NO2-N (mgN/L)	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	0.02
16	NO3-N (mgN/L)	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	1.16
17	o-PO4-P (mg P/L)	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	0.434
18	SiO2 (mg/L)	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	16.5
19	SO4 (mg/L)	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	20.6

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.5
2	COD (mg/L)						38.1	53.0	32.2	47.3	39.6	56.3	42.0	29.0	57.2	101.9
3	DO (mg/L)	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	6.5
4	DO_SAT% (%)	92	91	89	91	89	84	87	87	95	88	79	86	81	102	82
5	FCol-MPN (MPN/100mL)	617	250	150	100	200	100	100	100	100	100	100	273	107	57	107
6	Tcol-MPN (MPN/100mL)	1433	350	250	150	283	100	100	150	100	233	500	1643	220	127	157
	TRACE & TOXIC															
1	As (µg/L)										0.7	2.8	3.4	1.3	2.0	1.0
2	Cd (µg/L)					7.0					0.0	1.2	0.0	1.0	0.2	0.0
3	Cr (µg/L)					30.0					0.0	0.1	0.5	0.0	0.4	4.0
4	Cu (µg/L)											1.0	5.2		4.2	3.0
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	8.0
7	Pb (µg/L)					48.0					13.0	2.6	0.2	11.0	0.7	1.0
8	Zn (µg/L)					27.0					25.7	13.3	13.8	6.0	20.1	5.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	54	59	52	74	72	58	51	58	71	67	65	78	63	91	62
2	HAR_Total (mgCaCO3/L)	118	449	105	108	105	103	124	114	169	171	141	141	113	146	131
3	Na% (%)	29	22	38	28	31	34	36	31	31	25	31	31	30	30	32
4	RSC (-)	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	0.3
5	SAR (-)	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	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	: 2016-2017
Site	: PAUNI	Code	: AGH40I8
State	: Maharashtra	District	Bhandara
Basin	: Godavari	Independent River	:
Tributary	:	Sub Tributary	:
Sub-Sub Tributary	:	Local River	:
Division	: Wainganga Div., Nagpur	Sub-Division	: L Wainganga SD, Chandrapur
Drainage Area	: 35520 Sq. Km.	Bank	:
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 : 2016-2017

Station Name : PAUNI (AGH40I8)

Local River :

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL											
1	Q (cumec)											
2	Colour_Cod (-)	Clear	Light Brown	Clear	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	422	294	237	214	271	246	328	346	338	331	336
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)	8.1	7.9	7.9	8.0	8.5	8.2	7.9	8.6	8.1	7.8	7.9
6	Temp (deg C)	32.0	27.0	29.0	27.0	26.0	21.0	24.0	23.0	26.0	30.0	31.0
	CHEMICAL											
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	12.0	0.0	0.0	14.9	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	177	99	99	96	144	123	155	162	170	160	148
3	B (mg/L)	0.04	0.86	1.35	1.70	0.31	0.29	0.16	0.81	1.22	0.09	0.23
4	Ca (mg/L)	36	25	26	25	29	29	42	54	36	30	37
5	Cl (mg/L)	21.9	13.9	11.9	9.9	11.9	15.9	11.9	17.9	19.9	29.8	35.8
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	14.4	0.0	0.0	18.0	0.0	0.0	0.0
7	F (mg/L)	0.86	0.00	0.00	0.00	0.00	0.01	0.47	0.20	0.52	0.22	0.81
8	Fe (mg/L)	0.0	0.0	0.3	0.1	0.0	0.0	0.2	0.1	0.1	0.0	0.3
9	HCO3 (mg/L)	216	121	121	117	147	150	189	161	207	195	180
10	K (mg/L)	4.1	2.5	2.1	1.9	2.3	1.6	2.2	2.4	2.5	3.3	2.3
11	Mg (mg/L)	10.5	9.2	7.9	7.0	10.1	13.3	15.7	7.3	15.1	20.7	27.1
12	Na (mg/L)	35.4	15.6	17.5	15.4	20.3	21.9	21.8	24.5	27.4	28.8	27.1
13	NH3-N (mg N/L)	0.11	0.11	0.38	0.44	0.38	0.15	0.66	0.09	0.14	2.41	0.00
14	NO2+NO3 (mg N/L)	2.84	1.04	1.88	1.05	2.03	1.24	1.43	1.61	1.33	1.47	1.21
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.00	0.01	0.03	0.01	0.10	0.01	0.14	0.03
16	NO3-N (mgN/L)	2.83	1.04	1.88	1.04	2.02	1.21	1.42	1.51	1.32	1.33	1.18
17	o-PO4-P (mg P/L)	0.123	0.144	0.072	0.064	0.348	0.452	0.671	1.395	0.063	0.146	0.320
18	SiO2 (mg/L)	12.5	13.9	15.8	16.9	19.5	9.5	17.4	8.3	17.4	17.1	13.8
19	SO4 (mg/L)	13.0	2.4	5.6	0.4	4.7	0.9	9.7	75.0	18.2	17.2	14.5

Water Quality Datasheet for the period : 2016-2017

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water Analysis

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL											
1	BOD3-27 (mg/L)	3.5	4.4	3.7	2.6	1.6	4.4	2.0	2.3	1.9	2.4	50.0
2	COD (mg/L)	67.0	11.6	30.6	24.4	53.6	55.7	77.3	72.6	183.2	301.4	53.7
3	DO (mg/L)	5.8	7.0	7.9	9.0	8.2	8.9	7.3	8.5	6.8	5.9	5.2
4	DO_SAT% (%)	79	88	103	113	101	100	87	99	84	78	70
5	FCol-MPN (MPN/100mL)	1100	80	40	130	130	16000	110	270	220	270	300
6	Tcol-MPN (MPN/100mL)	16000	900	16000	3000	170	16000	210	2400	260	9000	900
	TRACE & TOXIC											
1	As (µg/L)		3.0				1.8				1.0	
2	Cd (µg/L)		0.2				0.1				0.0	
3	Cr (µg/L)		5.7				0.7				2.0	
4	Cu (µg/L)		15.0				1.6				10.0	
5	Ni (µg/L)		2.5				6.1				20.0	
6	Pb (µg/L)		1.0				0.0				1.0	
7	Zn (µg/L)		2.5				4.6				9.0	
	CHEMICAL INDICES											
1	HAR_Ca (mgCaCO3/L)	90	61	65	61	74	71	106	136	90	76	91
2	HAR_Total (mgCaCO3/L)	134	100	98	90	116	127	171	166	153	162	204
3	Na% (%)	36	25	28	27	27	27	21	24	28	27	22
4	RSC (-)	0.9	0.0	0.0	0.1	0.6	0.0	0.0	0.0	0.4	0.0	0.0
5	SAR (-)	1.3	0.7	0.8	0.7	0.8	0.8	0.7	0.8	1.0	1.0	0.8
	PESTICIDES											

Water Quality Summary for the period : 2016-2017

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)	11	422	214	306
3	pH_GEN (pH units)	11	8.6	7.8	8.1
4	Temp (deg C)	11	32.0	21.0	26.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	14.9	0.0	2.4
2	ALK-TOT (mgCaCO3/L)	11	177	96	139
3	B (mg/L)	11	1.70	0.04	0.64
4	Ca (mg/L)	11	54	25	34
5	Cl (mg/L)	11	35.8	9.9	18.3
6	CO3 (mg/L)	11	18.0	0.0	2.9
7	F (mg/L)	11	0.86	0.00	0.28
8	Fe (mg/L)	11	0.3	0.0	0.1
9	HCO3 (mg/L)	11	216	117	164
10	K (mg/L)	11	4.1	1.6	2.5
11	Mg (mg/L)	11	27.1	7.0	13.1
12	Na (mg/L)	11	35.4	15.4	23.2
13	NH3-N (mg N/L)	11	2.41	0.00	0.44
14	NO2+NO3 (mg N/L)	11	2.84	1.04	1.56
15	NO2-N (mgN/L)	11	0.14	0.00	0.03
16	NO3-N (mgN/L)	11	2.83	1.04	1.53
17	o-PO4-P (mg P/L)	11	1.395	0.063	0.345
18	SiO2 (mg/L)	11	19.5	8.3	14.7
19	SO4 (mg/L)	11	75.0	0.4	14.7
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	50.0	1.6	7.2
2	COD (mg/L)	11	301.4	11.6	84.6
3	DO (mg/L)	11	9.0	5.2	7.3
4	DO_SAT% (%)	11	113	70	91
5	FCol-MPN (MPN/100mL)	11	16000	40	1695
6	Tcol-MPN (MPN/100mL)	11	16000	170	5895
	TRACE & TOXIC				
1	As (µg/L)	3	3.0	1.0	1.9
2	Cd (µg/L)	3	0.2	0.0	0.1
3	Cr (µg/L)	3	5.7	0.7	2.8
4	Cu (µg/L)	3	15.0	1.6	8.9
5	Ni (µg/L)	3	20.0	2.5	9.5
6	Pb (µg/L)	3	1.0	0.0	0.7
7	Zn (µg/L)	3	9.0	2.5	5.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	136	61	84
2	HAR_Total (mgCaCO3/L)	11	204	90	138
3	Na% (%)	11	36	21	27
4	RSC (-)	11	0.9	0.0	0.2
5	SAR (-)	11	1.3	0.7	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	658.3	857.0	224.3	1111											
2	EC_GEN (µmho/cm)	319	240	274	325	307	271	318	380	334	345	313	274	327	289	292
3	pH_GEN (pH units)	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	8.0
4	Temp (deg C)	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	28.8
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)	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	0.0
2	ALK-TOT (mgCaCO3/L)	128	102	122	130	113	107	116	140	119	127	163	143	132	112	118
3	B (mg/L)	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	0.99
4	Ca (mg/L)	24	25	31	33	31	32	29	31	29	28	35	36	32	30	28
5	Cl (mg/L)	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	14.4
6	CO3 (mg/L)	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	0.0
7	F (mg/L)	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	0.22
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	147	125	144	144	131	126	136	166	141	155	191	175	162	131	144
10	K (mg/L)	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	2.7
11	Mg (mg/L)	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	8.6
12	Na (mg/L)	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	21.0
13	NH3-N (mg N/L)	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	0.26
14	NO2+NO3 (mg N/L)	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	1.70
15	NO2-N (mgN/L)	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	0.00
16	NO3-N (mgN/L)	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	1.70
17	o-PO4-P (mg P/L)	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	0.101
18	SiO2 (mg/L)	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	14.8
19	SO4 (mg/L)	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	5.3

Water Quality Seasonal Average for the period: 2002-2017

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood														
		Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	3.6
2	COD (mg/L)						53.9	56.8	69.2	71.6	35.5	59.7	49.4	26.0	78.6	33.4
3	DO (mg/L)	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	7.4
4	DO_SAT% (%)	59	81	86	90	90	93	86	84	90	90	75	86	81	88	96
5	FCol-MPN (MPN/100mL)	14890	5850	4350	1169	590	770	530	1720	290	350	1760	1290	776	110	338
6	Tcol-MPN (MPN/100mL)	31400	67370	27600	6600	1960	1980	2980	3620	6080	1820	48618	55400	2760	1200	8975
	TRACE & TOXIC															
1	As (µg/L)											5.3	3.5			3.0
2	Cd (µg/L)											1.6	0.3			0.2
3	Cr (µg/L)											0.9	0.6			5.7
4	Cu (µg/L)											15.0	4.1			15.0
5	Hg (µg/L)												0.2			
6	Ni (µg/L)											2.1	7.3			2.5
7	Pb (µg/L)				49.0							1.5	1.3			1.0
8	Zn (µg/L)				1.0							5.8	16.5			2.5
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	61	64	78	84	77	81	73	77	73	70	87	90	81	74	69
2	HAR_Total (mgCaCO3/L)	103	103	120	747	111	111	108	137	118	134	150	152	130	112	105
3	Na% (%)	30	18	21	21	23	15	25	25	20	28	20	20	30	25	29
4	RSC (-)	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	0.3
5	SAR (-)	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	0.9
	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: 2002-2017

Station Name : PAUNI (AGH40I8)

Local River :

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	43.44	80.92	113.2												
2	EC_GEN (µmho/cm)	309	339	310	352	337	356	370	373	406	408	357	440	288	313	298
3	pH_GEN (pH units)	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	8.3
4	Temp (deg C)	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	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)	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	6.7
2	ALK-TOT (mgCaCO3/L)	157	150	144	162	147	160	165	144	162	153	213	180	151	157	146
3	B (mg/L)	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	0.39
4	Ca (mg/L)	36	38	30	44	41	41	38	42	36	39	43	55	35	33	39
5	Cl (mg/L)	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	14.4
6	CO3 (mg/L)	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	8.1
7	F (mg/L)	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	0.17
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	0.1
9	HCO3 (mg/L)	192	170	162	182	167	187	193	176	197	187	260	215	177	188	162
10	K (mg/L)	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	2.1
11	Mg (mg/L)	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	11.6
12	Na (mg/L)	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	22.1
13	NH3-N (mg N/L)	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	0.32
14	NO2+NO3 (mg N/L)	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	1.58
15	NO2-N (mgN/L)	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	0.04
16	NO3-N (mgN/L)	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	1.54
17	o-PO4-P (mg P/L)	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	0.716
18	SiO2 (mg/L)	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	13.7
19	SO4 (mg/L)	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	22.6

Water Quality Seasonal Average for the period: 2002-2017

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	2.6
2	COD (mg/L)						58.6	70.4	60.0	64.5	73.0	30.3	52.8	28.5	37.8	64.8
3	DO (mg/L)	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	8.2
4	DO_SAT% (%)	66	78	91	102	91	81	88	79	93	89	83	86	93	80	97
5	FCol-MPN (MPN/100mL)	1650	5413	1900	138	1213	875	300	663	175	450	2375	138	65	455	4128
6	Tcol-MPN (MPN/100mL)	3788	34788	7425	163	3550	3538	713	2838	400	2163	6788	5700	430	8875	4695
	TRACE & TOXIC															
1	As (µg/L)										0.8				0.7	1.8
2	Cd (µg/L)										0.0			0.0	0.1	0.1
3	Cr (µg/L)										3.4			2.1	0.1	0.7
4	Cu (µg/L)										114.8			3.2	0.7	1.6
5	Hg (µg/L)															
6	Ni (µg/L)										75.3			0.1	0.4	6.1
7	Pb (µg/L)										0.3			0.9	0.2	0.0
8	Zn (µg/L)										28.3			3.0	5.7	4.6
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	91	95	75	110	102	102	94	105	91	97	107	138	87	82	97
2	HAR_Total (mgCaCO3/L)	141	145	139	151	128	151	147	147	152	171	215	208	134	137	145
3	Na% (%)	21	24	22	22	23	22	23	17	23	22	20	22	23	25	25
4	RSC (-)	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	0.1
5	SAR (-)	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	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: 2002-2017

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	15.15	32.78	8.796												
2	EC_GEN (µmho/cm)	373	417	429	419	388	443	360	392	418	362	403	387	392	358	335
3	pH_GEN (pH units)	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	7.9
4	Temp (deg C)	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	29.0
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)	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	0.0
2	ALK-TOT (mgCaCO3/L)	164	243	194	153	154	184	146	142	174	183	194	190	155	176	159
3	B (mg/L)	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	0.51
4	Ca (mg/L)	34	37	37	32	33	38	27	31	40	31	35	40	34	48	34
5	Cl (mg/L)	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	28.5
6	CO3 (mg/L)	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	0.0
7	F (mg/L)	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	0.51
8	Fe (mg/L)	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	0.2
9	HCO3 (mg/L)	200	220	220	180	171	220	174	173	208	223	232	232	189	214	194
10	K (mg/L)	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	2.7
11	Mg (mg/L)	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	20.9
12	Na (mg/L)	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	27.8
13	NH3-N (mg N/L)	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	0.85
14	NO2+NO3 (mg N/L)	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	1.34
15	NO2-N (mgN/L)	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	0.06
16	NO3-N (mgN/L)	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	1.28
17	o-PO4-P (mg P/L)	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	0.176
18	SiO2 (mg/L)	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	16.1
19	SO4 (mg/L)	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	16.6

Water Quality Seasonal Average for the period: 2002-2017

Station Name : PAUNI (AGH40I8)

Division : Wainganga Div., Nagpur

Local River :

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	18.1
2	COD (mg/L)						95.8	83.3	48.2	38.5	62.2	49.5	72.7	44.3	48.8	179.4
3	DO (mg/L)	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	6.0
4	DO_SAT% (%)	69	76	87	85	83	86	78	74	80	79	78	80	90	82	77
5	FCol-MPN (MPN/100mL)	7150	3267	3450	667	150	283	567	750	317	600	917	683	307	5417	263
6	Tcol-MPN (MPN/100mL)	13117	46633	18033	2533	283	667	9867	3083	650	8033	26867	18067	397	5887	3387
	TRACE & TOXIC															
1	As (µg/L)										1.0	3.1	2.8	6.6	2.6	1.0
2	Cd (µg/L)					8.0					0.3	1.0	0.1	1.0	0.3	0.0
3	Cr (µg/L)					13.0					5.2	1.5	1.3	0.0	1.9	2.0
4	Cu (µg/L)											0.8	3.6		2.3	10.0
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	20.0
7	Pb (µg/L)					75.0					16.9	1.6	1.2	14.0	0.7	1.0
8	Zn (µg/L)					39.0					27.1	1.9	20.4	15.0	6.7	9.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	85	93	92	80	83	94	67	78	99	77	86	100	84	121	86
2	HAR_Total (mgCaCO3/L)	152	167	158	139	133	175	126	124	190	187	171	181	136	204	173
3	Na% (%)	27	27	33	33	29	28	34	28	25	24	29	29	27	22	26
4	RSC (-)	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	0.1
5	SAR (-)	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	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)					0.0					0.0					
5	Endos (µg/L)					0.1					0.0					

HISTORY SHEET

		Water Year	: 2016-2017
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 : 2016-2017

Station Name : SATRAPUR (AGH4BF6)

Local River : Khanan

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.804	32.46	180.6	275.8	66.80	17.37	9.500	7.856	1.744	1.941	1.341	0.754
2	Colour_Cod (-)	Clear	Brown	Light Brown	Dark Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	733	312	320	241	380	492	501	570	587	648	611	643
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	8.1	7.8	8.2	8.6	8.2	8.4	8.7	8.4	7.8	7.7
6	Temp (deg C)	29.0	27.5	21.5	23.5	21.5	22.0	19.5	19.5	16.5	19.5	23.0	25.5
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	17.9	0.0	0.0	0.0	0.0	6.0	0.0	6.0	19.9	10.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	219	49	108	104	129	222	207	222	243	233	223	193
3	B (mg/L)	0.15	0.34	0.12	0.17	0.23	1.22	0.33	0.74	0.81	1.39	0.34	0.63
4	Ca (mg/L)	48	41	28	32	52	38	50	49	49	41	41	49
5	Cl (mg/L)	57.7	41.8	11.9	9.9	11.9	25.8	35.8	49.7	41.8	93.4	75.5	83.5
6	CO3 (mg/L)	21.6	0.0	0.0	0.0	0.0	7.2	0.0	7.2	24.0	12.0	0.0	0.0
7	F (mg/L)	0.35	3.00	0.00	0.00	0.02	0.01	0.28	0.71	0.16	0.90	0.68	1.32
8	Fe (mg/L)	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.1	0.0	0.2	0.0	0.3
9	HCO3 (mg/L)	223	60	132	127	157	256	253	256	247	259	271	235
10	K (mg/L)	3.9	3.6	2.3	1.9	2.5	2.4	2.6	2.5	2.5	3.3	3.3	2.3
11	Mg (mg/L)	23.2	3.1	11.4	8.3	6.1	24.2	22.4	23.5	23.5	24.6	31.9	27.6
12	Na (mg/L)	65.2	2.7	17.4	16.5	25.6	36.0	47.6	53.6	51.1	71.1	61.6	46.8
13	NH3-N (mg N/L)	0.02	0.14	0.14	0.65	0.51	0.41	0.47	0.33	0.09	0.31	2.87	0.76
14	NO2+NO3 (mg N/L)	1.12	3.77	1.28	2.44	2.32	1.90	1.58	1.10	1.55	1.36	1.36	1.33
15	NO2-N (mgN/L)	0.01	0.05	0.00	0.00	0.01	0.01	0.03	0.01	0.01	0.01	0.11	0.03
16	NO3-N (mgN/L)	1.10	3.72	1.28	2.44	2.31	1.90	1.55	1.09	1.54	1.35	1.25	1.30
17	o-PO4-P (mg P/L)	0.144	0.349	0.205	0.102	0.088	0.304	0.515	0.863	2.630	0.033	0.246	0.338
18	SiO2 (mg/L)	33.5	21.5	3.7	19.0	35.3	40.9	19.1	26.9	10.9	22.5	18.6	23.4
19	SO4 (mg/L)	41.0	29.6	1.0	2.7	23.3	28.1	13.4	36.8	59.0	46.6	35.5	36.0

Water Quality Datasheet for the period : 2016-2017

Station Name : SATRAPUR (AGH4BF6)

Division : Wainganga Div., Nagpur

Local River : Khanan

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	4.4	25.0	4.7	1.2	1.3	1.7	2.1	3.3	2.4	2.1	3.6	25.0
2	COD (mg/L)	33.3	52.0	49.0	44.4	35.8	145.3	103.5	30.5	73.9	166.6	617.1	56.0
3	DO (mg/L)	6.5	6.0	7.0	7.2	6.4	8.7	9.4	8.5	8.3	7.1	6.6	3.1
4	DO_SAT% (%)	85	75	79	84	72	100	101	92	84	77	77	38
5	FCol-MPN (MPN/100mL)	1100	16000	170	80	330	40	1100	130	500	500	800	140
6	Tcol-MPN (MPN/100mL)	2200	16000	3000	16000	16000	170	1400	300	8000	700	2200	500
	TRACE & TOXIC												
1	As (µg/L)			0.6				1.1				0.0	
2	Cd (µg/L)			0.2				0.1				0.0	
3	Cr (µg/L)			0.6				0.6				3.0	
4	Cu (µg/L)			7.3				1.1				9.0	
5	Ni (µg/L)			3.3				1.5				8.0	
6	Pb (µg/L)			0.5				0.0				1.0	
7	Zn (µg/L)			3.3				9.7				1.2	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	121	103	70	80	130	94	124	122	122	104	104	122
2	HAR_Total (mgCaCO3/L)	217	116	118	115	155	195	218	220	220	206	236	237
3	Na% (%)	39	5	24	24	26	28	32	34	33	43	36	30
4	RSC (-)	0.1	0.0	0.0	0.0	0.0	0.6	0.0	0.1	0.5	0.6	0.0	0.0
5	SAR (-)	1.9	0.1	0.7	0.7	0.9	1.1	1.4	1.6	1.5	2.2	1.7	1.3
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	365	1160	0.512	44.78
2	EC_GEN (µmho/cm)	12	733	241	503
3	pH_GEN (pH units)	12	8.7	7.7	8.2
4	Temp (deg C)	12	29.0	16.5	22.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	19.9	0.0	5
2	ALK-TOT (mgCaCO3/L)	12	243	49	179
3	B (mg/L)	12	1.39	0.12	0.54
4	Ca (mg/L)	12	52	28	43
5	Cl (mg/L)	12	93.4	9.9	44.9
6	CO3 (mg/L)	12	24.0	0.0	6
7	F (mg/L)	12	3.00	0.00	0.62
8	Fe (mg/L)	12	0.3	0.0	0.1
9	HCO3 (mg/L)	12	271	60	206
10	K (mg/L)	12	3.9	1.9	2.7
11	Mg (mg/L)	12	31.9	3.1	19.1
12	Na (mg/L)	12	71.1	2.7	41.3
13	NH3-N (mg N/L)	12	2.87	0.02	0.56
14	NO2+NO3 (mg N/L)	12	3.77	1.10	1.76
15	NO2-N (mgN/L)	12	0.11	0.00	0.02
16	NO3-N (mgN/L)	12	3.72	1.09	1.74
17	o-PO4-P (mg P/L)	12	2.630	0.033	0.485
18	SiO2 (mg/L)	12	40.9	3.7	22.9
19	SO4 (mg/L)	12	59.0	1.0	29.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	25.0	1.2	6.4
2	COD (mg/L)	12	617.1	30.5	117.3
3	DO (mg/L)	12	9.4	3.1	7.1
4	DO_SAT% (%)	12	101	38	80
5	FCol-MPN (MPN/100mL)	12	16000	40	1741
6	Tcol-MPN (MPN/100mL)	12	16000	170	5539
	TRACE & TOXIC				
1	As (µg/L)	3	1.1	0.0	0.6
2	Cd (µg/L)	3	0.2	0.0	0.1
3	Cr (µg/L)	3	3.0	0.6	1.4
4	Cu (µg/L)	3	9.0	1.1	5.8
5	Ni (µg/L)	3	8.0	1.5	4.3
6	Pb (µg/L)	3	1.0	0.0	0.5
7	Zn (µg/L)	3	9.7	1.2	4.7
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	130	70	108
2	HAR_Total (mgCaCO3/L)	12	237	115	188
3	Na% (%)	12	43	5	30
4	RSC (-)	12	0.6	0.0	0.1
5	SAR (-)	12	2.2	0.1	1.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	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	25.58	111.3
2	EC_GEN (µmho/cm)	406	307	364	350	338	307	384	423	416	391	438	361	480	444	397
3	pH_GEN (pH units)	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	8.1
4	Temp (deg C)	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	24.6
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)	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	3.6
2	ALK-TOT (mgCaCO3/L)	154	126	157	145	117	127	146	143	148	158	222	168	193	166	122
3	B (mg/L)	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	0.20
4	Ca (mg/L)	37	34	38	41	34	36	35	36	35	43	47	42	47	40	40
5	Cl (mg/L)	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	26.6
6	CO3 (mg/L)	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	4.3
7	F (mg/L)	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	0.67
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	186	147	183	171	140	151	176	170	175	189	257	198	235	200	140
10	K (mg/L)	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	2.8
11	Mg (mg/L)	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	10.4
12	Na (mg/L)	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	25.5
13	NH3-N (mg N/L)	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	0.29
14	NO2+NO3 (mg N/L)	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	2.19
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	2.17
17	o-PO4-P (mg P/L)	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	0.178
18	SiO2 (mg/L)	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	22.6
19	SO4 (mg/L)	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	19.5

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	7.3
2	COD (mg/L)						32.7	36.4	105.1	56.8	37.9	45.7	42.4	37.2	80.1	42.9
3	DO (mg/L)	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	6.6
4	DO_SAT% (%)	86	89	94	90	90	91	85	80	88	73	74	78	84	81	79
5	FCol-MPN (MPN/100mL)	9182	3400	2087	2671	1450	1240	690	1650	1950	9530	1870	6770	320	164	3536
6	Tcol-MPN (MPN/100mL)	16504	23360	5800	10880	7070	7460	2650	7770	9470	25660	72900	73990	1546	4940	10640
	TRACE & TOXIC															
1	As (µg/L)											3.5	5.8			0.6
2	Cd (µg/L)											1.3	0.2			0.2
3	Cr (µg/L)											0.6	1.5			0.6
4	Cu (µg/L)											29.6	1.8			7.3
5	Hg (µg/L)												0.0			
6	Ni (µg/L)											1.4	8.9			3.3
7	Pb (µg/L)				46.0							3.5	2.3			0.5
8	Zn (µg/L)				21.0							2.8	0.0			3.3
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	94	85	95	102	86	91	87	89	87	107	118	104	117	99	101
2	HAR_Total (mgCaCO3/L)	153	122	152	149	129	141	142	159	154	173	209	174	190	172	144
3	Na% (%)	26	19	26	20	19	14	30	26	21	27	21	21	32	27	23
4	RSC (-)	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	0.0
5	SAR (-)	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	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	5.346	21.94	4.040	21.02	9.315	13.36	4.212	12.56	18.74	13.91	13.47	23.02	6.795	7.894	9.117
2	EC_GEN (µmho/cm)	450	459	615	418	444	459	626	518	529	501	471	623	548	536	538
3	pH_GEN (pH units)	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	8.5
4	Temp (deg C)	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	19.4
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)	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	8.0
2	ALK-TOT (mgCaCO3/L)	184	185	203	192	168	179	188	175	199	164	222	242	218	196	223
3	B (mg/L)	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	0.78
4	Ca (mg/L)	42	45	46	36	41	43	52	45	40	41	52	71	52	38	46
5	Cl (mg/L)	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	38.3
6	CO3 (mg/L)	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	9.6
7	F (mg/L)	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	0.29
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	0.1
9	HCO3 (mg/L)	221	219	237	220	193	211	226	204	227	191	257	290	266	231	253
10	K (mg/L)	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	2.5
11	Mg (mg/L)	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	23.4
12	Na (mg/L)	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	47.1
13	NH3-N (mg N/L)	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	0.32
14	NO2+NO3 (mg N/L)	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	1.53
15	NO2-N (mgN/L)	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	0.01
16	NO3-N (mgN/L)	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	1.52
17	o-PO4-P (mg P/L)	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	1.078
18	SiO2 (mg/L)	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	24.5
19	SO4 (mg/L)	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	34.3

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	2.4
2	COD (mg/L)						19.7	40.2	34.2	50.6	50.5	59.2	48.3	29.3	36.4	88.3
3	DO (mg/L)	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	8.7
4	DO_SAT% (%)	97	89	91	107	107	94	88	87	82	80	90	97	95	100	94
5	FCol-MPN (MPN/100mL)	2000	1171	1158	488	413	313	250	288	313	913	2625	2838	110	135	443
6	Tcol-MPN (MPN/100mL)	3554	2621	4121	1138	888	900	575	963	450	5238	5563	5550	223	645	2468
	TRACE & TOXIC															
1	As (µg/L)										1.8				0.8	1.1
2	Cd (µg/L)										0.3			0.0	0.2	0.1
3	Cr (µg/L)										13.7			3.0	1.0	0.6
4	Cu (µg/L)										6.5			3.5	3.8	1.1
5	Hg (µg/L)															
6	Ni (µg/L)										18.3			0.1	0.5	1.5
7	Pb (µg/L)										0.6			1.5	1.0	0.0
8	Zn (µg/L)										11.0			3.0	6.1	9.7
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	105	111	115	91	103	108	129	113	100	101	129	178	129	96	116
2	HAR_Total (mgCaCO3/L)	169	176	213	178	156	183	222	189	184	208	218	283	220	185	213
3	Na% (%)	29	27	37	24	29	29	26	24	27	29	29	24	30	36	32
4	RSC (-)	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	0.3
5	SAR (-)	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	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	1.845	1.345
2	EC_GEN (µmho/cm)	440	487	659	504	486	562	636	659	734	634	674	623	705	686	634
3	pH_GEN (pH units)	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	8.0
4	Temp (deg C)	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	22.7
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)	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	3.3
2	ALK-TOT (mgCaCO3/L)	168	189	213	144	169	173	197	186	212	194	284	223	198	233	216
3	B (mg/L)	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	0.79
4	Ca (mg/L)	37	35	46	36	33	44	40	44	45	47	58	51	52	69	44
5	Cl (mg/L)	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	84.2
6	CO3 (mg/L)	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	4.0
7	F (mg/L)	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	0.97
8	Fe (mg/L)	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	0.2
9	HCO3 (mg/L)	202	227	255	168	202	205	240	227	259	227	335	272	241	274	255
10	K (mg/L)	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	2.9
11	Mg (mg/L)	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	28.0
12	Na (mg/L)	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	59.8
13	NH3-N (mg N/L)	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	1.31
14	NO2+NO3 (mg N/L)	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	1.35
15	NO2-N (mgN/L)	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	0.05
16	NO3-N (mgN/L)	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	1.30
17	o-PO4-P (mg P/L)	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	0.206
18	SiO2 (mg/L)	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	21.5
19	SO4 (mg/L)	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	39.4

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	10.2
2	COD (mg/L)						84.7	39.9	35.4	37.7	70.9	37.4	53.0	30.0	47.8	279.9
3	DO (mg/L)	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	5.6
4	DO_SAT% (%)	92	95	90	96	91	86	87	74	79	78	98	90	91	90	64
5	FCol-MPN (MPN/100mL)	2761	1028	2094	717	350	433	200	567	5067	5733	2983	173	107	113	480
6	Tcol-MPN (MPN/100mL)	17333	5344	15828	1583	933	1117	817	6467	32533	42983	55950	2893	353	1863	1133
	TRACE & TOXIC															
1	As (µg/L)										1.1	3.3	4.3	4.0	3.6	0.0
2	Cd (µg/L)					8.0					0.2	2.2	0.0	2.0	0.3	0.0
3	Cr (µg/L)					22.0					7.1	4.3	4.2	0.0	1.6	3.0
4	Cu (µg/L)											2.1	2.0		2.7	9.0
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	8.0
7	Pb (µg/L)					22.0					29.0	16.3	0.4	19.0	2.0	1.0
8	Zn (µg/L)					35.0					29.1	21.7	6.8	7.0	3.1	1.2
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	91	88	115	90	83	110	99	109	114	116	146	127	130	173	110
2	HAR_Total (mgCaCO3/L)	163	170	231	1467	152	172	230	213	248	271	304	259	207	309	227
3	Na% (%)	31	34	34	22	36	37	35	31	48	29	33	29	40	30	36
4	RSC (-)	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	0.2
5	SAR (-)	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	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)					0.0					0.0					
5	Endos (µg/L)					0.1					0.0					

HISTORY SHEET

		Water Year	: 2016-2017
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 : 2016-2017

Station Name : RAJEGAON (AGH4MC3)

Local River : Bagh

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017
		A	A	A	A	A	A	A	A	A	A
	PHYSICAL										
1	Q (cumec)	25.77	109.0	232.4	108.2	21.14	9.221	5.568	2.457	0.346	0.547
2	Colour_Cod (-)	Brown	Brown	Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	123	156	107	143	214	214	239	261	276	244
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)	7.7	7.8	7.5	8.3	8.4	8.1	7.9	8.5	8.2	7.8
6	Temp (deg C)	26.0	26.0	26.0	26.0	24.0	20.0	19.0	18.5	21.0	27.0
	CHEMICAL										
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	12.0	12.0	0.0	0.0	19.9	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	62	38	63	96	126	115	105	143	138	73
3	B (mg/L)	1.37	0.53	0.52	1.05	0.25	0.10	0.89	0.24	0.11	0.05
4	Ca (mg/L)	22	12	17	16	21	29	34	46	29	22
5	Cl (mg/L)	2.0	41.8	11.9	6.0	6.0	11.9	9.9	8.0	13.9	67.5
6	CO3 (mg/L)	0.0	0.0	0.0	14.4	14.4	0.0	0.0	24.0	0.0	0.0
7	F (mg/L)	0.61	0.00	0.00	0.00	0.00	0.01	0.48	0.32	0.27	0.00
8	Fe (mg/L)	0.2	0.1	0.5	0.2	0.0	0.0	0.1	0.0	0.1	0.1
9	HCO3 (mg/L)	75	46	77	88	124	140	128	125	168	89
10	K (mg/L)	4.2	2.2	2.3	1.5	2.4	1.7	1.5	1.6	1.2	2.6
11	Mg (mg/L)	0.9	9.2	1.3	6.6	11.7	14.0	12.3	2.2	18.5	15.1
12	Na (mg/L)	7.4	9.8	18.4	10.8	17.4	15.6	14.5	14.1	19.6	19.5
13	NH3-N (mg N/L)	0.07	0.07	0.52	0.01	0.20	0.35	1.49	0.18	0.29	2.04
14	NO2+NO3 (mg N/L)	4.35	1.52	2.19	1.18	2.17	1.19	0.88	0.95	1.50	2.04
15	NO2-N (mgN/L)	0.07	0.00	0.00	0.01	0.00	0.03	0.01	0.01	0.01	0.01
16	NO3-N (mgN/L)	4.28	1.52	2.19	1.17	2.17	1.16	0.87	0.94	1.50	2.03
17	o-PO4-P (mg P/L)	0.218	0.243	0.110	0.048	0.216	0.436	0.659	1.892	0.244	0.560
18	SiO2 (mg/L)	16.4	2.5	13.7	18.2	25.5	14.0	24.6	10.4	30.9	29.5
19	SO4 (mg/L)	15.0	9.6	17.1	0.9	6.5	3.0	17.4	32.0	17.6	14.0
	BIOLOGICAL/BACTERIOLOGICAL										

Water Quality Datasheet for the period : 2016-2017

Station Name : RAJEGAON (AGH4MC3)

Division : Wainganga Div., Nagpur

Local River : Bagh

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017
		A	A	A	A	A	A	A	A	A	A
1	BOD3-27 (mg/L)	2.1	1.8	1.2	1.0	1.3	1.2	1.4	1.3	1.8	2.1
2	COD (mg/L)	100.0	5.6	34.0	19.4	108.3	13.0	18.6	138.2	169.2	311.4
3	DO (mg/L)	6.0	6.2	6.2	7.0	7.8	8.2	7.7	7.7	7.3	6.1
4	DO_SAT% (%)	74	76	76	86	93	90	83	81	82	77
5	FCol-MPN (MPN/100mL)	270	110	80	40	40	20	210	90	230	170
6	Tcol-MPN (MPN/100mL)	1300	1400	2200	130	80	70	220	1100	500	900
	TRACE & TOXIC										
1	As (µg/L)		1.3				1.1				1.0
2	Cd (µg/L)		0.3				0.2				0.0
3	Cr (µg/L)		3.6				0.7				2.0
4	Cu (µg/L)		7.4				2.0				1.2
5	Ni (µg/L)		3.4				1.1				1.6
6	Pb (µg/L)		0.7				17.3				0.0
7	Zn (µg/L)		3.4				1.6				7.0
	CHEMICAL INDICES										
1	HAR_Ca (mgCaCO3/L)	54	31	43	40	53	71	85	115	74	55
2	HAR_Total (mgCaCO3/L)	58	69	48	67	102	130	137	125	151	118
3	Na% (%)	20	23	44	25	27	21	19	20	22	26
4	RSC (-)	0.1	0.0	0.3	0.6	0.5	0.0	0.0	0.4	0.0	0.0
5	SAR (-)	0.4	0.5	1.2	0.6	0.8	0.6	0.5	0.6	0.7	0.8
	PESTICIDES										

Water Quality Summary for the period : 2016-2017

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)	365	2750	0.000	83.00
2	EC_GEN (µmho/cm)	10	276	107	198
3	pH_GEN (pH units)	10	8.5	7.5	8
4	Temp (deg C)	10	27.0	18.5	23.4
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	19.9	0.0	4.4
2	ALK-TOT (mgCaCO3/L)	10	143	38	96
3	B (mg/L)	10	1.37	0.05	0.51
4	Ca (mg/L)	10	46	12	25
5	Cl (mg/L)	10	67.5	2.0	17.9
6	CO3 (mg/L)	10	24.0	0.0	5.3
7	F (mg/L)	10	0.61	0.00	0.17
8	Fe (mg/L)	10	0.5	0.0	0.1
9	HCO3 (mg/L)	10	168	46	106
10	K (mg/L)	10	4.2	1.2	2.1
11	Mg (mg/L)	10	18.5	0.9	9.2
12	Na (mg/L)	10	19.6	7.4	14.7
13	NH3-N (mg N/L)	10	2.04	0.01	0.52
14	NO2+NO3 (mg N/L)	10	4.35	0.88	1.8
15	NO2-N (mgN/L)	10	0.07	0.00	0.01
16	NO3-N (mgN/L)	10	4.28	0.87	1.78
17	o-PO4-P (mg P/L)	10	1.892	0.048	0.463
18	SiO2 (mg/L)	10	30.9	2.5	18.6
19	SO4 (mg/L)	10	32.0	0.9	13.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	2.1	1.0	1.5
2	COD (mg/L)	10	311.4	5.6	91.8
3	DO (mg/L)	10	8.2	6.0	7
4	DO_SAT% (%)	10	93	74	82
5	FCol-MPN (MPN/100mL)	10	270	20	126
6	Tcol-MPN (MPN/100mL)	10	2200	70	790
	TRACE & TOXIC				
1	As (µg/L)	3	1.3	1.0	1.1
2	Cd (µg/L)	3	0.3	0.0	0.1
3	Cr (µg/L)	3	3.6	0.7	2.1
4	Cu (µg/L)	3	7.4	1.2	3.5
5	Ni (µg/L)	3	3.4	1.1	2
6	Pb (µg/L)	3	17.3	0.0	6
7	Zn (µg/L)	3	7.0	1.6	4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	115	31	62
2	HAR_Total (mgCaCO3/L)	10	151	48	100
3	Na% (%)	10	44	19	25
4	RSC (-)	10	0.6	0.0	0.2
5	SAR (-)	10	1.2	0.4	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	173.1	154.0	41.36	468.5						88.54	168.7	595.9	67.77	90.48	118.8
2	EC_GEN (µmho/cm)	125	97	150	122							134	103	203	141	132
3	pH_GEN (pH units)	7.9	7.9	7.7	7.8							8.4	7.6	7.2	7.6	7.8
4	Temp (deg C)	27.3	27.1	28.7	27.7							25.3	26.9	29.5	25.8	26.0
5	Turb (NTU)											24.0	19.7	14.4		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0							3.6	0.0	0.0	0.0	3.0
2	ALK-TOT (mgCaCO3/L)	66	41	79	42							80	61	101	82	65
3	B (mg/L)	0.55	0.48	0.17	0.21							0.23	0.12	0.21	0.24	0.87
4	Ca (mg/L)	19	13	18	11							20	17	27	19	17
5	Cl (mg/L)	3.8	1.6	5.0	7.1							5.0	9.2	7.6	8.9	15.4
6	CO3 (mg/L)	0.0	0.0	0.0	0.0							4.4	0.0	0.0	0.0	3.6
7	F (mg/L)	0.17	0.36	0.30	0.94							0.71	0.46	0.44	0.02	0.15
8	Fe (mg/L)	0.3	0.3	0.2	0.9							0.3	1.4	0.1	0.2	0.2
9	HCO3 (mg/L)	81	50	97	51							89	74	123	100	71
10	K (mg/L)	2.1	1.6	2.3	1.8							1.5	2.9	2.4	1.8	2.5
11	Mg (mg/L)	4.4	3.3	6.0	7.1							6.4	8.8	8.1	13.9	4.5
12	Na (mg/L)	5.0	2.8	8.5	3.5							5.1	5.6	14.9	9.5	11.6
13	NH3-N (mg N/L)	0.26	0.54	0.20	0.11							0.00	0.07	0.29	0.16	0.17
14	NO2+NO3 (mg N/L)	0.66	0.76	2.29	0.95							2.27	1.75	1.57	8.15	2.31
15	NO2-N (mgN/L)	0.06	0.02	0.17	0.11							0.29	0.01	0.01	0.02	0.02
16	NO3-N (mgN/L)	0.59	0.74	2.12	0.84							1.97	1.74	1.56	8.13	2.29
17	o-PO4-P (mg P/L)	0.015	0.032	0.110	0.024							0.063	0.039	0.126	0.089	0.155
18	SiO2 (mg/L)	24.5	20.8	28.4	68.5							23.4	19.3	13.8	22.4	12.7
19	SO4 (mg/L)	8.8	8.5	6.2	8.2							7.4	16.3	13.3	11.0	10.6

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	1.2	1.4							1.1	1.4	1.6	1.7	1.5
2	COD (mg/L)											65.5	71.1	23.6	104.7	39.7
3	DO (mg/L)	5.9	6.2	6.7	5.9							6.5	6.3	6.1	6.5	6.3
4	DO_SAT% (%)	75	78	86	75							78	78	80	79	78
5	FCol-MPN (MPN/100mL)	4875	3575	1250	283							150	725	274	165	125
6	Tcol-MPN (MPN/100mL)	7125	26613	11010	797							9667	63175	800	805	1258
	TRACE & TOXIC															
1	As (µg/L)											3.4	2.2			1.3
2	Cd (µg/L)											1.5	0.2			0.3
3	Cr (µg/L)											0.5	2.0			3.6
4	Cu (µg/L)											25.1	7.3			7.4
5	Hg (µg/L)												0.0			
6	Ni (µg/L)											0.9	12.8			3.4
7	Pb (µg/L)											0.6	0.0			0.7
8	Zn (µg/L)											5.8	2.0			3.4
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	48	32	45	27							50	43	67	47	42
2	HAR_Total (mgCaCO3/L)	66	46	70	57							77	79	101	105	60
3	Na% (%)	13	12	18	11							11	13	25	18	28
4	RSC (-)	0.1	0.0	0.2	0.0							0.1	0.1	0.2	0.0	0.2
5	SAR (-)	0.3	0.2	0.4	0.2							0.2	0.3	0.7	0.4	0.7
	PESTICIDES															

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	5.318	14.33	39.85							8.720	12.02	14.53	13.18	7.192	9.596
2	EC_GEN (µmho/cm)	224	181	175							470	229	257	237	234	232
3	pH_GEN (pH units)	7.9	7.8	7.8							8.2	8.1	7.6	7.9	7.9	8.2
4	Temp (deg C)	22.0	21.9	20.1							17.0	21.4	21.4	21.5	20.8	20.4
5	Turb (NTU)										1.7	0.6	1.9	0.8		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0							0.0	0.0	0.0	0.0	1.3	8.0
2	ALK-TOT (mgCaCO3/L)	117	93	92							109	119	118	112	114	122
3	B (mg/L)	0.28	0.30	0.17							0.17	0.28	0.17	0.36	0.34	0.37
4	Ca (mg/L)	26	25	19							51	33	43	26	29	32
5	Cl (mg/L)	6.3	4.3	4.6							54.0	8.0	5.9	8.5	7.9	8.9
6	CO3 (mg/L)	0.0	0.0	0.0							0.0	0.0	0.0	0.0	1.6	9.6
7	F (mg/L)	0.21	0.26	0.39							0.66	0.19	0.18	0.16	0.05	0.20
8	Fe (mg/L)	0.0	0.1	0.1							0.2	0.3	0.3	0.0	0.1	0.1
9	HCO3 (mg/L)	143	114	112							133	145	144	136	136	129
10	K (mg/L)	1.5	1.6	1.8							1.4	2.6	1.8	1.5	2.1	1.8
11	Mg (mg/L)	10.2	5.7	12.7							20.8	9.4	9.4	15.1	9.6	10.1
12	Na (mg/L)	8.8	7.5	6.5							32.9	13.4	14.0	13.8	14.6	15.4
13	NH3-N (mg N/L)	0.16	0.17	0.11							0.16	0.08	0.10	0.15	0.35	0.56
14	NO2+NO3 (mg N/L)	0.14	0.38	1.67							0.22	0.21	1.83	3.86	4.15	1.30
15	NO2-N (mgN/L)	0.02	0.03	0.10							0.01	0.01	0.00	0.00	0.02	0.01
16	NO3-N (mgN/L)	0.12	0.35	1.57							0.21	0.20	1.82	3.85	4.13	1.29
17	o-PO4-P (mg P/L)	0.010	0.015	0.419							0.023	0.038	0.431	0.171	0.085	0.801
18	SiO2 (mg/L)	30.8	23.8	34.2							139.2	30.4	11.5	9.0	18.7	18.6
19	SO4 (mg/L)	5.0	5.8	10.8							25.9	14.1	15.9	16.3	18.6	14.7

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.8	1.1	1.8							2.0	1.6	1.4	2.7	1.2	1.3
2	COD (mg/L)										77.1	29.6	36.0	27.3	36.6	69.5
3	DO (mg/L)	8.6	7.5	7.9							8.1	7.8	7.3	7.4	7.4	7.8
4	DO_SAT% (%)	98	84	87							84	88	82	84	82	87
5	FCol-MPN (MPN/100mL)	688	388	2300							100	300	138	100	145	90
6	Tcol-MPN (MPN/100mL)	850	688	7125							250	11975	663	340	630	368
	TRACE & TOXIC															
1	As (µg/L)										0.3				0.6	1.1
2	Cd (µg/L)										0.3			0.3	0.1	0.2
3	Cr (µg/L)										2.9			2.5	0.2	0.7
4	Cu (µg/L)										137.6			4.0	0.6	2.0
5	Hg (µg/L)															
6	Ni (µg/L)										45.8			5.2	0.6	1.0
7	Pb (µg/L)										0.0			0.8	0.1	17.3
8	Zn (µg/L)										38.6			4.0	5.8	1.6
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	66	61	47							128	82	108	65	72	81
2	HAR_Total (mgCaCO3/L)	108	85	100							215	121	147	128	112	123
3	Na% (%)	15	16	12							25	20	18	19	22	21
4	RSC (-)	0.2	0.2	0.0							0.0	0.1	0.0	0.0	0.1	0.2
5	SAR (-)	0.4	0.4	0.3							1.0	0.5	0.5	0.5	0.6	0.6
	PESTICIDES															

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	0.000	4.751	0.302							0.276	0.747	8.319	7.355	1.224	0.446
2	EC_GEN (µmho/cm)	238	277	257							284	276	224	272	228	260
3	pH_GEN (pH units)	7.7	7.8	8.0							8.1	7.9	7.5	7.8	7.6	8.0
4	Temp (deg C)	27.0	26.7	25.0							24.0	24.5	27.3	23.5	24.0	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	178	131							122	146	103	103	120	105
3	B (mg/L)	0.32	0.57	0.09							0.14	0.23	0.31	0.45	0.05	0.08
4	Ca (mg/L)	27	28	27							36	41	28	36	51	26
5	Cl (mg/L)	5.7	8.7	6.4							12.1	9.2	8.4	9.5	8.2	40.7
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)	0.19	0.25	0.54							0.17	0.00	0.49	0.12	0.01	0.13
8	Fe (mg/L)	0.0	0.0	0.0							0.2	0.0	0.3	0.3	0.0	0.1
9	HCO3 (mg/L)	164	162	159							149	178	126	126	146	129
10	K (mg/L)	2.3	2.9	2.0							1.0	3.0	2.7	2.2	2.6	1.9
11	Mg (mg/L)	9.5	13.4	12.3							17.5	15.9	8.6	13.4	16.6	16.8
12	Na (mg/L)	13.7	14.0	13.9							13.3	14.9	18.3	11.5	14.5	19.5
13	NH3-N (mg N/L)	0.27	0.42	0.14							0.14	0.02	0.78	0.10	0.09	1.16
14	NO2+NO3 (mg N/L)	0.23	0.27	1.33							0.35	0.00	3.56	5.04	14.33	1.77
15	NO2-N (mgN/L)	0.04	0.05	0.20							0.01	0.00	0.01	0.01	0.05	0.01
16	NO3-N (mgN/L)	0.18	0.23	1.13							0.34	0.00	3.55	5.03	14.28	1.76
17	o-PO4-P (mg P/L)	0.017	0.010	0.107							0.040	0.043	0.697	0.219	0.085	0.402
18	SiO2 (mg/L)	27.7	31.0	34.1							29.4	15.3	13.7	40.2	22.4	30.2
19	SO4 (mg/L)	5.7	5.7	4.5							9.6	25.8	10.9	13.3	27.4	15.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.9	1.0	2.6							1.4	1.7	2.2	1.8	15.0	1.9
2	COD (mg/L)										9.3	57.3	31.7	33.0	88.8	240.3
3	DO (mg/L)	6.5	5.8	5.7							6.9	7.2	6.5	6.2	4.8	6.7
4	DO_SAT% (%)	79	72	69							82	86	81	73	57	79
5	FCol-MPN (MPN/100mL)	150	583	933							100	100	223	410	110	200
6	Tcol-MPN (MPN/100mL)	183	1183	21933							400	200	3227	660	800	700
	TRACE & TOXIC															
1	As (µg/L)											6.1	3.9	1.3		1.0
2	Cd (µg/L)											0.0	0.2	1.0		0.0
3	Cr (µg/L)											0.7	1.7	0.0		2.0
4	Cu (µg/L)											0.3	10.1			1.2
5	Hg (µg/L)											0.0	0.4	0.1		
6	Ni (µg/L)											10.7	1.7	0.0		1.6
7	Pb (µg/L)											16.8	0.3	1.0		0.0
8	Zn (µg/L)											2.8	12.0	17.0		7.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	68	70	67							90	101	70	91	128	65
2	HAR_Total (mgCaCO3/L)	107	126	119							163	167	106	147	197	134
3	Na% (%)	21	19	20							15	16	26	15	14	24
4	RSC (-)	0.6	0.2	0.3							0.0	0.0	0.1	0.0	0.0	0.0
5	SAR (-)	0.6	0.5	0.6							0.5	0.5	0.8	0.4	0.5	0.7
	PESTICIDES															

HISTORY SHEET

		Water Year	: 2016-2017
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 : 2016-2017

Station Name : KUMHARI (AGH40R6)

Local River : Wainganga

Division : Wainganga Div., Nagpur

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.509	29.27	824.8	554.5	101.2	7.144	12.42	9.639	18.51	11.97	0.964	0.503
2	Colour_Cod (-)	Clear	Brown	Brown	Brown	Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	389	210	248	149	216	260	300	328	344	322	337	365
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	7.9	8.1	8.3	8.3	8.4	8.3	7.8	8.5	8.3	8.2	8.0
6	Temp (deg C)	31.0	30.0	27.0	27.0	25.0	23.0	18.0	17.0	19.0	19.0	24.0	23.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	17.9	0.0	0.0	12.0	6.0	6.0	6.0	0.0	29.9	29.9	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	189	96	90	99	106	140	181	157	198	171	179	160
3	B (mg/L)	0.03	0.04	0.90	0.87	1.78	0.35	0.15	1.02	0.83	1.22	0.93	0.22
4	Ca (mg/L)	32	28	26	16	30	29	27	51	46	39	38	38
5	Cl (mg/L)	23.9	25.8	13.9	8.0	25.8	8.0	9.9	77.7	13.9	61.6	55.7	33.8
6	CO3 (mg/L)	21.6	0.0	0.0	14.4	7.2	7.2	7.2	0.0	36.0	36.0	0.0	0.0
7	F (mg/L)	0.23	0.66	0.00	0.00	0.00	0.01	0.01	0.24	0.31	0.42	0.00	0.64
8	Fe (mg/L)	0.0	0.0	0.0	1.0	0.1	0.0	0.2	0.1	0.2	0.4	0.0	0.3
9	HCO3 (mg/L)	187	117	110	92	115	156	206	191	168	135	218	195
10	K (mg/L)	1.9	3.8	1.7	1.3	1.4	1.5	1.3	1.3	1.1	2.2	1.4	1.0
11	Mg (mg/L)	17.1	4.8	9.2	11.4	4.8	9.5	25.7	14.5	16.8	20.1	20.7	21.5
12	Na (mg/L)	29.8	12.7	11.7	10.7	15.3	19.5	20.4	18.2	10.1	19.4	22.6	22.0
13	NH3-N (mg N/L)	0.00	0.11	0.11	0.51	1.10	0.31	0.55	0.63		0.76	3.04	0.96
14	NO2+NO3 (mg N/L)	1.03	2.46	1.79	2.35	1.88	8.49	1.35	1.60	2.79	2.30	1.84	1.28
15	NO2-N (mgN/L)	0.01	0.02	0.00	0.01	0.02	0.01	0.02	0.00	0.00	0.01	0.06	0.03
16	NO3-N (mgN/L)	1.02	2.44	1.79	2.34	1.86	8.48	1.32	1.60	2.79	2.29	1.79	1.26
17	o-PO4-P (mg P/L)	0.094	0.111	0.190	0.066	0.092	0.304	0.471	0.843	2.359	0.906	0.658	1.080
18	SiO2 (mg/L)	37.6	16.9	17.0	16.6	29.3	37.2	21.0	26.8	11.7	34.8	30.9	31.9
19	SO4 (mg/L)	12.3	4.0	1.1	2.1	6.7	0.1	0.2	0.3	14.0	5.0	9.0	14.5

Water Quality Datasheet for the period : 2016-2017

Station Name : KUMHARI (AGH40R6)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	4.3	35.0	1.5	1.0	1.0	2.2	1.4	1.7	2.0	1.5	2.4	1.8
2	COD (mg/L)	37.6	52.0	46.7	11.5	47.5	18.9	75.5	72.7	83.5	118.4	144.5	44.4
3	DO (mg/L)	10.8	0.0	5.3	7.0	7.0	5.7	8.1	9.7	10.0	7.5	7.3	6.8
4	DO_SAT% (%)	145	0	67	88	85	66	86	100	108	81	87	79
5	FCol-MPN (MPN/100mL)	40	700	220	40	270	80	40	220	40	800	130	110
6	Tcol-MPN (MPN/100mL)	900	1100	800	5000	1700	170	230	1100	500	1300	130	140
	TRACE & TOXIC												
1	As (µg/L)			0.5				1.3				0.0	
2	Cd (µg/L)			0.3				0.1				0.0	
3	Cr (µg/L)			1.8				0.8				3.0	
4	Cu (µg/L)			10.0				0.5				3.0	
5	Ni (µg/L)			3.1				1.7				9.0	
6	Pb (µg/L)			1.1				0.1				1.0	
7	Zn (µg/L)			3.1				2.9				22.0	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	81	70	65	40	74	74	67	127	115	97	94	94
2	HAR_Total (mgCaCO3/L)	152	90	103	88	94	113	174	187	185	181	181	184
3	Na% (%)	30	23	19	21	26	27	20	17	11	19	21	21
4	RSC (-)	0.8	0.1	0.0	0.3	0.3	0.5	0.2	0.0	0.3	0.0	0.0	0.0
5	SAR (-)	1.1	0.6	0.5	0.5	0.7	0.8	0.7	0.6	0.3	0.6	0.7	0.7
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	365	6133	0.255	120.2
2	EC_GEN (µmho/cm)	12	389	149	289
3	pH_GEN (pH units)	12	8.5	7.8	8.2
4	Temp (deg C)	12	31.0	17.0	23.6
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	29.9	0.0	9
2	ALK-TOT (mgCaCO3/L)	12	198	90	147
3	B (mg/L)	12	1.78	0.03	0.69
4	Ca (mg/L)	12	51	16	33
5	Cl (mg/L)	12	77.7	8.0	29.8
6	CO3 (mg/L)	12	36.0	0.0	10.8
7	F (mg/L)	12	0.66	0.00	0.21
8	Fe (mg/L)	12	1.0	0.0	0.2
9	HCO3 (mg/L)	12	218	92	157
10	K (mg/L)	12	3.8	1.0	1.6
11	Mg (mg/L)	12	25.7	4.8	14.7
12	Na (mg/L)	12	29.8	10.1	17.7
13	NH3-N (mg N/L)	11	3.04	0.00	0.73
14	NO2+NO3 (mg N/L)	12	8.49	1.03	2.43
15	NO2-N (mgN/L)	12	0.06	0.00	0.01
16	NO3-N (mgN/L)	12	8.48	1.02	2.41
17	o-PO4-P (mg P/L)	12	2.359	0.066	0.598
18	SiO2 (mg/L)	12	37.6	11.7	26
19	SO4 (mg/L)	12	14.5	0.1	5.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	35.0	1.0	4.7
2	COD (mg/L)	12	144.5	11.5	62.8
3	DO (mg/L)	12	10.8	0.0	7.1
4	DO_SAT% (%)	12	145	0	83
5	Fcol-MPN (MPN/100mL)	12	800	40	224
6	Tcol-MPN (MPN/100mL)	12	5000	130	1089
	TRACE & TOXIC				
1	As (µg/L)	3	1.3	0.0	0.6
2	Cd (µg/L)	3	0.3	0.0	0.1
3	Cr (µg/L)	3	3.0	0.8	1.8
4	Cu (µg/L)	3	10.0	0.5	4.5
5	Ni (µg/L)	3	9.0	1.7	4.6
6	Pb (µg/L)	3	1.1	0.1	0.7
7	Zn (µg/L)	3	22.0	2.9	9.3
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	127	40	83
2	HAR_Total (mgCaCO3/L)	12	187	88	144
3	Na% (%)	12	30	11	21
4	RSC (-)	12	0.8	0.0	0.2
5	SAR (-)	12	1.1	0.3	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	72.62	251.8	30.42	697.6						113.1	179.8	186.0	93.26	51.14	302.1
2	EC_GEN (μmho/cm)	225	174	226	210							225	206	304	286	242
3	pH_GEN (pH units)	8.1	8.0	8.1	8.0							8.5	8.1	7.2	7.9	8.2
4	Temp (deg C)	26.8	28.4	27.7	28.4							25.4	20.8	27.4	26.6	28.0
5	Turb (NTU)											8.6	8.5	12.3		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	1.6	0.0	1.2	0.0							5.4	3.6	0.0	1.0	7.2
2	ALK-TOT (mgCaCO3/L)	107	89	119	100							133	109	142	133	116
3	B (mg/L)	0.99	0.59	0.23	0.21							0.15	0.11	0.20	0.17	0.72
4	Ca (mg/L)	29	20	30	29							32	27	36	29	26
5	Cl (mg/L)	9.6	5.6	5.2	6.1							7.2	8.9	8.2	16.7	19.5
6	CO3 (mg/L)	2.0	0.0	1.5	0.0							6.6	4.3	0.0	1.2	8.6
7	F (mg/L)	0.23	0.30	0.31	0.24							0.40	0.33	0.37	0.12	0.18
8	Fe (mg/L)	0.1	0.1	0.1	0.3							0.1	0.5	0.1	0.1	0.2
9	HCO3 (mg/L)	126	108	142	122							149	124	173	159	124
10	K (mg/L)	2.2	1.5	2.1	1.4							1.6	2.3	1.9	2.1	2.0
11	Mg (mg/L)	6.1	7.5	8.5	8.3							14.2	12.4	13.2	13.4	9.5
12	Na (mg/L)	14.2	7.6	11.3	9.5							14.3	11.9	19.1	19.5	16.0
13	NH3-N (mg N/L)	0.28	0.38	0.25	0.11							0.05	0.11	0.42	0.16	0.36
14	NO2+NO3 (mg N/L)	0.69	0.61	1.62	0.47							1.35	1.54	1.39	6.01	1.90
15	NO2-N (mgN/L)	0.06	0.03	0.08	0.07							0.06	0.01	0.01	0.01	0.01
16	NO3-N (mgN/L)	0.63	0.58	1.54	0.39							1.29	1.54	1.38	6.00	1.89
17	o-PO4-P (mg P/L)	0.024	0.022	0.113	0.031							0.085	0.046	0.101	0.140	0.111
18	SiO2 (mg/L)	31.6	28.4	38.3	65.4							46.0	24.3	24.7	31.8	23.5
19	SO4 (mg/L)	10.0	4.8	8.6	17.3							15.9	11.9	10.0	13.3	5.2

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	2.1	2.2	1.1	2.0							1.2	3.0	1.6	1.7	8.6
2	COD (mg/L)											43.9	69.6	26.2	92.0	39.1
3	DO (mg/L)	6.9	6.1	6.8	6.4							7.0	5.6	6.7	6.7	6.0
4	DO_SAT% (%)	86	78	86	82							85	64	85	83	77
5	FCol-MPN (MPN/100mL)	23550	1010	1420	210							250	260	274	154	254
6	Tcol-MPN (MPN/100mL)	96830	1780	5100	652							3030	15880	1520	804	1900
	TRACE & TOXIC															
1	As (µg/L)											4.3	3.1			0.5
2	Cd (µg/L)											1.2	0.2			0.3
3	Cr (µg/L)											0.2	1.0			1.8
4	Cu (µg/L)											21.0	4.8			10.0
5	Hg (µg/L)												0.0			
6	Ni (µg/L)											2.8	9.5			3.1
7	Pb (µg/L)											1.1	0.9			1.1
8	Zn (µg/L)											2.9	3.0			3.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	74	50	74	72							80	68	89	72	66
2	HAR_Total (mgCaCO3/L)	99	81	110	107							139	120	144	128	105
3	Na% (%)	23	15	17	14							16	17	22	25	24
4	RSC (-)	0.2	0.2	0.2	0.1							0.2	0.0	0.1	0.3	0.3
5	SAR (-)	0.7	0.3	0.5	0.4							0.5	0.5	0.7	0.8	0.7
	PESTICIDES															

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	16.23	17.42	22.87							31.25	10.22	28.36	19.62	11.75	11.93
2	EC_GEN (µmho/cm)	275	293	304							726	334	364	316	295	308
3	pH_GEN (pH units)	8.0	8.2	8.3							7.0	8.0	8.1	7.8	8.0	8.3
4	Temp (deg C)	21.5	18.8	21.6							16.0	14.0	18.3	16.8	20.0	19.3
5	Turb (NTU)										22.1	0.3	1.4	0.8		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	4.9							0.0	0.0	1.1	0.0	2.6	10.5
2	ALK-TOT (mgCaCO3/L)	134	147	167							271	214	180	149	158	169
3	B (mg/L)	0.33	0.34	0.24							0.24	0.25	0.20	0.30	0.19	0.59
4	Ca (mg/L)	38	39	40							63	52	56	44	39	38
5	Cl (mg/L)	7.8	5.8	7.1							56.1	11.9	7.6	7.4	10.4	27.4
6	CO3 (mg/L)	0.0	0.0	5.9							0.0	0.0	1.3	0.0	3.1	12.6
7	F (mg/L)	0.43	0.31	0.45							0.67	0.28	0.35	0.23	0.12	0.14
8	Fe (mg/L)	0.0	0.0	0.0							0.1	0.5	0.5	0.0	0.1	0.1
9	HCO3 (mg/L)	163	180	192							331	261	217	182	187	180
10	K (mg/L)	1.2	1.2	1.4							3.8	2.0	1.4	1.3	1.6	1.3
11	Mg (mg/L)	6.9	10.2	16.5							30.1	21.4	15.2	11.1	12.3	16.6
12	Na (mg/L)	10.8	12.0	13.9							51.3	18.8	16.0	15.8	17.2	17.0
13	NH3-N (mg N/L)	0.17	0.14	0.16							1.20	0.16	0.08	0.12	0.39	0.50
14	NO2+NO3 (mg N/L)	0.29	0.59	1.49							0.20	0.67	2.35	5.55	6.86	3.56
15	NO2-N (mgN/L)	0.01	0.02	0.04							0.01	0.01	0.00	0.00	0.01	0.01
16	NO3-N (mgN/L)	0.28	0.56	1.45							0.20	0.66	2.34	5.54	6.85	3.55
17	o-PO4-P (mg P/L)	0.012	0.012	0.099							0.352	0.061	0.438	0.136	0.121	0.994
18	SiO2 (mg/L)	36.8	34.5	36.1							307.2	56.6	16.1	15.4	25.6	24.1
19	SO4 (mg/L)	3.3	4.5	11.0							61.9	7.7	5.8	12.1	10.7	3.7

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.4	0.7	1.5							1.2	2.8	1.5	2.2	1.8	1.8
2	COD (mg/L)										69.7	22.0	54.8	34.0	29.1	62.6
3	DO (mg/L)	8.1	8.1	9.8							7.6	9.4	7.5	8.3	7.5	8.4
4	DO_SAT% (%)	91	86	112							77	91	79	86	82	90
5	FCol-MPN (MPN/100mL)	1075	138	400							120000	438	1063	328	135	95
6	Tcol-MPN (MPN/100mL)	1700	238	600							120000	3925	2201	758	393	500
	TRACE & TOXIC															
1	As (µg/L)														0.6	1.3
2	Cd (µg/L)										0.2			0.0	0.1	0.1
3	Cr (µg/L)										4.4			2.7	0.6	0.8
4	Cu (µg/L)										78.9			3.4	0.5	0.5
5	Hg (µg/L)															
6	Ni (µg/L)										44.5			0.2	1.1	1.6
7	Pb (µg/L)										0.3			0.9	0.1	0.1
8	Zn (µg/L)										57.3			5.0	7.5	2.9
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	94	98	100							158	129	139	110	96	96
2	HAR_Total (mgCaCO3/L)	123	141	169							283	218	203	156	148	165
3	Na% (%)	16	16	15							28	16	15	18	20	19
4	RSC (-)	0.2	0.2	0.1							0.0	0.1	0.0	0.2	0.3	0.2
5	SAR (-)	0.4	0.4	0.5							1.3	0.6	0.5	0.6	0.6	0.6
	PESTICIDES															

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	2.266	3.283	2.754							5.078	3.997	8.232	9.997	1.557	4.479
2	EC_GEN (µmho/cm)	283	344	373							331	382	351	309	361	341
3	pH_GEN (pH units)	7.7	8.0	8.1							8.4	8.5	7.7	7.6	8.1	8.2
4	Temp (deg C)	24.3	22.7	24.3							22.0	22.3	20.7	22.3	25.7	22.0
5	Turb (NTU)										8.5	0.2	0.8	23.6		
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0							4.2	6.7	0.0	0.0	0.0	10.0
2	ALK-TOT (mgCaCO3/L)	152	230	198							150	208	172	149	187	170
3	B (mg/L)	0.34	0.61	0.11							0.19	0.17	0.11	0.19	0.12	0.79
4	Ca (mg/L)	38	37	38							38	45	43	37	54	38
5	Cl (mg/L)	5.7	8.0	10.9							10.9	8.3	9.4	17.1	29.4	50.4
6	CO3 (mg/L)	0.0	0.0	0.0							5.1	8.0	0.0	0.0	0.0	12.0
7	F (mg/L)	0.15	0.32	0.46							0.34	0.22	0.47	0.17	0.05	0.36
8	Fe (mg/L)	0.0	0.0	0.0							0.2	0.0	0.3	0.0	0.0	0.3
9	HCO3 (mg/L)	186	213	241							173	238	210	181	228	183
10	K (mg/L)	1.7	2.2	1.3							1.2	2.1	1.7	1.5	1.8	1.5
11	Mg (mg/L)	7.5	12.9	20.0							18.1	22.4	14.4	11.4	23.5	20.8
12	Na (mg/L)	14.7	19.3	18.5							17.5	19.5	23.7	16.8	21.2	21.3
13	NH3-N (mg N/L)	0.25	0.22	0.10							0.62	0.02	0.65	0.13	0.31	1.58
14	NO2+NO3 (mg N/L)	0.39	0.24	2.78							0.14	0.33	4.09	5.01	5.93	1.81
15	NO2-N (mgN/L)	0.02	0.01	0.05							0.01	0.01	0.00	0.00	0.15	0.03
16	NO3-N (mgN/L)	0.38	0.23	2.73							0.12	0.33	4.09	5.01	5.78	1.78
17	o-PO4-P (mg P/L)	0.027	0.013	0.181							0.023	0.045	0.734	0.199	0.100	0.881
18	SiO2 (mg/L)	35.0	43.7	49.8							36.7	24.5	23.4	34.6	29.9	32.5
19	SO4 (mg/L)	5.7	5.7	6.4							78.4	8.8	5.9	13.1	14.8	9.5

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.5	1.6	1.6							8.9	15.9	1.8	2.1	1.4	1.9
2	COD (mg/L)										47.1	56.7	37.3	27.7	47.0	102.4
3	DO (mg/L)	6.5	7.1	7.1							5.4	6.0	7.6	6.2	7.4	7.2
4	DO_SAT% (%)	78	82	84							63	67	84	72	91	82
5	FCol-MPN (MPN/100mL)	283	100	450							150	233	143	447	130	347
6	Tcol-MPN (MPN/100mL)	533	433	1667							467	533	750	813	233	523
	TRACE & TOXIC															
1	As (µg/L)										0.6	2.5	4.3	0.9	1.7	0.0
2	Cd (µg/L)										0.0	1.3	0.1	1.0	0.1	0.0
3	Cr (µg/L)										0.0	1.2	6.4	0.0	0.7	3.0
4	Cu (µg/L)											1.8	14.9		1.4	3.0
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	9.0
7	Pb (µg/L)										16.7	7.0	0.3	12.0	0.5	1.0
8	Zn (µg/L)										9.1	16.1	13.4	0.0	2.8	22.0
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	95	93	95							95	112	108	92	134	95
2	HAR_Total (mgCaCO3/L)	126	147	178							170	205	168	140	233	182
3	Na% (%)	20	22	18							18	17	23	20	17	20
4	RSC (-)	0.5	0.6	0.4							0.3	0.1	0.2	0.4	0.0	0.0
5	SAR (-)	0.6	0.7	0.6							0.6	0.6	0.8	0.6	0.6	0.7
	PESTICIDES															

HISTORY SHEET

		Water Year	: 2016-2017
Site	: SAKMUR	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 : 2016-2017

Station Name : SAKMUR (AGH30B6)

Local River : Wardha

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL											
1	Q (cumec)	1729	1720	328.1	1047	104.3	27.26	20.33	27.75	19.05	5.331	0.483
2	Colour_Cod (-)	Clear	Brown	Brown	Light Brown	Clear	Clear	Clear	Clear	Other	Clear	Clear
3	EC_GEN (µmho/cm)	203	401	479	376	549	558	502	483	518	574	633
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)	8.1	8.2	8.3	8.3	8.4	8.4	8.4	8.4	8.5	7.8	8.4
6	Temp (deg C)	26.0	27.0	25.0	25.0	26.0	25.0	25.0	24.0	26.0	26.0	25.0
	CHEMICAL											
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	6.0	6.0	6.0	9.0	6.0	14.9	12.5	0.0	12.5
2	ALK-TOT (mgCaCO3/L)	126	120	189	186	213	210	198	208	188	143	173
3	B (mg/L)	0.11	0.63	0.92	1.26	0.10	0.30	0.88	0.17	0.13	0.15	0.90
4	Ca (mg/L)	37	31	38	43	39	46	52	44	31	27	31
5	Cl (mg/L)	8.0	9.9	29.8	33.8	33.8	31.8	27.8	31.8	49.7	69.6	93.4
6	CO3 (mg/L)	0.0	0.0	7.2	7.2	7.2	10.8	7.2	18.0	15.0	0.0	15.0
7	F (mg/L)	0.57	0.00	0.23	0.09	0.11	0.26	0.56	0.18	0.65	0.91	1.29
8	Fe (mg/L)	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.2
9	HCO3 (mg/L)	154	146	216	212	245	234	227	217	198	174	180
10	K (mg/L)	2.9	2.4	2.7	2.8	3.2	3.5	0.4	2.5	3.7	4.7	3.2
11	Mg (mg/L)	7.9	13.1	21.0	16.6	29.4	30.8	13.4	20.1	25.2	28.0	29.3
12	Na (mg/L)	14.0	18.0	30.5	22.6	37.6	38.9	34.9	36.5	54.5	21.3	49.4
13	NH3-N (mg N/L)	0.10	0.10	0.19	0.36	0.32	0.41	0.93	0.17	0.18	1.50	0.51
14	NO2+NO3 (mg N/L)	1.87	2.15	3.11	0.51	5.39	2.60	1.56	1.37	0.35	1.61	1.22
15	NO2-N (mgN/L)	0.01	0.00	0.02	0.01	0.01	0.03	0.01	0.01	0.01	0.01	0.03
16	NO3-N (mgN/L)	1.86	2.15	3.09	0.50	5.38	2.57	1.55	1.36	0.34	1.60	1.19
17	o-PO4-P (mg P/L)	0.129	0.140	0.049	0.064	0.320	0.348	0.779	2.216	0.801	0.289	0.284
18	SiO2 (mg/L)	11.8	17.1	29.5	23.5	32.9	20.7	24.6	10.7	26.6	20.2	20.7
19	SO4 (mg/L)	10.9	2.4	25.8	14.9	42.6	33.3	46.0	59.2	8.8	33.8	67.3

Water Quality Datasheet for the period : 2016-2017

Station Name : SAKMUR (AGH30B6)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water Analysis

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL											
1	BOD3-27 (mg/L)	20.0	3.3	3.5	1.9	1.9	2.9	1.4	3.0	2.0	2.5	45.0
2	COD (mg/L)	63.0	26.0	26.6	22.0	60.5	81.7	125.9	149.5	118.0	153.2	48.7
3	DO (mg/L)	3.9	7.2	5.8	6.9	8.0	8.1	6.4	6.5	3.8	6.6	4.6
4	DO_SAT% (%)	48	90	70	84	99	98	77	77	47	81	56
5	FCol-MPN (MPN/100mL)	3500	90	80	170	20	40	140	80	800	130	140
6	Tcol-MPN (MPN/100mL)	16000	170	300	800	40	60	330	3000	1300	700	140
	TRACE & TOXIC											
1	As (µg/L)		1.8				1.8				1.0	
2	Cd (µg/L)		0.1				0.2				0.0	
3	Cr (µg/L)		39.1				0.8				5.0	
4	Cu (µg/L)		1.3				0.8				4.0	
5	Ni (µg/L)		2.8				1.4				12.0	
6	Pb (µg/L)		0.5				2.8				0.0	
7	Zn (µg/L)		1.2				2.9				6.0	
	CHEMICAL INDICES											
1	HAR_Ca (mgCaCO3/L)	92	78	95	106	97	115	129	111	78	67	78
2	HAR_Total (mgCaCO3/L)	125	132	183	176	219	243	185	194	183	183	200
3	Na% (%)	19	23	26	22	27	26	29	29	39	20	35
4	RSC (-)	0.0	0.0	0.2	0.2	0.0	0.0	0.3	0.3	0.1	0.0	0.0
5	SAR (-)	0.5	0.7	1.0	0.7	1.1	1.1	1.1	1.1	1.8	0.7	1.5
	PESTICIDES											

Water Quality Summary for the period : 2016-2017

Station Name : SAKMUR (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)	365	8080	0.000	313.7
2	EC_GEN (µmho/cm)	11	633	203	480
3	pH_GEN (pH units)	11	8.5	7.8	8.3
4	Temp (deg C)	11	27.0	24.0	25.5
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	11	14.9	0.0	6.6
2	ALK-TOT (mgCaCO3/L)	11	213	120	177
3	B (mg/L)	11	1.26	0.10	0.5
4	Ca (mg/L)	11	52	27	38
5	Cl (mg/L)	11	93.4	8.0	38.1
6	CO3 (mg/L)	11	18.0	0.0	8
7	F (mg/L)	11	1.29	0.00	0.44
8	Fe (mg/L)	11	0.2	0.0	0.1
9	HCO3 (mg/L)	11	245	146	200
10	K (mg/L)	11	4.7	0.4	2.9
11	Mg (mg/L)	11	30.8	7.9	21.3
12	Na (mg/L)	11	54.5	14.0	32.6
13	NH3-N (mg N/L)	11	1.50	0.10	0.43
14	NO2+NO3 (mg N/L)	11	5.39	0.35	1.98
15	NO2-N (mgN/L)	11	0.03	0.00	0.01
16	NO3-N (mgN/L)	11	5.38	0.34	1.96
17	o-PO4-P (mg P/L)	11	2.216	0.049	0.493
18	SiO2 (mg/L)	11	32.9	10.7	21.6
19	SO4 (mg/L)	11	67.3	2.4	31.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	11	45.0	1.4	7.9
2	COD (mg/L)	11	153.2	22.0	79.6
3	DO (mg/L)	11	8.1	3.8	6.2
4	DO_SAT% (%)	11	99	47	75
5	FCol-MPN (MPN/100mL)	11	3500	20	472
6	Tcol-MPN (MPN/100mL)	11	16000	40	2076
	TRACE & TOXIC				
1	As (µg/L)	3	1.8	1.0	1.5
2	Cd (µg/L)	3	0.2	0.0	0.1
3	Cr (µg/L)	3	39.1	0.8	15
4	Cu (µg/L)	3	4.0	0.8	2
5	Ni (µg/L)	3	12.0	1.4	5.4
6	Pb (µg/L)	3	2.8	0.0	1.1
7	Zn (µg/L)	3	6.0	1.2	3.4
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	11	129	67	95
2	HAR_Total (mgCaCO3/L)	11	243	125	184
3	Na% (%)	11	39	19	27
4	RSC (-)	11	0.3	0.0	0.1
5	SAR (-)	11	1.8	0.5	1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

Station Name : SAKMUR (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	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	PHYSICAL									
1	Q (cumec)	761.5	141.3	1206	34.79	30.83	44.91	11.98	8.813	8.286
2	EC_GEN (µmho/cm)	566	486	365	500	537	523	680	548	575
3	pH_GEN (pH units)	7.8	8.2	8.2	8.2	8.3	8.4	8.2	8.3	8.2
4	Temp (deg C)	28.4	25.7	25.8	25.8	26.9	25.0	25.7	26.0	25.7
5	Turb (NTU)	7.8			0.8			1.2		
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)	1.2	3.1	3.0	2.9	3.2	9.0	2.3	6.0	8.3
2	ALK-TOT (mgCaCO3/L)	209	158	155	214	196	207	164	211	168
3	B (mg/L)	0.22	0.25	0.73	0.40	0.36	0.36	0.48	0.11	0.39
4	Ca (mg/L)	41	38	37	43	40	45	33	70	30
5	Cl (mg/L)	38.8	31.4	20.4	35.6	35.3	31.3	46.8	49.3	70.9
6	CO3 (mg/L)	1.5	3.7	3.6	3.5	3.9	10.8	2.7	7.2	10.0
7	F (mg/L)	0.87	0.29	0.22	0.30	0.33	0.28	0.50	0.20	0.95
8	Fe (mg/L)	0.1	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2
9	HCO3 (mg/L)	252	185	182	254	231	231	195	243	184
10	K (mg/L)	4.9	3.5	2.7	2.8	4.0	2.4	5.2	4.7	3.9
11	Mg (mg/L)	24.3	16.1	14.7	23.8	24.3	23.4	23.7	24.1	27.5
12	Na (mg/L)	54.0	33.0	21.3	40.8	43.5	36.9	56.7	59.6	41.7
13	NH3-N (mg N/L)	0.31	0.08	0.19	0.06	0.18	0.46	0.10	0.24	0.73
14	NO2+NO3 (mg N/L)	1.79	9.91	1.91	6.15	6.74	2.73	6.07	4.99	1.06
15	NO2-N (mgN/L)	0.00	0.02	0.01	0.01	0.02	0.01	0.00	0.14	0.01
16	NO3-N (mgN/L)	1.79	9.89	1.90	6.14	6.72	2.72	6.07	4.85	1.04
17	o-PO4-P (mg P/L)	0.171	0.115	0.095	0.157	0.100	0.916	0.134	0.098	0.458
18	SiO2 (mg/L)	17.0	19.3	20.5	11.1	21.1	22.2	32.4	20.4	22.5
19	SO4 (mg/L)	15.0	24.8	13.5	34.2	43.4	45.3	45.8	37.3	36.6

Water Quality Seasonal Average for the period: 2014-2017

Station Name : SAKMUR (AGH30B6)

Division : Wainganga Div., Nagpur

Local River : Wardha

River Water

Sub-Division : Wardha SD, Chandrapur

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2014	2015	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	4.8	13.1	7.2	2.0	1.5	2.3	2.7	28.5	16.5
2	COD (mg/L)	33.6	101.7	34.4	30.5	38.0	104.4	27.3	43.5	106.6
3	DO (mg/L)	5.9	5.7	6.0	7.3	6.3	7.3	6.3	5.4	5.0
4	DO_SAT% (%)	76	70	73	89	79	88	77	67	61
5	FCol-MPN (MPN/100mL)	516	42	960	80	53	70	70	70	357
6	Tcol-MPN (MPN/100mL)	1438	270	4318	215	270	858	117	295	713
	TRACE & TOXIC									
1	As (µg/L)			1.8		0.9	1.8	0.9	2.5	1.0
2	Cd (µg/L)			0.1	0.3	0.5	0.2	1.0	0.2	0.0
3	Cr (µg/L)			39.1	3.9	0.3	0.8	6.0	1.3	5.0
4	Cu (µg/L)			1.3	7.2	1.7	0.8		2.4	4.0
5	Hg (µg/L)							0.0		
6	Ni (µg/L)			2.8	0.2	0.4	1.4	5.7	1.9	12.0
7	Pb (µg/L)			0.5	1.0	2.4	2.8	15.0	1.8	0.0
8	Zn (µg/L)			1.2	4.0	6.0	2.9	22.0	4.5	6.0
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	102	96	93	108	100	113	83	175	74
2	HAR_Total (mgCaCO3/L)	203	163	154	207	202	211	182	276	189
3	Na% (%)	33	29	22	30	32	28	40	32	31
4	RSC (-)	0.3	0.1	0.1	0.4	0.1	0.1	0.0	0.0	0.0
5	SAR (-)	1.6	1.1	0.7	1.2	1.3	1.1	1.8	1.6	1.3
	PESTICIDES									

HISTORY SHEET

		Water Year	: 2016-2017
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 : 2016-2017

Station Name : WAIRAGARH (AGH46D4)

Local River : Khobragarhi

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017
		A	A	A	A	A	A	A
	PHYSICAL							
1	Q (cumec)	5.160	45.53	144.7	116.2	9.342	1.967	0.118
2	Colour_Cod (-)	Brown	Brown	Brown	Light Brown	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	53	154	97	97	144	120	120
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.2	7.7	7.7	7.7	8.3	8.0	7.7
6	Temp (deg C)	28.5	28.0	29.0	29.0	26.0	22.0	19.0
	CHEMICAL							
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	6.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	49	48	30	60	75	69	134
3	B (mg/L)	0.04	0.38	0.53	0.76	0.38	0.11	0.61
4	Ca (mg/L)	25	12	11	20	14	18	16
5	Cl (mg/L)	5.0	6.0	13.9	11.9	9.9	8.0	8.0
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	7.2	0.0	0.0
7	F (mg/L)	0.31	0.00	0.00	0.00	0.00	0.01	0.23
8	Fe (mg/L)	0.3	0.1	1.2	0.3	0.0	0.0	0.3
9	HCO3 (mg/L)	60	59	37	73	77	84	163
10	K (mg/L)	3.1	2.6	1.8	1.7	1.7	1.6	1.2
11	Mg (mg/L)	1.3	2.3	1.3	3.5	8.1	3.4	13.5
12	Na (mg/L)	10.3	14.7	10.4	10.0	14.4	15.5	12.0
13	NH3-N (mg N/L)	0.06	0.06	0.03	0.02	0.26	0.15	0.36
14	NO2+NO3 (mg N/L)	4.08	2.97	1.91	1.74	1.53	1.38	0.82
15	NO2-N (mgN/L)	0.04	0.00	0.00	0.03	0.00	0.02	0.00
16	NO3-N (mgN/L)	4.04	2.97	1.91	1.71	1.53	1.35	0.82
17	o-PO4-P (mg P/L)	0.248	0.175	0.077	0.084	0.312	0.240	0.817
18	SiO2 (mg/L)	12.3	13.7	16.1	1.2	31.9	20.0	23.9
19	SO4 (mg/L)	5.2	12.5	6.0	3.4	1.5	1.0	1.1

Water Quality Datasheet for the period : 2016-2017

Station Name : WAIRAGARH (AGH46D4)

Local River : Khobragarhi

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

River Water Analysis

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017
		A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL							
1	BOD3-27 (mg/L)	25.0	1.8	1.5	2.5	1.4	1.2	1.7
2	COD (mg/L)	52.0	21.3	20.2	12.1	237.8	13.0	119.9
3	DO (mg/L)	1.4	7.2	5.5	7.3	7.6	7.7	9.2
4	DO_SAT% (%)	18	92	72	95	94	88	99
5	FCol-MPN (MPN/100mL)	1700	70	220	220	40	330	130
6	Tcol-MPN (MPN/100mL)	16000	90	2800	2200	70	1700	260
	TRACE & TOXIC							
1	As (µg/L)		0.3				3.2	
2	Cd (µg/L)		0.1				0.1	
3	Cr (µg/L)		25.9				1.7	
4	Cu (µg/L)		0.9				1.2	
5	Ni (µg/L)		2.4				1.6	
6	Pb (µg/L)		0.8				1.5	
7	Zn (µg/L)		0.2				91.3	
	CHEMICAL INDICES							
1	HAR_Ca (mgCaCO3/L)	61	29	28	51	35	44	40
2	HAR_Total (mgCaCO3/L)	67	38	33	65	68	58	96
3	Na% (%)	24	44	39	25	31	36	21
4	RSC (-)	0.0	0.2	0.0	0.0	0.1	0.2	0.8
5	SAR (-)	0.5	1.0	0.8	0.5	0.8	0.9	0.5
	PESTICIDES							

Water Quality Summary for the period : 2016-2017

Station Name : WAIRAGARH (AGH46D4)

Division : Wainganga Div., Nagpur

Local River : Khobragarhi

Sub-Division : L Wainganga SD, Chandrapur

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	988.3	0.000	33.86
2	EC_GEN (µmho/cm)	7	154	53	112
3	pH_GEN (pH units)	7	8.3	7.2	7.8
4	Temp (deg C)	7	29.0	19.0	25.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	7	6.0	0.0	0.9
2	ALK-TOT (mgCaCO3/L)	7	134	30	66
3	B (mg/L)	7	0.76	0.04	0.4
4	Ca (mg/L)	7	25	11	16
5	Cl (mg/L)	7	13.9	5.0	8.9
6	CO3 (mg/L)	7	7.2	0.0	1
7	F (mg/L)	7	0.31	0.00	0.08
8	Fe (mg/L)	7	1.2	0.0	0.3
9	HCO3 (mg/L)	7	163	37	79
10	K (mg/L)	7	3.1	1.2	2
11	Mg (mg/L)	7	13.5	1.3	4.8
12	Na (mg/L)	7	15.5	10.0	12.5
13	NH3-N (mg N/L)	7	0.36	0.02	0.13
14	NO2+NO3 (mg N/L)	7	4.08	0.82	2.06
15	NO2-N (mgN/L)	7	0.04	0.00	0.01
16	NO3-N (mgN/L)	7	4.04	0.82	2.05
17	o-PO4-P (mg P/L)	7	0.817	0.077	0.279
18	SiO2 (mg/L)	7	31.9	1.2	17
19	SO4 (mg/L)	7	12.5	1.0	4.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	7	25.0	1.2	5
2	COD (mg/L)	7	237.8	12.1	68
3	DO (mg/L)	7	9.2	1.4	6.6
4	DO_SAT% (%)	7	99	18	80
5	FCol-MPN (MPN/100mL)	7	1700	40	387
6	Tcol-MPN (MPN/100mL)	7	16000	70	3303
	TRACE & TOXIC				
1	As (µg/L)	2	3.2	0.3	1.8
2	Cd (µg/L)	2	0.1	0.1	0.1
3	Cr (µg/L)	2	25.9	1.7	13.8
4	Cu (µg/L)	2	1.2	0.9	1.1
5	Ni (µg/L)	2	2.4	1.6	2
6	Pb (µg/L)	2	1.5	0.8	1.1
7	Zn (µg/L)	2	91.3	0.2	45.7
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	7	61	28	41
2	HAR_Total (mgCaCO3/L)	7	96	33	61
3	Na% (%)	7	44	21	31
4	RSC (-)	7	0.8	0.0	0.2
5	SAR (-)	7	1.0	0.5	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

Station Name : WAIRAGARH (AGH46D4)

Local River : Khobragarhi

River Water

Division : Wainganga Div., Nagpur

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2014	2015	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	PHYSICAL									
1	Q (cumec)	110.1	18.46	77.88	1.933	1.079	3.809			
2	EC_GEN (µmho/cm)	80	127	100	124	144	128			
3	pH_GEN (pH units)	7.3	7.8	7.6	7.7	8.2	8.0			
4	Temp (deg C)	26.8	27.5	28.6	19.0	26.5	22.3			
5	Turb (NTU)	86.5			1.7					
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0	0.0	0.0	2.0			
2	ALK-TOT (mgCaCO3/L)	55	66	47	71	74	93			
3	B (mg/L)	0.20	0.21	0.43	0.25	0.43	0.37			
4	Ca (mg/L)	17	19	17	21	22	16			
5	Cl (mg/L)	8.4	10.4	9.2	6.3	9.9	8.6			
6	CO3 (mg/L)	0.0	0.0	0.0	0.0	0.0	2.4			
7	F (mg/L)	0.39	0.06	0.08	0.13	0.07	0.08			
8	Fe (mg/L)	0.9	0.2	0.5	0.0	0.1	0.1			
9	HCO3 (mg/L)	67	81	57	86	90	108			
10	K (mg/L)	1.6	1.8	2.3	1.3	2.0	1.5			
11	Mg (mg/L)	2.4	9.0	2.1	4.3	3.7	8.3			
12	Na (mg/L)	10.6	9.5	11.3	11.2	11.9	14.0			
13	NH3-N (mg N/L)	0.14	0.07	0.04	0.32	0.07	0.26			
14	NO2+NO3 (mg N/L)	4.25	5.91	2.68	4.14	3.41	1.24			
15	NO2-N (mgN/L)	0.02	0.02	0.02	0.01	0.01	0.01			
16	NO3-N (mgN/L)	4.23	5.89	2.66	4.14	3.40	1.23			
17	o-PO4-P (mg P/L)	0.159	0.225	0.146	0.152	0.095	0.456			
18	SiO2 (mg/L)	19.4	21.1	10.8	5.2	17.5	25.3			
19	SO4 (mg/L)	11.1	11.2	6.8	6.7	9.4	1.2			

Water Quality Seasonal Average for the period: 2014-2017

Station Name : WAIRAGARH (AGH46D4)

Division : Wainganga Div., Nagpur

Local River : Khobragarhi

River Water

Sub-Division : L Wainganga SD, Chandrapur

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2014	2015	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	2.3	1.3	7.7	2.1	2.7	1.4			
2	COD (mg/L)	34.0	115.4	26.4	38.5	51.2	123.6			
3	DO (mg/L)	6.4	6.4	5.3	7.3	7.3	8.2			
4	DO_SAT% (%)	80	81	69	79	91	94			
5	FCol-MPN (MPN/100mL)	125	108	553	85	95	167			
6	Tcol-MPN (MPN/100mL)	510	4315	5273	215	720	677			
	TRACE & TOXIC									
1	As (µg/L)			0.3			3.2			
2	Cd (µg/L)			0.1	0.0		0.1			
3	Cr (µg/L)			25.9	0.5		1.7			
4	Cu (µg/L)			0.9	13.7		1.2			
5	Ni (µg/L)			2.4	0.5		1.6			
6	Pb (µg/L)			0.8	0.4		1.5			
7	Zn (µg/L)			0.2	5.0		91.3			
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	42	49	42	53	56	40			
2	HAR_Total (mgCaCO3/L)	52	86	51	71	72	74			
3	Na% (%)	30	20	33	26	26	29			
4	RSC (-)	0.2	0.0	0.0	0.1	0.1	0.4			
5	SAR (-)	0.6	0.5	0.7	0.6	0.6	0.7			
	PESTICIDES									

HISTORY SHEET

		Water Year	: 2016-2017
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 : 2016-2017

Station Name : RAMAKONA (AGH4BQ3)

Local River : Khanan

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

River Water Analysis

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017
		A	A	A	A	A	A	A	A
	PHYSICAL								
1	Q (cumec)	26.22	56.51	72.88	31.38	4.578	0.646	0.106	0.083
2	Colour_Cod (-)	Dark Brown	Brown	Brown	Light Brown	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	219	368	302	302	454	491	552	568
4	Odour_Code (-)	odour free	odour free	odour free	odour free	odour free	odour free	odour free	odour free
5	pH_GEN (pH units)	7.8	8.3	8.2	8.3	8.4	8.2	8.3	8.7
6	Temp (deg C)	25.0	24.0	24.0	23.0	18.0	15.0	14.0	16.0
	CHEMICAL								
1	Alk-Phen (mgCaCO3/L)	0.0	12.0	0.0	6.0	6.0	0.0	9.0	10.0
2	ALK-TOT (mgCaCO3/L)	135	135	135	135	201	201	268	238
3	B (mg/L)	0.11	0.78	1.18	1.55	0.97	0.99	0.14	0.21
4	Ca (mg/L)	30	30	34	39	44	60	44	60
5	Cl (mg/L)	9.9	4.0	8.0	13.9	19.9	15.9	11.9	17.9
6	CO3 (mg/L)	0.0	14.4	0.0	7.2	7.2	0.0	10.8	12.0
7	F (mg/L)	0.62	0.00	0.21	0.10	0.31	0.46	0.73	0.15
8	Fe (mg/L)	0.1	0.0	0.2	0.1	0.0	0.0	0.1	0.0
9	HCO3 (mg/L)	165	135	165	150	231	245	305	265
10	K (mg/L)	4.6	2.0	1.7	1.9	2.1	2.1	2.7	1.8
11	Mg (mg/L)	17.1	13.6	8.8	9.6	24.0	16.8	21.8	29.1
12	Na (mg/L)	13.6	18.1	20.0	19.3	30.2	35.2	31.8	36.0
13	NH3-N (mg N/L)	0.06	0.06	0.25	0.61	0.28	0.45	0.54	0.32
14	NO2+NO3 (mg N/L)	3.47	1.88	1.90	1.74	2.27	2.10	1.60	2.23
15	NO2-N (mgN/L)	0.01	0.00	0.00	0.01	0.01	0.03	0.00	0.04
16	NO3-N (mgN/L)	3.45	1.88	1.90	1.73	2.27	2.07	1.60	2.19
17	o-PO4-P (mg P/L)	0.171	0.204	0.060	0.076	0.284	0.368	1.429	5.505
18	SiO2 (mg/L)	18.8	24.5	24.7	23.6	44.2	25.3	42.7	20.4
19	SO4 (mg/L)	2.5	6.3	20.0	24.1	45.8	15.0	33.3	23.6

Water Quality Datasheet for the period : 2016-2017

Station Name : RAMAKONA (AGH4BQ3)

Division : Wainganga Div., Nagpur

Local River : Khanan

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017
		A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL								
1	BOD3-27 (mg/L)	25.0	10.0	1.2	1.5	3.2	1.8	1.2	1.2
2	COD (mg/L)	52.0	44.3	51.5	14.6	37.0	63.1	87.7	159.3
3	DO (mg/L)	0.0	4.5	6.2	7.7	7.5	7.4	5.7	6.4
4	DO_SAT% (%)	0	53	74	90	79	73	55	65
5	FCol-MPN (MPN/100mL)	16000	40	1300	170	80	110	140	40
6	Tcol-MPN (MPN/100mL)	16000	100	9000	16000	170	170	700	230
	TRACE & TOXIC								
1	As (µg/L)		2.2				1.5		
2	Cd (µg/L)		0.2				0.0		
3	Cr (µg/L)		3.4				0.6		
4	Cu (µg/L)		8.2				1.9		
5	Ni (µg/L)		2.1				1.7		
6	Pb (µg/L)		0.2				7.0		
7	Zn (µg/L)		2.1						
	CHEMICAL INDICES								
1	HAR_Ca (mgCaCO3/L)	74	76	85	97	111	150	111	150
2	HAR_Total (mgCaCO3/L)	145	132	122	138	211	220	201	271
3	Na% (%)	16	23	26	23	24	26	25	22
4	RSC (-)	0.0	0.1	0.3	0.0	0.0	0.0	1.4	0.0
5	SAR (-)	0.5	0.7	0.8	0.7	0.9	1.0	1.0	1.0
	PESTICIDES								

Water Quality Summary for the period : 2016-2017

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)	365	708.0	0.000	19.60
2	EC_GEN (µmho/cm)	8	568	219	407
3	pH_GEN (pH units)	8	8.7	7.8	8.3
4	Temp (deg C)	8	25.0	14.0	19.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	8	12.0	0.0	5.4
2	ALK-TOT (mgCaCO3/L)	8	268	135	181
3	B (mg/L)	8	1.55	0.11	0.74
4	Ca (mg/L)	8	60	30	43
5	Cl (mg/L)	8	19.9	4.0	12.7
6	CO3 (mg/L)	8	14.4	0.0	6.4
7	F (mg/L)	8	0.73	0.00	0.32
8	Fe (mg/L)	8	0.2	0.0	0.1
9	HCO3 (mg/L)	8	305	135	208
10	K (mg/L)	8	4.6	1.7	2.4
11	Mg (mg/L)	8	29.1	8.8	17.6
12	Na (mg/L)	8	36.0	13.6	25.5
13	NH3-N (mg N/L)	8	0.61	0.06	0.32
14	NO2+NO3 (mg N/L)	8	3.47	1.60	2.15
15	NO2-N (mgN/L)	8	0.04	0.00	0.01
16	NO3-N (mgN/L)	8	3.45	1.60	2.14
17	o-PO4-P (mg P/L)	8	5.505	0.060	1.012
18	SiO2 (mg/L)	8	44.2	18.8	28
19	SO4 (mg/L)	8	45.8	2.5	21.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	8	25.0	1.2	5.6
2	COD (mg/L)	8	159.3	14.6	63.7
3	DO (mg/L)	8	7.7	0.0	5.7
4	DO_SAT% (%)	8	90	0	61
5	FCol-MPN (MPN/100mL)	8	16000	40	2235
6	Tcol-MPN (MPN/100mL)	8	16000	100	5296
	TRACE & TOXIC				
1	As (µg/L)	2	2.2	1.5	1.9
2	Cd (µg/L)	2	0.2	0.0	0.1
3	Cr (µg/L)	2	3.4	0.6	2
4	Cu (µg/L)	2	8.2	1.9	5
5	Ni (µg/L)	2	2.1	1.7	1.9
6	Pb (µg/L)	2	7.0	0.2	3.6
7	Zn (µg/L)	1	2.1	2.1	2.1
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	8	150	74	107
2	HAR_Total (mgCaCO3/L)	8	271	122	180
3	Na% (%)	8	26	16	23
4	RSC (-)	8	1.4	0.0	0.2
5	SAR (-)	8	1.0	0.5	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

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	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	PHYSICAL									
1	Q (cumec)	38.46	23.04	46.75	1.615	1.732	1.353	1.002	0.066	
2	EC_GEN (µmho/cm)	442	352	298	484	534	516	467	564	
3	pH_GEN (pH units)	7.8	8.1	8.2	8.0	8.1	8.4	8.0	8.1	
4	Temp (deg C)	23.6	23.8	24.0	16.0	17.3	15.8	19.3	20.5	
5	Turb (NTU)	22.6			0.5			0.5		
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)	0.8	0.0	4.5	1.0	1.3	6.2	0.0	0.0	
2	ALK-TOT (mgCaCO3/L)	193	161	135	228	189	227	206	221	
3	B (mg/L)	0.29	0.14	0.90	0.43	0.33	0.58	0.24	0.13	
4	Ca (mg/L)	48	43	33	56	49	52	47	53	
5	Cl (mg/L)	14.9	15.9	9.0	14.2	16.9	16.4	12.2	16.5	
6	CO3 (mg/L)	1.0	0.0	5.4	1.2	1.6	7.5	0.0	0.0	
7	F (mg/L)	0.73	0.21	0.23	0.44	0.64	0.41	0.34	0.44	
8	Fe (mg/L)	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	
9	HCO3 (mg/L)	233	196	154	276	228	261	252	269	
10	K (mg/L)	2.1	2.0	2.6	1.7	2.0	2.1	2.0	2.1	
11	Mg (mg/L)	15.7	15.7	12.3	16.4	22.9	22.9	16.4	16.8	
12	Na (mg/L)	27.9	18.0	17.7	26.5	29.9	33.3	25.8	41.8	
13	NH3-N (mg N/L)	0.35	0.08	0.24	0.05	0.15	0.40	0.05	0.17	
14	NO2+NO3 (mg N/L)	5.03	9.07	2.25	8.55	10.37	2.05	8.15	5.95	
15	NO2-N (mgN/L)	0.01	0.01	0.01	0.01	0.05	0.02	0.00	0.15	
16	NO3-N (mgN/L)	5.02	9.07	2.24	8.54	10.32	2.03	8.15	5.80	
17	o-PO4-P (mg P/L)	0.163	0.070	0.128	0.153	0.092	1.897	0.165	0.104	
18	SiO2 (mg/L)	19.5	28.3	22.9	21.0	33.9	33.2	41.1	29.6	
19	SO4 (mg/L)	10.4	25.1	13.2	16.4	54.0	29.4	23.1	21.2	

Water Quality Seasonal Average for the period: 2014-2017

Station Name : RAMAKONA (AGH4BQ3)

Division : Wainganga Div., Nagpur

Local River : Khanan

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2014	2015	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	3.0	3.8	9.4	8.4	2.5	1.9	2.2	4.5	
2	COD (mg/L)	26.2	122.9	40.6	34.0	34.5	86.8	35.0	55.9	
3	DO (mg/L)	7.8	6.2	4.6	6.7	8.1	6.8	7.7	8.3	
4	DO_SAT% (%)	92	74	54	68	85	68	83	92	
5	FCol-MPN (MPN/100mL)	110	78	4378	63	68	93	63	45	
6	Tcol-MPN (MPN/100mL)	634	4265	10275	175	308	318	153	105	
	TRACE & TOXIC									
1	As (µg/L)			2.2		1.3	1.5	0.8	1.4	
2	Cd (µg/L)			0.2	0.0	0.2	0.0	1.0	0.2	
3	Cr (µg/L)			3.3	2.5	0.6	0.6	5.4	1.3	
4	Cu (µg/L)			8.2	16.4	0.6	1.9		2.3	
5	Hg (µg/L)							0.0		
6	Ni (µg/L)			2.1	0.1	0.3	1.6	3.6	0.9	
7	Pb (µg/L)			0.2	0.8	1.8	7.0	14.0	1.3	
8	Zn (µg/L)			2.1	5.0	7.4		1.0	3.6	
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	119	108	83	141	122	130	118	133	
2	HAR_Total (mgCaCO3/L)	184	173	134	209	217	226	186	204	
3	Na% (%)	25	18	22	22	22	24	23	33	
4	RSC (-)	0.3	0.0	0.1	0.4	0.0	0.3	0.4	0.5	
5	SAR (-)	0.9	0.6	0.7	0.8	0.9	1.0	0.8	1.3	
	PESTICIDES									

HISTORY SHEET

		Water Year	: 2016-2017
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 : 2016-2017

Station Name : KEOLARI (AGH40V3)

Local River : Wainganga

River Water Analysis

Division : Wainganga Div., Nagpur

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	PHYSICAL												
1	Q (cumec)	0.000	0.000	154.1	175.7	45.26	6.237	29.95	33.25	35.52	37.86	25.40	0.000
2	Colour_Cod (-)	Clear	Clear	Brown	Clear	Light Brown	Clear	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	335	310	258	262	269	376	320	336	356	331	313	323
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	8.1	8.1	8.1	8.3	8.4	8.2	8.2	8.7	8.6	8.5	8.0
6	Temp (deg C)	28.0	28.0	25.0	26.0	23.0	20.0	19.0	16.0	18.0	20.0	30.0	27.0
	CHEMICAL												
1	Alk-Phen (mgCaCO3/L)	14.9	0.0	0.0	0.0	12.0	12.0	0.0	0.0	17.4	10.0	14.9	0.0
2	ALK-TOT (mgCaCO3/L)	141	144	84	108	166	201	174	159	185	173	183	170
3	B (mg/L)	0.03	0.04	0.21	0.35	0.43	0.30	0.71	0.71	0.29	0.42	0.19	1.57
4	Ca (mg/L)	26	24	26	34	30	41	45	42	53	41	29	30
5	Cl (mg/L)	23.9	15.9	6.0	9.9	17.9	13.9	9.9	11.9	8.0	13.9	15.9	21.9
6	CO3 (mg/L)	18.0	0.0	0.0	0.0	14.4	14.4	0.0	0.0	21.0	12.0	18.0	0.0
7	F (mg/L)	0.29	1.09	0.00	0.00	0.00	0.00	0.01	0.36	0.21	0.54	0.34	0.68
8	Fe (mg/L)	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.4	0.2	0.2	0.0	0.3
9	HCO3 (mg/L)	135	176	102	132	173	216	212	194	183	186	186	207
10	K (mg/L)	3.3	1.6	1.5	1.5	1.3	1.3	1.4	0.9	1.4	1.3	1.2	1.8
11	Mg (mg/L)	15.8	12.7	7.9	7.4	14.9	20.7	17.3	19.6	15.1	17.9	20.1	25.4
12	Na (mg/L)	42.7	31.4	11.8	13.1	14.4	18.9	17.4	13.7	15.5	19.3	37.2	20.8
13	NH3-N (mg N/L)	0.01	0.43	0.43	0.13	0.39	0.26	0.32	0.69	0.95	0.34	1.88	0.76
14	NO2+NO3 (mg N/L)	1.69	2.63	2.17	2.11	1.86	2.26	2.01	1.50	2.49	2.00	1.35	1.84
15	NO2-N (mgN/L)	0.12	0.01	0.00	0.00	0.01	0.00	0.03	0.01	0.02	0.01	0.07	0.03
16	NO3-N (mgN/L)	1.57	2.62	2.17	2.11	1.84	2.26	1.98	1.49	2.47	2.00	1.28	1.81
17	o-PO4-P (mg P/L)	0.119	0.087	0.180	0.047	0.064	0.300	2.520	0.918	2.916	0.424	0.086	1.399
18	SiO2 (mg/L)	35.6	36.2	16.3	19.5	28.0	42.1	20.5	29.6	20.7	24.4	32.6	26.0
19	SO4 (mg/L)	13.5	1.0	2.0	4.9	2.3	9.4	1.3	2.7	68.0	9.6	8.8	10.5

Water Quality Datasheet for the period : 2016-2017

Station Name : KEOLARI (AGH40V3)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water Analysis

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	02.06.2016	01.07.2016	01.08.2016	01.09.2016	04.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	03.04.2017	01.05.2017
		A	A	A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL												
1	BOD3-27 (mg/L)	35.0	30.0	2.4	5.1	2.9	3.3	3.9	1.2	3.9	1.2	3.1	30.0
2	COD (mg/L)	57.4	61.0	66.0	24.4	31.5	26.5	94.8	66.9	91.5	79.9	126.8	76.3
3	DO (mg/L)	5.1	4.5	5.8	8.3	7.5	9.5	11.1	7.1	9.5	6.7	8.3	5.1
4	DO_SAT% (%)	65	57	70	102	87	104	120	72	100	74	110	64
5	FCol-MPN (MPN/100mL)	130	16000	60	130	80	20	1300	140	110	300	20	16000
6	Tcol-MPN (MPN/100mL)	2200	16000	130	2400	700	40	2400	340	16000	500	40	16000
	TRACE & TOXIC												
1	As (µg/L)			2.7				0.9				1.0	
2	Cd (µg/L)			0.2				0.5				0.0	
3	Cr (µg/L)			2.7				0.9				3.0	
4	Cu (µg/L)			1.4				1.7				3.0	
5	Ni (µg/L)			1.9				1.0				12.0	
6	Pb (µg/L)			0.9				5.4				0.0	
7	Zn (µg/L)			2.4				0.4				6.0	
	CHEMICAL INDICES												
1	HAR_Ca (mgCaCO3/L)	65	60	65	85	74	104	113	106	131	101	71	76
2	HAR_Total (mgCaCO3/L)	130	112	98	116	136	190	185	188	194	176	155	182
3	Na% (%)	41	38	21	20	19	18	17	14	15	19	34	20
4	RSC (-)	0.2	0.6	0.0	0.0	0.6	0.2	0.0	0.0	0.0	0.0	0.6	0.0
5	SAR (-)	1.6	1.3	0.5	0.5	0.5	0.6	0.6	0.4	0.5	0.6	1.3	0.7
	PESTICIDES												

Water Quality Summary for the period : 2016-2017

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)	365	714.9	0.000	35.31
2	EC_GEN (µmho/cm)	12	376	258	316
3	pH_GEN (pH units)	12	8.8	8.0	8.3
4	Temp (deg C)	12	30.0	16.0	23.3
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	12	17.4	0.0	6.8
2	ALK-TOT (mgCaCO3/L)	12	201	84	157
3	B (mg/L)	12	1.57	0.03	0.44
4	Ca (mg/L)	12	53	24	35
5	Cl (mg/L)	12	23.9	6.0	14.1
6	CO3 (mg/L)	12	21.0	0.0	8.1
7	F (mg/L)	12	1.09	0.00	0.29
8	Fe (mg/L)	12	0.4	0.0	0.1
9	HCO3 (mg/L)	12	216	102	175
10	K (mg/L)	12	3.3	0.9	1.5
11	Mg (mg/L)	12	25.4	7.4	16.2
12	Na (mg/L)	12	42.7	11.8	21.3
13	NH3-N (mg N/L)	12	1.88	0.01	0.55
14	NO2+NO3 (mg N/L)	12	2.63	1.35	1.99
15	NO2-N (mgN/L)	12	0.12	0.00	0.03
16	NO3-N (mgN/L)	12	2.62	1.28	1.97
17	o-PO4-P (mg P/L)	12	2.916	0.047	0.755
18	SiO2 (mg/L)	12	42.1	16.3	27.6
19	SO4 (mg/L)	12	68.0	1.0	11.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	12	35.0	1.2	10.2
2	COD (mg/L)	12	126.8	24.4	66.9
3	DO (mg/L)	12	11.1	4.5	7.4
4	DO_SAT% (%)	12	120	57	86
5	Fcol-MPN (MPN/100mL)	12	16000	20	2858
6	Tcol-MPN (MPN/100mL)	12	16000	40	4729
	TRACE & TOXIC				
1	As (µg/L)	3	2.7	0.9	1.6
2	Cd (µg/L)	3	0.5	0.0	0.2
3	Cr (µg/L)	3	3.0	0.9	2.2
4	Cu (µg/L)	3	3.0	1.4	2
5	Ni (µg/L)	3	12.0	1.0	5
6	Pb (µg/L)	3	5.4	0.0	2.1
7	Zn (µg/L)	3	6.0	0.4	2.9
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	12	131	60	88
2	HAR_Total (mgCaCO3/L)	12	194	98	155
3	Na% (%)	12	41	14	23
4	RSC (-)	12	0.6	0.0	0.2
5	SAR (-)	12	1.6	0.4	0.8
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

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	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	PHYSICAL									
1	Q (cumec)	25.98	38.60	75.02	0.000	5.527	26.24	0.000	2.712	21.09
2	EC_GEN (µmho/cm)	323	254	287	384	324	347	372	330	322
3	pH_GEN (pH units)	7.8	8.0	8.3	8.0	8.2	8.4	8.1	8.2	8.4
4	Temp (deg C)	26.6	27.0	26.0	20.8	21.5	18.3	23.7	25.7	25.7
5	Turb (NTU)	5.4			0.5			0.7		
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	5.4	1.7	1.3	7.3	0.0	0.0	8.3
2	ALK-TOT (mgCaCO3/L)	163	117	129	172	157	180	177	170	175
3	B (mg/L)	0.26	0.20	0.21	0.53	0.19	0.50	0.40	0.11	0.73
4	Ca (mg/L)	37	36	28	47	43	45	39	51	33
5	Cl (mg/L)	10.7	13.4	14.7	8.4	15.4	10.9	14.6	12.2	17.2
6	CO3 (mg/L)	0.0	0.0	6.5	2.0	1.6	8.8	0.0	0.0	10.0
7	F (mg/L)	0.69	0.08	0.28	0.21	0.15	0.15	0.47	0.03	0.52
8	Fe (mg/L)	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	0.2
9	HCO3 (mg/L)	199	143	144	206	188	201	217	208	193
10	K (mg/L)	1.7	1.4	1.8	1.1	2.2	1.2	1.1	1.7	1.4
11	Mg (mg/L)	18.8	15.5	11.7	12.4	15.2	18.2	17.5	16.3	21.1
12	Na (mg/L)	16.2	10.8	22.7	13.9	22.2	16.3	16.7	18.4	25.8
13	NH3-N (mg N/L)	0.33	0.08	0.28	0.05	0.14	0.55	0.05	0.12	0.99
14	NO2+NO3 (mg N/L)	1.95	9.16	2.09	7.81	8.41	2.07	7.46	4.99	1.73
15	NO2-N (mgN/L)	0.00	0.01	0.03	0.00	0.04	0.01	0.02	0.17	0.04
16	NO3-N (mgN/L)	1.95	9.15	2.06	7.80	8.36	2.05	7.45	4.82	1.70
17	o-PO4-P (mg P/L)	0.134	0.086	0.099	0.166	0.065	1.663	0.257	0.098	0.636
18	SiO2 (mg/L)	20.7	23.9	27.1	12.8	22.8	28.2	42.7	40.0	27.7
19	SO4 (mg/L)	7.4	21.1	4.7	8.6	11.9	20.4	15.6	11.6	9.6

Water Quality Seasonal Average for the period: 2014-2017

Station Name : KEOLARI (AGH40V3)

Division : Wainganga Div., Nagpur

Local River : Wainganga

River Water

Sub-Division : Upper Wainganga SD, Nagpur

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2014	2015	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	18.6	2.3	15.1	2.2	1.4	3.1	2.1	11.5	11.4
2	COD (mg/L)	47.8	118.7	48.1	26.3	26.1	69.9	33.3	48.9	94.3
3	DO (mg/L)	4.8	6.8	6.2	7.5	6.6	9.3	6.8	5.8	6.7
4	DO_SAT% (%)	60	85	77	84	75	99	81	72	83
5	FCol-MPN (MPN/100mL)	714	135	3280	63	90	393	87	90	5440
6	Tcol-MPN (MPN/100mL)	3758	4440	4286	115	680	4695	387	1797	5513
	TRACE & TOXIC									
1	As (µg/L)			2.7		0.5	0.9	0.4	1.2	1.0
2	Cd (µg/L)			0.2	0.0	0.1	0.5	1.0	0.2	0.0
3	Cr (µg/L)			2.7	0.9	0.4	0.9	5.4	6.5	3.0
4	Cu (µg/L)			1.4	5.2	0.9	1.7		4.0	3.0
5	Hg (µg/L)							0.0		
6	Ni (µg/L)			1.9	0.2	0.1	1.0	3.3	0.2	12.0
7	Pb (µg/L)			0.9	0.7	0.2	5.4	9.0	0.5	0.0
8	Zn (µg/L)			2.4	4.0	6.4	0.4	0.0	15.4	6.0
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	94	89	70	118	109	114	98	126	83
2	HAR_Total (mgCaCO3/L)	172	154	118	170	172	189	171	194	171
3	Na% (%)	18	14	27	15	21	16	18	18	24
4	RSC (-)	0.1	0.0	0.3	0.1	0.0	0.1	0.2	0.2	0.2
5	SAR (-)	0.5	0.4	0.9	0.5	0.8	0.5	0.6	0.6	0.9
	PESTICIDES									

HISTORY SHEET

		Water Year	: 2016-2017
Site	: Mancherial	Code	: AG000J3
State	: Andhra Pradesh	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°50'00"	Longitude	: 79°27'00"
	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 : 2016-2017

Station Name : Mancherla (AG000J3)

Local River : Godavari

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

River Water Analysis

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017
		A	A	A	A	A	A	A	A	A	A
	PHYSICAL										
1	Q (cumec)	66.74	93.06	86.10	3672	78.03	44.31	22.93	21.37	10.17	3.305
2	Colour_Cod (-)	Clear	Clear	Clear	Brown	Clear	Clear	Clear	Clear	Clear	Clear
3	EC_GEN (µmho/cm)	353	358	540	287	570	535	529	272	368	355
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)	7.6	8.0	8.8	8.2	8.4	8.5	8.4	7.2	8.3	7.8
6	TDS (mg/L)	318	249	482	165	326	299	221	255	251	250
7	Temp (deg C)	27.0	25.0	25.5	22.0	24.5	14.0	26.5	11.5	24.5	28.0
8	Turb (NTU)	184.0	31.0	0.1	4.0	0.1	1.0	1.0	9.0	24.0	5.0
	CHEMICAL										
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	6.0	0.0	7.0	5.4	5.4	0.0	9.5	0.0
2	ALK-TOT (mgCaCO3/L)	142	176	230	146	239	175	175	148	163	177
3	Ca (mg/L)	24	38	40	25	54	38	35	32	49	45
4	Cl (mg/L)	25.8	17.0	29.8	13.4	27.4	29.9	36.7	20.0	22.8	21.5
5	CO3 (mg/L)	0.0	0.0	7.2	0.0	8.4	6.5	6.5	0.0	11.4	0.0
6	F (mg/L)	0.59	0.19	0.56	0.02	0.41	0.43	0.53	0.03	0.45	0.87
7	Fe (mg/L)	0.0	0.0	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
8	HCO3 (mg/L)	173	215	266	178	275	200	200	181	176	216
9	K (mg/L)	3.9	3.2	3.5	3.2	3.9	3.5	4.1	7.2	3.6	3.6
10	Mg (mg/L)	13.4	20.9	21.6	13.8	29.3	21.0	18.9	10.2	16.9	21.8
11	Na (mg/L)	34.7	29.4	48.2	18.0	49.8	45.0	42.0	58.5	32.8	31.0
12	NH3-N (mg N/L)	0.16	0.01	0.01	0.01	0.01		0.01	0.01	0.69	0.01
13	NO2+NO3 (mg N/L)	0.17	1.21	0.71	1.35	0.33	0.05	0.16	1.07	0.74	1.21
14	NO2-N (mgN/L)	0.00	1.13	0.01	0.00	0.00	0.00	0.01	0.16	0.00	0.00
15	NO3-N (mgN/L)	0.17	0.08	0.70	1.35	0.33	0.05	0.15	0.91	0.74	1.21
16	o-PO4-P (mg P/L)	0.052		0.016	0.010	0.041	0.054	0.080	0.040	0.060	0.010
17	SiO2 (mg/L)	12.7	17.7	23.4	9.0	17.6	17.5	9.2	18.4	15.5	21.2
18	SO4 (mg/L)	21.3	7.8	42.3	3.3	34.0	46.0	37.5	39.9	27.9	18.1

Water Quality Datasheet for the period : 2016-2017

Station Name : Mancherla (AG000J3)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	01.07.2016	01.08.2016	01.09.2016	01.10.2016	01.11.2016	01.12.2016	02.01.2017	01.02.2017	01.03.2017	01.04.2017
		A	A	A	A	A	A	A	A	A	A
	BIOLOGICAL/BACTERIOLOGICAL										
1	BOD3-27 (mg/L)	1.9	1.7	1.1	0.8	1.6	2.4	3.7	2.6	2.0	1.1
2	COD (mg/L)	5.3	8.6	5.1	7.2	4.0	9.7	20.2	5.2	6.3	5.5
3	DO (mg/L)	4.2	4.7	5.6	7.1	6.9	7.3	8.5	6.9	6.8	6.2
4	DO_SAT% (%)	53	57	68	81	83	71	105	63	81	79
5	FCol-MPN (MPN/100mL)	70	16000	5000	16000	340	1700	16000	500	16000	300
6	Tcol-MPN (MPN/100mL)	16000	16000	5000	16000	340	1700	16000	2400	16000	500
	TRACE & TOXIC										
1	As (µg/L)										0.9
2	Cd (µg/L)										0.0
3	Cr (µg/L)										0.0
4	Cu (µg/L)						1.0	1.0	1.0	1.0	2.9
5	Hg (µg/L)										0.5
6	Ni (µg/L)										4.3
7	Pb (µg/L)										0.0
8	Zn (µg/L)						0.1	0.1	0.1	0.1	23.6
	CHEMICAL INDICES										
1	HAR_Ca (mgCaCO3/L)	60	94	99	63	134	96	87	81	123	112
2	HAR_Total (mgCaCO3/L)	116	181	189	121	256	184	165	123	194	203
3	Na% (%)	39	26	35	24	29	34	35	49	27	25
4	RSC (-)	0.5	0.0	0.8	0.5	0.0	0.0	0.2	0.5	0.0	0.0
5	SAR (-)	1.4	1.0	1.5	0.7	1.4	1.4	1.4	2.3	1.0	1.0
	PESTICIDES										

Water Quality Summary for the period : 2016-2017

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)	365	9226	0.000	256.3
2	EC_GEN (µmho/cm)	10	570	272	417
3	pH_GEN (pH units)	10	8.8	7.2	8.1
4	TDS (mg/L)	10	482	165	282
5	Temp (deg C)	10	28.0	11.5	22.9
6	Turb (NTU)	10	184.0	0.1	25.9
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	10	9.5	0.0	3.3
2	ALK-TOT (mgCaCO3/L)	10	239	142	177
3	Ca (mg/L)	10	54	24	38
4	Cl (mg/L)	10	36.7	13.4	24.4
5	CO3 (mg/L)	10	11.4	0.0	4
6	F (mg/L)	10	0.87	0.02	0.41
7	Fe (mg/L)	10	0.2	0.0	0
8	HCO3 (mg/L)	10	275	173	208
9	K (mg/L)	10	7.2	3.2	4
10	Mg (mg/L)	10	29.3	10.2	18.8
11	Na (mg/L)	10	58.5	18.0	38.9
12	NH3-N (mg N/L)	9	0.69	0.01	0.1
13	NO2+NO3 (mg N/L)	10	1.35	0.05	0.7
14	NO2-N (mgN/L)	10	1.13	0.00	0.13
15	NO3-N (mgN/L)	10	1.35	0.05	0.57
16	o-PO4-P (mg P/L)	9	0.080	0.010	0.04
17	SiO2 (mg/L)	10	23.4	9.0	16.2
18	SO4 (mg/L)	10	46.0	3.3	27.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	10	3.7	0.8	1.9
2	COD (mg/L)	10	20.2	4.0	7.7
3	DO (mg/L)	10	8.5	4.2	6.4
4	DO_SAT% (%)	10	105	53	74
5	Fcol-MPN (MPN/100mL)	10	16000	70	7191
6	Tcol-MPN (MPN/100mL)	10	16000	340	8994
	TRACE & TOXIC				
1	As (µg/L)	1	0.9	0.9	0.9
2	Cd (µg/L)	1	0.0	0.0	0
3	Cr (µg/L)	1	0.0	0.0	0
4	Cu (µg/L)	5	2.9	1.0	1.4
5	Hg (µg/L)	1	0.5	0.5	0.5
6	Ni (µg/L)	1	4.3	4.3	4.3
7	Pb (µg/L)	1	0.0	0.0	0
8	Zn (µg/L)	5	23.6	0.1	4.8
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	10	134	60	95
2	HAR_Total (mgCaCO3/L)	10	256	116	173
3	Na% (%)	10	49	24	32
4	RSC (-)	10	0.8	0.0	0.3
5	SAR (-)	10	2.3	0.7	1.3
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	106.1	94.37	18.41	289.5	367.5	129.0	53.74	55.37	1143	196.9	181.3	1162	34.58	81.02	979.4
2	EC_FLD (µmho/cm)						514									
3	EC_GEN (µmho/cm)	415	460	421	357	462	479	515	458	289	482	524	468	592	396	385
4	pH_FLD (pH units)						8.5									
5	pH_GEN (pH units)	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	8.1
6	TDS (mg/L)							320	270	191	374	383	295	387	303	304
7	Temp (deg C)	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	24.9
8	Turb (NTU)							2.3	6.0	41.3	0.3	13.2	2.6	5.4	8.0	54.8
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	1.5
2	ALK-TOT (mgCaCO3/L)	162	201	182	136	183	159	177	157	109	179	178	151	203	180	173
3	B (mg/L)	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)	39	50	38	31	38	21	28	29	25	30	37	33	35	32	32
5	Cl (mg/L)	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	21.5
6	CO3 (mg/L)	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	1.8
7	F (mg/L)	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	0.34
8	Fe (mg/L)	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	0.1
9	HCO3 (mg/L)	165	211	199	145	189	162	179	170	124	185	217	184	247	219	208
10	K (mg/L)	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	3.5
11	Mg (mg/L)	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	17.4
12	Na (mg/L)	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	32.5
13	NH3-N (mg N/L)	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	0.04
14	NO2+NO3 (mg N/L)	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	0.86
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	0.28
16	NO3-N (mgN/L)	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	0.57
17	o-PO4-P (mg P/L)	0.226	0.008	0.065	0.012			0.008	0.019	0.026	0.036	0.151	0.035	0.163	0.150	0.026
18	P-Tot (mgP/L)					0.032	0.009									
19	SiO2 (mg/L)	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	15.7
20	SO4 (mg/L)	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	18.6

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.4
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	6.6
3	DO (mg/L)	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		5.4
4	DO_SAT% (%)	74	82	77	82	81	73	69	71	82	76	79	78	65		65
5	FCol-MPN (MPN/100mL)	643	40	135	470	8720	1152	5417	3048	9133	11660	2028	558	3778	2135	9268
6	Tcol-MPN (MPN/100mL)	1120	90	245	470	10560	1924	5417	7580	12333	13280	3688	5358	4368	10600	13250
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)	97	125	96	77	96	53	71	73	63	74	92	83	87	80	79
2	HAR_Total (mgCaCO3/L)	141	195	132	117	143	145	175	152	107	159	170	161	169	154	152
3	Na% (%)	37	30	45	25	38	40	29	30	22	34	28	27	44	42	31
4	RSC (-)	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	0.5
5	SAR (-)	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	1.2
	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	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	41.66
2	EC_FLD (µmho/cm)						917									
3	EC_GEN (µmho/cm)	498	497	411	583	605	590	537	551	493	512	547	618	415	728	477
4	pH_FLD (pH units)						8.6									
5	pH_GEN (pH units)	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	8.1
6	TDS (mg/L)							340	319	306	344	352	365	307	237	275
7	Temp (deg C)	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	19.1
8	Turb (NTU)							0.5	1.2	3.4	0.0	2.3	5.8	0.8	3.0	2.8
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	4.4
2	ALK-TOT (mgCaCO3/L)	249	221	196	232	204	233	204	225	180	216	191	222	193	167	184
3	B (mg/L)	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)	51	58	30	56	35	28	33	39	32	35	49	41	38	31	40
5	Cl (mg/L)	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	28.5
6	CO3 (mg/L)	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	5.3
7	F (mg/L)	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	0.35
8	Fe (mg/L)	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	0.0
9	HCO3 (mg/L)	220	241	225	259	226	252	226	236	189	248	233	270	236	202	214
10	K (mg/L)	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	4.7
11	Mg (mg/L)	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	19.8
12	Na (mg/L)	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	48.8
13	NH3-N (mg N/L)	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	0.01
14	NO2+NO3 (mg N/L)	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	0.40
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	0.04
16	NO3-N (mgN/L)	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	0.36
17	o-PO4-P (mg P/L)	0.010	0.017	0.019	0.018			0.006	0.027	0.023	0.025	0.066	0.053	0.087	0.061	0.054
18	P-Tot (mgP/L)					0.011	0.102									
19	SiO2 (mg/L)	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	15.7
20	SO4 (mg/L)	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	39.4

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Mancherla (AG000J3)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Winter														
		Nov - Feb														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	2.6
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	9.8
3	DO (mg/L)	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		7.4
4	DO_SAT% (%)	83	81	65	85	85	76	68	77	84	71	73	68	63		80
5	FCol-MPN (MPN/100mL)	185	390	5515	6273	6210	868	4138	13250	16000	4420	716	63	773	2968	4635
6	Tcol-MPN (MPN/100mL)	2515	390	12115	10680	10833	1018	4205	16000	16000	5258	4700	111	2800	9050	5110
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		1.0
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		0.1
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	129	145	75	139	89	71	83	98	81	88	122	102	96	77	99
2	HAR_Total (mgCaCO3/L)	179	190	133	183	186	189	187	218	169	177	206	200	171	144	182
3	Na% (%)	35	33	43	33	38	36	30	27	31	35	34	35	41	33	37
4	RSC (-)	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	0.2
5	SAR (-)	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	1.6
	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	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	6.737
2	EC_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	507	505	431	548	551	644	609		488	591	599	596	516	642	362
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	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	8.1
6	TDS (mg/L)							379		362	420	367	377	283	266	251
7	Temp (deg C)	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	26.3
8	Turb (NTU)							0.2		1.1	0.3	0.7	5.0	2.0	12.5	14.5
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	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	4.7
2	ALK-TOT (mgCaCO3/L)	203	310	191	231	187	225	198		199	210	218	215	173	172	170
3	B (mg/L)	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)	42	50	28	57	26	20	29		26	30	37	38	33	31	47
5	Cl (mg/L)	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	22.1
6	CO3 (mg/L)	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	5.7
7	F (mg/L)	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	0.66
8	Fe (mg/L)	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	0.0
9	HCO3 (mg/L)	215	236	233	268	215	246	208		207	246	262	262	211	210	196
10	K (mg/L)	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	3.6
11	Mg (mg/L)	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	19.3
12	Na (mg/L)	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	31.9
13	NH3-N (mg N/L)	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	0.35
14	NO2+NO3 (mg N/L)	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	0.97
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	0.00
16	NO3-N (mgN/L)	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	0.97
17	o-PO4-P (mg P/L)	0.030	0.057	0.007	0.012			0.000		0.040	0.053	0.054	0.031	0.170	0.119	0.035
18	P-Tot (mgP/L)					0.134	0.241									
19	SiO2 (mg/L)	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	18.4
20	SO4 (mg/L)	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	23.0

Water Quality Seasonal Average for the period: 2002-2017

Station Name : Mancherla (AG000J3)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Summer														
		Mar - May														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	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	1.6
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	5.9
3	DO (mg/L)	6.3	5.8	4.8	5.5	6.0	5.9	5.3		6.4	7.0	7.3	5.3	6.2		6.5
4	DO_SAT% (%)	79	66	57	68	75	67	62		82	90	89	61	67		80
5	FCol-MPN (MPN/100mL)	4600	70		5907	1467	2900	1857		8370	5437	84	5423	30	2250	8150
6	Tcol-MPN (MPN/100mL)	24000	110		6580	1567	5050	2723		10720	5643	511	5523	8070	9100	8250
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	0.9
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	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	0.0
4	Cu (µg/L)		2.5	0.0							5.7	0.5	2.4			2.0
5	Hg (µg/L)	0.6				1.3	0.7				0.0	0.6	0.5	0.0	0.0	0.5
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	4.3
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	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	11.9
	CHEMICAL INDICES															
1	HAR_Ca (mgCaCO3/L)	105	125	70	143	64	49	73		66	76	92	94	83	78	118
2	HAR_Total (mgCaCO3/L)	155	202	124	192	184	173	184		178	152	178	183	162	148	198
3	Na% (%)	48	32	47	33	37	45	36		37	44	40	37	37	34	26
4	RSC (-)	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	0.0
5	SAR (-)	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	1.0
	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	: 2016-2017
Site	: Gandlapet	Code	: AGM00G6
State	: Andhra Pradesh	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°26'17"
	Opening Date	Closing Date	
Gauge	: 18.07.1986		
Discharge	: 10.09.1986		
Sediment	:		
Water Quality	: 31.07.1988		

Water Quality Datasheet for the period : 2016-2017

Station Name : Gandlapet (AGM00G6)

Local River : Peddavagu

Division : U Godavari Div., Hyderabad

Sub-Division : Manjira SD, Nizamabad

River Water Analysis

S.No	Parameters
	PHYSICAL
1	Q (cumec)
	CHEMICAL
	BIOLOGICAL/BACTERIOLOGICAL
	TRACE & TOXIC
	CHEMICAL INDICES
	PESTICIDES

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	7.856			0.616	10.40										
2	EC_GEN (µmho/cm)	270			380	294										
3	pH_GEN (pH units)	8.1			8.2	8.3										
4	Temp (deg C)	25.8			28.5	28.6										
	CHEMICAL															
1	ALK-TOT (mgCaCO3/L)	93			322	131										
2	B (mg/L)	0.13			0.11	0.04										
3	Ca (mg/L)	26			22	32										
4	Cl (mg/L)	13.0			16.0	14.0										
5	F (mg/L)	1.14			0.74	0.21										
6	Fe (mg/L)				0.2	0.1										
7	HCO3 (mg/L)	114			196	160										
8	K (mg/L)	1.3			2.0	0.3										
9	Mg (mg/L)	4.9			13.1	10.2										
10	Na (mg/L)	24.0			26.0	10.0										
11	NH3-N (mg N/L)	0.05			0.17	0.05										
12	NO2+NO3 (mg N/L)	0.90			0.56	1.45										
13	NO2-N (mgN/L)				0.01	0.00										
14	NO3-N (mgN/L)	0.90			0.55	1.45										
15	o-PO4-P (mg P/L)	0.300			0.030											
16	P-Tot (mgP/L)					0.060										
17	SiO2 (mg/L)	18.0			24.0	15.4										
18	SO4 (mg/L)	12.0			5.0	5.0										
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	3.6			0.9	1.4										
2	COD (mg/L)				1.0	2.0										

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
3	DO (mg/L)	6.1			5.7	6.4										
4	DO_SAT% (%)	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)	65			55	80										
2	HAR_Total (mgCaCO3/L)	85			110	123										
3	Na% (%)	38			34	15										
4	RSC (-)	0.2			1.0	0.2										
5	SAR (-)	1.1			1.1	0.4										
	PESTICIDES															

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)															
2	EC_GEN (µmho/cm)															
3	pH_GEN (pH units)															
4	Temp (deg C)															
	CHEMICAL															
1	ALK-TOT (mgCaCO3/L)															
2	B (mg/L)															
3	Ca (mg/L)															
4	Cl (mg/L)															
5	F (mg/L)															
6	Fe (mg/L)															
7	HCO3 (mg/L)															
8	K (mg/L)															
9	Mg (mg/L)															
10	Na (mg/L)															
11	NH3-N (mg N/L)															
12	NO2+NO3 (mg N/L)															
13	NO2-N (mgN/L)															
14	NO3-N (mgN/L)															
15	o-PO4-P (mg P/L)															
16	P-Tot (mgP/L)															
17	SiO2 (mg/L)															
18	SO4 (mg/L)															
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)															
2	COD (mg/L)															

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)															
2	EC_GEN (µmho/cm)															
3	pH_GEN (pH units)															
4	Temp (deg C)															
	CHEMICAL															
1	ALK-TOT (mgCaCO3/L)															
2	B (mg/L)															
3	Ca (mg/L)															
4	Cl (mg/L)															
5	F (mg/L)															
6	Fe (mg/L)															
7	HCO3 (mg/L)															
8	K (mg/L)															
9	Mg (mg/L)															
10	Na (mg/L)															
11	NH3-N (mg N/L)															
12	NO2+NO3 (mg N/L)															
13	NO2-N (mgN/L)															
14	NO3-N (mgN/L)															
15	o-PO4-P (mg P/L)															
16	P-Tot (mgP/L)															
17	SiO2 (mg/L)															
18	SO4 (mg/L)															
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)															
2	COD (mg/L)															

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
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	: 2016-2017
Site	: NANDED	Code	: NANDED
State	: Maharashtra	District	Nanded
Basin	: Godavari	Independent River	: -
Tributary	: -	Sub Tributary	: -
Sub-Sub Tributary	: -	Local River	: Godavari
Division	: Upper Godavari Div., Hyderabad	Sub-Division	: Purna SD, Nanded
Drainage Area	: Sq. Km.	Bank	: Right
Latitude	: 19°04'00"	Longitude	: 77°30'00"
	Opening Date	Closing Date	
Gauge	: 01.06.1977		
Discharge	: 01.06.2016		
Sediment	:		
Water Quality	:		

Water Quality Datasheet for the period : 2016-2017

Station Name : NANDED (NANDED)

Division : Upper Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : Purna SD, Nanded

S.No	Parameters	01.10.2016
		A
	PHYSICAL	
1	Q (cumec)	918.5
2	EC_GEN (µmho/cm)	346
3	pH_GEN (pH units)	8.1
4	TDS (mg/L)	206
5	Temp (deg C)	26.0
6	Turb (NTU)	1.0
	CHEMICAL	
1	Alk-Phen (mgCaCO3/L)	0.0
2	ALK-TOT (mgCaCO3/L)	144
3	Ca (mg/L)	31
4	Cl (mg/L)	20.1
5	CO3 (mg/L)	0.0
6	F (mg/L)	0.01
7	Fe (mg/L)	0.2
8	HCO3 (mg/L)	175
9	K (mg/L)	3.5
10	Mg (mg/L)	17.1
11	Na (mg/L)	19.7
12	NH3-N (mg N/L)	0.01
13	NO2+NO3 (mg N/L)	2.40
14	NO2-N (mgN/L)	0.00
15	NO3-N (mgN/L)	2.40
16	o-PO4-P (mg P/L)	0.031
17	SiO2 (mg/L)	10.9
18	SO4 (mg/L)	17.3
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	1.1
2	COD (mg/L)	7.4
3	DO (mg/L)	6.7
4	DO_SAT% (%)	83
5	FCol-MPN (MPN/100mL)	16000
6	Tcol-MPN (MPN/100mL)	16000
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	79
2	HAR_Total (mgCaCO3/L)	150
3	Na% (%)	22
4	RSC (-)	0.0
5	SAR (-)	0.7
	PESTICIDES	

Water Quality Summary for the period : 2016-2017

Station Name : NANDED (NANDED)

Division : Upper Godavari Div., Hyderabad

Local River : Godavari

Sub-Division : Purna SD, Nanded

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	3709	0.000	114.7
2	EC_GEN (µmho/cm)	1	346	346	346
3	pH_GEN (pH units)	1	8.1	8.1	8.1
4	TDS (mg/L)	1	206	206	206
5	Temp (deg C)	1	26.0	26.0	26
6	Turb (NTU)	1	1.0	1.0	1
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	1	144	144	144
3	Ca (mg/L)	1	31	31	31
4	Cl (mg/L)	1	20.1	20.1	20.1
5	CO3 (mg/L)	1	0.0	0.0	0
6	F (mg/L)	1	0.01	0.01	0.01
7	Fe (mg/L)	1	0.2	0.2	0.2
8	HCO3 (mg/L)	1	175	175	175
9	K (mg/L)	1	3.5	3.5	3.5
10	Mg (mg/L)	1	17.1	17.1	17.1
11	Na (mg/L)	1	19.7	19.7	19.7
12	NH3-N (mg N/L)	1	0.01	0.01	0
13	NO2+NO3 (mg N/L)	1	2.40	2.40	2.4
14	NO2-N (mgN/L)	1	0.00	0.00	0
15	NO3-N (mgN/L)	1	2.40	2.40	2.4
16	o-PO4-P (mg P/L)	1	0.031	0.031	0.031
17	SiO2 (mg/L)	1	10.9	10.9	10.9
18	SO4 (mg/L)	1	17.3	17.3	17.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1	1.1	1.1	1.1
2	COD (mg/L)	1	7.4	7.4	7.4
3	DO (mg/L)	1	6.7	6.7	6.7
4	DO_SAT% (%)	1	83	83	83
5	FCol-MPN (MPN/100mL)	1	16000	16000	16000
6	Tcol-MPN (MPN/100mL)	1	16000	16000	16000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	1	79	79	79
2	HAR_Total (mgCaCO3/L)	1	150	150	150
3	Na% (%)	1	22	22	22
4	RSC (-)	1	0.0	0.0	0
5	SAR (-)	1	0.7	0.7	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

Station Name : NANDED (NANDED)

Local River : Godavari

Division : Upper Godavari Div., Hyderabad

Sub-Division : Purna SD, Nanded

River Water

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2014	2015	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	PHYSICAL									
1	Q (cumec)			918.5						
2	EC_GEN (µmho/cm)			346						
3	pH_GEN (pH units)			8.1						
4	TDS (mg/L)			206						
5	Temp (deg C)			26.0						
6	Turb (NTU)			1.0						
	CHEMICAL									
1	ALK-TOT (mgCaCO3/L)			144						
2	Ca (mg/L)			31						
3	Cl (mg/L)			20.1						
4	F (mg/L)			0.01						
5	Fe (mg/L)			0.2						
6	HCO3 (mg/L)			175						
7	K (mg/L)			3.5						
8	Mg (mg/L)			17.1						
9	Na (mg/L)			19.7						
10	NH3-N (mg N/L)			0.00						
11	NO2+NO3 (mg N/L)			2.40						
12	NO3-N (mgN/L)			2.40						
13	o-PO4-P (mg P/L)			0.031						
14	SiO2 (mg/L)			10.9						
15	SO4 (mg/L)			17.3						

Water Quality Seasonal Average for the period: 2014-2017

Station Name : NANDED (NANDED)

Division : Upper Godavari Div., Hyderabad

Local River : Godavari

River Water

Sub-Division : Purna SD, Nanded

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2014	2015	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)			1.1						
2	COD (mg/L)			7.4						
3	DO (mg/L)			6.7						
4	DO_SAT% (%)			83						
5	FCol-MPN (MPN/100mL)			16000						
6	Tcol-MPN (MPN/100mL)			16000						
	TRACE & TOXIC									
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)			79						
2	HAR_Total (mgCaCO3/L)			150						
3	Na% (%)			22						
4	SAR (-)			0.7						
	PESTICIDES									

HISTORY SHEET

		Water Year	: 2016-2017
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°03'00"	Longitude	: 77°03'00"
	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 : 2016-2017

Station Name : Saigaon (AGP00N8)

Division : U Godavari Div., Hyderabad

Local River : Manjera/Godavari

River Water Analysis

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	01.11.2016
		A
	PHYSICAL	
1	Q (cumec)	12.45
2	Colour_Cod (-)	Clear
3	EC_GEN (μmho/cm)	493
4	Odour_Code (-)	odour free
5	pH_GEN (pH units)	8.5
6	TDS (mg/L)	272
7	Temp (deg C)	25.0
8	Turb (NTU)	0.1
	CHEMICAL	
1	Alk-Phen (mgCaCO3/L)	3.0
2	ALK-TOT (mgCaCO3/L)	171
3	Ca (mg/L)	52
4	Cl (mg/L)	33.7
5	CO3 (mg/L)	3.6
6	F (mg/L)	0.23
7	Fe (mg/L)	0.2
8	HCO3 (mg/L)	202
9	K (mg/L)	4.5
10	Mg (mg/L)	28.3
11	Na (mg/L)	24.7
12	NH3-N (mg N/L)	0.01
13	NO2+NO3 (mg N/L)	0.09
14	NO2-N (mgN/L)	0.01
15	NO3-N (mgN/L)	0.09
16	o-PO4-P (mg P/L)	0.009
17	SiO2 (mg/L)	14.6
18	SO4 (mg/L)	32.2
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	2.6
2	COD (mg/L)	5.4
3	DO (mg/L)	7.0
4	DO_SAT% (%)	85
5	FCol-MPN (MPN/100mL)	1400
6	Tcol-MPN (MPN/100mL)	1400
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	130
2	HAR_Total (mgCaCO3/L)	248
3	Na% (%)	18
4	RSC (-)	0.0
5	SAR (-)	0.7
	PESTICIDES	

Water Quality Summary for the period : 2016-2017

Station Name : Saigaon (AGP00N8)

Division : U Godavari Div., Hyderabad

Local River : Manjera/Godavari

Sub-Division : Manjira SD, Nizamabad

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	177.4	0.000	7.513
2	EC_GEN (µmho/cm)	1	493	493	493
3	pH_GEN (pH units)	1	8.5	8.5	8.5
4	TDS (mg/L)	1	272	272	272
5	Temp (deg C)	1	25.0	25.0	25
6	Turb (NTU)	1	0.1	0.1	0.1
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1	3.0	3.0	3
2	ALK-TOT (mgCaCO3/L)	1	171	171	171
3	Ca (mg/L)	1	52	52	52
4	Cl (mg/L)	1	33.7	33.7	33.7
5	CO3 (mg/L)	1	3.6	3.6	3.6
6	F (mg/L)	1	0.23	0.23	0.23
7	Fe (mg/L)	1	0.2	0.2	0.2
8	HCO3 (mg/L)	1	202	202	202
9	K (mg/L)	1	4.5	4.5	4.4
10	Mg (mg/L)	1	28.3	28.3	28.3
11	Na (mg/L)	1	24.7	24.7	24.7
12	NH3-N (mg N/L)	1	0.01	0.01	0
13	NO2+NO3 (mg N/L)	1	0.09	0.09	0.09
14	NO2-N (mgN/L)	1	0.01	0.01	0.01
15	NO3-N (mgN/L)	1	0.09	0.09	0.09
16	o-PO4-P (mg P/L)	1	0.009	0.009	0.009
17	SiO2 (mg/L)	1	14.6	14.6	14.6
18	SO4 (mg/L)	1	32.2	32.2	32.2
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1	2.6	2.6	2.6
2	COD (mg/L)	1	5.4	5.4	5.4
3	DO (mg/L)	1	7.0	7.0	7
4	DO_SAT% (%)	1	85	85	85
5	Fcol-MPN (MPN/100mL)	1	1400	1400	1400
6	Tcol-MPN (MPN/100mL)	1	1400	1400	1400
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	1	130	130	130
2	HAR_Total (mgCaCO3/L)	1	248	248	248
3	Na% (%)	1	18	18	18
4	RSC (-)	1	0.0	0.0	0
5	SAR (-)	1	0.7	0.7	0.7
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	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)	289	323	289	437	380	291	316	254	436	415	322	541			
3	pH_GEN (pH units)	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)	23.5	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)	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)	102	145	105	160	146	87	98	77	169	148	104	194			
3	B (mg/L)	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)	35	41	26	44	37	25	27	20	40	37	28	42			
5	Cl (mg/L)	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)	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)	0.45	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)			0.3	0.1	0.1	0.1	0.3	0.2	0.2	0.3	0.1	0.1			
9	HCO3 (mg/L)	124	150	128	188	167	90	120	80	199	171	127	237			
10	K (mg/L)	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)	5.8	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)	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)	0.05	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)	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)	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)	0.010	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)	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)	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: 2002-2017

Station Name : Saigaon (AGP00N8)

Division : U Godavari Div., Hyderabad

Local River : Manjera/Godavari

River Water

Sub-Division : Manjira SD, Nizamabad

S.No	Parameters	Flood														
		Jun - Oct														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.0	1.6	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)	5.2	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% (%)	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)	87	102	65	111	91	63	66	50	101	91	70	106			
2	HAR_Total (mgCaCO3/L)	111	142	83	157	136	107	123	87	174	151	135	230			
3	Na% (%)	23	22	30	24	25	26	22	24	21	19	25	23			
4	RSC (-)	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 (-)	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)		0.229		18.66					14.58			0.000			12.45
2	EC_GEN (µmho/cm)		375		500					479			561			493
3	pH_GEN (pH units)		8.4		8.0					8.2			8.2			8.5
4	TDS (mg/L)									302			322			272
5	Temp (deg C)		26.0		23.0					25.5			24.0			25.0
6	Turb (NTU)									3.3			4.0			0.1
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)		8.0		0.0					6.1			0.0			3.0
2	ALK-TOT (mgCaCO3/L)		158		197					192			211			171
3	B (mg/L)		0.00		0.63					0.19			0.04			
4	Ca (mg/L)		43		56					30			47			52
5	Cl (mg/L)		25.0		33.5					40.2			37.2			33.7
6	CO3 (mg/L)		9.6		0.0					7.3			0.0			3.6
7	F (mg/L)		0.89		0.29					0.31			0.37			0.23
8	Fe (mg/L)				0.2					0.2			0.0			0.2
9	HCO3 (mg/L)		173		240					219			257			202
10	K (mg/L)		4.8		3.6					4.2			5.1			4.4
11	Mg (mg/L)		13.1		6.8					27.6			27.7			28.3
12	Na (mg/L)		29.0		23.0					30.4			37.5			24.7
13	NH3-N (mg N/L)		0.19		0.01					0.16			0.02			0.00
14	NO2+NO3 (mg N/L)		0.10		0.23					0.58			0.73			0.09
15	NO2-N (mgN/L)				0.01					0.03			0.00			0.01
16	NO3-N (mgN/L)		0.48		0.22					0.56			0.73			0.09
17	o-PO4-P (mg P/L)		0.010		0.000					0.021			0.001			0.009
18	P-Tot (mgP/L)															
19	SiO2 (mg/L)		9.0		23.0					44.6			19.9			14.6
20	SO4 (mg/L)		4.0		17.0					21.6			29.0			32.2

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)		0.2		0.7					1.9			2.5			2.6
2	COD (mg/L)				16.7					4.8			8.1			5.4
3	DO (mg/L)		5.8		6.7					6.5			7.3			7.0
4	DO_SAT% (%)		71		78					79			87			85
5	FCol-MPN (MPN/100mL)									16000			16000			1400
6	Tcol-MPN (MPN/100mL)									16000			16000			1400
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			130
2	HAR_Total (mgCaCO3/L)		161		168					191			234			248
3	Na% (%)		27		22					25			25			18
4	RSC (-)		0.0		0.6					0.1			0.0			0.0
5	SAR (-)		1.0		0.8					1.0			1.1			0.7
	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	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	: 2016-2017
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 : 2016-2017

Station Name : Purna (AGR00A5)

Division : U Godavari Div., Hyderabad

Local River : Purna

River Water Analysis

Sub-Division : Purna SD, Nanded

S.No	Parameters	01.08.2016	01.09.2016	01.10.2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	146.7	41.01	36.25
2	Colour_Cod (-)	Light Brown	Light Brown	Clear
3	EC_FLD (µmho/cm)	340	281	678
4	EC_GEN (µmho/cm)	255	335	626
5	Odour_Code (-)	odour free	odour free	odour free
6	pH_FLD (pH units)	8.0	7.9	8.1
7	pH_GEN (pH units)	8.2	8.2	8.2
8	TDS (mg/L)	228	298	399
9	Temp (deg C)	27.0	25.0	31.0
10	Turb (NTU)	22.0	44.0	0.1
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	0.0
2	ALK-TOT (mgCaCO3/L)	123	137	258
3	Ca (mg/L)	27	28	55
4	Cl (mg/L)	14.0	14.5	44.7
5	CO3 (mg/L)	0.0	0.0	0.0
6	F (mg/L)	0.06	0.23	0.20
7	Fe (mg/L)	0.0	0.1	0.3
8	HCO3 (mg/L)	151	167	315
9	K (mg/L)	3.2	3.4	5.0
10	Mg (mg/L)	15.5	15.4	29.9
11	Na (mg/L)	24.3	23.3	35.6
12	NH3-N (mg N/L)	0.01	0.01	0.01
13	NO2+NO3 (mg N/L)	4.18	2.07	3.35
14	NO2-N (mgN/L)	4.13	0.00	0.02
15	NO3-N (mgN/L)	0.05	2.07	3.34
16	o-PO4-P (mg P/L)		0.027	0.026
17	SiO2 (mg/L)	13.4	15.7	16.5
18	SO4 (mg/L)	13.1	16.6	16.8
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.0	1.4	1.4
2	COD (mg/L)	3.5	7.4	10.0
3	DO (mg/L)	5.8	5.9	5.6
4	DO_SAT% (%)	73	71	75
5	FCol-MPN (MPN/100mL)	16000	2	16000
6	Tcol-MPN (MPN/100mL)	16000	16000	16000
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	68	71	137
2	HAR_Total (mgCaCO3/L)	133	135	261
3	Na% (%)	28	27	23
4	RSC (-)	0.0	0.1	0.0
5	SAR (-)	0.9	0.9	1.0
	PESTICIDES			

Water Quality Summary for the period : 2016-2017

Station Name : Purna (AGR00A5)

Division : U Godavari Div., Hyderabad

Local River : Purna

Sub-Division : Purna SD, Nanded

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	984.8	0.000	21.21
2	EC_FLD (µmho/cm)	3	678	281	433
3	EC_GEN (µmho/cm)	3	626	255	405
4	pH_FLD (pH units)	3	8.1	7.9	8
5	pH_GEN (pH units)	3	8.2	8.2	8.2
6	TDS (mg/L)	3	399	228	308
7	Temp (deg C)	3	31.0	25.0	27.7
8	Turb (NTU)	3	44.0	0.1	22
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	3	258	123	173
3	Ca (mg/L)	3	55	27	37
4	Cl (mg/L)	3	44.7	14.0	24.4
5	CO3 (mg/L)	3	0.0	0.0	0
6	F (mg/L)	3	0.23	0.06	0.16
7	Fe (mg/L)	3	0.3	0.0	0.2
8	HCO3 (mg/L)	3	315	151	211
9	K (mg/L)	3	5.0	3.2	3.9
10	Mg (mg/L)	3	29.9	15.4	20.3
11	Na (mg/L)	3	35.6	23.3	27.7
12	NH3-N (mg N/L)	3	0.01	0.01	0
13	NO2+NO3 (mg N/L)	3	4.18	2.07	3.2
14	NO2-N (mgN/L)	3	4.13	0.00	1.38
15	NO3-N (mgN/L)	3	3.34	0.05	1.82
16	o-PO4-P (mg P/L)	2	0.027	0.026	0.027
17	SiO2 (mg/L)	3	16.5	13.4	15.2
18	SO4 (mg/L)	3	16.8	13.1	15.5
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3	1.4	1.0	1.3
2	COD (mg/L)	3	10.0	3.5	7
3	DO (mg/L)	3	5.9	5.6	5.8
4	DO_SAT% (%)	3	75	71	73
5	FCol-MPN (MPN/100mL)	3	16000	2	10667
6	Tcol-MPN (MPN/100mL)	3	16000	16000	16000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	137	68	92
2	HAR_Total (mgCaCO3/L)	3	261	133	176
3	Na% (%)	3	28	23	26
4	RSC (-)	3	0.1	0.0	0
5	SAR (-)	3	1.0	0.9	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	147.9	5.785	20.31	32.24								131.9	470.3		74.67
2	EC_FLD (µmho/cm)															433
3	EC_GEN (µmho/cm)	386	421	261	423								397	449		405
4	pH_FLD (pH units)															8.0
5	pH_GEN (pH units)	8.1	8.4	7.9	8.2								7.9	8.1		8.2
6	TDS (mg/L)												247	252		308
7	Temp (deg C)	25.5	23.3	23.0	24.3								24.0	18.0		27.7
8	Turb (NTU)												22.1	72.0		22.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.5	3.0	0.0	4.9								0.0	0.0		0.0
2	ALK-TOT (mgCaCO3/L)	142	191	108	153								192	105		173
3	B (mg/L)	0.14	0.01	0.25	0.09								0.04	0.43		
4	Ca (mg/L)	41	55	25	33								39	33		37
5	Cl (mg/L)	29.0	38.5	17.7	23.8								16.3	25.5		24.4
6	CO3 (mg/L)	3.0	3.6	0.0	5.9								0.0	0.0		0.0
7	F (mg/L)	0.78	0.59	0.50	0.42								0.49	0.33		0.16
8	Fe (mg/L)	0.0		0.1	0.1								0.1	0.1		0.2
9	HCO3 (mg/L)	167	226	131	174								234	128		211
10	K (mg/L)	2.1	3.5	2.8	3.2								3.4	4.4		3.9
11	Mg (mg/L)	6.7	17.0	4.7	11.6								22.9	18.0		20.3
12	Na (mg/L)	32.0	52.0	19.3	27.0								34.6	42.4		27.7
13	NH3-N (mg N/L)	0.08	0.05	0.05	0.03								0.07	0.00		0.00
14	NO2+NO3 (mg N/L)	1.50	1.75	0.87	1.45								4.60	3.90		3.20
15	NO2-N (mgN/L)			0.01	0.06								0.00	0.13		1.38
16	NO3-N (mgN/L)	1.50	7.72	0.87	1.38								4.60	3.76		1.82
17	o-PO4-P (mg P/L)	0.010	0.062	0.090	0.021								0.101	0.167		0.027
18	SiO2 (mg/L)	16.0	18.0	14.0	23.7								22.1	19.1		15.2
19	SO4 (mg/L)	18.8	31.5	14.7	19.3								27.6	136.0		15.5

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.1	0.9	1.1	1.6								2.3	0.9		1.3
2	COD (mg/L)		23.7	1.0	25.4								13.1	19.4		7.0
3	DO (mg/L)	5.5	5.2	5.5	6.4								5.9	5.1		5.8
4	DO_SAT% (%)	67	60	64	77								70	54		73
5	FCol-MPN (MPN/100mL)												6300	16000		10667
6	Tcol-MPN (MPN/100mL)												11033	16000		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)	102	137	63	82								98	82		92
2	HAR_Total (mgCaCO3/L)	129	207	83	130								193	157		176
3	Na% (%)	33	36	33	31								27	36		26
4	RSC (-)	0.3	0.1	0.5	0.5								0.2	0.0		0.0
5	SAR (-)	1.2	1.6	0.9	1.0								1.1	1.5		0.9
	PESTICIDES															

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	2.468			4.332								21.54			
2	EC_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	509			525								465			
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	8.3			8.3								8.1			
6	TDS (mg/L)												284			
7	Temp (deg C)	20.3			20.0								23.0			
8	Turb (NTU)												5.0			
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	3.4			4.3								0.0			
2	ALK-TOT (mgCaCO3/L)	172			201								193			
3	B (mg/L)	0.00			0.24								0.03			
4	Ca (mg/L)	39			50								42			
5	Cl (mg/L)	23.5			24.0								24.5			
6	CO3 (mg/L)	4.0			5.1								0.0			
7	F (mg/L)	0.49			0.55								0.39			
8	Fe (mg/L)	0.0			0.0								0.0			
9	HCO3 (mg/L)	202			235								235			
10	K (mg/L)	2.3			3.2								3.4			
11	Mg (mg/L)	16.5			10.9								24.3			
12	Na (mg/L)	50.5			32.5								34.6			
13	NH3-N (mg N/L)	0.23			0.05								0.04			
14	NO2+NO3 (mg N/L)	0.70			1.03								2.03			
15	NO2-N (mgN/L)				0.00								0.00			
16	NO3-N (mgN/L)	0.70			1.02								2.03			
17	o-PO4-P (mg P/L)	0.010			0.064								0.001			
18	SiO2 (mg/L)	12.5			25.0								26.1			
19	SO4 (mg/L)	43.5			22.5								25.6			

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.0			0.8								0.5			
2	COD (mg/L)				17.9								4.1			
3	DO (mg/L)	6.4			7.1								6.4			
4	DO_SAT% (%)	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)	99			125								104			
2	HAR_Total (mgCaCO3/L)	167			170								205			
3	Na% (%)	38			29								27			
4	RSC (-)	0.1			0.6								0.0			
5	SAR (-)	1.7			1.1								1.1			
	PESTICIDES															

Water Quality Seasonal Average for the period: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	PHYSICAL															
1	Q (cumec)	1.854			0.910								5.128			
2	EC_FLD (µmho/cm)															
3	EC_GEN (µmho/cm)	435			520								464			
4	pH_FLD (pH units)															
5	pH_GEN (pH units)	8.2			8.1								7.7			
6	TDS (mg/L)												319			
7	Temp (deg C)	24.7			21.0								23.5			
8	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	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	: 2016-2017
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 : 2016-2017

Station Name : Dhalegaon (AG000S9)

Division : U Godavari Div., Hyderabad

Local River : Godavari

River Water Analysis

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	07.10.2016
		A
	PHYSICAL	
1	Q (cumec)	186.6
2	EC_GEN (µmho/cm)	381
3	pH_GEN (pH units)	7.5
4	TDS (mg/L)	213
5	Temp (deg C)	26.0
6	Turb (NTU)	2.0
	CHEMICAL	
1	Alk-Phen (mgCaCO3/L)	0.0
2	ALK-TOT (mgCaCO3/L)	149
3	Ca (mg/L)	32
4	Cl (mg/L)	20.1
5	CO3 (mg/L)	0.0
6	F (mg/L)	0.00
7	Fe (mg/L)	0.2
8	HCO3 (mg/L)	182
9	K (mg/L)	3.9
10	Mg (mg/L)	17.5
11	Na (mg/L)	16.5
12	NH3-N (mg N/L)	0.01
13	NO2+NO3 (mg N/L)	2.24
14	NO2-N (mgN/L)	0.24
15	NO3-N (mgN/L)	2.00
16	o-PO4-P (mg P/L)	0.091
17	SiO2 (mg/L)	16.8
18	SO4 (mg/L)	17.8
	BIOLOGICAL/BACTERIOLOGICAL	
1	BOD3-27 (mg/L)	1.1
2	COD (mg/L)	6.1
3	DO (mg/L)	5.9
4	DO_SAT% (%)	73
5	FCol-MPN (MPN/100mL)	3000
6	Tcol-MPN (MPN/100mL)	9000
	TRACE & TOXIC	
	CHEMICAL INDICES	
1	HAR_Ca (mgCaCO3/L)	80
2	HAR_Total (mgCaCO3/L)	153
3	Na% (%)	19
4	RSC (-)	0.0
5	SAR (-)	0.6
	PESTICIDES	

Water Quality Summary for the period : 2016-2017

Station Name : Dhalegaon (AG000S9)

Division : U Godavari Div., Hyderabad

Local River : Godavari

Sub-Division : U Godavari SD, Aurangabad

River Water Summary

S.No	Parameters	Number of Observations	Maximum	Minimum	Mean
	PHYSICAL				
1	Q (cumec)	365	2022	0.000	21.99
2	EC_GEN (µmho/cm)	1	381	381	381
3	pH_GEN (pH units)	1	7.5	7.5	7.5
4	TDS (mg/L)	1	213	213	213
5	Temp (deg C)	1	26.0	26.0	26
6	Turb (NTU)	1	2.0	2.0	2
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	1	0.0	0.0	0
2	ALK-TOT (mgCaCO3/L)	1	149	149	149
3	Ca (mg/L)	1	32	32	32
4	Cl (mg/L)	1	20.1	20.1	20.1
5	CO3 (mg/L)	1	0.0	0.0	0
6	F (mg/L)	1	0.00	0.00	0
7	Fe (mg/L)	1	0.2	0.2	0.2
8	HCO3 (mg/L)	1	182	182	182
9	K (mg/L)	1	3.9	3.9	3.9
10	Mg (mg/L)	1	17.5	17.5	17.5
11	Na (mg/L)	1	16.5	16.5	16.5
12	NH3-N (mg N/L)	1	0.01	0.01	0
13	NO2+NO3 (mg N/L)	1	2.24	2.24	2.24
14	NO2-N (mgN/L)	1	0.24	0.24	0.24
15	NO3-N (mgN/L)	1	2.00	2.00	2
16	o-PO4-P (mg P/L)	1	0.091	0.091	0.091
17	SiO2 (mg/L)	1	16.8	16.8	16.8
18	SO4 (mg/L)	1	17.8	17.8	17.8
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	1	1.1	1.1	1.1
2	COD (mg/L)	1	6.1	6.1	6.1
3	DO (mg/L)	1	5.9	5.9	5.9
4	DO_SAT% (%)	1	73	73	73
5	FCol-MPN (MPN/100mL)	1	3000	3000	3000
6	Tcol-MPN (MPN/100mL)	1	9000	9000	9000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	1	80	80	80
2	HAR_Total (mgCaCO3/L)	1	153	153	153
3	Na% (%)	1	19	19	19
4	RSC (-)	1	0.0	0.0	0
5	SAR (-)	1	0.6	0.6	0.6
	PESTICIDES				

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	PHYSICAL															
1	Q (cumec)	11.72	0.513	18.78	109.0	296.0	45.26			114.6	125.9					186.6
2	EC_GEN (µmho/cm)	504	452	344	322	440	635			389	421					381
3	pH_GEN (pH units)	8.2	8.8	8.3	7.6	8.4	8.6			8.1	8.3					7.5
4	TDS (mg/L)									241	312					213
5	Temp (deg C)	27.0	26.5	26.0	26.0	27.0	28.5			28.0	27.0					26.0
6	Turb (NTU)									2.3	0.0					2.0
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	2.6	9.0	19.8	1.4	12.3	15.7			4.1	8.1					0.0
2	ALK-TOT (mgCaCO3/L)	144	146	148	93	137	130			143	147					149
3	B (mg/L)	0.22	0.11	0.16	0.16	0.19	0.09			0.18	0.17					
4	Ca (mg/L)	41	33	28	31	33	26			30	28					32
5	Cl (mg/L)	29.0	26.0	26.5	21.2	38.7	62.0			31.5	24.3					20.1
6	CO3 (mg/L)	3.2	10.8	23.8	1.7	14.8	18.9			4.9	9.8					0.0
7	F (mg/L)	0.59	0.46	0.44	0.24	0.30	0.44			0.28	0.39					0.00
8	Fe (mg/L)	0.0		0.1	0.1	0.2	0.1			0.2	0.2					0.2
9	HCO3 (mg/L)	170	156	132	110	137	120			165	159					182
10	K (mg/L)	3.2	0.9	3.3	2.5	3.2	2.8			3.6	3.5					3.9
11	Mg (mg/L)	8.9	7.7	5.6	7.8	12.5	24.7			14.7	21.3					17.5
12	Na (mg/L)	45.7	34.0	45.5	22.3	46.7	55.3			28.5	27.0					16.5
13	NH3-N (mg N/L)	0.09	0.05	0.05	0.82	0.05	0.11			0.13	0.11					0.00
14	NO2+NO3 (mg N/L)	1.03	0.15	0.95	0.77	0.98	0.80			0.99	1.01					2.24
15	NO2-N (mgN/L)			0.01	0.05	0.01	0.02			0.05	0.01					0.24
16	NO3-N (mgN/L)	1.03	0.80	0.95	0.77	0.97	0.78			0.93	1.00					2.00
17	o-PO4-P (mg P/L)	0.030	0.040	0.060	0.009					0.022	0.013					0.091
18	P-Tot (mgP/L)					0.013	0.043									
19	SiO2 (mg/L)	27.7	11.0	25.0	25.0	12.5	22.0			24.8	19.8					16.8
20	SO4 (mg/L)	64.0	23.5	21.0	18.7	17.3	70.3			27.0	29.5					17.8

Water Quality Seasonal Average for the period: 2002-2017

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														
		2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	0.6	1.7	0.8	1.5	1.0	0.8			0.8	1.0					1.1
2	COD (mg/L)		7.9	31.8	25.0	29.8	24.1			4.9	6.7					6.1
3	DO (mg/L)	5.2	5.2	4.8	5.7	6.2	5.6			5.7	6.8					5.9
4	DO_SAT% (%)	66	65	59	70	78	72			72	85					73
5	FCol-MPN (MPN/100mL)				2050	12333	293			260	16000					3000
6	Tcol-MPN (MPN/100mL)				3000	13667	403			8010	16000					9000
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)	102	84	70	77	83	66			74	70					80
2	HAR_Total (mgCaCO3/L)	139	115	93	110	134	169			135	159					153
3	Na% (%)	41	39	50	30	41	41			31	27					19
4	RSC (-)	0.2	0.6	1.1	0.0	0.2	0.0			0.2	0.0					0.0
5	SAR (-)	1.7	1.4	2.1	0.9	1.7	1.9			1.1	0.9					0.6
	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: 2002-2017

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														
		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	2016-2017
	PHYSICAL															
1	Q (cumec)	0.196			11.25	3.114	1.478									
2	EC_GEN (µmho/cm)	739			599	840	780									
3	pH_GEN (pH units)	8.2			8.3	8.6	8.2									
4	TDS (mg/L)															
5	Temp (deg C)	20.0			23.3	22.0	25.0									
6	Turb (NTU)															
	CHEMICAL															
1	Alk-Phen (mgCaCO3/L)	0.0			4.4	6.5	0.0									
2	ALK-TOT (mgCaCO3/L)	192			167	180	219									
3	B (mg/L)	0.02			0.21	0.12	0.18									
4	Ca (mg/L)	44			62	48	64									
5	Cl (mg/L)	43.0			53.2	72.3	65.0									
6	CO3 (mg/L)	0.0			5.3	7.8	0.0									
7	F (mg/L)	0.66			0.51	0.17	0.60									
8	Fe (mg/L)				0.1	0.1	0.3									
9	HCO3 (mg/L)	234			193	204	267									
10	K (mg/L)	3.1			4.2	3.3	0.6									
11	Mg (mg/L)	16.5			7.9	22.8	17.0									
12	Na (mg/L)	88.0			47.3	88.0	73.6									
13	NH3-N (mg N/L)	0.37			0.05	0.05	0.05									
14	NO2+NO3 (mg N/L)	0.10			0.81	1.54	1.83									
15	NO2-N (mgN/L)				0.01	0.00	0.15									
16	NO3-N (mgN/L)	0.10			0.81	1.54	1.68									
17	o-PO4-P (mg P/L)	0.010			0.004											
18	P-Tot (mgP/L)					0.030	0.037									
19	SiO2 (mg/L)	33.0			25.0	24.1	25.0									
20	SO4 (mg/L)	143.0			28.0	98.0	98.0									

Water Quality Seasonal Average for the period: 2002-2017

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														
		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	2016-2017
	BIOLOGICAL/BACTERIOLOGICAL															
1	BOD3-27 (mg/L)	1.8			0.8	0.8	1.2									
2	COD (mg/L)				0.0	6.8	65.0									
3	DO (mg/L)	6.3			7.3	6.7	6.9									
4	DO_SAT% (%)	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)	110			154	120	160									
2	HAR_Total (mgCaCO3/L)	178			187	215	231									
3	Na% (%)	51			35	46	41									
4	RSC (-)	0.3			0.0	0.4	0.0									
5	SAR (-)	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	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: 2002-2017

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														
		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	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	: 2016-2017
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	: 25.05.1977		
Discharge	: 31.07.2014		
Sediment	:		
Water Quality	: 01.04.2014		

Water Quality Datasheet for the period : 2016-2017

Station Name : Kopergaon gauge,Rainfal,W/L (KOPERGAON) Division : Upper Godavari Div., Hyderabad

Local River : Godavari River Water Analysis Division : Upper Godavari SD, Aurangabad

S.No	Parameters	12.07.2016	01.08.2016	24.09.2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	478.0	191.2	483.5
2	Colour_Cod (-)	Brown	Clear	Light Brown
3	EC_GEN (µmho/cm)	426	275	381
4	Odour_Code (-)	fishy	fishy	fishy
5	pH_GEN (pH units)	7.3	8.4	8.2
6	TDS (mg/L)	237	246	371
7	Temp (deg C)	26.0	26.0	25.0
8	Turb (NTU)	322.0	5.0	3.0
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	7.0	0.0
2	ALK-TOT (mgCaCO3/L)	168	99	156
3	Ca (mg/L)	29	30	48
4	Cl (mg/L)	21.9	38.9	66.3
5	CO3 (mg/L)	0.0	8.4	0.0
6	F (mg/L)	0.52	0.03	0.05
7	Fe (mg/L)	0.0	0.0	0.2
8	HCO3 (mg/L)	205	104	191
9	K (mg/L)	4.3	2.6	3.1
10	Mg (mg/L)	17.0	17.5	26.5
11	Na (mg/L)	24.8	32.1	47.8
12	NH3-N (mg N/L)	0.01	0.01	0.01
13	NO2+NO3 (mg N/L)	0.54	3.08	3.26
14	NO2-N (mgN/L)	0.00	2.86	0.00
15	NO3-N (mgN/L)	0.54	0.22	3.26
16	o-PO4-P (mg P/L)	0.482		0.165
17	SiO2 (mg/L)	16.4	13.9	17.5
18	SO4 (mg/L)	25.0	34.2	62.0
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.8	1.7	2.5
2	COD (mg/L)	6.0	5.2	6.5
3	DO (mg/L)	4.8	6.4	5.9
4	DO_SAT% (%)	59	79	71
5	FCol-MPN (MPN/100mL)	16000	16000	5000
6	Tcol-MPN (MPN/100mL)	16000	16000	16000
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	72	76	121
2	HAR_Total (mgCaCO3/L)	143	149	231
3	Na% (%)	27	32	31
4	RSC (-)	0.5	0.0	0.0
5	SAR (-)	0.9	1.1	1.4
	PESTICIDES			

Water Quality Summary for the period : 2016-2017

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)	365	4029	0.000	55.04
2	EC_GEN (µmho/cm)	3	426	275	361
3	pH_GEN (pH units)	3	8.4	7.3	8
4	TDS (mg/L)	3	371	237	285
5	Temp (deg C)	3	26.0	25.0	25.7
6	Turb (NTU)	3	322.0	3.0	110
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	7.0	0.0	2.3
2	ALK-TOT (mgCaCO3/L)	3	168	99	141
3	Ca (mg/L)	3	48	29	36
4	Cl (mg/L)	3	66.3	21.9	42.4
5	CO3 (mg/L)	3	8.4	0.0	2.8
6	F (mg/L)	3	0.52	0.03	0.2
7	Fe (mg/L)	3	0.2	0.0	0.1
8	HCO3 (mg/L)	3	205	104	166
9	K (mg/L)	3	4.3	2.6	3.3
10	Mg (mg/L)	3	26.5	17.0	20.3
11	Na (mg/L)	3	47.8	24.8	34.9
12	NH3-N (mg N/L)	3	0.01	0.01	0
13	NO2+NO3 (mg N/L)	3	3.26	0.54	2.29
14	NO2-N (mgN/L)	3	2.86	0.00	0.95
15	NO3-N (mgN/L)	3	3.26	0.22	1.34
16	o-PO4-P (mg P/L)	2	0.482	0.165	0.323
17	SiO2 (mg/L)	3	17.5	13.9	15.9
18	SO4 (mg/L)	3	62.0	25.0	40.4
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3	2.5	1.7	2
2	COD (mg/L)	3	6.5	5.2	5.9
3	DO (mg/L)	3	6.4	4.8	5.7
4	DO_SAT% (%)	3	79	59	70
5	Fcol-MPN (MPN/100mL)	3	16000	5000	12333
6	Tcol-MPN (MPN/100mL)	3	16000	16000	16000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	121	72	90
2	HAR_Total (mgCaCO3/L)	3	231	143	174
3	Na% (%)	3	32	27	30
4	RSC (-)	3	0.5	0.0	0.2
5	SAR (-)	3	1.4	0.9	1.1
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

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

Division : Upper Godavari Div., Hyderabad

Local River : Godavari

River Water Sub-Division : Upper Godavari SD, Aurangabad

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2014	2015	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	PHYSICAL									
1	Q (cumec)	447.2	288.0	384.2		447.3				
2	EC_FLD (µmho/cm)		437							
3	EC_GEN (µmho/cm)	411	783	361		550				
4	pH_FLD (pH units)		7.1							
5	pH_GEN (pH units)	7.4	7.2	8.0		8.2				
6	TDS (mg/L)	270	212	285		245				
7	Temp (deg C)	26.0	27.0	25.7		26.0				
8	Turb (NTU)	103.0	76.7	110.0		14.0				
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	2.3		0.0				
2	ALK-TOT (mgCaCO3/L)	109	129	141		103				
3	B (mg/L)	0.26	0.50			0.00				
4	Ca (mg/L)	31	42	36		30				
5	Cl (mg/L)	3.9	90.5	42.4		54.7				
6	CO3 (mg/L)	0.0	0.0	2.8		0.0				
7	F (mg/L)	0.20	0.40	0.20		0.24				
8	Fe (mg/L)	0.1	0.0	0.1		0.0				
9	HCO3 (mg/L)	133	158	166		126				
10	K (mg/L)	2.8	4.2	3.3		3.9				
11	Mg (mg/L)	17.7	23.9	20.3		17.0				
12	Na (mg/L)	22.3	94.7	34.9		49.0				
13	NH3-N (mg N/L)	0.03	0.00	0.00		0.00				
14	NO2+NO3 (mg N/L)	3.23	1.72	2.29		0.95				
15	NO2-N (mgN/L)	0.04	0.00	0.95		0.00				
16	NO3-N (mgN/L)	3.19	1.71	1.34		0.95				
17	o-PO4-P (mg P/L)	0.137	0.405	0.323		0.108				
18	SiO2 (mg/L)	20.9	17.3	15.9		11.1				
19	SO4 (mg/L)	65.0	162.3	40.4		65.5				
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)	1.9	0.5	2.0		0.5				
2	COD (mg/L)	16.8	17.3	5.9		11.7				
3	DO (mg/L)	6.0		5.7						
4	DO_SAT% (%)	73		70						
5	FCol-MPN (MPN/100mL)	9200	2100	12333		16000				
6	Tcol-MPN (MPN/100mL)	16000	16000	16000		16000				
7	TOC (mg/L)	6.1	10.5			4.6				
	TRACE & TOXIC									
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)	77	106	90		76				
2	HAR_Total (mgCaCO3/L)	151	205	174		147				
3	Na% (%)	23	41	30		41				
4	RSC (-)	0.0	0.0	0.2		0.0				
5	SAR (-)	0.8	2.4	1.1		1.8				
	PESTICIDES									

HISTORY SHEET

		Water Year	: 2016-2017
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	:		
Water Quality	:		

Water Quality Datasheet for the period : 2016-2017

Station Name : Pachegaon (AGU00D3)

Division : U Godavari Div., Hyderabad

Local River : Pravara

River Water Analysis Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	05.08.2016	19.09.2016	01.10.2016
		A	A	A
	PHYSICAL			
1	Q (cumec)	121.0	46.67	70.56
2	Colour_Cod (-)	Light Brown	Light Brown	Clear
3	EC_GEN (µmho/cm)	365	365	250
4	Odour_Code (-)	odour free	odour free	odour free
5	pH_GEN (pH units)	7.9	6.9	8.3
6	TDS (mg/L)	208	190	153
7	Temp (deg C)	28.0	26.0	26.0
8	Turb (NTU)	133.0	73.0	0.1
	CHEMICAL			
1	Alk-Phen (mgCaCO3/L)	0.0	0.0	4.7
2	ALK-TOT (mgCaCO3/L)	127	130	120
3	Ca (mg/L)	31	25	24
4	Cl (mg/L)	14.3	20.3	19.7
5	CO3 (mg/L)	0.0	0.0	5.6
6	F (mg/L)	0.00	0.34	0.00
7	Fe (mg/L)	0.0	0.0	0.3
8	HCO3 (mg/L)	155	158	135
9	K (mg/L)	1.4	4.1	1.1
10	Mg (mg/L)	18.2	13.6	13.0
11	Na (mg/L)	18.0	34.1	19.2
12	NH3-N (mg N/L)	0.01	0.01	0.01
13	NO2+NO3 (mg N/L)	3.01	1.37	0.93
14	NO2-N (mgN/L)	2.91	0.11	0.12
15	NO3-N (mgN/L)	0.09	1.27	0.80
16	o-PO4-P (mg P/L)		0.147	0.003
17	SiO2 (mg/L)	22.0	14.9	15.3
18	SO4 (mg/L)	12.4	7.2	26.3
	BIOLOGICAL/BACTERIOLOGICAL			
1	BOD3-27 (mg/L)	1.0	1.1	1.4
2	COD (mg/L)	10.3	13.2	11.8
3	DO (mg/L)	6.2	5.9	6.7
4	DO_SAT% (%)	79	73	83
5	FCol-MPN (MPN/100mL)	1100	2	16000
6	Tcol-MPN (MPN/100mL)	16000	16000	16000
	TRACE & TOXIC			
	CHEMICAL INDICES			
1	HAR_Ca (mgCaCO3/L)	78	62	60
2	HAR_Total (mgCaCO3/L)	154	119	114
3	Na% (%)	20	38	27
4	RSC (-)	0.0	0.2	0.1
5	SAR (-)	0.6	1.4	0.8
	PESTICIDES			

Water Quality Summary for the period : 2016-2017

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)	365	550.7	0.000	16.83
2	EC_GEN (µmho/cm)	3	365	250	327
3	pH_GEN (pH units)	3	8.3	6.9	7.7
4	TDS (mg/L)	3	208	153	184
5	Temp (deg C)	3	28.0	26.0	26.7
6	Turb (NTU)	3	133.0	0.1	68.7
	CHEMICAL				
1	Alk-Phen (mgCaCO3/L)	3	4.7	0.0	1.6
2	ALK-TOT (mgCaCO3/L)	3	130	120	126
3	Ca (mg/L)	3	31	24	27
4	Cl (mg/L)	3	20.3	14.3	18.1
5	CO3 (mg/L)	3	5.6	0.0	1.9
6	F (mg/L)	3	0.34	0.00	0.11
7	Fe (mg/L)	3	0.3	0.0	0.1
8	HCO3 (mg/L)	3	158	135	149
9	K (mg/L)	3	4.1	1.1	2.2
10	Mg (mg/L)	3	18.2	13.0	14.9
11	Na (mg/L)	3	34.1	18.0	23.8
12	NH3-N (mg N/L)	3	0.01	0.01	0
13	NO2+NO3 (mg N/L)	3	3.01	0.93	1.77
14	NO2-N (mgN/L)	3	2.91	0.11	1.05
15	NO3-N (mgN/L)	3	1.27	0.09	0.72
16	o-PO4-P (mg P/L)	2	0.147	0.003	0.075
17	SiO2 (mg/L)	3	22.0	14.9	17.4
18	SO4 (mg/L)	3	26.3	7.2	15.3
	BIOLOGICAL/BACTERIOLOGICAL				
1	BOD3-27 (mg/L)	3	1.4	1.0	1.2
2	COD (mg/L)	3	13.2	10.3	11.8
3	DO (mg/L)	3	6.7	5.9	6.3
4	DO_SAT% (%)	3	83	73	78
5	Fcol-MPN (MPN/100mL)	3	16000	2	5701
6	Tcol-MPN (MPN/100mL)	3	16000	16000	16000
	TRACE & TOXIC				
	CHEMICAL INDICES				
1	HAR_Ca (mgCaCO3/L)	3	78	60	67
2	HAR_Total (mgCaCO3/L)	3	154	114	129
3	Na% (%)	3	38	20	28
4	RSC (-)	3	0.2	0.0	0.1
5	SAR (-)	3	1.4	0.6	0.9
	PESTICIDES				

Water Quality Seasonal Average for the period: 2014-2017

Station Name : Pachegaon (AGU00D3)

Division : U Godavari Div., Hyderabad

Local River : Pravara

River Water

Sub-Division : U Godavari SD, Aurangabad

S.No	Parameters	Flood			Winter			Summer		
		Jun - Oct			Nov - Feb			Mar - May		
		2014	2015	2016	2014-2015	2015-2016	2016-2017	2015	2016	2017
	PHYSICAL									
1	Q (cumec)			79.42		85.61		66.51		
2	EC_GEN (µmho/cm)			327		228		474		
3	pH_GEN (pH units)			7.7		7.1		7.5		
4	TDS (mg/L)			184		69		306		
5	Temp (deg C)			26.7		23.5		23.0		
6	Turb (NTU)			68.7		28.5		5.0		
	CHEMICAL									
1	Alk-Phen (mgCaCO3/L)			1.6		0.0		0.0		
2	ALK-TOT (mgCaCO3/L)			126		90		112		
3	B (mg/L)					0.00		0.16		
4	Ca (mg/L)			27		23		24		
5	Cl (mg/L)			18.1		7.3		45.5		
6	CO3 (mg/L)			1.9		0.0		0.0		
7	F (mg/L)			0.11		0.01		0.93		
8	Fe (mg/L)			0.1		0.0		0.3		
9	HCO3 (mg/L)			149		110		137		
10	K (mg/L)			2.2		1.1		2.3		
11	Mg (mg/L)			14.9		10.8		13.6		
12	Na (mg/L)			23.8		9.7		45.9		
13	NH3-N (mg N/L)			0.00		0.04		0.00		
14	NO2+NO3 (mg N/L)			1.77		0.39		1.40		
15	NO2-N (mgN/L)			1.05		0.00		0.00		
16	NO3-N (mgN/L)			0.72		0.38		1.40		
17	o-PO4-P (mg P/L)			0.075		0.046		0.200		
18	SiO2 (mg/L)			17.4		13.4		36.8		
19	SO4 (mg/L)			15.3		4.8		33.0		
	BIOLOGICAL/BACTERIOLOGICAL									
1	BOD3-27 (mg/L)			1.2		1.0		1.7		
2	COD (mg/L)			11.8		2.4		13.7		
3	DO (mg/L)			6.3				5.8		
4	DO_SAT% (%)			78				68		
5	Fcol-MPN (MPN/100mL)			5701		12500		40		
6	Tcol-MPN (MPN/100mL)			16000		16000		3500		
7	TOC (mg/L)					1.7		3.7		
	TRACE & TOXIC									
	CHEMICAL INDICES									
1	HAR_Ca (mgCaCO3/L)			67		58		60		
2	HAR_Total (mgCaCO3/L)			129		103		117		
3	Na% (%)			28		17		46		
4	RSC (-)			0.1		0.1		0.0		
5	SAR (-)			0.9		0.4		1.9		
	PESTICIDES									

